



CONSULTATION PAPER

Information Disclosure: Problem Assessment

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Executive Summary

In August 2018, Gas Industry Co established a workstream to progress issues concerning information transparency and asymmetry in the gas sector. The purpose of the workstream is to consider whether current market arrangements related to information disclosure in the wholesale gas sector are sufficient or whether further arrangements are required.

Gas Industry Co's initial work focussed on gaining a broad understanding of possible information issues. We met with various energy sector parties to understand their perspectives. We also conducted a review of information disclosure regimes in several countries and markets. This work fed into Gas Industry Co's release of the *Options for Information Disclosure in the Wholesale Gas Sector* consultation paper¹ ('Options Paper') in March. The purpose of the paper was to provide gas sector stakeholders with the opportunity to comment on various issues relating to information disclosure in the New Zealand gas sector. This paper set out a number of information areas or 'information elements' where there may be problems with information transparency and asymmetry.

We received submissions and cross-submissions from twenty-two parties on the Options Paper. These parties span various parts of the gas industry as well as the wider energy sector. These submissions highlighted further information areas where there may be transparency or asymmetry issues.

In this paper, we assess (using feedback from submissions) the information elements identified in the Options Paper and submissions against the Government's policy objectives for the Gas Sector. These objectives are set out in the Gas Act (1992) (Gas Act) and the Government Policy Statement on Gas Governance 2008 (GPS). This paper represents the first step in the development of a Statement of Proposal as described in Section 43N of the Gas Act.

In parallel with this workstream, upstream gas producers (OMV, Greymouth Gas, Todd Energy and Beach Energy), the Petroleum Exploration and Production Association of New Zealand (PEPANZ) and Flex Gas have proposed a new industry-led information disclosure regime in respect of planned and unplanned outages. Gas Industry Co will assess these arrangements in the Statement of Proposal.

Our assessment of issues for each information element and proposed next steps are summarised in Table 1 below.

¹ *Options for Information Disclosure in the Wholesale Gas Sector* consultation paper, <https://www.gasindustry.co.nz/dmsdocument/6480>

Table 1 Summary of conclusions on information elements

Information Element	Conclusion
<p>Gas production outages</p> <p>Gas production and related processing facility outage information (including planned and unplanned outages).</p>	<p>A number of issues associated with limited information transparency and asymmetry of production outage information have been identified across most parts of the gas sector value chain and the electricity sector. Costs associated with the disclosure of this information still need to be determined.</p> <p>Gas Industry Co considers that gas production outage information should be included in a Statement of Proposal.</p>
<p>Major gas user facility outages</p> <p>Major user facility (excluding gas-fired electricity generation) outage information (including planned and unplanned outages).</p>	<p>Possible issues with a lack of information on major gas user facility outages have been identified for some parts of the gas sector. Limited information may affect the efficient and effective operation of the emsTradepoint market. Some parties submitted that a lack of information on major users' outages may affect the gas wholesale market more broadly, given the volume of gas that these users consume in the market. The largest cost with disclosing this information appears to relate to the potential impact that this disclosure would have on Methanex's operation. However, parties did not provide supporting information to provide insight into the nature of these issues.</p> <p>Gas Industry Co is unsure whether this information element should be included in a Statement of Proposal given the lack of supporting information from parties. We encourage submissions to further inform our thinking on the matter.</p>
<p>Gas storage outages</p> <p>Ahuroa storage facility outage information (including planned and unplanned outages).</p>	<p>Similar to gas production outages, several issues associated with limited information transparency and asymmetry of gas storage outage information have been identified, affecting some parts of the gas sector value chain and the electricity sector. Costs associated with the disclosure of this information appear to be quite small.</p> <p>Gas Industry Co considers that gas storage outage information should be included in a Statement of Proposal.</p>
<p>Transmission pipeline outages</p> <p>Transmission pipeline outage information (including planned and unplanned outages).</p>	<p>Some transmission pipeline outage information is currently required to be disclosed. There appears to be a general level of comfort that this information is sufficient.</p> <p>Gas Industry Co does not intend to include further transmission pipeline outage information in a Statement of Proposal. If related issues arise after GTAC and its associated IT systems have been implemented, then we would consider them at that time.</p>
<p>Contract prices & volumes</p> <p>Publication of weighted average prices and volumes from gas traded under Gas Supply Agreements (GSAs).</p>	<p>While there are no transparent prices and volumes available for gas supplied under bilateral arrangements, the benefits of disclosing weighted price and volume information do not appear to be large. No significant problems associated with this limited transparency have been identified. In addition, there are practical issues with publishing weighted average prices and volumes from a range of contracts with bespoke terms which would reduce the value of this information. In contrast, the disclosure of this information could adversely affect some parties' operations due to the</p>

	<p>commercial sensitivity of the information and limitations on the ability to anonymise parties' information.</p> <p>Based on these conclusions, Gas Industry Co considers that this information element should not be included in a Statement of Proposal.</p>
<p>emsTradepoint price and volume</p> <p>emsTradepoint traded volumes and prices information.</p>	<p>EmsTradepoint publishes some price information publicly. In particular, it provides VWAP (Volume Weighted Average Price), FRMI (Frankley Road Natural Gas Monthly Index) and FRQI (Frankley Road Natural Gas Quarterly Index) price measures weekly on its public website but no market volume information. Interested parties can access a greater range of price as well as volume information through a read-only subscription.</p> <p>Gas Industry Co considers that efficiency costs from emsTradepoint limiting the information it provides publicly are reasonably small. Costs of the disclosure of this information would be related to a potential loss in revenue for emsTradepoint associated with losing customers subscribed to its read-only subscription. However, we note that the absence of publicly available volume information is a gap.</p> <p>At this stage, Gas Industry Co considers that this information element should not be included in a Statement of Proposal. However, we will continue to monitor the effectiveness of information disclosure on the emsTradepoint market. For instance, if emsTradepoint's disclosure arrangements changed, Gas Industry Co would look to review this conclusion.</p>
<p>Gas storage facilities information</p> <p>The quantity of stored gas and the amount of available storage capacity in the Ahuroa storage facility.</p>	<p>Several issues associated with limited information transparency and asymmetry of gas storage information have been identified that affect parts of the gas sector value chain and the electricity sector. In part, this reflects the growing importance of the Ahuroa storage facility for delivering flexibility across the sector.</p> <p>Costs of disclosing this information appear to be relatively low. For instance, Flex Gas already discloses storage volumes to MBIE as part of its Quarterly Retail Sales Survey (QRSS).</p> <p>Some of these issues could be addressed if MBIE published available gas storage information that Flex Gas discloses in the Quarterly Retail Sales Survey. Gas Industry Co intends to discuss this matter with MBIE. Flex Gas has said it would be willing to seek the consent of users of Ahuroa to disclose capacity and availability, if it was considered that this was important information for the effective functioning of the wholesale gas market.</p> <p>The inclusion of this information element in a Statement of Proposal will depend to some extent on the progress on these matters. We welcome submissions from parties on their information needs in this area.</p>
<p>Forecasts of gas production</p> <p>Gas production forecasts for the next twelve months, provided by gas producers.</p>	<p>The motivation for considering this information element came primarily from the electricity sector. In particular, the electricity system operator expressed a concern that the lack of information regarding the availability of gas for thermal generators makes it difficult to assess and manage electricity security of supply. Thirteen submitters on the Options Paper said that they would like to have this information disclosed. All upstream parties were opposed to this disclosure.</p>

	<p>MBIE already receives an annual report from gas producers that includes production profile forecasts for each field. It publishes production information in its annual Reserves, Activity and Field Data report.</p> <p>Given that MBIE already publishes this information, Gas Industry Co proposes that this information element is not included in a Statement of Proposal. We intend to work with MBIE to understand whether this information can be made available on a more timely basis so that it is more useful for electricity sector parties.</p>
<p>Gas positions of thermal electricity generators</p> <p>Gas fuel positions of electricity generators with gas-fired plants.</p>	<p>There are two potential problems associated with limited transparency of thermal electricity generators’ gas positions:</p> <ul style="list-style-type: none"> • The system operator may have limited information on participants’ gas positions and it lacks the powers to require information formally. Given this limited information, the system operator must make assumptions about the availability of gas for gas-fired electricity generation. This causes some uncertainty in understanding electricity security of supply; • Lack of information regarding gas availability potentially causes information asymmetry between electricity participants that have gas-fired plants as part of their generation portfolio and participants that do not have these plants (including renewables-only generators, retailers and traders). This asymmetry may make it more difficult for renewables-only electricity companies, retailers and traders to participate in the wholesale electricity market. <p>The EA has added the Wholesale Market Information Disclosure project to its 2019/20 work programme. This project will identify any gaps in the EA’s power to require further information disclosure (such as contract fuel supplies) and strengthen disclosure rules to include information on the availability of generation fuel. Given the cross-over between the gas and electricity sectors, Gas Industry Co and the EA have agreed to work together on this workstream. In light of this, Gas Industry Co proposes that this information element is not included in a Statement of Proposal.</p>
<p>Forecasts of major users’ gas consumption</p> <p>Gas consumption forecasts for the next twelve months, provided by gas major users.</p>	<p>Several submitters on the Options Paper commented that they would like to see major users’ gas consumption forecasts disclosed. A common theme in these submissions was that disclosure of this information would promote efficiency in the gas wholesale market. However, our problem assessment does not identify any significant problems that disclosure of these forecasts would address. In addition, Methanex submitted that this information is commercially sensitive, and its disclosure would adversely affect its international competitiveness (although we note that no supporting information was provided supporting this position).</p> <p>Based on our problem assessment, Gas Industry Co considers that this information element should not be included in a Statement of Proposal. However, we welcome further information on this matter in parties’ submissions. We may revisit this conclusion based on stakeholder feedback or if circumstances change.</p>

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1. Introduction

1.1 Purpose

The purpose of this paper is to identify whether there are problems with information transparency and asymmetry in the wholesale gas sector. As part of this assessment, individual information elements are identified that may be included in a Statement of Proposal.

We welcome stakeholders' submissions on the issues raised in this paper. These submissions will be used to further our understanding of information problems in the sector and to determine the set of information issues that will be the subject of the Statement of Proposal.

1.2 Background

In August 2018, Gas Industry Co established a workstream to progress issues concerning information transparency and asymmetry in the gas sector. The purpose of the workstream is to consider whether current market arrangements related to information disclosure in the wholesale gas sector are sufficient or whether further arrangements are required.

Gas Industry Co's initial work focussed on gaining a broad understanding of possible information issues. We met with various energy sector parties to understand their perspectives. We also conducted a review of information disclosure regimes in several countries and markets. This work fed into Gas Industry Co's release of the *Options for Information Disclosure in the Wholesale Gas Sector* consultation paper² ('Options Paper') in March. The purpose of the paper was to provide gas sector stakeholders with the opportunity to comment on various issues relating to information disclosure in the New Zealand gas sector. This paper set out a number of information areas or 'information elements' where there may be problems with information transparency and asymmetry.

We received submissions and cross-submissions from twenty-two parties on the Options Paper. These parties span various parts of the gas industry as well as the wider energy sector:

- Electricity Authority (EA)
- Major Energy Users Group (MEUG)
- Transpower Limited (Transpower)
- Mercury Limited (Mercury)
- Meridian Energy Limited (Meridian)
- Energy Link Ltd (EnergyLink)
- Petroleum Exploration & Production New Zealand (PEPANZ)
- Greymouth Gas New Zealand Limited (Greymouth)
- OMV New Zealand Limited (OMV)

² Options for Information Disclosure in the Wholesale Gas Sector consultation paper, <https://www.gasindustry.co.nz/dmsdocument/6480>

- Todd Energy Limited and Nova Energy Limited (Todd)
- First Gas Limited (First Gas)
- Trustpower Limited (Trustpower)
- Genesis Energy Limited (Genesis)
- Contact Energy Limited (Contact)
- Vector Limited (Vector)
- Major Gas Users Group (MGUG)
- New Zealand Steel Limited (NZ Steel)
- Fonterra Co-operative Group Limited (Fonterra)
- Methanex New Zealand Limited (Methanex)
- emsTradepoint Limited (emsTradepoint)
- Haast Energy Trading Limited (Haast)
- Flick Energy Ltd (Flick)

A summary of the issues raised during the consultation process can be found in the paper *Analysis of Submissions on Options for Information Disclosure*³.

