

Performance Measures Quarterly Report for the period ending 30 June 2012

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 2009 (the Reconciliation Rules), and the Gas Governance (Critical Contingency Management) Regulations 2008 (CCM Regulations), both in terms of activity related to these statutes and the competitive outcomes that they foster. The Report also tracks transmission balancing actions, as a means of informing Gas Industry Co's work on this issue. .

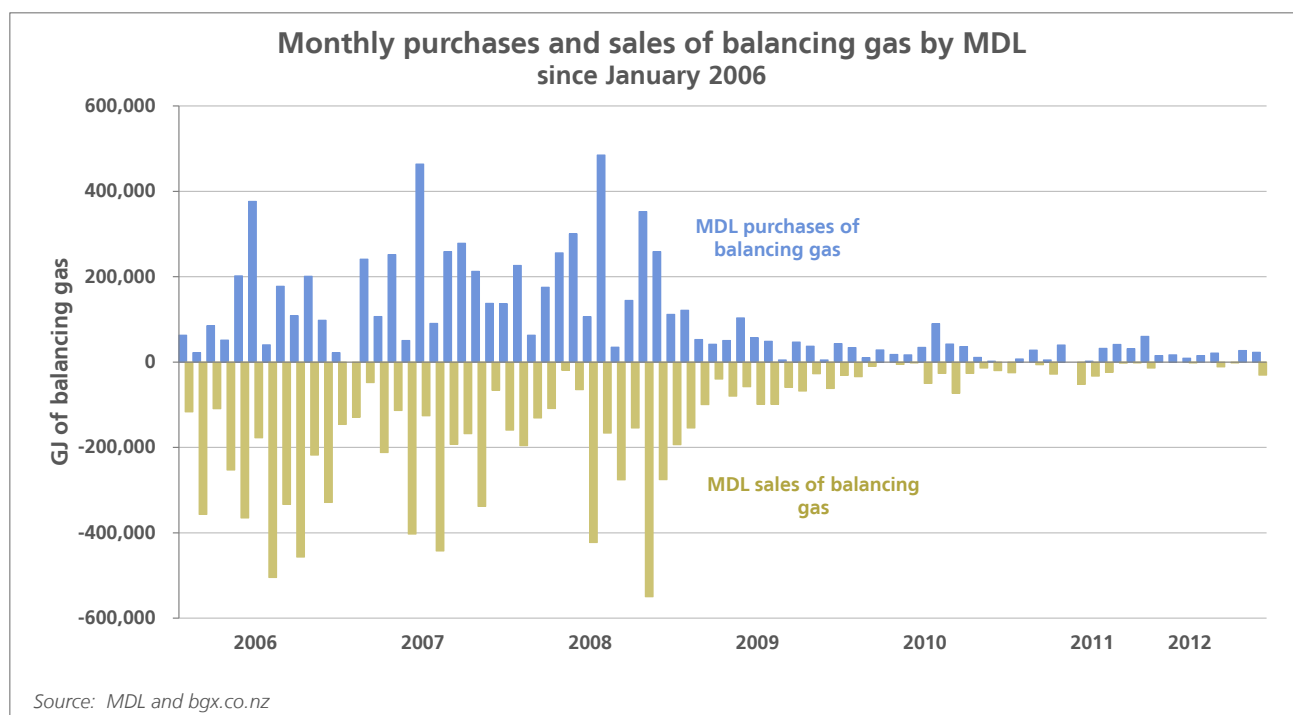
Highlights of the Report:

- Balancing gas volumes are a fraction of what they were prior to 2009. In the 18 months from January 2011, monthly balancing gas volumes have averaged less than 33,000 GJ, a decrease of 92% from the 403,000 GJ monthly average experienced from 2006-2008.
- The annual average number of switches has trended up over the past quarter, due to relatively high numbers of customer switches in March and May 2012. The annual rate of switching stands at about 16.6%. The time required to process switches remains at about 6 days, a fraction of the weeks that switching used to take before the inception of the switching rules.
- There have been no major movements in customer market shares over the past quarter. Genesis Energy continues hold the largest customer market share: about 42% of customer ICPs. Contact is next, with 24%; followed by Mercury, with 16%.
- In terms of market share by gas volumes, Nova and OnGas are the largest retailers, with 29% and 26%, respectively, of allocated gas volumes over the previous 12 months.
- Volumes of annual unaccounted-for gas (UFG) increased in May and June, following the usual seasonal pattern. UFG accounts for about 1.3% of allocated gas volumes on a rolling annual basis. Prior to the introduction of the Reconciliation Rules, the annual percentage of UFG was about 2.5%.
- Consistent with the trend over the past 18 months, the majority of gas customers are connected to a gate where least six retailers trade: 95%, as of June 2012.

2 Balancing gas volumes

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. When a transmission owner, or operator, manages the gas inventory in a pipeline, it is referred to as *secondary* or *residual balancing*. 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, mean that pipeline users are now responsible for imbalances that they create. In 2009, MDL instituted the Balancing Gas Exchange, an online platform that displays pipeline balance conditions and enables parties physically interconnected to the Maui pipeline 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 be purchased or sold by MDL to balance the Maui pipeline, as can be seen in the chart above. In each of the calendar years 2006, 2007, and 2008, over 4,600,000 GJ of balancing gas were bought and sold by MDL. In 2009,

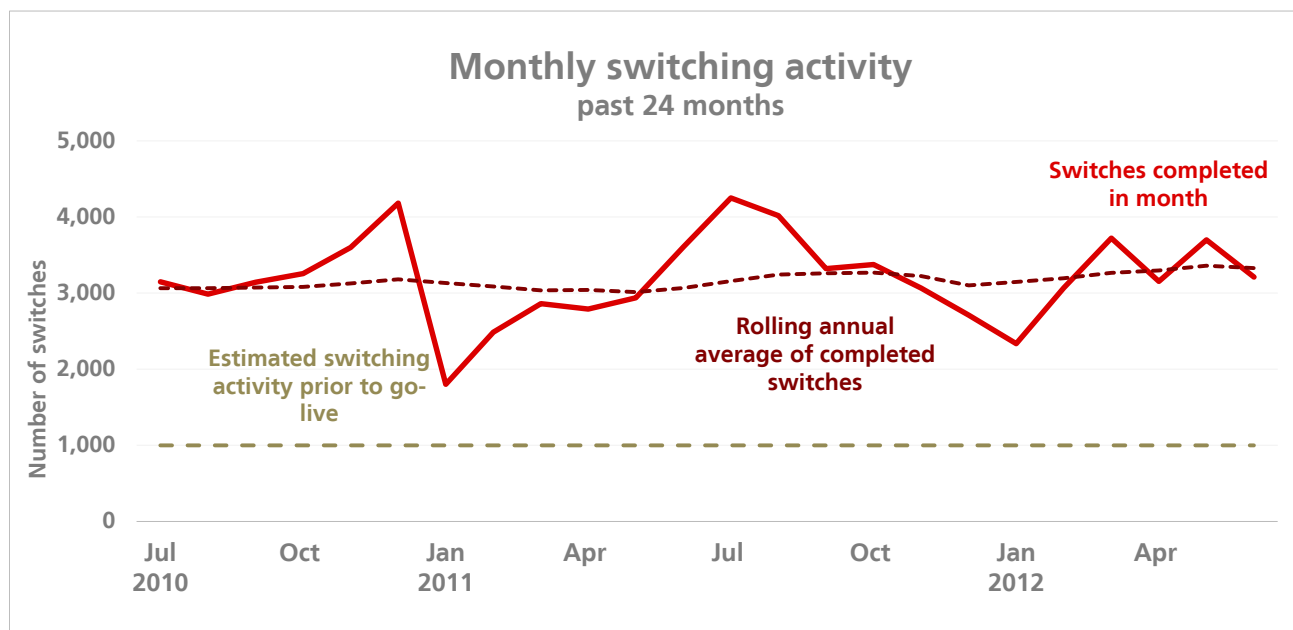
balancing gas volumes totalled less than 1,500,000; and in 2010, balancing gas volumes were just over 600,000GJ – a decrease of 87% from 2008 volumes. In calendar 2011, balancing volumes declined again, to less than 440,000 GJ. In calendar 2012, about 140,000 GJ of balancing gas have been bought and sold by MDL in the first six months.

3 Switching performance measures

Monthly switching activity

The annual average number of switches has trended up over the past quarter, due to relatively high numbers of customers switches in March and May 2012. The annual rate of switching stands at about 16.6%. As a comparison, the annual electricity switching rate is about 21%.

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%.

