



---

# Statement of Proposal for amending the Critical Contingency Management Regulations

SUBMISSIONS CLOSE: 5:00PM, FRIDAY, 24 JULY 2020

# Executive Summary

The purpose of the Gas Governance (Critical Contingency Management) Regulations 2008 (CCM Regulations) is to achieve the effective management of critical gas outages and other security of supply contingencies without compromising long-term security of supply.

The CCM Regulations were extensively reviewed and amended after the October 2011 Maui pipeline outage. In light of experience with, and feedback on, subsequent events and exercises, and with the passage of time, it is clear that some elements of the CCM Regulations could be further improved.

There are also external elements that have led to the need to amend the CCM Regulations. Since the previous review, the transmission system has come under a single owner, and a new set of transmission arrangements, termed the Gas Transmission Access Code (GTAC), is anticipated. Another element is the potential amendments to the penalty provisions in the Gas Act 1992 (Gas Act). It is important that the CCM Regulations remain consistent both with its empowering legislation and with current transmission arrangements.

This paper proposes amendments intended to increase the efficiency and effectiveness of the CCM Regulations. The proposals relate to a number of elements of the CCM Regulations, including:

- Critical contingency price setting methodology
- Compliance regulations and offence provisions
- Curtailment band definitions and curtailment instructions
- Information provided to CCO
- Critical contingency management plans
- Critical care and essential services designations
- Critical contingency threshold limits
- Asset owner information obligations
- Definition of publish
- Minor amendments to clarify meanings and update drafting

# Contents

<b>1. INTRODUCTION AND PURPOSE</b>	<b>6</b>
<b>2. LEGISLATIVE CONTEXT</b>	<b>10</b>
2.1 Gas Act and GPS	10
2.2 CCM Regulations	10
2.3 Process Requirements	10
<b>3. SETTING A CRITICAL CONTINGENCY PRICE</b>	<b>12</b>
3.1 Current requirements	12
3.2 Is the electricity market still a good benchmark?	15
3.3 Are there other price benchmarks that should be considered?	17
3.4 Developing an enduring critical contingency price methodology	19
<b>4. COMPLIANCE REGULATIONS AND OFFENCE PROVISIONS</b>	<b>21</b>
4.1 Gas Act amendments	21
4.2 Penalty regime for industry participants	22
4.3 Penalty regime for non-industry participants	22
<b>5. CURTAILMENT BAND DEFINITIONS</b>	<b>23</b>
5.1 Customers and volumes in curtailment bands	23
5.2 Are the curtailment bands fit for purpose?	25
5.2.1 Production station outages	25

5.2.2	Pipeline event	26
5.3	Curtailment bands by consumer numbers and volume	26
5.4	Options for bands 1 and 2	28
5.4.1	Distinction between consumers with and without alternative fuel capability	28
5.4.2	Definitions of bands 1 and 2	29
5.4.3	Ambiguity in band definition	30
5.5	Create a band between 2 and 3?	31
5.6	Other matters of band definition	33
5.6.1	Measuring consumer consumption	33
5.6.2	Defining "consumer installation"	33
<b>6.</b>	<b>CURTAILMENT INSTRUCTIONS</b>	<b>35</b>
6.1	How curtailment instructions are disseminated	35
6.2	How curtailment instructions apply	35
6.3	Consumers with critical processing designations	36
<b>7.</b>	<b>INFORMATION PROVIDED TO THE CCO</b>	<b>39</b>
7.1	Transmission system information	39
7.2	Asset outages	40
7.3	Consumer information	40
<b>8.</b>	<b>CRITICAL CONTINGENCY PLANS</b>	<b>41</b>
8.1	Critical contingency management plan	41
8.2	Retailer curtailment plans	44
8.3	Scope of the communications plan	46
<b>9.</b>	<b>CRITICAL CARE AND ESSENTIAL SERVICES DESIGNATIONS</b>	<b>47</b>
9.1	Lower threshold for essential services designation	47
9.2	Requirement for a time of use meter	47
9.3	Declaration form	47
<b>10.</b>	<b>CRITICAL CONTINGENCY THRESHOLD LIMITS</b>	<b>49</b>
10.1	Current requirements	49
10.2	Proposed amendments to Schedule 1	50

10.2.1	Proposed move for the Central (North) pipeline point of measurement from Westfield to Henderson Compression Station inlet	50
10.2.2	Proposed new thresholds for Henderson Compression Station inlet	50
10.2.3	Proposed standardisation of thresholds at Whangarei	51
10.2.4	Summary of proposed changes	51
<b>11.</b>	<b>OTHER MATTERS</b>	<b>53</b>
11.1	Definition of “retailer”	53
11.2	Transient situations	53
11.3	Planned outages	54
11.4	Obligation for asset owners to provide information	54
11.5	Compliance updates	55
11.6	Definition of “publish”	56
11.7	Performance reports	56
<b>12.</b>	<b>UPDATE AMENDMENTS</b>	<b>58</b>
<b>13.</b>	<b>PROPOSED MINOR AMENDMENTS</b>	<b>60</b>
<b>14.</b>	<b>NEXT STEPS</b>	<b>62</b>
	<b>REFERENCES</b>	<b>63</b>

# 1. Introduction and purpose

The purpose of the Gas Governance (Critical Contingency Management) Regulations 2008 (CCM Regulations) is to achieve the effective management of critical gas outages and other security of supply contingencies without compromising long-term security of supply. The CCM Regulations provide for:

- The appointment of a critical contingency operator (CCO) and funding arrangements in relation to the regulations
- The development of critical contingency management plans
- Processes for managing a critical contingency
- Processes for determining gas imbalances resulting from a critical contingency and setting a price to apply to those gas imbalances

There have been five critical contingency events under the CCM Regulations:

- Pohokura production station outage, July 2010
- Maui pipeline outage, October 2011
- Pohokura production station outage, March 2012
- Pohokura production station outage, May 2016
- System imbalance event, May 2017

The CCM Regulations were extensively reviewed and amended in light of the October 2011 Maui pipeline outage. Since then, subsequent experience with the regulations and feedback on events and exercises have highlighted elements of the CCM Regulations could be further improved.

There are also external elements that have led to the need to amend the CCM Regulations. Since the previous review, the transmission system has come under a single owner, and a new set of transmission arrangements, termed the Gas Transmission Access Code (GTAC), is anticipated. Another element is the potential amendments to the penalty provisions in the Gas Act 1992 (Gas Act). It is important that the CCM Regulations remain consistent both with its empowering legislation and with current transmission arrangements.

This paper proposes a number of amendments intended to increase the efficiency and effectiveness of the CCM Regulations. A summary of the proposals follows:

Issue	Proposal	Reason
<b>Critical contingency price setting methodology</b>	<ul style="list-style-type: none"> <li>Remove restriction to base price on electricity market for curtailment of bands 0-2.</li> <li>Add a price floor</li> </ul>	<ul style="list-style-type: none"> <li>Allow greater flexibility to consider factors relevant on the day</li> <li>Provide a measure of certainty about price</li> </ul>
<b>Compliance regulations and offence provisions</b>	<ul style="list-style-type: none"> <li>Ensure that Compliance Regulations and CCM Regulations are consistent with any Gas Act amendments</li> </ul>	<ul style="list-style-type: none"> <li>Ensure penalties are consistent with the Gas Act and that penalties for non-industry participants are consistent with those for industry participants</li> </ul>
<b>Curtailment band definitions</b>	<ul style="list-style-type: none"> <li>Remove distinction between consumers with and without alternative fuel capability</li> <li>Reserve band 2 for large consumers who are thermal electricity generators</li> <li>Institute annual volume threshold for bands 1 and 2</li> <li>Create band 3A for consumers under band 2 but with greater than 300 TJ annual consumption</li> <li>Provide guidance on application of curtailment band definitions</li> <li>Modify definition of consumer installation to include installations with more than one gas connection</li> </ul>	<ul style="list-style-type: none"> <li>Remove disincentive to implement dual fuelling</li> <li>Provide more precision and certainty to the CCO in curtailing demand</li> <li>Enable faster curtailment response while giving some priority to electricity generators</li> <li>Remove ambiguity in curtailment band definitions</li> </ul>
<b>Curtailment instructions</b>	<ul style="list-style-type: none"> <li>Require gas wholesalers to issue critical contingency notices to retailers who are not shippers</li> <li>Allow partial curtailment defined by gas usage on the day</li> <li>Change timing of complete shutdown for critical processing consumers</li> </ul>	<ul style="list-style-type: none"> <li>Ensure curtailment instructions are provided to all retailers</li> <li>Clarify application of partial curtailment and shutdown profiles</li> <li>Make the shutdown arrangements more balanced and to provide more precision and certainty to the CCO in curtailing demand</li> </ul>

Issue	Proposal	Reason
<b>Information provided to CCO</b>	<ul style="list-style-type: none"> <li>Require asset owners to provide information on actual and expected outages to the CCO as soon as practicable</li> <li>Allow CCO to request customer numbers by gas gate and curtailment band as recorded in the registry</li> </ul>	<ul style="list-style-type: none"> <li>Ensure CCO remains up to date with events that could affect the likelihood of a critical contingency</li> <li>Provide the CCO with a means of cross-checking the information it receives from retailers</li> </ul>
<b>Critical contingency management plans</b>	<ul style="list-style-type: none"> <li>For contact details, clarify that reference to an authoritative source is an acceptable means of including contact details</li> <li>Provide shortened change process for minor edits of the CCMP</li> <li>Specifically allow a go-live date for a proposed amended CCMP</li> </ul>	<ul style="list-style-type: none"> <li>Make CCMP requirements less cumbersome</li> </ul>
<b>Contingency imbalance calculations</b>	<ul style="list-style-type: none"> <li>Remove reference to data from Downstream Reconciliation Rules</li> </ul>	<ul style="list-style-type: none"> <li>Allow the possibility of using data collated by the transmission system owner, which can be more timely</li> </ul>
<b>Annual test exercises</b>	<ul style="list-style-type: none"> <li>Require retailers to provide retailer curtailment plans annually and to participate in annual exercises</li> <li>Incorporate retailer curtailment plans into annual test exercises</li> </ul>	<ul style="list-style-type: none"> <li>Provide a means of ensuring that retailers have complete and up to date plans</li> <li>Ensure retailers are fully prepared for a critical contingency</li> </ul>
<b>Communications plan</b>	<ul style="list-style-type: none"> <li>Increase scope of plan between CCO and TSO to include communications before a contingency</li> </ul>	<ul style="list-style-type: none"> <li>Including communications protocols for situations prior to a critical contingency will increase efficiency and effectiveness</li> </ul>
<b>Critical care and essential services designations</b>	<ul style="list-style-type: none"> <li>Lower consumption threshold for eligibility</li> <li>Remove requirement for ToU meter</li> <li>Allow declaration form to be signed by CE</li> </ul>	<ul style="list-style-type: none"> <li>Adapt requirements to the characteristics of critical care and essential services consumers</li> </ul>



Issue	Proposal	Reason
<b>Critical contingency threshold limits</b>	<ul style="list-style-type: none"> <li>Update the critical contingency threshold limits detailed in Schedule 1 in response to a recommendation from the transmission owner</li> </ul>	<ul style="list-style-type: none"> <li>To better align with the current use and operation of the transmission system</li> </ul>
<b>Definition of "retailer"</b>	<ul style="list-style-type: none"> <li>Change definition to recognise that gas transport arrangements may be made by third party</li> </ul>	<ul style="list-style-type: none"> <li>To clarify definition in response to changing retailer arrangements</li> </ul>
<b>Transient situations</b>	<ul style="list-style-type: none"> <li>Allow for short-term transient threshold breaches</li> </ul>	<ul style="list-style-type: none"> <li>Minimise risk of critical contingency being declared when pipeline is not in danger</li> </ul>
<b>Planned outages</b>	<ul style="list-style-type: none"> <li>Allow for planned outages not triggering a critical contingency</li> </ul>	<ul style="list-style-type: none"> <li>Minimise risk of critical contingency being declared when pipeline is not in danger</li> </ul>
<b>Asset owner information obligations</b>	<ul style="list-style-type: none"> <li>Require asset owners to provide information in the event of an unexpected interruption (regulation 54A)</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate ambiguity with current drafting</li> </ul>
<b>Compliance updates</b>	<ul style="list-style-type: none"> <li>Retailers and large consumers to use specified template</li> </ul>	<ul style="list-style-type: none"> <li>Enhance efficiency in information collation and provision to CCO</li> </ul>
<b>Definition of publish</b>	<ul style="list-style-type: none"> <li>Include Industry Notifications page on Gas Industry Co website (include in GIC determination)</li> </ul>	<ul style="list-style-type: none"> <li>Provide an additional avenue for stakeholders to publish information required by the CCM Regulations</li> </ul>
<b>Performance reports</b>	<ul style="list-style-type: none"> <li>Include timetable for draft report, stakeholder feedback, and final report; stipulate that CCO must have regard to submissions</li> </ul>	<ul style="list-style-type: none"> <li>Resolve ambiguity in the CCM Regulations by providing a process for a draft and final performance report</li> </ul>
<b>Minor amendments to clarify meanings and update drafting</b>		

## 2. Legislative context

### 2.1 Gas Act and GPS

Section 43F(2)(a)(vi) of the Gas Act empowers the making of regulations providing for the establishment and operation of wholesale markets for gas including “arrangements relating to outages and other security of supply contingencies”.

The Government Policy Statement on Gas Governance (GPS) contains specific objectives and outcomes for Gas Industry Co to pursue relating to the proper and efficient management of risks relating to security of supply and the management of critical gas contingencies (clauses 11(e) and 13 of the GPS).

### 2.2 CCM Regulations

The CCM Regulations came into force on 21 January 2010. The purpose of the CCM Regulations is to achieve the effective management of critical gas outages and other security of supply contingencies without compromising long-term security of supply.

Gas Industry Co recommended that the Minister of Energy make the regulations following a lengthy period of industry consultation that included consultation on a Statement of Proposal that identified and assessed regulatory and non-regulatory options.<sup>1</sup>

The CCM Regulations were reviewed following an extended supply disruption on the Maui Pipeline in 2011. Amendments strengthening and clarifying aspects of the regulatory arrangements took effect on 1 March 2014.

### 2.3 Process Requirements

Section 43N of the Gas Act requires Gas Industry Co to identify and assess “all reasonably practicable options for achieving the objective of the regulation”.

We consider the objective of the proposed amendments in this Statement of Proposal to be as stated in the purpose of the CCM Regulations:

“The purpose of these regulations is to achieve the effective management of critical gas outages and other security of supply contingencies without compromising long-term security of supply” (regulation 3)

The proposed amendments to the CCM Regulations contained in this Statement of Proposal are intended to further achieve this objective.

The proposed amendments contained in this Statement of Proposal involve refinement of the existing CCM Regulations. Given that the regulatory framework is already in place, we do not believe that there are other reasonably practicable options, or that the regulatory objective can be better achieved by a means other than an amendment to the CCM Regulations. However, we

---

<sup>1</sup> The “Recommendation to the Minister of Energy on Arrangements for the Effective Management of Critical Contingencies” and the “Statement of Proposal – Gas Outage and Contingency Management Arrangements” are available at <https://gasindustry.co.nz/work-programmes/critical-contingency-management/background/original-development-2006-2008/statement-of-proposal-gas-outage-and-contingency-management-arrangements/>

would welcome stakeholders views on whether, for any particular proposed amendment, the regulatory objective could be achieved by non-regulatory means.

*Q1: Do you agree with our view that, in relation to the proposed amendments, there are no other reasonably practicable options for achieving the regulatory objective other than an amendment to the CCM Regulations? If not, why not?*

## 3. Setting a critical contingency price

### 3.1 Current requirements

Regulations 67 and 71 provide the framework within which the industry expert must determine the critical contingency price:

**67 Purpose of applying critical contingency price to contingency imbalances**

The purpose of regulations 68 to 71 is to determine a critical contingency price to be applied to the contingency imbalances sustained by interconnected parties and shippers during a critical contingency to –

- (a) Avoid shippers instructing their suppliers of gas to reduce supply during a critical contingency when those shippers' consumers have been curtailed; and
- (b) Signal to suppliers and consumers of gas that it is a scarce and valuable product during a critical contingency; and
- (c) Provide incentives before a critical contingency, particularly for retailers who supply gas to consumers who are unlikely to be curtailed, to make alternative arrangements to minimize the financial consequences of a critical contingency.

**71 Determining critical contingency price**

- (1) The industry expert must determine the critical contingency price in dollars per gigajoule of gas
- (2) The industry expert must seek to set the critical contingency price at a level that reflects the price that would be established by an efficient short-term market that allocated scarce gas resource to the highest value users during the critical contingency.
- (3) If –
  - (a) Only consumers in curtailment bands 0 and 1, or 0, 1, and 2 were curtailed during the critical contingency, the industry expert must base his or her determination on the prices in the wholesale market for electricity during the critical contingency except where that would be contrary to subclause (2); and
  - (b) Any other circumstances apply, the industry expert must take into account the following matters:
    - (i) The prices in the wholesale market for electricity during the critical contingency; and
    - (ii) The economic cost of the loss of gas supply to those consumers who had their gas supply curtailed; and
    - (iii) Any other matters that the industry expert considers relevant to achieving subclause (2)

There have now been four critical contingency price determinations under this framework, as outlined in the table below. Three prices were set by the netback price, or willingness to pay,<sup>2</sup> for gas at the combined cycle gas turbine unit (CCGT) at Huntly, known in the industry as e3p. The fourth critical contingency price was set based on the price of balancing gas purchases on the day.

