

Performance Measures Quarterly Report for the period ending 30 June 2011

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 ('CCM Regulations'), both in terms of activity related to these rules and the competitive outcomes that they foster.

A new addition to the Report is the inclusion of balancing gas volumes, the data for which come from MDL and the MDL-operated Balancing Gas Exchange. The costs of balancing gas are apportioned in part based on gas volumes allocated under the Reconciliation Rules, and the trend of gas volumes bought and sold over time to balance the pipeline will provide important context in Gas Industry Co's upcoming review of the Reconciliation Rules. The information will also be an input into Gas Industry Co's upcoming review of balancing arrangements.

Highlights of the Report:

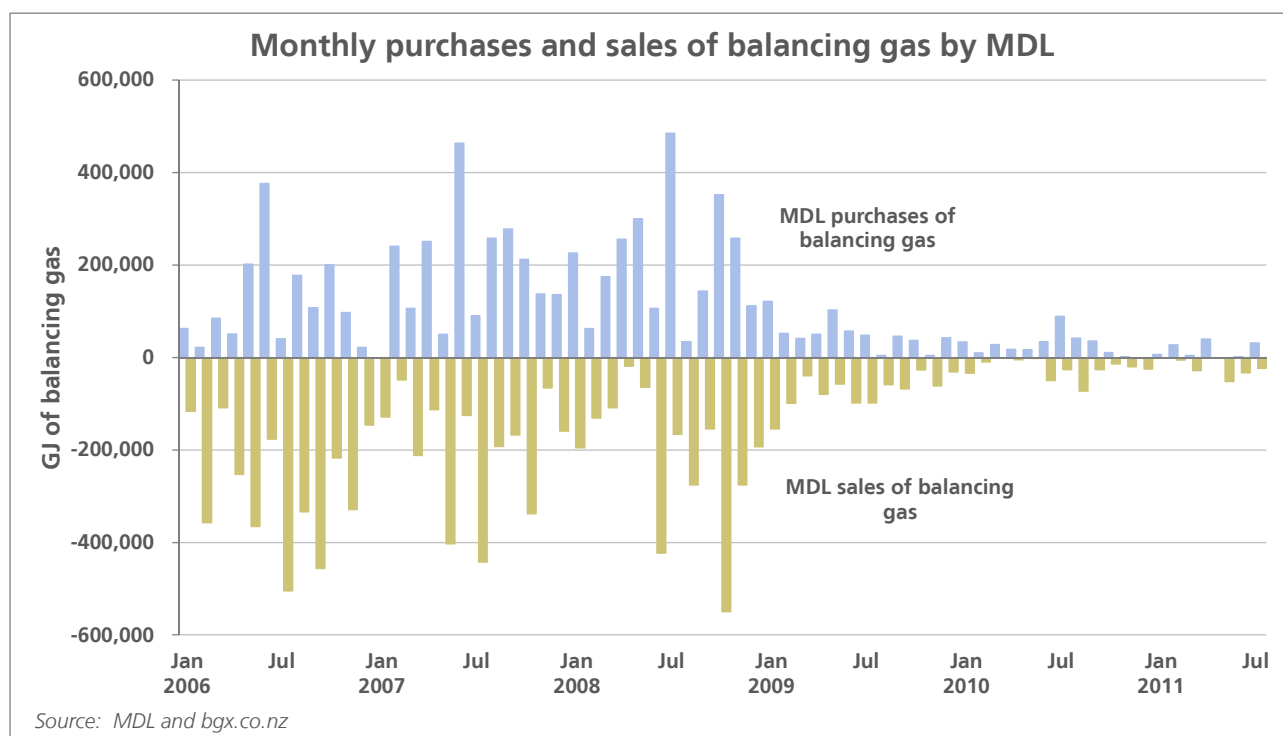
- Balancing volumes have fallen nearly 90% from calendar year 2008 to 2010. This marked decrease is due to improvements by interconnected parties and gas shippers in self-balancing their own receipts and deliveries of gas on the Maui pipeline. Prior to 2008, pipeline balancing was effectively a free service for holders of legacy Maui gas contracts. Since 2008, the Maui Pipeline Operating Code has been revised to eliminate legacy provisions, and access to operational pipeline information has improved; these changes have provided both an incentive and a means for gas transmission users to manage their positions better.
- Switching activity has shown a marked increase, from a monthly average of about 3,000 switches to over 3,600 completed switches in June of this year. The increase is likely to have been spurred by the Electricity Authority's "What's my number?" switching campaign, as a number of retailers supply both gas and electricity.
- The average time to process switches continues to decline. The average switching time is now just over six days, compared to the weeks or months that switches took prior to the implementation of the Switching Rules.
- Unaccounted-for gas (UFG) has decreased on an annual basis in the past two years, although UFG in recent months has increased, consistent with previous winter trends.

- The Nova Gas retail brand has continued to grow, through the acquisition of former E-Gas customers, amalgamation of the Auckland Gas brand, and organic growth. Nova Gas is the fourth largest retailer in customer numbers and, for May and June 2011, the largest in terms of allocated gas volumes.¹
- Although there are fewer retailers in the market than this time last year, most gas customers – over 93% – are connected to gas gates where six or more retailers operate.
- There were no critical contingencies this quarter.

¹ Note that allocated gas volumes relate to networks that are shared by gas retailers. Some gas customers are connected directly to the transmission system (particularly large industrial customers) and some are connected to private distribution networks. These loads are not included in the comparison.

2 Balancing gas volumes

Balancing refers to the management of the gas inventory in a pipeline. 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 will 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. MDL buys and sells balancing gas in order to manage gas volumes and thus maintain gas pressure within safety and operational limits.



In each of the calendar years 2006, 2007, and 2008, over 4,600,000 GJ of balancing gas was bought and sold by MDL. In 2009, balancing gas volumes totalled less than 1,500,000; and in 2010, balancing gas volumes were just over 600,000 – a decrease of nearly 90% from 2008 volumes.

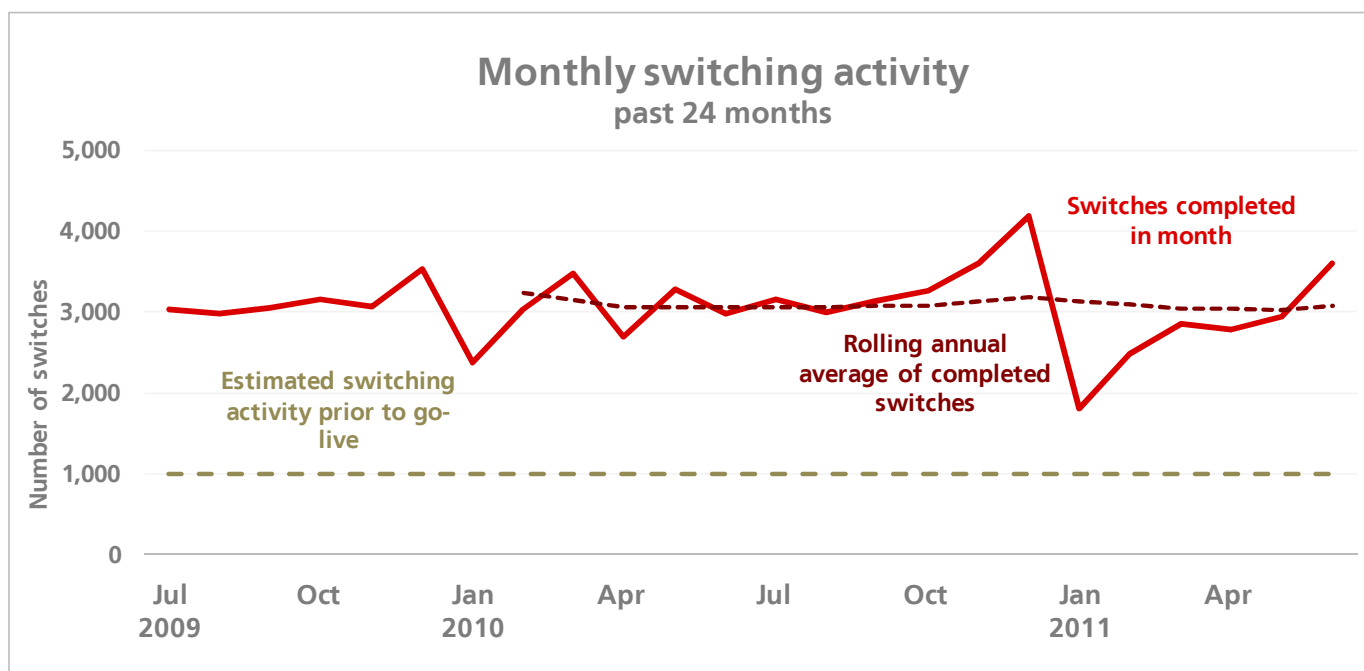
Prior to 2008, balancing services were essentially free to holders of legacy Maui gas contracts, but changes implemented at the end of 2008 to the Maui Pipeline Operating Code have meant that interconnected parties and gas shippers are responsible for imbalances that they create. Another significant change is the inception of the Balancing Gas Exchange by MDL, an online platform that displays pipeline balance conditions and enables gas producers and wholesale gas consumers to post offers to buy and sell balancing gas. These two changes appear to have provided gas transmission customers with an incentive to self-balance and greater information on which to base their balancing decisions. The outcome is the significantly reduced volumes of gas needed to balance the Maui pipeline.

3 Switching performance measures

Monthly switching activity

Switching activity has increased recently, from a recent monthly average of about 3,000 switches per month to over 3,600 completed switches in the month of June, an increase of 20% over the monthly average for the past year. The increase is likely due in large part to the electricity switching campaign being run by the Electricity Authority. Indeed, for the month of June, the Electricity Authority has reported that completed switches are 48% higher than the monthly average over the past 12 months.

The average annual rate of switching remains at about 15%. In comparison, the annual churn rate for electricity is about 18.7% as at the end of June. Prior to the gas registry going live in March 2009, approximately 1,000 switches were processed on a monthly basis, and the annual churn rate was approximately 4.8%.