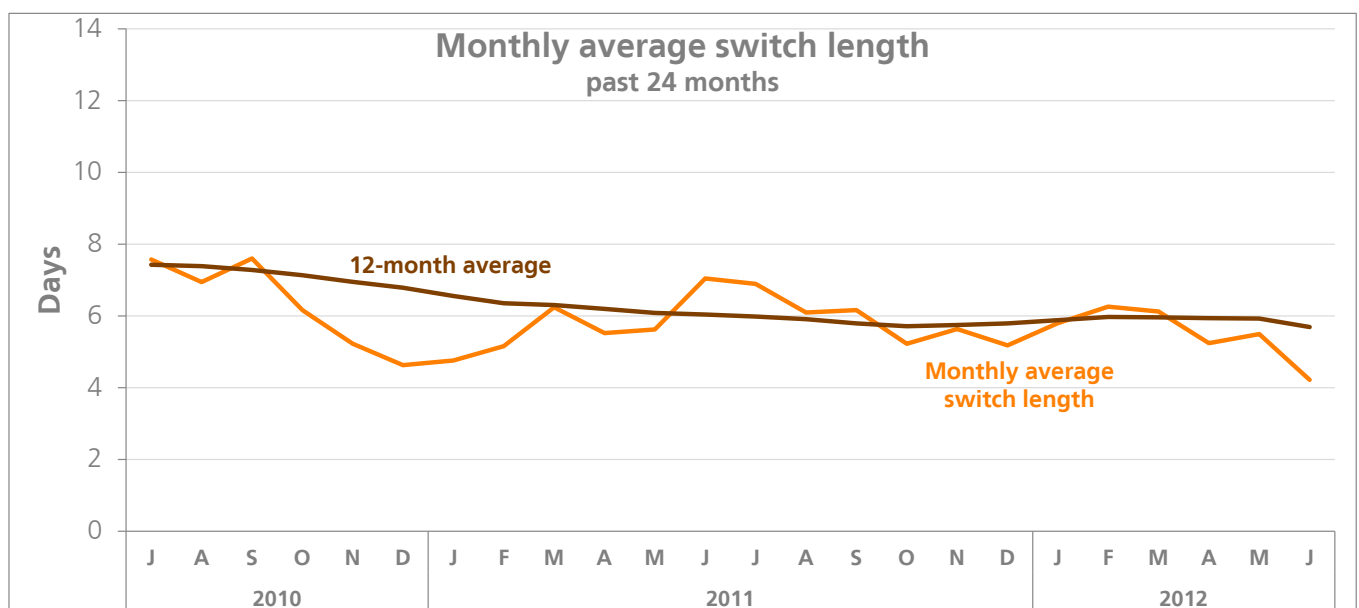


Note that this chart includes only switches that occurred on open-access distribution networks; switches from open-access to bypass networks (or vice versa) would not be recorded as a switch in the Gas Registry.

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 consistently fallen in the past two years. The twelve-month rolling average switching time has been just under six days since July of last year. In comparison, switches could take weeks or even months to process prior to the inception of the switching registry.

The downward trend in switching times may be a byproduct of the ability to automate mass-market switches since the introduction of the gas registry together with the changed switching requirements in electricity and is pleasing to see, provided that the costs of the shortened switching times do not outweigh the benefits to consumers.

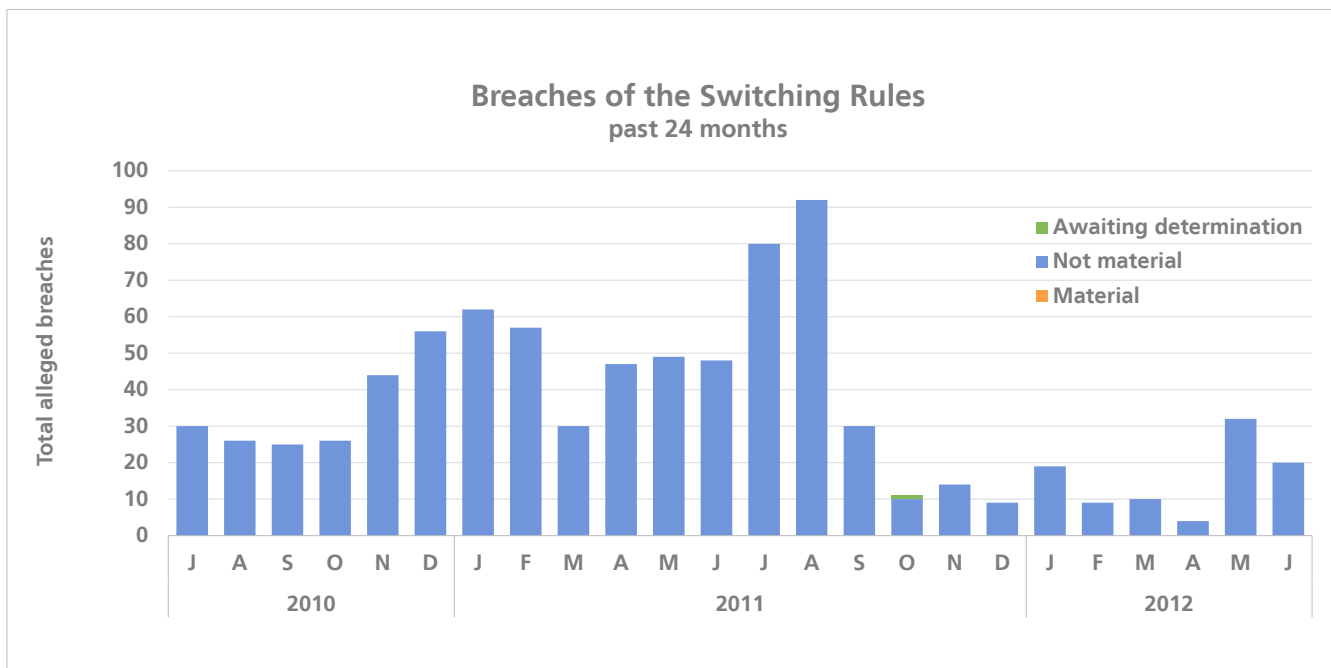


Note that the chart above excludes the transfers from E-Gas to Nova and from Auckland Gas to Nova, all of which went through in less than a day.

Number and severity of breaches of the Switching Rules

In the first year after the inception of the Switching Rules, nearly 5,500 switching breaches were alleged. Many of these breaches can be attributed to unfamiliarity with the Rules. Since that first year, the numbers of switching breaches have fallen significantly. The average number of alleged breaches per month has fallen from 450 in the first 12 months to under 30 in the past 12 months.

The number of breaches reported in May 2012 seems unusual, but the majority of those breaches arose from a minor clerical error by one participant and have been determined to be not material.



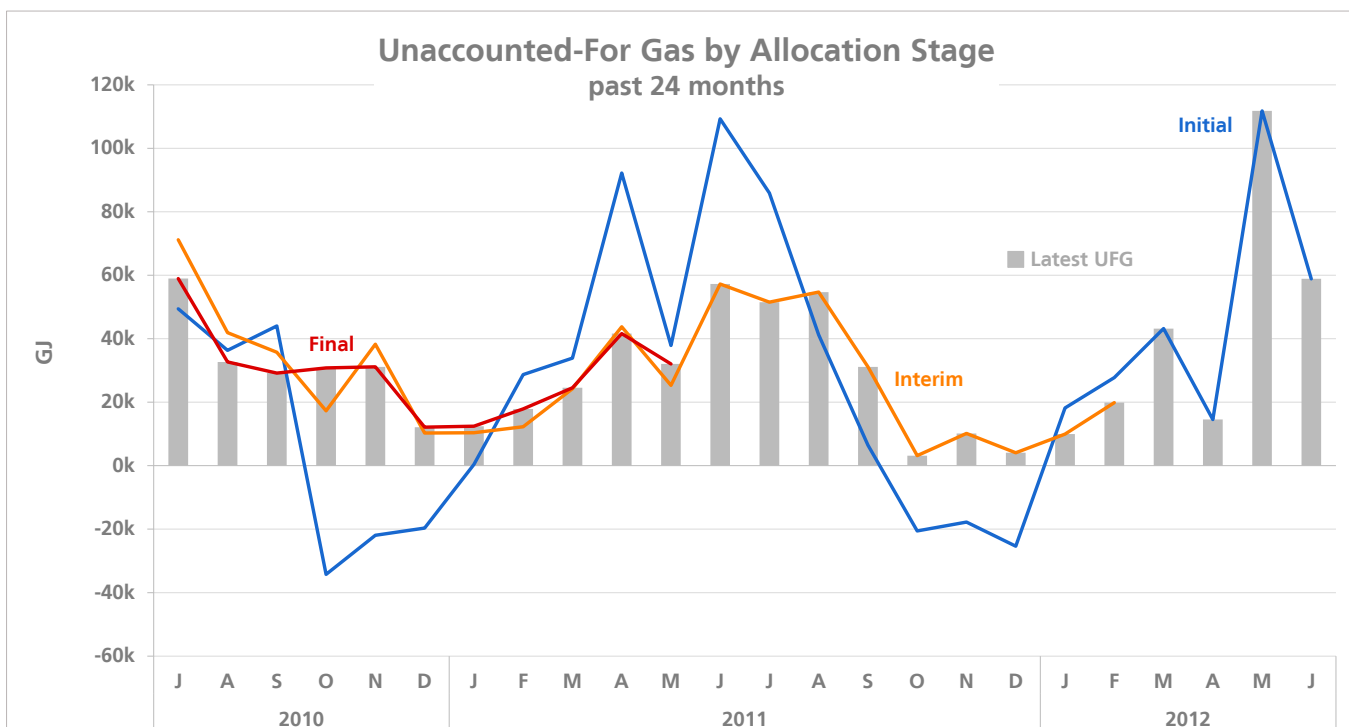
4 Allocation and reconciliation performance measures