**Table 1 Summary of contingency price setting**

	<b>13 July 2010 Pohokura outage</b>	<b>3 March 2012 Pohokura outage</b>	<b>24 May 2016 Pohokura outage</b>	<b>23 May 2017 System imbalance</b>
<b>Duration</b>	3 hours	11 hours	4.5 hours	7.5 hours
<b>Gas thermal electricity generation running on the day</b>	Huntly: P40 and e3p Otahuhu B Southdown TCC Cogen: Glenbrook, Kapuni, Whareroa	Huntly e3p Otahuhu B Southdown TCC Cogen: Glenbrook, Kapuni, Te Rapa, Whareroa	Huntly e3p McKee Stratford Cogen: Glenbrook, Kapuni, Whareroa	Huntly: P40 and e3p McKee Stratford Cogen: Glenbrook, Kapuni, Whareroa
<b>Curtailment</b>	None	Bands 0 and 1 curtailed completely Band 2 <sup>3</sup> curtailed partially: e3p and OTB allocated about half load; Te Rapa and Southdown got minimum amounts to supply heat/steam customers; TCC and Stratford got no gas because access to storage	None, though e3p, McKee, and Stratford turned down voluntarily during contingency	None

<sup>2</sup> The willingness of a thermal generator to pay for gas can be calculated from the wholesale price for electricity, the variable costs and efficiency of the thermal plant, and costs relating to gas transmission and carbon emissions. The calculated willingness to pay (WTP) represents the point at which the generator is covering all its costs, so represents the maximum the generator would be willing to pay, given the wholesale electricity price.

<sup>3</sup> At the time, bands 1 and 2 were known as 1a and 1b, respectively.

	13 July 2010 Pohokura outage	3 March 2012 Pohokura outage	24 May 2016 Pohokura outage	23 May 2017 System imbalance
<b>Pricing considerations</b>	<ul style="list-style-type: none"> <li>Netback gas price based on e3p lower than prices paid for balancing gas on the day.</li> <li>Supply of balancing gas was limited, so additional gas would have been more expensive</li> <li>Spot price for electricity likely to have increased in the event that curtailment was directed by CCO</li> <li>Price readily observable, so feasible way of signalling value of gas</li> </ul>	<p>Gas was available on BGIX at \$14.95/GJ but was not purchased. That price is higher than the calculated willingness to pay of any of the generators.</p> <p>Price to mimic actual outcome:</p> <ul style="list-style-type: none"> <li>Sufficiently high that no non-CCGT gas plant will generate; and</li> <li>Low enough such that CCGTs will generate.</li> </ul> <p>TCC ignored because generation at that plant determined by availability of gas in storage.</p>	<ul style="list-style-type: none"> <li>Calculated willingness to pay (WTP) for gas for peakers during contingency was below spot market price for gas – (possibly explained by generators' low cost of supply (Contact's take or pay agreement and gas storage; Todd's own supply))</li> <li>Market prices for gas lower than e3p's estimated WTP</li> </ul>	<ul style="list-style-type: none"> <li>Estimated WTP for gas by McKee and Stratford similar to market gas prices</li> <li>WTP for TCC and e3p was higher, suggesting that CCGTs are high value users</li> <li>CCGTs also used in setting critical contingency prices in 2012 and 2016</li> <li>E3p's WTP higher than TCC's</li> </ul>
<b>Price setting</b>	<ul style="list-style-type: none"> <li>CC price set at highest balancing gas purchase. \$15 was an actual price on the day</li> </ul>	<ul style="list-style-type: none"> <li>Midpoint of netback value of gas at Otahuhu B and e3p during contingency</li> </ul>	<ul style="list-style-type: none"> <li>Average WTP by e3p during contingency</li> </ul>	<ul style="list-style-type: none"> <li>Average WTP by e3p during contingency</li> </ul>
<b>Critical contingency price</b>	\$15.00/GJ	\$11.10/GJ	\$6.66/GJ	\$10.62/GJ

(Small, 2010) (Denne, 2012) (Denne, 2016) (Denne, 2017)

Tim Denne of Covec observed that there seem to be some patterns emerging from the critical contingency price setting that has occurred thus far (Denne, 2017). The emerging patterns seem to be:

- Where there is curtailment, the price is defined as that which would result in the same allocation as was achieved by curtailment; and
- Where there is no curtailment, the price is set by the higher of prices paid in the balancing market and a netback price based on the wholesale electricity price and the operating costs and performance of high value gas generators.

There appear to be some other trends emerging as well. As noted previously, three of four prices have been set using the calculated willingness to pay for gas at e3p. Partly, this reflects the efficiency of e3p in turning natural gas into electricity: put simply, e3p requires less gas to generate a unit of electricity, compared with other generators, and so can afford to pay more for

gas at a given electricity price than other generators. Another factor is the realisation that for some electricity generators, other considerations come into play in deciding whether or not to generate. Critical contingency price reports have previously discounted the willingness to pay at the McKee and Stratford peakers on the basis that those generators have alternative gas supply arrangements.

### 3.2 Is the electricity market still a good benchmark?

At the time that the CCM Regulations were enacted, baseload gas thermal generation underpinned the electricity system. In 2008, gas thermal generation provided 21% of New Zealand's electricity demand. Of the installed thermal generation capacity, nearly all was baseload generation.

Since then, the role of thermal generation has changed, both qualitatively and quantitatively. A number of the baseload thermal generation plants have been decommissioned in the past nine years. A couple of new thermal peaking plants have been installed, but their capacity is much less than the capacity of the decommissioned plants. Their role in the electricity market is different, too: peakers are designed to operate on short notice to cover periods of high demand during the day, rather than the steady generation profile typical of baseload generation.

Table 2 below shows the changes in installed gas thermal generation capacity since 2008. Over 1,000 MW of capacity have been decommissioned and not replaced.

**Table 2 Installed thermal generation capacity (Electricity Authority, 2018)**

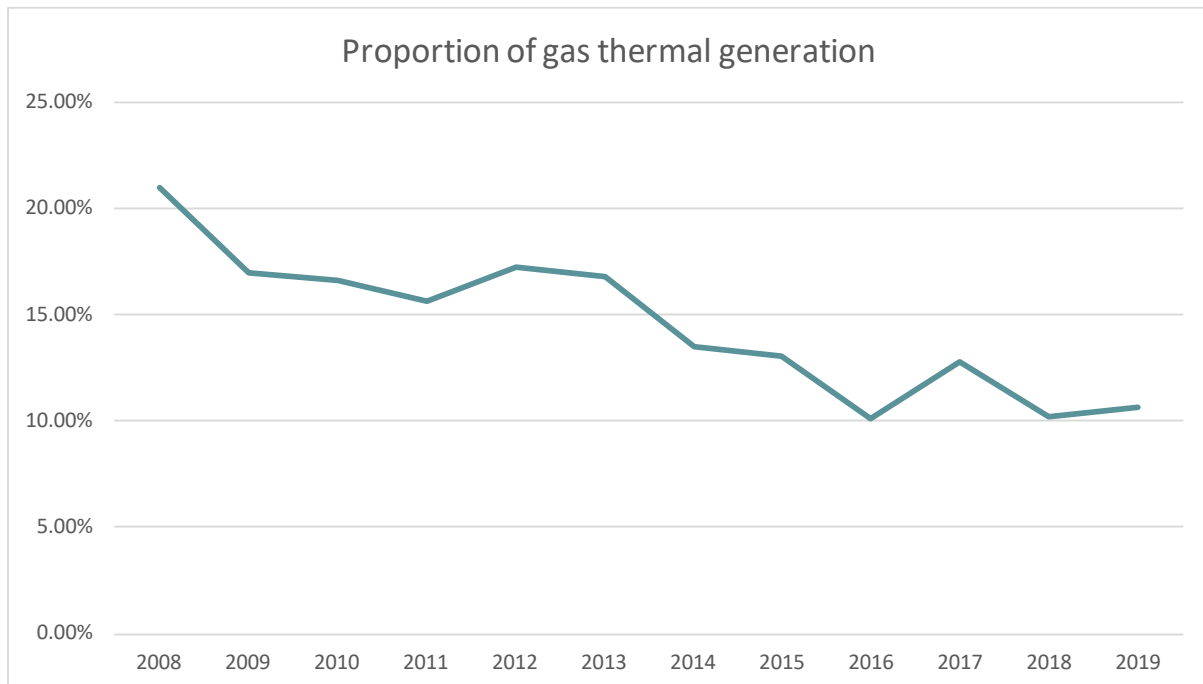
Station	Generation type	Capacity in 2008 (MW)	Note	Capacity in 2020 (MW)
<b>Huntly p40</b> (gas/distillate)	peaker	48		48
<b>Huntly e3p</b>	baseload	400		400
<b>TCC - Taranaki Combined Cycle</b>	baseload	385		385
<b>Huntly units 1-4</b> (coal/gas)	baseload	1,000	2 units mothballed in 2012 and 2013	500
<b>New Plymouth</b> (gas/oil)	baseload	360	Decommissioned 2011	
<b>Southdown</b>	baseload	175	Decommissioned 2015	
<b>Otahuhu B</b>	baseload	380	Decommissioned 2015	
<b>Stratford Peaker</b>	peaker		Commissioned 2011	200
<b>McKee</b>	peaker		Commissioned 2013	102
<b>Junction road</b>	Peaker		Commissioned 2020	100

Station	Generation type	Capacity in 2008 (MW)	Note	Capacity in 2020 (MW)
<b>Total</b>		<b>2,748</b>		<b>1,735</b>

(Electricity Authority)

Along with the change in installed capacity has come a change in the proportion of electricity demand met by gas thermal generation. Figure 1 shows this trend. In calendar 2008, about 8.3 TWh (around 21% of the 39.5 TWh total electricity demand) were supplied by gas thermal generation. In contrast, in 2019, gas thermal supplied 4.4 TWh of a total electricity demand of 41 TWh, about 11%.

**Figure 1 Change in gas thermal generation, 2008 - 2019**

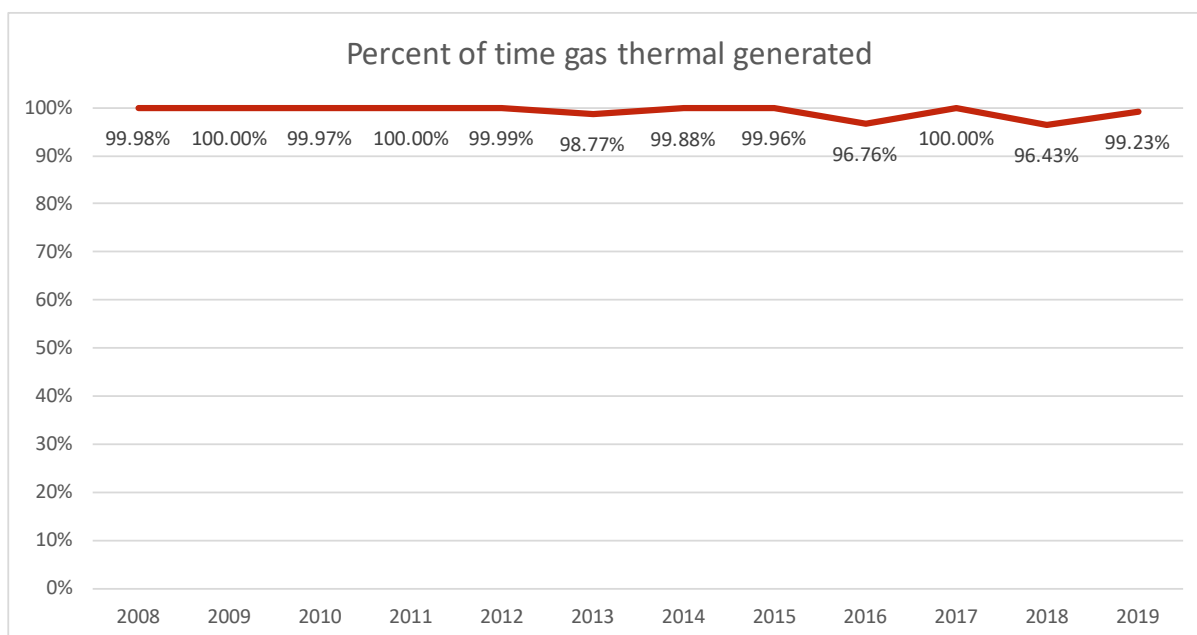


(Electricity Authority)

On the other hand, the *frequency* of gas thermal generation running has changed very little in the past twelve years. The chart below shows the percentage of half-hour trading periods in a calendar year in which gas thermal generation injected into the electricity system. From 2008 to 2015, and again in 2017 and 2019, gas thermal generation ran in virtually all trading periods. There was gas thermal generation in 96.8% of trading periods in 2016, and in 96.4% of 2018 trading periods.



**Figure 2 Frequency of gas generation**



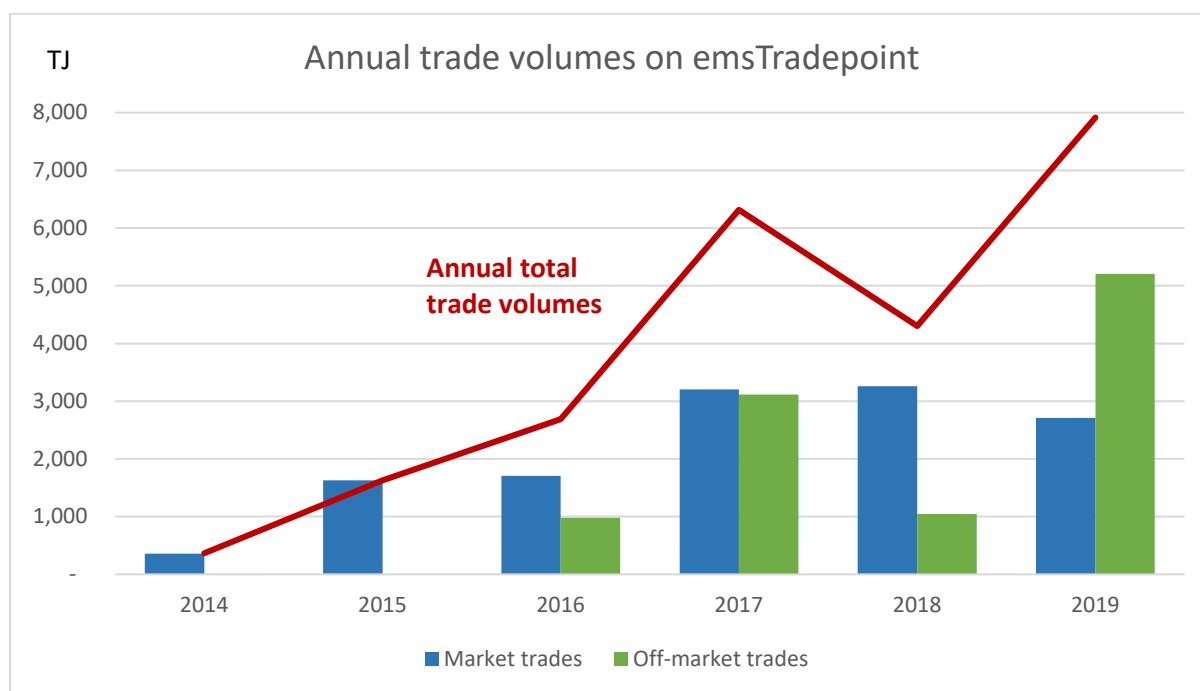
(Electricity Authority)

### **3.3 Are there other price benchmarks that should be considered?**

At the time that the CCM Regulations were enacted, there were very few ways that short-term gas prices could be discovered. The gas prices associated with long-term supply contracts are generally confidential and do not reflect the supply scarcity associated with a critical contingency. This is one of the reasons that the CCM Regulations specifically stipulate the use of wholesale electricity prices in determining the critical contingency price. Wholesale electricity prices by definition reflect the short-term conditions on the day, and they are publicly available.

In 2013, Transpower instituted emsTradepoint, a platform that facilitates short-term gas trading. Since its inception, emsTradepoint has grown in terms of traded volumes and market liquidity. emsTradepoint also provides a means for off-market trades to be reported. Figure 3 shows the growth in annual volumes that have been settled through emsTradepoint since 2013.

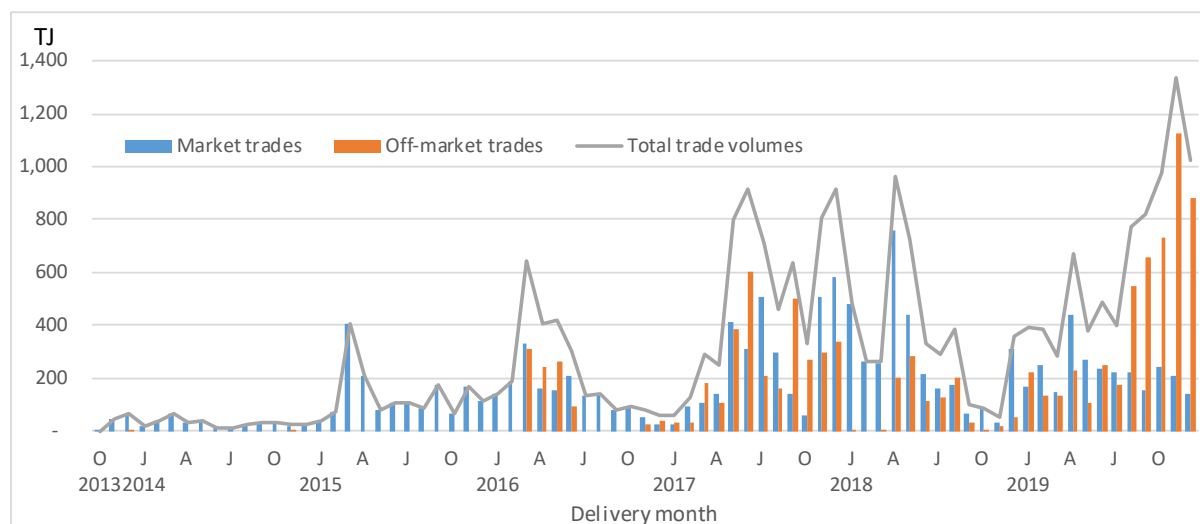
**Figure 3 Trade volume growth on emsTradepoint**



(emsTradepoint)

The increasing volumes on emsTradepoint suggest that the platform may provide a useful source of observable gas price information that could be used as an input into determining a critical contingency price. A potential drawback, though, is that, thus far at least, traded volumes have tended to be peaky.