From the Options Paper and submissions, we have identified several information areas or 'information elements' where we consider there to be information transparency or asymmetry issues. These information elements and their issues are explored in the remainder of this paper.

This paper represents the first step in the development of a Statement of Proposal. Section 43N of the Gas Act (1992) (Gas Act) requires the following:

1. Identification of information transparency and asymmetry problems in the gas wholesale sector;⁴
2. Identification and assessment of reasonably practicable options for addressing the problem(s);
3. Assessment of the costs and benefits of each of the options;
4. Assessment of the extent to which the problem would be addressed by each option;
5. Consideration of whether the problem(s) can be satisfactorily addressed by non-regulatory means;
6. Preparation of a Statement of Proposal for consultation, meeting the requirements of Section 43N of the Gas Act.

Steps 2 – 4 would include an assessment of options that would include the industry-led arrangements⁵ that upstream parties (OMV, Todd, Greymouth, Beach and PEPANZ) and Flex Gas are developing currently and any other arrangements that parties may develop.

³ Analysis of Submissions on Options for Information Disclosure, <https://www.gasindustry.co.nz/dmsdocument/6589>

⁴ Section 43N of the Gas Act refers to the "objective of the regulation". We consider this to be a matter of terminology. If a regulatory process is commenced, the objective of in the regulation will be framed as a statement to address the problem.

⁵ Copies of the draft Upstream Gas Outage Information Disclosure Code, an overview document and a covering letter can be found at <https://www.gasindustry.co.nz/work-programmes/gas-sector-information-disclosure/upstream-outage-information-disclosure-code/>

2. Assessment framework

2.1 Introduction

In this section we set out the framework we have used to identify information transparency and asymmetry issues in the gas sector. We begin with a general discussion of the role that information plays in markets. This is followed by a description of the assessment framework, which is based on the government's objectives for the gas sector as identified in the Gas Act and the Government Policy Statement on Gas Governance 2008 (GPS).

2.2 Role of information in a well-functioning market

Free-flowing, timely and accurate information is a key element of a well-functioning market. Accessible information is a cornerstone for market participants in making decisions. It supports the efficient production of gas and the allocation of supply to those users who value it the most. Information reduces the barriers to market entry for new participants. It supports parties in managing their risks, enabling them to make more informed operational and investment decisions. Information also facilitates better monitoring by regulators and third parties.

In contrast, situations where parties do not have full information or where information is uneven (or asymmetric) amongst parties are regarded as examples of information failure, a type of market failure. If information is not available widely, some parties may be required to make decisions based on limited facts. In these situations, there may be a misallocation of resources, with users paying too much or too little, and producers supplying too much or too little.

A report⁶ to the Ministerial Council on Energy in Australia said the following regarding the importance of information in a gas wholesale market:

Information is the life-blood of any commodity market. A transparent wholesale gas market is one in which market participants have ready access to long and short term information on price and the availability of gas and transmission capacity. Transparency enables the market to respond effectively to fluctuations in supply and demand both large and small. Transparency reduces barriers to entry and exit by enabling prospective and current participants to easily assess their commercial positions.

Although transparent and widely accessible information is important for the efficient operation of a market, this does not mean all information should necessarily be made available. For instance, information related to outputs from research and development investments, creativity and business initiative is a key factor for companies in both developing and maintaining their competitive advantage. It is argued that protection of this information encourages efficiency and innovation.

⁶ Allen Consulting Group (2005). *Options for the development of the Australian wholesale gas market*. Report to the Ministerial Council on Energy Standing Committee of Officials - Gas Market Development Working Group

TDB Advisory makes a similar point in its *Gas Industry Governance: Incentives, Regulation and Outcomes* report⁷, prepared for the Major Electricity Users Group (MEUG):

In some cases, which may include commercial information, protection of a right to withhold information is necessary to the production of that information in the first place. A duty of disclosure abrogates that right. We, therefore, think there is merit in treading carefully when it comes to extending obligations around disclosure of information.

TDB Advisory concludes that unless there is clear justification that a problem exists, information disclosure obligations in the gas sector should not cover commercial information.

Following the above discussion, the design of an information disclosure regime should consider carefully the costs and benefits of different types of information disclosure. Both of these aspects are considered in the problem assessments that follow.

2.3 Assessment methodology

Problem identification

To understand whether there are problems relating to information availability in the gas sector, we assess the information issues identified in the Options Paper and submissions/cross submissions against the Government's policy objectives for the sector. These objectives are identified in the Gas Act and the GPS. This assessment methodology is similar to the approach used in our assessment of First Gas's proposed Gas Transmission Access Code (GTAC)⁸.

Relevant Gas Act and GPS objectives and outcomes are listed in Table 2. GPS outcomes that are unlikely to be relevant to information disclosure outcomes are not included in the table.

Table 2 Assessment criteria

Criterion	Objective/Outcome	Text
1	Gas Act s43ZN(a)	the principal objective is to ensure that gas is delivered to existing and new customers in a safe, efficient, and reliable manner
2	Gas Act s43ZN(b)(i)	facilitation and promotion of the ongoing supply of gas to meet New Zealand's energy needs, by providing access to essential infrastructure and competitive market arrangements
3	Gas Act s43ZN(b)(ii)	barriers to competition in the gas industry are minimised
4	Gas Act s43ZN(b)(iii)	incentives for investment in gas processing facilities, transmission, and distribution are maintained or enhanced
5	Gas Act s43ZN(b)(iv)	delivered gas costs and prices are subject to sustained downward pressure
6	Gas Act 43ZN(b)(v)	risks relating to security of supply, including transport arrangements, are properly and efficiently managed by all parties
7	Gas Act s43ZN(b)(vi)	consistency with the Government's gas safety regime is maintained
8	GPS Item 12(a)	energy and other resources used to deliver gas to consumers are used efficiently
9	GPS Item 12(b)	competition is facilitated in upstream and downstream gas markets by minimising barriers to access to essential infrastructure to the long-term benefit of end-users

⁷ TDB Advisory (2019). *Gas Industry Governance: Incentives, Regulation and Outcomes*, Report prepared for MEUG.

⁸ See GTAC Final Assessment Paper, <https://www.gasindustry.co.nz/dmsdocument/6477>

10	GPS Item 12(c)	the full costs of producing and transporting gas are signalled to consumers
11	GPS Item 12(d)	the quality of gas services where those services include a trade-off between quality and price, as far as possible, reflect customers' preferences
12	GPS Item 12(e)	the gas sector contributes to achieving the Government's climate change objectives as set out in the New Zealand Energy Strategy, or any other document the Minister of Energy may specify from time to time, by minimising gas losses and promoting demand-side management and energy efficiency
13	GPS Item 9	it is also the Government's objective that Gas Industry Co takes account of fairness and environmental sustainability in all its recommendations. To this end, the Government's objective for the entire gas industry is as follows: To ensure that gas is delivered to existing and new customers in a safe, efficient, fair, reliable and environmentally sustainable manner
14	GPS Item 13 point 1	pursue: An efficient market structure for the provision of gas metering, pipeline and energy services
15	GPS Item 13 point 2	pursue: Efficient arrangements for the short-term trading of gas
16	GPS Item 13 point 3	pursue: gas governance arrangements are supported by appropriate compliance and dispute resolution processes.
17	GPS Item 13 point 4	good information is publicly available on the performance and present state of the gas sector

These criteria can be mapped against the five outcome categories listed in Table 3. These outcome categories are identified in the GPS, listed as criterion 13 in the previous table.

Table 3 Assessment categories

	Efficiency	Fairness	Reliability	Environment	Safety
Gas Act	Criterion 1 Criterion 2 Criterion 3 Criterion 4 Criterion 5		Criterion 1 Criterion 2 Criterion 6		Criterion 1 Criterion 7
GPS Objective	Criterion 8 Criterion 9 Criterion 10 Criterion 11	Criterion 13		Criterion 8 Criterion 12 Criterion 13	
GPS Outcome	Criterion 14 Criterion 15				

	Criterion 16				
	Criterion 17				

This table shows that many of the criteria are related to economic efficiency. This includes objectives such as downward pressure on gas costs and prices, facilitation of gas supply through competitive market arrangements, efficient management of risks and the minimisation of barriers to competition in the industry.

A number of the possible problems associated with a lack of information availability in the gas sector relate to these efficiency outcomes. In the problem assessments that follow, we split the efficiency discussion by the relevant components of the gas value chain and related sectors (i.e. electricity) to unpick the various efficiency issues.

Criterion two is concerned with "...*the facilitation and promotion of the ongoing supply of gas to meet New Zealand's energy needs, by providing access to essential infrastructure and competitive market arrangements*" [emphasis added]. From this criterion we consider that the implications of gas information transparency for related energy markets (particularly the New Zealand electricity market) should be considered. In the problem assessments that follow, we include the impact of potential gas information problems on the electricity sector.

Cost evaluation

As we discussed above, a key part of our problem assessment includes an evaluation of the costs of disclosing various types of information. In this paper, these costs are evaluated qualitatively, using information provided in submissions and cross-submissions on the Options Paper. A more formal analysis of costs may be included in the Statement of Proposal.

Q1: Do you have any comments on our approach to the analysis?

3. Information elements

From the Options Paper and submissions, the potential areas or information elements where there may be information issues include:

1. Major plant outage (planned and unplanned) information:
 - a. Gas production
 - b. Major gas users' facilities
 - c. Storage
 - d. Transmission
2. Bilateral contract price and volume information
3. emsTradepoint price and volume information
4. Gas storage facilities information
5. Forecasts of gas production
6. Forecasts of major users' consumption
7. Gas positions of thermal electricity generators

Many of these areas were discussed in the Options Paper. Items 1c, 4 and 7 were suggested by some parties during the submissions process.

The Options Paper discussed various possible approaches to information disclosure. The paper identified three broad categories: an information disclosure regime could use a principles-based approach, a specific (or rules-based) approach or it could be a voluntary arrangement. The regime could also be a mix of all three, depending on the types of information that are disclosed. This subject will be covered in the Statement of Proposal. However, we note that information that has no particular immediacy (e.g. forecasts of projected production or regular updates of market volumes and prices) may fit better with either a rules-based or voluntary approach, rather than a principles-based approach. This is because this type of information is unlikely to meet the 'market impact' test inherent in a principles-based approach. Information that falls into this category includes items 2 – 7. Event driven information (item 1) could fit under all three approaches.

Q2: Have we identified all of the relevant information elements in this list?

4. Gas production outages

4.1 Description

The Options Paper identified gas production outage information as an information element that may have transparency and asymmetry issues. This information includes both gas production and related processing facility information. The paper commented that both planned and unplanned outage information is generally not disclosed publicly.

In the following discussion, we assess production outage information issues using the assessment categories listed in Table 3. We also consider at a qualitative level the costs associated with providing this information. Finally, we consider whether the identified net benefits of providing production outage information mean that this information element should be considered in a Statement of Proposal.

4.2 Problem assessment

4.2.1 Overview

Over the past year, there has been considerable focus on the availability of gas production (including processing facilities) outage information. This focus was driven by several major events (including the discovery of a leak in the Pohokura flexible pipeline and a subsequent, unrelated failure of a shutdown valve on the Pohokura offshore platform which led to major outages in Pohokura gas production) which significantly affected gas supply in the wholesale gas market. These events highlighted that there may be transparency and asymmetry issues associated with gas production information.

The Options Paper identified that most gas in New Zealand is sold under long-term, bilateral gas supply agreements (GSAs)⁹. Upstream parties are understood to provide information relating to production outages to contract counterparties; however, we understand that these contracts have confidentiality clauses that restrict wider disclosure. Information is not generally shared with the wider gas sector. These arrangements result in gas production outage information being relatively opaque to the broader gas market. The paper also noted that for fields owned by Joint Venture (JV) entities, the JV arrangements may limit the disclosure of information.