Volumes of Unaccounted-for Gas

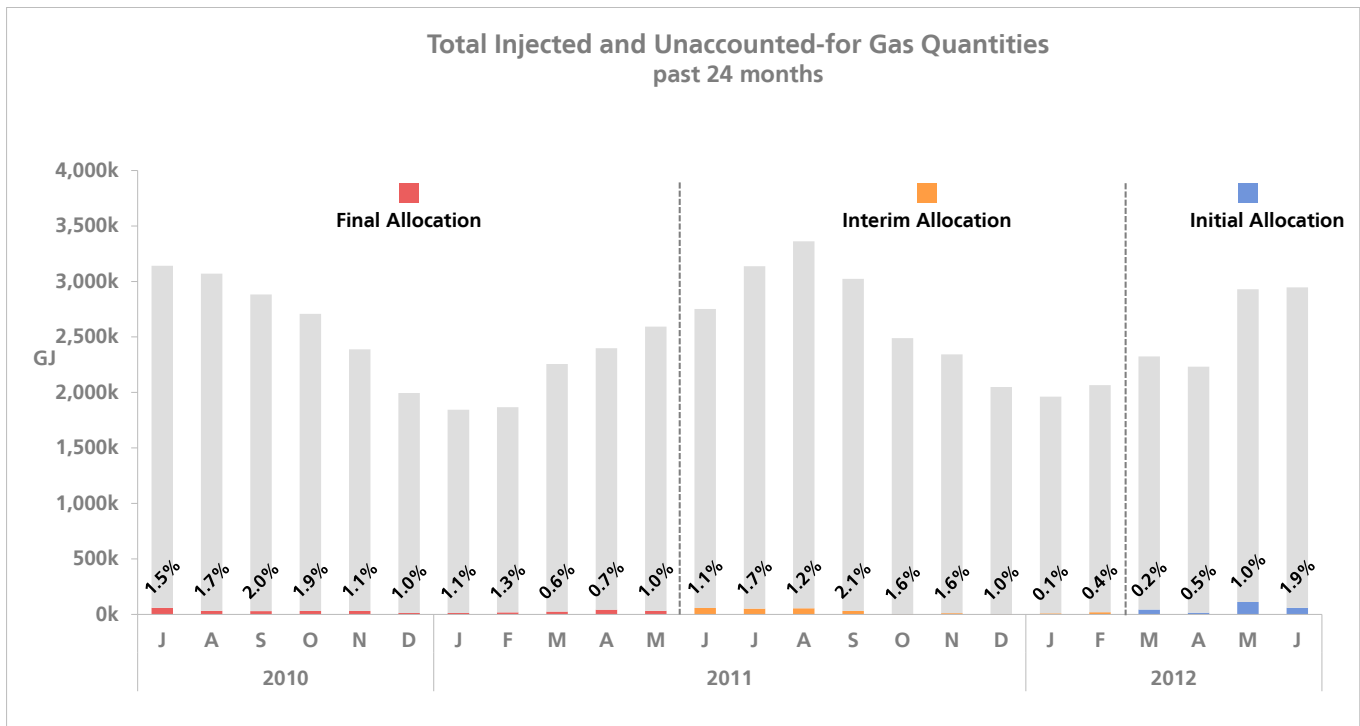
Under the Reconciliation Rules, the amounts of gas that retailers estimate their customers have used are subtracted from the amounts of gas leaving the transmission system. The difference is UFG, which arises from technical losses on the system, metering inaccuracies, and retailer estimation errors. 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. This transparency should assist the industry to take steps to reduce UFG where it is efficient to do so.

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.

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. The chart below shows that UFG at the initial stage was negative for October, November, and December of both 2010 and 2011, but subsequent allocations for those months resulted in relatively small amounts of positive UFG. This effect is due to retailers tending to overestimate their customers' consumption in that shoulder period between seasons and then correcting the estimations at the interim and final allocations. Initial UFG spiked in May of this year, as it has in previous winters.

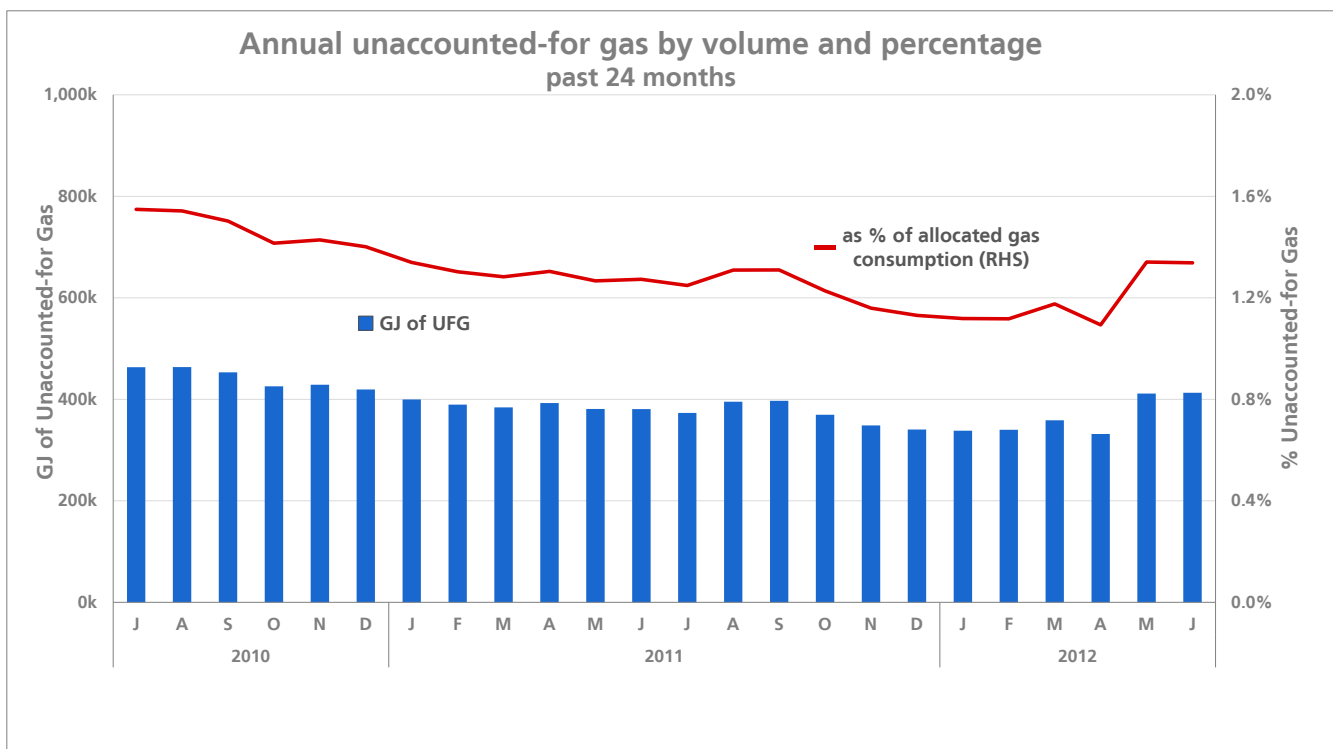


The chart below shows the amount of unaccounted-for gas in comparison to the total amount of allocated gas consumed each month. The grey bars show gas consumption at allocated gas gates, which follows a seasonal pattern: higher in winter and lower in summer. UFG as a percentage of volume follows a similar 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 2012 total is based on four initial allocation results and eight interim results, while the June 2011 total is based on twelve final allocation runs.

For the first year after the Reconciliation Rules came into effect, annual UFG was about 2%. This percentage has dropped to as low as 1.1% in recent months, although the winter spike in UFG (which will be corrected when interim data comes through in Sept/Oct) has raised the figure to 1.3% in May and June of this year.



