



Victorian Gas Distribution Business Comparative Performance Report 2012

February 2014

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Preface

The role of the Australian Energy Regulator

Gas distribution network businesses offer a number of key services relating to the transport of gas (referred to as haulage reference services). They also offer a number of one-off services including meter and installation testing and disconnection and reconnection, known as ancillary reference services. The terms, conditions and tariffs associated with these services are regulated by the Australian Energy Regulator.

On July 1 2008, the AER became the economic regulator for covered natural gas transmission and distribution pipelines in all states and territories except Western Australia. As the economic regulator of gas distribution, we are responsible for exercising certain powers and functions previously undertaken by the Essential Services Commission of Victoria (ESCV). As part of this role, we:

- administered and reported on the ESCV's Gas Access Arrangement 2008–2012 (GAAR) under the Victorian regulatory framework.
- are responsible for compliance monitoring (including service performance) and enforcement of the gas distribution licence conditions of the Victorian gas distribution network service providers (commonly referred to as gas DNSPs).

This is the last of the Victorian-specific gas reports released by the AER covering the 2008–12 GAAR period. Future gas performance reports will incorporate all jurisdictions that we regulate.¹

Previous reports published by the ESCV are available from the ESCV's website:
<http://www.esc.vic.gov.au/Energy/Compliance/publications>

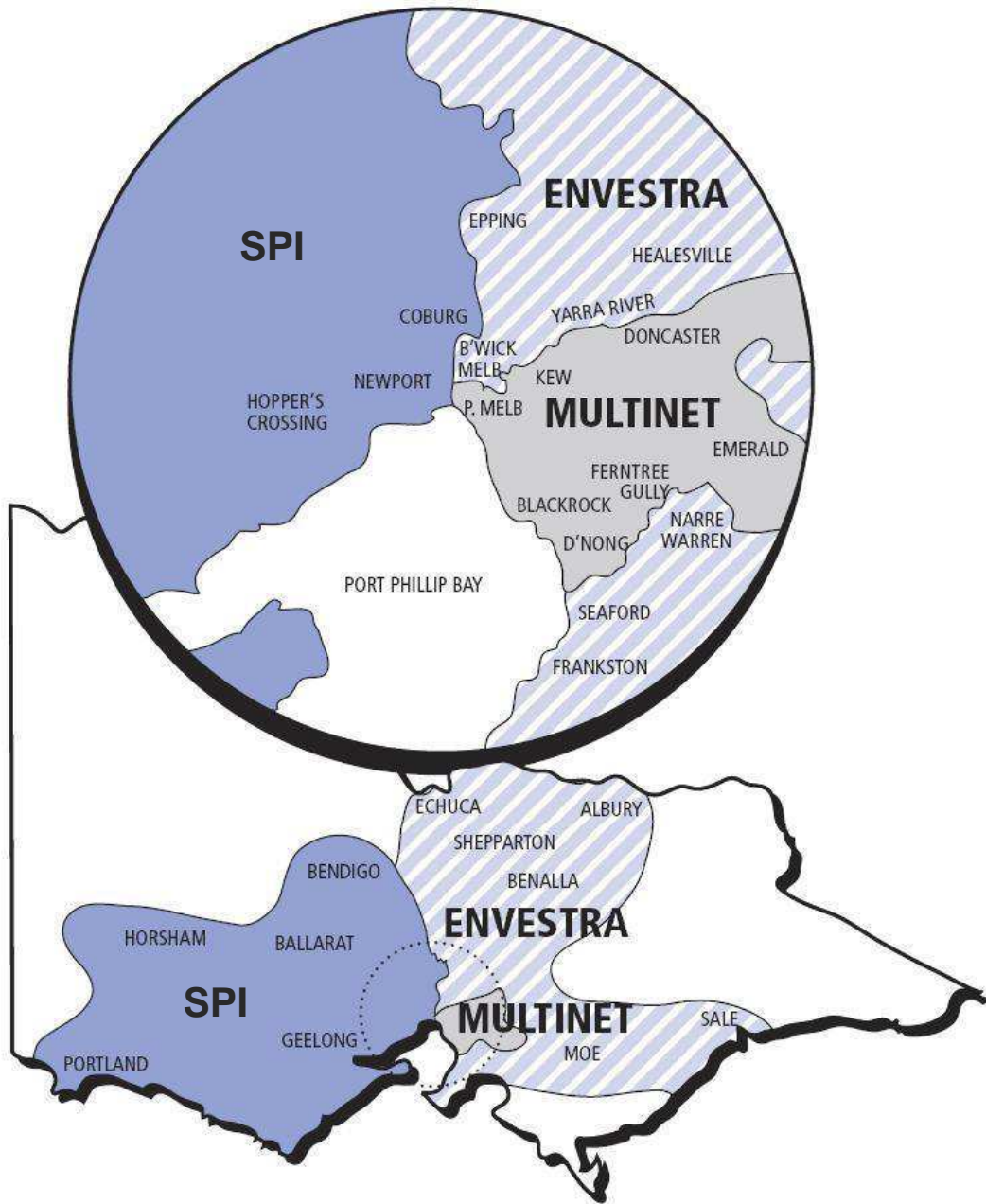
Purpose of this report

The purpose of this report is to highlight the performance of the three gas DNSPs in Victoria, Envestra, Multinet and SP AusNet for the 2012 calendar year.

The report allows the financial performance, reliability, and quality of gas supply to be compared between the Victorian gas DNSPs. Their financial and operating performance is also contrasted with the benchmarks established in the 2008–2012 GAAR. Reporting gas DNSPs performances helps:

- promote transparency and assist us with setting regulatory benchmarks in future gas determinations
- encourage competition between gas DNSPs through basic benchmarking
- provide an incentive for gas DNSPs to improve performance
- provide customers with information about the services they are receiving.

¹ The AER in March 2013 completed its determination on the Victorian DNSPs' 2013–17 Gas Access Arrangement. Future performance reports will record performance against the benchmarks set in that determination.



Overview

This report summarises the three Victorian gas DNSPs financial performance, reliability of supply, network integrity and customer service during the period 2008–12.

The businesses' financial performance is dependent on the quantity of gas usage by customers. For the access arrangement, small customers total cumulative gas usage was 1.4 per cent higher than forecast for 2012. This indicates that actual gas usage was similar to the ESCV's benchmark in the GAAR.

Envestra was the only gas DNSP to distribute less gas than forecast. Residential gas consumption is largely influenced by weather and differences from forecast gas usage are likely due to colder or warmer weather. The recent push towards more energy efficient appliances may also explain, in part, the difference between forecast and actual gas usage of small residential customers in its area.