Production outage information is disclosed in all of the markets that were reviewed in the paper. Most submissions on the Options Paper considered that information on upstream production outages should be disclosed.

4.2.2 Efficiency

Limited production outage information has efficiency implications for most parts of the gas industry value chain, as well as other related sectors. The following discussion examines efficiency implications for each of these components.

⁹ This is similar to the arrangements in other gas markets; for instance, most gas supplied in the Australian gas markets is sold under bilateral contracts.

Upstream gas production (including processing)

PEPANZ's submission noted that upstream parties' knowledge of outages across the upstream sector can enable coordination of plant maintenance. Similarly, OMV remarked that outage information regarding other producers may assist its own outage and contingency planning. Potential benefits of this coordination include improved scheduling of the workforce involved in planned outage projects and the ability to stagger planned outage projects between fields so that multiple fields are not out at the same time.

These submissions indicate that there may be some efficiency benefits to upstream parties from knowing the timetables for each other's planned outages. It follows that the absence of this information may mean that parties operations are less efficient than they otherwise could be.

Transmission

Under the Maui Pipeline Operating Code (MPOC) (and interconnection agreements under the Gas Transmission Access Code (GTAC)), upstream parties provide planned and unplanned outage information to First Gas. Given these arrangements, there are no obvious efficiency issues for the gas transmission system operator regarding limited production outage information.

The Critical Contingency Operator (CCO) is another party in the transmission part of the sector who can be affected by limited access to production outage information. Under s38A of the Gas Governance (Critical Contingency Management) Regulations 2008, the CCO can ask producers and large consumers for information. However, as a practical matter, the CCO needs to know whether there is an issue in order to request this information. Formalised information disclosure regarding planned outages would improve the CCO's processes for managing potential contingency events. The current lack of planned production outage disclosure means that the CCO has incomplete information about factors affecting the transmission system, potentially hampering its ability to anticipate and manage a critical contingency event.

Downstream (including major users)

Several downstream parties commented in their submissions that a lack of information regarding the Pohokura outage events in 2018 and 2019 adversely affected their operations. The Major Gas Users Group (MGUG) noted that the experience of its members during these outages was that their gas suppliers were not able to inform them fully or in a timely way. This limited information availability left these companies poorly equipped to deal with the consequences of the outages.

NZ Steel's submission described its experience during the Pohokura outages. It commented that the Pohokura planned outage in February 2019 is an example of where information was "...minimal and not timely". NZ Steel commented that the field operator was "...not prepared to share information on the planned timetable." NZ Steel was endeavouring to have a planned maintenance shutdown align with the Pohokura outage. The lack of information led to production inefficiencies, not only for NZ Steel, but also the wider gas market, who would have benefited from this coordination of maintenance activities.

Fonterra's experience during the Pohokura outages was similar. It did not receive sufficient notice of the outages and had limited information on the nature of the events. Fonterra noted that it used informal networks to try to piece together information regarding the outages. Fonterra submitted that uncertainty regarding the duration of events (particularly during its peak production season) significantly affects its ability to make effective business decisions. Fonterra commented that it does not have one contingency plan for a gas outage, but rather a coordinated response that depends on the particular set of events at the time. Limited

information regarding gas production outages affects the ability of Fonterra to react to a particular set of circumstances and limits its ability to run efficient business operations.

These submissions highlight that the operations of downstream parties are affected adversely by inadequate information regarding planned and unplanned gas production outages.

Gas wholesale trading market

In general, transparent and symmetric availability of information is a cornerstone for the efficient operation of any market. The gas wholesale market is no different. emsTradepoint commented in its submission that the GPS includes an objective of providing for "Efficient arrangements for the short-term trading of gas" (criterion 15). emsTradepoint considered that:

...in the absence of meaningful and transparent information disclosure, this objective is not met. Market participants face material barriers as they seek to make informed trading decisions. The consequential loss of efficiency is against the interests of gas consumers and, more broadly, consumers in downstream inter-related markets including electricity.

Related energy markets - electricity

A number of electricity market parties made submissions on the Options Paper. These parties shared a common perspective on the need for information transparency in the gas market, particularly around gas supply availability. For instance, Meridian noted that the gas and electricity markets "...are interconnected and arrangements for information disclosures must begin to reflect this." Genesis considered that "...greater transparency of information about gas supply and gas availability is critical to the efficient operation of both the gas and electricity markets."

The renewables-only generators (Meridian and Mercury) had a common view on the importance of gas production information (particularly outage information) on their business operations. They noted that because they do not operate thermal plant, they may have asymmetric information regarding gas production outages, relative to their competitors. In contrast, all electricity companies have information on hydro storage. Mercury commented that if "...competitors have information asymmetry this results in inefficient decision making and poor market outcomes." It was noted that electricity companies require information on fuel availability (including gas, coal, geothermal and hydro) in order to make the best decisions on what supply to offer into the market and also to manage risk positions. Finally, information asymmetry regarding thermal fuel availability may also make market-making in the electricity hedge market more challenging¹⁰.

Mercury noted that if it was aware of planned gas outages, it could reschedule any non-urgent plant maintenance to ensure the electricity market retained capacity to meet demand. There are efficiency benefits associated with parties making these types of operational decisions.

The electricity system operator raised its concerns in correspondence with Gas Industry Co that it was not given enough visibility over the Pohokura outages to effectively manage short- and medium-term electricity security of supply. In general, a lack of information on gas supply issues makes it more difficult for the system operator to manage outages on the electricity network. It can also lead to potential gaps in security of supply forecasting and information (i.e. energy risk information). The electricity system operator noted that, in some circumstances, this information scarcity could also impact real time operations. These issues suggest that limited

¹⁰ The Electricity Price Review paper recommends that "The Electricity Authority should impose a mandatory market-making obligation on vertically integrated companies within 12 months unless the industry can develop an incentive-based scheme by then that is effective, funded largely by those companies and acceptable to the Authority" (recommendation D2). See <https://www.mbie.govt.nz/assets/electricity-price-review-final-report.pdf>

information regarding gas production outages may affect the ability of the electricity system operator to manage the electricity system effectively and efficiently.

4.2.3 Fairness

There is less discussion regarding fairness in parties' submissions. However, the fairness point is picked up in emsTradepoint's submission which commented that information asymmetry potentially enables some parties to trade with more information, which has fairness connotations.

As we noted earlier, Mercury made a similar comment regarding information asymmetry and fairness in its submission. In particular, its electricity competitors with thermal generation (who are informed about gas supply issues under their GSAs) have access to information regarding gas supply that Mercury does not have. Meridian made a similar point in its March 2019 letter to Gas Industry Co.

In general, parties' uneven access to gas production outage information (or asymmetric information), with those having the information advantaged relative to those who do not, would appear to imply fairness issues.

4.2.4 Reliability

This outcome is focussed on the reliable supply of gas (see criterion 2 and 6). Limited information on production outages has three main implications for reliability. First, limited production outage information creates uncertainty in other parts of the gas sector (particularly downstream parties) regarding gas supply reliability. This uncertainty was a common theme among several submissions on the Options Paper. It was discussed earlier in the context of efficiency (see, for example, the earlier discussion regarding NZ Steel and Fonterra's perspectives).

Secondly, limited information reduces the ability of upstream parties to coordinate planned shutdown work. Todd notes that the availability of suppliers for planned shutdown work is limited. This reduced ability to coordinate projects potentially increases gas supply risk.

Finally, as we discussed in the efficiency section, the current lack of planned production outage disclosure means that the CCO has incomplete information about factors affecting the transmission system, potentially hampering its ability to anticipate and manage a critical contingency event. The CCO's purpose is to effectively manage critical gas outages and other security of supply contingencies without compromising long-term gas security of supply. Any detriment to the CCO's effectiveness implies a greater risk of gas reliability problems.

4.2.5 Environment

There appears to be no identifiable impacts on environmental outcomes from a lack of information transparency regarding gas production outages.

4.2.6 Safety

There appears to be no identifiable impacts on safety outcomes from a lack of information transparency regarding gas production outages.

4.2.7 Conclusion

Our problem assessment for gas production outages has identified a number of issues associated with limited transparency and asymmetry of this information. In particular, we have found that there are significant implications for efficiency in the gas sector and related markets from limited production outage information. These issues appear in most parts of the gas sector value chain

(from production right through to end users). There are also fairness implications, arising primarily from the asymmetric availability of information to parties. Gas reliability is also potentially affected by a lack of information transparency. Finally, we note that limited and asymmetric production outage information is inconsistent with the Government's outcome for good, publicly available information on the present state of the gas sector.

4.3 Costs of disclosing gas production outage information

As we note in Section 3, an assessment of whether an information element should be disclosed should weigh the benefits and costs of that disclosure. In the following discussion, we consider the possible costs associated with the disclosure of production outage information.

Todd identified in its submission that disclosure of upstream outage information may create a risk that other energy sector parties may place too much emphasis on information that is uncertain and subject to change (particularly early on in a planned or unplanned outage). This could adversely affect parties' operations. We agree that this is a risk that parties should account for in their decision-making but note that it is a risk that is common to all types of outage event, across the whole energy sector. The only time all the information regarding an outage is known with certainty is after the event has occurred.

The Options Paper noted that there would be compliance costs for upstream companies in disclosing planned and unplanned outage information. Parties did not comment on the likely size of compliance costs in their submissions. However, OMV did make the general point that compliance costs will depend on the form of disclosure regime. It considered that a rules-based regime is likely to be more cost effective than a principles-based approach. These costs would be reviewed in a Statement of Proposal.

There would be costs with establishing and operating an information disclosure platform. We have not sought to quantify these costs at this stage although we note that Gas Industry Co currently has an Industry Notifications page and the costs associated with hosting that page are small. We expect that the costs of a full information disclosure platform are likely to be considerably less than the benefits associated with disclosure of gas production information. This would be assessed formally in a Statement of Proposal.

4.4 Should this information element be included in a Statement of Proposal?

Our problem assessment for gas production outages has identified a number of issues associated with limited transparency and asymmetry of this information. At least some of these appear to be material issues. Costs associated with disclosure of this information still need to be determined. Given the range of issues identified, Gas Industry Co considers that gas production outage information should be included in a Statement of Proposal for information disclosure in the gas wholesale market.

Q3: Do you agree with our assessment for gas production outage information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.

5. Major Gas User Facility Outages

5.1 Description

The Options Paper identified major gas user facility outage (including planned and unplanned outages) information as an information element that may have transparency and asymmetry issues. Some of this information is not disclosed publicly, potentially affecting the operation of the gas wholesale market.

In the following discussion, we assess major gas user outage information issues using the assessment categories listed in Table 3. We also consider at a qualitative level the costs associated with providing this information. Finally, we consider whether the identified net benefits of providing major gas user outage information mean that this information element should be considered in a Statement of Proposal.

5.2 Problem assessment

5.2.1 Overview

The Options Paper noted that the actions of all participants affect a market, whether they are producers or consumers. The concentrated nature of gas demand in New Zealand¹¹ means that an outage in any of the largest major gas users could potentially have a significant effect on the volumes of gas available on the wholesale market. An outage at a major gas users' plant may affect the volumes and prices traded by brokers or through emsTradePoint. OMV acknowledged this point in its submission on the Options Paper commenting that all parties that have facilities where an outage may impact short-term market prices (including users and producers) should be covered in an outage disclosure regime¹². It considered that a regime that only covered producers would not be effective.

Major gas users' perspectives on disclosing outage information varied in submissions. Fonterra supported sharing its outage information with the market. In its submission, Fonterra commented that sharing its planned outages¹³ information could be beneficial because this could enable gas production outages to be coordinated better. In contrast, Methanex stated that "It has long been Methanex Corporation's global policy to not publicly disclose plant outage information as this is deemed to be commercially sensitive...".