Accuracy of submission data

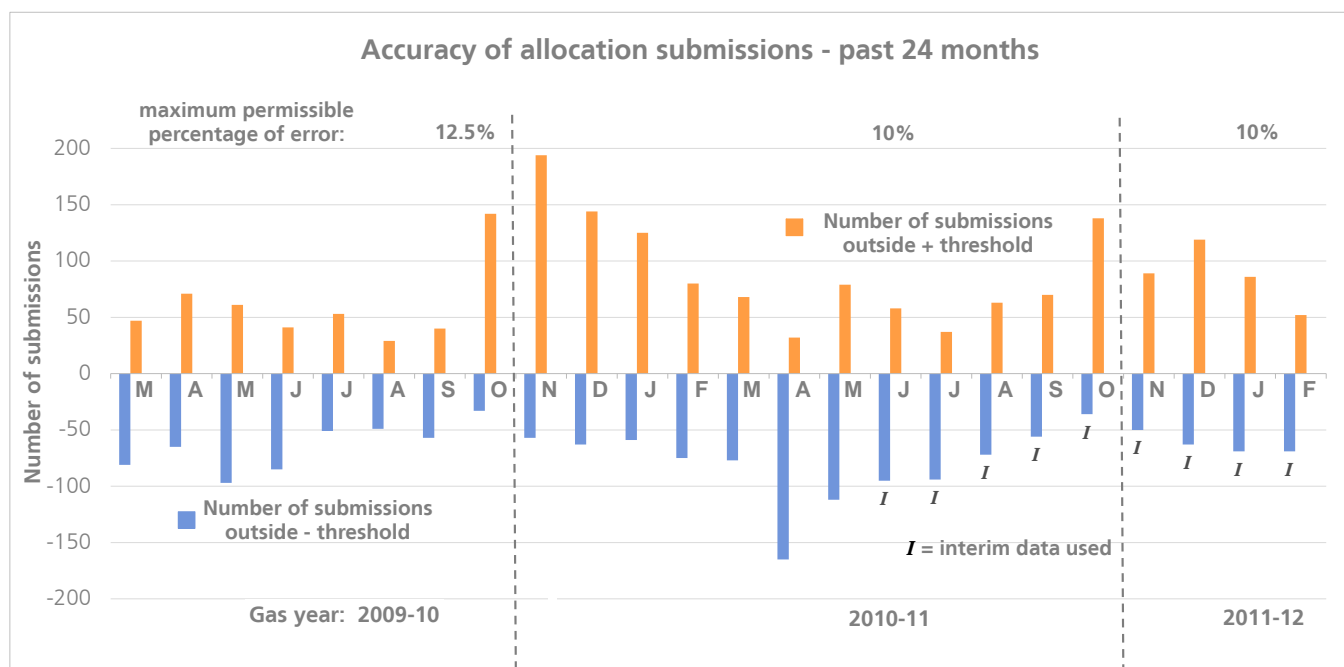
The accuracy of initial submissions is important, as balancing and peaking charges on the Vector transmission system are levied on the basis of initial allocation results and are not subsequently washed up. This means that the UFG created through inaccurate initial consumption submissions falls onto all retailers at the affected gate and affects their exposure to balancing costs. 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 2010 – May 2011). Other months use interim submissions (in place of final) for the comparison data and are

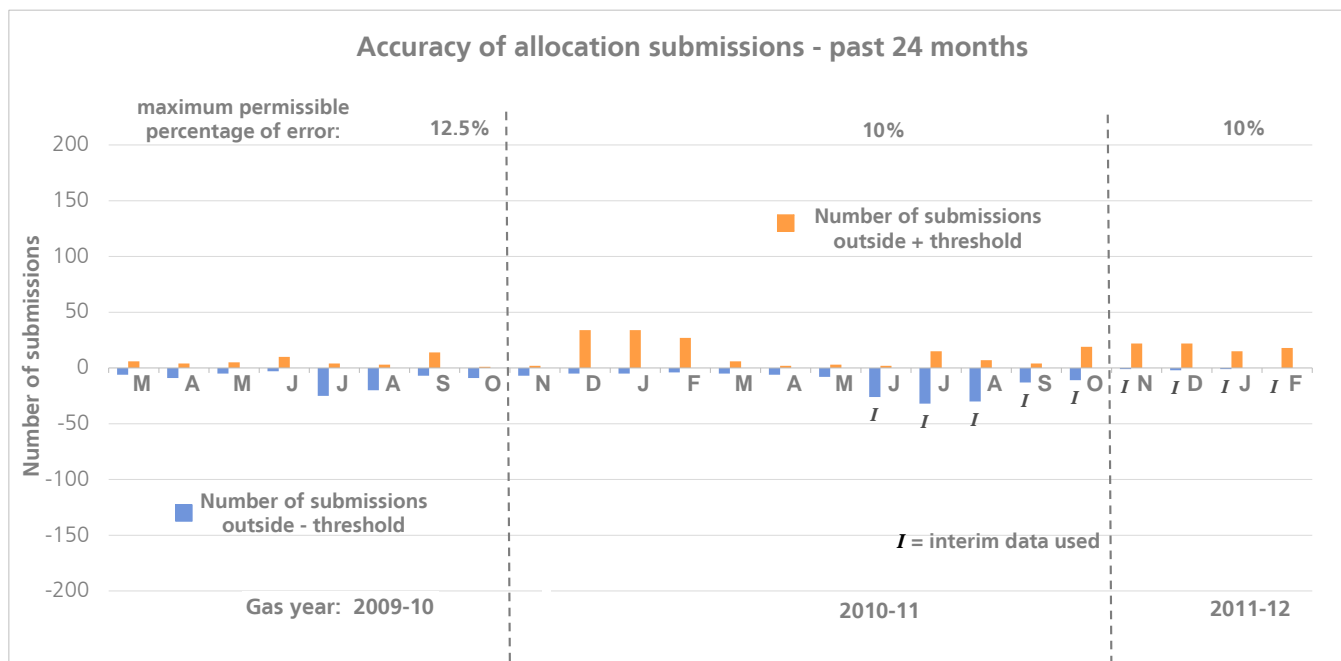
marked with 'I' in the chart below. The percentage of error relevant to the consumption month has been used to measure accuracy: 12.5% in the 2009-10 gas year and 10% in both 2010-11 and 2011-12.

October 2010 saw an increase in the number of submissions outside the accuracy threshold, and this increase is noticeable particularly in the number of oversubmissions (orange bars) from October 2010 through December 2011. The oversubmissions at the initial allocation stage for these months are reflected in the negative UFG at the initial allocation shown in the preceding charts. A similar increase can be seen in the 2011-12 gas year.

The number of undersubmissions in the winter months of 2010-11 increased over the same months in the previous year. This effect is shown in the increase in positive UFG in these months.



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 provide daily measurements. The data from those meters are considered to be more reliable than the readings from meters used in the mass market which are only read at monthly or two-monthly intervals. 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

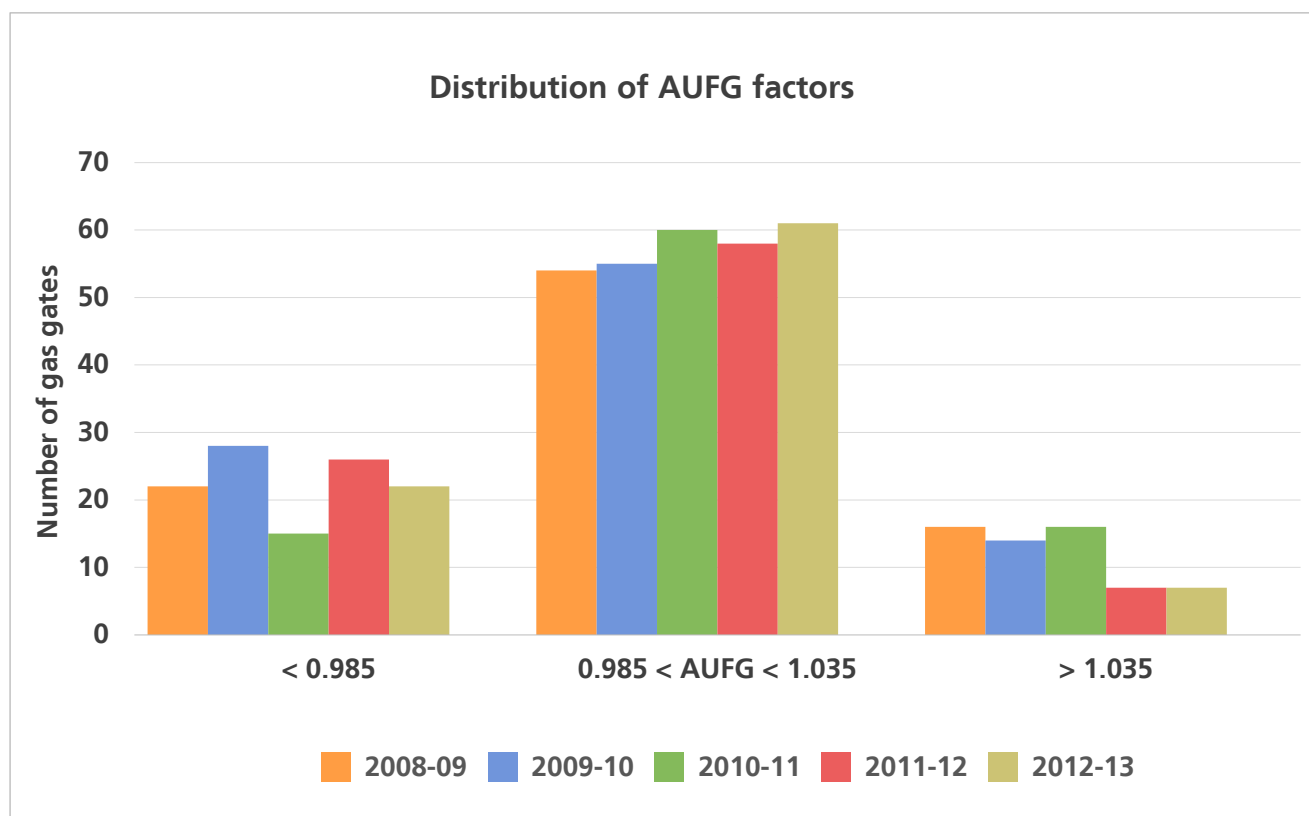
When the Reconciliation Rules were implemented, AUFG factors by were constrained by transitional provisions to a floor and cap. Those transitional provisions have now expired; however, the former cap and ceiling limits are useful as a means of tracking improvements in AUFG factors.

The closer AUFG is to one, the more accurate the consumption submissions have historically been at that gate. The chart below shows the improvement in AUFG factors over the five years that the Reconciliation Rules have been in effect. 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.