Gas consumption of large commercial and manufacturing customers is less influenced by weather and more the overall performance of the economy. In 2012 gas consumption by these customers declined 3.3 per cent across Victoria, with each business experiencing a decline in consumption from large customers. This is most likely a reflection of the changing structure of the Victorian economy and in particular the ongoing decline in manufacturing.

During the 2008–12 access arrangement, the businesses undertook less mains replacement than they had been funded for. Setting revenues in our 2013–17 access arrangement, we were concerned that customers should not pay twice for infrastructure upgrades. We therefore approved the same volume of mains replacement that was achieved by the businesses in 2008–12. However, we will allow the businesses to apply for extra funding should this be required to meet their service obligations and the long term interests of customers.

That said, past asset upgrades and replacements and improvements in operating performance have led to sustained reliability improvements. For instance, since 2003 the industry average is one customer interruption every 46 years.

Similarly to the electricity sector, consumption has been falling, as commercial demand tapers due to closure of industrial and manufacturing facilities, while milder winters in recent times has reduced household heating needs.

For 2012 financial performance, Envestra reported:

- an increase in revenue, capex and opex compared to the previous year of 5.9 per cent, 38.7 per cent and 8.8 per cent respectively
- a 8.2 per cent return on assets.
- 0.8 per cent lower actual revenue, 7.1 per cent higher capex and 13.8 per cent higher opex compared to the access arrangement benchmarks.

Multinet reported:

- an increase in revenue, capex and opex compared to 2011 of 2.0 per cent, 21.6 per cent and 32.7 per cent
- a 7.4 per cent return on assets

- 0.5 per cent higher actual revenue, 59.5 per cent higher capex and 57.5 per cent higher opex compared to access arrangement benchmarks for 2012.

SP AusNet reported:

- an increase in revenue and opex compared to 2011 of 5.1 per cent and 16.9 per cent respectively and a 4.9 per cent decline in capex
- a 9.4 per cent return on assets
- 2.6 per cent higher actual revenue, 4.7 per cent lower opex and 11.7 per cent higher capex compared to benchmarks set in the access arrangement.

Maintaining the network is critical to preserving reliability of supply to customers. In 2012 customers experienced the equivalent of one supply interruption every 36² years. There was some variation in the number of supply interruptions between the businesses. In particular, one supply interruption in 22 years for Envestra customers, 72 years in Multinet's territory and 38 years in the case of SP AusNet. Since 2003, the average for all businesses is one supply interruption every 46 years. For Envestra it is one interruption every 58 years, Multinet one every 59 years and SP AusNet one every 40 years.

In 2012, Envestra made the most Guaranteed Service Level (GSL) payments (582) totalling \$81,954. Payments were mostly for interruptions lasting longer than 12 hours but less than 18 hours. SP AusNet made the least number of payments (206) totalling \$20,817.

² This is calculated by dividing one by the number to total planned and unplanned interruptions.

1 Summary

1.1 Main features of the Victorian distribution network

There are three gas distribution network businesses in Victoria:

- SP AusNet (central and western Victoria)
- Multinet (inner and outer east metropolitan area, the Yarra Ranges and South Gippsland)
- Envestra (central and south east metropolitan, northern Victoria and south east to Moe and Sale).

Collectively the businesses distribute gas to over 1.89 million domestic and non-domestic customers via a total pipeline length of 30,145 kilometres.³ Appendix A.1 sets out the main features of the Victorian gas distribution network businesses.

In this report the benchmark and actual revenue and costs relate to both reference and ancillary reference services.

1.2 Financial performance

The financial performance of the gas DNSPs is affected in part by the volume of gas they distribute. In 2012 the amount of gas distributed to Tariff V (small customers) in Victoria was 119,789 terajoules, 5 per cent higher than in 2011. The three businesses reported the following:

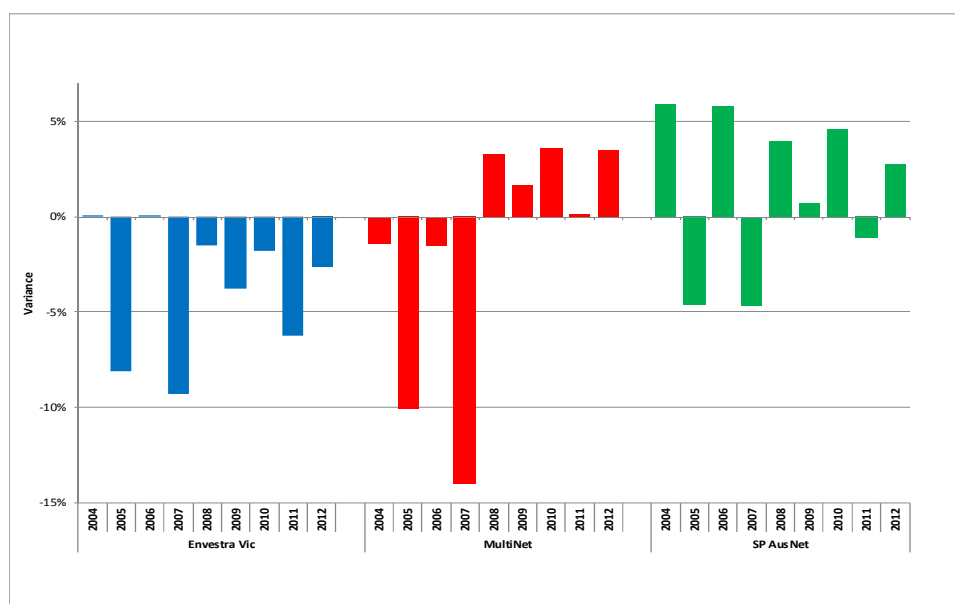
- Envestra distributing less gas to tariff V customers (2.6 per cent) and earning lower revenue (0.8 per cent) than forecasts
- SP AusNet distributing more gas to tariff V customers (2.8 per cent) and earning higher revenue (2.6 per cent) than forecasts
- Multinet distributing more gas to tariff V customers (3.5 per cent) and earning higher revenue (2.2 per cent) than forecasts.

Figure 1.2.1 shows the difference between forecasts and actual gas distributed to tariff V customers since 2004. It shows that Envestra has consistently reported less actual tariff V distributed than forecast over the access arrangement period, with differences in individual years of between 0.05 per cent (in 2006) and -9.29 per cent (in 2007).

Multinet and SP AusNet on the other hand have had both positive and negative variances between forecasts and actual gas distributed.

³ A distribution customer is defined as any supply point through which gas is delivered from a distribution network identified as a separate account for billing purposes. The number of customers is based on the number of active meters.