Electricity generation companies already disclose gas-fired generation outages as part of the disclosure regime in the electricity sector. The Electricity Industry Participation Code (2010) requires parties to disclose, in a timely manner, any information that they hold that they expect

¹¹ The three largest gas user facilities consumed around 51 percent of gas shipped in the transmission system in 2018; the 10 largest facilities consumed 71 percent of gas.

¹² OMV noted that issues such as the competitiveness concerns raised by Methanex should be considered when the coverage of participants is determined.

¹³ Fonterra has a seasonal production cycle with production concentrated in the summer period. Its planned outages occur over the winter period.

would have a material impact on prices in the electricity wholesale market if it was made publicly available.

In Australia, the Australian Energy Market Commission (AEMC) concluded that a lack of information on the demand for gas by major users in the East Coast Australia gas markets is a significant limitation that could affect both the efficiency with which trades occur and competition in gas and other related markets (particularly the electricity market). The AEMC noted that the publication of certain large user information¹⁴ would “allow market participants to gain a better understanding of the nature of the demand and the potential demand for gas in a particular location and therefore be in a better position to anticipate changes in demand”¹⁵. We note that care must be taken in translating Australian energy sector conclusions to the New Zealand sector, given the marked differences in the two sectors. For instance, in 2018, 21 percent of electricity in Australia was produced by gas fired generation (60 percent was from coal-fired generation)¹⁶. In New Zealand, 12 percent of electricity was produced by gas-fired generation in 2018, with 84 percent produced from renewable generation¹⁷. This share from gas-fired generation is expected to reduce over the medium term as the two CCGTs¹⁸ exit from baseload modes of operation.

It is important to note that the implications of major gas user outages on the gas wholesale market are different to production outages. A production outage leads to a reduction in overall gas supply (unless production from another field is increased to compensate, which is less likely in the current market given the trend over the last several years of reduced deliverability¹⁹), which may result in some consumers having to reduce demand. There are potentially gas security of supply issues and wholesale prices may increase. In contrast, a major gas user outage does not cause gas supply issues. In this situation, gas producers may lower production and/or there could be short-term gas available to the market at lower prices. A major user may reduce production (e.g. by bringing forward a planned outage) in response to a production outage. Given these security of supply outcomes, the risk profile associated with limited major gas user information is different to production information.

We also point out that the information that is being considered for disclosure is plant outage information only. In particular, we do not propose that parties disclose their short-term (daily, weekly or monthly) production decisions and the associated implications for gas demand (the possible disclosure of consumption forecasts over the year is discussed in Section 13). Yet these decisions may potentially have an effect on the market that is as large as an outage event. For example, Enerlytica noted in its NZ Energy Weekly in July²⁰ that the recently signed OMV/Contact gas supply arrangements appear to have resulted in Methanex having access to less gas, with gas demand for methanol production reducing by around 40-50 TJ/day. Enerlytica also expects Genesis to reduce gas-fired generation production at Huntly Power Station in November as Kupe has a full plant shutdown. More generally, major gas users’ changes in

¹⁴ This information includes, inter alia, any material changes in capacity that are expected to affect a facility for more than three months, as well as planned permanent expansions or reductions in capacity and when they are to occur.

¹⁵ AEMC (2016) *Stage 2 Final Report: Information Provision*, 23 May 2016,

¹⁶ Australian Energy Update, Commonwealth of Australia 2019

¹⁷ Electricity graph and data tables, MBIE, <https://www.mbie.govt.nz/assets/Data-Files/Energy/nz-energy-quarterly-and-energy-in-nz/Electricity.xls>

¹⁸ See Concept Consulting’s report *Long term gas supply and demand scenarios – 2019 update*. <https://www.gasindustry.co.nz/dmsdocument/6588>. The two CCGTs are Huntly Unit Five (often referred to as e3p) and the Taranaki Combined Cycle (TCC) power station.

¹⁹ For more on this, see Concept Consulting’s report *Long term gas supply and demand scenarios – 2019 update*. <https://www.gasindustry.co.nz/dmsdocument/6588>.

²⁰ Enerlytica, *NZ Energy Weekly*, 15 July 2019

production in response to upstream outages would not be included. These examples demonstrate that there are factors that impact major gas users' demand for gas that are unlikely to be captured by an outage disclosure regime. Given these varied reasons for a reduction in gas demand at a major gas users' facility, outage disclosure may only provide a limited insight into changes in major users' gas demand.

5.2.2 Efficiency

The following discussion examines the efficiency implications associated with limited major gas user facility outage information for various parts of the gas industry value chain, as well as other related sectors.

Upstream gas production (including processing)

Producers are likely to have knowledge of major gas users' outages through the gas supply agreements they have with customers (either through GSAs they have with some major users or indirectly through GSAs they have with users' retailers). They will also have information on gas-fired electricity generation outages through the disclosure regime in the electricity Code. Given this, it appears that there are limited efficiency benefits to producers from major gas users' publicly disclosing outage information. Upstream parties did not identify efficiency benefits from having this information in their submissions.

Transmission

Under the GTAC arrangements, downstream participants that connect directly to the transmission network must provide outage information to First Gas under their interconnection agreements. Given these arrangements, there are no obvious efficiency issues for the gas transmission system operator regarding major gas user outage information.

The CCO could benefit from having a better understanding of both planned and unplanned major gas user outages since its role includes monitoring the supply/demand balance on the transmission system. During a contingency event, the CCO does receive information from large users and retailers regarding their curtailment progress. However, it could be useful, from a system balance perspective, to have advance notice of outages and any other atypical patterns of usage that are expected.

Downstream (including major users)

Several parties commented in submissions that major gas users should disclose outage information given that they make up a large portion of the demand side of the market. However, these parties did not provide information on how limited disclosure of this information would adversely affect their operations. Given the earlier discussion, there may be no effect on a downstream party's gas supply from a major gas user outage. There could potentially be the opportunity to source some cheaper gas if producers decide not to reduce production, though this is lessened by the fact that downstream users have contractual arrangements in place for much of their gas supply.

In contrast, Methanex disagreed that major gas user information should be disclosed, noting the costs of providing this information on its operation. Methanex's perspective is discussed further in the costs section that follows.

Gas wholesale trading market

emsTradepoint considered that all major plant outages that affect its market should be disclosed. It commented that a lack of information regarding outages has a "very negative effect" on its market, with corrosive effects on investors' trust and confidence. Trading activity is adversely affected as market participants have limited information to make informed trading decisions.

However, emsTradepoint did not provide supporting information backing up these points. We note that this issue of limited information affecting the efficient operation of the wholesale trading market was a driver behind the AEMC's recommendation to include major gas users' outage information in the Australian East Coast information bulletin board.

Related energy markets - electricity

Some electricity sector parties commented that major gas users should be required to disclose outage information. Information on gas-fired electricity generation outages is available under the disclosure regime in the electricity Code. However, these parties provided limited arguments supporting their position beyond the general observation that major gas users make a substantial portion of the demand side of the market. Given the limited discussion on this topic in submissions, the benefit to related markets from improved disclosure of major gas user outages is unclear.

5.2.3 Fairness

There was no discussion in submissions on the implications of limited major gas user outage information for fairness outcomes. From the earlier producer outages discussion, fairness issues appear to be related to situations where parties have asymmetric information. Asymmetry is not a particular problem with major gas user outages; the issue is that no downstream parties have information regarding an outage, rather than some knowing more than others (as noted in the earlier discussion, relevant upstream parties and the transmission operator are informed of major gas user outages that may have a significant effect on their operations).

5.2.4 Reliability

This outcome is focussed on the reliable supply of gas (see criterion 2 and 6). As we discussed, a major gas user outage does not cause gas supply issues. Given this point, limited transparency regarding major gas user outages is unlikely to have reliability implications.

5.2.5 Environment

There appears to be no identifiable impacts on environmental outcomes from a lack of information transparency regarding major gas user outages.

5.2.6 Safety

There appears to be no identifiable impacts on gas safety outcomes from a lack of information transparency regarding major gas user outages.

5.2.7 Conclusion

From our assessment, it appears that limited information on major gas users' outages could have an impact on the efficient and effective operation of the emsTradepoint gas market (electricity generators already disclose outage information under the electricity Code, so some major gas user information is available). However, we are unable to gauge the size of this problem given the absence of supporting information. Some downstream and electricity sector parties commented that major gas users should disclose outage information given their role in the market. Again, parties did not provide details supporting this position.

5.3 Costs of disclosing major gas user outage information

In submissions, Methanex was the only party that identified costs associated with major gas user outage disclosure (although several upstream parties recognised the potential costs on Methanex from this disclosure). Methanex submitted:

It has long been Methanex Corporation's global policy to not publicly disclose plant outage information as this is deemed to be commercially sensitive and could have a material impact on sector wide demand and supply, with a flow on effect to share and product pricing. This is evidenced by our quarterly public conference calls where our CEO is regularly required to decline answering questions on plant outages.

And:

Methanex is concerned about making public disclosure of forward-looking information; specifically, where the information is individually identifiable and relates to plant outages or contract details. Methanex would face adverse consequences if such information were to be widely disclosed, given the prospect that its competitors in global methanol markets would be able to use that information to gain a competitive advantage where they are not required to disclose such information themselves.

Methanex did not provide much detail behind its assertion that disclosure of plant outages would affect its competitive position internationally. We can surmise why this might be an issue. For example, perhaps the world methanol market is opaque and so any disclosure by Methanex would affect its competitive position in this market. However, without supporting information, Methanex's submission lacks detail to support its position. Gas Industry Co encourages Methanex to provide this information during consultation on this paper so that we may better understand its position on this issue.

Similar to the production outage information element, there would be compliance costs and platform costs in disclosing major gas user outage information. These costs would be reviewed in a Statement of Proposal.

5.4 Should this information element be included in a Statement of Proposal?

Two problems were identified in submissions regarding the current lack of transparency regarding major gas user outages. First, limited information may affect the efficient and effective operation of the emsTradePoint market. Lack of transparency on factors that materially alter the demand for gas may adversely affect the performance of the market. Secondly, some parties submitted that a lack of information on major users' outages may affect the gas wholesale market more broadly, given the volume of gas that they consume in the market. However, parties did not provide details supporting the points they made, so we are unable to assess the size of these issues.

Electricity generators already disclose outage information under the electricity Code, so some major gas user information is already available to the market. If a decision is made to include major gas users in a gas sector information disclosure regime, it may be appropriate to exclude generators to avoid duplication.

In our earlier discussion, we identified that the implications of major gas user outages on the gas wholesale market are different to production outages. A production outage leads to a reduction in overall gas supply, which may result in some consumers having to reduce demand. In contrast, a major gas user outage does not cause gas supply issues but may affect the volume of gas in the wholesale market. These differing outcomes mean that the risk profile for the two types of outages may be different, with greater risks attached to production outages. We would appreciate submitters' views on this issue.

The largest cost with disclosing this information appears to relate to the potential impact that this disclosure could have on Methanex's operation. From Methanex's submission, it would appear that this cost could be significant. However, as we note, Methanex did not provide detail to support its position, so we have no guide to the nature and size of this cost.

We are unsure whether this information element should be included in a Statement of Proposal given the lack of information provided by parties to support their positions. We encourage submissions to further inform our thinking on this matter.

Q4: Do you agree with our assessment for major gas user facility outage information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.

6. Gas storage outages

6.1 Description

The Options Paper did not consider gas storage outage information as an information element; however, it has been identified as a potential issue in subsequent conversations with some industry parties.

In the following discussion, we assess storage outage information issues using the assessment categories listed in Table 3. We also consider at a qualitative level the costs associated with providing this information. Finally, we consider whether the identified net benefits of providing storage outage information means that this information element should be considered in a Statement of Proposal.