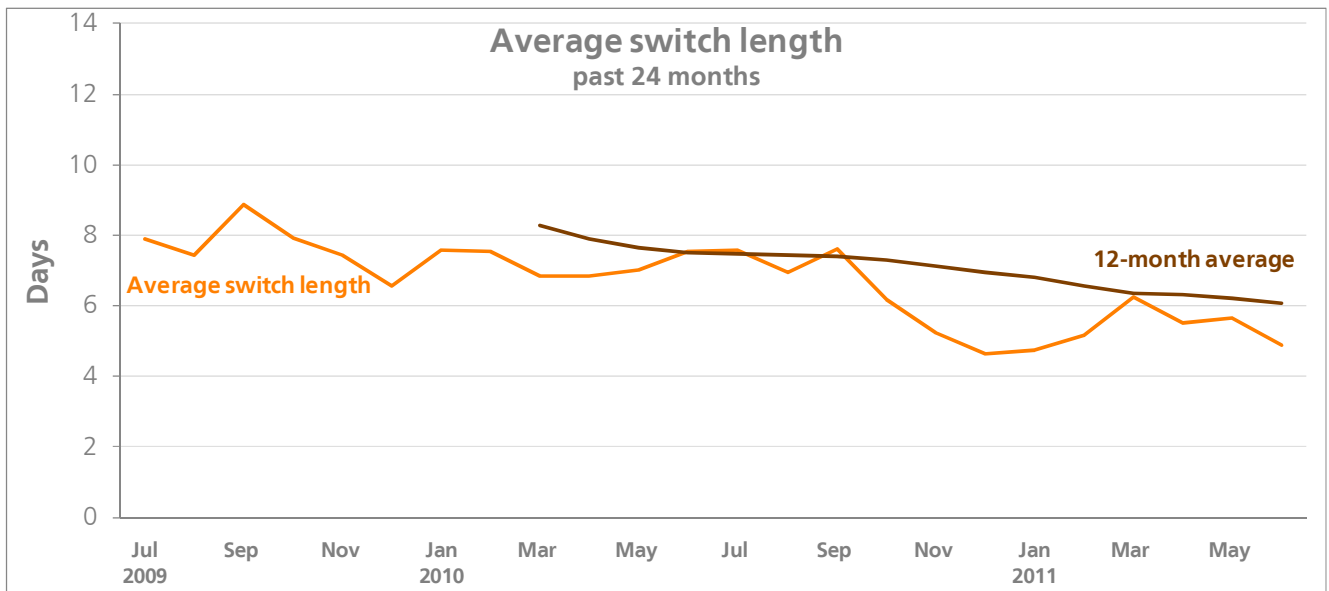


June 2011 in the chart above has been adjusted to remove the 2,243 transfers from the Auckland Gas retailer code to Nova Energy that were processed in that month, as both retailers are part of the Todd group and the transfers were related to a re-branding rather than being "switches". Likewise, the chart also excludes the transfer of about 6,350 E-Gas customers to Nova Energy in November 2010 as a result of Nova purchasing the customer base from BDO, E-Gas's liquidator.

Additionally, the chart includes 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.

Time to process switches

The chart below shows the average length of time it has taken to process the switch requests that have been received in a month. The average time to process a switch has been consistently below seven days each month since October of last year. In comparison, switches could take weeks or even months to process prior to the inception of the switching registry.

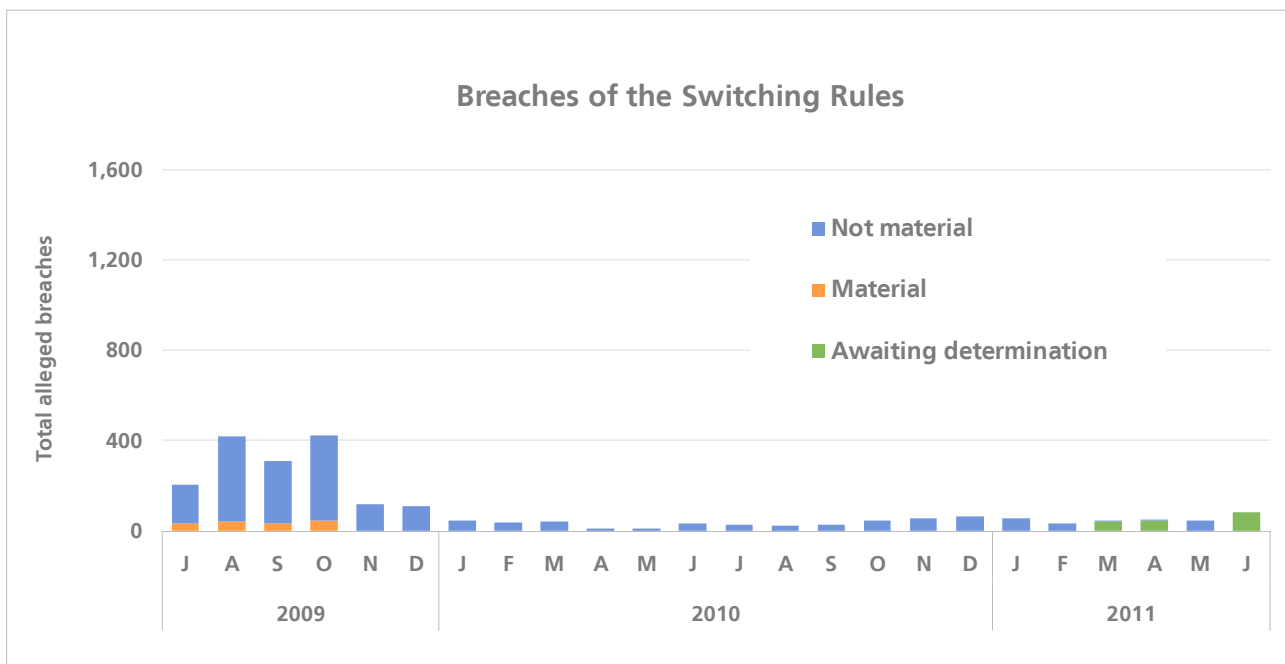


Note that the chart above excludes the transfers from E-Gas to Nova and from Auckland Gas to Nova, all of which went through in less than a day.

Number and severity of breaches to the Switching Rules

The number of switching breaches has fallen significantly since the inception of the Switching Rules, as has the severity of the breaches. The Market Administrator has not determined a breach of the Switching Rules to be material since October 2009.

The breaches awaiting determination from March and April of this year relate to a single retailer whose systems apparently are not compliant with the amendments to the Switching Rules that went into effect in February. The Market Administrator expects that these breaches will not be material.



4 Allocation and reconciliation performance measures

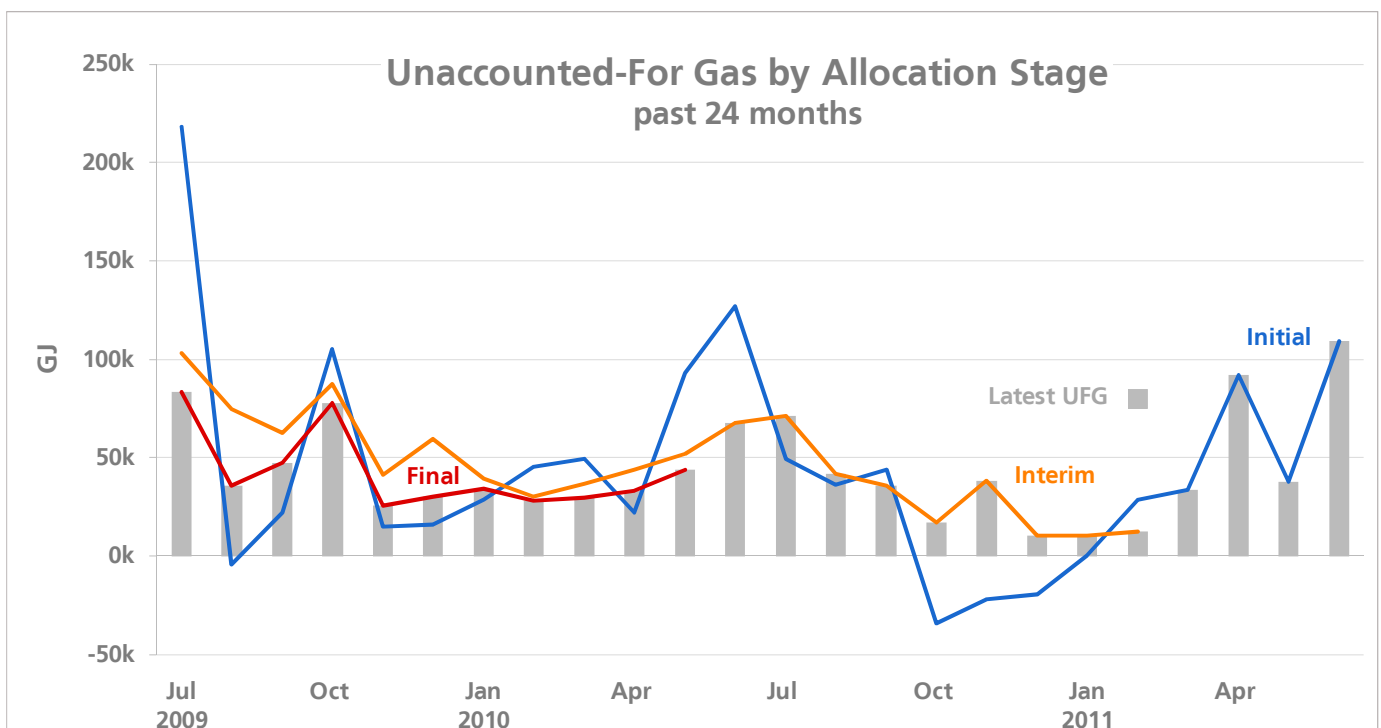
Volumes of Unaccounted-for Gas

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.