Figure 1.2.1 Percentage difference between forecast and actual gas distributed to tariff V customers



Source: ESCV 2008-12 Gas Access Arrangement review, ESCV 2002 GAAR and DNSP regulatory accounting reports and quarterly reports

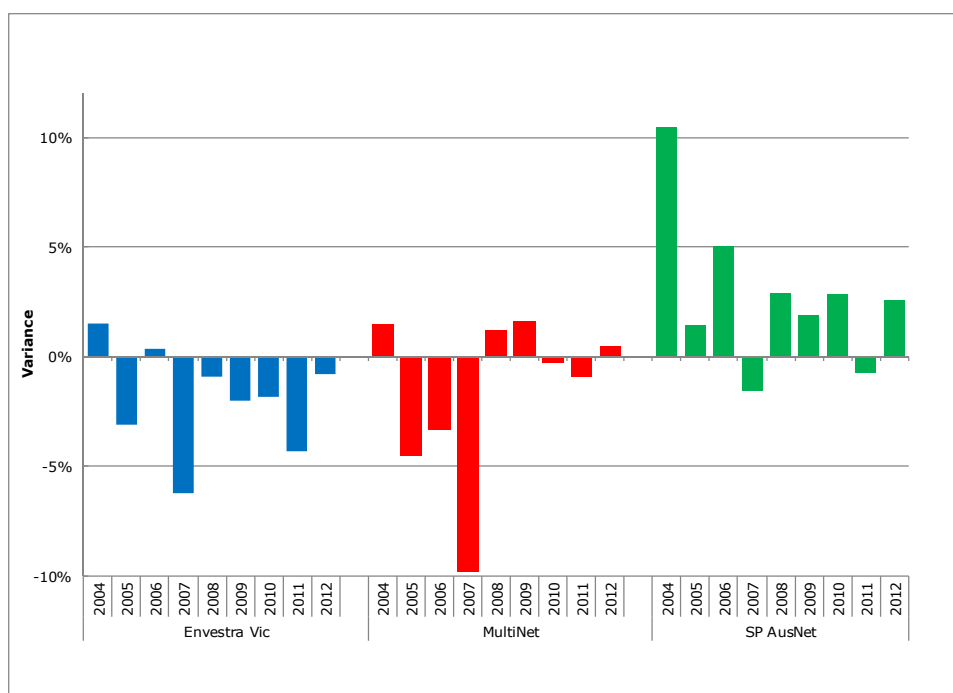
Note: A positive percentage represents actual gas distributed to tariff V being higher than the 2003 and 2008 GAAR forecasts.

The distribution of gas to tariff D (industrial and commercial customers) was not forecast at the time of the 2008-12 GAAR and hence comparisons to forecasts cannot be made. However, for Tariff D customers, the maximum hourly quantity (MHQ) or peak demand increased by 2.1 per cent for all gas DNSPs. Actual gas distributed to tariff D customers across all the businesses declined by 3.3 per cent. Since 2008 gas distribution for MHQ and tariff D decreased by 4.6 per cent and 13.1 per cent respectively across the industry. Further information relating to gas being distributed is provided in section 4 of this report.

In 2012, aggregate industry revenue was 0.8 per cent higher than forecast. Revenue for Multinet and SP AusNet was higher than forecasts by 2.2 per cent and 2.6 per cent while Envestra was 0.8 per cent lower than forecast. During the 2008–12 regulatory period Envestra collected 2 per cent less revenue than forecast, with SP AusNet earning 1.9 per cent and Multinet 2.3 per cent more revenue than forecasts.

Figure 1.2.2 shows the percentage difference between actual and forecast revenue since 2004.

Figure 1.2.2 Percentage difference between total forecast and total actual revenue (including revenue for ancillary reference services⁴)

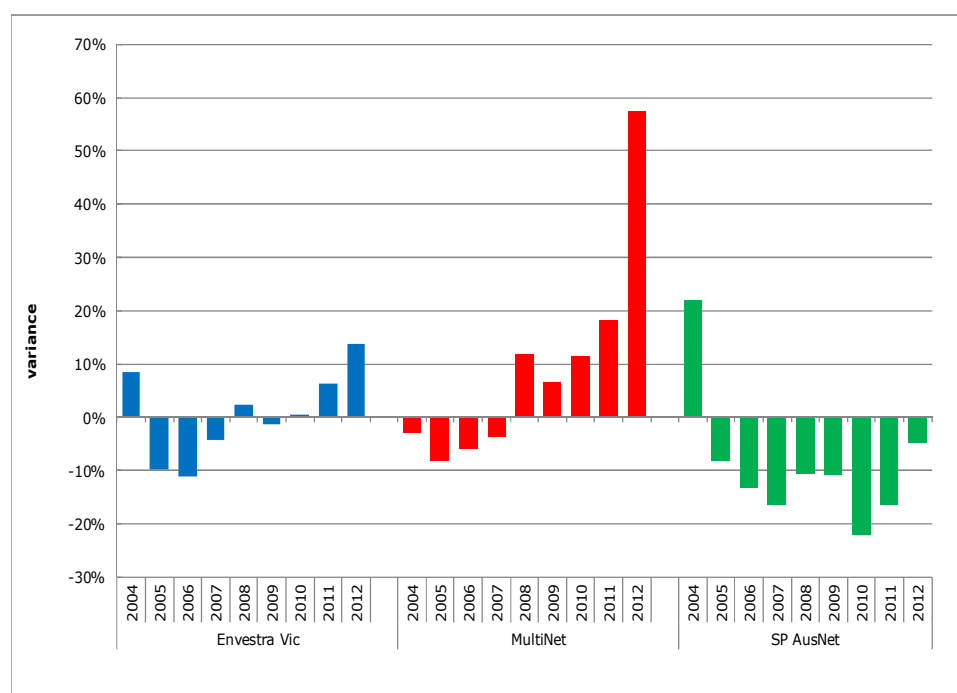


Source: ESCV 2008-12 GAAR, ESCV 2002 GAAR and DNSP regulatory accounting reports and quarterly reports
 Note: A positive percentage represents actual revenue higher than the 2003 and 2008 GAAR forecasts.

Overall, the gas DNSPs spent 19.6 per cent more on operating expenditure (opex) in 2012 compared to the previous year. In 2012, aggregate opex for all businesses was also 20.7 per cent above forecast for that year. Envestra and MultiNet's opex was higher than forecast by 13.8 per cent and 57.5 per cent respectively. In contrast, SP AusNet's opex was 4.7 per cent below its 2012 forecast. Figure 1.2.3 shows the percentage difference between forecast and actual operating expenditure. Further information relating to operating expenditure is provided in section 4 of this report.

⁴ Ancillary reference services include: new connections, disconnection, meter and gas installation and special meter reads.

