QUARTERLY REPORT

Quarter ended 30 June 2017

FROM THE CHIEF EXECUTIVE

Gas Industry Co would like to express its appreciation to the Minister of Energy and Resources for her support in the levy process which led to the finalisation of our levy and work programme for the year ahead.

The 2017 Levy Regulations came into force on 1 July 2017, the same date as the publication of our 2018-2020 *Statement of Intent*. Both these documents are available on our website. Gas Industry Co would like to thank all the stakeholders who participated in the consultation process.

We continue to work with First Gas Limited (First Gas) and industry stakeholders in developing the new Gas Transmission Access Code (GTAC). In May, we hosted a workshop where First Gas presented its paper *GTAC - Emerging Views on Detailed Design of Access Products, Pricing, and Balancing and Allocation (EV Paper)*.

The paper analysed detailed design choices that need to be made in drafting the new code and provided emerging views on the best way to make those design choices. The May workshop also included a presentation by Concept Consulting on governance options for the new GTAC.

During the six week consultation period, First Gas engaged with stakeholders to help ensure a good understanding of the emerging views and to get as much input as possible on the new code.

A full draft of the GTAC is intended to be released for consultation in August 2017. Further information can be found in the *Developments in the Quarter* section below and also on our website.

On 23 May, a critical contingency was declared due to a system imbalance.

The critical contingency was caused by a sequence of events that happened under otherwise normal pipeline operating conditions, but linepack and pressure fell to levels that required declaration.

This is the first critical contingency that was not caused by an unexpected physical event, such as an outage or pipeline breakage. Further details on the event can also be found below in the *Developments in the Quarter* section.

Ian Dempster
Acting Chief Executive

Contents

Workstream developments during the quarter are summarised in this Quarterly Report. Further details of the developments have been reported previously through Gas Industry Co's periodic News Bulletins and are available on our website www.gasindustry.co.nz

HIGHLIGHTS FROM THE QUARTERLY INDUSTRY PERFORMANCE MEASURES REPORT

- About 4,100 gas consumers switch gas supplier each month; about 18% of gas customers switch supplier each year.
- So far in 2017, 76% of customer switches have been completed within three business days.
- 63% of residential consumer sites have switched retailer at least once in the past eight years; 66% of small commercial and 79% of large commercial sites have switched at least once.
- Over 99% of gas customers are connected to a gate where seven or more retailers trade, suggesting that the gas retail sector is generally competitive throughout the North Island.
- Average annual unaccounted-for gas (UFG) over the past year stands at about 0.8% (compared with about 2% in 2009).
- Genesis is the largest retailer by customer share. Nova has the largest share of commercial and industrial customers.
- Nova, Genesis, and Vector Gas are the largest retailers by volume market share.

A comprehensive Industry Performance Measures Report is found on page 6.

DEVELOPMENTS IN THE QUARTER

FY2018-20 Statement of Intent and Levy take effect.

As required by the Gas Act 1992, Gas Industry Co has published its *Statement of Intent* (SOI) that covers the next financial year and the two following financial years ending 30 June 2018 – 2020.

The Gas (Levy of Industry Participants) Regulations (the Regulations), came into force on 1 July 2017. The Regulations provide for Gas Industry Co's funding for the financial year ended 30 June 2018 by way of wholesale and retail levies.

Our SOI represents the culmination of the preparation required in advance of the new financial year beginning on 1 July. It presents a strategy and work programme developed in close consultation with stakeholders and reflects the objectives of the Gas Act 1992, the objectives and outcomes of the Government Policy Statement on Gas Governance 2008 (GPS), and Gas Industry Co's strategic goals.

Gas Industry Co will commence consultation on its proposed FY2019 work programme at the annual Co-regulatory Forum in November. We look forward to continuing to work closely with industry participants and stakeholders, in the context of our strategy of '*optimising the contribution of gas to New Zealand'.*

Work on the single new gas transmission access code continuing.

Gas Industry Co and the gas transmission system owner First Gas Limited (First Gas) have been co-leading work on the development of a single new gas transmission access code (GTAC) since August 2016.

In addition to providing a regulatory backstop, Gas Industry Co's role includes:

1. Facilitating the consultation process on key documents;
2. Independently analysing key documents and submissions on those documents; and
3. Making a full evaluation of proposals against Gas Act and GPS objectives when First Gas arrives at a point where it is requesting users to sign up to new arrangements.

Gas Industry Co's role in facilitating industry consultation and analysing key documents means that it is well-positioned to advance a regulated solution should industry efforts to reform the access arrangements fail.

In April 2017, Gas Industry Co engaged Concept Consulting to develop a 'think piece' on *GTAC* governance options; *Gas transmission access code governance options*. The report considered what arrangements are appropriate for code change proposals. The report, and stakeholder feedback on it, were presented at a stakeholder workshop on 17 May.

At the same workshop First Gas presented its paper *GTAC – Emerging Views on Detailed Design of Access Products, Pricing, and Balancing and Allocation (EV Paper)*. The *EV Paper* analysed detailed design choices needed in drafting the new code and provided emerging views on the best way to make those design choices.

Following the 17 May workshop, First Gas released a follow up paper, *Information Paper – Initial Summary of GTAC IT Risks*. It also held further discussions with stakeholders about the process to transition from the current Vector Transmission Code (VTC) and the Maui Pipeline Operating Code (MPOC). Draft Vector Transmission Code (VTC) and Maui Pipeline Operating Code (MPOC) code changes aimed at facilitating a transition to the GTAC were set out in a further First Gas consultation

paper, *Preliminary Draft Code Changes*, presented and discussed at a stakeholder workshop on 22 June 2017.

Consideration of the transition process led First Gas to submit a proposed change to the MPOC on 14 July 2017. The change aims to facilitate the transition to the GTAC by terminating MPOC when certain conditions are met. Gas Industry Co called for submissions on this change request, and expects to issue a Draft Recommendation on the matter in September.

Further information on the GTAC work can be found here.

Gas critical contingency event in May 2017

A natural gas critical contingency occurs when the demand for natural gas on the transmission pipeline is potentially greater than the system's ability to supply gas.

On 23 May 2017, a gas critical contingency was declared by the Critical Contingency Operator (CCO) following a breach of the Kapuni Gas Treatment Plant pressure threshold. The critical contingency was caused by a sequence of events that happened under otherwise normal pipeline operating conditions, but linepack and pressure fell to levels that required declaration. No demand curtailment was ordered during the event and the CCO terminated the critical contingency at 6.15pm.

There were three factors that contributed to the critical contingency: excess shipper imbalance, insufficient pipeline balancing activity, and a planned outage of the Pohokura Production Station.

First Gas conducted an internal review of the factors that caused the critical contingency and of its responses to those circumstances. First Gas has made the report public, and a copy is appended to the CCO's performance report (available at http://www.cco.org.nz/historical-cc-events). First Gas has committed to implementing a number of actions that would improve pipeline management. The steps include both near-term changes to operating procedures and longer-term considerations about balancing arrangements and incentives in the GTAC.

Daily Allocation Working Group meeting.

A Daily Allocation Working Group (DAWG) meeting was held in June 2017 to discuss the implications of First Gas's proposed GTAC on daily allocation arrangements. First Gas's presentation to the Group noted that it would require daily allocation information for transmission system balancing and billing under the downstream allocation arrangements. Gas Industry Co's survey of shippers found that shippers would use daily allocation information for both daily nominated capacity (DNC) nominations and wholesale purchases under the proposed GTAC. Depending on the final form of this new transmission code, an allocation approach similar to the current D+1 pilot may be appropriate for daily allocation information or other options may be more suitable. Gas Industry Co undertook to develop a paper reviewing several options for calculating this daily information. Further information on DAWG is available on our website here.

Gas metering papers

Following requests from industry stakeholders to look into gas metering issues, Gas Industry Co released two papers in May 2017 for consultation. The papers, *Gas Metering Review: Review of metering service provider arrangements* and *Gas Metering Review: Review of advanced metering technology*, describe current metering arrangements and spell out the possibilities offered by advanced metering with a view to assessing whether there are barriers to competition in the metering

market or to placement of advanced meters. Stakeholders were invited to provide responses on the papers. Eight submissions were received from the industry in June, and Gas Industry Co will shortly be releasing its analysis of submissions. The papers and the submissions received on them is available on our website here.

Gas Quality update

The potential consequences of a gas quality incident can be major. To check that the industry's gas quality arrangements are fit for purpose and aligned with the Gas Act objectives, Gas Industry Co reviews the arrangements from time to time as changes occur or new information comes to hand. In June 2017, Gas Industry Co published its *Gas Quality – June 2017 Update.* The paper reviewed previous gas quality work, outlined subsequent industry developments, identified issues that still require attention, and proposed how these issues should be addressed. The paper also proposed that the new First Gas access arrangements should be allowed to take shape before determining next steps.

Gas Quality – June 2017 Update and previous documents referred to above are available here.

Progress against objectives and outcomes.

Good progress continues to be made in achieving the objectives and outcomes for Gas Industry Co and the industry in Part 4A of the Gas Act and the Government Policy Statement on Gas Governance 2008, through the Work Programme included in the Company's *FY2017-19 Statement of Intent*. An updated summary of progress is included on page 37 of this Quarterly Report.

INDUSTRY PERFORMANCE MEASURES

1 APRIL – 30 JUNE 2017

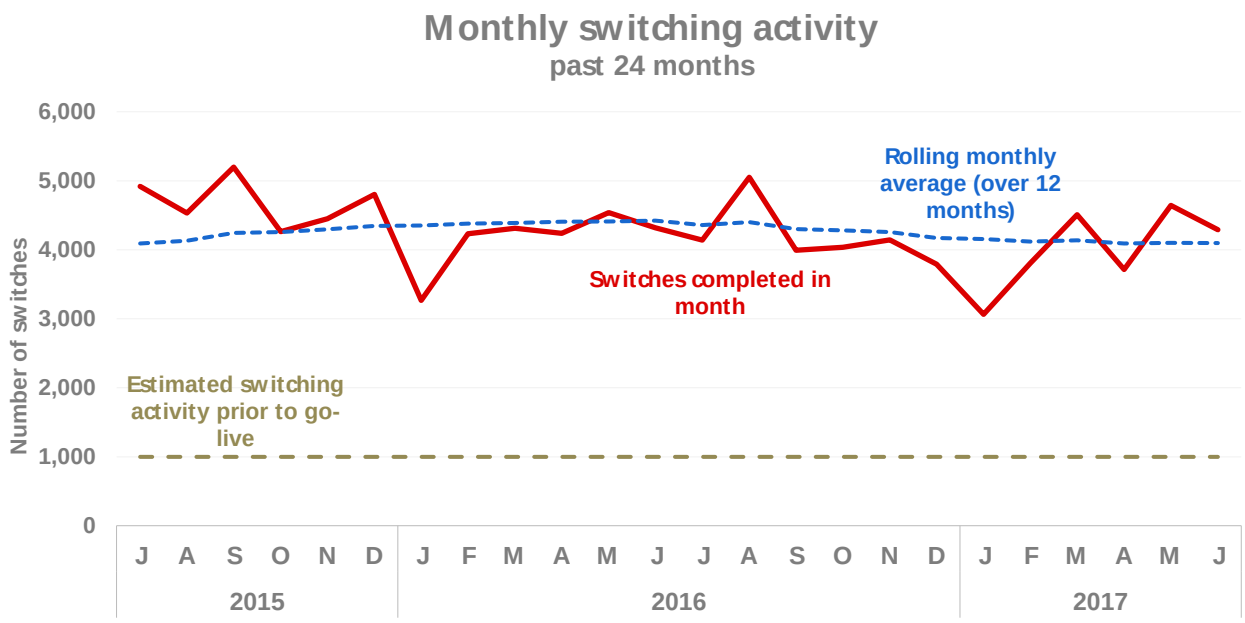
1 Summary

This report provides an update on the performance measures that Gas Industry Co monitors on a regular basis. The purpose of these measures is to track the performance of the Gas (Switching Arrangements) Rules 2008 (the Switching Rules), the Gas (Downstream Reconciliation) Rules 2008 (the Reconciliation Rules), and the Gas Governance (Critical Contingency Management) Regulations 2008 (the CCM Regulations), both in terms of activity related to these governance arrangements and the competitive outcomes that they foster. The Report also tracks transmission pipeline balancing measures, as a means of informing Gas Industry Co's work on this issue.

Explanatory details about the charts can be found in the Appendix to this report.

2 Switching performance measures

Chart 1: Monthly switching activity



- About 4,100 consumers switch gas supplier each month.
- The churn rate for the last 12 months is about 18%. Gas customers can switch retailers for many reasons, but the high level of activity in the gas retail market suggests that customers find changing retailer easy and can put pressure on retailers to offer competitive terms and pricing.
- This chart shows the number of switches that have occurred on ICPs that have a status of either active-contracted (ACTC) or active-vacant (ACTV) at the time of switching.

- Note that this chart excludes the transfer of Energy Direct customers to Trustpower from August – October 2016.
- See Chart A-1 in the appendix for a chart of switching activity since the start of the registry.