The number of gas gates with AUFG figures less than 0.985 has decreased from the previous year. Many of these gates are small, with low gas volumes and relatively small numbers of ICPs associated with them. A number of these gates have atypical load patterns and are candidates for allocation by a methodology that avoids the use of AUFG factors, as outlined in the *Statement of Proposal: Downstream Reconciliation Rules Review*, which was recently released for consultation. The majority of the remaining gas gates with less than 0.985 AUFG do not have any Time of Use customers connected to them, so the AUFG factors are not used in allocations for those gates.

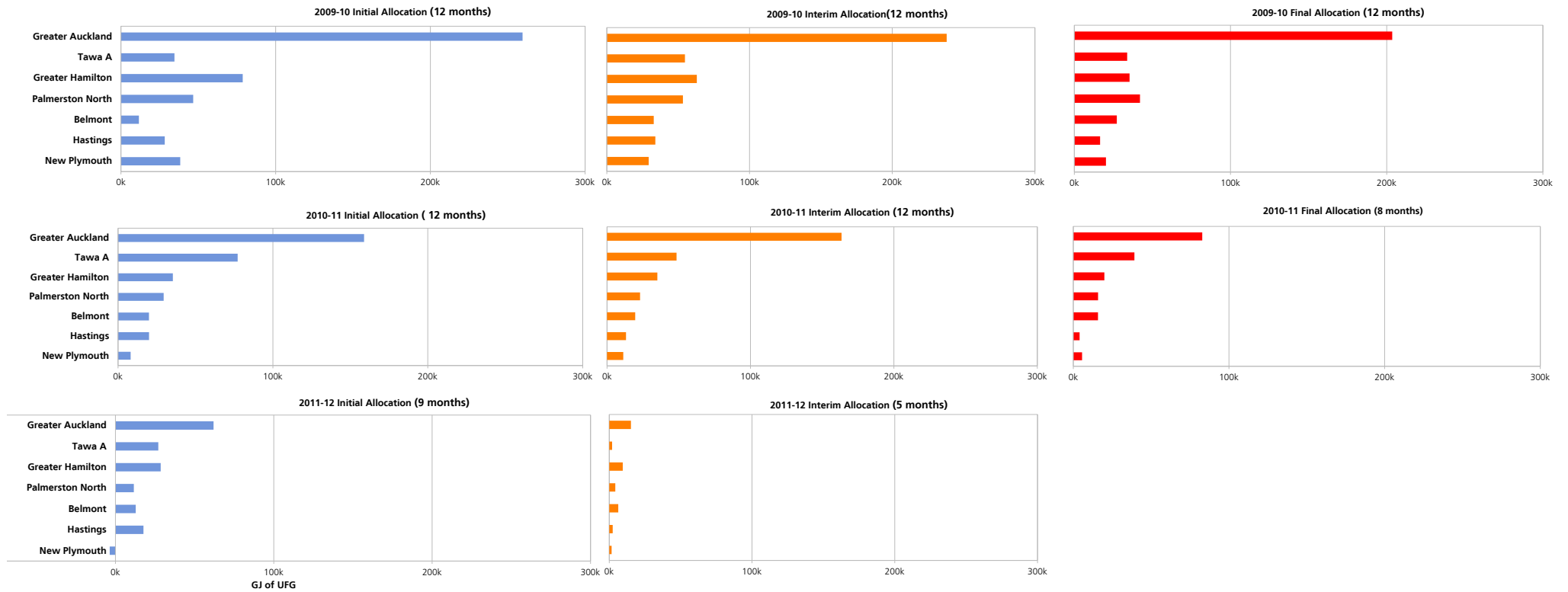
Gas Industry Co intends to conduct audits on the larger gas gates with outlying AUFG factors as a means of determining and remedying the causes of UFG at those gates.



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, Greater Hamilton, Palmerston North, Hastings, and Belmont. These gates are also the largest gates in terms of consumption volumes, so it is not surprising that they are relatively large contributors to UFG. The pattern is roughly consistent over all three allocation cycles and across gas years.

The charts below compare UFG across time and across allocation stages. All allocations have now been performed for the 2009-10 gas year and are shown in the top row below. For the 2010-11 year, shown in the second row, initial and interim allocations have been done for all 12 months; as well as the final allocations for the eight months of October through May 2011. For the 2011-12 gas year, shown in the third row, initial allocations for October through June 2012 and interim allocations for October through February 2012 have been performed. As can be seen from the charts, there is a trend of decreasing UFG both from year to year and across allocation stages.



Audits commissioned

Event audits

There have been no event audits commissioned in the past quarter.

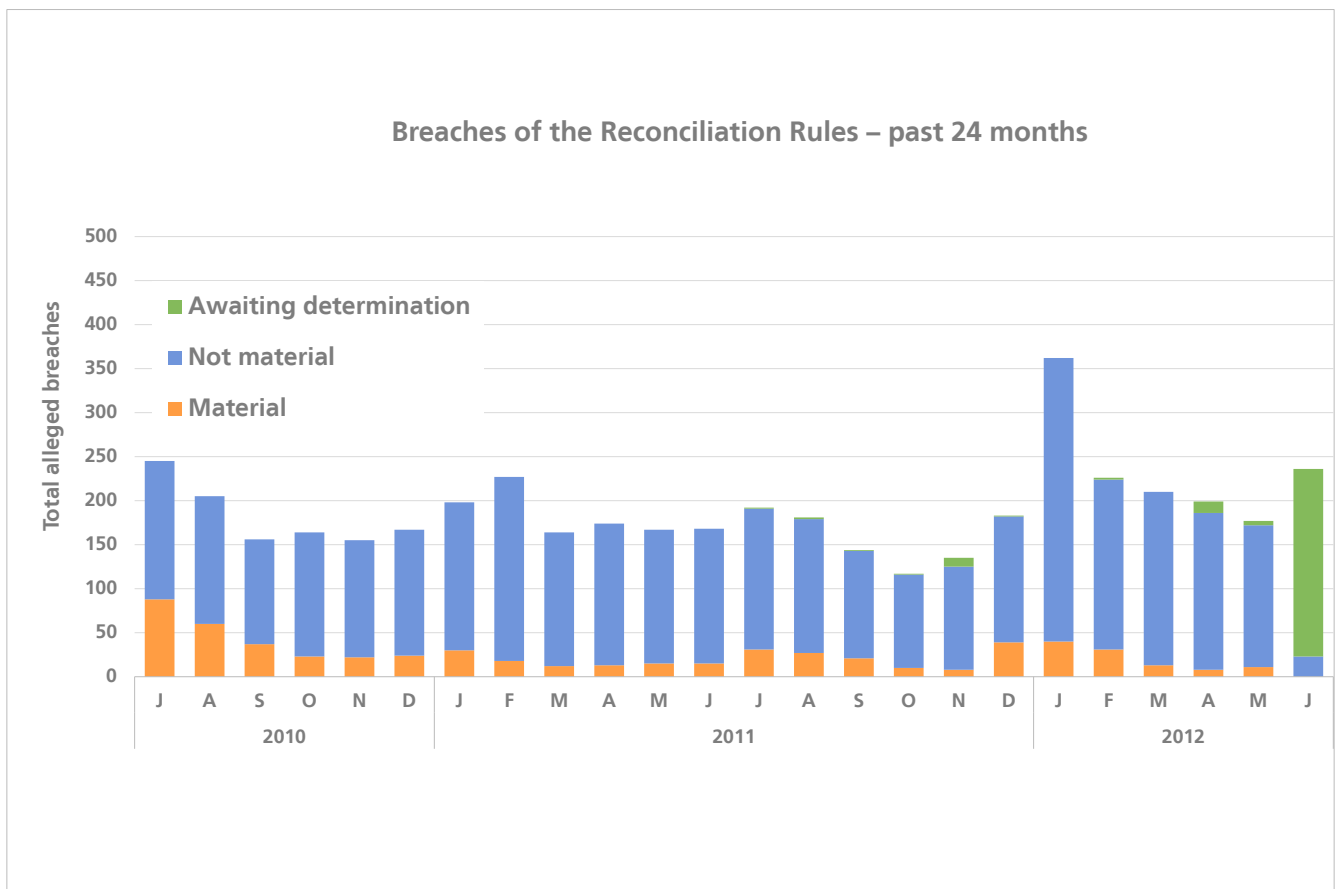
Performance audits

There have been no performance audits commissioned this quarter.

Number and severity of breaches of the Reconciliation Rules

Over 90% of breaches alleged under the Reconciliation Rules relate to rule 37, 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.