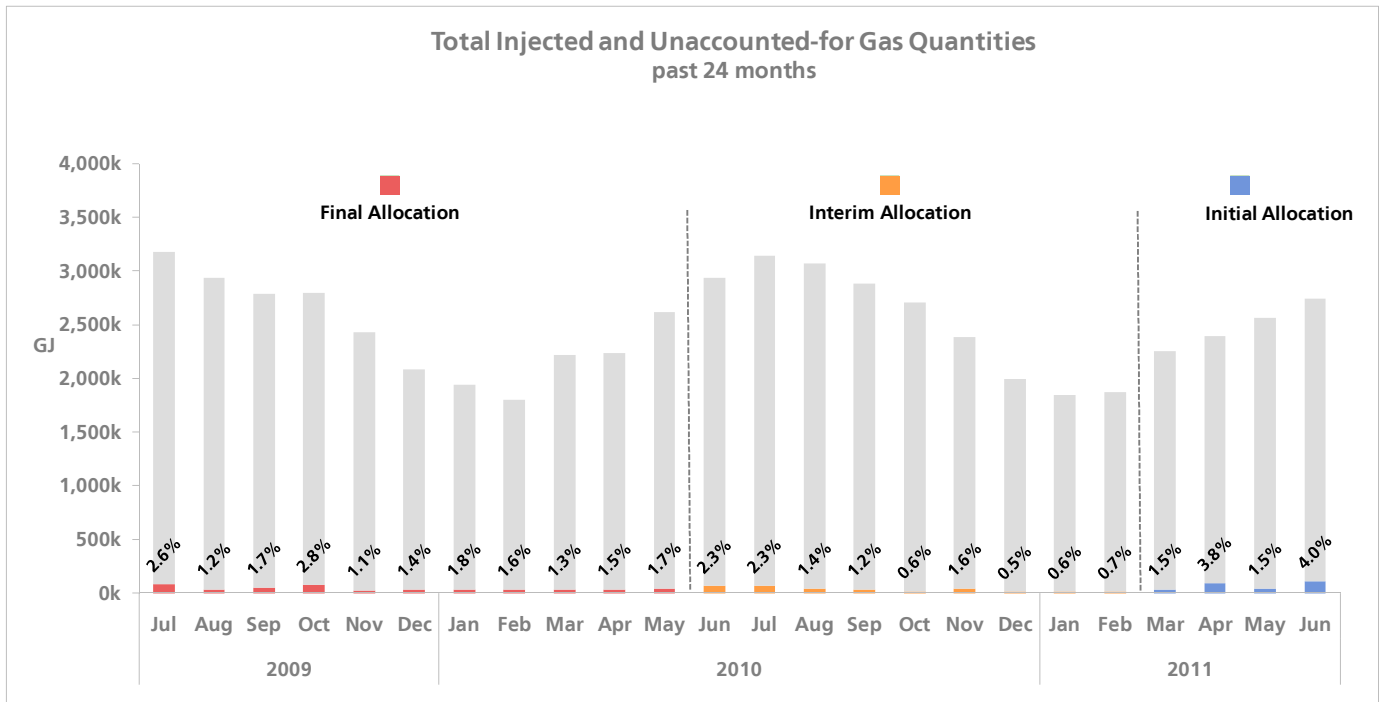
The chart below compares total UFG quantities by consumption month and allocation stage (initial, interim or final). The grey bars show UFG based on the most recent data available.

The data show an uptick in UFG in recent months, consistent with the pattern experienced in winter months in previous years. UFG recorded in the months of April, May, and June 2011 was 239,000 GJ, about the same as experienced at the initial stage of 2010, and a decrease of over 60% from the same months in 2009.

Consistent with experience in the previous two winters, it is likely that a significant proportion of the UFG recorded at the initial allocation stage in April through June of this year is due to retailers under-estimating their customers' consumption. It is likely that the UFG will decrease with subsequent allocation stages, when retailers' submissions are informed by more complete meter reading data.

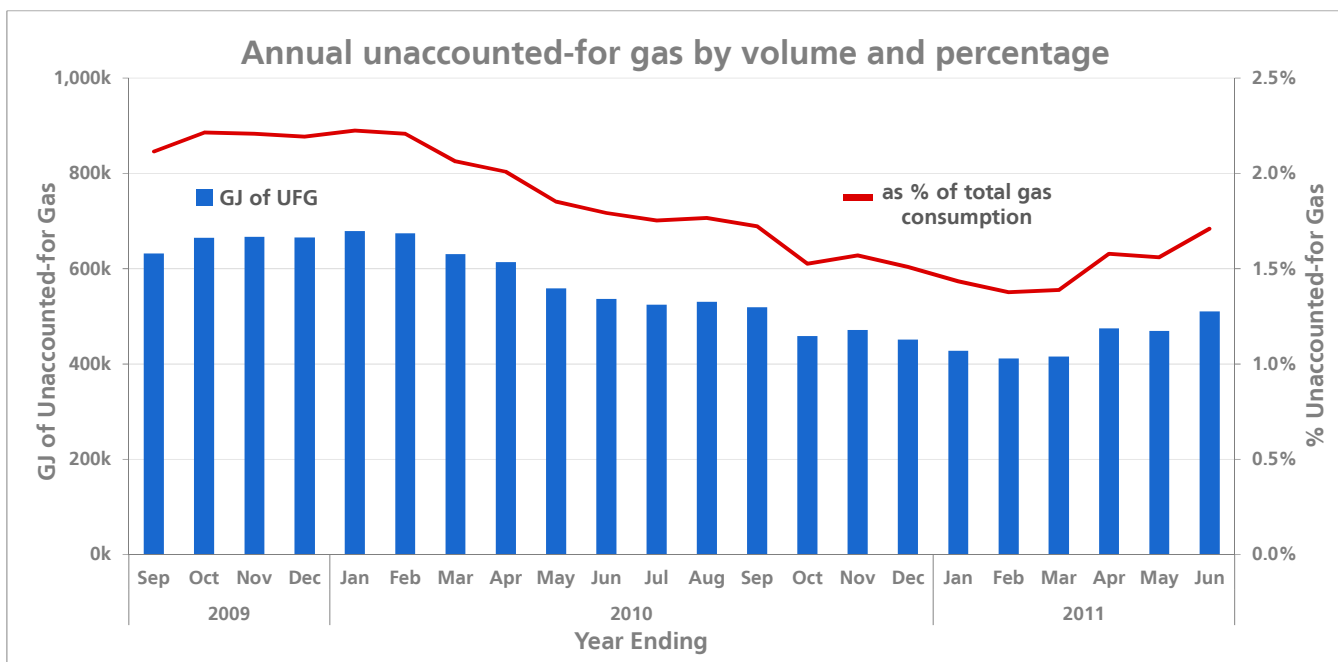


This chart shows the amount of unaccounted-for gas in comparison to the total amount of allocated gas consumed each month. The grey bars show gas consumption at allocated gas gates, which follows a seasonal pattern: higher in winter and lower in summer. UFG as a percentage of volume follows a similar seasonal pattern.



Another way to think about UFG is the amount recorded over a 12-month period. The chart below shows rolling 12-month UFG figures, both as a GJ total and as a percentage of gas consumed. The information is based on the best data available at the time of publication, so, for example, the June 2011 total is based on 4 initial allocation results and 8 interim results, while the June 2010 total is based on one interim and eleven final allocation runs.

The chart shows that annual UFG has declined from over 2% of annual consumption at allocated gas gates to less than 1.5% as of earlier this year. The recent uptick in annual UFG is due to the seasonally-influenced increase in UFG experienced in recent months, a large proportion of which is expected to be resolved in subsequent allocation stages.