Chart 2: Regional switching activity

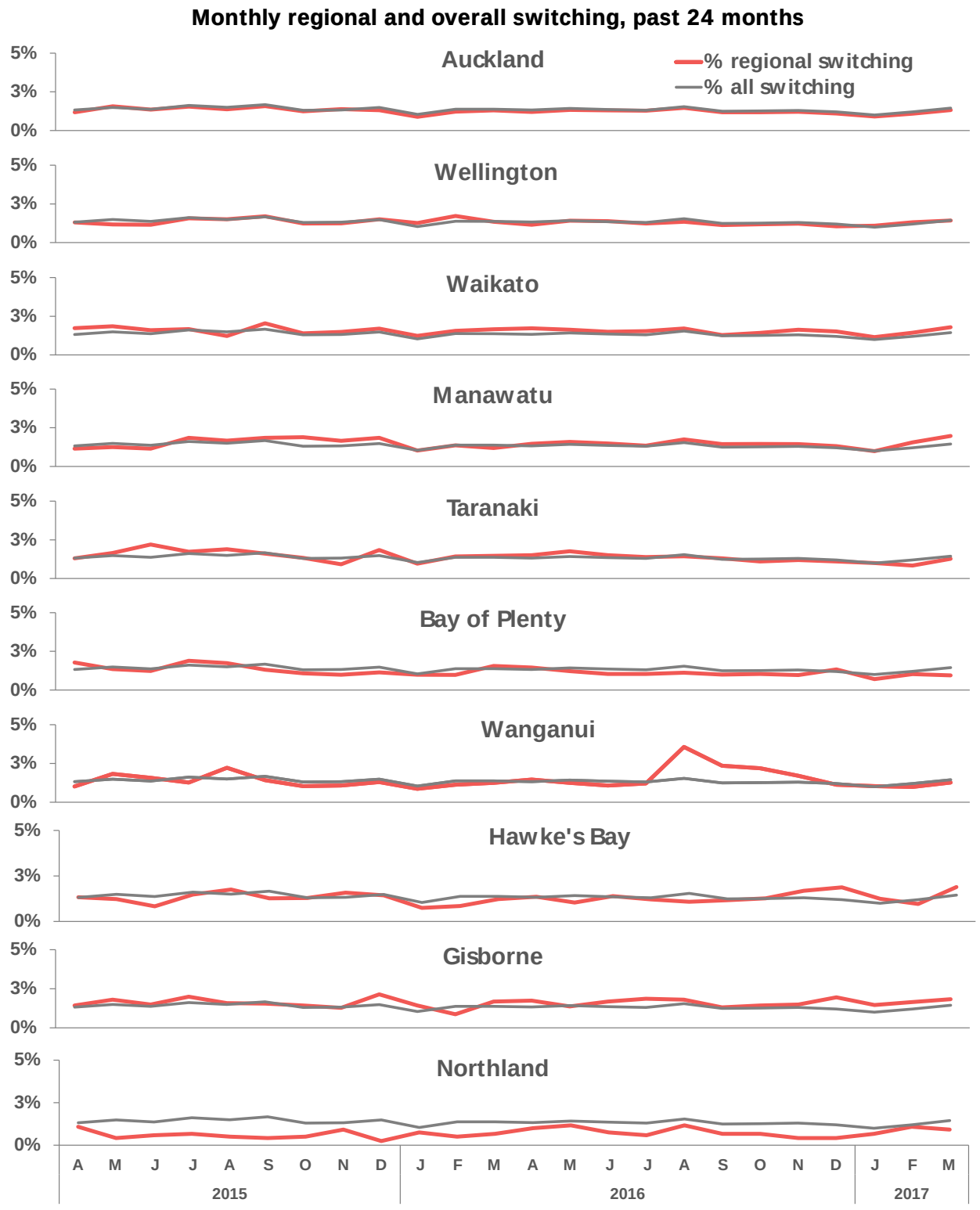
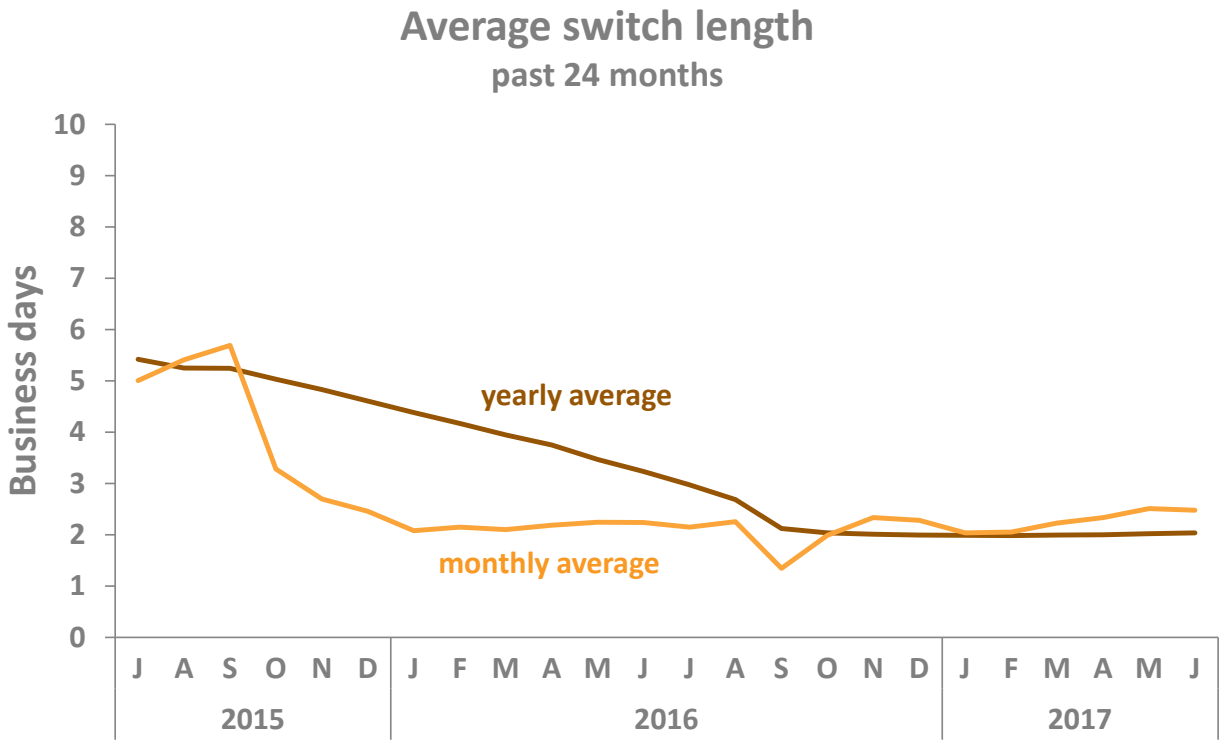
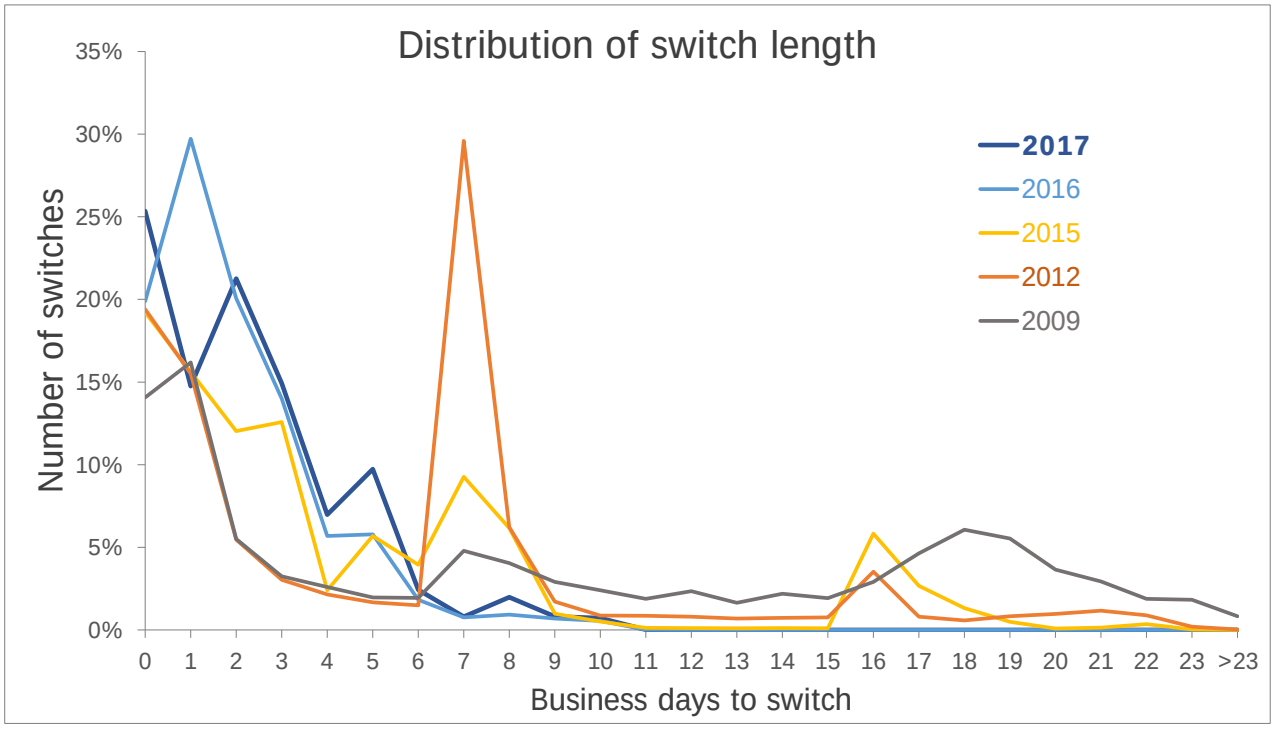


Chart 3: Time to process switches



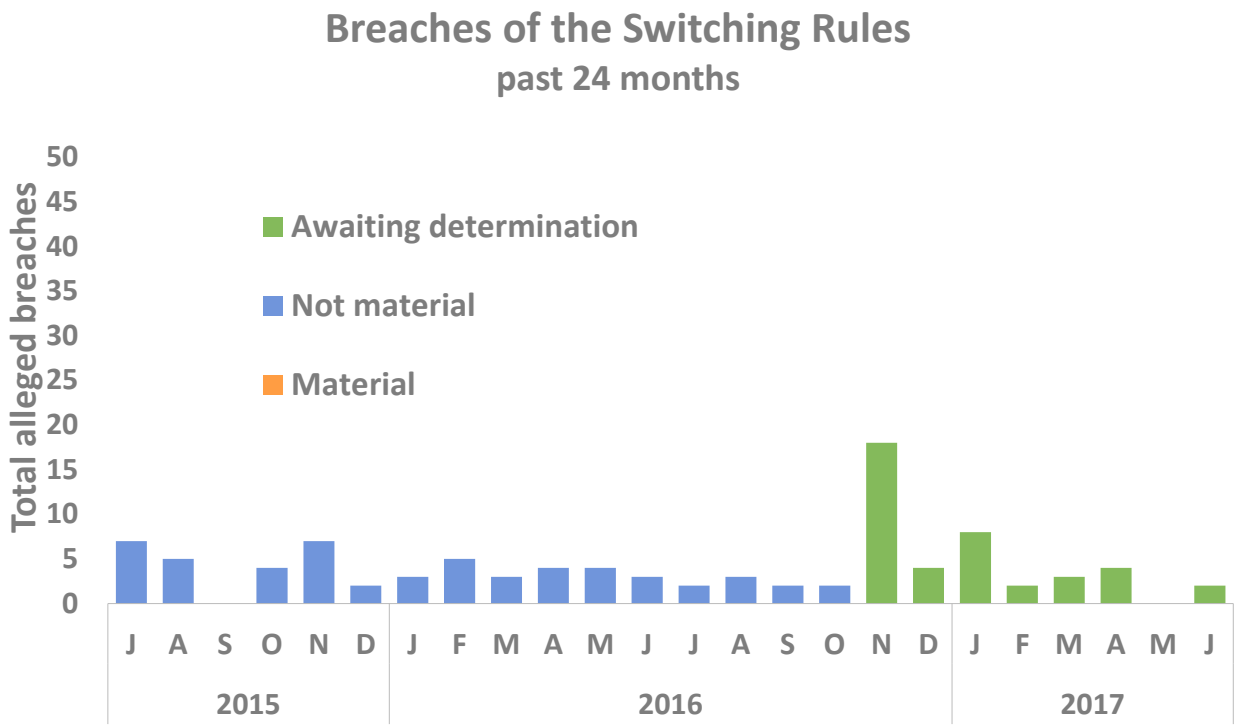
- Switching times have fallen markedly in the past two years. At the start of 2015, switches took a little over six days, on average. Switching times now average between 2 and 2.5 business days.
- Data are for switches of ICPs with a status of either active-contracted (ACTC) or active-vacant (ACTV) at the time of switching.

Chart 4: Distribution of switching length



- This chart shows the distribution of switching times for the calendar years of 2009, 2012, 2015, 2016, and 2017.
- The chart shows the change in switch length over time. In all years, there were some switches that took place within two days. In 2009, over half of switches took at least seven days to complete. By 2012, three-quarters of switches took place in seven days or less. In 2015, there was a shift to completion within three days. In 2016, 84% of switches were completed within three days. Thus far in 2017, another pattern has emerged, where about a quarter of switches happen in less than a day and another 36% are completed in two business days.

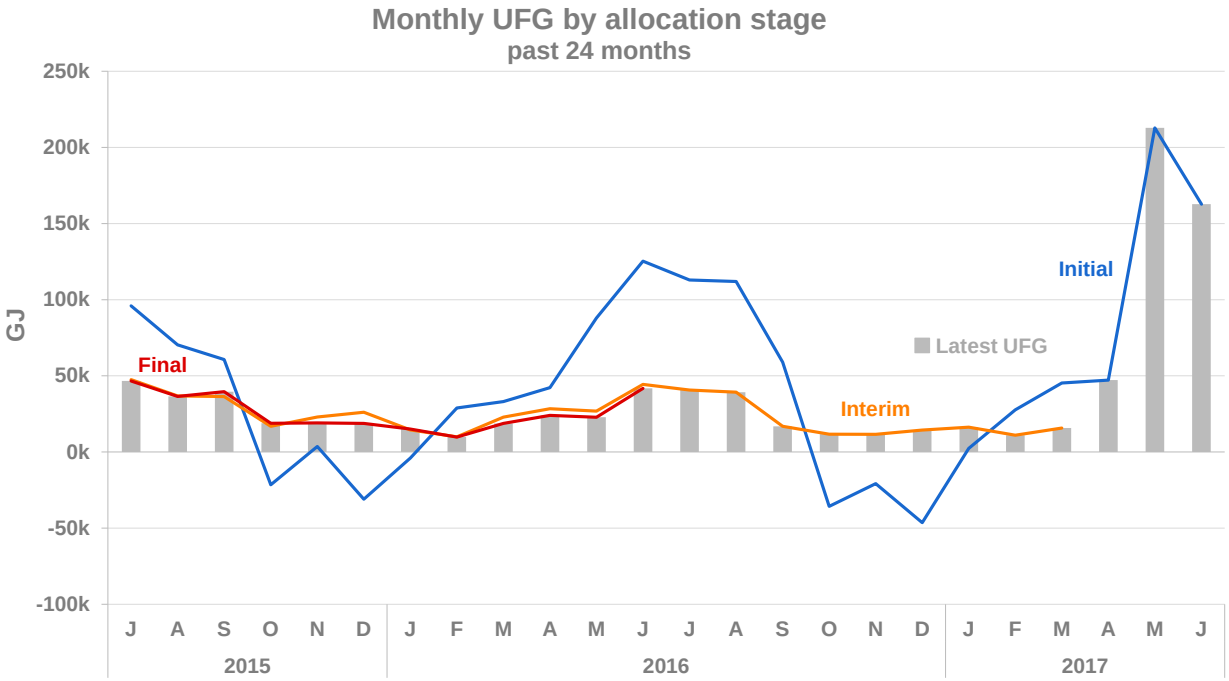
Chart 5: Number and severity of breaches of the Switching Rules



- Most of the Switching Rules breaches reported each month are alleged by the registry operator.
- In contrast, bulk of the breaches from November and January were alleged as a result of performance audits commissioned under the Switching Rules.

3 Allocation and reconciliation performance measures

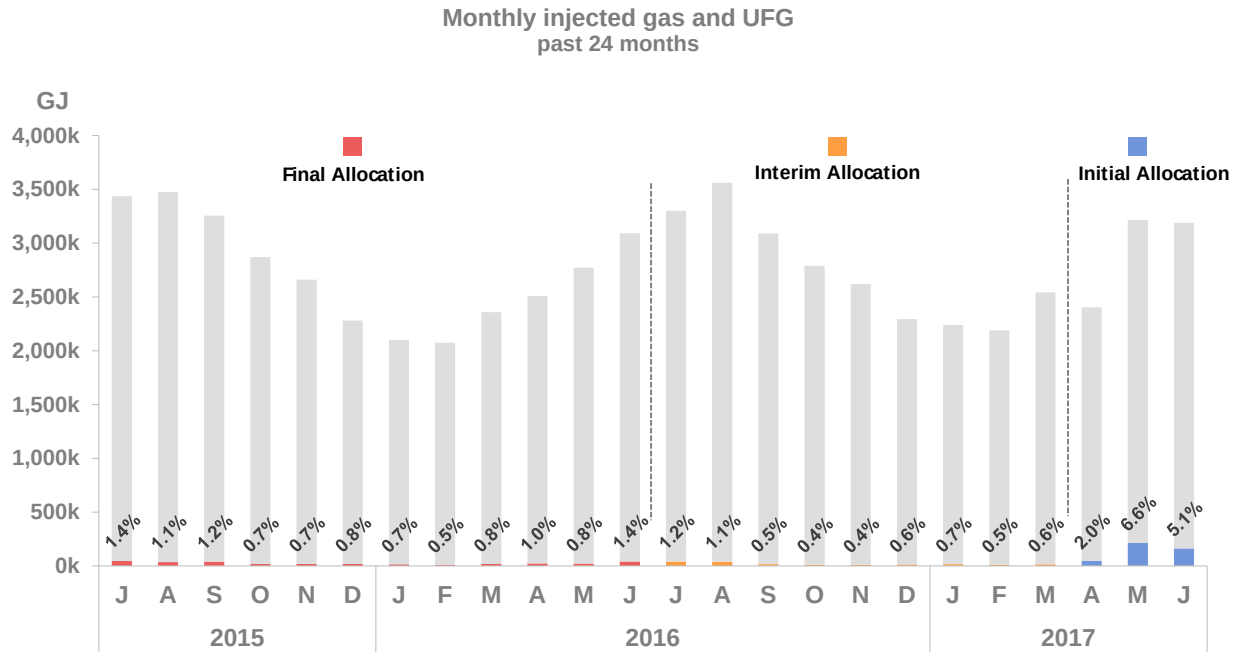
Chart 6: Volumes of unaccounted-for gas (UFG)



- Note that this chart uses the initial allocation produced by the allocation agent at the end of the month, not the D+1 allocation results.[1]
- See Chart A-2 in the appendix for a chart of UFG since the start of the Reconciliation Rules.