**Figure 4 Monthly emsTradepoint volumes**

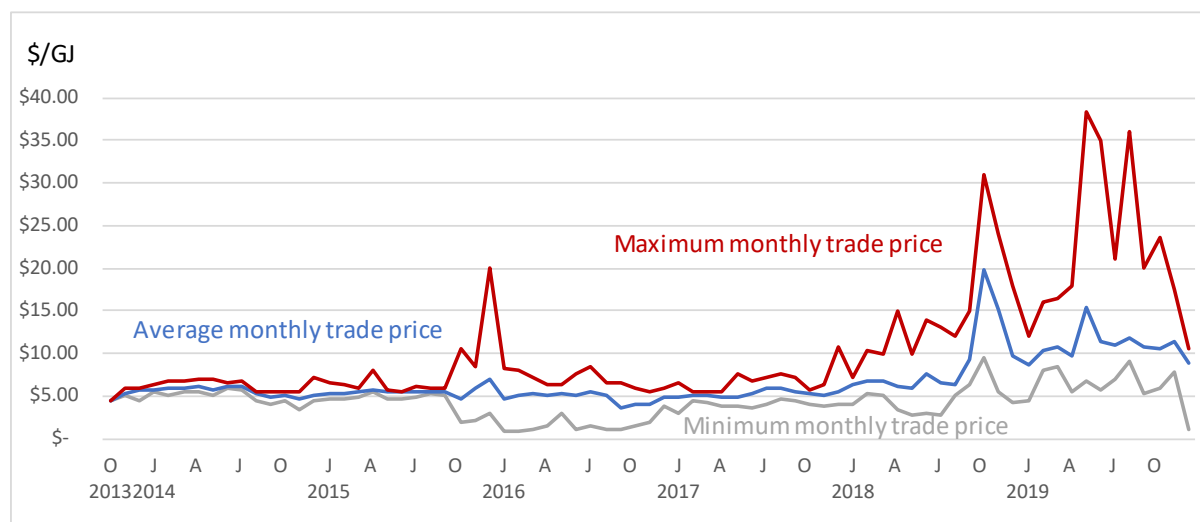


(emsTradepoint)

As shown in Figure 4, there are still times when traded volumes on emsTradepoint are relatively slim, so that market prices may not be fully representative of current market conditions. Further, the prices of the gas trades listed on emsTradepoint generally are lower than the critical contingency prices. As shown in Figure 5 below, the average volume-weighted average price has hovered around \$5 for much of the market's history; prices have been both higher and more

volatile since the end of 2018. Still, it is possible that emsTradeprice prices could be useful as a floor in determining a critical contingency price.

**Figure 5 Average and maximum monthly prices on emsTradeprice**



(emsTradeprice)

### 3.4 Developing an enduring critical contingency price methodology

As Covec stated in its report *Determination of Critical Contingency Price* in respect of the 23 May 2017 critical contingency:

"...the price should be relatively high, and certainly higher than market price expectations in the absence of a critical contingency. In addition, and importantly, because the price is determined and applied retrospectively, it can only achieve its objectives if it is (broadly) predictable by market participants. Given this, an important consideration for the process of determination is that the methodology used is both consistent with the regulations and builds on historical precedent, such that participants might reasonably estimate the final determined price."<sup>4</sup>

Gas Industry Co agrees with this assessment. The question is how best to achieve the goal of predictability in the setting of the critical contingency price. The more prescriptive the CCM Regulations are, the more easily participants can calculate for themselves what the critical contingency price might be – but the higher the risk that the price-setting prescription will not be suited to changing market conditions or able to adapt to exceptional circumstances. Conversely, a more general method prescribed in the CCM Regulations may not provide market participants with sufficient certainty during a critical contingency.

Gas Industry Co proposes two changes to the contingency price methodology. The first is to remove subpart (a) from regulation 71(3). With this change, all instances of contingency price-setting would need to take account of all three elements listed in regulation 71(3)(b): prices in the wholesale market for electricity, cost of loss of gas supply to affected consumers, and any other matters that the industry expert considers relevant. This change would reduce the level of prescription in price setting, allowing the industry expert to consider the relevant circumstances of the particular event.

The second change is to propose a price floor for contingency prices. Gas Industry Co considers that a volume-weighted average price (VWAP) calculated from trades on a gas market (as that

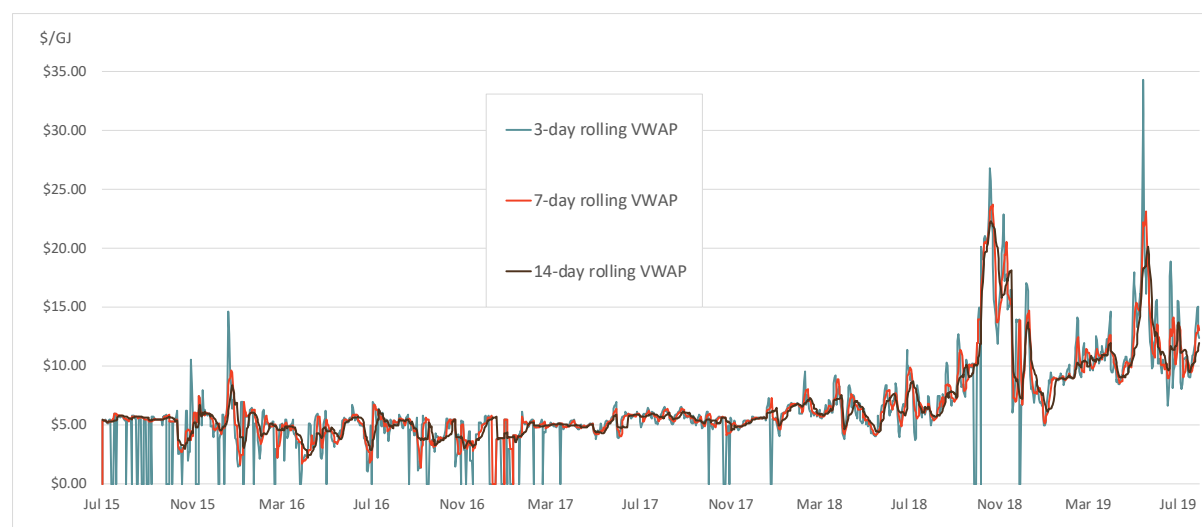
<sup>4</sup> (Denne, 2017)

term is defined in the GTAC<sup>5</sup>) would provide an appropriate measure. Trades included in the calculation would be those for daily products delivered within the relevant period<sup>6</sup>.

There are two competing factors to consider in determining the time period over which to calculate the VWAP to be used as a floor price: the price should be reasonably representative of current market conditions on the day; but it should also be reasonably predictable by market participants.

Gas Industry Co examined three averaging time periods: three days, seven days, and ten days, as shown in the chart below. The three-day averaging period is more susceptible to periods where there are no trades (and the methodology would produce zero as the floor price), while a 14-day averaging period tends to be less volatile (and so produce floor prices that are perhaps not indicative of current market conditions). Gas Industry Co proposes that the use of a seven-day averaging period could strike a reasonable balance between the two concerns.

**Figure 6 Options for calculating VWAP**



(emsTradePoint)

*Q2: Do you agree with rewording regulation 71 to remove 71(3)(a) as described above?*

*Q3: Do you agree with adding a floor price to the calculation of the contingency price? Do you agree with the proposed calculation method, using VWAP for the 7 days prior to and including the critical contingency day?*

*Q4: Are there other pricing benchmarks that should be used in setting the critical contingency price?*

<sup>5</sup> In the GTAC, *Gas Market* means "a reputable and open electronic market platform controlled and operated by:

- (a) a person other than First Gas for the purposes of trading Gas; and/or
- (b) First Gas, exclusively for the purposes of buying and selling Balancing Gas

<sup>6</sup> This methodology avoids the use of weekly or monthly strips, which can be bought well in advance of delivery and whose prices may not be reflective of current market conditions.

## 4. Compliance regulations and offence provisions

### 4.1 Gas Act amendments

Under the Gas Act 1992 (Gas Act), the Rulings Panel considers alleged breaches of gas governance arrangements, including breaches of the CCM Regulations, by industry participants. The Gas Act (at section 43D) defines “industry participant” as:

- a) a gas retailer:
- b) a gas distributor:
- c) a gas producer:
- d) a pipeline owner:
- e) a gas wholesaler:
- f) a person who purchases gas directly from a gas producer or gas wholesaler or on any wholesale gas market:
- g) a service provider appointed under any gas governance regulations:
- h) a gas metering equipment owner:
- i) a data administrator that provides data administration services to the gas industry

The largest gas consumers are often industry participants because they purchase gas directly from a gas producer or gas wholesaler. However, many large industrial consumers and all smaller industrial and commercial consumers are not industry participants.

In May 2019, the Ministry of Business, Innovation and Employment (MBIE) published a review of the Gas Act that proposed, among other things, increasing the maximum penalties for breaches of gas governance arrangements and changing the treatment of breaches by non-industry participants (Ministry of Business, Innovation and Employment, 2019).

The results from that review are included in the Gas (Information Disclosure and Penalties) Amendment Bill (the Bill). In summary, the proposed amendments are:

- Increase the maximum penalty that the Rulings Panel can order an industry participant pay under the Gas Act and Gas Governance (Compliance) Regulations 2008 (Compliance Regulations) from \$20,000 to \$200,000, equivalent to the maximum penalty under the Electricity Industry Act 2010.
- Repeal the provision in the Gas Act that allows gas governance regulations to provide for fines and offences of up to \$20,000 for breaches of gas governance regulations or rules. Instead, allow regulations to provide for the High Court to impose a civil pecuniary penalty on consumers (other than domestic consumers). The maximum penalty must not exceed \$200,000.

## 4.2 Penalty regime for industry participants

The impact of the proposed Gas Act amendments is likely to be straightforward for industry participants. For industry participants, the monitoring and enforcement of alleged breaches of gas governance arrangements will continue to happen under the Compliance Regulations, and the maximum pecuniary penalty that the Rulings Panel can order is proposed to increase from \$20,000 to \$200,000. That proposed change is given effect to by clauses 15 and 21 of the Bill which amends the relevant provisions of the Gas Act and Compliance Regulations.

## 4.3 Penalty regime for non-industry participants

Previously, non-compliance by non-industry participants<sup>7</sup> was addressed through regulation 82A and regulation 82B of the CCM Regulations, which included strict liability offences and the prospect of criminal conviction. Regulation 82A created an offence for providing false or misleading information; and regulation 82B created an offence for failing to comply with curtailment directions during a critical contingency. The Bill proposes that both of these provisions will be repealed.

Gas Industry Co continues to consider that good information and timely compliance with curtailment instructions are vital to the effectiveness of the CCM Regulations in managing a critical contingency. Therefore, we propose replacing regulation 82A and regulation 82B with civil pecuniary penalties for knowingly providing false or misleading information and for failing to comply with curtailment directions. We also propose that the prescribed defence formerly provided in regulation 82B(2) should apply to the civil pecuniary penalty for failing to comply with curtailment directions. Assuming that the amendments to the Gas Act are passed, the maximum fine applicable to these penalties would be \$200,000. In this way, the enforcement regime for non-industry participants would be as consistent as possible with the regime for industry participants.

*Q5: Do you agree with replacing the criminal penalties with civil pecuniary penalties for non-industry participants as described above? If not, why not?*

---

<sup>7</sup> That is, for industrial and commercial gas consumers who are not industry participants. Domestic gas consumers are not covered by the CCM Regulations.

## 5. Curtailment band definitions

### 5.1 Customers and volumes in curtailment bands

The objective of the curtailment bands is to promote the effective management of critical gas outages by facilitating curtailment in an efficient and pragmatic way. At the moment, there are seven curtailment bands (excluding gas storage), five of which are defined by consumer consumption volumes; the remaining two are designations for essential services and critical care providers.

**Table 3 Curtailment bands**

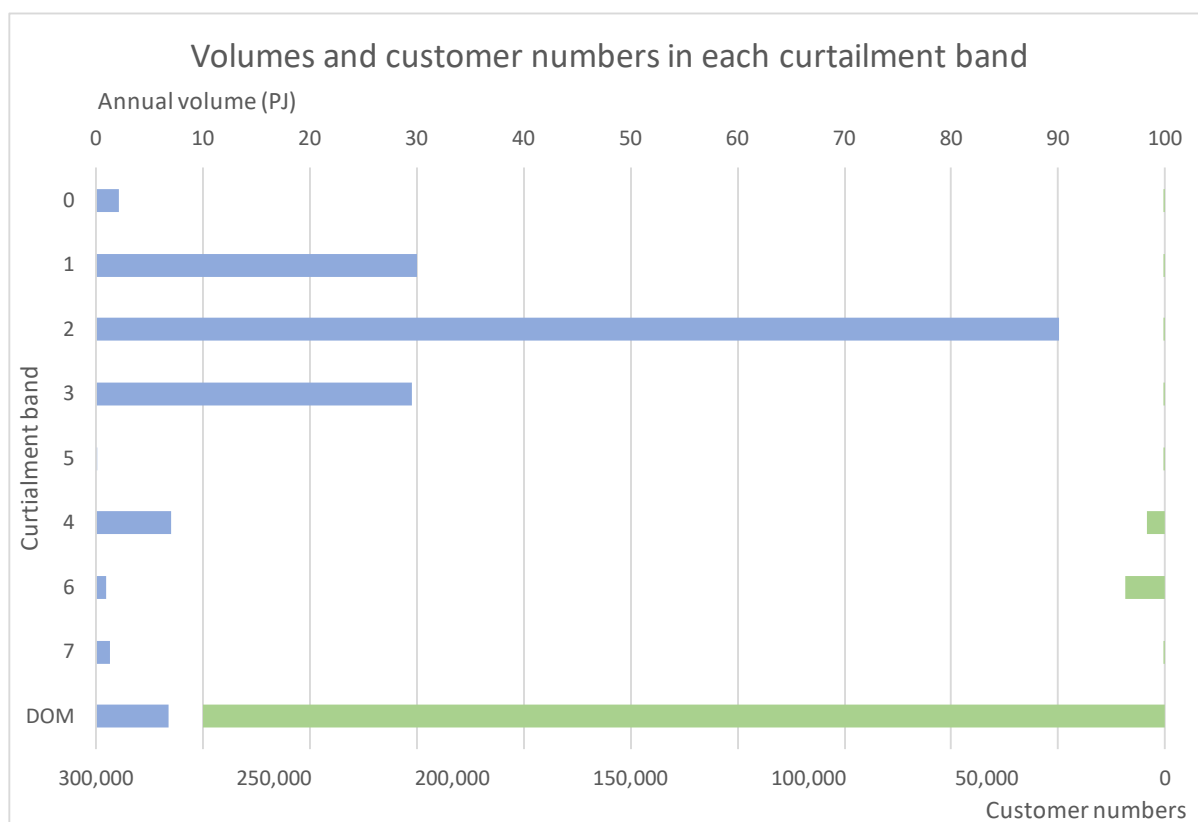
Curtailment band	Consumer installation's gas consumption in gigajoules (GJ or terajoules (TJ))	Description
0	N/A	Any consumer installation, to the extent that gas is used for injection into gas storage
1	More than 15 TJ per day	Any consumer installation supplied directly from the transmission system and that has an alternative fuel capability
2	More than 15 TJ per day	Any consumer installation supplied directly from the transmission system and that does not have an alternative fuel capability
3	More than 10 TJ per annum and up to 15 TJ per day	Large industrial or commercial consumer installation
4	More than 250 GJ per annum and up to 10 TJ per annum	Medium-sized industrial or commercial consumer installation
5	More than 2 TJ per annum	Any consumer installation (whether or not in any of curtailment bands 0 to 4), to the extent that an essential services designation applies to the installation
6	250 GJ or less per annum	Small commercial consumer installation
7	Any	Any consumer installation (whether or not in any of curtailment bands 0 to 6), to the extent that a critical care designation applies to the consumer installation

(Schedule 3, CCM Regulations)

The annual volumes and customer numbers represented by each band are shown in the figure below. Note that this chart, and all other volume-based charts in this chapter, use calendar

2017 as a representative time frame, since the extended outages of Pohokura in 2018 depressed gas volumes in that year. Domestic consumers (denoted DOM) are included for comparison, although they are not covered by the CCM Regulations.