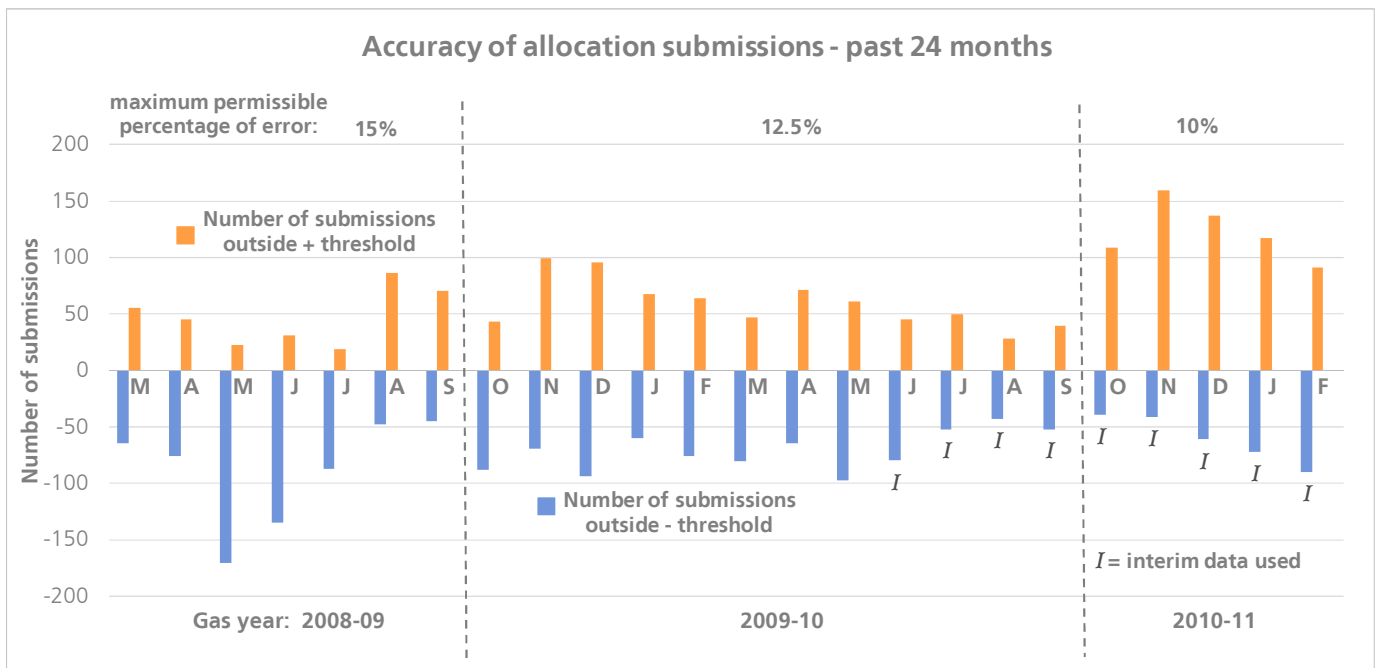


Accuracy of submission data

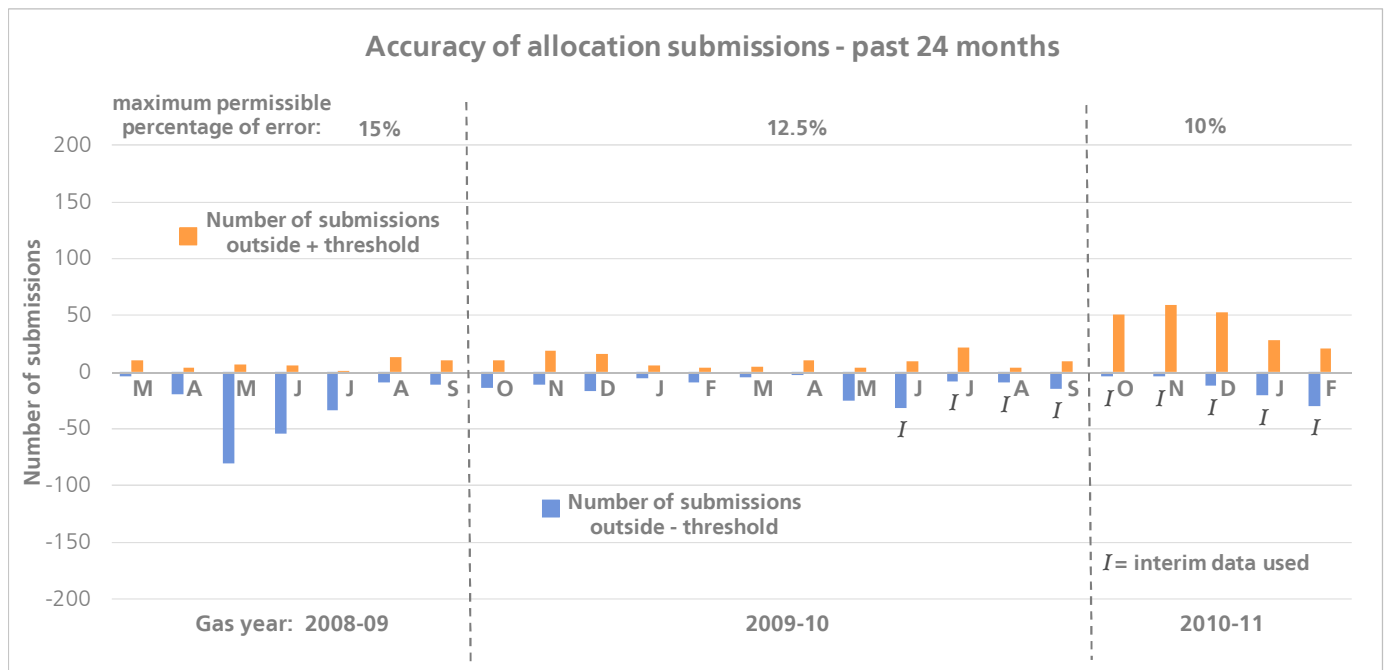
The accuracy of initial submissions is important, as balancing and peaking charges on the Vector transmission system are levied on the basis of initial allocation results and are not subsequently washed up. This means that the balancing costs of the UFG created through inaccurate initial consumption submissions fall onto all retailers at the affected gate. To limit the impact of this effect, the Reconciliation Rules require that initial consumption submissions are within a specified percentage of the final (and most accurate) consumption submissions.

The chart below shows the number of retailer submissions that were outside the maximum permissible error threshold in the last 24 months for which data are available. For this analysis, final submissions were compared to initial allocation submissions for the months they were available (March 09 – May 10). Other months use interim submissions (in place of final) for the comparison data and are marked with 'I' in the chart below. The percentage of error relevant to the consumption month has been used to measure accuracy: 15% in the 2008-09 gas year, 12.5% in 2009-10, and 10% in 2010-11.

There has been an increase in the number of submissions outside the accuracy threshold since October, when a lower percentage accuracy threshold came into effect. It appears that the issue is common to all the large mass market retailers. Interestingly, although this effect is due partially to the tightened accuracy threshold that went into effect in October, the lower threshold is only part of the answer, as a large number of potential breaches would also have occurred if the threshold had remained at 12.5% or even 15%.



The market administrator uses a volume threshold of 200 GJ as a means of differentiating those breaches that are likely to have had a materially adverse effect on other market participants. The chart below shows the number of accuracy breaches that involve gas quantities larger than 200 GJ. As a comparison of the two charts illustrates, there is a significant proportion of accuracy breaches that have involved less than 200 GJ. Deeming these breaches not material allows industry participants to focus on addressing the harm caused by larger volume estimation errors.



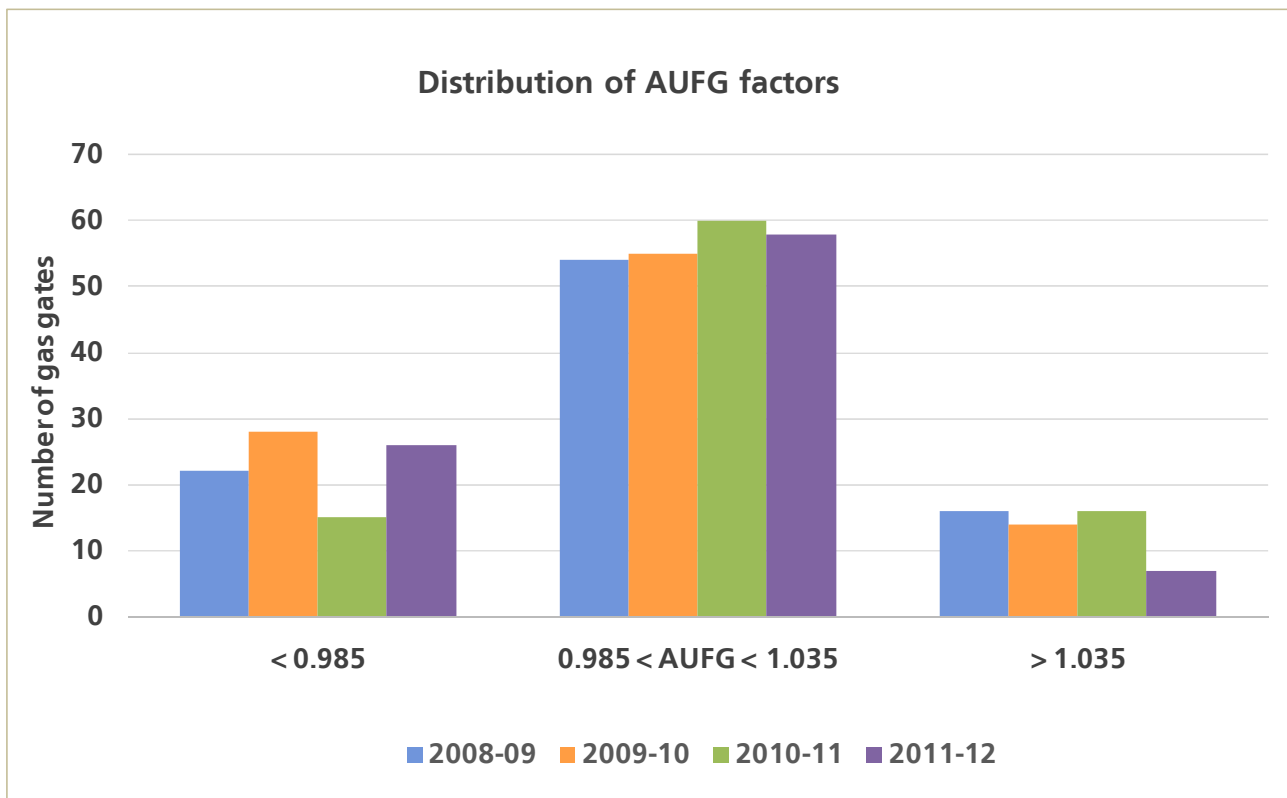
Distribution of AUFG factors

Annual UFG (AUFG) factors are used as part of the reconciliation process to determine how much of UFG gets assigned to customers with time of use meters. Time of use meters are used by large industrial customers and are generally considered to be more reliable than meters used in the mass market. Time of use meters receive UFG based on historical amounts of UFG at the gas gate, defined as the AUFG factor, while the remainder of customers at a gas gate receive the remainder of the UFG experienced at that gate

When the Reconciliation Rules were implemented, AUFG factors were constrained by transitional provisions to a floor and cap. Those transitional provisions have now expired; however, the former cap and ceiling limits are useful as a means of tracking improvements in AUFG factors.

The closer AUFG is to one, the more accurate the consumption submissions have historically been at that gate. The chart below shows that, for the 2011-12 gas year, the number of gas gates with an AUFG factor greater than 1.035 has decreased dramatically, from 16 gas gates to seven. This outcome reflects falling UFG and the underlying efforts of retailers, aided by the results of the event and performance audits, to remedy identified causes of UFG.

Surprisingly, the number of gas gates with AUFG figures less than 0.985 has increased for the 2011-2012 gas year. For a number of these gates, the AUFG factor is not used in allocation, because they either have only time of use customers, or only non-time of use customers (so there is no need to apportion UFG between the two groups). However, the number of low AUFG gas gates suggests that there may be errors in the data used in reconciliation. Gas Industry Co intends to investigate these gas gates further.