6.2 Problem assessment

6.2.1 Overview

In New Zealand there is one storage operator, Flex Gas, who owns and operates the Ahuroa gas storage facility (Ahuroa). Ahuroa can currently store up to 18 PJ of gas. Flex Gas currently has the ability to inject 27 TJ/day into Ahuroa and withdraw 45 TJ/day. It is expected that after a planned expansion in 2021, these volumes will both increase to 65 TJ/day²¹. These volumes are comparable to the deliverability of some gas fields (Kapuni's maximum deliverability in 2018 was 68.5 TJ/day and Turangi's was 60 TJ/day²²). Currently all of the storage capacity in Ahuroa is contracted. Flex Gas has no requirements outside of its contracts to disclose outage information.

To date, the Ahuroa storage facility has played a relatively small part in the gas sector. However, it is expected that the facility will play an increasingly important role over time. There are at least two reasons for this. First, as noted above, the planned expansion will increase the injection and deliverability capabilities of the facility. Gas Industry Co understands that it is possible that additional investment could further expand the capability of the facility. Secondly, with the depletion of several of the larger gas fields²³, Ahuroa's storage and deliverability flexibility will be increasingly valuable. The expected increase in gas peaking generation plant to complement renewable generation will further increase the importance of this flexibility. In the discussion that follows, we consider Ahuroa's role over time as a means to understanding broader storage outage information issues.

²¹ <https://flexgas.co.nz/about-ahuroa/current-layout-and-capacity/>

²² <https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-statistics-and-modelling/energy-statistics/petroleum-reserves-data/>

²³ The Maui gas field is likely to be depleted over the medium term. The production profile in MBIE's New Zealand Oil and Gas Reserves tables shows the field being depleted by 2022, though further investment could extend the field's life. Deliverability flexibility from the Maui field has reduced over the last few years. The Pohokura field is also in its decline phase. See *Long term gas supply and demand scenarios – 2019 update*, <https://www.gasindustry.co.nz/dmsdocument/6588>

6.2.2 Efficiency

Storage outage information has the potential to have efficiency implications across the gas sector and the wider energy market. The following discussion considers these implications for each part of the sector.

Upstream gas production (including processing)

No upstream parties raised storage outage information issues in their submissions. However, in later discussions with parties, the point was made that an outage at Ahuroa could be similar to a production outage in its effect on the wholesale market (particularly once the Ahuroa expansion is completed). Given this similarity, the efficiency implications of a lack of information regarding an Ahuroa outage may be similar to a production outage.

Efficiency implications resulting from limited gas production outage information were discussed in Section 4.2.2. It was considered that there may be some efficiency benefits to upstream parties knowing the schedules for each other's planned outages. Given the size of Ahuroa's potential deliverability it is possible that there would also be benefits for upstream parties to know Ahuroa's planned maintenance timetable for the same reasons described in Section 4.2.2. The information would enable parties to coordinate workforce scheduling and plan projects so that there are not multiple outages at the same time. A lack of storage outage information could mean maintenance planning decisions are not made as efficiently as they otherwise could be.

Transmission

Under the GTAC arrangements, downstream participants that connect directly to the transmission network must provide outage information to First Gas under their interconnection agreements. Given these arrangements, there are no obvious efficiency issues for the gas transmission system operator regarding limited storage outage information.

The Critical Contingency Operator (CCO) is another party that sits within the transmission part of the sector. The upstream production outage information issues discussed in Section 4.2.2 could also apply to the Ahuroa gas storage facility. The CCO could benefit from having a formal arrangement of outage disclosure to improve its ability to anticipate and manage a critical contingency event.

Downstream (including major users)

Downstream submitters were also silent on storage outage information issues. However, if we continue along the vein that Ahuroa can be reasonably compared to some gas production facilities then the information issues for downstream participants described in Section 4.2.2 could also be true of storage outages.

As noted in Section 4.2.2, submissions on the Options Paper commented that a lack of planned maintenance information means major users do not have an ability to coordinate their own maintenance plans with any production outages. Lack of upstream unplanned outage information leads to major users making inefficient production decisions as they are unable to feed any information of outage duration or size into their decisions. It is possible that if Ahuroa was to have an outage (either planned or unplanned) and its deliverability to the market was to reduce then some major users may have an experience similar to when there is a production facility outage. These users would be unable to coordinate their maintenance or make efficient operational decisions during an outage. It appears that limited gas storage outage information, like upstream outage information, could negatively impact on the operations of downstream participants.

Gas wholesale trading market

emsTradepoint's submission highlighted that it does not think criterion 15, the GPS objective for "efficient arrangements for the short-term trading of gas", is effectively met with the current level of information disclosure. It believes that the current arrangements lack meaningfulness and transparency. An absence of storage outage information in the market could be considered to be part of this inadequate transparency.

Related energy markets - electricity

Although no electricity participant specifically called for improved storage outage information in its submission, several parties highlighted that more information in general was better for the electricity market to manage its risk. Transpower noted in its submission that during periods of electricity shortage or periods where there is a risk of electricity shortage, the electricity sector is reliant on the gas industry making thermal generation available at full capacity. Ahuroa is perceived by some as energy storage that could be drawn upon during periods of tight electricity supply. This suggests that there could be efficiency benefits to the electricity sector by making both planned and unplanned outage information for Ahuroa public. This would enable electricity participants to make their risk assessments using more complete information.

6.2.3 Fairness

As previously discussed, emsTradepoint mentioned in its submission that fairness issues can arise when some participants are able to trade with more information than others. All of the storage capacity at Ahuroa is contracted currently and so fairness issues could arise if only these contracted participants were made aware of outages that could affect the wholesale gas market.

6.2.4 Reliability

This outcome is focussed on the reliable supply of gas (see criterion 2 and 6). Three reliability issues associated with production outages were discussed in Section 4.2.4; uncertainty caused by lack of outage information across the wider energy sector, risks posed by an inability to co-ordinate maintenance, and the CCO not being able to perform its role of anticipating and managing contingency events as effectively as it otherwise could. It appears that these same reliability issues could also arise from a lack of storage outage information.

If Ahuroa was to experience an outage, uncertainty regarding gas supply reliability could arise and potentially cause inefficient operational decisions for downstream participants. The electricity sector also would be unable to use this information to feed into its risk assessments. Upstream parties would not be able to co-ordinate maintenance with Ahuroa and so risks could arise of multiple outages coinciding with one another. Finally, a lack of planned storage outage information means that the CCO has incomplete information about factors affecting the transmission system. This in turn has the potential to impact the CCO's ability to manage its critical contingency event processes. As previously discussed, any detriment to the CCO's effectiveness implies a greater risk of gas reliability problems.

6.2.5 Environment

There appears to be no identifiable impacts on environmental outcomes from a lack of information transparency or information asymmetry regarding gas storage outages.

6.2.6 Safety

There appear to be no identifiable impacts on safety outcomes from a lack of information transparency or information asymmetry regarding gas storage outages.

6.2.7 Conclusion

Our problem assessment for storage outage information is based mostly on the assumption that the characteristics of the Ahuroa gas storage facility are comparable to those of a gas production facility. As such, our assessment for storage outage information concludes that the issues are similar to the gas production outage information issues discussed in Section 4.2. Specifically, lack of storage outage information may have efficiency implications across the energy sector. Fairness issues could arise from the information asymmetry caused by only parties with Ahuroa contracts being aware of any outages. Finally, there may be reliability issues if uncertainty of gas supply arises, maintenance on the facility is unable to be coordinated with production outages, or if the CCO has incomplete information about storage outages affecting the transmission system.

6.3 Costs of disclosing storage outage information

Gas Industry Co has had discussions with Flex Gas to get an understanding of the costs associated with disclosing Ahuroa outage information. It appears that the main cost of disclosing storage outage information is related to the restrictions imposed under Flex Gas's contracts with users of the facility. However, Flex Gas does not see this as a significant inhibitor to it being able to disclose information. Flex Gas is open to having discussions with its customers about the possibility of making outage information available if it was agreed that the information would be useful to the industry.

6.4 Should this information element be included in a Statement of Proposal?

Overall, it appears that there are several potential issues associated with the lack of publicly available storage outage information. In addition, it seems that there are no significant costs associated with making this information available publicly. Given this assessment, we propose that storage outage information should be included as an information element in a Statement of Proposal for information disclosure in the gas wholesale market.

Q5: Do you agree with our assessment for gas storage outage information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.

7. Transmission pipeline outages

7.1 Description

The Options Paper considered that the scope of planned and unplanned outage disclosure could include transmission pipeline outages.

In the following discussion, we assess the benefits of including transmission pipeline outage information issues using the assessment categories listed in Table 3. We also consider at a qualitative level the costs associated with providing this information. Finally, we consider whether the identified net benefits of including transmission pipeline outage information means that this information element should be considered in a Statement of Proposal.

7.2 Problem assessment

7.2.1 Overview

In all of the countries Gas Industry Co reviewed in the Options Paper, transmission pipeline information is part of their information disclosure regime. For instance, in Australia, capacity outlook and nominations information for transmission is an important component in the East Coast Bulletin Board. This reflects the transmission capacity constraints that exist from time to time in the East Coast gas market. In Europe, transmission system operators are participants covered by the REMIT (regulation on wholesale energy market integrity and transparency) regime and are required to disclose under the regime's principles-based approach to regulation.

In New Zealand, under the terms of both the Maui Pipeline Operating Code (MPOC) and the Vector Transmission Code (VTC), operational information is publicly disclosed by First Gas via the Open Access Transmission Information System (OATIS). There is provision for outages on the transmission system to be disclosed under these regimes. From 1 April 2020 these two codes are scheduled to be replaced by a single code, the Gas Transmission Access Code (GTAC). OATIS is set to be replaced by the Transmission Access Commercial Operating System (TACOS). Gas Industry Co believes that the proposed new arrangements under GTAC would provide at least the same level of transmission information to the market as the current codes.

7.2.2 Efficiency

The availability of information relating to transmission pipeline outages has the potential to have efficiency implications across the wider energy sector. The following discussion considers these implications for each component of the sector.

Upstream gas production (including processing)

Upstream parties who submitted on the Options Paper either were silent on transmission outage information or showed a general level of comfort that the information currently supplied by the transmission pipeline owner is adequate for their needs.

Transmission

First Gas is the owner of all transmission outage information and therefore lack of information is not an efficiency issue for the gas transmission system operator.

The Critical Contingency Operator (CCO) is another party in the transmission part of the sector. As required under the Gas Governance (Critical Contingency Management) Regulations 2008, the CCO receives information about transmission outages directly from First Gas and also has access to the same information that the transmission system operator discloses publicly. No efficiency issues are apparent in this regard.

Downstream (including major users)

In general, downstream submitters acknowledged that the current level of transmission outage information supplied by the transmission owner is sufficient. The importance of transmission outage information to downstream participants was highlighted during the Pariroa bypass project in 2018, where the Maui transmission pipeline had a planned outage of 27 hours and the industry was alerted to the risks the outage posed. NZ Steel commented in its submission that the information provided by First Gas, in both the lead up and during the Pariroa bypass project, enabled it to make timely and informed updates to its risk assessments and contingency plans. If this information had not been made available, then participants would have been left to make assessments based on incomplete information which could have led to inefficient decision-making.

Although there appears to be a general level of comfort relating to transmission outage information, Fonterra raised a view in its submission that transmission outage information should be disclosed in a more structured way. The information that First Gas supplied during the Pariroa bypass project went beyond what was required of them under the operational codes and so there is no guarantee that future outages will be disclosed in the same way. A consistent process for disclosing outages could limit inefficiencies for the parties interested in transmission outage information.

Gas wholesale trading market

As noted in its submission, emsTradepoint considers that the information currently disclosed by the transmission pipeline operator is sufficient.

Related energy markets - electricity

Submissions made by electricity participants emphasised the importance of transmission outage information to their businesses but did not highlight any current information gaps.

7.2.3 Fairness

There was no discussion in submissions on the implications of limited transmission pipeline outage information for fairness outcomes. In the earlier producer outages disclosure discussion in Section 4.2.3, it was explained that fairness issues tend to arise from information asymmetries. No issues relating to transmission outage information asymmetries were raised in submissions.