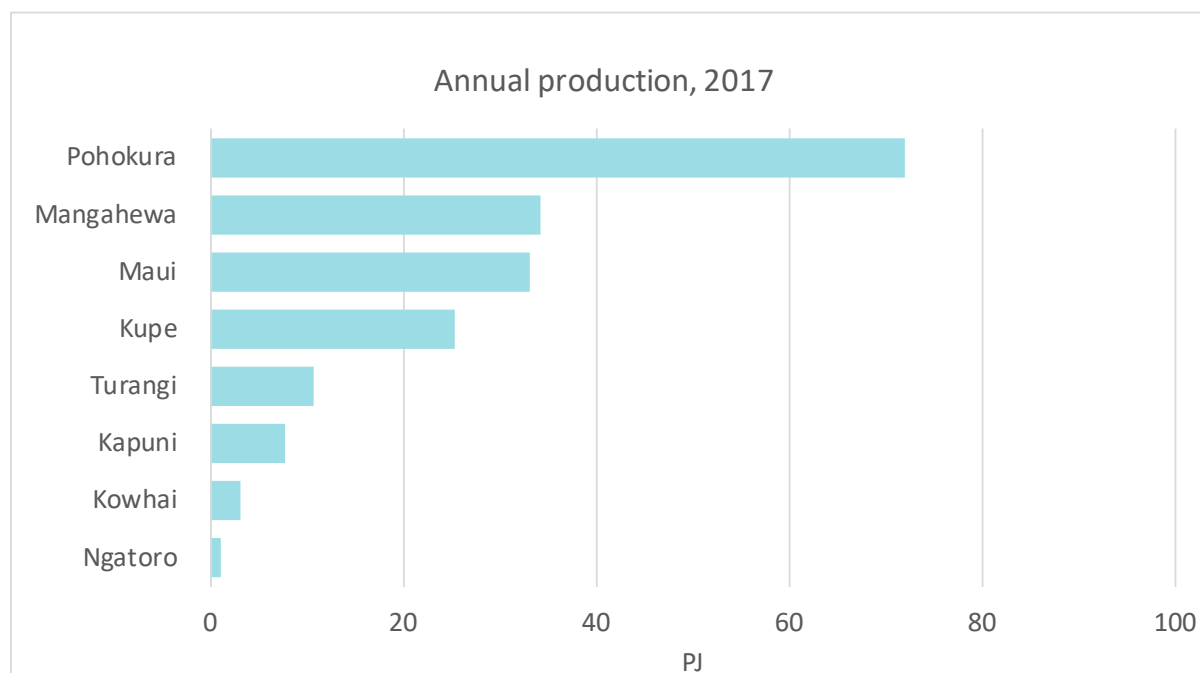
**Figure 7 Volumes and customer numbers by curtailment band**



As a comparison, the figure below shows annual gas production volumes.



**Figure 8 Annual gas production, 2017<sup>8</sup>**



(Ministry of Business, Innovation and Employment, 2019)

## 5.2 Are the curtailment bands fit for purpose?

In general terms, there are essentially two types of events that can trigger a critical contingency: one is an unexpected outage of one or more gas production stations; and the other is an event that impairs the pipeline's ability to transmit gas. Since the introduction of the CCM Regulations, there have been two critical contingencies that resulted in demand curtailment, one of each type. It is useful to look at these examples to identify any improvements that could be made to the curtailment arrangements.

### 5.2.1 Production station outages

For critical contingencies caused by production station outages, the goal of demand curtailment is to stabilise pressure in the transmission system by balancing overall gas demand with the amount of gas coming into the system. For example, during the March 2012 Pohokura production station outage, bands 0 and 1 were curtailed completely, while band 2 was curtailed partially,<sup>9</sup> allowing some thermal generation consumers to continue generating. In other words, demand curtailment of only part of band 2 was required to balance the transmission system.

As shown in Figure 7 and Figure 8, there is little alignment between production station volumes and curtailment band volumes.<sup>10</sup> In the case of a Pohokura outage, as the March 2012 contingency event demonstrated, curtailing bands 0 and 1 themselves would be insufficient to balance the pipeline, but curtailing band 2 as well would result in excessive – and therefore inefficient – levels of curtailment.

<sup>8</sup> Annual gas production for the year 2017 was chosen as 2018 was an unusual year with several production outages and at the time of writing this document 2019 data was unavailable.

<sup>9</sup> At the time, bands 1 and 2 were known as 1a and 1b, respectively.

<sup>10</sup> Note that annual volumes are presented in Figure 7 and Figure 8, but the relative sizes of the bars would be the same if average daily volumes were shown.

The actual amount of curtailment required during a critical contingency depends on the supply/demand balance on the day, of course, but the chart suggests that outages of Mangaheua, Maui, or Kupe might also necessitate some curtailment of band 2.

In other words, there appears to be the opportunity to make the curtailment associated with a production station outage more efficient through reconfiguring the curtailment bands.

### **5.2.2 Pipeline event**

The other type of critical contingency that can occur is a pipeline event, where the ability of a transmission pipeline to carry gas is impaired, either partially or totally. Such a situation can arise from damage to the pipeline itself, as in the Maui pipeline outage in October 2011; or due to other factors that lead to pressures being lowered in the pipeline, as happened during the Pohangina River flood in 2004.<sup>11</sup>

In such situations, it is particularly important for the CCO to effect demand curtailment downstream of the incident in a timely and efficient way. With reduced or no gas flowing into the affected area, this is the only way to achieve supply/demand balance and preserve gas pressure.

In the Maui outage in 2011, the CCO called for demand to be fully curtailed at the power stations north of the pipeline damage – Huntly, Southdown, and Te Rapa (note that the petrochemicals plants are located in Taranaki and were unaffected by the incident). Following modelling work and internal discussions, the CCO called for full curtailment of bands 2-6, “due to the uncertainties associated with the integrity of the Vector 200 line and the time it may take for curtailment directions to be effectively implemented.” (Critical Contingency Operator, 2011) Once the transmission system was reconfigured (to allow the Vector 200 line to supply gas north of Rotowaro) and actual levels of demand curtailment were known, the CCO began incrementally allowing some demand to be restored.

Each critical contingency must be managed according to system conditions at the time, of course, and it is prudent for the CCO to be conservative in managing system linepack and pressures. But it appears there is also a case for reviewing the curtailment bands to see if there are ways that demand curtailment could be made faster and more predictable.

## **5.3 Curtailment bands by consumer numbers and volume**

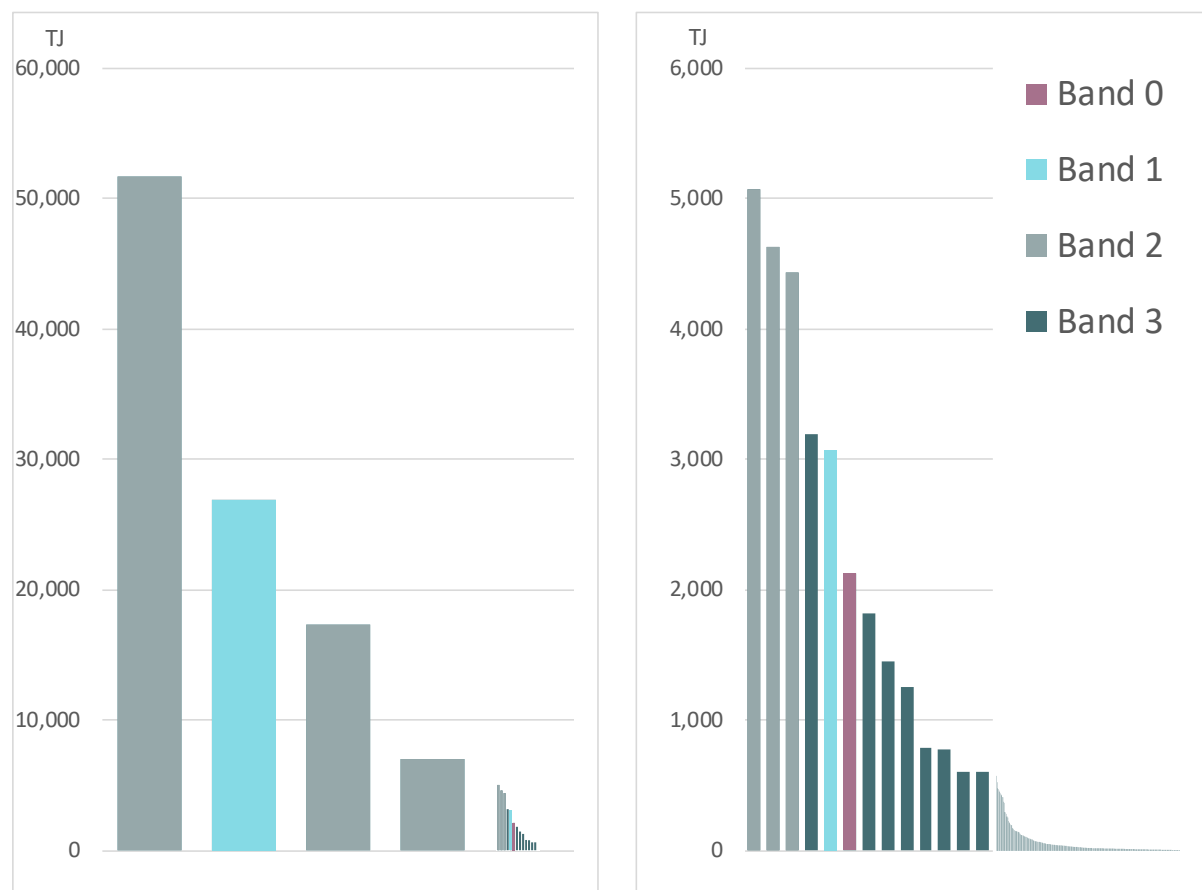
There are 328 consumers in bands 0 to 3. The largest is Methanex Motunui, which uses over 51,000 TJ of gas yearly.<sup>12</sup> At the bottom end of band 3, there are about 130 consumers who use less than 20 TJ of gas per year. The charts below show the number and scale of these consumers.

---

<sup>11</sup> The floodwaters destroyed a bridge that had a gas transmission pipeline attached to it. The pipeline itself was undamaged, but it became untethered from the bridge structure and floated in the floodwaters, vulnerable to damage from floating debris travelling downstream. Gas continued to flow through the pipeline, but at a reduced rate, so as to minimise the risk of a large gas escape should the pipeline be damaged.

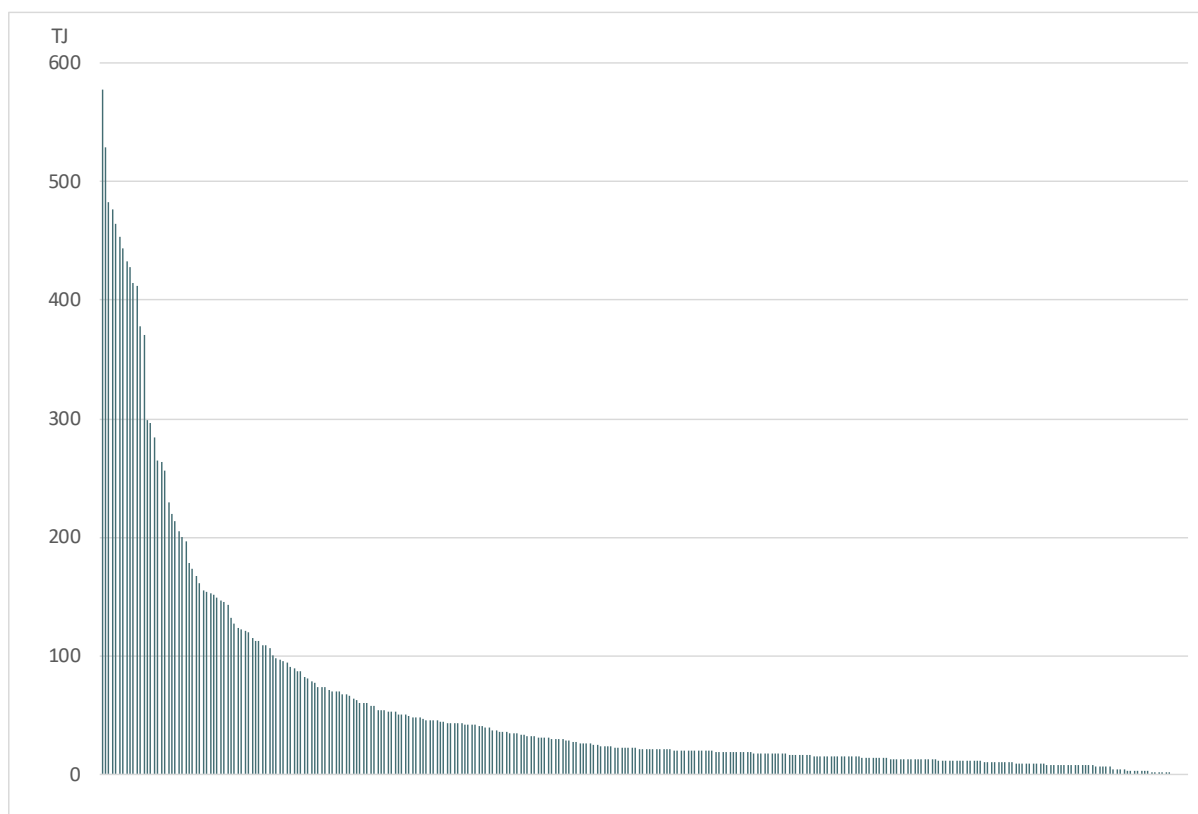
<sup>12</sup> Note that calendar 2017 has been used to calculate annual volumes, as calendar 2018 is likely to understate typical consumption due to unscheduled outages at the Pohokura field that year.

**Figure 9 Consumers using more than 600 TJ per year**



The two charts above show the 17 largest consumer sites – those that use more than 600 TJ of gas a year. The chart on the left shows all 17 consumers – the largest four on the left, and the remaining 13 to scale on the right. The chart on the right shows that same group of 13 consumers using a vertical scale that is 1/10<sup>th</sup> of the previous one; that is, the first bar in the left-hand chart represents ten times more gas than the first bar on the right-hand chart. The right-hand chart also includes the balance of the Band 3 consumers to scale.

**Figure 10 Band 3 consumers using less than 600 TJ annually**



The chart above shows the remaining consumers in band 3. Again, the vertical axis in this case is 1/10<sup>th</sup> the scale of the previous chart – here, the leftmost data point represents about 580 TJ annual consumption.

## **5.4 Options for bands 1 and 2**

Under the CCM Regulations, band 0 is for gas storage, band 1 is for consumers who use more than 15 TJ per day and have an alternative fuel capability, and band 2 is for consumers who use more than 15 TJ per day but do not have alternative fuel capability.

Gas storage is a means of putting gas from the transmission system into a reservoir so that it can be withdrawn and consumed at a later stage. It enables relatively cheap gas to be bought and held, to be used at a later time when gas prices are higher. During a critical contingency, when gas is scarce, it makes sense that the first class of consumer to be curtailed is gas storage. Gas Industry Co does not propose to change the definition of band 0.

For bands 1 and 2, there are three issues to examine: the distinction between consumers with and without alternative fuels, the inconsistent use of volumes in their definitions, and the band sizes. Each of these is discussed in turn below.

### **5.4.1 Distinction between consumers with and without alternative fuel capability**

Prior to 2013, the CCM Regulations made a distinction between consumers with and without alternative fuel capability for consumers using more than 15 TJ per day as well as for consumers using more than 10 TJ per year. Following consultation with stakeholders, Gas Industry Co recommended to the Minister that the distinction for consumers using more than 10 TJ per year but less than 15 TJ per day be removed.

There were several reasons for this recommendation. On the face of it, it would seem sensible to curtail users who can switch to an alternate fuel ahead of users who cannot. However, the size of the band of consumers with alternative fuels was small in comparison to the band of consumers without alternative fuels, meaning that both bands would likely have been directed to curtail at the same time in a critical contingency event. Further, it was considered that having a distinction based on alternative fuel capability might act as a disincentive to gas consumers considering installing such capacity.

Gas Industry Co considers that these same points could be used to argue against retaining the distinction between large consumers with and without alternative fuel capability. As outlined in section 4.2.1, band 1 is likely to be insufficient to manage most critical contingencies caused by production station outages, so there is little practical difference at the moment between the two bands. As well, preserving the distinction may disincentivise dual fuelling where it would otherwise be efficient to do so.

Further, Gas Industry Co is aware that the definition of “alternative fuel capability” has been applied in a rather strict sense. There are only two consumers in band 1, and both do have the ability to consume a fuel other than natural gas. But Gas Industry Co is also aware that there are some industrial consumers who have alternative natural gas supply arrangements, as they can receive natural gas via private pipelines that are unconnected to the open-access transmission system. Arguably such consumers should also be considered to have “alternative fuel capability,” since they can continue to operate without taking gas from the transmission system. However, if consumers with private pipeline connections were included with those with alternative fuel capabilities, that band would likely include most if not all band 2 consumers.

Therefore, it seems that alternative fuel capability is not a useful distinction in terms of curtailment arrangements, and it may disincentivise efficient consumer decisions. Gas Industry Co proposes to eliminate this distinction in the curtailment band definitions.

<i>Q6: Do you agree that the distinction between large consumers that have alternative fuel capability and those that do not should be removed from the curtailment bands? Why or why not?</i>
--

#### **5.4.2 Definitions of bands 1 and 2**

The above discussion raises the question: if alternative fuel capability is not a useful way to distinguish bands 1 and 2, then what would be? At the moment, the consumers in bands 1 and 2 are largely petrochemicals plants and thermal generation stations, along with one large industrial consumer.