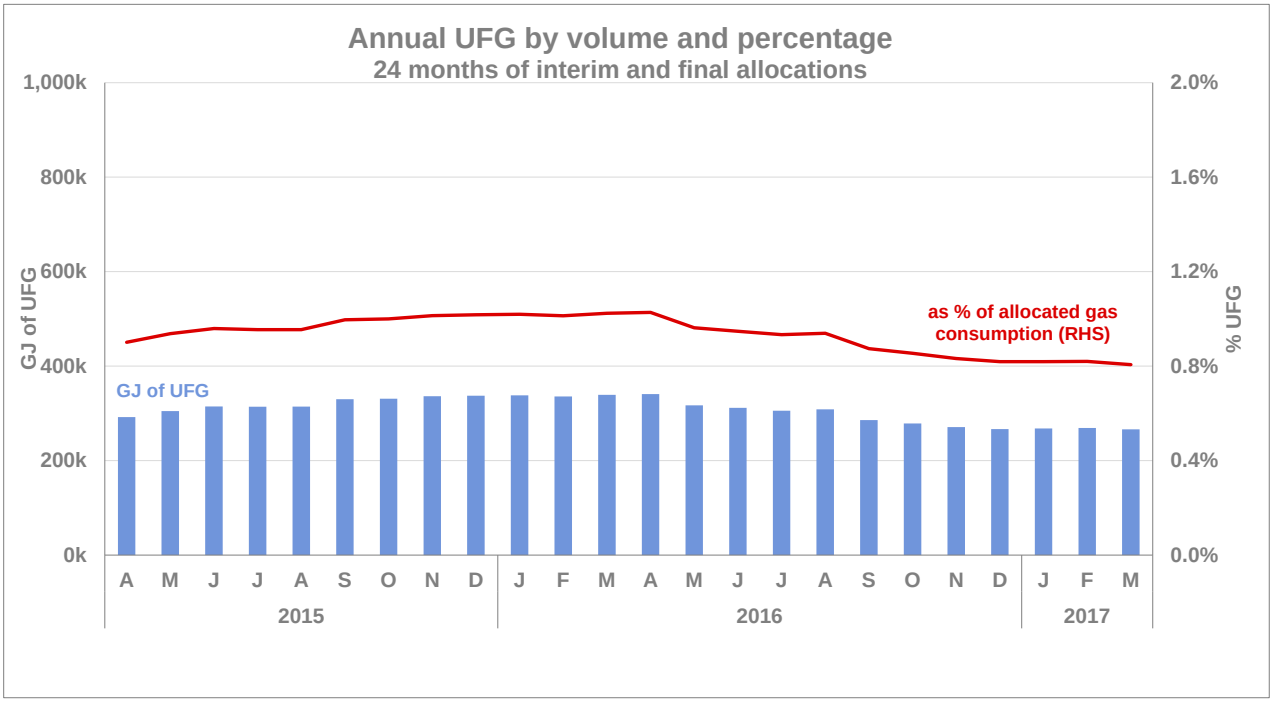
[1] The initial allocation produced by the Allocation Agent is a "bottom up" approach whereby each of the retailers submits data based on a combination of actual meter readings (historical estimates) and consumption estimates since the last meter reading (forward estimates). In that context, UFG is a meaningful measure of the difference between the aggregate estimates and the volumes that have entered the network. By contrast, D+1 is a system for dividing the network volumes among retailers and that process does not produce UFG figures that are comparable with the bottom-up approach to allocation.

Chart 7: Percentage of UFG



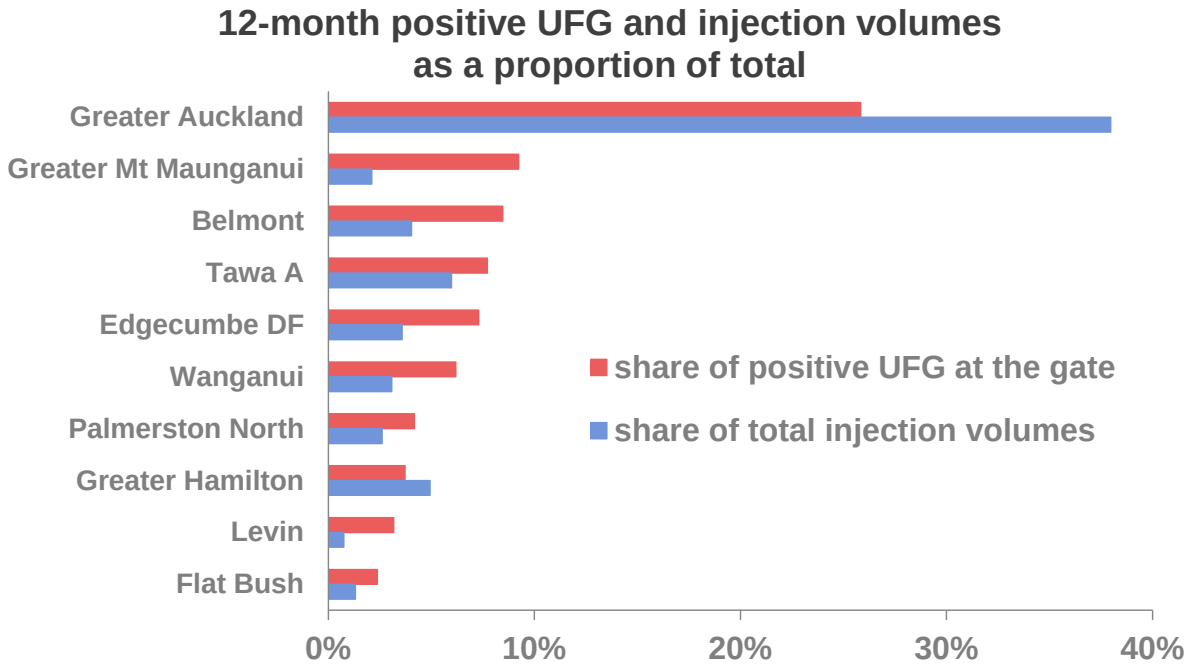
- UFG tends to be higher as a percentage when total volumes are high. This trend most likely due to UFG attributable to mass market consumption.

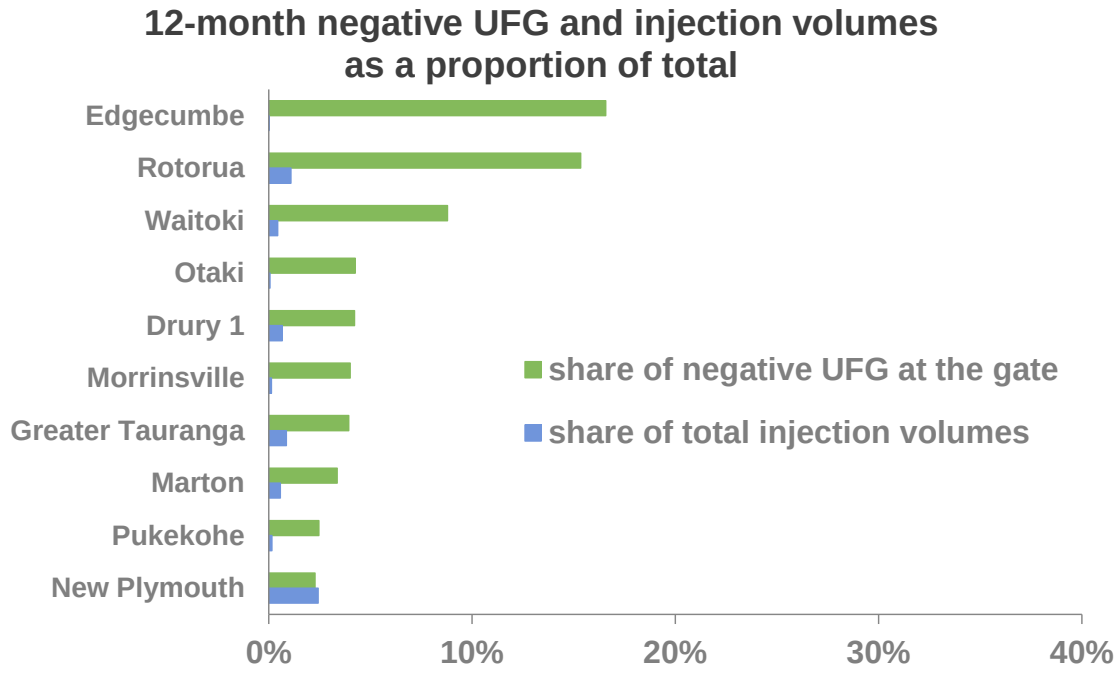
Chart 8: Rolling 12-month UFG



- In volume terms, annual UFG has decreased dramatically since 2009, when UFG was about 600,000 GJ per year. In the past 12 months, UFG totalled about 266,000 GJ, about 0.8% of allocated gas consumption.

Chart 9: Gas gates where UFG is the highest

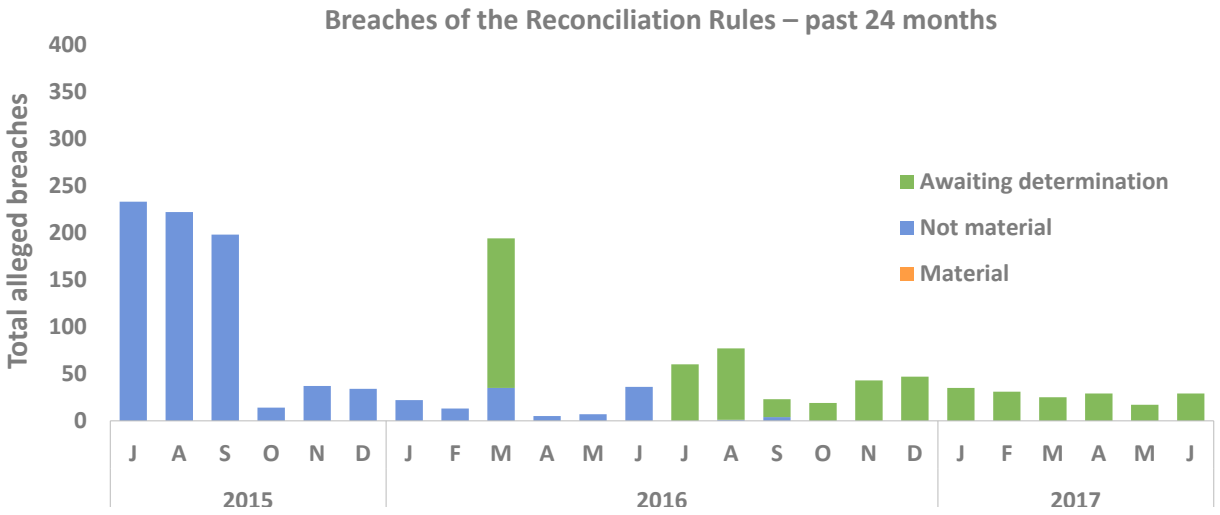




- These charts show the gates that experience the largest share of total UFG, compared to their share of total gas gate deliveries at shared gas gates. These charts use 12 months of the most recent interim and final allocation data available: in this case, April 2016 through March 2017.
- The 10 gates shown in the top chart account for 78% – about 268,000 GJ – of the positive UFG experienced over the past 12 months.

- The 10 gates shown in the bottom chart account for about 65% (about 50,000 GJ) of the negative UFG experienced in the past 12 months.
- A number of the gas gates shown have been determined to be global one-month gates, since, among other things, they have a high proportion of industrial load. The global one-month methodology assigns a share of the actual UFG experienced in a month to industrial consumers, in contrast to the usual calculation method, which assigns industrial load an annual average amount of UFG.
- In the first chart, Edgecumbe DF and Flat Bush are a global one-month gates; Marton is in the second chart.

Chart 10: Number and severity of breaches of the Reconciliation Rules



- In March 2016, a number of breaches were alleged in relation to the audit of the Greater Tauranga and Greater Mount Maunganui gas gates. Some are in relation to ICP mapping, and Gas Industry Co understands that First Gas is in the process of correcting these errors.
- Historically, the majority of breaches have occurred in relation to rule 37 – the rule that requires initial consumption information submitted by retailers to be within a percentage of accuracy of the consumption information submitted for the final allocation.
- In September 2015, the market administrator issued a guideline[2] on the materiality of rule 37 breaches, stating that instances where the volume involved is less than or equal to 200 gigajoules do not need to be alleged as a breach by the allocation agent, as there is no likelihood that those errors will raise material issues under the Reconciliation Rules. This change can be seen in the decrease in alleged breaches in October 2015.
- It has proven efficient for the Market Investigator (or, more recently, Gas Industry Co) to attempt to reach a settlement on batches of rule 37 breaches. The settlement of the 23 months up to and including the consumption month of April 2015 (alleged in June 2106) has just concluded. The final batch of settlements will be for the May 2015 to November 2015 consumption months.
- Beginning in December 2015, the end-of-month initial allocations have been replaced with day-after daily allocations (known as D+1), which eliminate the need for rule 37 breach settlements.

[2] Available at http://gasindustry.co.nz/dmsdocument/5031.

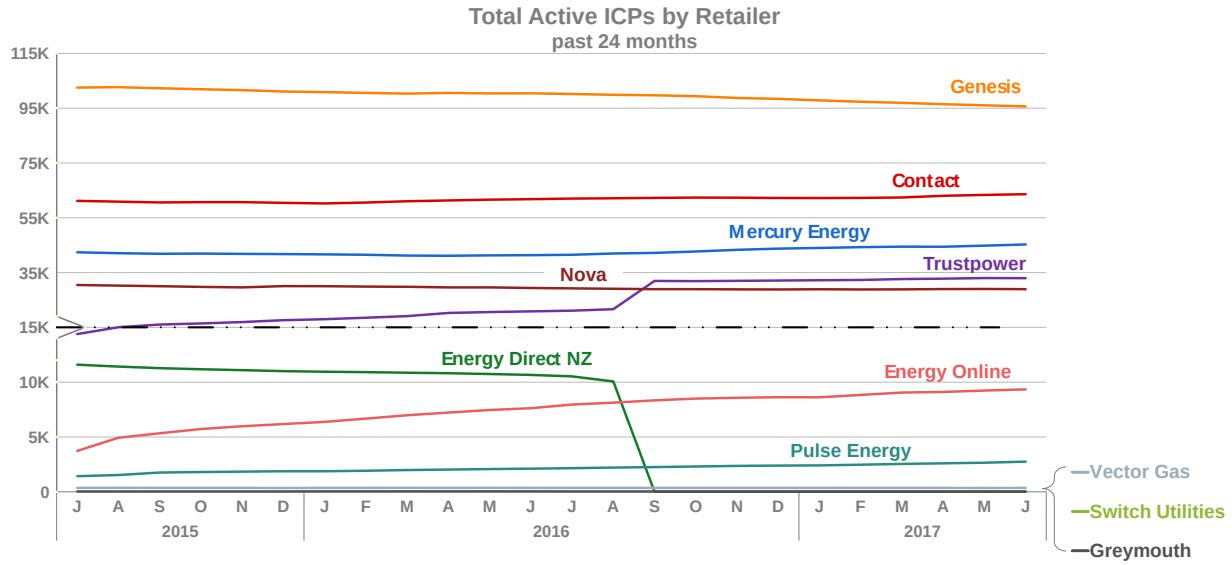
Audits commissioned

Event audits
No event audits were commissioned in this quarter.