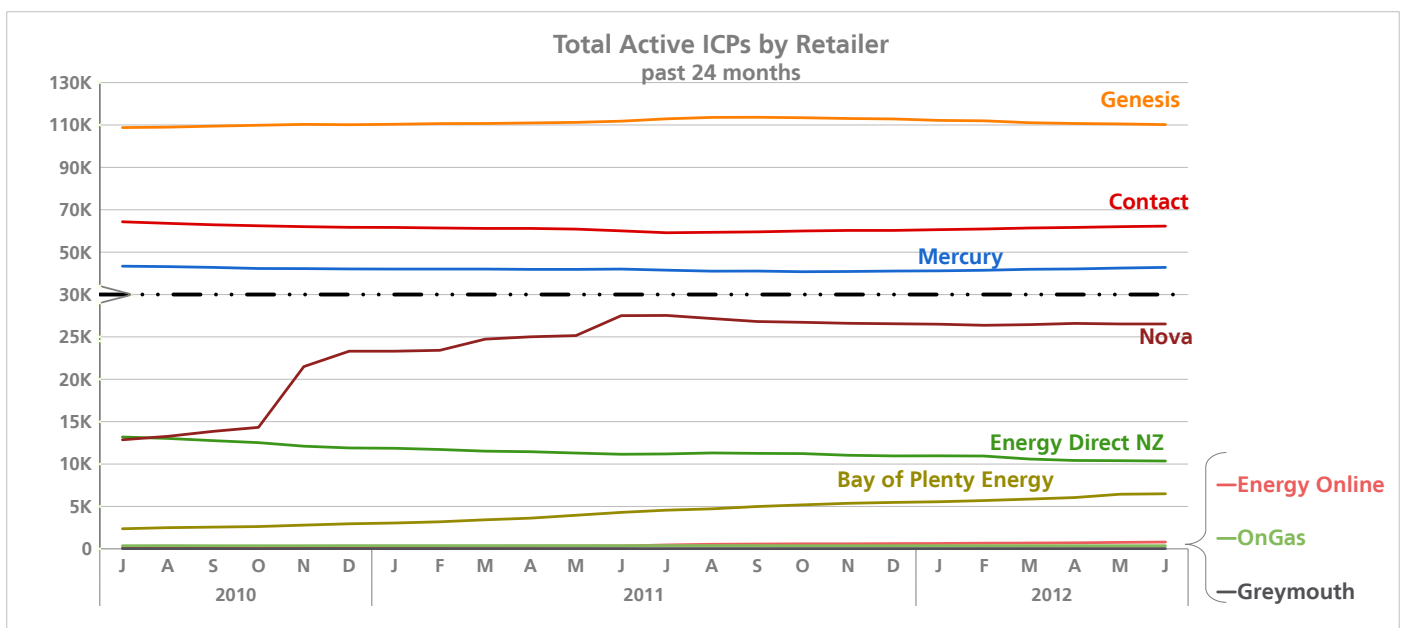
It has proven efficient for the Market Investigator to attempt to reach a settlement on batches of rule 37 breaches. The Market Investigator is in the process of trying to effect a settlement of the most recent batch, which represents breaches alleged from January 2011 to April 2012.



5 Market competition performance measures

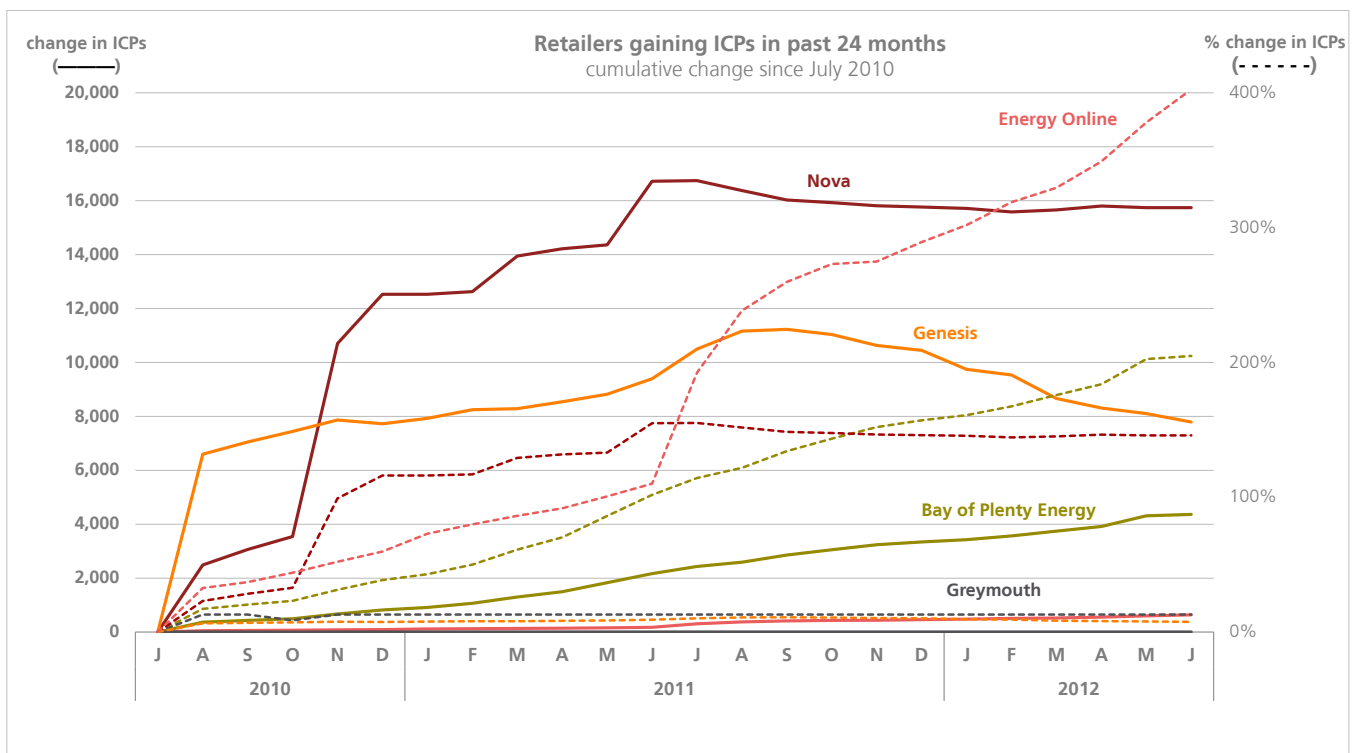
Market share of ICPs by retailer

Market share of ICPs has again been relatively constant over the past quarter, as illustrated by the chart below. Contact, Mercury, and Bay of Plenty Energy have been steadily winning customers since the beginning of the calendar year, while Genesis and Energy Direct have lost customers over the same time period. Nova Energy's step changes are a result of acquiring the E-Gas customer base in November 2010 and amalgamating its Auckland Gas brand in December 2010 and June 2011. The other movements in market share are due to customer switching.

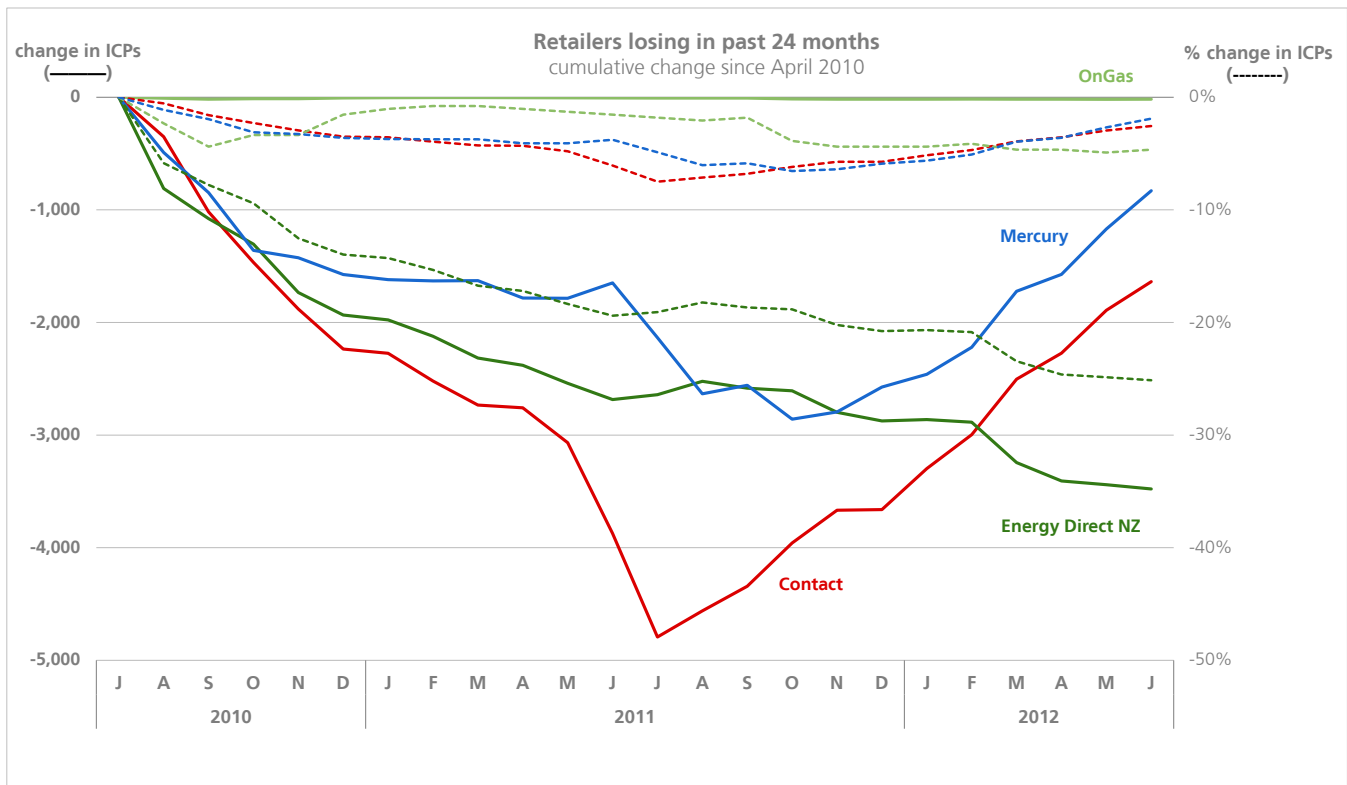


The two charts below are drawn from the same data set. The solid lines represent the change in numbers of ICPs, and the dashed lines show the percentage change in ICPs relative to July 2010. The first chart includes retailers who have experienced net gains in ICPs in the past two years, and the second includes retailers who overall have lost ICPs in the same timeframe.