Gas Industry Co considers that there could be merit in distinguishing bands 1 and 2 in terms of the type of gas usage: band 2 for electricity generation, and band 1 for other large users. This would provide a measure of priority for thermal generation stations and help to support the security of the electricity system. As outlined above in section 2.2, thermal generation is an important part of New Zealand’s electricity generation mix.

Thermal power plants have generated in practically all half hourly trading periods in the past ten years. Thermal generation often plays the role of the marginal generator, providing electricity to “top up” the generation coming from renewables and meet total electricity demand. Essentially, thermal generation enhances the security and reliability of the generation system.

It is for these reasons that Gas Industry Co proposes putting thermal generation into its own band, after the other large users. In this way, electricity generation will be curtailed only if

curtailing band 0 (storage) and band 1 (other large users) is insufficient. It is possible that some critical contingencies, such as some production station outages, could be managed through curtailing bands 0 and 1 only, leaving the electricity system unaffected.

If this proposal were to go ahead, Gas Industry Co proposes that a “gas thermal generator” be defined as a consumer who generates electricity for export to the electricity grid. The band would also be subject to the usage thresholds discussed below.

*Q7: Do you agree with reserving band 2 for large consumers who are electricity generators who export electricity to the grid? If not, what alternative way would you suggest for defining bands 1 and 2?*

### **5.4.3 Ambiguity in band definition**

One issue that has been raised with Gas Industry Co is the difference in defining the curtailment bands: bands 3, 4, and 6 are defined by annual consumption volumes; while bands 1 and 2 use daily volumes. This difference creates some ambiguity in the definitions. While annual volumes tend to be straightforward delimiters, there is a question about using daily volumes, which can be highly variable. Does the existing definition imply that a band 1 or 2 consumer uses 15 TJ every day? Most days? Once per year? The question is relevant as there have been instances of a band 3 customer using more than 15 TJ per day.

Gas Industry Co considers that it would be simpler and more straightforward for large industrial consumers to be classified into bands by annual consumption, as other consumers are. The question is, what should be the threshold?

From an examination of annual volumes in Figure 9 and Figure 10 above, using a threshold of 4,000 TJ per year as the dividing line between bands 1 and 2 (as a lower limit) and band 3 (as an upper limit) would codify the classifications as they stand today. This seems a sensible delimiter as there is a wide gap between the smallest consumer greater than 4,000 TJ annual consumption and the next largest consumer. Thresholds of, for example, 2,000 TJ or 1,000 TJ per year could also be considered; each would result in additional consumers and volumes moving out of band 3 and into bands 1 and 2.

If the proposal for limiting band 2 to gas thermal generation is progressed, then it is worth considering consumption thresholds specifically for that subset of consumers. At the moment, the electricity generators who would be in band 2 include two baseload generators; one co-generation plant, which produces steam as well as electricity; and one peaking plant. An analysis of future gas supply and demand scenarios commissioned by Gas Industry Co suggests that future gas demand for baseload generation will drop away, as baseload generation is crowded out of the market by cheaper wind and geothermal options. Demand for gas for cogeneration and peaking, in contrast, may remain at least through 2050. (Concept Consulting, 2019)

In a world where thermal generation runs less frequently but is still needed to cover peak demand, it perhaps does not make sense to define the thermal generation curtailment band solely by annual demand. A peaking station may not run enough for its annual consumption to reach 4,000 TJ, but when such a station runs, it can easily consume more than 15 TJ per day.

For this reason, if the proposal for band 2 goes ahead, Gas Industry proposes that it is defined by both an annual consumption volume as well as the existing daily consumption figure. That is, the band should contain gas thermal generators who consume more than 4,000 TJ per year (as this will include baseload and cogeneration plant) and those who consume more than 15 TJ per

day (to include peaking generation). 5.6.1 below discusses how the per day threshold would be calculated.

*Q8: Do you agree that the lower threshold of the curtailment band for the largest consumers should be changed to yearly consumption? Why or why not?*

*Q9: Do you agree with the proposed 4,000 TJ per year threshold? Is there a different threshold you consider would work better?*

*Q10: Do you agree with an annual threshold and a daily consumption threshold for a curtailment band of gas thermal generation plant?*

## 5.5 Create a band between 2 and 3?

While band 2 has a handful of some of the largest gas consumers, band 3 has over 300 consumers with wide variation in their consumption volumes, as shown by the charts in Figure 9 and Figure 10 above. As such, the size of the band can be cumbersome when rapid demand curtailment is required. There could be merit in subdividing band 3 so that a relatively small number of the largest customers would go into the newly created band, and the remainder of smaller band 3 customers would remain where they are.

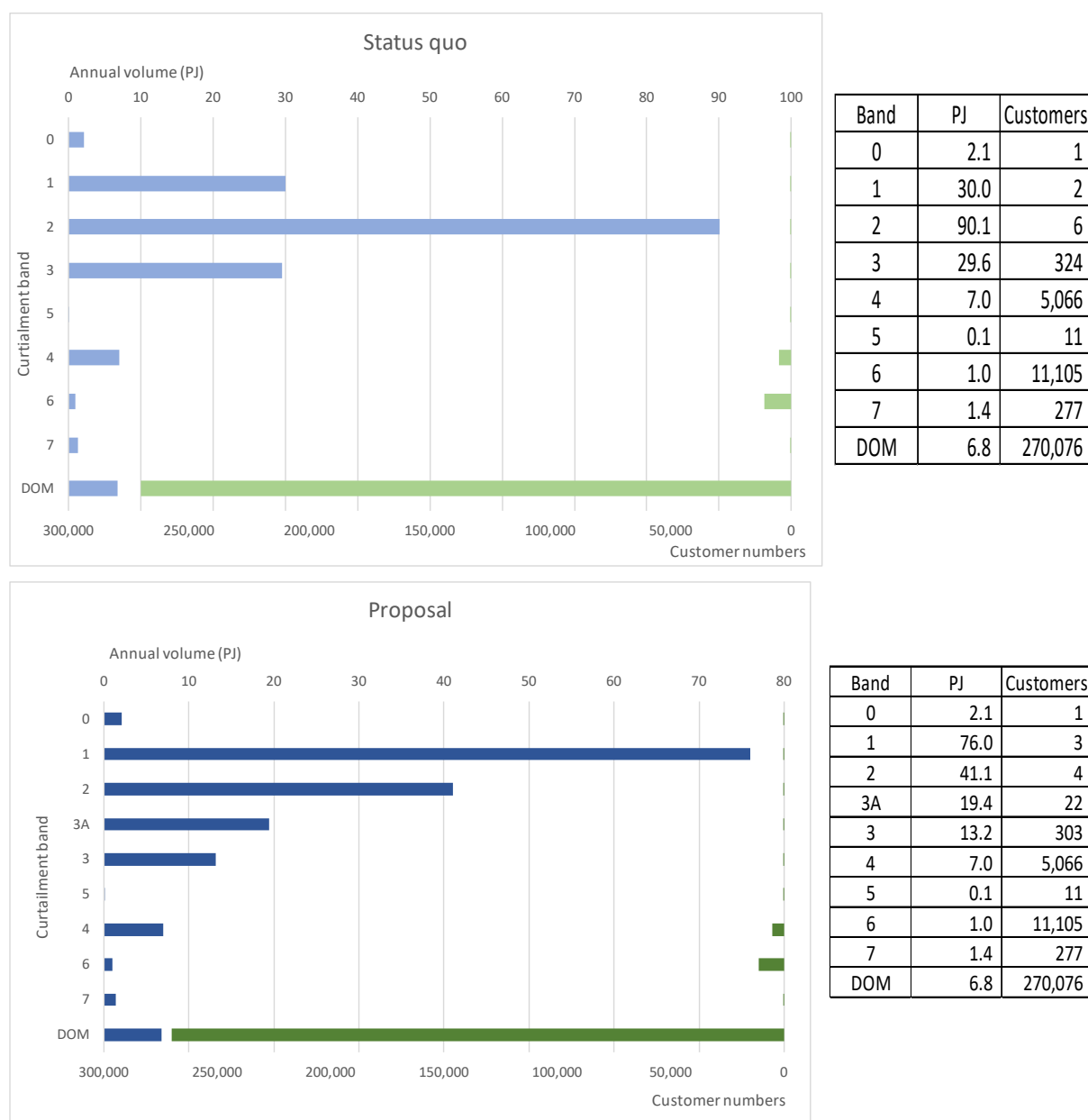
The new band could be called band 3A, and in the curtailment order, band 3A would be curtailed after band 2 but before band 3. In this way, nothing would change for the band 3A consumers: they would still be directed to curtail in instances where a critical contingency required demand curtailment greater than that achieved by curtailing bands 0 through 2. Consumers who remain in band 3 would potentially benefit, as they may not be needed for demand curtailment in instances where otherwise, the whole of band 3 would have been directed to curtail. The new band 3A would provide the CCO with another band that represents a relatively large volume but contains relatively few consumers – one that should be able to respond quickly to a curtailment direction. This should facilitate the efficient management of a critical contingency.

As shown in Figure 10 above, there is a relatively large gap between consumers using less than 300 TJ per year and the next largest consumer, and this could make a logical threshold between bands 3A and band 3. Defining band 3A in this way would include about two-thirds of the volume of the current band 3 with less than 10% of its consumers. About 300 consumers would remain in band 3.

*Q11: Do you agree with the proposal to create curtailment band 3A as described above? Do you agree with an annual consumption threshold of 300 TJ? Why or why not?*

The cumulative effect of these proposals is shown in the charts below. The top chart repeats the data from Figure 7, for comparison.

**Figure 11 Status quo and proposed curtailment bands**



Combined, the proposals to amend the curtailment bands help to achieve the twin goals of efficient and timely demand curtailment. Decreasing the volume of the largest band and adding an additional band will mean that the CCO is better able to match demand curtailment levels to the amount of reduction needed, leading to more efficient curtailment.

Under the proposed revised arrangements, curtailment will also be faster and more predictable. The time to effect curtailment depends in part on the amount of time that it takes to notify consumers of the need to stop their gas usage. With the creation of band 3A, the CCO will be able to call for the curtailment of over 83% of gas demand by curtailing just 30 gas consumers. This will enable a rapid and more certain response in situations such as pipeline outages, when fast demand response is essential to managing pipeline pressure.

*Q12: Do you have any other comments about the proposed changes to the curtailment bands?*



## 5.6 Other matters of band definition

### 5.6.1 Measuring consumer consumption

A remaining source of ambiguity in the curtailment band definitions is how consumer consumption is measured for the purpose of classifying consumers into curtailment bands. The CCM Regulations are silent on this issue, and Gas Industry Co considers that there would be merit in clarifying the matter. Because consumption in any one year can vary due to unusual circumstances – as happened in calendar 2018, with lowered consumption due to production outages, and more recently with the COVID-19 lockdown – it would make sense to average consumption from a number of years.

Gas Industry Co proposes that three years is a period long enough to smooth out yearly anomalies but also short enough to reflect current, rather than historical, consumption. That is, the average of a consumer's consumption for the three years immediately preceding the current one would be used for determining that consumer's curtailment band. Depending on stakeholder feedback, this issue may be included in the CCM Regulations, or the CCM Regulations may be amended to allow the industry body to make a determination on this issue.

For the daily usage threshold proposed for the thermal generators in band 2, Gas Industry Co similarly proposes that a three-year window be used for determining whether the consumer uses over 15 TJ per day from time to time.

*Q13: Do you agree that guidance is required on assigning consumers to curtailment bands? Do you agree with the concept of an average over the previous three years for the annual threshold volumes?*

*Q14: Do you agree with using three years to determine whether thermal generators use at least 15 TJ per day from time to time?*

### 5.6.2 Defining “consumer installation”

Curtailment band definitions in the CCM Regulations refer to “consumer installations.” Consumer installation is defined as

*1 or more gas installations that have a single point of connection to a distribution system or the transmission system and for which there is, or previously has been, a single consumer*

In some cases, though, gas consumers can have more than one gas connection that supplies a single location. Two obvious examples are Methanex Motunui, which is supplied by the Ngatimaru Road Delivery and Faull Road welded points; and Ballance, which is supplied by the BAL09626 and BAL08201 welded points. In both of these instances, one connection point supplies gas for fuel, and one supplies gas as a feedstock – that is, both connections feed the same manufacturing process.

Gas Industry Co considers that cases such as Motunui and Ballance should be considered a single consumer installation for the purposes of assigning a curtailment band and directing curtailment during a critical contingency. At the moment, there is no ambiguity, as the Motunui ICPs and the Ballance ICPs fall into the same curtailment band<sup>13</sup>. In the future, though, it is possible that consumption at one of the ICPs may decrease to the point where it would be

---

<sup>13</sup> Note that the charts in this section have depicted amalgamated volumes for both Methanex Motunui and Ballance.

classified into a different curtailment band, a situation that could lead to uncertainty regarding the overall plant's place in the curtailment order. It is also possible that a new gas consumer may be connected via two or more ICPs.

Gas Industry Co proposes that the definition of "consumer installation" be amended to include a gas installation that has multiple points of connection to a distribution system or transmission system.

<i>Q15: Do you agree with amending the definition of "consumer installation" to include a gas installation with multiple points of connection to a distribution system or transmission system? Why or why not?</i>
--

## 6. Curtailment instructions

### 6.1 How curtailment instructions are disseminated

During a critical contingency, the CCO issues curtailment instructions to the transmission system owner, which transmits those instructions to large consumers and retailers. Retailers then instruct their affected consumers. In effect, instructions cascade down from the CCO to the transmission system owner, to retailers, and then to consumers.

This system has worked historically because the parties who were required to pass on curtailment instructions were those who had contractual relationships with the parties who were receiving the instructions. In other words, large consumers and retailers all had a contract with the transmission system owner for the shipment of gas.

Recently, a number of retailers have entered the gas market who are not shippers and do not have a relationship with the transmission system owner. The question is how to ensure that these retailers receive curtailment notices so that they can instruct their own consumers.

Gas Industry Co considers that it makes sense to retain the existing construct in the CCM Regulations that notices are passed down through existing relationships. To that end, it seems sensible to require the transmission system owner to issue directions to gas wholesalers as well as to retailers who are shippers and to large consumers. Gas wholesalers then would have an obligation to issue directions to their retailers. Retailers' obligations would remain the same: to instruct their consumers and to provide updates of their own and their consumers' compliance with the directions. Compliance updates for retailers who are not shippers would go through their gas wholesaler to the transmission system owner; while compliance updates for shipper retailers would go directly to the transmission system owner, as happens now.

*Q16: Do you agree that gas wholesalers should be responsible for issuing critical contingency notices to their retailers and for receiving and forwarding compliance updates to the transmission system owner? If not, can you suggest an alternative way to ensure that non-shipper retailers and their consumers receive critical contingency directions and provide compliance updates?*

### 6.2 How curtailment instructions apply

At the heart of the CCM Regulations is the ability of the CCO to direct curtailment of gas demand. This is the primary tool that the CCO has for balancing the transmission system during a critical contingency.

#### **Partial curtailment of a band**

At times, the CCO, in monitoring flows and pressures on the transmission system, determines that only partial curtailment of a band would be sufficient to balance the transmission system. Regulation 53(2) provides for the CCO to direct curtailment of a subset of load within a curtailment band for this reason.

It has come to Gas Industry Co's attention that there is perhaps some ambiguity in the way the CCM Regulations are drafted with respect to partial curtailment. Regulation 53(2)(c) provides for subsets defined by a percentage of maximum consumer load, but on any given day, one or more consumers are likely not to be at their maximum load.

Since the CCO is working to manage actual transmission conditions, it seems sensible to allow for subsets to be defined by actual consumption rates on the day. Gas Industry Co proposes that "on the day" in this case be the period immediately prior to the critical contingency being declared. This would prevent any perverse incentives for consumers to increase consumption after a contingency is declared.

This proposal would allow the CCO to direct curtailment of a percentage of the load in a band, using the gas demand immediately before the contingency as the base. For example, a consumer may have a maximum hourly demand of 100 GJ, but on a day just prior to a critical contingency, it was using 50 GJ per hour. If the CCO directs that band to curtail its usage by 50%, then that consumer would be expected to reduce its gas usage down to 25 GJ per hour.

### **Critical processing consumers**

A similar ambiguity may exist among designated consumers with approved shutdown profiles. If a consumer with a critical processing designation is operating at less than full load when a critical contingency is declared, then how should an instruction to curtail be implemented?

Critical processing consumers have an approved shutdown profile, which specifies the amount of gas that may be used to complete critical processing and the period of time for which the consumer may use gas. If a critical processing consumer is at less than full load when a critical contingency is declared, then it seems reasonable that it would need less gas and less time to complete critical processing and effect an orderly shutdown of plant. In such a case, the consumer should follow its approved shutdown profile from the consumption rate at the time of the critical contingency declaration.

Gas Industry Co therefore proposes that the CCM Regulations be amended to clarify that:

- directions for partial curtailment may be made with regard to consumption rates at the time the critical contingency was declared; and
- designated shutdown profiles apply to consumption rates at the time the critical contingency was declared: less than usual gas demand means a shorter shutdown profile.

*Q17: Do you agree with this assessment and proposals? Why or why not?*

## **6.3 Consumers with critical processing designations**

The purpose of designations under the CCM Regulations is to modify curtailment arrangements as they apply to a consumer installation that needs to continue using gas in a critical contingency in order to provide critical care, provide essential services, secure the supply of electricity, or to complete critical processing. Proposals in respect of critical care and essential services designations are presented later in this paper. This section relates to curtailment arrangements for critical processing consumers.