Performance audits
Gas Industry Co is continuing the current round of performance audits under the Switching Rules and the Downstream Reconciliation Rules. These are the first audits to be commissioned since the Switching Rules were amended in September 2015 to provide for regular performance audits of registry participants, defined as retailers, distributors, and meter owners. It is the third round of regular retailer performance audits under the Downstream Reconciliation Rules. The audits of Genesis Energy, Contact Energy, Trustpower and Nova Energy have been completed with four other retailer audits currently underway. Audits of distributors and meter owners are scheduled to begin shortly.

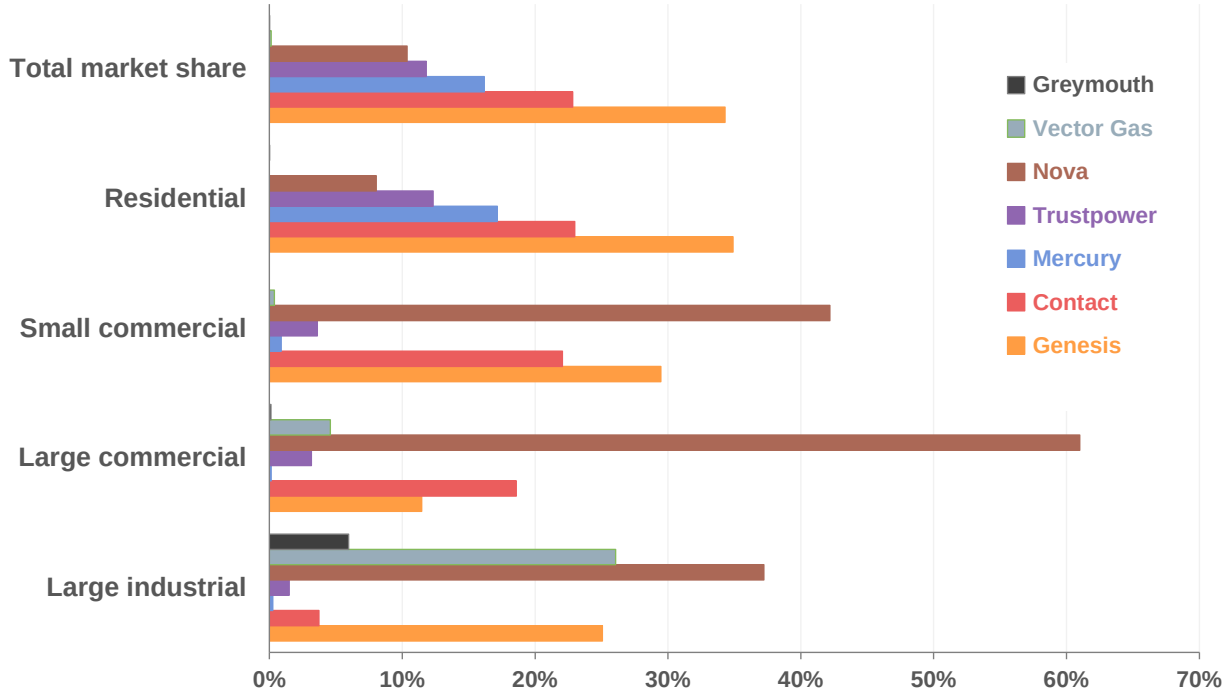
4 Market competition performance measures

Chart 11: Market share of ICPs by retailer



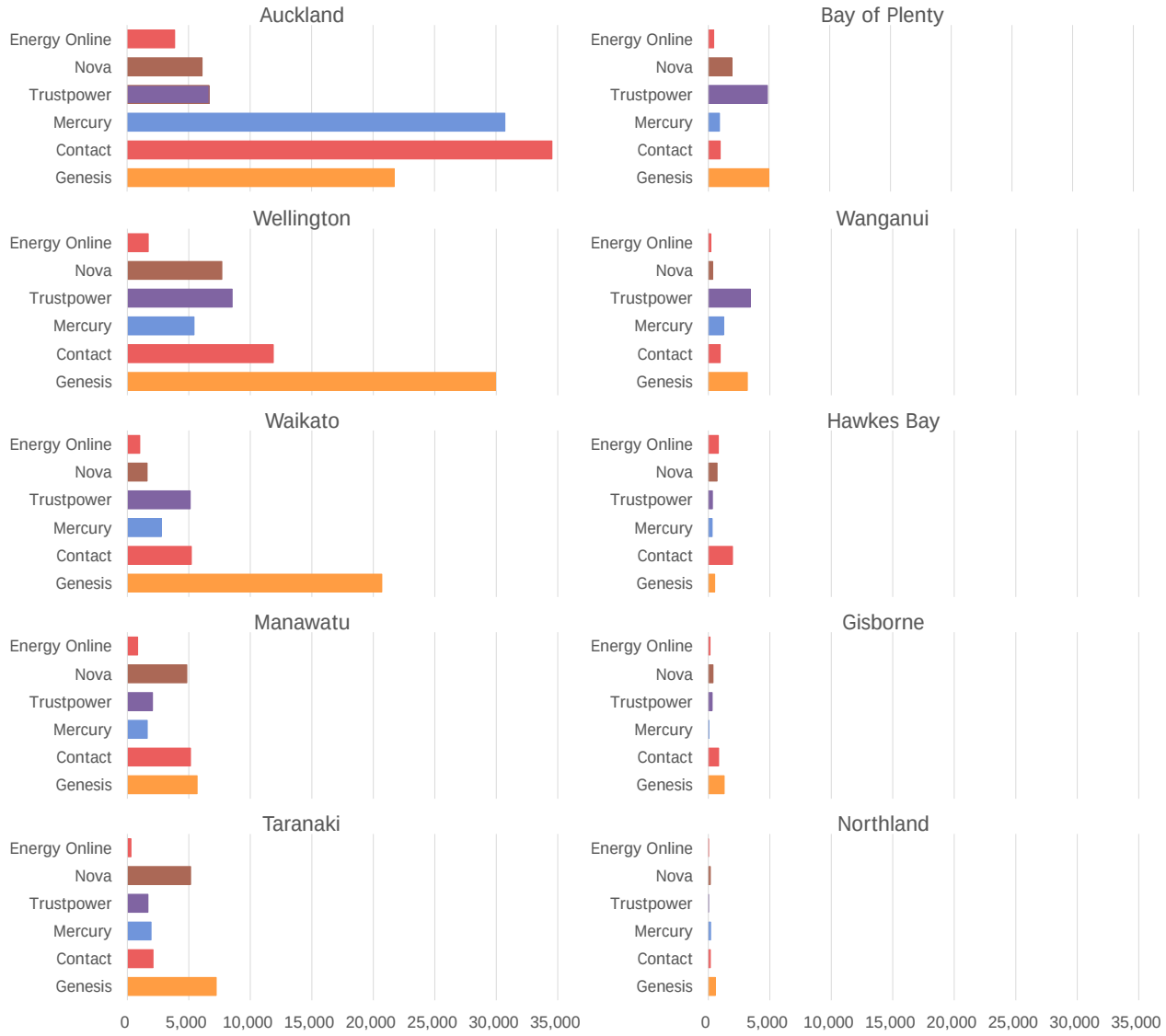
- This chart shows the contrast between the relative stability of customer numbers for the established retailers versus the growth of the new entrant retailers:
  - Trustpower, which entered the retail gas market in November 2013, is now the fourth largest retailer by customer share;
  - Pulse Energy entered the market in October 2014;
  - Switch Utilities entered in July 2015.
- Energy Online is a retail brand of Genesis Energy and has also been experiencing growth in customer numbers.
- There are 10 distinct retail brands, owned by nine different retail companies (Energy Online is owned by Genesis Energy).

Chart 12: Customer market share by consumer segment



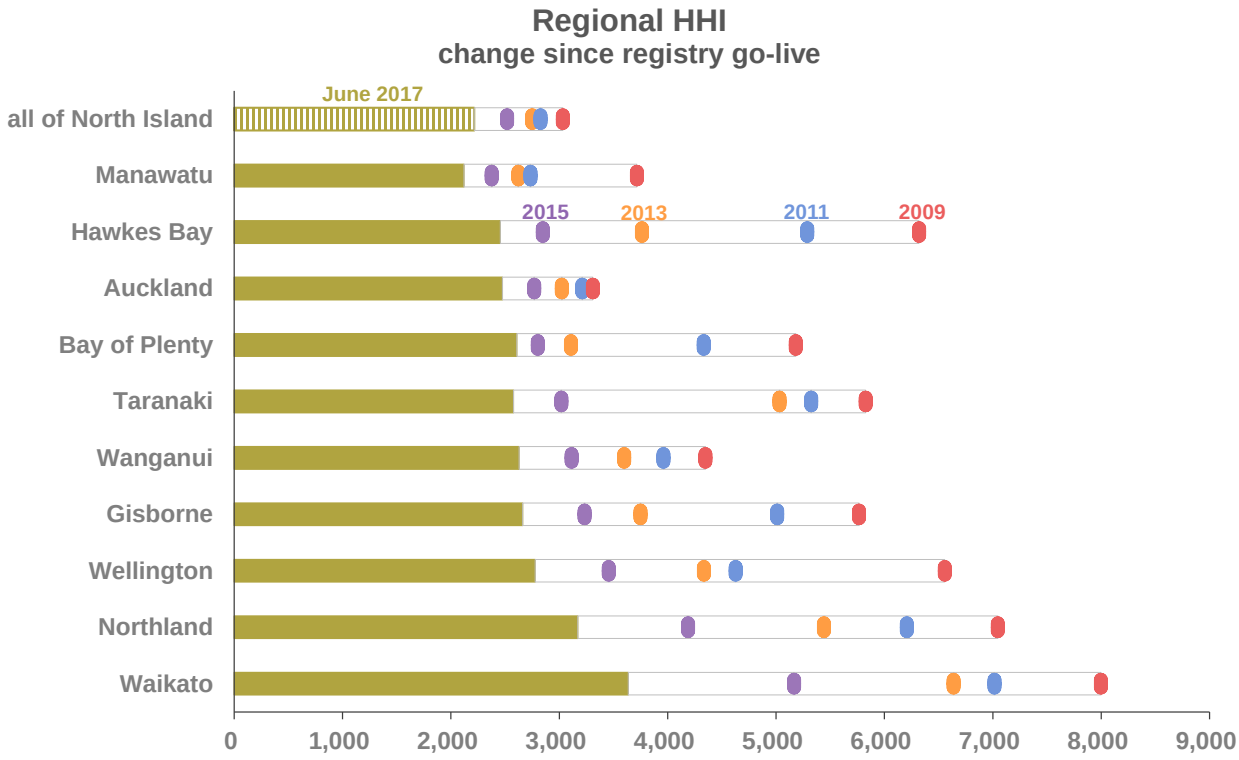
- In this chart, consumer segment is determined by the load shedding category listed on the gas registry for each consumer site. The top set of bars shows the same set of data as the previous chart. The other sets of bars show how some retailers are more dominant in specific sectors of the retail gas market. Vector Gas, for example, focusses on large industrial and large commercial customers, while Greymouth has a focus on large industrial customers.
- The chart includes the retail brands that have more than 4% of market share in a category.

Chart 12a: Customer market share by region



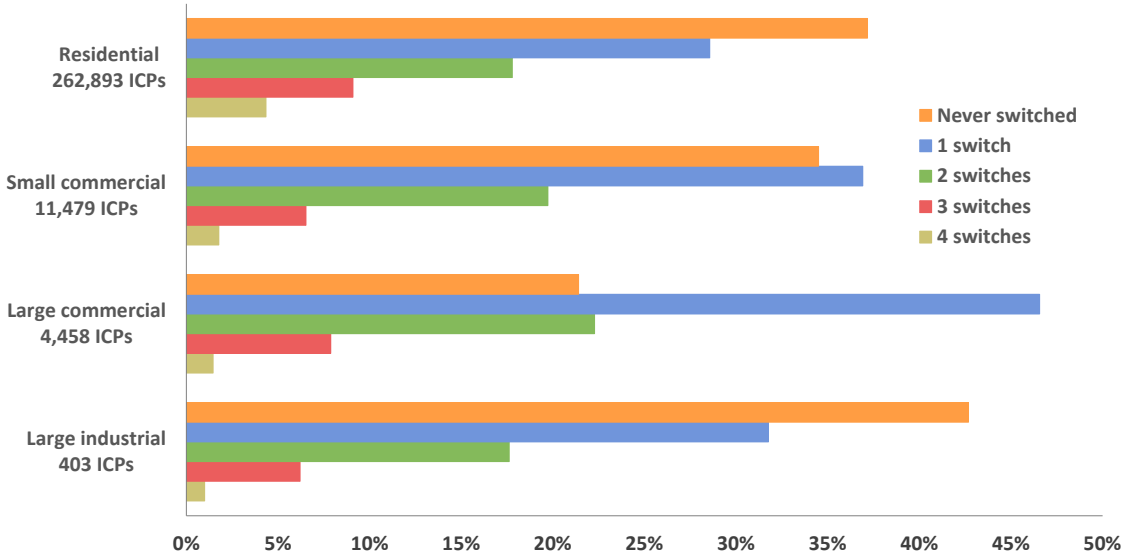
- This chart shows the number of ICPs for each retailer in each geographical region. The retailers shown each have over 3% of total customer market share.

Chart 13: Herfindahl–Hirschman Index (HHI)



- The HHI has decreased in all regions since 2009, indicating that the retail market is becoming less concentrated across the North Island.
- Nationally, the HHI stands at 2,214, in comparison to 3,033 in February 2009 (the start of the registry).

Chart 14: Switching by consumer sites since 2009



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- Switch Utilities entered in July 2015.

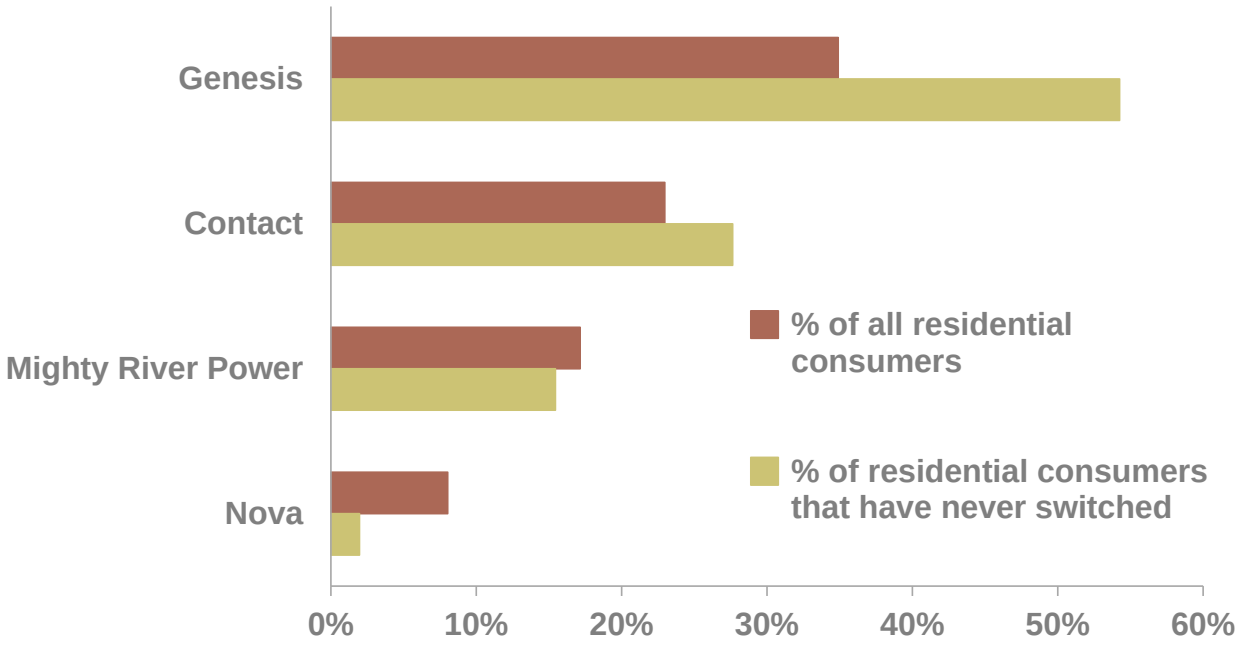
- Energy Online is a retail brand of Genesis Energy and has also been experiencing growth in customer numbers.
- There are 10 distinct retail brands, owned by nine different retail companies (Energy Online is owned by Genesis Energy).