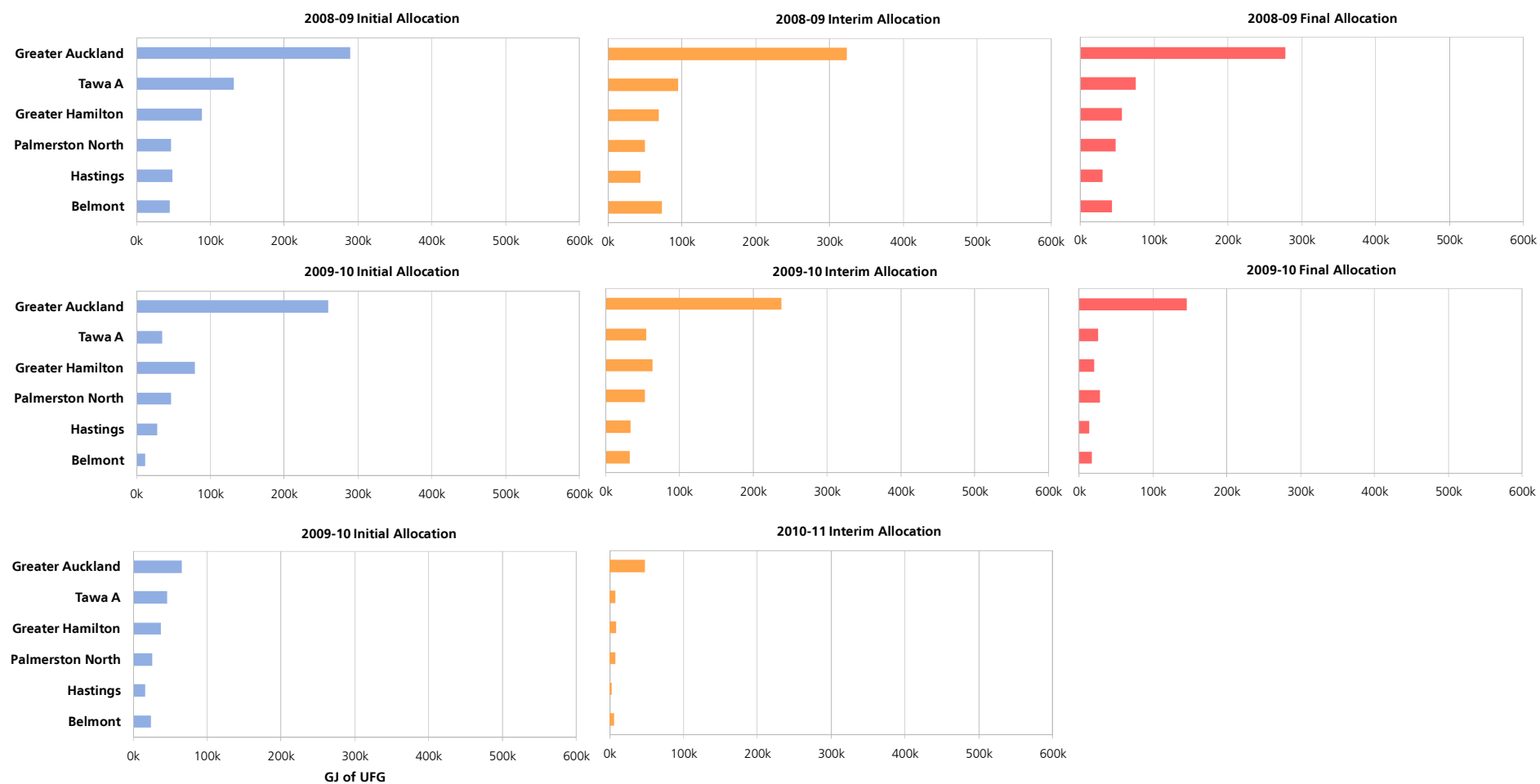


Gas gates where UFG is the highest

Greater Auckland gas gate is consistently the largest contributor of all the gas gates to UFG volumes, followed by Tawa A, Belmont, Greater Hamilton, and Palmerston North. This pattern is roughly consistent over all three allocation cycles and across gas years, indicating that UFG is a persistent issue at these gates.

All allocations have now been performed for the 2008-09 gas year and are shown in the top row below. For the 2009-10 year, shown in the middle row, initial and interim allocations have been done for all 12 months; as well as the final allocations for October through May 2010. Comparing the 2008-09 initial and interim allocations with those for 2009-10 shows a trend of decreasing UFG.

For the 2010-11 gas year, the charts below include initial allocation information through June 2011 and interim information through February 2011. No final allocations have yet been performed for the 2010-11 gas year.



Audits commissioned

Event audits

Event audits of Greater Hamilton and Palmerston North are now complete. Although specific issues were uncovered in both audits that had caused UFG, there were also a number of factors common to both audits. In particular, both audits found that there were inaccuracies in converting meter readings to energy, including through the use of erroneous meter pressure and altitude data and a failure to account for the Joule-Thomson effect.

The similarity of the findings has led Gas Industry Co to delay commissioning further event audits until the issues outlined above have been addressed. The upcoming performance audits of meter owners, undertaken as part of the Reconciliation Rules requirement to audit allocation participants at regular intervals, will help to check the accuracy of the metering parameters used by industry participants.

Performance audits of retailers

The baseline performance audit of OnGas under the Reconciliation Rules was completed this quarter and is available on the Gas Industry Co website. Final performance audit reports for the remaining retailers – Nova Energy, Energy Online, and Greymouth Gas – are expected to be completed shortly and will also be published.

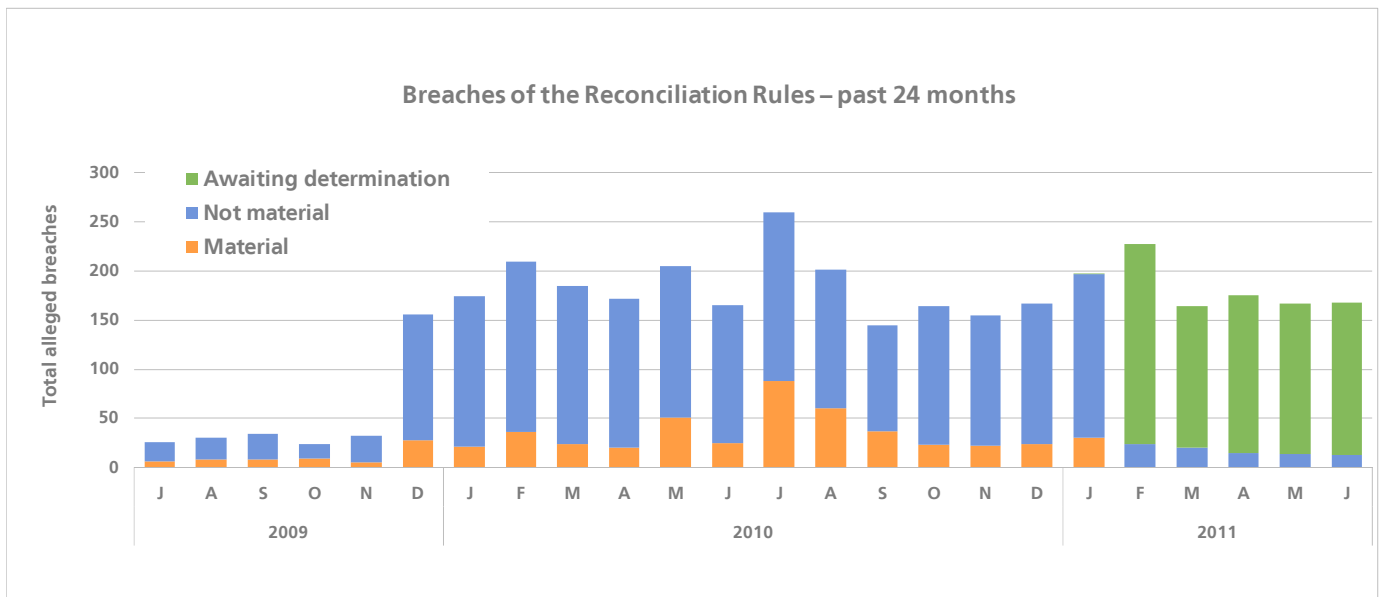
The performance audits have highlighted some of the same factors found in the event audits; particularly the use of inaccurate factors in converting meter readings into energy. Some of these inaccuracies appear to arise from poor data management by distributors, meter owners, and retailers in the gas registry. Gas Industry Co is considering ways to improve the quality of registry data in order to address these data weaknesses. Gas Industry Co is also progressing a guideline note on energy conversion factors that will serve as a consistent point of reference for all retailers in achieving best practice in their energy conversion calculations.

A performance audit of the allocation agent is in progress.

As per rule 65.1 of the Reconciliation Rules, Gas Industry Co intends shortly to commission performance audits of the remaining allocation participants: meter owners, distributors, and transmission system owners.