At the moment, consumers with critical processing designations in Bands 1 to 3 begin their shutdown profiles when their band is directed to curtail; and they must completely stop using gas as soon as possible when Band 4 is curtailed. Band 4 contains over 5,000 small industrial and large commercial customers who each consume an average of less than 4 GJ of gas per day.

Conversely, Band 2 contains three consumers with critical processing designations, and these three consumers each have an average daily consumption of over 69,000 GJ.

While Gas Industry Co recognises the importance of critical processing designations to the consumers who hold them, it does not seem proportionate to require curtailment down to Band 4 before critical processing consumers are required to cease using gas. Further, the current linkage between curtailing critical processing consumers and curtailing a specific band can be cumbersome. It means that another band of consumers must stop using gas in order for critical processing consumers to curtail fully, which can lead to excessive and inefficient levels of demand curtailment. These are issues that have also been raised to us by the CCO. The upshot is that the current curtailment arrangements can at times impede the CCO's ability to effectively manage a critical contingency.

Gas Industry Co therefore proposes that the order of curtailment be modified so that large industrial consumers are directed to curtail fully before the next tranche of industrial consumer; and all industrial consumers are directed to curtail fully before commercial consumers, as set out in the table below. We also propose that the complete curtailment of critical processing consumers be de-linked from the curtailment of a specific band. That is, the CCO should have the ability to direct the complete curtailment of critical processing consumers as part of the curtailment order, without directing an additional curtailment band to stop using gas. In the table below, a "C" denotes consumers with a critical processing designation.

**Table 4 Proposed curtailment order**

Direction to curtail	Effect of direction:				
	Stop using gas as soon as possible	Follow or continue designated shutdown profile	Bands to remain curtailed		
<b>1</b> (band as proposed)	Band 1	Band 1C			
<b>2</b> (band as proposed)	Band 2	Band 1C Band 2C	1		
<b>Critical processing consumers in bands 1 and 2</b>	Band 1C Band 2C		1	2	
<b>3A</b> (if created)	Band 3A	Band 3AC	1 1C	2 2C	
<b>3</b>	Band 3	Band 3AC Band 3C	1 1C	2 2C	3A
<b>Critical processing consumers in bands 3A and 3</b>	Band 3AC Band 3C		1 1C	2 2C	3A 3
<b>4</b>	Band 4	Band 4C	1 1C	2 2C	3A 3AC 3 3C

Direction to curtail	Effect of direction:				
	Stop using gas as soon as possible	Follow or continue designated shutdown profile	Bands to remain curtailed		
<b>5</b>	Band 5	Band 4C	1 1C  4	2 2C	3A 3AC 3 3C
<b>Critical processing consumers in band 4C</b>	Band 4C		1 1C  4	2 2C  5	3A 3AC 3 3C
<b>6</b>	Band 6		1 1C  4 4C	2 2C  5	3A 3AC 3 3C
<b>7</b>	Band 7		1 1C  4 4C	2 2C  5	3A 3AC 3 3C  6

In this way, the largest consumption volumes will be available to the CCO for balancing the transmission system earlier in the curtailment order. These changes should make the curtailment process faster and more efficient.

*Q18: Do you agree with the changes to the curtailment order as outlined in Table 4? Why or why not?*

## 7. Information provided to the CCO

Good information on the configuration and use of the transmission system is essential for the CCO to perform its role effectively. As well as needing to monitor system conditions in real time, the CCO needs information to validate and update the load models that are used during a critical contingency.

### 7.1 Transmission system information

Although the CCM Regulations were amended in 2013 to identify the types of transmission system information that the TSO is required to provide to the CCO, there have been instances where the CCO has been frustrated in its requests for system information. It is therefore proposed that Schedule 4 be amended as follows:

#### Schedule 4

##### Transmission system information

The information referred to in regulations 10(1) and 38(1)(d) in respect of a transmission system is as follows:

- (a) a high-level map indicating the geographic location of the network and the critical contingency pressure thresholds;
- (b) a diagram, engineering drawings in paper and electronic format, with any cross-referenced information contained in an accompanying schedule, of each transmission system of the pipeline owner showing the following details:
  - (i) all assets in the system with notations showing—
    - (A) internal, external, or nominal pipe diameters used (identifying whether internal, external, or nominal pipe diameters are used), pipe wall thickness; and
    - (B) pipe design pressure ratings and operating pressure; and
    - (C) all stations, main line valves, intake and offtake points, flow control valves, systems isolation valves and non-return valves, including a unique identifier for each item; and
    - (D) the distance between the items referred to in subparagraph (C); and
    - (E) pipeline route maps in paper and electronic format.
  - (ii) if applicable, the points where a significant change has occurred since the previous disclosure of the information referred to in subparagraph (i), including—
    - (A) a clear description of every point on the network that is affected by the change; and
    - (B) a statement as to whether the capacity of the network, at the points where the change has occurred or other points (as the case may be), has increased or decreased or is not affected; and
    - (C) a description of the change.

## 7.2 Asset outages

Outages of production stations and large consumer facilities can have a significant impact on the operation of the gas transmission system. It is therefore important that the CCO is informed about scheduled maintenance and other actual or expected plant outages. Regulation 38A allows the CCO to request information about expected outages from gas producers, the TSO, and large consumers; and it requires those parties to provide information in response to those requests.

Gas Industry Co is aware that the CCO regularly requests from the TSO and other industry participants information about outages. This process works reasonably well for outages that are planned well in advance and therefore are notified to the CCO well in advance of their occurring. Some outages, though, come up more suddenly and can be missed in a regular schedule of information requests.

Gas Industry Co considers that a better method of ensuring that the CCO is informed about actual and expected asset outages would be for the information to be relayed to the CCO as soon as the TSO or asset owner is aware of it. That is, it should be incorporated into the business processes of gas producers, the TSO, and large consumers to notify the CCO as soon as an outage is scheduled or identified (in the case of unplanned outages) and to update the CCO if plans change. Under GTAC interconnection agreements will require interconnected parties to notify the TSO of planned and unplanned outages as soon as reasonably practicable. Like the TSO, the CCO also needs the information specified in regulation 38A to be provided in a timely manner. Gas Industry Co proposes modifying regulation 38A to require the provision of outage information as soon as practicable after an asset owner or large consumer becomes aware of it (rather than in response to a request from the CCO).

## 7.3 Consumer information

Regulation 39 requires that retailers provide the CCO with numbers of consumers and aggregate annual consumption by curtailment band. Although this information is critical, it does not always give a complete picture of the total numbers of consumers in a band or at a particular gas gate. Gas Industry Co proposes that the CCO be able to request from the industry body numbers of ICPs by curtailment band and by gas gate, as recorded in the gas registry. This information can then be used as a means of validating the data provided by retailers.

Regulation 46K(2) requires the industry body to give notice of approved designations to the CCO, the responsible retailer, and the responsible distributor. It is not clear from the drafting whether the notification includes the consumer's approved shutdown profile, but the shutdown profile is a necessary piece of information that the CCO needs to model responses to curtailment directions. For the avoidance of doubt, Gas Industry Co proposes amending this regulation to clarify that approved shutdown profiles are to be provided along with notice of an approved designation to the parties listed in regulation 46K.

*Q19: Do you agree with the proposed changes regarding information provided to the CCO? Why or why not?*



## 8. Critical contingency plans

This chapter contains proposals to modify arrangements pertaining to:

- critical contingency management plans (CCMPs), which TSOs prepare and maintain.
- retailer curtailment plans, which are the plans that gas retailers are required to develop and maintain;
- communications plan, which is a CCO-maintained document that outlines communication protocols between the CCO and the TSO.

### 8.1 Critical contingency management plan

#### Contact details

The CCM Regulations require the inclusion of contact details for suitably qualified persons employed by the TSO who will be responsible for communicating with the CCO and giving directions in accordance with the CCMP. It also requires contact details for the parties who are the target audience for communications under the CCMP:

- Operators of gas storage facilities;
- Operators of upstream gas production facilities;
- Large consumers connected directly to the transmission system;
- Interconnected parties, retailers, and shippers; and
- Gas distributors.

The CCMPs published to date have included contact details for the TSO and the CCO, generally in the form of a generic email address and a 24/7 phone number.

For contact details of the other parties, the situation is bit more complicated. There are approximately 36 different parties on the list of stakeholders. Some parties are counted more than once because different parts of their business have different functions; for example, Huntly Power station (owned and operated by Genesis Energy) is a large consumer; Genesis is also a gas retailer. It has proven impractical to include contact details for specific people representing all 36 possible recipients of critical contingency messages.

Instead, the CCMP lists the names of the individual organisations and states that the contact details of the relevant personnel in each of those organisations can be obtained on OATIS when necessary. Hugh Driver, the industry expert who reviewed the CCMP in 2017, noted that

One of the benefits of a single source of data (OATIS) is that it avoids confusion during a critical contingency if there are differences between a separate contact list maintained via the CCMP and the main list provided via OATIS. Including reference to the contact list maintained in OATIS appears to be a satisfactory mechanism, providing that First Gas undertakes regular checks to ensure the contact details remain current in accordance with regulation 33 (1).

Gas Industry Co notes, however, that there have been various interpretations of the CCM Regs regarding the requirement for contact details. We therefore propose to amend the CCM Regs to clarify that a reference to an authoritative data source is an acceptable means of including contact details.

At the same time, it is important to have a process to ensure that contact details are actively maintained. Gas Industry Co also proposes adding a requirement that CCMPs must outline the process by which the TSO will manage and maintain contact details, to ensure that they are correct.

*Q20: With respect to CCMPs, do you agree with the proposed changes to contact detail requirements as outlined above?*

### **Minor edits**

Regulations 33(4), 34(6), and 65(3) provide that a TSO must consult on a proposed amendment to a CCMP, unless the TSO and the CCO agree that the proposed amendment is immaterial, and then submit the amendments to the industry body for approval. Under regulation 27, the industry body must appoint an expert advisor to review any proposed amendment to a CCMP.

The expert advisor process is appropriate for significant proposed changes to a CCMP, because it ensures consultation with the CCO and scrutiny by the expert adviser to ensure that it meets regulatory requirements. However, there are no exceptions under regulation 27 for immaterial amendments. This means that amendments that the TSO and the CCO agree are immaterial (and thus not subject to consultation) still trigger the expert adviser process, which does not seem warranted in all situations.

On the other hand, without some sort of approval process, there could be incentives for the TSO and the CCO to adopt a broad definition of immaterial as a way of avoiding consultation and scrutiny by the expert adviser.

Gas Industry Co therefore proposes a hybrid process for CCMP amendments that the TSO and CCO have agreed are immaterial. The amendments would still be submitted to the industry body for approval. The industry body would then have three avenues available to it:

1. Approve, for proposals that it agrees are immaterial and appropriate;
2. Send the proposed amendment back to the TSO, for proposals that it does not agree are immaterial, or where it feels that industry input is warranted; or
3. Follow the usual expert adviser process, for proposals that it deems require the scrutiny of the standard approval process.

In instances where the second option is followed, the TSO would need to conduct the consultation and resubmission of the proposed amendment in accordance with r26.

*Q21: Do you agree with the proposed CCMP amendment procedures outlined above? Why or why not?*

### **Go-live of an amended CCMP**

Under the procedures for amending a CCMP provided for in regulation 33, there is no provision for an amended CCMP to take effect on a certain date. That is, the drafting assumes that once a

CCMP is approved, it is published and takes effect. This is a reasonable outcome in many cases, where the CCMP needs to be amended because it has become out of date.

However, the anticipated implementation of GTAC has highlighted that there are scenarios in which it would be desirable to specify when an approved amended CCMP will go into force. Regulation 25(2) states that a proposed CCMP must be consistent with the transmission code, so, implicitly, a CCMP that is consistent with a new code cannot be implemented until that transmission code is. Further, there is nothing in the CCM Regulations that disallows the specification of a go-live date for a CCMP. Still, for the avoidance of doubt, Gas Industry Co considers that it could be worthwhile for the CCM Regulations explicitly to allow the specification of a go-live date for an amended CCMP. This specification could be a date or it could refer to another event, such as the go-live date of a new transmission code.

*Q22: Do you agree with allowing a go-live date for a proposed amended CCMP?*

### **Contingency imbalance calculations**

One of the things that a CCMP must include is an outline of the process for determining contingency imbalances after a critical contingency (regulation 25(1)(h)), which must be consistent with regulations 73 to 82. Imbalances arise, for example, when a gas producer injects more (or less) gas into the transmission system than its customers have contracted to use, or when an interconnected party takes more (or less) gas than it has contracted to take. Imbalances can be either positive (adding to linepack) or negative (decreasing linepack).

The CCM Regulations stipulate that the process for determining contingency imbalances for shippers must “take into account” any allocation results under the Gas (Downstream Reconciliation) Rules 2008 (DR Rules) (regulation 74). This arrangement made sense when the DR Rules were the only way that the industry had for determining daily delivered quantities for shippers. Under the GTAC, however, imbalances are calculated daily for pipeline users (GTAC uses the term “mismatch”), and section 6.11 of the GTAC provides three possible ways that First Gas can determine the daily delivered quantities used in the imbalance calculation: using the DR Rules results, using the D+1 results, or calculating shippers’ delivered quantities in proportion to their daily nominated capacity.

It would be sensible for the contingency imbalance calculation to be able to use the same data as is used for daily imbalances (or mismatch). Gas Industry Co therefore proposes that the reference to the DR Rules be deleted from r74. This deletion will not detrimentally affect the calculation of contingency imbalances, as the process will still need to be included in the TSO’s CCMP, consulted on with industry, and assessed by the expert adviser.

*Q23: Do you agree with deleting the requirement in r74 that refers to the DR Rules? If not, why not?*

### **Testing the CCMP and retailer curtailment plans**

Regulation 34 requires the CCO to instigate exercises to test that:

- the CCMP is complete and effective;
- the contact details in the CCMP are current; and
- the list of emergency contact details maintained by retailers in their retailer curtailment plans is current.

The TSO must participate in these exercises, as well as any interconnected parties, shippers, retailers, gas distributors, and large consumers reasonably requested by the CCO.

Unfortunately, in recent years, retailers' participation has been insufficient to adequately test their emergency contact details.

After the test exercise in 2018, Exercise Paparua, the CCO stated in its exercise report (Critical Contingency Operator, 2018):

*Only one Retailer elected to contact a sample of consumers to test that the details they held were correct. The remaining Retailers elected not to contact any Consumers and placed full reliance on their business as usual process for capturing and maintaining consumer contact details....*

*It is a specific part of the purpose of the annual exercise, specified in regulation 34 (1) (c), 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. While the risk of miscommunication is acknowledged, Retailers do not need to explain the exercise scenario, they can simply state that they are testing that they have the correct contact for issues related to gas supply.*

*The CCO would ask Retailers to put plans in place, which mitigate any of their concerns, so they are able to test a sample of their contacts during the next annual exercise.*

A similar outcome happened in 2019's Exercise Matatau<sup>14</sup> (Critical Contingency Operator, 2019):

*The level of engagement in the exercise by Retailers with respect to testing emergency contact details was less than optimal:*

- *Only one Retailer elected to carry out a thorough test and contact all their consumers to test that the details they held were correct.*
- *Two Retailers contacted a small sample of consumers.*
- *One Retailer elected not to contact any consumers and placed full reliance on their business as usual process for capturing and maintaining consumer contact details.*
- *One Retailer advised that their Retailer Curtailment Plan was last updated for contact details in February 2019 which they consider to be current.*
- *Two Retailers did not provide any feedback or evidence of testing of their 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.*

Gas Industry Company considers that the annual exercise is a valuable opportunity for all of the gas industry to refamiliarise themselves with critical contingency processes and to ensure that they are prepared for an actual event. Our proposal in respect of this issue follows the next section.

## **8.2 Retailer curtailment plans**

The obligation for retailers to prepare and keep current retailer curtailment plans was added to the CCM Regulations in 2013. The requirement arose from a recommendation in the post-Maui review, which found that a number of retailers were unprepared to carry out the actions required of them during the Maui outage. The rationale for retailer curtailment plans was to ensure that retailers had planned for, and were prepared to carry out, all of the obligations that they have

---

<sup>14</sup> Both exercise reports are available in full on the CCO's website at <http://cco.org.nz/Historical-Events/>

under the CCM Regulations. The plans are required to be kept up to date, and copies are to be provided to Gas Industry Co as the industry body.

Gas Industry Co has reviewed the retailer curtailment plans submitted to us. There were good retailer practices in a number of areas, such as ways to prioritise and contact mass market consumers during a critical contingency. However, the review also raised some concerns, as some plans seemed to be:

***Incomplete:*** some plans are missing elements required under the CCM Regulations; and

***Out of date:*** a number of plans are not actively maintained and have fallen out of date.

In addition, Gas Industry Co has concerns regarding the plans' comprehensiveness. The expectation in requiring retailer curtailment plans to be prepared was that retailers would include any internal steps or contact details so that the curtailment plans would be reasonably stand-alone; that is, that they could be used by any member of the retailer's staff to initiate and carry out necessary actions during a critical contingency. It is not clear that the plans can function in this way.

Ultimately, though, the purpose of the curtailment plans is to ensure that retailers are sufficiently prepared so that they can respond quickly and effectively during a critical contingency. The question is what steps are needed to ensure that the plans are as effective as possible and are updated on a timely basis.