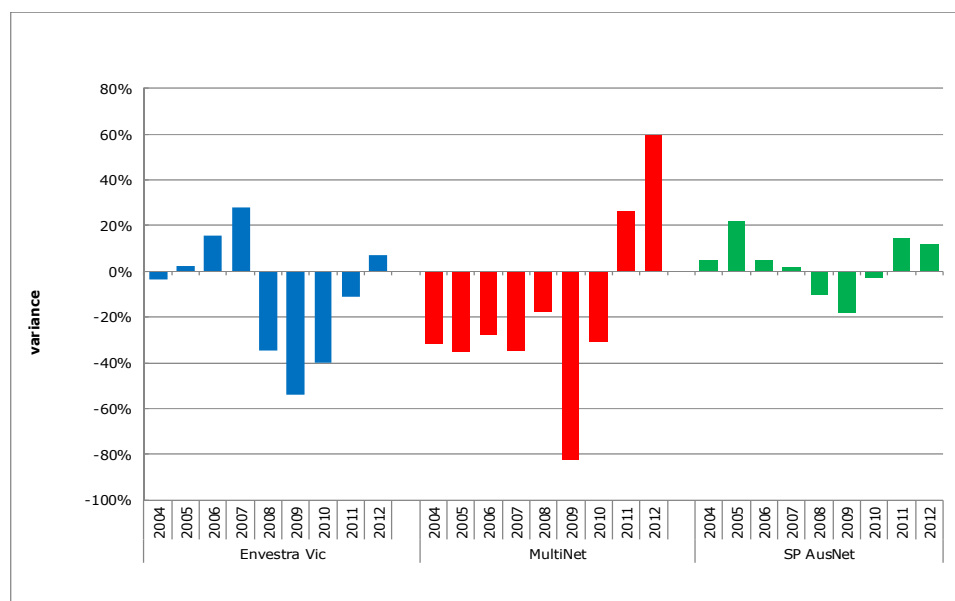
Figure 1.2.3 Percentage difference between forecast and actual operating expenditure



Source: ESCV 2008-12 GAAR, ESCV 2002 GAAR and DNSP regulatory accounting reports and quarterly reports
 Note: A positive percentage represents actual opex higher than the 2003 and 2008 GAAR forecasts.

Overall actual capex for 2012 increased by 17.4 per cent across all gas DNSPs and was 20.3 per cent above the forecast. All gas distributors incurred higher capex than forecast; Multinet by 59.5 per cent, SP AusNet 11.7 per cent and Envestra by 7.1 per cent. The higher capex incurred by Multinet may be due to the timing of its capex program or to catch up with its capital allowance. Figure 1.2.4 shows the difference between forecast and actual capex. Further information relating to capital expenditure is provided in section 3 of this report.

Figure 1.2.4 Percentage difference between forecast and actual capital expenditure



Source: ESCV 2008-12 GAAR and 2002 GAAR and DNSP regulatory accounting reports and quarterly reports
 Note: A positive percentage represents actual capex higher than the 2003 and 2008 GAAR forecasts.

Table 1.2.1 shows the return on assets achieved by each DNSP compared to forecasts made at the time of the 2008 GAAR.

Further information relating to financial performance is provided in section 3 of this report.

Table 1.2.1 Return on assets 2012, per cent

Distributor	Forecast pre-tax return on assets	Actual pre-tax return on assets	Variance
Envestra	6.8	8.2	1.4
Multinet	8.1	7.4	-0.7
SP AusNet	7.7	9.4	2.2

Source: ESCV 2008-12 GAAR and revisions to GAAR and DNSP annual regulatory accounting reports

1.3 Reliability of supply

Across the industry, the average Victorian customer experienced supply interruption's equivalent to once every 36 years which was a 14.6 per cent decrease compared to 2011.⁵

There was some variation in the number of supply interruptions reported. While Envestra's customers experienced the industry average interruption, there was one supply interruption every 22 years for Multinet's customers, while those in SP AusNet area suffered one disruption every 38 years.

Reliability of supply is typically measured by the following reliability performance reporting indicators⁶:

- System Average Interruption Duration Index (SAIDI)—measures the total duration of supply interruption for the average customer on the network.
- System Average Interruption Frequency Index (SAIFI)—measures how often the average customer experiences a supply interruption.
- Customer Average Interruption Duration Index (CAIDI)—measures the total duration of supply interruption for those customers who have experienced an interruption during the year.

Figure 1.3.1 and figure 1.3.2 shows the average number of supply interruptions per customer (SAIFI) and the total duration of supply interruption (CAIDI) per customer, respectively. Figure 1.3.3 shows the minutes off supply from these interruptions (SAIDI) per customer.

While the number of planned and unplanned interruptions per customer (SAIFI) was reduced in 2012 by 6.0 per cent, the overall minutes off supply per customer (SAIDI) increased 3.2 per cent compared to 2011. This was driven by the duration of interruptions per customer (CAIDI), which increased by 2.7 per cent across all DNSPs.

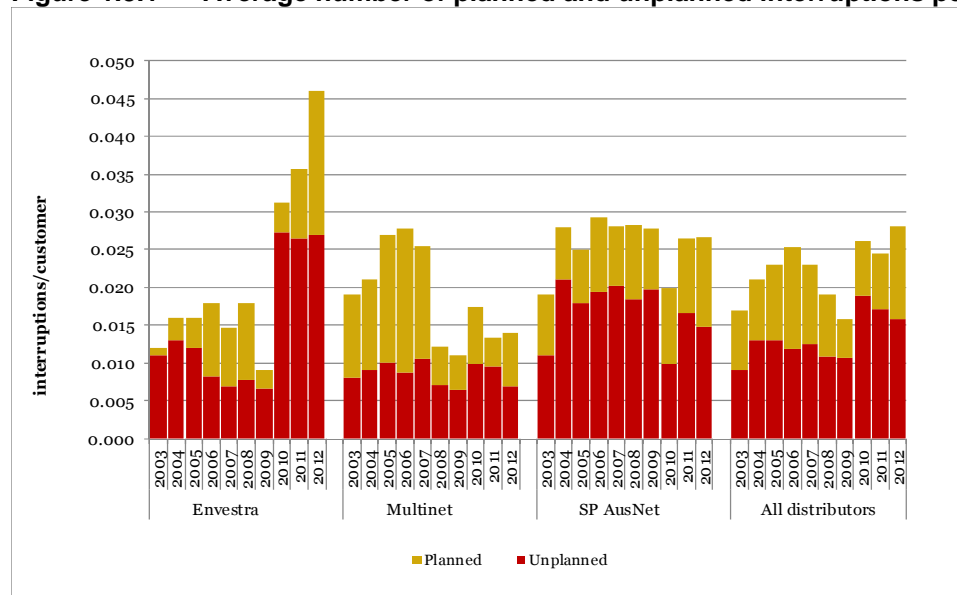
Multinet commented that significant rainfall experienced in the period under review resulted in an increase in unplanned supply interruptions—primarily as a result of water ingress to the low pressure portion of the Multinet network.