7.2.4 Reliability

This outcome is focussed on the reliable supply of gas (see criterion 2 and 6). No concerns were raised by submitters that the current level of transmission outage information is not adequate or could cause reliability issues.

7.2.5 Environment

There appears to be no identifiable impacts on environmental outcomes from a lack of information transparency or information asymmetry regarding gas transmission pipeline outages.

7.2.6 Safety

There appears to be no identifiable impacts on safety outcomes from a lack of information transparency or information asymmetry regarding gas transmission pipeline outages.

7.2.7 Conclusion

Our problem assessment has identified few concerns relating to transmission pipeline outage information. There appears to be a general level of comfort from submitters that the current level of information is sufficient. The only concern raised (by Fonterra) relates to the consistency of information disclosed, rather than the information itself.

7.3 Costs of disclosing transmission pipeline outage information

Submitters did not highlight any issues that should require the transmission system owner to disclose significant further transmission pipeline outage information. One issue was raised (by Fonterra) around the consistency of currently disclosed information. First Gas has already committed to new IT systems to support the GTAC and this should improve the consistency of such information. This cost is sunk and any further improvement, if necessary, should be achievable at negligible incremental cost.

7.4 Should this information element be included in a Statement of Proposal?

Overall, it appears that there are no major information issues relating to transmission pipeline outages. It is expected that the consistency of transmission outage information will improve under GTAC and its associated IT systems. If concerns relating to notifications arise after this change then we would consider them at that time. However, submissions and our own assessment of the issue suggest that there is no reason to include this information element in a Statement of Proposal.

Q6: Do you agree with our assessment for transmission pipeline outage information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.

8. Contract price and volume information

8.1 Description

The Options Paper noted that, as a general point, an understanding of traded quantities and prices by all parties in a marketplace is important for the efficient operation of that market. Most of the wholesale gas sold in New Zealand is via bilateral gas contracts. This means that traded price and quantity information that spans the whole market is not readily available.

The paper considered that the publication of weighted average prices and volumes from gas traded under GSAs could aid price discovery in the gas wholesale market. Under this disclosure, upstream parties would report price and quantity information to an independent party, who would publish aggregated information.

In the following discussion, we assess contract price and volume information issues against the assessment categories listed in Table 3. We also consider at a qualitative level the costs associated with providing this information. Finally, we consider whether the identified net benefits of providing contract price and volume information mean that this information element should be considered in a Statement of Proposal.

8.2 Problem assessment

8.2.1 Overview

Submissions on this information element were mixed. Of those parties that expressed a view, six supported the further development of this disclosure option, while seven parties considered that it should not be part of an information disclosure regime. Several parties that supported further development thought that this information element should be a lower priority relative to other elements, particularly gas production outage disclosure.

Parties disagreeing with the inclusion of this information element raised several practical points, including:

- The price in a GSA reflects the market dynamics at the time the contract was entered into rather than the current market, so an aggregation of GSA prices will not necessarily reflect current market conditions;
- GSA terms and conditions are bespoke (particularly for larger wholesale contracts) so aggregating or averaging price and quantity information from these contracts would not provide useful information.

The latter point was also raised in the workshop that Gas Industry Co held on the Options Paper.

We note that MBIE does collect quarterly wholesale gas sales information (gas volumes and purchases) from gas retailers in its Quarterly Retail Sales Survey (QRSS). MBIE calculates an average wholesale price series using this information. This data series provides an insight into wholesale prices in the market although it does not include trades that do not go through a retailer.

8.2.2 Efficiency

In the following discussion we review the efficiency implications of limited public availability of bilateral contract price and volume information by value chain component.

Upstream sector

Upstream parties who submitted on the Options Paper were unsupportive of information disclosure on this information element. Two of the parties highlighted the commercial sensitivity of this information.

TDB Advisory's report on Gas Industry Governance²⁴ for the Major Electricity Users Group (MEUG) recommended against introducing disclosure obligations for commercial information except where it is clear such disclosure would solve identified problems. TDB noted that "Disclosure obligations carry the risk of reducing incentives for investment in the production of information. Compared with outage information, incentive risks are higher around commercial information." The implication from this report is that disclosure of this information element could create an efficiency loss in the upstream sector.

Transmission

There appear to be no discernible problems caused by a lack of gas contract price and volume information for the transmission part of the gas value chain.

Downstream (including major users)

The Options Paper noted that the disclosure of contract price and volume (albeit on an aggregated basis to preserve anonymity) could aid price discovery and promote efficiency in the wholesale market. Currently, downstream parties who want to contract for gas must enter into discussions with upstream parties to discover the wholesale price. MBIE's QRSS does provide some average wholesale price information at quarterly rests.

Contact and Vector supported disclosure of this information in their submissions; however, neither of these parties provided rationale supporting their positions.

As noted earlier, there are several practical reasons why the disclosure of this information element may not be particularly useful for parties' price discovery. These hinge on the bespoke nature of GSAs, such that aggregation of prices and volumes across contracts would not be measuring 'apples with apples'. Although upstream parties made this point, Trustpower, Genesis and Methanex also noted the practical limitations with this form of information disclosure.

Methanex identified costs to its operation associated with disclosure of this information element, which would likely translate into efficiency losses. This is discussed further in the costs section below.

Overall, it appears that the efficiency benefits to downstream parties from disclosure of this information element may be somewhat limited.

Gas wholesale trading market

emsTradepoint supported the disclosure of this information element in its submission. emsTradepoint suggested that its platform could be extended to encompass all wholesale market transactions (including gas traded via bilateral contracts), rather than just trades placed through emsTradepoint. It considered that this extension could be made while preserving the anonymity of parties (e.g. by publishing information as an index). emsTradepoint agreed with the point made in the Options Paper that better information regarding wholesale gas price and quantity

²⁴ TDB Advisory (2019). "Gas Industry Governance: Incentives, Regulation and Outcomes", 29 April 2019. This report, commissioned by MEUG, was separate to the Gas Industry Co workstream on information disclosure.

information would lead to more informed business decisions, promoting efficiency in the gas wholesale market.

Related energy markets - electricity

A couple of parties from the electricity sector commented that the disclosure of contract price and volume information would support improved transparency for participants across the energy sector. The EA acknowledged that the nature of gas products can be quite different between contracts, which may limit the value of price and volume information (at least without supporting information that contextualises the reported data).

The efficiency implications for related markets from limited contract price and quantity information appear to be fairly small. Furthermore, the publication of aggregated volume and weighted average price information may not address information transparency issues that exist due to the practical issues identified earlier.

8.2.3 Fairness

There was no discussion in submissions on the implications of limited information on contract price and quantity information for fairness outcomes.

8.2.4 Reliability

There appears to be no identifiable impact on reliability outcomes from a lack of information transparency regarding contract price and quantity information.

8.2.5 Environment

There appears to be no identifiable impacts on environmental outcomes from a lack of information transparency regarding contract price and quantity information.

8.2.6 Safety

There appears to be no identifiable impacts on gas safety outcomes from a lack of information transparency regarding contract price and quantity information.

8.2.7 Conclusion

The above discussion identified that while there are no transparent prices and volumes available for gas supplied under bilateral arrangements, the benefits of disclosing weighted price and volume information do not appear to be large. In part, this is due to the practical issues with disclosing weighted average prices and volumes from a range of contracts with bespoke terms. In addition, the problems associated with this limited transparency do not appear to be significant. For instance, there were no submissions that identified particular costs from the lack of transparency regarding this information. MBIE's QRSS does provide some average wholesale price information at quarterly rests.

In contrast, several parties considered this information to be commercially sensitive. Given the concentrated nature of the market, aggregation of this information may not address this problem.

8.3 Costs of disclosing contract price and quantity information

The disclosure of contract price and quantity information could affect adversely some parties' operations due to the commercial sensitivity of the information. This point was made by Methanex and some of the upstream parties. In particular, Methanex submitted that this disclosure would damage its operations because of the confidential nature of this information.

Methanex noted that because of the large size of its gas consumption relative to the total market, aggregation would not anonymise its contract price and volume information:

Methanex strongly opposes the disclosure of pricing and volume information in bilateral contracts in terms of the value of the information to the operation of a wholesale market and the damage it would do to Methanex to have that information disclosed to other parties both in New Zealand and internationally. Methanex considers that given the proportion of gas it purchases under bilateral gas contracts it would be challenging to sufficiently aggregate the information to ensure that Methanex specific information is protected.

Apart from this issue, there would be administrative costs associated with an appropriate agency compiling returns from upstream parties and calculating aggregated volumes and weighted average prices. Given the heterogeneity of bespoke GSAs, this would not be a simple exercise.

8.4 Should this information element be included in a Statement of Proposal?

The problems associated with limited transparency of contract volume and price information do not appear to be significant. In contrast, there are practical issues with disclosing this information in a manner that is useful for parties. In addition, several parties consider this to be commercially sensitive information. They argue that aggregation of information would not provide sufficient anonymity given the small and concentrated nature of the sector.

Based on these conclusions, Gas Industry Co considers that this information element should not be included in a Statement of Proposal on information disclosure.

Q7: Do you agree with our assessment for contract price and volume information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.

9. emsTradePoint price & volume information

9.1 Description

The Options Paper noted that an understanding of traded quantities and prices by all parties in a market is necessary for the efficient operation of that market. The paper considered that the absence of publicly available emsTradePoint price and volume information may contribute to problems with information transparency in the wholesale gas market.

In the following discussion, we assess this information element against the assessment categories listed in Table 3. We also consider at a qualitative level the costs associated with providing this information. Finally, we assess whether emsTradePoint information should be considered in a Statement of Proposal.

9.2 Problem assessment

9.2.1 Overview

At one stage, emsTradePoint provided freely available lagged volume and price data on its website. It stopped providing these data in April 2018. Subsequent to the beginning of this workstream, emsTradePoint has again started publishing some information on its public website. In particular, it is now publishing VWAP (Volume Weighted Average Price), FRMI (Frankley Road Natural Gas Monthly Index) and FRQI (Frankley Road Natural Gas Quarterly Index) price measures on a weekly basis. It is still not providing volume information on its public website.

EmsTradePoint reports that it is re-designing its website over the next few months, with different levels of access and information depending on the participation level. It will continue to provide subscription-based access to its exchange. In its submission, emsTradePoint considered that the current \$5,000 entry level annual fee for parties to have read-only access to information is not unreasonable. EmsTradePoint further noted that, as it has paying participants it assumes that they derive at least that value in benefits.

9.2.2 Efficiency

Widely available information is a cornerstone of an efficient market. For this paper, the question is whether a timely, sufficient range of emsTradePoint data is available publicly. As noted earlier, publicly available data is limited to VWAP, FRMI and FRQI price index information and this can be up to a week out-of-date. There is no volume information that is publicly available.

Parties can access a fuller suite of market information through a \$5,000/year read-only subscription. In submissions, four parties acknowledged that this is a relatively small sum to pay for this information. However, other submissions considered that price and volume information should be freely available.

We do not consider the \$5,000 fee to represent a significant efficiency loss for any party in the market, particularly given the value of the information that is available from paying the fee.

We can understand that this fee may be an issue for potential new entrants; having to pay this sum before possible entry may be regarded as something of a barrier. However, price

information is available (albeit with a lag) and this should be sufficient for a potential new entrant to understand price trends. Gas Industry Co also publishes a history of emsTradepoint volumes and prices in its Performance Measures Quarterly Report.

It has been suggested that emsTradepoint should provide a list of the participants in its market and it should also publish energy-only gas prices. With regard to the first point, the emsTradepoint market is a private, commercial market; it is up to the operator of the market to choose what information to publish. There are plenty of markets where the identities of participants are not revealed. For example, in the gas sector, the parties involved in GSAs are sometimes not known to the wider market. On the second point, the price traded on emsTradepoint is a carbon-inclusive price so there seems little reason for emsTradepoint to publish an energy-only price.

9.2.3 Fairness

There appears to be no significant impacts on fairness outcomes from emsTradepoint limiting the amount of its market information it provides publicly.