Gas Industry Co is concerned that the requirement to keep retailer curtailment plans current is something that retailers have had difficulty incorporating into their usual business processes. An annual requirement to provide a copy of the current retailer curtailment plan by a specified date could provide a useful prompt to retailers to ensure that their plans are current. Gas Industry Co therefore proposes that retailers be required to submit their retailer plans annually. Since it would be useful to have updated plans in advance of any industry exercise (which has generally been held in April or May), we would propose that retailer curtailment plans be submitted by 1 March each year.

Gas Industry Co also considers that the effectiveness of retailer curtailment plans should be tested as part of the annual exercise, in the same way that the CCMP is tested annually. Retailers would have an obligation to provide their curtailment plans to the CCO at the same time as they provide them to Gas Industry Co. The CCO would then take the plans into consideration when designing the annual test exercise. In this way, retailers would have an annual prompt to consider updates and improvements to their plans.

Retailers would also have a positive obligation to participate in the annual test exercises, in the same way that the TSO is required to participate.

*Q24: Do you agree with the proposal for retailers to provide their retailer curtailment plans to the industry body on an annual basis? Why or why not? Would 1 March be an appropriate submission deadline?*

*Q25: Do you agree that incorporating retailer curtailment plans into the annual exercise would be an effective way to ensure their effectiveness and currency? If not, why not?*

*Q26: Do you have other suggestions for ways to improve retailer curtailment plans?*

*Q27: Do you agree that retailers should be required to participate in annual test exercises? If not, why not?*

### **8.3 Scope of the communications plan**

Regulation 35 stipulates that the communications plan will govern the communications between the CCO and the TSO during a critical contingency. But the focus on the actions during a critical contingency overlooks the fact that there is generally a need for coordinated communications prior to the declaration of a critical contingency as well. Critical contingencies are often precipitated by a production station or pipeline outage, and the CCO's primary source of information about these events, at least initially, is the TSO. The system operator function of the TSO continuously monitors pipeline conditions and pressures, and the CCO often liaises with control room operators in assessing whether or not a situation warrants a critical contingency declaration. Of course, there are also situations where a critical contingency does not eventuate, but good communication between the CCO and the TSO is nevertheless important in these situations as well.

Gas Industry Co considers that there would be value in the communications plan explicitly including communications protocols that would apply prior to and including a critical contingency declaration. We propose that regulation 35 be amended accordingly.

*Q28: Do you agree that the scope of the communications plan should include communications that occur in monitoring the system prior to a critical contingency and in declaring a critical contingency?*

## 9. Critical care and essential services designations

The CCM Regulations include provisions for a number of categories of gas consumer that are entitled to extended shutdown periods in order to provide critical care, provide essential services, complete critical processing, and to secure the supply of electricity. The criteria for these designations can include minimum annual consumption volumes, metering configuration, and Board certification, depending on the specific designation category.

The critical care designation was added and the essential services designation significantly revised in 2013. Gas Industry Co is now proposing further refinements to these designations.

### 9.1 Lower threshold for essential services designation

Essential services designation holders are categorised into curtailment band 5. The intention of this designation is that a gas consumer in bands 1 through 4 who provides essential services would only need to curtail its gas consumption if the CCO's curtailment of the band 1 to 4 consumers was insufficient to manage a critical contingency. That is, essential services consumers would get curtailed later and less frequently than otherwise would be the case.

At the moment, one criterion for essential services designation holders is to consume more than 2 TJ of gas per year, a threshold that is out of alignment with the lower bound of curtailment band 4. This means that the protections of an essential service provider are unavailable for consumers using between 250 GJ and 2 TJ of gas, an unintended outcome of the 2013 revisions.

Gas Industry Co proposes changing the consumption criterion for essential service providers to above 250 GJ per year, consistent with the lower bound of curtailment band 4.

### 9.2 Requirement for a time of use meter

Regulation 46K requires that consumers with designations have time of use (ToU) meters. Under the Downstream Reconciliation Rules, ToU meters are required for gas consumers using more than 10 TJ of gas per year, so that daily gas quantities for these large customers can be logged accurately. The requirement for ToU meters under the CCM Regulations ensures that there is a means of assessing compliance with curtailment instructions after a critical contingency.

Gas Industry Co believes that this rationale still exists for critical processing and electricity supply designation consumers, but it does not apply equally well to critical care and essential services consumers. Many critical care and essential services consumers are nonprofit organisations who are relatively small users of gas and do not already have a ToU meter installed. In these instances, the additional expense of the ToU meters does not seem warranted.

Gas Industry Co therefore proposes to remove the requirement for critical care and essential services consumers to have a ToU meter.

### 9.3 Declaration form

Regulation 46K also provides that a designation is not effective until the industry body receives a declaration form signed by a director of the gas consumer receiving the designation. But critical



care providers and essential service providers are not necessarily body corporates. For example, some of these consumers, such as water and wastewater treatment plants, are owned by local government. At the other end of the spectrum, some residential care homes are owned and operated by corporations with dozens of facilities in their portfolios. In these cases, it can be unnecessarily difficult for the manager of a specific residential care home to obtain a director's signature.

Gas Industry Co proposes that the declaration form for critical care providers and essential service providers can be signed by a chief executive or equivalent position.

*Q29: Do you agree with the proposed changes for critical care and essential services designations? Why or why not?*



## 10. Critical contingency threshold limits

Schedule 1 of the CCM Regulations provides the threshold limits within which the TSO's CCMP must set the critical contingency trigger thresholds. Schedule 1 defines the minimum operating pressure ranges for the points of measurement that reflect the contingency situations of the different parts of the system. Schedule 1 also determines the limits for the maximum and minimum time before a minimum operating pressure is reached.

The minimum operating pressure for a pipeline, the unique requirements of an individual measurement point and the load characteristics of a delivery point all contribute to the setting of these threshold boundaries. It is important that these ranges strike the balance of being clearly defined whilst remaining sufficiently flexible to allow the TSO to tweak the thresholds in response to any minor changes in the use or operation of its system.

Where there have been more significant changes to the use or operation of the system it may be necessary to update Schedule 1 to ensure the CCM Regulations remain fit-for-purpose.

### 10.1 Current requirements

Schedule 1					r 25
Critical contingency threshold limits					
In accordance with regulation 25(1)(a), the permissible limits for the thresholds specified in a critical contingency management plan that apply to the following parts of the transmission system (as identified on the map published in accordance with regulation 10) are:					
Pipeline	Maximum time before minimum operating pressure is reached	Minimum time before minimum operating pressure is reached	Minimum operating pressure range	Point of measurement*	
<i>Maui pipeline</i>					
Rotowaro	5 hours	2 hours	32 ( $\pm 2.5$ ) bar g	Rotowaro Compressor Station	
<i>Vector pipeline</i>					
South	10 hours	3 hours	35 ( $\pm 2.5$ ) bar g	Waitangirua WTG06910	
Hawkes Bay lateral	6 hours	3 hours	30 ( $\pm 2.5$ ) bar g	Hastings HST05210	
Frankley Rd to Kapuni	6 hours	3 hours	35 ( $\pm 2.5$ ) bar g	Kapuni (GTP) KAP09612	
Bay of Plenty	6 hours	3 hours	30 ( $\pm 2.5$ ) bar g	Gisborne GIS07810	
Bay of Plenty	6 hours	3 hours	30 ( $\pm 2.5$ ) bar g	Taupo TAU07001	
Bay of Plenty	6 hours	3 hours	30 ( $\pm 2.5$ ) bar g	Tauranga TRG07701	
Bay of Plenty	6 hours	3 hours	30 ( $\pm 2.5$ ) bar g	Whakatane WHK32101	
Morrinsville lateral	6 hours	3 hours	30 ( $\pm 2.5$ ) bar g	Cambridge CAM17201	
Central (North)	6 hours	3 hours	40 ( $\pm 2.5$ ) bar g	Westfield WST03610	
North	6 hours	3 hours	25 ( $\pm 2.5$ ) bar g	Whangarei WHG07501	
For any other gas gate on the Maui or Vector pipeline	6 hours	3 hours	30 ( $\pm 2.5$ ) 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.					

## 10.2 Proposed amendments to Schedule 1

The TSO recently undertook a review of its system's critical contingency conditions. The results of which led to it recommending to Gas Industry Co that Schedule 1 of the CCM Regulations be updated to capture the following:

- replacement of the Central (North) pipeline measurement point from Westfield to the Henderson Compressor Station inlet and adjustment of the boundaries to 35 ( $\pm 2.5$ ) bar g, with a time range of 3-10 hours;
- standardisation of the Whangarei boundary conditions to a minimum operating pressure range of 30 ( $\pm 2.5$ ) bar g, with a time range of 3-6 hours; and
- updates of naming conventions to align with current practice (see section 11).

Gas Industry Co agrees with the TSO's proposed changes. The rationale for these proposed changes is discussed below.

### 10.2.1 Proposed move for the Central (North) pipeline point of measurement from Westfield to Henderson Compression Station inlet

The Westfield delivery point served both the Otahuhu and Southdown power stations before they were decommissioned in 2015. The concentration of high demand created by the power stations meant that Westfield was an appropriate point of measurement for determining the contingency thresholds for the Auckland area at the time they were set. However, since the closure of the power stations the total capacity requirements in the area have fallen by about two thirds and Westfield has become a less significant delivery point. Although the current measurement point and parameters are workable, they are no longer well aligned with the current use of the transmission system and a breach of the Westfield threshold may result in a critical contingency being needlessly determined. As a result of the substantial demand changes caused by the decommissioning of the power stations it is to be expected that the appropriate point of measurement should shift.

It has reasonably been suggested that a more relevant point of measurement is now the Henderson Compressor Station inlet as it has become a point of substantial load in the area. The station has recently been upgraded and runs almost continuously to meet new demand on the North pipeline.

### 10.2.2 Proposed new thresholds for Henderson Compression Station inlet

When the two power stations were in operation there was a contractual minimum pressure requirement that justified a higher minimum operating pressure range threshold of 40 ( $\pm 2.5$ ) bar g for the Westfield delivery point. This is obviously not relevant for a pressure threshold at the Henderson Compression Station inlet and a more reasonable threshold would be based on the pressure at which the station would trip due to low suction pressure, approximately 35 bar g. A threshold of 35 ( $\pm 2.5$ ) bar g is comparable to other Schedule 1 compressor station measurement points (Rotawaro with 32 ( $\pm 2.5$ ) bar g and Kapuni with 35 ( $\pm 2.5$ ) bar g).

The minimum and maximum times before minimum operating pressure is breached at Westfield was set at 3-6 hours to reflect the small number of large consumers on the system and the shorter timeframe it would take to curtail their demand. The Auckland region now has a high proportion of demand generated by smaller customers, who can take a longer time to curtail. This situation is comparable to the Waitangirua measurement point that covers the Wellington area. Waitangirua has time thresholds of 3-10 hours to reflect the longer curtailment time and it would therefore be reasonable to apply the same threshold boundaries to the Henderson Compression Station inlet.

### 10.2.3 Proposed standardisation of thresholds at Whangarei

The addition of the Henderson Compression Station inlet as a measurement point will make the Whangarei thresholds less significant as a low pressure at the station can indicate a critical contingency on the North pipeline as well as the Auckland area. In response to this, the TSO has recommended that the pressure threshold limits for Whangarei be raised from 3-6 hours to 25 ( $\pm 2.5$ ) bar g to 3-6 hours to 30 ( $\pm 2.5$ ) bar g. This will standardise the pressure range to almost all other measurement points on the system. The current lower pressure threshold reflects the measurement point's ability to operate at a lower pressure. In practice however, this ability is irrelevant as the standardised 3-6 hours to 30 ( $\pm 2.5$ ) bar g applies to all other delivery points on the North pipeline. Although in practice the change is likely to have little effect, the recommendation is reasonable to standardise the settings at Whangarei.

### 10.2.4 Summary of proposed changes

Gas Industry Co supports the changes proposed by the TSO. The parameters in Schedule 1 are workable but in some cases are no longer tightly aligned with the current system's use and operation. There are costs and disruptions that could arise if critical contingencies are declared at inappropriate times and so a good fit between Schedule 1 and reality is needed to avoid any negative effects. It is proposed that Schedule 1 be amended as follows:

Schedule 1				
Critical contingency threshold limits				
In accordance with regulation 25(1)(a), the permissible limits for the thresholds specified in a critical contingency management plan that apply to the following parts of the transmission system (as identified on the map published in accordance with regulation 10) are:				
Pipeline	Maximum time before minimum operating pressure is reached	Minimum time before minimum operating pressure is reached	Minimum operating pressure range	Point of measurement*
<del>Maui pipeline</del>				
<del>Rotowaro Maui</del>	5 hours	2 hours	32 ( $\pm 2.5$ ) bar g	Rotowaro Compressor Station
<del>Vector pipeline</del>				
South	10 hours	3 hours	35 ( $\pm 2.5$ ) bar g	Waitangirua WTG06910
Hawkes Bay lateral	6 hours	3 hours	30 ( $\pm 2.5$ ) bar g	Hastings HST05210
Frankley Rd to Kapuni	6 hours	3 hours	35 ( $\pm 2.5$ ) bar g	Kapuni (GTP) KAP09612
Bay of Plenty	6 hours	3 hours	30 ( $\pm 2.5$ ) bar g	Gisborne GIS07810
Bay of Plenty	6 hours	3 hours	30 ( $\pm 2.5$ ) bar g	Taupo TAU07001
Bay of Plenty	6 hours	3 hours	30 ( $\pm 2.5$ ) bar g	Tauranga TRG07701
Bay of Plenty	6 hours	3 hours	30 ( $\pm 2.5$ ) bar g	Whakatane WHK32101
Morrinsville lateral	6 hours	3 hours	30 ( $\pm 2.5$ ) bar g	Cambridge CAM17201
Central (North)	<del>6 hours</del> 10 hours	3 hours	<del>40 (<math>\pm 2.5</math>) bar g</del> 35 ( $\pm 2.5$ ) bar g	<del>Westfield WST03610</del> Henderson Compressor Station inlet
North	6 hours	3 hours	<del>25 (<math>\pm 2.5</math>) bar g</del> 30 ( $\pm 2.5$ ) bar g	Whangarei WHG07501
For any other gas gate on the <del>Maui or Vector pipeline</del> Transmission System	6 hours	3 hours	30 ( $\pm 2.5$ ) 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.				

*Q30: Do you agree with the proposed changes to the critical contingency threshold limits detailed in Schedule 1? Why or why not?*

# 11. Other matters

## 11.1 Definition of “retailer”

The definition of retailer in the CCM Regulations (regulation 5):

- (a) means any person who supplies gas to another person or other persons through the transmission system, or through a distribution system where that gas has been transported through the transmission system, for any purpose other than for resupply by the other person or persons; but
- (b) does not include a gas producer in respect of the supply of gas to a large consumer.

This definition is more specific than the one included in the Gas Act, which states in section 2:

**gas retailer** means any person who supplies gas to another person or other persons for any purpose other than for resupply by the other person or persons.

The exclusion of gas that is not transported through the transmission system makes sense for the purposes of the CCM Regulations, which focus on security of supply contingencies that affect the transmission system. However, it does not matter for the purposes of the regulations whether it is the seller of the gas who arranges transport of the consumer’s gas, or whether other arrangements apply.

It has come to Gas Industry Co’s attention that there are now some supply agreements where the point of sale is located upstream of the consumer’s ICP, and a third party has responsibility for the transport of the purchased gas. In these cases, there is potential for the CCM Regulations definition of retailer to create ambiguity.

Gas Industry Co therefore proposes that the definition of retailer be amended to clarify that retailer means any person who supplies gas to another person or other persons for any purpose other than for resupply by the other person or persons, as long as that gas is transported through the transmission system. The existing exclusion of gas producer would remain.

*Q31: Do you agree with this amendment to the definition of retailer?*

## 11.2 Transient situations

Regulation 48 requires the CCO to make a determination of a critical contingency if a threshold breach has occurred or is unavoidable. In determining whether a breach of a threshold is unavoidable, the CCO must assume that any trends in pressure reduction will continue at a constant rate.

But the CCM Regulations are silent if the opposite situation occurs; that is, if a threshold breach has occurred, but pressure is increasing. For example, there can be short-term transient breaches of the threshold due to short-term normal high demand on the system, where it is clear that pipeline pressures will shortly recover to above-threshold levels. Similarly, there can be instances such as a malfunctioning pipeline valve that closes unexpectedly. In that situation,

if the cause of the loss of pressure can be found and rectified swiftly, then the pipeline pressures can recover without the need for demand curtailment.

In neither of these cases would the purpose of the CCM Regulations be served by a critical contingency declaration. In cases such as these, the pressure threshold breaches are not indicative of a critical gas outage nor a security of supply contingency; rather, they are merely a symptom of a short-term issue that has no detrimental effect on security of supply.

Gas Industry Co therefore considers that it is reasonable to make some allowance for the occurrence of short-term transient breaches of a pressure threshold without requiring a critical contingency declaration. We propose to amend regulation 48 accordingly.

*Q32: Do you agree with the proposal to amend regulation 48 to allow for short-term transient breaches of a pressure threshold?*

### 11.3 Planned outages

Planned outages are another category of events that potentially should be excluded from triggering a critical contingency. At times, a particular part of the transmission system may be isolated to allow for hot tapping or other work to occur on the isolated section. One example is lowering the pressure at a single gas gate so that work can be done on the pipework downstream of that gas gate.