⁵ This is calculated by dividing one by the number to total planned and unplanned interruptions. (the numbers in figure 1.3.1 have been converted using this formula).

⁶ A description of the performance indicators is set out in more detail in appendix A.3.

Envestra commented that the step change in unplanned interruptions in 2010 does not reflect a deterioration of network performance but a change in reporting to include all supply interruptions (results are also not directly comparable to other businesses). Envestra also notes that the increase in planned interruptions reflects the recent expansion in mains renewal works.

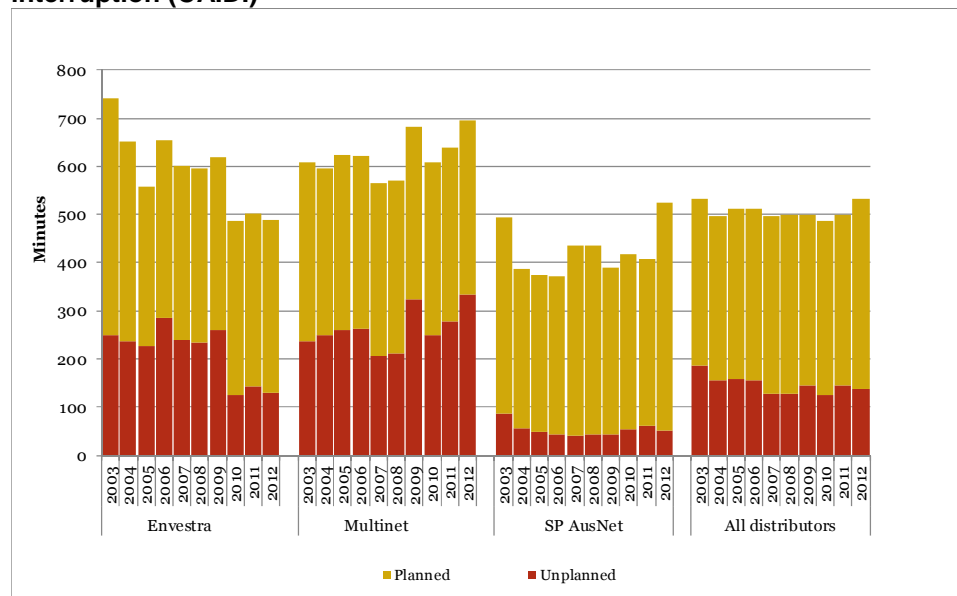
Figure 1.3.1 Average number of planned and unplanned interruptions per customer (SAIFI)



Source: AER calculations based on DNSP quarterly KPI reports

Note: The System Average Interruption Frequency Index (SAIFI) is the average number of interruptions that a customer would experience, and is calculated as the total number of customer interruptions divided by the total number of customers served. Due to different methodologies of reporting outages between businesses direct comparisons between businesses cannot be made.

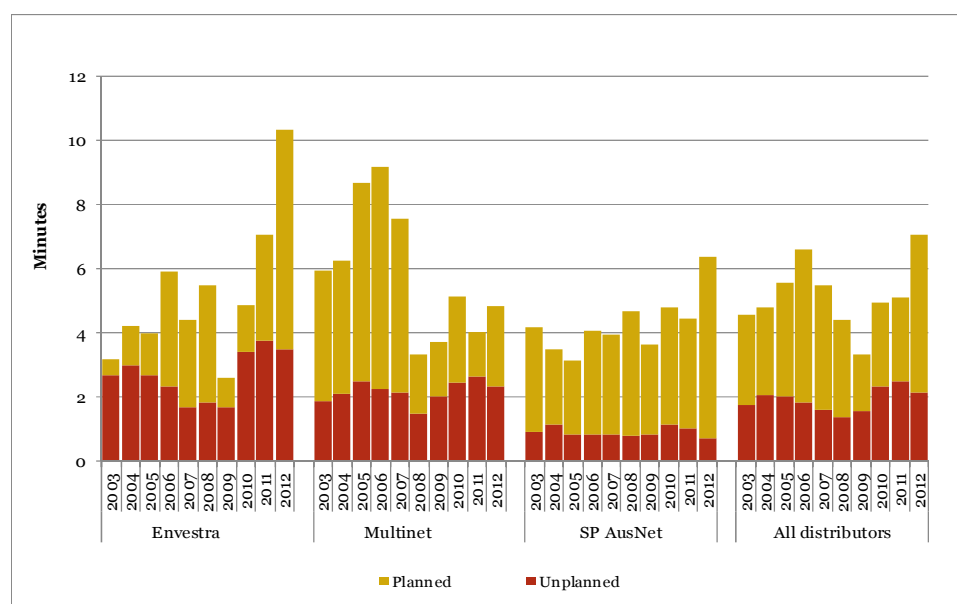
Figure 1.3.2 Average duration of interruptions for those customers experiencing an interruption (CAIDI)



Source: AER calculations based on DNSPs quarterly KPI reports

Note: CAIDI is the customer average interruption duration Index. It is related to SAIDI and SAIFI, and is calculated as the sum of all customer interruption durations divided by the total number of customer interruptions or (SAIDI / SAIFI). Due to different methodologies of reporting outages between businesses direct comparisons between businesses cannot be made.

Figure 1.3.3 Average minutes-off-supply per customer (SAIDI)



Source: AER calculations based on DNSPs quarterly KPI reports

Note: The increase in planned interruptions for Envestra and SP AusNet reflect the increased level of mains renewal works completed in 2012.

Note: The System Average Interruption Duration Index (SAIDI) is the average outage duration for each customer served, and is calculated as: the sum of all customer interruption durations divided by the total number of customers served. SAIDI is measured in unites of time (minutes).