Number and severity of breaches of the Reconciliation Rules

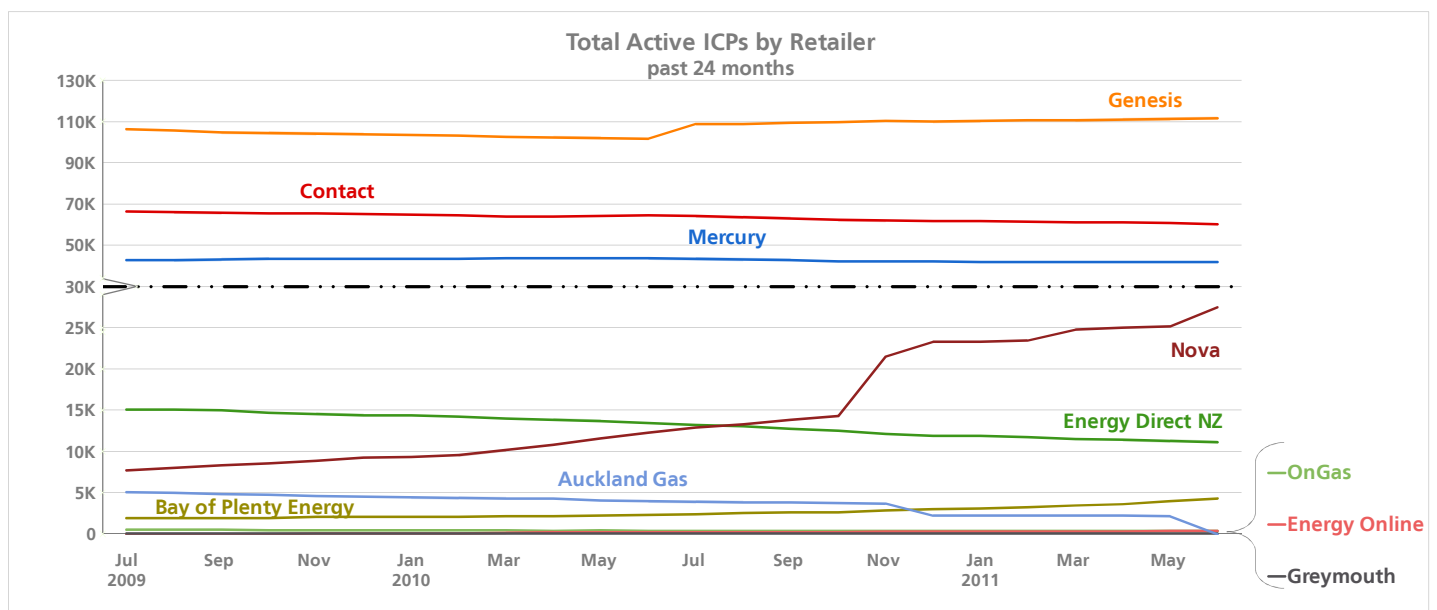
The marked increase in alleged breaches from December 2009 onwards represents breaches of rule 37. This is the rule that requires the accuracy of consumption information provided at the initial allocation stage to be within a specified tolerance level of the information provided at the final allocation stage. July 2010 and February 2011 stand out in particular in this regard and represent the months that the poor consumption estimations for May 2009 and December 2009, respectively, were alleged as breaches.



5 Market competition performance measures

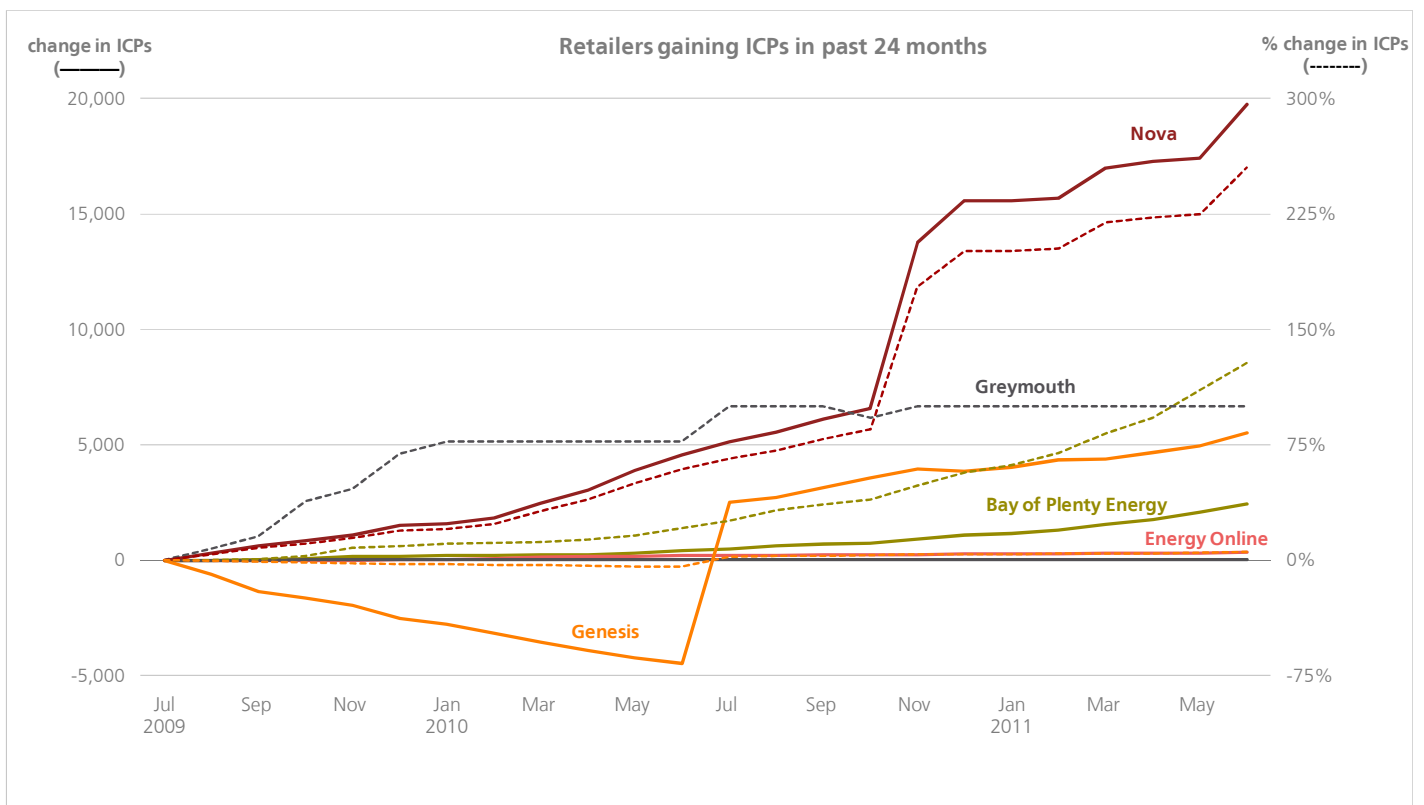
Market share of ICPs by retailer

In June of this year, Nova transferred all of the ICPs in the Auckland Gas retailer code to its primary Nova Energy retailer brand, thus continuing the increase of Nova ICPs on the registry. Other notable movements in market share include the increase in ICPs by Bay of Plenty Energy, which, like Nova, is a brand of Todd Energy. Bay of Plenty Energy has steadily increased from less than 2,000 ICPs two years ago to over 4,000 ICPs at present. Genesis has also enjoyed a net increase in customers since the start of the registry. Mercury, which at one point had added over 900 ICPs to its customer base, has since lost market share and now has fewer customers than it did two years ago.

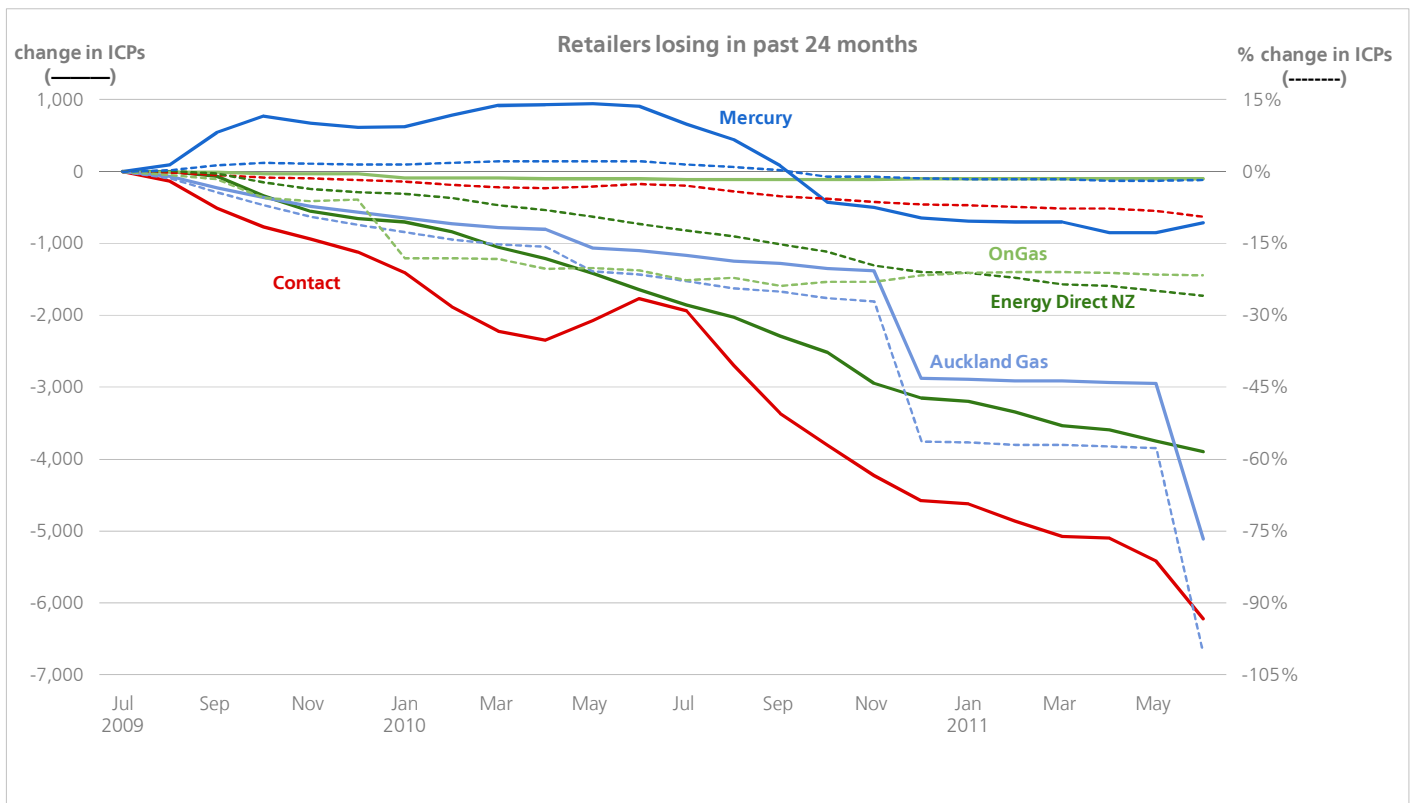


The two charts below are drawn from the same data set. The solid lines represent the change in numbers of ICPs, and the dashed lines show the percentage change in ICPs relative to July 2009. The first chart includes retailers who have experienced net gains in ICPs since July 2009, and the second includes retailers who overall have lost ICPs in the same timeframe.