Chart 12, consumer sites in this chart and Chart 15 are categorised based on the load shedding category recorded in the gas registry.

- 63% of residential consumer sites
- 66% of small commercial sites
- 79% of large commercial sites; and
- 57% of large industrial sites

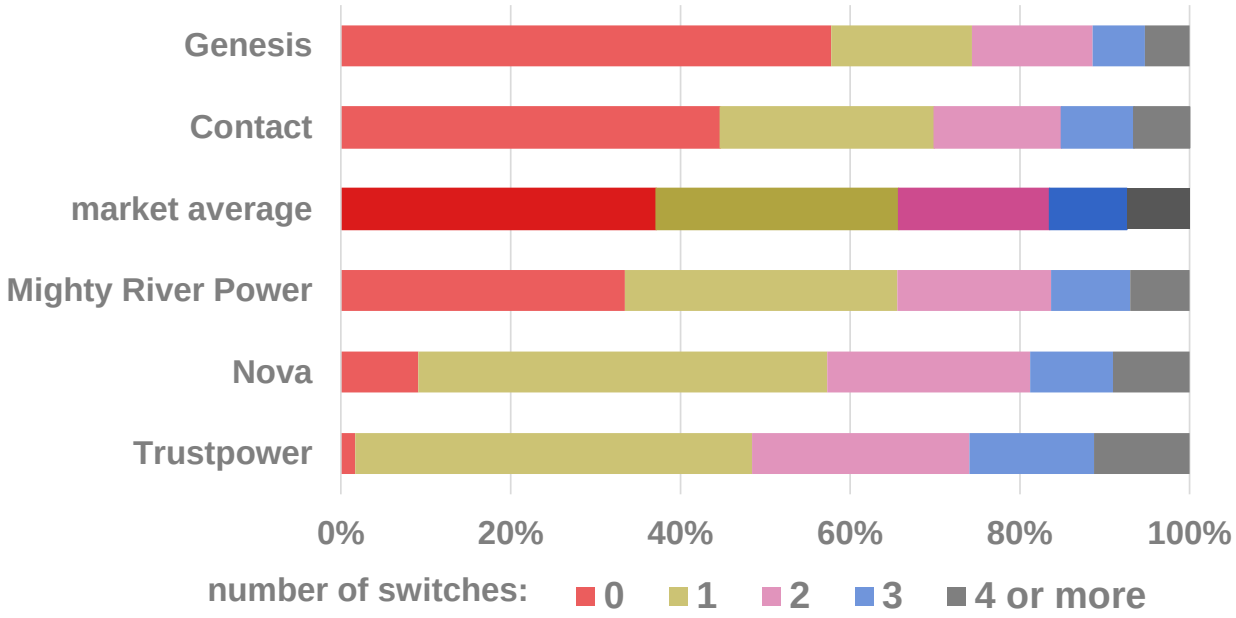
have switched retailer at least once since the start of the gas registry (February 2009).

Chart 15: Residential consumer sites that have never switched



- This chart compares retailers' market share of all residential consumers with their share of residential consumers that have never switched. It shows, for example, that Genesis has about 35% of the total residential market, and about 54% of the residential consumers that have not switched retailer since the start of the gas registry in February 2009.
- The chart focuses on the incumbent retailers that were in operation at the start of the gas registry.

Chart 15a: Residential customers by number of switches



- This chart provides another way to think about residential customer switching. The third bar repeats the data on residential switches from chart 14 above: 37% of residential consumer sites have never switched retailer; 29% have switched once; 18% have switched twice; 9% three times, and 7% four or more times.
- The other bars enable comparison with retailers' residential customer bases. 58% of Genesis customers, for example, have never switched; the proportion is 45% for Contact customers.
- In contrast, Trustpower has built its customer base almost entirely through switching: 47% of its customers have switched once; 26% twice; and 15% three times. (Trustpower is also retailer to a small number of newly-created ICPs that have never switched.) Note that the transfers from Energy Direct would be counted as switches in this context.

Chart 16: Switching activity by retailer

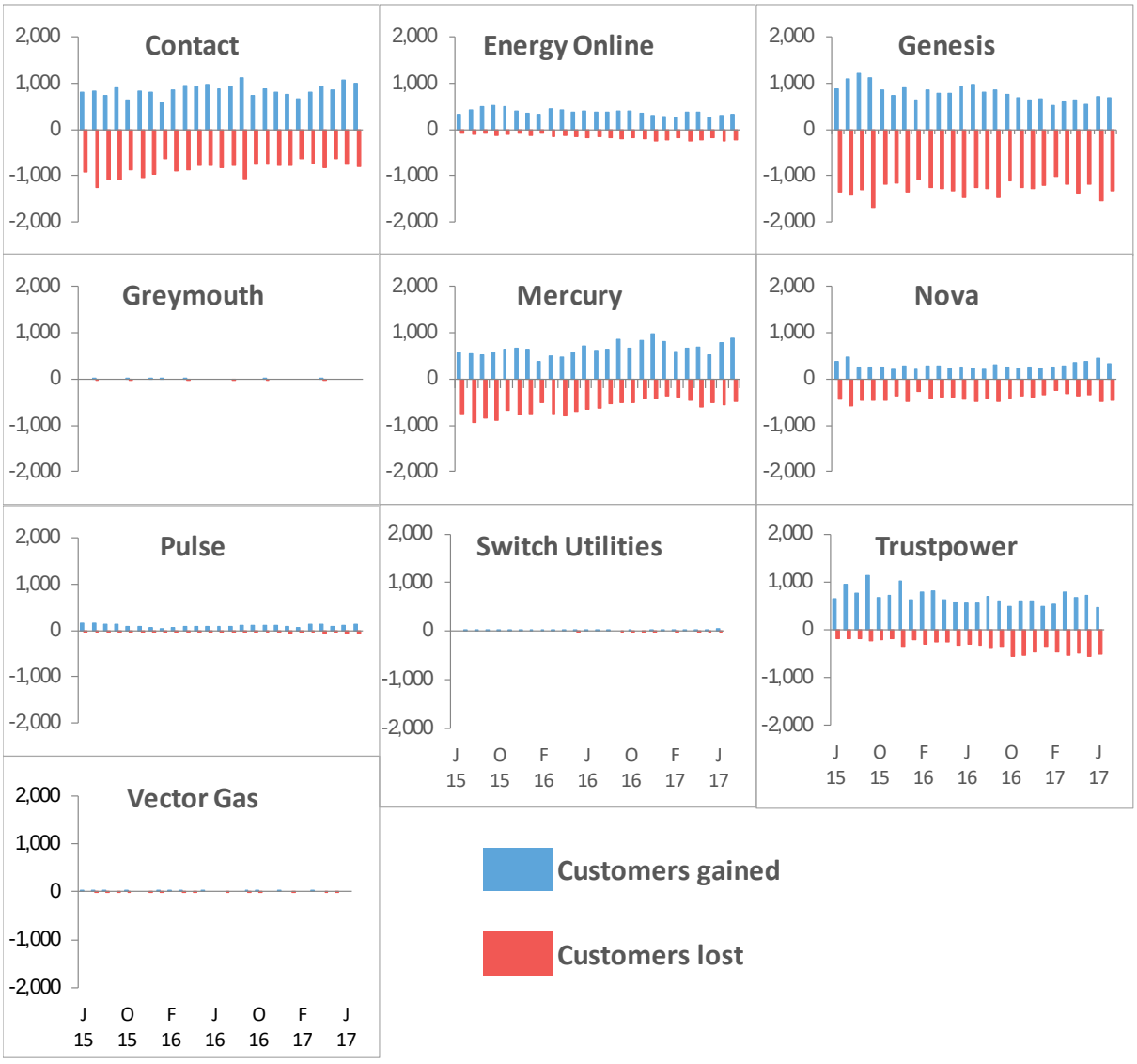
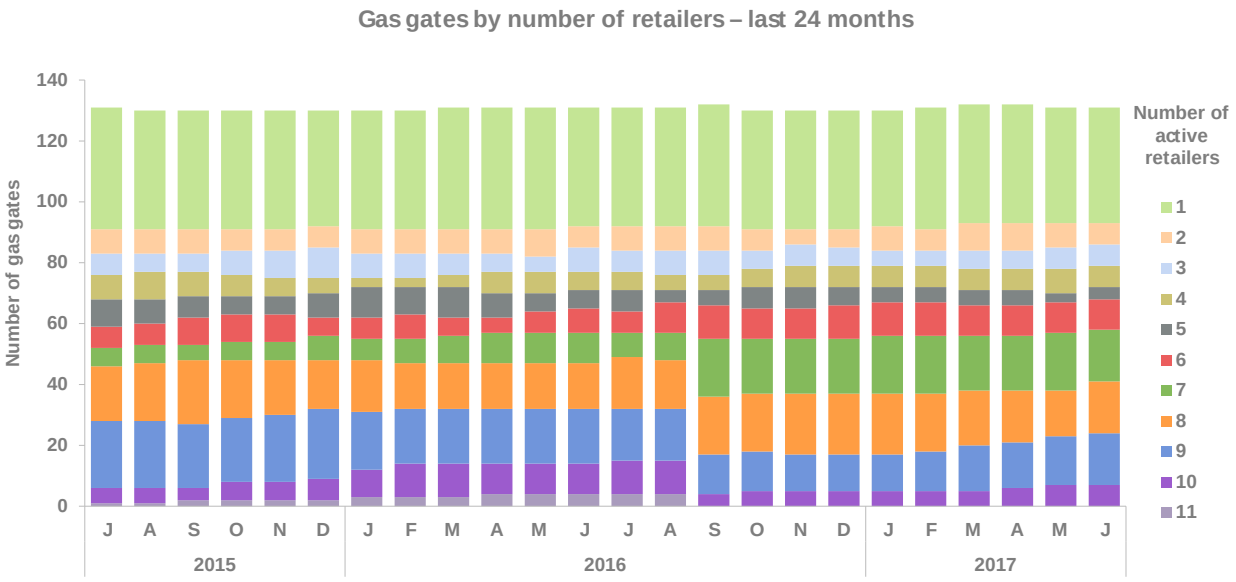
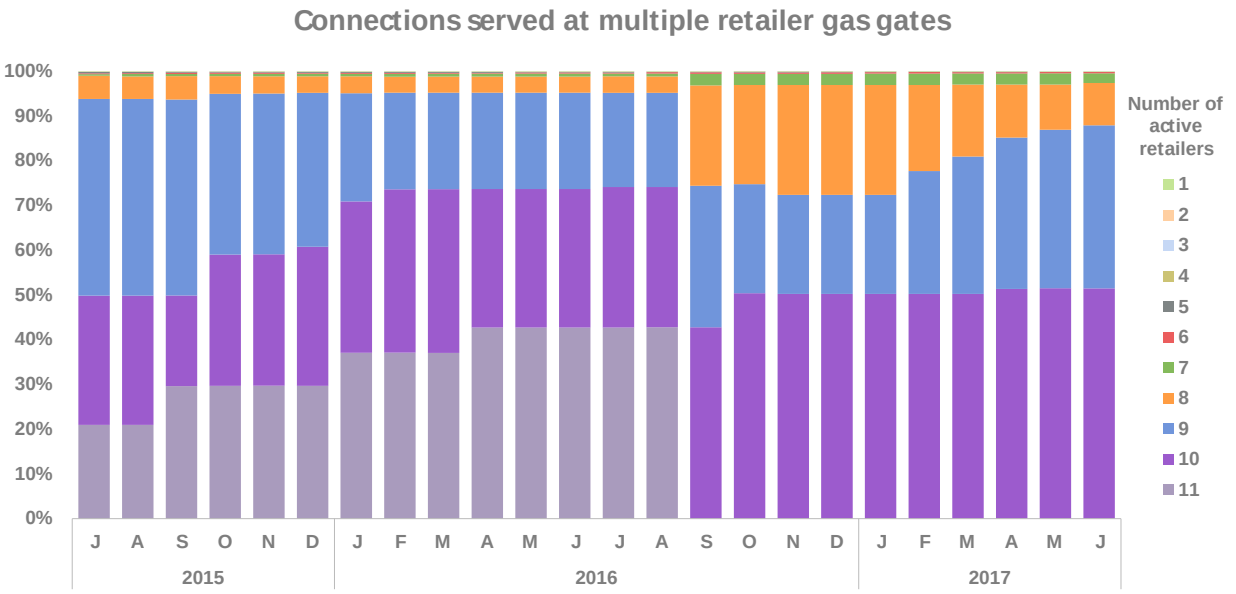


Chart 17: Gas gates by number of retailers



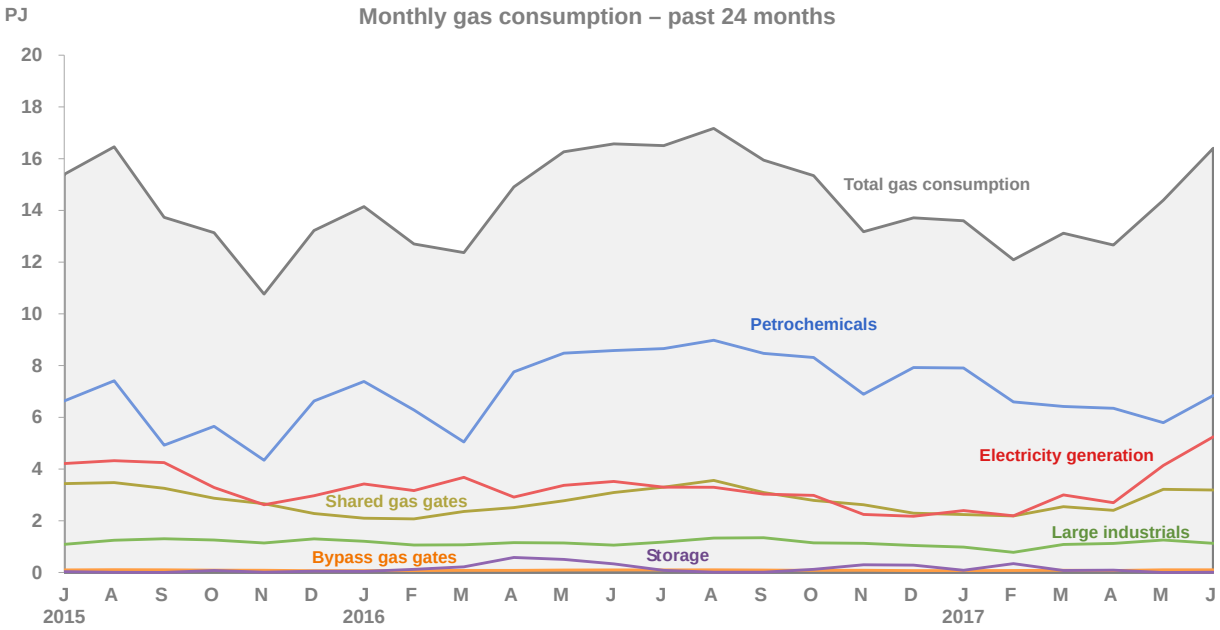
- With the amalgamation of Energy Direct and Trustpower, there are now ten retailers trading at some gas gates in Auckland and Wellington.