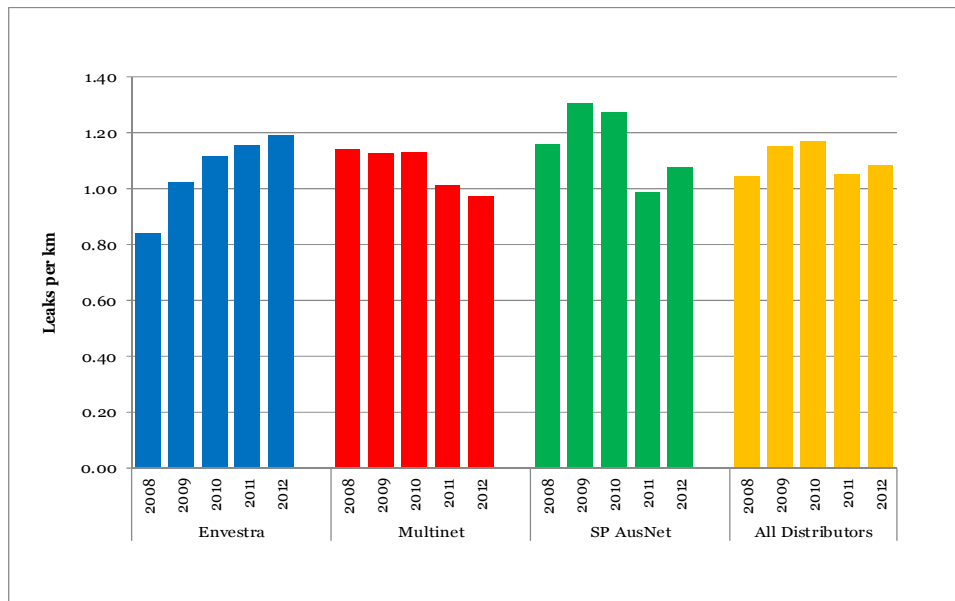
1.4 Network integrity

A critical aspect of gas supply safety is network integrity, which can be measured in terms of loss of containment (leakages), third-party damage (mechanical damage and service connection damage) and replacement of aged assets. Figures 1.4.1 to 1.4.3 indicate that the DNSPs have generally improved their performance on the majority of these measures compared to 2011.

Loss of containment

Figure 1.4.1 shows the number of publicly reported and repaired gas leaks per distributor. In 2012 the total number of gas leaks reported and repaired across all DNSPs increased by 3 per cent compared to 2011.

Figure 1.4.1 Repaired leaks per kilometre of gas pipe



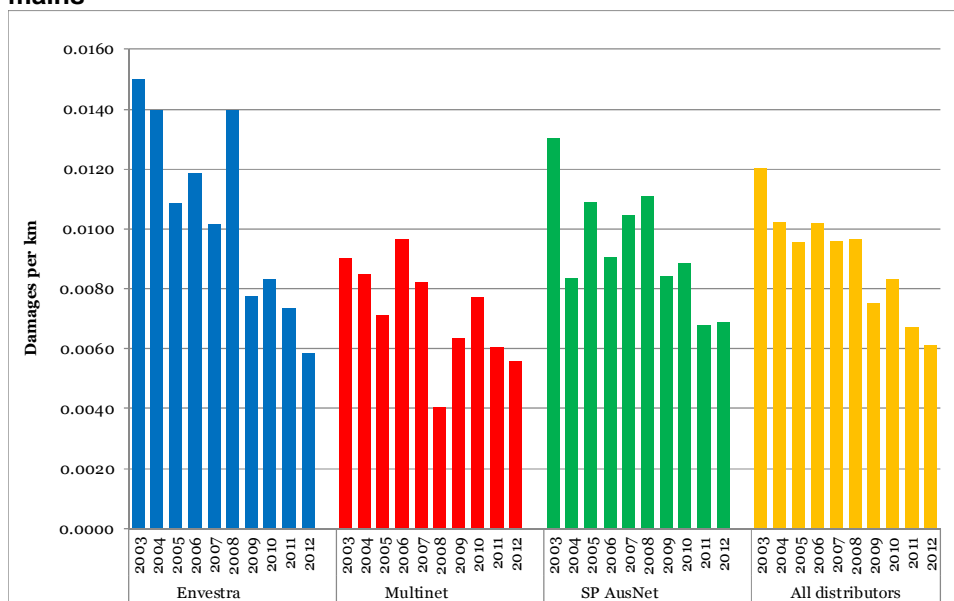
Source: DNSP quarterly KPI reports

Mechanical damage

The reporting of mechanical damage and service impairment monitors the structural and functional integrity of the DNSPs' networks. External damage to networks is a significant cause of gas escapes and customer supply interruptions.

Figure 1.4.2 shows the number of incidents of mechanical damage to mains per kilometre. In 2012, DNSPs reported a 9 per cent decline in damage to gas distribution mains.

Figure 1.4.2 Mechanical damage to mains - number of incidents per kilometre of distribution mains

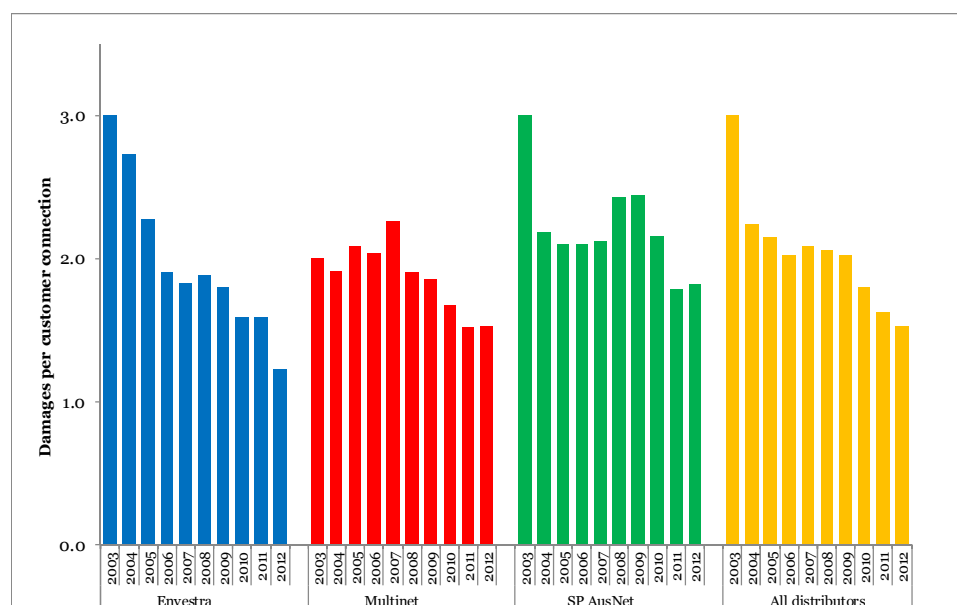


Source: DNSP quarterly KPI reports

Service connection damage

Figure 1.4.3 shows the damage to service connections. There were 2846 incidents of damage to customer service connections in 2012. This represents 141 fewer incidents, or a 5 per cent improvement during the year.