In percentage terms, Energy Online, a retail brand of Genesis Energy, has grown by over 300% in the past two years, adding 640 ICPs to its customer base. Bay of Plenty Energy has grown by over 200% with the addition of over 4,300 ICPs. Genesis increased its customer base by over 11,000 ICPs as of the middle of last year, but it has lost over 3,400 ICPs in the past nine months. Nova's customer numbers have been boosted by the acquisition of E-Gas, amalgamation of the Auckland Gas brand, and organic growth.



The chart below shows the retailers who have lost market share in ICP numbers in the past two years. Although Mercury and Contact have overall lost customers in the past two years, both have made net gains in customer numbers since about mid-last year.



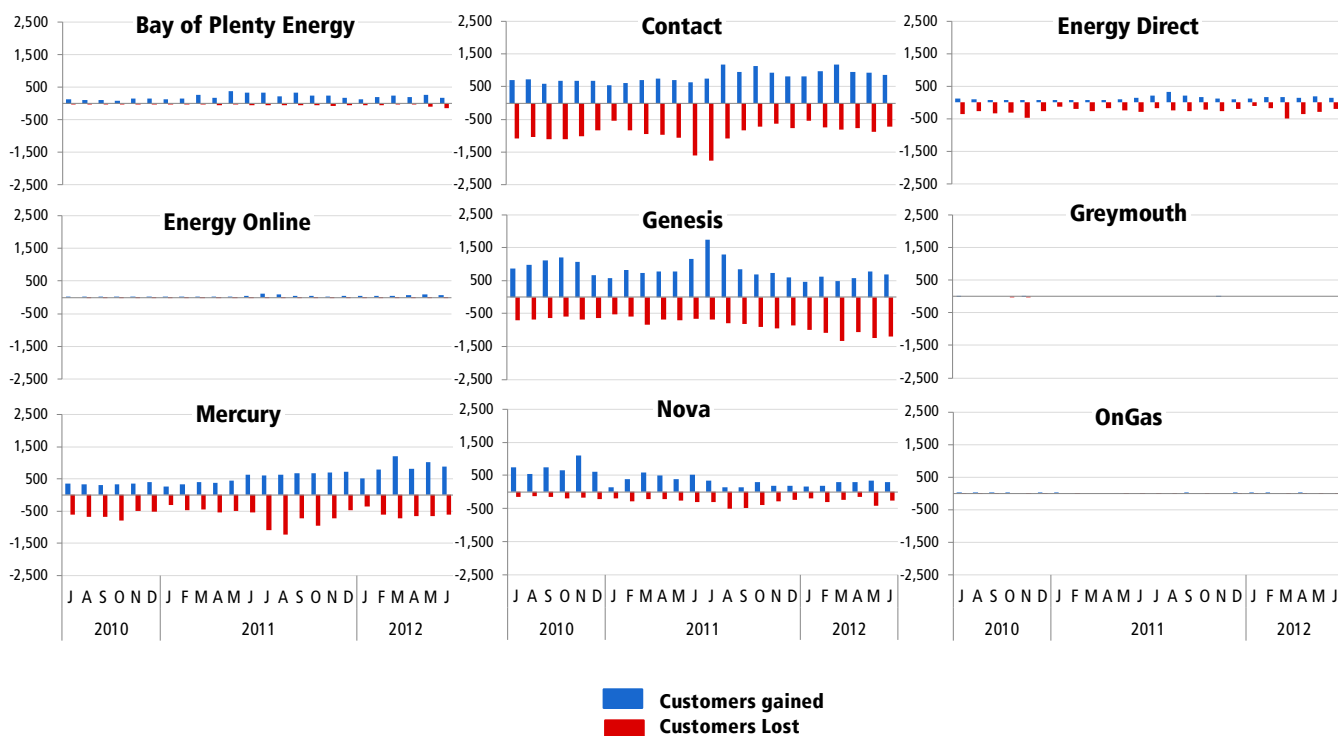
Note that all three of the ICP share charts above include data from ICPs on open-access distribution networks only; information about ICPs on bypass networks is not available in the Gas Registry.

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 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, 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.

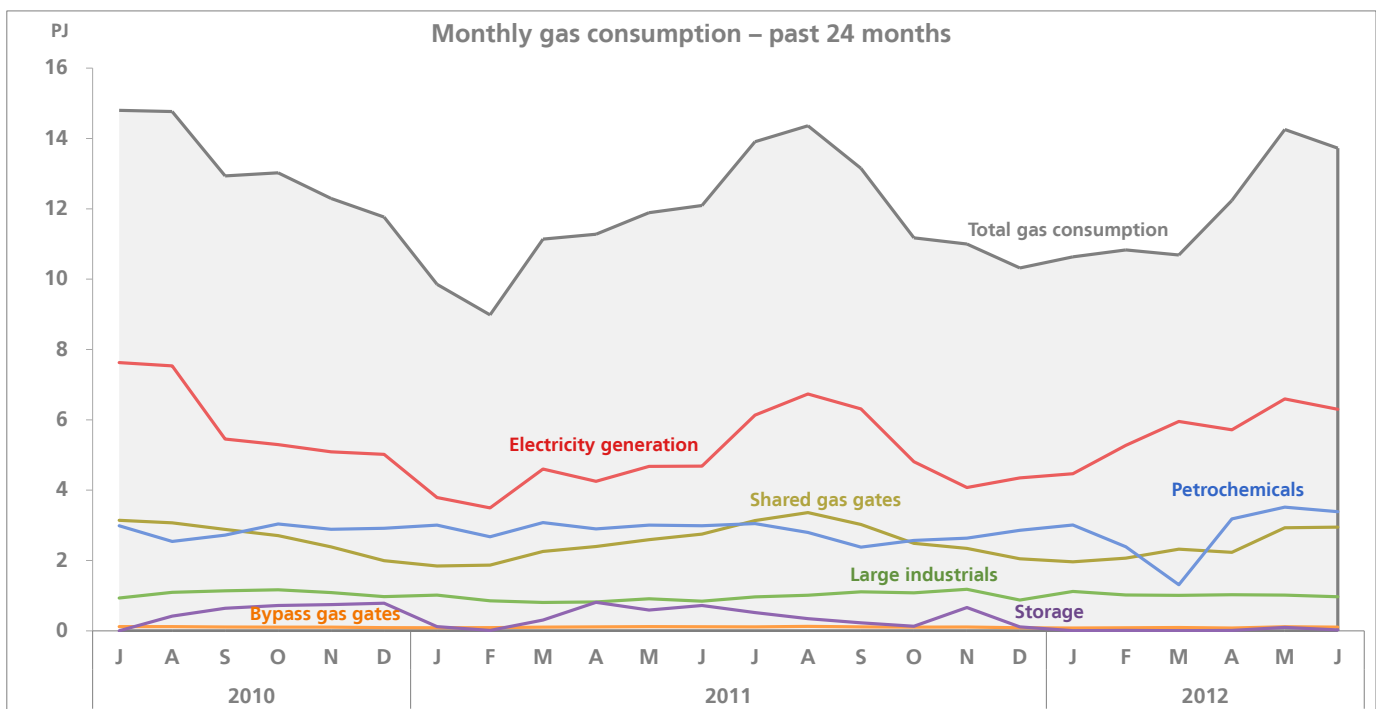
Switching activity by retailer



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.