In addition to the increases enjoyed by Nova and Bay of Plenty Energy, which were discussed above, the first chart below illustrates Energy Online's and Greymouth's increases in customers. Energy Online, a retail brand of Genesis Energy, has grown from zero customers in October 2009 to over 300 customers today. Greymouth has gained relatively few ICPs, but those gains represent an increase of 100% over its customer base two years ago. Genesis's apparent decline in active customers was found to be a misclassification of ICPs, which was corrected in July 2010. Overall, Genesis has gained over 750 customers since registry go-live.



The chart below shows the retailers who have lost market share in ICP numbers in the past two years. As discussed above, Auckland Gas's customers have been transferred to the Nova Gas retailer code.



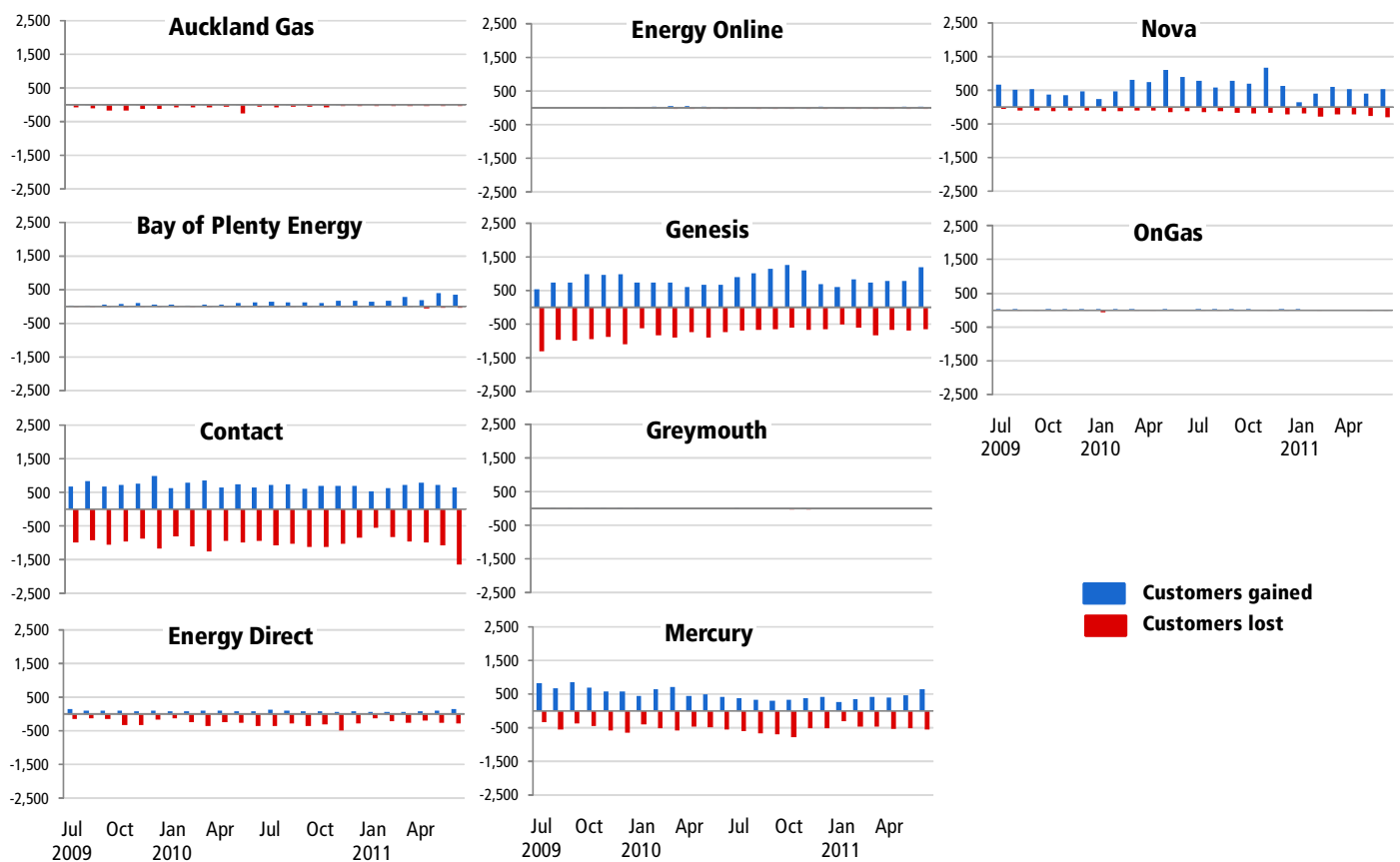
Note that both of the charts above include data from ICPs on open-access distribution networks only; information about ICPs on bypass networks is not available in the Gas Registry.

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 number 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, and Mercury. Note that these charts exclude the bulk transfer of 6,348 ICPs from E-Gas to Nova in November 2010; they also exclude the transfer from Auckland Gas to Nova of 1,478 ICPs in December 2010 and 2,243 ICPs in June 2011.

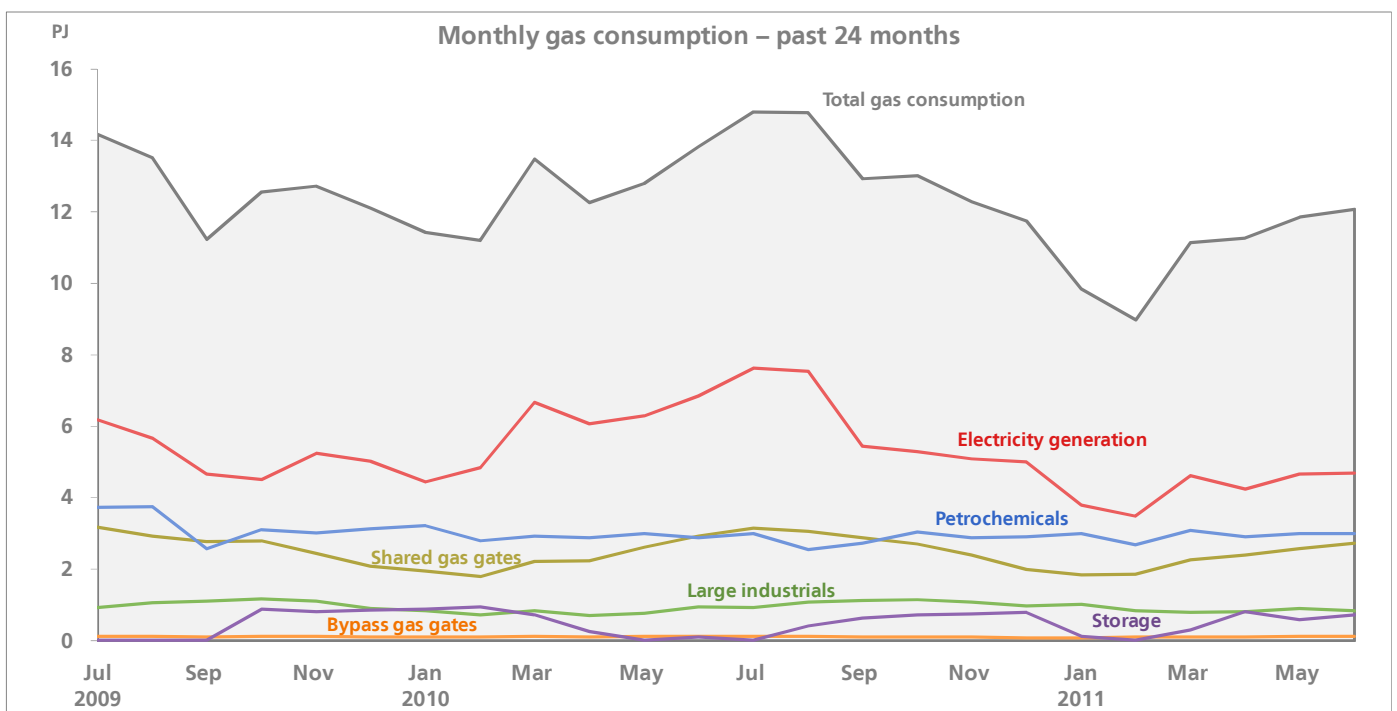
Switching activity by retailer



Total gas volumes

The chart below shows the total amount of gas 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.