Figure 1.4.3 Service damage per customer 2003–2012



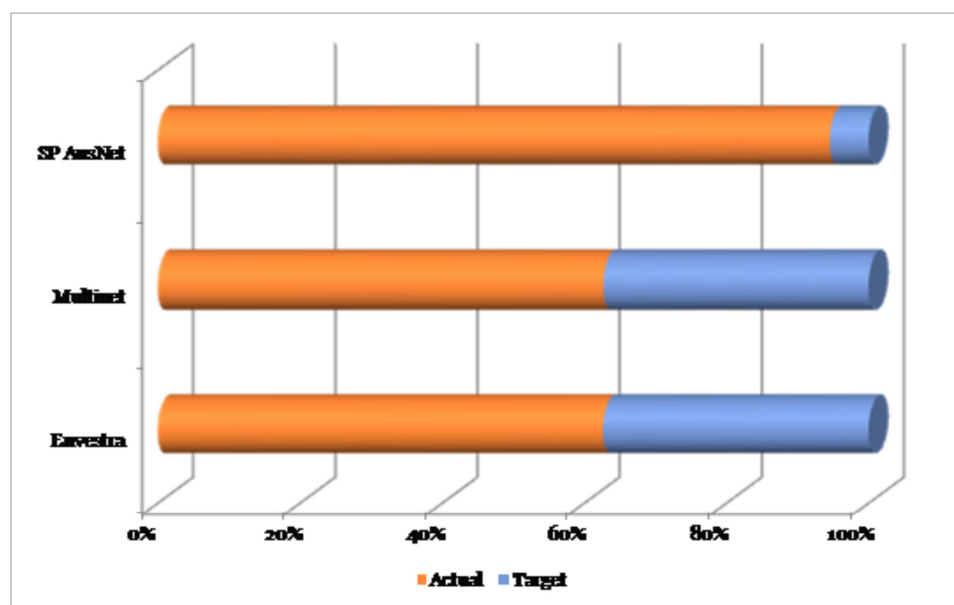
Source: DNSP quarterly KPI reports

Low pressure network replacement

Another significant cause of gas escapes is chronic leakage from older, generally low pressure pipes. Figure 1.4.4 shows the cumulative number of low pressure kilometres of gas mains decommissioned and replaced with high pressure pipelines for each DNSP compared to levels for which they were funded during the 2008–12 access arrangement period. This shows that all DNSPs are below target.

For the 2013–17 access arrangement decision we noted that over the previous two access arrangement periods the businesses had completed fewer kilometres of mains than was either proposed by them or approved as a regulatory benchmark. We considered that the businesses safety and regulatory obligations and the mains risk would not materially change over the 2013–17 access arrangement period compared with the 2008–12 access arrangement. We therefore approved the same volume of mains replacement that was undertaken by the businesses in the 2008–12 access arrangement. However, recognising that circumstances may change, we provided for a pass through, whereby the businesses could seek approval for additional volumes to meet their obligations in a manner that best serves the long term interests of customers.

Figure 1.4.4 Replacement of low pressure gas mains with high pressure against target up to 2012



Source: DNSP quarterly KPI reports

1.5 Customer service

Customer service is measured by the businesses in terms of their performance in responding to calls about service incidents, meeting customers' appointments on time, making supply connections and maintaining supply reliability above the minimum reliability level. The distribution businesses report on these key performance indicators to the AER. Complaints about the distribution businesses customer service are reported to and handled by the Energy and Water Ombudsman Victoria (EWOV).

Response to customer calls

The DNSPs are required to report on their response time to customer calls in relation to targets established by the ESCV.⁷ Not all businesses were able to exceed all of the targets for responding to customer calls.

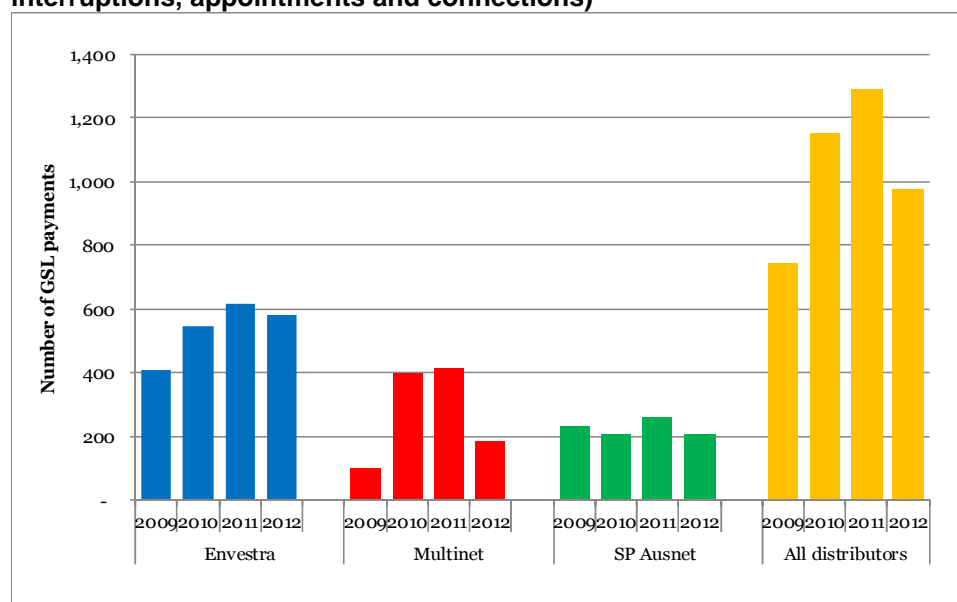
Guaranteed service level scheme

In 2008 the ESCV revised its GSL scheme as part of the 2008–12 GAAR. As a result of this decision, historical data provided in previous comparative reports are no longer comparable to the new parameters set out in the GAAR and reported in this report. The main objective of the GSL scheme is to improve service and reliability levels to the worst served customers. The areas of service targeted by the scheme include repeat interruptions, lengthy interruptions, appointments and connections.

In 2012 Envestra made the most GSL payments (582) totalling \$81,954. The majority of these payments were for interruptions lasting longer than 18 hours. SP AusNet made the least number of payments (207) totalling around \$20,817.

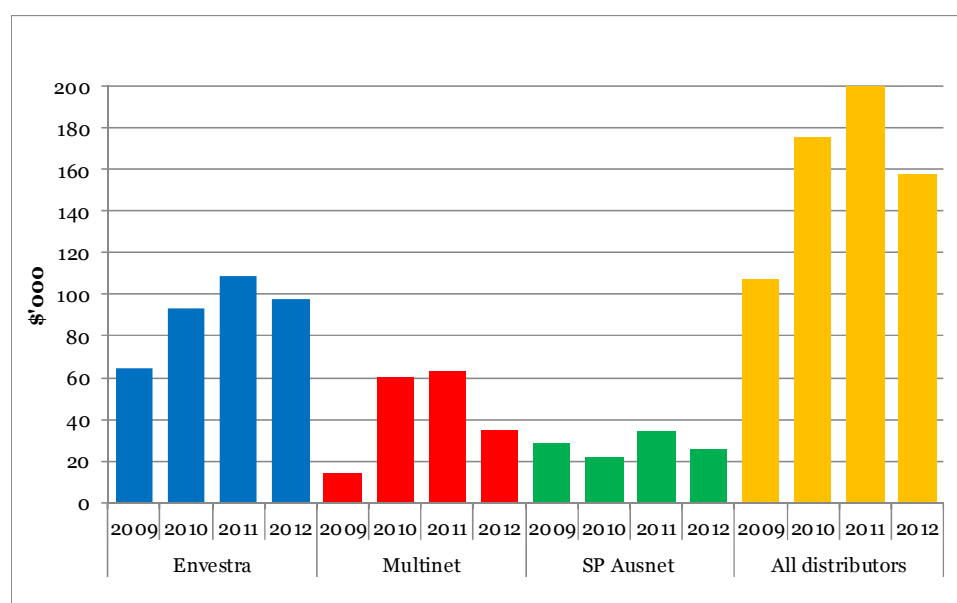
⁷ Metropolitan target—to respond to 95 per cent of calls within 60 minutes during business hours and 90 per cent within 60 minutes after hours; Non-metropolitan target—to respond to 90 per cent within 60 minutes, all hours.