9.2.4 Reliability

There appears to be no identifiable impacts on reliability outcomes from emsTradepoint limiting the amount of its market information it provides publicly.

9.2.5 Environment

There appears to be no identifiable impacts on environment outcomes from emsTradepoint limiting the amount of its market information it provides publicly.

9.2.6 Safety

There appears to be no identifiable impacts on safety outcomes from emsTradepoint limiting the amount of its market information it provides publicly.

9.2.7 Conclusion

Overall, Gas Industry Co considers that efficiency costs from emsTradepoint limiting the public information it provides on its market are small. However, we note that the absence of publicly available volume information is a gap²⁵. There appear to be no significant issues associated with fairness, reliability, environment and safety outcomes.

9.3 Costs of disclosing further emsTradepoint information

The cost of requiring emsTradepoint to publicly disclose lagged price and volume data is that it could lose at a portion of the revenue it earns from read-only subscriptions to its website. The size of this loss would depend on the number of subscribers with read-only access who would be happy with publicly available lagged volume and price information.

9.4 Should this information element be included in a Statement of Proposal?

At this stage, Gas Industry Co considers that this information element should not be included in a Statement of Proposal on information disclosure. This conclusion is made on the basis that emsTradepoint continues to provide at least the current level of information (i.e. read only access to its platform for \$5,000 p.a. with VWAP, FRMI and FRQI price measures published on

²⁵ to understand the market, both price (which is publicly available, albeit on a lagged basis) and volume information is important

its public website). We note that market volume information is currently not publicly available but consider that this omission is not sufficient for this information element to be included in a Statement of Proposal (particularly since this information can be assessed if parties subscribe to at least read-only access). We will continue to monitor the effectiveness of information disclosure on the emsTradepoint market. For instance, if emsTradepoint's disclosure arrangements changed, Gas Industry Co would look to review this conclusion.

Q8: Do you agree with our assessment for emsTradepoint price & volume information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.

10. Gas storage facilities information

10.1 Description

The Options Paper did not consider gas storage information as an information element; however, it was raised by several parties in their submissions. Storage outage information is discussed in Section 6. The focus of this section is on information related to the quantity of gas stored in storage facilities.

10.2 Problem assessment

10.2.1 Overview

Gas storage information is included as part of the information disclosure regime in all of the countries Gas Industry Co reviewed in the Options Paper. For instance, in Australia, gas storage operators are required to disclose capacity and nominations information. In Europe, storage operators are participants covered by the REMIT (regulation on wholesale energy market integrity and transparency) regime and are required to disclose under the regime's principles-based approach to regulation.

Currently there is one storage facility in the New Zealand gas market (Ahuroa, owned by Flex Gas – see Section 6.2.1). Flex Gas is required to submit Ahuroa's stock changes to MBIE as part of the Quarterly Retail Sales Survey (QRSS). The survey includes information about Ahuroa's opening stock volume, the volume of gas injected and withdrawn, the volume of gas lost or consumed in the storage process, the closing stock volume, the stock change, the gross and net calorific value, the working capacity and the peak output. This data is used by MBIE to calculate an annual stock change figure for natural gas and is presented publicly in its energy balances table²⁶. This table was most recently updated for calendar year 2017. Calendar year 2018 is expected to be published shortly.

First Gas noted in its submission that Flex Gas does not currently publish the availability of uncontracted Ahuroa storage capacity, and it is not able to disclose this due to contractual constraints. Flex Gas would be willing to seek the consent of existing and future users of the facility, if it was considered that this information is important to the effective functioning of the gas market.

10.2.2 Efficiency

The following discussion considers the efficiency implications across the wider energy market. These implications are examined individually for each part of the sector.

²⁶ <https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-statistics-and-modelling/energy-statistics/energy-balances/>

Upstream gas production (including processing)

Several submissions from upstream parties mentioned that they would like to see the aggregate volume of stored gas at Ahuroa. These submissions did not specifically highlight how the lack of this information creates inefficiencies in the upstream market.

Transmission

First Gas noted in its submission that Ahuroa can be used to minimise the impact of planned interruptions on the gas network. It provided the example of how during the planned Pariroa bypass project, First Gas contracted with Flex Gas "on an arms-length basis" to assist with the management of pipeline pressures during the event. Due to the close relationship between First Gas and Flex Gas, lack of Ahuroa capacity information is not likely to have been a barrier to setting up such an arrangement.

The CCO also sits within the transmission part of the sector. During a critical contingency, the CCO has an obligation to explore available opportunities to increase upstream gas production and draw on gas storage in order to mitigate the severity of the critical contingency. Knowing the volume of stored gas could therefore be useful information to the CCO in managing a contingency event.

Downstream (including major users)

Storage information is currently only available to those who have contracted with the Ahuroa facility. It would be useful if all downstream parties had an understanding of capacity availability so they could potentially use the facility in their operations. First Gas noted in its submission that there will be a wider opportunity for participants to contract to use storage at Ahuroa now that it is owned by Flex Gas. Given Flex Gas's interests in marketing the facility, this may mean that information could be available more widely in the future.

Gas wholesale trading market

We have previously mentioned that emsTradepoint's submission highlighted that it does not think criterion 15, the GPS objective for "efficient arrangements for the short-term trading of gas", is effectively met with the current level of information disclosure. It believes that the current arrangements lack meaningfulness and transparency. Although emsTradepoint's submission is not clearly directed at gas storage information, we have noted it here because an absence of storage information could contribute to a lack of transparency in the market.

Related energy markets - electricity

It is important for electricity sector parties to understand gas availability (both production and storage) so they can make efficient production decisions and manage risk. This is particularly the case in periods of tight electricity supply (e.g. in periods where there are low inflows into the hydro generation lakes) where the electricity sector is reliant on thermal generation to maintain electricity security of supply. First Gas suggested in its submission that the Ahuroa gas storage facility can support the provision of gas for thermal generation. It follows that information on gas storage may be useful for the efficient operation of the electricity wholesale market. However, it is important to note that all of the gas stored in Ahuroa is owned by third parties (some of which may be parties in the electricity sector). This gas could be used for electricity generation or it may be used for other purposes. Given this, Ahuroa storage quantities may not translate directly into quantities of gas available for generation. Nevertheless, information on these quantities may provide electricity companies with a clearer picture regarding what gas could potentially be drawn upon.

10.2.3 Fairness

Currently, parties with contracts with Flex Gas for storage may have a better understanding of Ahuroa's overall storage capacity and uncontracted capacity. This asymmetry implies that there could be fairness issues associated with the unevenness of this information across the market. However, we note that Flex Gas's interest in operating the Ahuroa facility with multiple downstream users may mean that information will be shared more widely going forward.

10.2.4 Reliability

This outcome is focussed on the reliable supply of gas (see criterion 2 and 6). There are a couple of possible reliability issues resulting from a lack of Ahuroa storage information. First, the Ahuroa gas storage facility is perceived by some electricity sector participants as readily available energy storage that can be drawn upon during periods of tight electricity supply. As we identified in the previous efficiency discussion, the availability of gas in Ahuroa for this purpose depends on the third-party contracts that are in place. Public disclosure of storage volumes at Ahuroa could mean that electricity sector participants have a better understanding of Ahuroa gas availability during these periods and the implications for thermal generation. Secondly, the actual reliability of gas supply could be increased if Ahuroa is used, as suggested by First Gas, as a tool to minimise the impact of planned interruptions on the gas network. A lack of information could mean these outcomes are not realised.

10.2.5 Environment

There appear to be no identifiable impacts on environmental outcomes from a lack of information transparency or information asymmetry regarding storage information.

10.2.6 Safety

There appear to be no identifiable impacts on safety outcomes from a lack of information transparency or information asymmetry regarding gas storage.

10.2.7 Conclusion

Our problem assessment for gas storage information has identified several issues with the current level of information available for the Ahuroa facility. These relate to possible efficiency issues for parts of the sector and reliability issues. More broadly, limited and asymmetric storage information is inconsistent with the Government's outcome for good, publicly available information on the present state of the gas sector.

We note that with the decline in some of the larger gas fields over the coming years and the increasing demand for deliverability flexibility from the electricity sector (see Section 6.2.1), it is expected that the facility will play an increasingly important role over time. Accordingly, information on Ahuroa storage will become increasingly valuable to the market.

10.3 Costs of disclosing storage information

Flex Gas currently discloses aggregated Ahuroa storage volumes to MBIE in the form of quarterly stocks and so there would be no extra costs to Flex Gas if this quarterly information was deemed sufficient to industry and if MBIE was amenable to making this information public. First Gas has noted in conversations that it would be open to making more frequent disclosures if this was needed.

First Gas highlighted in its submission that although Flex Gas does not disclose capacity and availability of the gas at Ahuroa due to contractual constraints, it would be willing to seek the consent of existing and future users of the facility, if it was considered that this information is important to the effective functioning of the gas market. First Gas's willingness to consider these disclosures suggests a low cost to making this information available.

10.4 Should this information element be included in a Statement of Proposal?

Our problem assessment suggests that there are several issues associated with the lack of publicly available storage information. Gas Industry Co believes some of these concerns could potentially be addressed by discussing with MBIE the possibility of making the information supplied by Flex Gas in its QRSS submission publicly available. We would be interested in hearing from parties if having this information made available would be useful for improving their understanding of Ahuroa storage. We also encourage Flex Gas to discuss with its customers the possibility of publicly disclosing Ahuroa capacity and gas availability information and provide feedback in its submission. The inclusion of this information element in a Statement of Proposal will depend to some extent on the feedback we receive on these points.

Q9: Do you agree with our assessment for gas storage facilities information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.

11. Forecasts of gas production

11.1 Description

The Options Paper considered the requirement for gas producers to provide forecast production information for the coming year.

The motivation for this possible information element came primarily from the electricity sector. In particular, the electricity system operator has expressed its concern that the lack of information regarding the availability of gas for thermal generators makes it difficult to assess and manage electricity security of supply. It considers that an understanding of gas production over the next year, along with thermal generators' thermal fuel supply positions (see Section 12) is necessary to understand security of supply issues. For instance, thermal fuel assumptions are an important input into the system operator's Electricity Risk Curves (formerly known as Hydro Risk Curves).

11.2 Problem assessment

Thirteen submitters on the Options Paper said that they would like to see production information disclosed. In contrast, all of the upstream parties who submitted (Greymouth, OMV, PEPANZ and Todd) were opposed to further disclosure, with several of these parties pointing out that MBIE already publishes this information.

As upstream parties identified in submissions, MBIE publishes forecasts of annual gas production. Under the Crown Minerals (Petroleum) Regulations 2007, producers are required to provide MBIE with an annual report on mining activities and production operations. This report includes (amongst many other matters) gas production figures for the previous year and the proposed production profile for the projected life of each gas field. Producers provide this information to MBIE by 31 March each year. MBIE publishes these annual production figures in its Reserves, Activity and Field Data report. The timing of the publication of this report has varied. In 2019, MBIE published the information in June, which was earlier than other years. If gas production outage information was available, these annual production forecasts would provide a reasonably good snapshot of likely gas production, by field, over the year.

We note that for electricity generators and the electricity system operator, MBIE's June publication date (although earlier than previous years) may lessen the usefulness of the information; by this date, the winter period has begun, and hydro lake levels may be starting to decline²⁷. A publication date that was, for instance, a month earlier may be more useful.

It is important to note that even though electricity generation uses a sizeable share of gas, it is still well less than half of gas market volumes. For instance, electricity generation accounted for 31 percent of gas produced in 2018. If there is a reduction in gas production (for example), it is not a given that electricity generation would be affected. This would depend on the nature of bespoke GSAs between producers and a variety of customers that include electricity generators, and the relative economics of different types of gas demand. The implication of this is that gas

²⁷ for example, the system operator's Electricity Risk Curves show the distribution of hydro storage across the year

production levels may not be a particularly useful proxy for the amount of gas available for thermal generation plants (at least not in isolation).