Chart 18: Connections served by multiple retailers



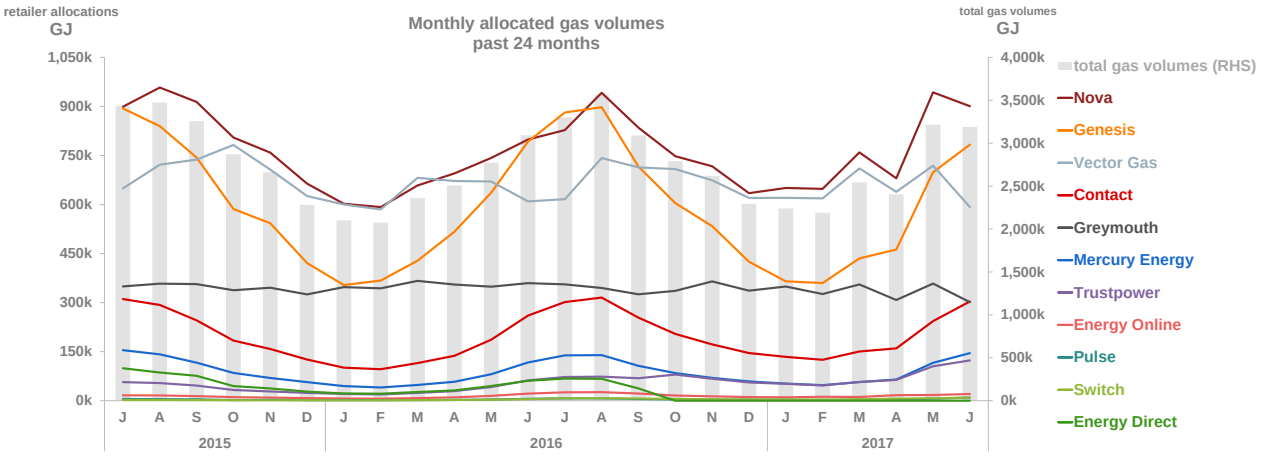
- Over 99% of gas consumers are connected to a gate where seven or more retailers trade.

Chart 19: Total gas volumes



- Note that these data reflect only the gas delivered through the Maui and First Gas transmission pipelines. Gas volumes flowing through private non-open access pipelines, such as to Methanex, are not included.

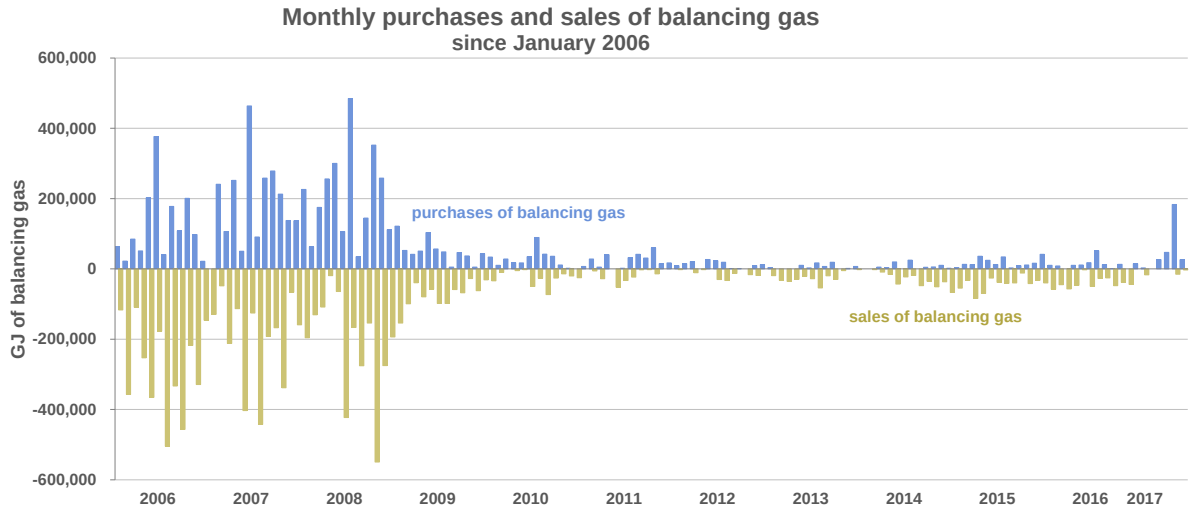
Chart 20: Allocated gas volumes



5 The data are from a mix of allocation stages: Final through June 2016; Interim for July 2016 through March 2017; and Initial for April through June 2017. Note that the initial allocation data are those initially produced by the allocation agent, not the D+1 allocations that were used to replace the initial allocations.

6 Pipeline balance

Chart 21: Balancing gas volumes



Source: MDL, bgx.co.nz, and bgix.co.nz

Gas Industry Co has tracked MDL's – and later, First Gas's – purchases and sales of balancing gas as a means of informing the industry and ourselves about the volumes of these transactions through time. Prior to 2008, balancing services were essentially free to holders of legacy Maui gas contracts, and for each of the calendar years 2006, 2007, and 2008, Maui transacted an average of 403,000 GJ of balancing gas per month. Changes implemented at the end of 2008 to the Maui Pipeline Operating Code (MPOC) meant that interconnected parties and gas shippers became responsible for imbalances that they created, and the volumes of secondary balancing gas fell accordingly. From 2010 to 2014, monthly balancing gas volumes were about 35,000 GJ.

In 2015, Market-Based Balancing (MBB) was implemented. This set of arrangements was designed to target the costs of secondary balancing (i.e. balancing undertaken by the transmission operator) to parties that were out of balance. A review of MBB published in November 2016[3] by Gas Industry Co found that, since October 2015, imbalance on the pipeline had decreased, both on the Maui and ex-Vector transmission pipelines, indicating that shippers had improved in balancing their own positions (primary balancing). However, this improvement in primary balancing did not result in a decrease in secondary balancing volumes: from October 2015 to December 2016, balancing gas volumes averaged about 52,000 GJ per month.

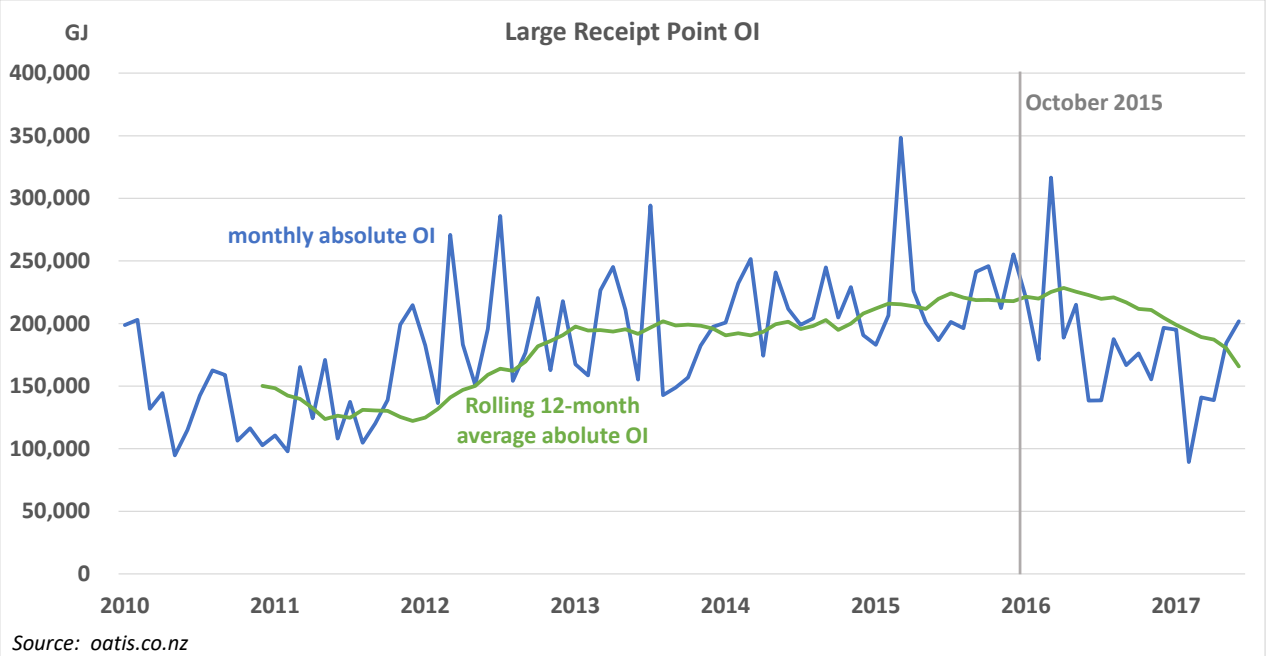
In January 2017, First Gas announced that it was changing the operation of its compressors across the transmission system, in order to reduce overall fuel gas costs and to increase the ability of the transmission pipeline to cope with unplanned production station outages. One aspect of this change is the increased use of the Mokau compressor station, which can be seen in the increase in fuel gas transactions on the BGIX since January. Another aspect of the operational change is increased linepack on the Maui pipeline, which in turn has decreased the need for balancing gas transactions. Since January 2017, balancing gas volumes have averaged 15,000 GJ per month.

Gas Industry Co no longer intends to track balancing gas volumes in this quarterly report. Secondary balancing volumes are less relevant now that MBB is in place. As well, the data series has become harder to interpret with the change in pipeline operations. As noted above, fuel gas volumes have

[3] *Review of Market-Based Balancing*, published November 2016. Available at http://www.gasindustry.co.nz/dmsdocument/5420

increased on the BGIX while balancing gas volumes have decreased. However, other purchases of fuel gas are not publicly visible, so it is difficult to see an overall picture of the effect of the operational changes.

Chart 22: Receipt point operational imbalance



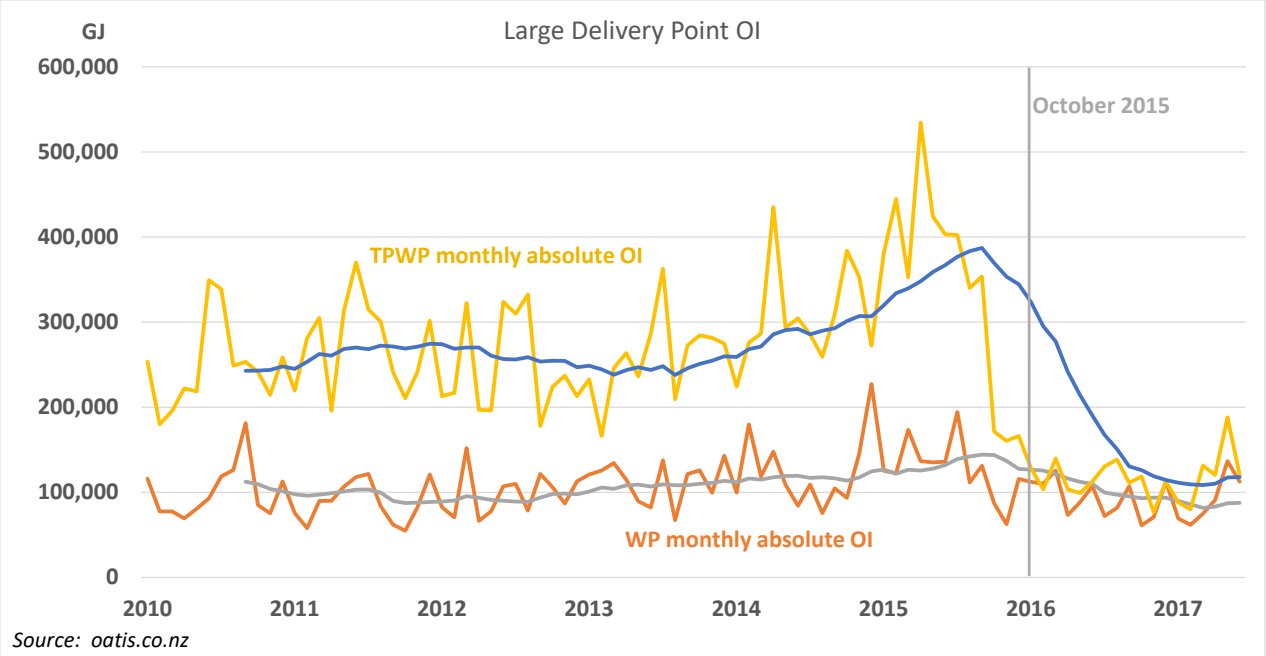
One of the expectations of MBB was that it would improve primary balancing; that is, that pipeline users would strive to match their actual gas flows with the quantities of gas that they scheduled. For welded parties on the Maui pipeline, the daily difference between the two quantities is termed operational imbalance (OI).

The chart above was constructed by calculating the absolute value of OI on a daily basis for each large receipt welded point on the Maui Pipeline (with the exception of Frankley Road). These values were then summed by month and plotted as the blue data series above. The data plotted in green represent the rolling average of the previous 12 months of monthly OI data.

As observed in Gas Industry Co's *Review of Market-Based Balancing*,[4] dated November 2016, management of the receipt welded points changed very little with the introduction of MBB. More recent data do show a downward trend in OI, commencing about June 2016.

[4] Available at http://www.gasindustry.co.nz/dmsdocument/5420

Chart 23: Delivery point operational imbalance



This chart shows the OI at large delivery welded points on the Maui pipeline: the yellow line shows data from the transmission pipeline welded points (TPWPs) Pokuru and Rotowaro; the orange line shows the Bertrand Road, Faull Road, Ngatimaru Road, Mokau Compressor Station, and Huntly Power Station delivery points. The Frankley Road bi-directional point is again excluded from this analysis.

Unlike the previous chart, this chart does show a marked difference in OI from October 2015, the start of MBB, particularly in the TPWP OI. In *Review of Market–Based Balancing*, Gas Industry Co considered that there were two likely causes of these changes: the incentive provided by mandatory daily cash-outs; and the improved information available as a result of D+1 allocations and notifications of cash-out shares, which probably increased shippers' ability to manage their daily positions.

7 Critical Contingency Management performance measures

A critical contingency was declared by the critical contingency operator (CCO) at 10:50 on Tuesday 23 May 2017. The cause of the event was low linepack due to downstream delivery points taking significantly more gas than was being injected into the pipeline, which was exacerbated during a planned outage of the Pohokura Production Station. During the period of this outage, the imbalance between supply and demand caused pipeline linepack and pressures to fall to the point where the critical contingency threshold of 3 hours to 37.5 barg at the Kapuni Gas Treatment Plant was breached. The critical contingency was terminated at 18:15 the same day, after Pohokura returned to expected flows and the CCO considered that the supply of gas into the system was sufficient to meet expected demand.

As required under the CCM Regulations, the CCO has published an incident report, which outlines the events and the actions taken during the critical contingency; and a performance report, which assesses the effectiveness of the critical contingency arrangements. The performance report found that the Critical Contingency Management Plan, the CCO Communications Plan and the CCO Information Guide were all effective in achieving the purpose of the Regulations and no amendments were required.

Tim Denne of Covec was engaged as the industry expert and determined the critical contingency price for the event to be $10.62 per GJ. This is the price that will be used to settle critical contingency imbalances incurred on the day.

APPENDIX – EXPLANATORY NOTES

1 Introduction

This appendix provides context and additional information about the industry performance measures contained in the body of the report. Section numbering is consistent with the main report.

2 Switching performance measures

All of the switching charts include only switches that occurred on open-access distribution networks; switches from open-access to bypass networks (or vice versa) would not be recorded as a switch in the gas registry. Additionally, the charts include only those switches that occurred to customer sites that had a status of active-contracted (ACTC) or active-vacant (ACTV) in the registry (so as to exclude the transfer of vacant sites from one retailer code to another).

The charts also exclude bulk transfers of customers associated with events such as retailer amalgamation or the purchase of a retail customer base. Specifically, the charts exclude the transfer of E-Gas customers to Nova Energy in November 2010; the amalgamation of Auckland Gas (June 2011) and Bay of Plenty Energy (March 2013) with Nova Energy; and the transfer of Energy Direct customers to Trustpower (August-October 2016).

Chart 1: Monthly switching activity

Prior to the gas registry going live in March 2009, there were approximately 1,000 switches per month, and the annual churn rate was approximately 4.8%.