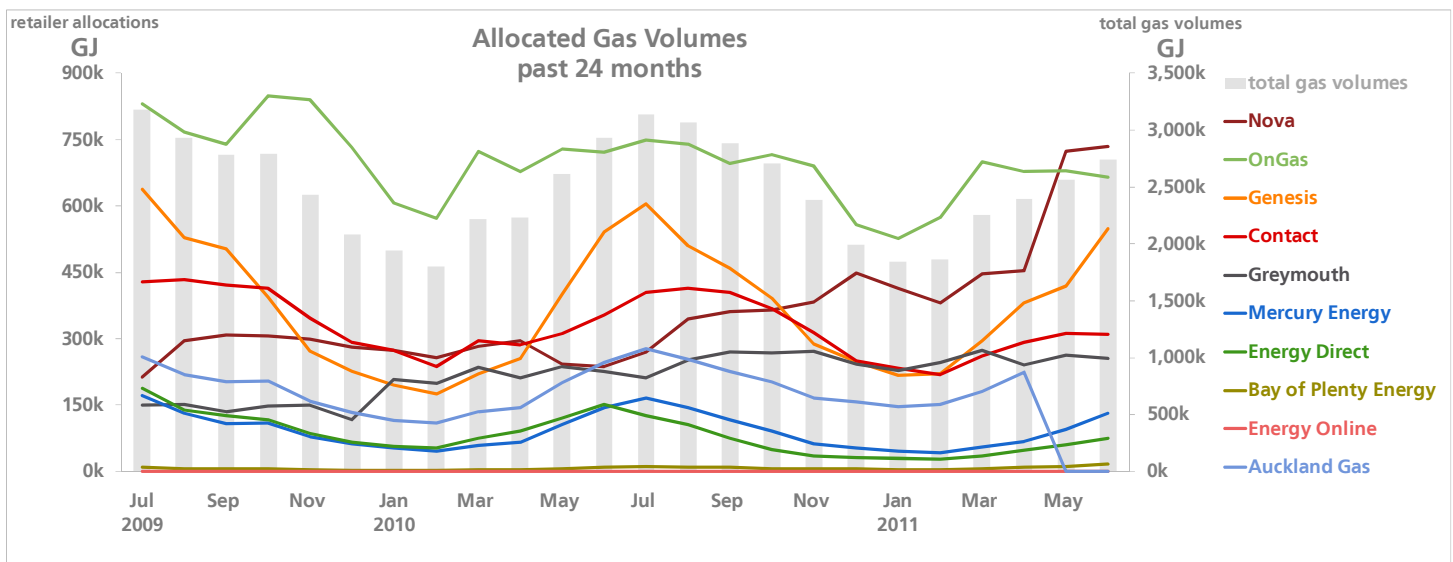
- The red line shows the seasonal peaks and troughs in gas used for thermal electricity generation.
- Consumption for petrochemicals, in blue, is relatively constant, as is usage by large industrials (in blue).
- The purple storage line also shows a seasonal trend: gas is used for storage during the summer and shoulder seasons.
- The orange line represents gas used by consumers connected to the private pipelines owned by Nova.
- The tan line shows the amount of gas used by customers connected to shared gas gates. This represents the majority of commercial and residential customers. There is a seasonality trend to the consumption, higher in winter and lower in summer. These allocated gas volumes are broken down by retailer in the next section.



Allocated gas volumes

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

In the months of May and June this year, Nova Energy has been allocated the largest share of gas, about 28% and 27%, respectively. This increase reflects the increase in Nova's customer base, through acquisition of E-Gas, amalgamation of Auckland Gas, and organic growth. OnGas is the next largest retailer in terms of gas volumes, with its large proportion of high-consuming commercial and industrial customers. Genesis has also shown an increase in gas volumes in recent months, consistent with its winter peaking pattern in previous years.

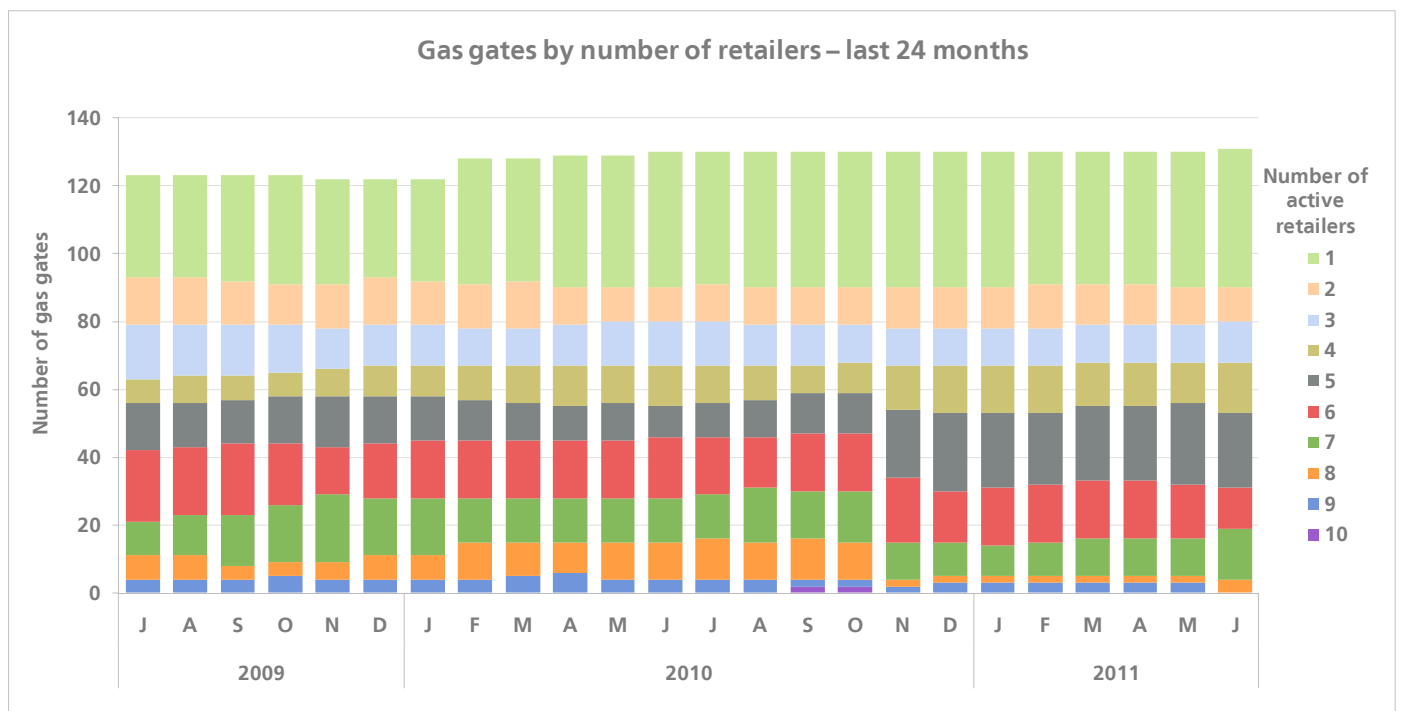


The data are from a mix of allocation stages: Final through May 10; Interim for June 10 through February 11; and Initial for March 11 through June 11.

Gas gates by number of retailers

This chart shows, by month, numbers of gas gates by the number of active retailers. The greater the number of retailers that trade at a gas gate, the greater the potential competition for customers.

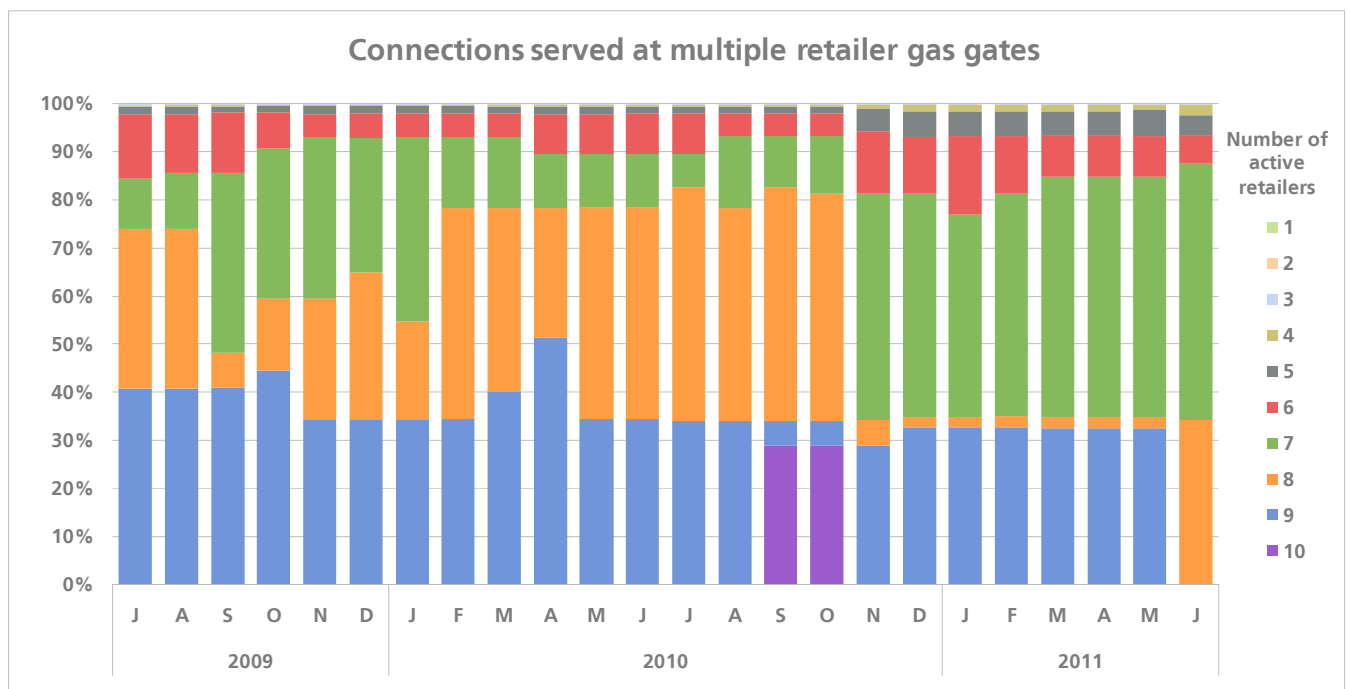
There have been two step-changes in the data over the past year: the acquisition by Nova Gas of the E-Gas customer base in November last year, and the amalgamation of Auckland Gas into the Nova Gas brand in June of this year. In spite of these decreases in the number of retail brands, the number of gas gates at which three or more retailers trade has remained about the same in the past two years. As of June 2011, there are 80 such gas gates.



Connections served by multiple retailers

This chart plots the proportion of gas customers who are served from the gas gates in the chart above; that is, customers served at gas gates where multiple retailers trade. For example, the chart shows that in June 2011, 93% of gas customers could potentially be served by at least six retailers.

As with the previous chart, the acquisition of E-Gas and the amalgamation of Auckland Gas have produced step changes in the data. Still, some improvements to market competition can be seen. For example, the proportion of customers served at gas gates where seven or more retailers trade has continued to increase in recent months, from 77% in January to 88% as of June 2011.



Note that the above chart includes data from ICPs on open-access distribution networks only; information about ICPs on bypass networks is not available in the Gas Registry.

6 Critical Contingency Management performance measures

There have been no critical contingency events since the last Quarterly Report.