11.3 Should this information element be included in a Statement of Proposal?

Given that producers already disclose gas production forecast information to MBIE under the Crown Minerals (Petroleum) Regulations 2007, it does not appear to make sense for this disclosure to be replicated under new, separate arrangements. Gas Industry Co proposes that this information element is not advanced to the next stage of our information disclosure workstream. We intend to work with MBIE to understand whether this information can be made available on a more timely basis.

Q10: Do you agree with our assessment for gas production forecast information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.

12. Gas positions of thermal electricity generators

12.1 Description

The Options Paper identified information regarding thermal electricity generators' current and likely future gas positions²⁸ as an information element that may have transparency and asymmetry issues. This issue was also identified by several electricity sector parties in submissions on the paper and in discussions with Gas Industry Co.

12.2 Problem assessment

Several parties commented that in the electricity sector, there are inadequate obligations on thermal generators to provide information regarding the state of their thermal fuel (coal and gas) supplies. In contrast, inflows into the hydro lakes and lake levels, as well as snowpack levels, are publicly disclosed. We understand that this is an issue that the EA's Wholesale Advisory Group (WAG) has investigated²⁹.

From our review of submissions and related discussions, it appears that there are two potential problems associated with limited transparency regarding thermal generators' gas positions. First, the system operator may have limited information on participants' gas positions and it lacks the powers to require information formally. Given this limited information, the system operator must make assumptions about the availability of gas for gas-fired electricity generation. This causes some uncertainty in understanding electricity security of supply. For instance, the calculation of the Electricity Risk Curves may be affected adversely by this uncertainty.

Secondly, we understand that this lack of information regarding gas availability potentially causes information asymmetry between electricity participants that have gas-fired plants as part of their generation portfolio and participants that do not have these plants (including renewables-only generators, retailers and traders). The former participants may have more information on factors affecting the electricity wholesale market, particularly during times where there are gas supply outages. This asymmetry may make it more difficult for renewables-only electricity companies, retailers and traders to participate in the wholesale electricity market, with less knowledge to reliably evaluate the forward price curve. The *Electricity Price Review* recommendation on market-making³⁰ may increase this problem for these participants.

²⁸ These gas positions reflect the quantities of gas that generators with gas-fired plant have available for their plants.

²⁹ For example, thermal fuel information disclosure was a topic in the Wholesale Advisory Group's 2012 Wholesale Market Information Project: A WAG Discussion paper.

³⁰ *Electricity Price Review: Final Report*. Recommendation D2. Introduce mandatory market-making obligation unless the sector develops an effective incentive-based scheme.

Genesis and Contact are the two large electricity generation companies who have thermal plants in their generation portfolios. Contact did not comment on this matter in its submission. Genesis did not support disclosure of information regarding its gas position in its submission. It noted in its submission that:

- The quantity of gas available for generation from Genesis's book depends partly on the demand from its gas customers. It also depends on the availability of other generation energy sources (including coal at Huntly, given the dual-fuel capabilities of this facility). This portfolio approach to fuel allocation means that the quantity of gas for electricity generation is changeable.
- Genesis' short-term gas use varies partly on its ability to contract for additional gas at short notice. This makes the disclosure of a long-term gas contract position only partly informative.
- Genesis "...would be concerned if there was a suggestion any generator be required to disclose commercially sensitive and confidential information regarding their trading strategy which could potentially raise competition related concerns in the wholesale market."

Notwithstanding the above points, Genesis commented that it supports further engagement on the subject of greater fuel book disclosure with relevant stakeholders including Gas Industry Co, the EA and the system operator.

The EA and Gas Industry Co have agreed that this issue best fits within the EA's work programme. These thermal generator gas supply issues are related primarily to the generators' thermal fuel (i.e. gas and coal) procurement strategies rather than the effective and efficient operation of the wholesale gas market.

12.3 Should this information element be included in a Statement of Proposal?

Gas Industry Co proposes that this information element is not advanced to the next stage of our information disclosure workstream. The EA has added the Wholesale Market Information Disclosure project to its 2019/20 work programme. This project will identify any gaps in the EA's power to require further information disclosure (such as contract fuel supplies) and strengthen disclosure rules to include information on the availability of generation fuel. Given the cross-over between the gas and electricity sectors in this instance, Gas Industry Co and the EA have agreed to work together on this workstream. We will ensure that the comments raised in submissions are picked up in that workstream.

Q11: Do you agree with our assessment for thermal electricity generator gas position information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.

13. Forecasts of major users' gas consumption

13.1 Description

The Options Paper considered the requirement for major users to provide forecast consumption information for the coming year. This information element was identified as a possible extension to the disclosure of forecast production information (see Section 11).

In the following discussion, we assess this information element against the assessment categories listed in Table 3. We also consider at a qualitative level the costs associated with providing this information. Finally, we assess whether forecasts of major users' gas consumption should be considered in a Statement of Proposal.

13.2 Problem assessment

13.2.1 Overview

Particular information issues that would be improved through the disclosure of this information were not identified in the Options Paper; as noted, this information element was included as a possible extension to the scope of forecast quantity information (primarily production information) that could be published in an information disclosure regime.

We have reviewed the approaches taken in disclosing consumption information in the Australian Bulletin Boards to understand possible disclosure options. In the Western Australian Gas Bulletin Board, major gas users disclose their gas consumption for the prior day. This information is posted at an aggregated level with a two-day lag to address parties' commercial confidentiality concerns. It is published at a disaggregated level with a seven-day lag. Parties who are the only gas recipient at a transmission delivery point are exempt from reporting. For the East Coast Bulletin Board, the Australian Energy Market Commission (AEMC) has recommended that major gas users should disclose (on a disaggregated basis) their gas consumption for the prior day. Notably, in both the Western Australia and East Coast Australia Bulletin Boards there are no obligations on major users to disclose forecasts of future gas consumption.

In submissions, seven parties commented that they would like to see major users' consumption forecasts disclosed. A common theme was that disclosure of this information would promote efficiency in the wholesale market. However, parties did not identify a particular market efficiency issue caused by the absence of this information. The EA commented generally that, given the concentrated nature of the gas wholesale market, it is possible for the consumption decisions of some of the largest users to materially impact on the supply/demand balance in the market. Disclosure of consumption information could identify the potential for tighter market conditions. However, this issue could be at least partly addressed by major users disclosing plant outages.

13.2.2 Efficiency

Upstream sector

There appear to be no discernible efficiency problems caused by a lack of forecast consumption information for the upstream sector. OMV commented in its submission that while it "...might

like to see consumption profiles for all major users, we see no actual problem that would warrant a requirement for them to disclose this information.”

Transmission

There appear to be no discernible efficiency problems caused by a lack of forecast consumption information for the transmission part of the gas value chain. The nominations process enables the transmission operator to manage pressure in the transmission system without the need for users’ disclosure of forecast consumption over the year.

Downstream (including major users)

In submissions, there were no efficiency problems identified for the downstream sector caused by a lack of forecast consumption information.

In contrast, Methanex considered that forecast consumption information should not be disclosed, noting the costs of providing this information on its operation. Methanex’s perspective is discussed further in the costs section.

Gas wholesale trading market

emsTradepoint considered that major user consumption forecast information should be disclosed along with production forecast information to promote information symmetry. However, emsTradepoint did not identify any particular efficiency benefits for its market from the disclosure of this information.

Related energy markets - electricity

In submissions, several electricity companies thought that this information should be disclosed. These submitters provided limited rationale supporting this perspective. We note that major users in the electricity sector do not appear to disclose this type of information.

13.2.3 Fairness

There appears to be no significant impacts on fairness outcomes from a lack of information on major users’ planned consumption.

13.2.4 Reliability

There appears to be no identifiable impacts on reliability outcomes from a lack of information on major users’ planned consumption.

13.2.5 Environment

There appears to be no identifiable impacts on environment outcomes from a lack of information on major users’ planned consumption.

13.2.6 Safety

There appears to be no identifiable impacts on safety outcomes from a lack of information on major users’ planned consumption.

13.2.7 Conclusion

Overall, it appears that there are no significant problems associated with a lack of forecast consumption information in the gas wholesale market.

13.3 Costs of disclosing forecasts of gas consumption

Methanex commented in its submission that information related to its planned consumption of gas over the next year is commercially sensitive. It argued that overseas competitors would gain

a competitive advantage from the disclosure of this information. Methanex also commented that because of the large size of its gas consumption relative to the total market, aggregation of major users' consumption forecasts would not anonymise its information. If this is correct, then there appears to be a material disadvantage from the disclosure of major users' consumption forecasts. However, Methanex did not provide information to support its perspective.

Other costs associated with this disclosure appear to be reasonably small, related mainly to the administrative costs associated with providing and collecting the information.

13.4 Should this information element be included in a Statement of Proposal?

There does not appear to be a significant problem associated with a lack of information regarding major users' planned gas consumption over the next 12 months. In contrast, the impact on Methanex's competitiveness is potentially a large cost (although we note Methanex has not provided supporting information on this issue). On balance, it appears that there is no net benefit associated with the disclosure of major users' forecasts of gas consumption.

Based on the above problem assessment, Gas Industry Co considers that this information element should not be included in a Statement of Proposal. However, we welcome further information on this matter in parties' submissions. We may revisit this conclusion based on stakeholder feedback or if circumstances change.

Q12: Do you agree with our assessment for major users' forecast gas consumption information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.

Glossary

Term	Definition
AEMC	Australian Energy Market Commission
ASX	Australian Stock Exchange
CCGT	Combined Cycle Gas Turbine
CCO	Critical Contingency Operator
the Code	Electricity Industry Participation Code (2010)
E&P	Exploration & Production
EA	Electricity Authority
EU	European Union
Gas Act	Gas Act 1992
GBB	[Australian East Coast] Gas Bulletin Board
GIC	Gas Industry Company
GJ	Gigajoule
GTAC	Gas Transmission Access Code
GPS	Government Policy Statement on Gas Governance (2008)
GSA	Gas supply agreement
LNG	Liquefied Natural Gas
MBIE	Ministry of Business, Innovation & Employment
MEUG	Major Electricity Users Group
MGUG	Major Gas Users Group
MPOC	Maui Pipeline Operating Code
OATIS	Open Access Transmission Information System
PEPANZ	Petroleum Exploration and Production Association of New Zealand Inc
PJ	Petajoule
QRSS	Quarterly Retail Sales Survey

Term	Definition
REMIT	Regulation on Wholesale Energy Market Integrity and Transparency
TACOS	Transmission Access Commercial Operating System
TCC	Taranaki combined cycle power station
TJ	Terajoule
UTS	Undesirable Trading Situation
VTC	Vector Transmission Code

Appendix A Questions

Information Disclosure: Problem Assessment

Submission prepared by: <company name and contact>

Question	Comment
Q1: <i>Do you have any comments on our approach to the analysis?</i>	
Q2: <i>Have we identified all of the relevant information elements in this list?</i>	
Q3: <i>Do you agree with our assessment for gas production outage information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.</i>	
Q4: <i>Do you agree with our assessment for major gas user facility outage information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.</i>	
Q5: <i>Do you agree with our assessment for gas storage outage information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.</i>	
Q6: <i>Do you agree with our assessment for transmission pipeline outage information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.</i>	
Q7: <i>Do you agree with our assessment for contract price and volume information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.</i>	
Q8: <i>Do you agree with our assessment for emsTradepoint price & volume information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.</i>	
Q9: <i>Do you agree with our assessment for gas storage facilities information? Have we missed aspects of the issue or are there parts that have not been described</i>	

<p><i>correctly? Please include details and any examples in your response.</i></p>	
<p><i>Q10: Do you agree with our assessment for gas production forecast information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.</i></p>	
<p><i>Q11: Do you agree with our assessment for thermal electricity generator gas position information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.</i></p>	
<p><i>Q12: Do you agree with our assessment for major users' forecast gas consumption information? Have we missed aspects of the issue or are there parts that have not been described correctly? Please include details and any examples in your response.</i></p>	

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.

SUBMISSIONS CLOSE:
Monday, 9 December 2019

SUBMIT TO:
www.gasindustry.co.nz

ENQUIRIES:
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