Since registry go-live, switching rates have more than quadrupled to over 4,000 per month. The churn rate (defined as the number of switches in 12 months divided by the total number of gas consumers) has varied in that time from 13% to over 19%. By comparison, electricity switching rates have varied from about 11% to about 21% in the same time period.

For context, the chart below shows customer switching trends since March 2009, when the registry went live.

Chart A- 1: Monthly switching since March 2009

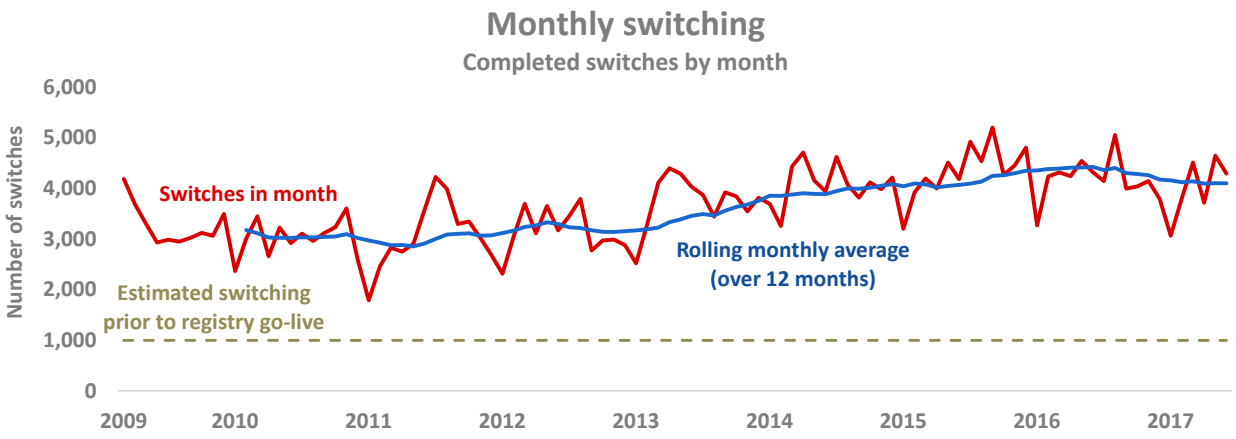


Chart 2: Regional switching activity

These charts compare regional switching rates with total switching rates. The grey line is the same in all the charts and shows the number of switches in a month as a percentage of active customer sites (ACTC and ACTV ICPs) across all North Island gas consumers. The data include both move switches (where a property is switched at the request of an incoming tenant or homeowner) and standard switches (where a gas customer decides to switch the retailer that supplies their existing location). As that grey line shows, monthly switching generally involves between about 1.0% and 1.7% of total North Island gas customers in a month.

The red line in each chart shows the number of switches in that region as a percentage of ICPs in that region. Auckland and Wellington switching rates tend to be similar to the North Island rates, since a large proportion of gas customers are located in those regions. Differences emerge in the smaller regions and show both long-term trends and the effects of regional marketing campaigns.

Chart 3: Time to process switches

The time to process switches has fallen markedly since the commencement of the Switching Rules and the associated inception of the gas registry. Prior to those events, switching could take weeks or months to complete. Once the registry went live, switching times dropped to about 10 days, and since then, switching times have dropped further, to an average of about 2.5 business days.

Chart 4: Distribution of switching length

These charts show the distribution of switching length since the start of the gas registry by calendar year. Since the start of the registry, switches have tended to occur within two days; or in seven days. Historically, switches taking zero to two business days were generally move switches (where a property is switched at the request of an incoming tenant or homeowner), while the majority of switches taking three or more business days were standard switches (where a gas customer simply decides to switch the retailer that supplies their existing location). Now, the majority of switches occur within three days.

Chart 5: Number and severity of breaches of the Switching Rules

Most breaches of the Switching Rules are alleged by the registry operator, though some have been alleged by other market participants. Breaches can also be reported by an auditor following an event audit or performance audit.

3 Allocation and reconciliation performance measures

Chart 6: Volumes of unaccounted-for gas (UFG)

Under the Reconciliation Rules, the amounts of gas that retailers estimate their customers have used are subtracted from the amounts of gas leaving the transmission system. The difference is UFG, which arises from technical losses on the system, metering inaccuracies, and retailer estimation errors. UFG imposes a cost on the market: it is gas that retailers are allocated and must pay for, but cannot sell. Tracking UFG is a way of monitoring these costs and the efficiency of the retail market. This transparency should assist the industry to take steps to reduce UFG where it is efficient to do so.

The chart compares total UFG quantities by consumption month and allocation stage (initial, interim or final). The grey bars show UFG based on the most recent data available.

Changes in UFG from one allocation stage to another are largely due to mass market retailers' consumption submissions becoming more accurate at later allocation stages. UFG tends to be most extreme at the initial allocation stage: in summer, UFG tends to be negative due to retailers'

overestimations of customer consumption; and in winter, UFG tends to be positive due to retailers underestimating consumption. Generally, UFG volumes diminish considerably from the initial to the interim allocation stages. The final allocation stage reflects further minor adjustments to retailers' data, which can result in slightly more or less UFG, as shown by the orange and red lines in the chart below.

For context, the chart below shows UFG trends since October 2008, when the Reconciliation Rules went into effect.

Chart A- 2: UFG since October 2008

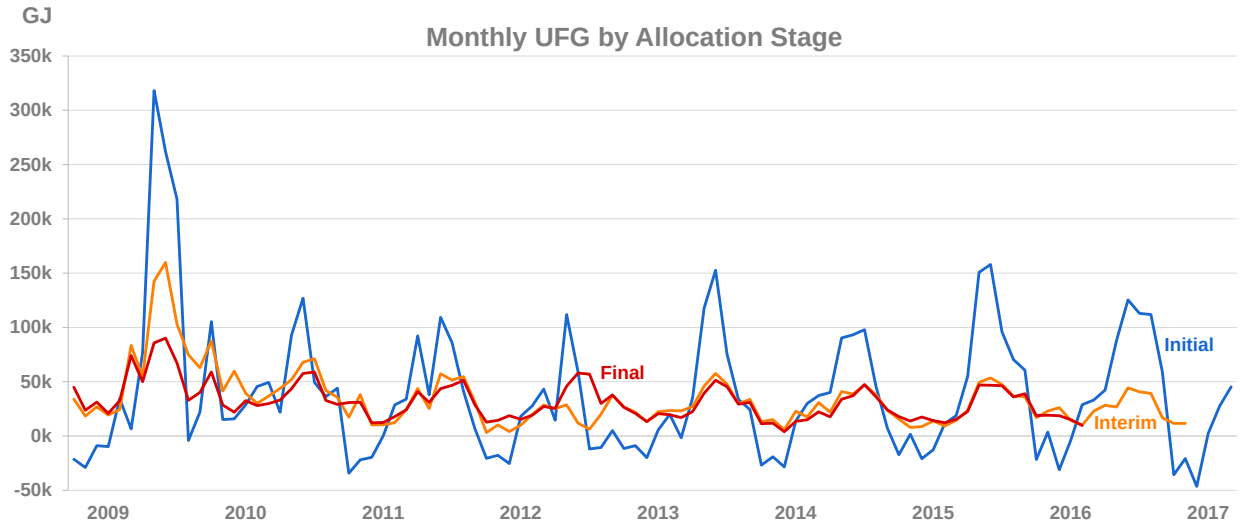


Chart 7: Percentage of UFG

This chart shows the amount of UFG in comparison with the total amount of allocated gas consumed each month. The grey bars show gas consumption at allocated gas gates, while the coloured bars show UFG volumes by allocation stage. The labels show the percent of UFG as a proportion of total allocated gas.

Chart 8: Rolling 12-month UFG

Another way to think about UFG is the amount recorded over a 12-month period. This chart shows rolling 12-month UFG figures, both as a GJ total and as a percentage of gas consumed. That is, each data point shows the amount of UFG recorded for that month and the preceding 11 months. As initial data are often inaccurate, the chart includes only consumption months for which interim or final data are available. The figures in the chart are based on the most recent data available at the time of publication.

Chart 9: Gas gates where UFG is the highest

These charts show the gates with the largest volumes of positive and negative UFG over 12 months, according to the most recent final and interim data.

The first chart shows the 10 gas gates that had the highest volume of UFG, in terms of the percentage of total positive UFG experienced over the same time period. As a comparison, the chart also includes the percentage of total gate injections each gate represents; that is, the proportion of total gas consumption that is drawn from those gates.

The second chart shows negative UFG compared with gate injections.

Chart 10: Number and severity of breaches of the Reconciliation Rules

Most breaches of the Reconciliation Rules are alleged by the Allocation Agent. Breaches can also be reported by an auditor following an event audit or performance audit. Rule 37 breaches tend to be considered and settled in batches.

4 Market competition performance measures

Chart 11: Market share of ICPs by retailer

This chart shows the number of active contracted customer sites associated with each retailer over the past two years, as recorded by the gas registry.

Chart 12: Market share by consumer segment

This chart shows market share by consumer type, as shown in the gas registry. Note that the chart shows retailers that have more than 4% of the market share of any category.

Chart 12a: Market share by geographical region

This chart shows the number of customers served by each retailer by geographical region. For simplicity, the charts include only those retailers with over 3% of total customer market share.

Chart 13: Herfindahl–Hirschman Index

The Herfindahl–Hirschman Index (HHI) is one way of measuring market concentration by using size and number of competing firms. The index ranges from 0 to 10,000. A low score indicates a low level of market concentration, which arises when there are a large number of small firms in the market, each with a small proportion of market share. Conversely, an HHI score of 10,000 represents a market with a single retailer. The measure is used because market concentration is often inversely related to market competition; that is, the more retailers there are, and the more that market share is spread among them, the greater the competition for customers is thought to be.

As a point of reference, the United States Department of Justice considers markets in which the HHI is between 1,500 and 2,500 to be moderately concentrated. Markets with an HHI of greater than 2,500 are considered highly concentrated.[5]

The bars in the chart shows the HHI of the retail gas market as at June 2017; for comparison, the HHI for the beginning of 2009, 2011, 2013, and 2015 are also shown. In all regions, the HHI has decreased, indicating that the retail gas markets in these regions have become less concentrated.

Until 1992, when the new Gas Act disestablished local exclusive franchise areas, gas retailing occurred through local vertically-integrated monopolies. With the consequent onset of retail competition, these former monopoly providers became 'incumbents', subject to competing retailers vying for customers in their areas. (A similar change occurred in the electricity sector). In most regions, there is still a dominant retailer, but the decrease in HHI shows that they have become less dominant in the past seven years. With the introduction of the Switching Rules, new retailers have entered the market and smaller retailers have increased their market share.

Chart 14: Switching by consumer sites since 2008

This chart shows the proportion of active contracted consumer sites by the number of times they have switched since the start of the registry, broken down by consumer type (as indicated by load shedding category in the registry).

[5] http://www.justice.gov/atr/public/guidelines/hhi.html accessed 1 May 2014.

Chart 15: Residential consumer sites that have never switched

This chart shows, for the residential consumer sites that have never switched retailer (since the start of the gas registry in February 2009), the proportion served by each retailer, compared to that retailer's market share of residential consumers.

Chart 15a: Residential customers by number of switches

This chart breaks down retailers' residential consumers by the number of times they have switched and compares those proportions with switches for the residential consumer market as a whole.

Chart 16: Switching activity by retailer

This chart shows the numbers of ICPs gained and lost by retailers over the past two years. The blue bars show the number of customers gained by the retailer each month, and the red bars show the numbers of customers lost.

As shown by these charts, although the net changes in number of customer ICPs may not change significantly from month to month for some retailers, there is a lot of underlying switching activity, particularly for the mass market retailers Contact, Genesis, Mercury, and Trustpower.

Chart 17: Gas gates by number of retailers

This chart shows, by month, numbers of gas gates by the number of active retailers. In this case, an active retailer means a retailer that has at least one active contracted ICP at that gas gate. About 40 gas gates are direct connect gates, meaning that they serve only one consumer, generally a large industrial consumer, and can have only one retailer active at that gate.

The majority of gas gates – about 100 – serve multiple consumers. The greater the number of retailers that trade at a gas gate, the greater is the potential competition for customers.

Chart 18: Connections served by multiple retailers

This chart plots the proportion of gas consumers who are served from the gas gates in the chart above; that is, consumers served at gas gates where multiple retailers trade. This chart shows, for example, that while nine or ten retailers are active at only a handful of gas gates, those gates tend to be the largest ones, since over 85% of all gas consumers are connected at these gates.

Chart 19: Total gas volumes

This chart shows the total amount of gas delivered by open-access transmission pipelines and consumed over the past two years by all gas users. The top grey line shows total consumption; the coloured lines provide a breakdown by type of use.

- The red line shows gas usage for thermal electricity generation.
- Consumption for petrochemicals is shown in blue.
- The tan line shows the amount of gas used by consumers connected to shared gas gates. This represents the majority of commercial and residential consumers. There is a seasonality trend to the consumption, higher in winter and lower in summer.
- The green line represents volumes of gas used by large industrials, including steel, wood products, dairy processing, and oil refining.
- The purple line shows the volumes of gas going to storage.
- The orange line represents gas used by consumers connected to the private pipelines owned by Nova.

Gas used by consumers connected to distribution pipelines (the tan line) is allocated by retailer and shown in the next chart.

Chart 20: Allocated gas volumes

This chart shows the gas volumes allocated to retailers at shared gas gates over the past two years, i.e. gas gates connected to a network that supplies multiple consumers. This includes gas used by industrial, commercial, and residential consumers, but it excludes gas volumes from direct connect gas gates; that is, from gas gates that supply a single consumer directly from the transmission system. For this reason, gas volumes supplied through direct connect gas gates to such industrial sites as thermal power stations, the oil refinery, and paper and chemical factories are not included in the chart.

The grey bars in the chart show total volumes of allocated gas (using the right-hand scale); company volumes are denoted by coloured lines and use the left-hand scale. The bars show the seasonality of gas consumption: higher in winter and lower in summer, and many of the retailers show similar patterns in their allocated volumes.

Nova Energy is generally the largest retailer by allocated volumes. Genesis has a load profile that peaks in winter and troughs during the summer. Contact and Mercury show similar – but less pronounced – winter peaking patterns. Greymouth's share of allocated gas, in contrast, is relatively steady throughout the year, reflecting its position as largely a supplier to industrial loads.

5 Pipeline balance

Chart 21: Balancing gas volumes

This chart shows the purchases and sales of balancing gas by month since January 2006.

The volume of gas in a pipeline relates to the gas pressure in the pipeline and needs to be maintained below the safe operating pressure limit for the pipeline and above the minimum required to maintain the supply of gas to consumers. On the Maui pipeline, pressures rise or fall as parties who inject gas into the pipeline over- or under-inject, and as parties who receive gas from the pipeline under- or over-take relative to their respective scheduled volumes. When a transmission owner or operator manages the gas inventory in a pipeline, it is referred to as *secondary* or *residual balancing*. Maui Development Limited (MDL) buys and sells balancing gas in order to manage gas volumes and thus maintain gas pressure within safety and operational limits.

Prior to 2008, secondary balancing services were essentially free to holders of legacy Maui gas contracts, but changes implemented at the end of 2008 to the Maui Pipeline Operating Code, together with the arrangements in the Vector Transmission Code, meant that the costs associated with secondary balancing were generally recovered from pipeline users. In 2009, MDL instituted the Balancing Gas Exchange, an online platform that displayed pipeline balance conditions and enabled parties physically interconnected to the Maui pipeline to post offers to buy and sell balancing gas. These two changes provided gas transmission customers with an incentive to self-balance and greater information on which to base their balancing decisions.

The outcome was the significantly reduced volumes of gas needed to be purchased or sold by MDL to balance the Maui pipeline.

On 1 October 2015, MDL introduced market-based balancing (MBB) on the Maui pipeline, wherein welded points are cashed out at the end of each day for imbalances over a tolerance limit. The rationale for the change was to provide welded parties with even greater incentive to self-balance. Balancing gas transactions are now posted on the Balancing Gas Information Exchange, bgix.co.nz.