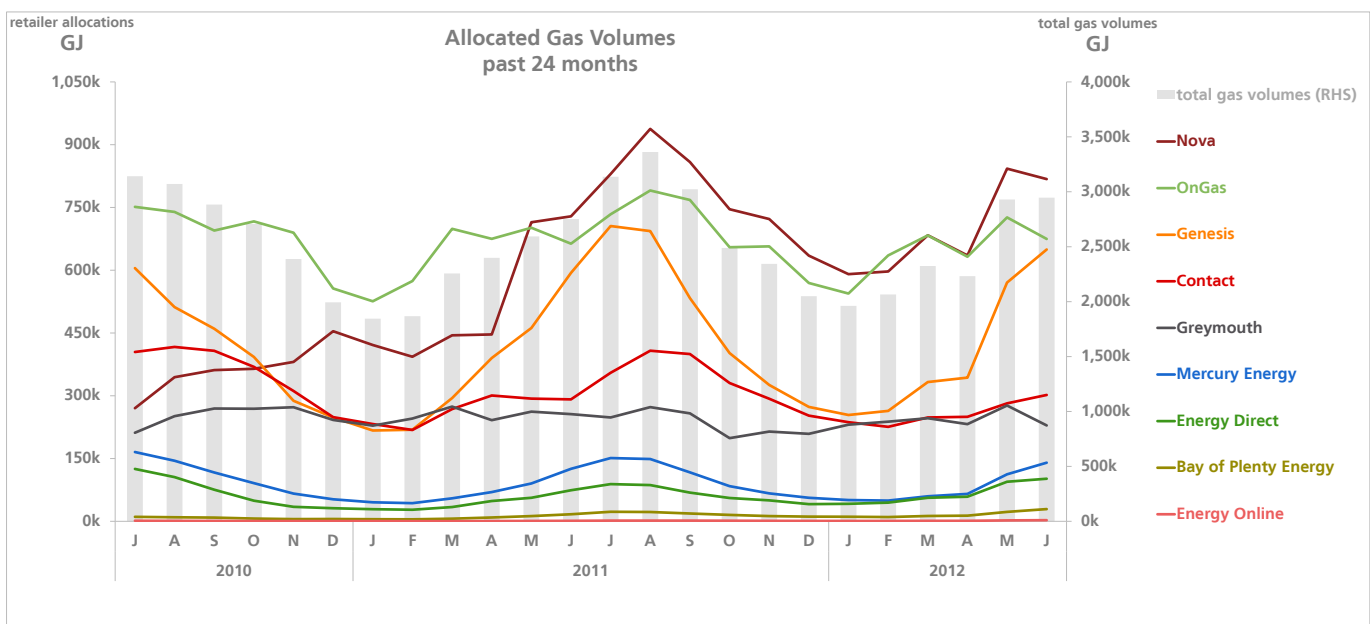
- The red line shows the seasonal peaks and troughs in gas used for thermal electricity generation.
- Consumption for petrochemicals, in blue, is relatively constant, as is usage by large industrials (in green). The dip in petrochemical gas consumption in March was caused by scheduled and unscheduled outages of the Pohokura production station during the month.
- 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.
- 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 May last year, Nova Energy overtook OnGas in terms of the largest share of allocated gas. This increase reflects the increase in Nova's customer base, through its acquisition of E-Gas, amalgamation of Auckland Gas, and organic growth. Genesis, the third largest retailer by volume, has a load profile that peaks in winter and troughs during the summer. Contact, Mercury, and Energy Direct all 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.

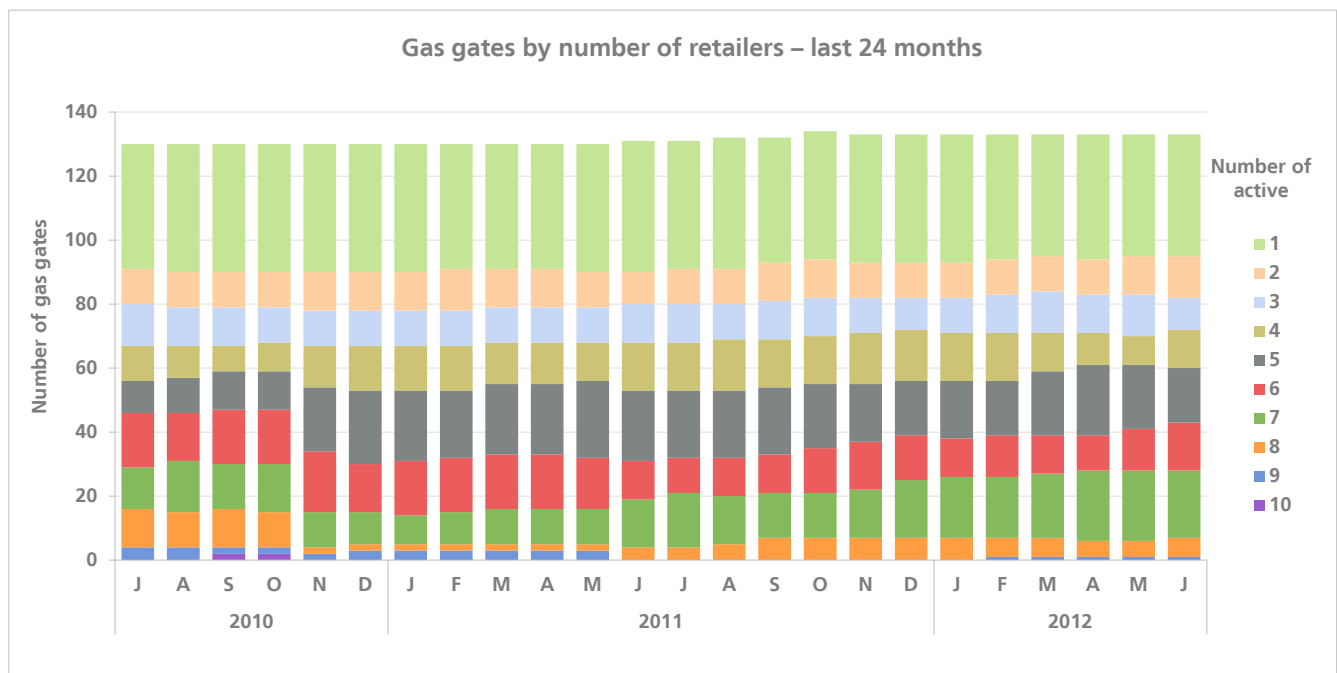


The data are from a mix of allocation stages: Final through May 2011; Interim for June 2011 through February 2012; and Initial for March through June 2012.

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 is.

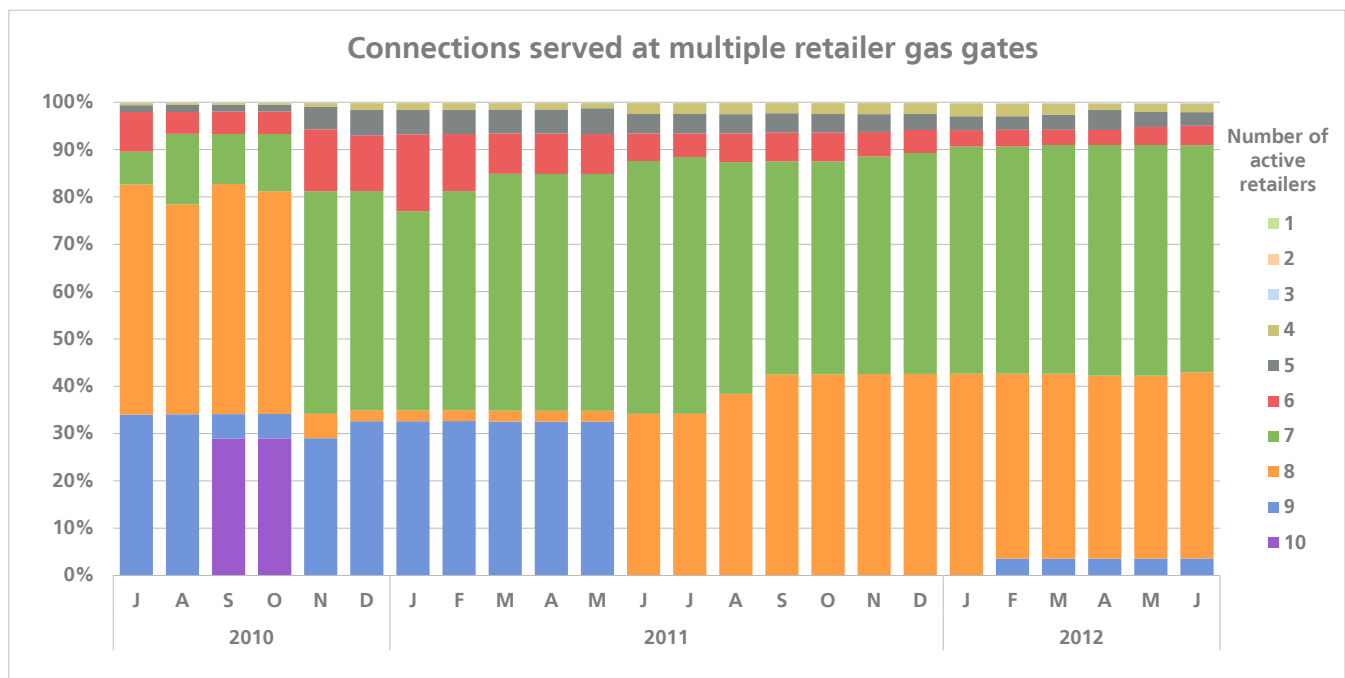
The chart shows that there has been a slight increase in retailers' activity at gas gates, following the amalgamation of Auckland Gas into the Nova Gas brand in 2011 and the exit from the market of E-Gas in 2010. The number of gas gates with six or more retailers (the red band and below in the chart) has seen an increase over the past year: in June 2011 there were 31 such gates; as at June 2012, there are 43.



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. As with the previous chart, the acquisition of E-Gas and the amalgamation of Auckland Gas have produced step changes in the data.

Since February, there has been a gas gate at which nine retailers trade, something that has not happened since Nova amalgamated its Auckland Gas brand. (The gate is Papakura, in the Auckland region.) Consistent with the trend over the past 18 months, the majority of gas customers are connected to a gate where least six retailers trade: 95%, as of June 2012.



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 were no critical contingencies in the previous quarter.