In such a situation, the pressure at the affected gas gate may be reduced below the threshold limit specified in Schedule 1 of the CCM Regulations, but the delivery of gas to the non-isolated parts of the transmission system would not be affected. Delivery of gas to the isolated section of the system would be managed as part of the project plan. Gas Industry Co considers that the purpose of the CCM Regulations would not be served by a critical contingency declaration in such a case.

Therefore, similar to our proposal in section 9.1 above, we propose explicitly allowing for planned outages, with the following conditions:

- prior to the planned outage commencing, that the TSO and, if required, the relevant distribution owner consult on their plans with the CCO; and
- the planned outage does not affect the wider transmission system.

Clearly, such an allowance would not detract from the CCO's responsibilities to declare a critical contingency if threshold breaches occurred outside of what was expected and planned.

*Q33: Do you agree with the proposal to allow for planned outages not triggering a critical contingency?*

### 11.4 Obligation for asset owners to provide information

The purpose of regulation 54A is to "ensure that transmission system owners, retailers, and consumers are informed about the cause of any critical contingency." The regulation applies if "a component of the gas supply chain is damaged or fails" and the damage or failure causes or contributes to a critical contingency.

Exercise Matatau was designed in part to test this regulation. In the exercise scenario, the loss of power from the electricity network resulted in unplanned outages at three production stations. The CCO requested the affected producers to consider how they would comply with the



requirement to provide information in such a situation. The exercise highlighted that there is not a common understanding of what “failure” means in this context. Some producers considered that since the loss of production was caused by an exogenous factor (the loss of electricity from the local power distribution network), it could not be construed as a “failure” of their production station.

Gas Industry Co appreciates that scope for ambiguity in this context. From our perspective, “failure” in this context would indicate an unexpected interruption to an asset’s operation, regardless of whether the cause of that interruption was internal or external to the asset itself. However, we understand how some might interpret the term a different way.

Nonetheless, Gas Industry Co considers that it is important for members of the public to be informed by affected asset owners during a critical contingency. This was the reason that r54A was added to the CCM Regulations (as well as expanded information requirements for the CCO) in 2013. We therefore propose to amend the CCM Regulations to clarify that asset owners have an obligation to communicate information about their assets when they have experienced an unexpected interruption to the asset’s operation. Subpart (2) would still apply; that is, the asset owner would only need to provide information if the interruption caused or contributed to a critical contingency.

*Q34: Do you agree with the proposal to amend regulation 54A to include unexpected interruptions to asset operation? Do you have alternate suggestions for how the obligation should be worded?*

## 11.5 Compliance updates

Regulations 55 and 56 provide that, during a critical contingency, retailers and large consumers must provide the TSO with regular updates of compliance with curtailment instructions. The TSO collates the information received and forwards it to the CCO; the CCO uses this information as important feedback in determining whether further curtailment directions are necessary.

There is an Excel-based template for retailers and large consumers to use in reporting compliance. The template is published on both OATIS and on cco.org.nz; and First Gas’s CCMP states that the template should be used for compliance updates. Nevertheless, Gas Industry Co is aware that the template is not consistently used by all retailers and large consumers.

The reason for the template is that it speeds up data collection and collation. Once First Gas has the completed templates, it is a simple matter to run a script to collate the information into a consolidated report that can be forwarded to the CCO. Getting information in different formats slows down this process, to the detriment of efficient management of a critical contingency event.

For this reason, Gas Industry Co proposes to amend regulations 55 and 56 to require that the compliance data forwarded to the transmission system operator is in the form specified in the CCMP.

*Q35: Do you agree that retailers and large consumers should be required to use the specified compliance reporting template?*

## 11.6 Definition of “publish”

The Interpretation section of the CCM Regulations includes a definition for the word “publish”, which has two parts: one that applies to information to be published by the industry body or CCO; and one for all other information. For the second category, “publish” means “to make available to the intended recipient in such manner as may be determined by the industry body from time to time”.

Gas Industry Co’s determination<sup>15</sup> on this matter is:

*For the purposes of asset owners publishing information under regulation 54A and Schedule 5, Gas Industry Co determines publish means to make available in a prominent way on a publicly available website, such as the asset owner’s public website or on the public website of an agent, such as the asset operator’s public website.*

Gas Industry Co has recently implemented an Industry Notifications page on its website for the purpose of providing a means for industry stakeholders to post notifications relating to the gas industry. Although it was not created specifically for critical contingencies, the notifications page could be a useful avenue for asset owners to fulfil their publication requirements.

Gas Industry Co therefore proposes to amend the determination of “publish” to include publication on the Industry Notifications page of the Gas Industry Co’s website.

*Q36: Do you agree with this proposal?*

## 11.7 Performance reports

Regulation 65 requires that the CCO produce a performance report after the termination of a critical contingency as a way of assessing the effectiveness of the arrangements and identifying any possible improvements.

Subclause (2A) was added as an amendment in 2013 to require the production and publication of a draft performance report that is released for submissions. This amendment ensured that stakeholders had an opportunity to provide input into the performance report prior to its finalisation. But the amendment left some ambiguity in terms of process and timing.

### Timing

Gas Industry Co proposes that the CCM Regulations be amended to clarify that:

- The CCO has 20 business days after the termination of a critical contingency to produce a draft performance report;
- Stakeholders have a minimum of 5 business days to make a submission; and
- The CCO must prepare a final performance report no later than 10 business days following receipt of submissions.

### Process

Gas Industry Co proposes that the CCM Regulations be amended to specify that the CCO must have regard for the submissions on its draft report when preparing the final report.

---

<sup>15</sup> Determination by the Industry Body (Gas Industry Co) under the Gas Governance (Critical Contingency Management) Regulations 2008, 28 February 2014. Available at <https://www.gasindustry.co.nz/work-programmes/critical-contingency-management/current-arrangements/determinations/>



*Q37: Do you agree with these proposed amendments? Why or why not?*

## 12. Update amendments

The CCM Regulations were future-proofed in their drafting in a number of places. The CCM Regulations reference the Maui Pipeline Operating Code (MPOC), for example, but the reference includes any amendment or replacement of that code. The same is true for the Vector Transmission Code (VTC). As a result, as they are written, the CCM Regulations are compatible with the GTAC.

However, it would be tidier for the CCM Regulations to be updated to reflect changed transmission ownership arrangements and the implementation of the GTAC. In addition, once the GTAC has gone into effect, references to MPOC and VTC in the CCM Regulations will be obsolete and can be deleted. The amendments proposed below reflect the changes required.

Regulation	Change proposed	Reason
5	<b>affected party</b> , in relation to any part of the transmission system affected by a critical contingency, means –  (a) <del>if the part of the transmission system is governed by MPOC, an interconnected party that has a contingency imbalance; and</del>  (b) <del>for all other parts of the transmission system, an interconnected party or shipper that has a contingency imbalance</del>	Update to reflect GTAC
5	<b>gas producer</b> has the same meaning as in section 43D(1) of the Act, <del>but in respect of Maui gas means the Crown</del>	Update to reflect current ownership
5	<b>OATIS</b> means the online interactive open access transmission information system, or any other replacement information system, that is used to facilitate information exchange in respect of the open access regime under <u>a transmission system code</u> <del>MPOC and VTC</del>	

Regulation	Change proposed	Reason
5	Delete definitions of MPOC and VTC	Obsolete references once GTAC goes live
13(2)	<del>MPOC, VTC, and a</del> Any other transmission system code must be read subject to these regulations.	Change to reflect GTAC
25(2)	A proposed critical contingency management plan must be consistent with <del>MPOC, VTC, or any other</del> transmission system code except to the extent necessary to comply with these regulations.	Change to reflect GTAC
81(1)	A payment made under these regulations in relation to a contingency imbalance discharges in full any payment obligation or liability under <del>MPOC, VTC, or any other</del> transmission system code in respect of the same contingency imbalance.	Change to GTAC
85	The critical contingency operator's role under these regulations is distinct and independent from any other role or capacity, including as a transmission system owner or system operator, that the critical contingency operator may have under <del>the MPOC, VTC (or other any</del> transmission system code), or any contractual agreement.	Change to reflect GTAC
Schedule 1	Replace "Vector pipeline" with " <u>non-Maui pipelines</u> "	Update to reflect change of ownership

*Q38: Do you agree with these update amendments? Are there any that you feel are not warranted or should be changed? Are there other updates that should be included?*

## 13. Proposed minor amendments

Regulation	Proposed change	Reason
18(5)	<del>"As soon as practicable after the publication of those estimated critical contingency ongoing costs, the industry body must notify every person to whom regulation 17(3) applies of the estimated critical contingency ongoing costs, and that ongoing fees will be payable by that person in that year or part year in accordance with In calculating ongoing costs, the industry body must use the following formula..."</del>	Delete redundant drafting
18(5)	"... <del>a</del> equals the critical contingency ongoing costs estimated in accordance with <del>subclause (4)</del> <u>subclause (6)</u> ..."	Correct the cross-reference
18(7)	"On the first business day of each month <del>following the notification in subclause (5)</del> the industry body must invoice..."	Wording referred to go-live provision that has since been revoked
40(1)	"Each large consumer must, as required by subclause (2), provide a notice to the critical contingency operator setting out, for the consumer installation, the total annual consumption, maximum daily consumption, curtailment band, and any <del>critical processing</del> designation."	The notification to the CCO should include any designation applicable to the ICP, not just critical processing designations.
66A(2)(a)	"the date on which the allocation agent receives the data from allocation participants or on which the transmission system owner receives the data <del>from</del> <u>on</u> large consumers (as applicable); and	To correct a drafting error

*Q39: Do you agree with the proposed minor amendments? Are there any you feel should be added or amended?*

## 14. Next steps

This Statement of Proposal is the first step in amending the CCM Regulations.

Following the receipt of submissions, Gas Industry Co will prepare a summary of submissions.

The next step in amending regulations is to prepare a Recommendation to the Minister. Gas Industry Co will determine whether we have enough information about the costs, benefits, and likely effectiveness of each proposal to proceed to this step; or whether there are specific issues that warrant further stakeholder consultation.

# References

- Critical Contingency Operator. (2018). *CCO Annual Exercise 2018: Exercise Paparua*. Retrieved from <http://cco.org.nz/Historical-Events/>
- Critical Contingency Operator. (2019). *CCO Annual Exercise 2019: Exercise Matatau*. Retrieved from <http://cco.org.nz/Historical-Events/>
- Denne, T. (2012). *Determination of Critical Contingency Price in respect of the critical contingency of 3rd March 2012*. Covec. Retrieved from <https://www.gasindustry.co.nz/work-programmes/critical-contingency-management/critical-contingency-events/3-march-2012-pohokura-production-station-outage/>
- Denne, T. (2016). *Determination of Critical Contingency Price in respect of the critical contingency of 24th May 2016*. Covec. Retrieved from <https://www.gasindustry.co.nz/work-programmes/critical-contingency-management/critical-contingency-events/pohokura-production-station-pps-unplanned-outage-may-2016/>
- Denne, T. (2017, July 12). *Determination of Critical Contingency Price in respect of the critical contingency of 23rd May 2017*. Retrieved from Gas Industry Co: <http://www.gasindustry.co.nz/work-programmes/critical-contingency-management/cc-events/system-imbalance-event-may-2017/>
- Electricity Authority. (2018, October 15). *Existing generation plant*. Retrieved May 27, 2019, from [https://www.emi.ea.govt.nz/Wholesale/Datasets/Generation/Generation\\_fleet/Existing](https://www.emi.ea.govt.nz/Wholesale/Datasets/Generation/Generation_fleet/Existing)
- Electricity Authority. (n.d.). Generation output by plant. Retrieved 2019, from [https://www.emi.ea.govt.nz/Wholesale/Datasets/Generation/Generation\\_MD](https://www.emi.ea.govt.nz/Wholesale/Datasets/Generation/Generation_MD)
- emsTradepoint. (n.d.). Retrieved from [emstradepoint.co.nz](http://emstradepoint.co.nz)
- Ministry of Business, Innovation and Employment. (2019). *Data tables for gas*. Retrieved from Gas statistics: <https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-statistics-and-modelling/energy-statistics/gas-statistics/>
- Ministry of Business, Innovation and Employment. (2019). *Discussion document: Options for amending the Gas Act 1992*. Retrieved from <https://www.mbie.govt.nz/have-your-say/amending-the-gas-act/>
- Small, J. (2010). *Critical Contingency Price: 13 July 2010*. Covec. Retrieved from <https://www.gasindustry.co.nz/work-programmes/critical-contingency-management/critical-contingency-events/13-july-2010/>

# Questions

## Title of Report

Submission prepared by: <company name and contact>

Question	Comment
Q1 Do you agree with our view that, in relation to the proposed amendments, there are no other reasonably practicable options for achieving the regulatory objective other than an amendment to the CCM Regulations? If not, why not?	
Q2: Do you agree with rewording regulation 71 to remove 71(3)(a) as described above?	
Q3: Do you agree with adding a floor price to the calculation of the contingency price? Do you agree with the proposed calculation method, using VWAP for the 7 days prior to and including the critical contingency day?	
Q4: Are there other pricing benchmarks that should be used in setting the critical contingency price?	
Q5: Do you agree with replacing the criminal penalties with civil pecuniary penalties for non-industry participants as described above? If not, why not?	



Q6:	Do you agree that the distinction between large consumers that have alternative fuel capability and those that do not should be removed from the curtailment bands? Why or why not?	
Q7:	Do you agree with reserving band 2 for large consumers who are electricity generators who export electricity to the grid? If not, what alternative way would you suggest for defining bands 1 and 2?	
Q8:	Do you agree that the lower threshold of the curtailment band for the largest consumers should be changed to yearly consumption? Why or why not?	
Q9:	Do you agree with the proposed 4,000 TJ per year threshold? Is there a different threshold you consider would work better?	
Q10:	Do you agree with an annual threshold and a daily consumption threshold for a curtailment band of gas thermal generation plant?	
Q11:	Do you agree with the proposal to create curtailment band 3A as described above? Do you agree with an annual consumption threshold of 300 TJ? Why or why not?	
Q12:	Do you have any other comments about the proposed changes to the curtailment bands?	

Q13:	Do you agree that guidance is required on assigning consumers to curtailment bands? Do you agree with the concept of an average over the previous three years for the annual threshold volumes?	
Q14:	Do you agree with using three years to determine whether thermal generators use at least 15 TJ per day from time to time?	
Q15:	Do you agree with amending the definition of "consumer installation" to include a gas installation with multiple points of connection to a distribution system or transmission system? Why or why not?	
Q16:	Do you agree that gas wholesalers should be responsible for issuing critical contingency notices to their retailers and for receiving and forwarding compliance updates to the transmission system owner? If not, can you suggest an alternative way to ensure that non-shipper retailers and their consumers receive critical contingency directions and provide compliance updates?	
Q17:	Do you agree with this assessment and proposals? Why or why not?	
Q18:	Do you agree with the changes to the curtailment order as outlined in Table 4? Why or why not?	

Q19:	Do you agree with the proposed changes regarding information provided to the CCO? Why or why not?	
Q20:	With respect to CCMPs, do you agree with the proposed changes to contact detail requirements as outlined above?	
Q21:	Do you agree with the proposed CCMP amendment procedures outlined above? Why or why not?	
Q22:	Do you agree with allowing a go-live date for a proposed amended CCMP?	
Q23:	Do you agree with deleting the requirement in r74 that refers to the DR Rules? If not, why not?	
Q24:	Do you agree with the proposal for retailers to provide their retailer curtailment plans to the industry body on an annual basis? Why or why not? Would 1 March be an appropriate submission deadline?	
Q25:	Do you agree that incorporating retailer curtailment plans into the annual exercise would be an effective way to ensure their effectiveness and currency? If not, why not?	
Q26:	Do you have other suggestions for ways to improve retailer curtailment plans?	

Q27:	Do you agree that retailers should be required to participate in annual test exercises? If not, why not?	
Q28	Do you agree that the scope of the communications plan should include communications that occur in monitoring the system prior to a critical contingency and in declaring a critical contingency?	
Q29	Do you agree with the proposed changes for critical care and essential services designations? Why or why not?	
Q30	Do you agree with the proposed changes to the critical contingency threshold limits detailed in Schedule 1? Why or why not?	
Q31	Do you agree with this amendment to the definition of retailer?	
Q32	Do you agree with the proposal to amend regulation 48 to allow for short-term transient breaches of a pressure threshold?	
Q33	Do you agree with the proposal to allow for planned outages not triggering a critical contingency?	
Q34	Do you agree with the proposal to amend regulation 54A to include unexpected interruptions to asset operation? Do you have alternate suggestions for how the obligation should be worded?	

Q35	Do you agree that retailers and large consumers should be required to use the specified compliance reporting template?	
Q36	Do you agree with this proposal?	
Q37	Do you agree with these proposed amendments? Why or why not?	
Q38	Do you agree with these update amendments? Are there any that you feel are not warranted or should be changed? Are there other updates that should be included?	
Q39	Do you agree with the proposed minor amendments? Are there any you feel should be added or amended?	

# 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.

Gas Industry Co's corporate strategy is to 'optimise the contribution of gas to New Zealand'.

SUBMISSIONS CLOSE:  
Friday, 24 July 2020

SUBMIT TO:  
[www.gasindustry.co.nz](http://www.gasindustry.co.nz)

ENQUIRIES:  
[consultations@gasindustry.co.nz](mailto:consultations@gasindustry.co.nz)