In June 2016, First Gas became the owner and operator of the Maui pipeline. The balancing gas chart shows balancing activity by MDL from 2006 until June 2016, and First Gas transactions from June 2016 to present.

Chart 22: Receipt point operational imbalance

On the Maui pipeline, shippers nominate gas to flow from a receipt welded point, a point where gas is injected into the transmission pipeline, to a delivery welded point, where it is either consumed by a large gas consumer such as Methanex or the Huntly Power Station, or transferred into another pipeline for delivery to smaller downstream customers. Once entered into the pipeline scheduling system and approved, these nominations become scheduled quantities.

Measured quantities, on the other hand, are the amounts of gas that physically flowed through a metering device at a welded point. Scheduled quantities are forecasts; measured quantities are what actually happened. Inevitably, there are differences between the two: forecasts may inaccurately predict actual demand on the day, or there are physical reasons why production stations or large users could not inject or offtake the volumes scheduled.

The difference between measured and scheduled quantities at a welded point is called operational imbalance. Positive imbalance at a welded point indicates that gas is being stored in the pipeline; negative imbalance, that gas is being drawn from pipeline inventory (called linepack). Excess imbalance on a transmission pipeline can incur costs inefficiently, as it may require the pipeline operator to take a balancing action by buying or selling gas to make up for the change in linepack due to operational imbalance.

As noted above, MBB was implemented in October 2015, and a key component of the change was the introduction of daily cash outs for operational imbalance. This change was projected to increase the incentives for primary balancing and thus reduce daily operational imbalance.

Chart 22 shows operational imbalance at large receipt points on the Maui pipeline excluding the bi-directional Frankley Road welded point.

Chart 23: Delivery point operational imbalance

This chart shows operational balance at large delivery points on the Maui pipeline (again excluding Frankley Road). The yellow line shows data from the transmission pipeline welded points (TPWPs) Pokuru and Rotowaro, which feed the distribution networks in Bay of Plenty and Auckland, respectively. The orange line shows the Bertrand Road, Faull Road, Ngatimaru Road, Mokau Compressor Station, and Huntly Power Station delivery points, which are direct connections to large consumers.

GLOSSARY

Critical contingency	A state of emergency on the transmission system characterised by falling or extremely low gas pressures. In such situations, the critical contingency operator has the authority to require consumers to stop using gas in order to balance the system, as set out in the Gas Governance (Critical Contingency Management) Regulations 2008.
Direct connect consumers	Large industrial consumers who are supplied gas directly from the transmission system via a dedicated gas gate.
Distribution system	System of lower pressure pipelines conveying gas from the transmission system to consumer sites.
Gas gate	A place where gas leaves the transmission system. Gas gates (most commonly) lead to distribution systems, which supply a number of different consumers. Some gas gates are direct connects, meaning that they supply a single large industrial consumer. A few gas gates supply private gas networks, which supply the customers of a single retailer.
Herfindahl–Hirschman Index (HHI)	Measure of market concentration. Generally, markets in which the HHI is between 1,500 and 2,500 are considered moderately concentrated. Markets with an HHI of greater than 2,500 are considered highly concentrated. For more information, see the Appendix.
ICP	Installation Control Point: the point where a consumer installation is connected to the distribution system. Used to describe a consumer site.
Move switch	A switch where the retailer supplying gas to a consumer site is changed to another retailer at the request of an incoming tenant or homeowner.
Reconciliation	The processes by which the volume of gas leaving the transmission system is allocated on a gate-by-gate basis to retailers with consumers at those gates; governed by the Gas (Downstream Reconciliation) Rules 2008. Reconciliation is done on a monthly basis, and each consumption month is calculated three times: in the month immediately after consumption month *(initial allocation)*; four months after consumption month *(interim allocation)*; and 13 months after consumption month *(final allocation).*
Registry	Database of information on consumer sites, including metering information, associated gas gate, and responsible retailer. Used to facilitate efficient and accurate switching.
Standard switch	A switch where a gas customer decides to switch the retailer that supplies its existing location.
Switching	The processes by which the retailer supplying a customer site is changed to another retailer, governed by the Gas (Switching Arrangements) Rules 2008.
Transmission system	System of high pressure pipelines that convey gas from gas processing facilities to a distribution system or to a direct connect consumer.
Unaccounted-for gas (UFG)	The difference between the amount of gas leaving the transmission system and retailers' estimates of their consumers' consumption. It is made up of technical losses on the system, metering inaccuracies, and retailer estimation errors. For more information, see the Appendix.

PROGRESS TOWARDS OBJECTIVES AND OUTCOMES

1 APRIL – 30 JUNE 2017

This section provides an update of progress towards objectives and outcomes for Gas Industry Co the gas industry body, as set out in the Gas Act 1992 and the April 2008 Government Policy Statement on Gas Governance, particularly as implemented through the Company's *FY2017-2019 Statement of Intent*.

Project	Rationale	Activity	Status
Strategic Objective 1: Promote efficient, competitive and confident gas markets			
Retail Gas Contracts Oversight Scheme	• Enhanced consumer outcomes by providing clarity around the respective roles and obligations of consumers and industry participants involved in the supply of gas to small consumers.	• Administer the Retail Gas Contracts Oversight Scheme. • Conduct a full review of retail contracts every 3 years - next in calendar year 2018. • Review retailers' contracts otherwise on an exceptions basis (ie new entrants and changed contracts). • Provide additional information to assist new entrant retailers to understand their obligations and governance processes.	• Fourth assessment of retailers' standard published contracts with small consumers published in October 2015; showed further improvements in alignment with the contract benchmarks. • Since the Retail Scheme's introduction in 2010, retailers' overall rating has increased from 'Moderate' to 'Substantial' alignment with the benchmarks. • The next review is scheduled for 2018.
Gas Distribution Contracts Oversight Scheme	• Gas industry participants and new entrants are able to access distribution pipelines on reasonable terms and conditions. • Ensure consistency in distribution services arrangements.	• Monitor and report to the Minister on the status of distribution arrangements. • Develop and publish distribution contract Principles. • Encourage publication of network services agreements.	• Report on the second assessment of distribution contracts issued in May 2014 showed that overall alignment improved from 'Moderate' to 'Substantial'. • Gas Industry Co continues to monitor industry participants' progress with executing new distribution contracts consistent with the Distribution Scheme principles.

Project	Rationale	Activity	Status
Gas Quality	• Maintain an acceptable standard of gas quality. • Ensure costs of gas quality incidents are met efficiently. • Achieve improved transparency on gas quality incidents.	• Ongoing review of industry arrangements for managing gas quality. • Consider options for improving gas quality arrangements.	• *Gas Quality: Requirements and Procedures Document* was issued in 2015, and will be reviewed and updated by Gas Industry Co as required. • The *Gas Quality Update* that Gas Industry Co released in June 2017 proposes that additional time is allowed for a new GTAC to take shape before reconsidering matters relating to gas quality. •
Rule Changes	• Improved industry governance through regular review of existing arrangements and recommending changes where appropriate.	• Maintain rule change registers. • Review Switching, Reconciliation, and CCM rules/regulations once new access code design sufficiently advanced.	• A pilot of day-after (D+1) gas allocation and daily balancing and peaking pool (BPP) information delivery is continuing successfully. The pilot will be reviewed in light of the development of the new GTAC, and changes made to Reconciliation Rules proposed where appropriate.
Gas Measurement	• Workstream arose from industry stakeholder discussions at annual Co-Regulatory Forums undertaken in context of GPS outcome of providing efficient market for metering services.	• Develop a seed paper to identify any metering issues.	• Gas Industry Co published two papers on gas metering issues and invited stakeholder feedback. • Submissions analysis being prepared.
Information Gathering	• Protocol established in 2012 as an industry arrangement rather than a formal regulated process.	• If required, due to non-compliance, Gas Industry Co can consult on regulations for mandatory supply of information by participants to inform relevant issues. • Subject to outcome of this consultation, Gas Industry Co may make recommendation to the Minister for regulations for the provision of information.	• Information was provided under the Protocol in relation to review of market-based balancing and metering contracts review.

Project	Rationale	Activity	Status
Strategic Objective 2: Facilitate efficient use of, and investment in, gas infrastructure			
Transmission Access	• Ensure transmission pipeline access arrangements transparently provide for the efficient utilisation of physical capacity and effectively signal any need for efficient investment in additional capacity.	• Address by regulatory and/or non-regulatory options any lessening of competition due to transmission constraints. • Improve the quality and availability of pipeline security and supply/demand information. • Promote changes to commercial and regulatory transmission access arrangements.	• Former Vector and Maui transmission systems under the ownership of First Gas. • Gas Industry Co and First Gas co-leading development work around a new GTAC to replace the Vector Transmission Code (VTC) and Maui Pipeline Operating Code (MPOC).
Supply/Demand Model	• *Gas Supply and Demand Scenarios 2012-2027* commissioned in 2012 as part of the Gas Transmission Investment Programme (GTIP).	• Developed first dedicated study on future gas supply and demand. • Review and update the supply/demand model biannually.	• Third edition of Report released October 2016 and was presented to the industry. • Next report will be released in 2018.
Transmission Pipeline Balancing	• Improved industry arrangements. Gas industry participants and new entrants are able to access transmission pipelines under reasonable terms and conditions.	• Assess balancing market developments.	• Market-Based Balancing (MBB) introduced on 1 October 2015 with associated new trading of balancing gas on emsTradepoint wholesale market. • Post-implementation review of MBB identified efficiency improvements. • Gas Industry Co, First Gas and stakeholders considering balancing in context of new GTAC development.
Transmission Code Change Requests	• Ensure ongoing relevance and efficiency of multilateral terms of access to transmission pipelines.	• Transmission Code Change Requests processed as required.	• On 14 July 2017, Gas Industry Co received a Code Change Request from First Gas to make changes to the MPOC. The changes aim to facilitate transition to a new GTAC by terminating TSAs and ICAs under the MPOC when certain conditions are met. Seven submissions were received, and we

Project	Rationale	Activity	Status
			are currently reviewing these.
Interconnection	• Improved industry outcomes. Gas industry participants and new entrants are able to access transmission pipelines under reasonable terms and conditions.	• Review interconnections as required. • Address any concerns regarding reasonable access • Amend Interconnection Guidelines if needed.	• Interconnection Guidelines have been in place since 2009. Transmission System Owner policies are largely consistent with those guidelines. • Gas Industry Co and First Gas to consider interconnection arrangements in context of new GTAC development.
Security and Reliability	• Gas Industry Co's 2015/16 review of transmission pipeline security and reliability found arrangements were generally appropriate but noted several opportunities for improvement under current arrangements (mainly development of first combined First Gas Transmission Asset Management Plan) and several areas where arrangements were evolving (Commerce Commission price-quality regulations.	• Gas Industry Co will continue to review developments and work with stakeholders on further improvements.	• Gas Industry Co published an assessment of First Gas's Asset Management Plan and other security and reliability related documents in March 2017. First Gas's adoption of Gas Industry Co's suggestions will be assessed in the next Asset Management Plan.
Wholesale Market Monitoring	• emsTradepoint wholesale gas market (eTp) makes a significant contribution to GPS outcome for 'efficient arrangements for the short-term trading of gas'.	• Gas Industry Co continues to monitor activity and developments in the wholesale spot market as well as having a role with the eTp's Operational Working Group' • Gas Industry Co monitors wholesale market activity and developments, particularly in relation to Market-Based Balancing.	• Continue to monitor the market platform, including impacts of balancing gas trading following introduction of MBB. • Supporting the new Energy Trader Forum.

Project	Rationale	Activity	Status
Strategic Objective 3: Deliver effectively on Gas Industry Co's accountabilities as the gas industry body			
Downstream Reconciliation	• Statutory role under Gas (Downstream Reconciliation) Rules 2008. • Improved industry arrangements and consumer outcomes through the objective of fairly allocating, and reducing, Unaccounted-for-gas (UFG) and its associated costs.	• Oversight of Reconciliation Rules, including Allocation Agent Service Provider role.	• Reconciliation Rules operating well, with emsTradepoint performing Allocation Agent Service Provider role. • Gas reconciliation audits performed regularly. • Annual Unaccounted for Gas (UFG) factors and unusual metering arrangements reviewed for any significant differences. • A pilot of day-after (D+1) gas allocation and daily balancing and peaking pool (BPP) information delivery is continuing successfully. The pilot will be reviewed in light of the new GTAC development, and changes to Reconciliation Rules proposed if appropriate.
Switching and Registry	• Statutory Role under Gas (Switching Arrangements) Rules 2008. • Efficient retail market and improved consumer outcomes by facilitating market contestability through customer switching between retailers.	• Oversight of Switching Rules, including Registry Operator Service Provider role.	• Switching Rules operating well, with Jade performing Registry Operator Service Provider role. • Switching statistics report issued monthly, with switching levels remaining high. • Completing Registry Service Provider contract negotiations.

Project	Rationale	Activity	Status
Critical Contingency Management	• Statutory role under Gas Governance (Critical Contingency Management) Regulations 2008. • Improved industry outcomes through increased market confidence in industry's ability to manage critical contingency events.	• Oversight of CCM Regulations including management of Critical Contingency Operator (CCO) Service Provider role. • Review effectiveness of the Regulations following any events/exercises. • Operate critical contingency pool following an event. • Conduct annual critical contingency management exercise.	• CCM Regulations operating well, with Core Group performing Critical Contingency Operator Service Provider role. • CCO activities are reviewed each quarter. • Annual industry exercise held 11 April 2017. • Critical contingency 23 May. CCO's incident and performance reports published. Industry expert's determination on critical contingency price published. Gas Industry Co has issued invoices and credit notes for critical contingency imbalances.
Compliance	• Statutory role under the Compliance Regulations. • Improved industry operations through provision of a compliance and dispute resolution process for industry participants.	• Oversight of Gas Governance (Compliance) Regulations 2008. • Appointment of Rulings Panel and Investigator, and management of associated processes.	• Gas Industry Co continues to fulfil its role as Market Administrator under the Compliance Regulations. • Sir John Hansen appointed as Rulings Panel and Jason McHerron as Investigator. • Breach activity remains generally low; a positive indicator of industry compliance. • One matter before Rulings Panel currently (alleged breaches of CCM Regulations 2008).
Statutory Accountability	• To ensure stakeholders understand the scope of the company's intended operations and its results to the cost thereof.	• Prepare/publish a Statement of Intent that meets statutory requirements • Prepare/publish Annual Reports that meet statutory requirements • Prepare/publish Quarterly Reports to the Minister on 'state and current performance of the industry'	• *Statement of Intent* (SOI) for FY2018-FY2020 published July 2017. • Annual Report published 30 September 2016. • Quarterly Reports and News Bulletins published regularly.
Performance Measures	• Improved industry and consumer outcomes through provision of public information on industry performance • Monitor the effectiveness of governance arrangements	• Determine and publish information on each gas governance arrangement that has been implemented.	• Performance Measures Reports included in Quarterly Reports. • Rules/Market performing well on key measures - switching numbers, switching times, Unaccounted-for gas (UFG) levels, etc.

Project	Rationale	Activity	Status
Strategic Objective 4: Build and communicate the New Zealand Gas Story			
NZ Gas Story/State and Performance of Industry	• Facilitate nexus between industry and Government. • Maintain informed industry participants and other stakeholders.	• Facilitate, influence and communicate with the industry and Government. • Liaise with other regulatory bodies, agencies and associations with responsibilities and interests encompassing the gas industry.	• *NZ Gas Story* – Fifth edition released December 2016. • Annual *NZ Gas Story* roadshow presentations held in Wellington and Auckland in December 2016. • Regular liaison with MBIE, Electricity Authority, and other relevant regulators. In particular, working closely with Commerce Commission on gas transmission matters (Commission Input Methodologies and price/quality path reviews; Gas Industry Co co-leadership of new GTAC development).