Figure 1.5.1 Total number of GSL payments (includes repeat interruptions, lengthy interruptions, appointments and connections)



Source: DNSP KPI reports

Figure 1.5.2 Total amount paid for GSL payments (includes repeat interruptions, lengthy interruptions, appointments and connections)

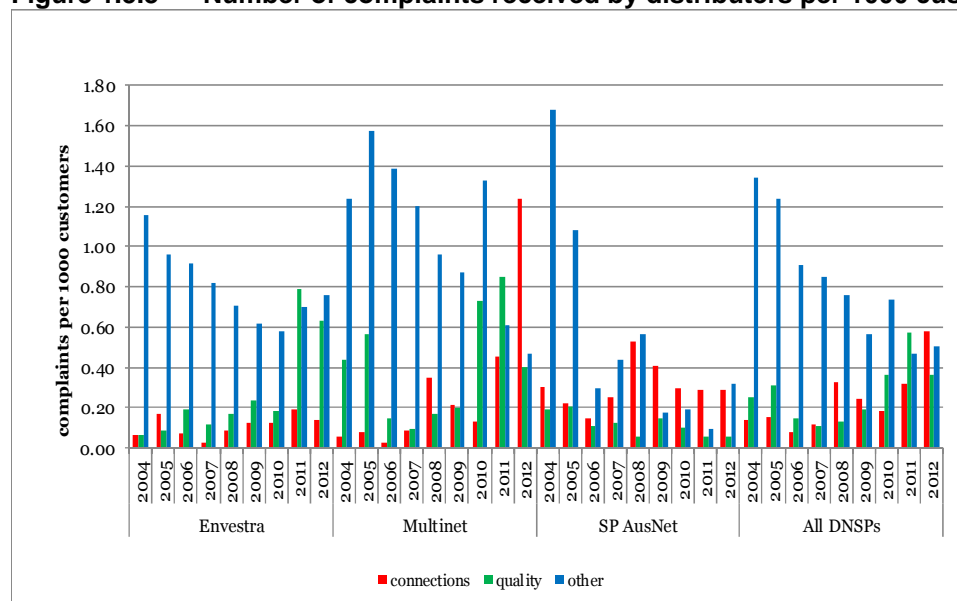


Source: DNSP quarterly KPI reports.

Customer complaints

In 2012, the total number of customer complaints received by the DNSPs increased by 70 per cent. In particular, complaints in relation to connection and augmentation were up by 84 per cent, while 'other' complaints increased by 81 per cent (refer to Figure 1.5.3). Conversely complaints in relation to quality and reliability of supply declined, by 58 per cent. Complaints against MultiNet for poor connection and augmentations work were the chief reasons for the deterioration in industry performance (see Table A.3.7).

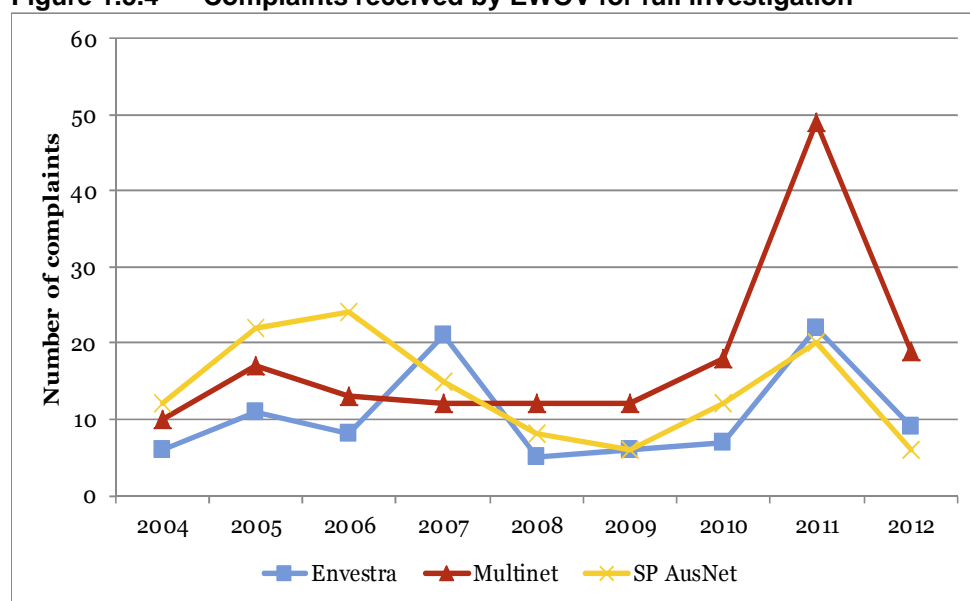
Figure 1.5.3 Number of complaints received by distributors per 1000 customers



Source: DNSP quarterly KPI reports.

Complaints received for full investigation by the Energy and Water Ombudsman Victoria (EWOV) fell by 63 per cent, from 91 in 2011 to 34 in 2012. Figure 1.5.4 illustrates the total number of complaints received by EWOV for full investigation for each of the DNSPs since 2004. Note that not all complaints received by the businesses are dealt with by EWOV. Most complaints are resolved between the customer and the business without further recourse to the ombudsman.

Figure 1.5.4 Complaints received by EWOV for full investigation



Source: Energy and Water Ombudsman Victoria

1.6 Format of Report

This report is structured as follows:

- Part 2 provides a summary for each DNSP.

- Part 3 outlines DNSPs reported financial performance against their forecasts in the 2008–12 GAAR.
- Part 4 outlines the gas businesses financial performance.
- Part 5 outlines the integrity of the gas networks.
- Part 7 outlines the levels of customer service achieved by the DNSPs.

2 Summary by Business

2.1 Envestra

Figure 2.1.1 Comparison of forecast and actual gas distributed to tariff V customers

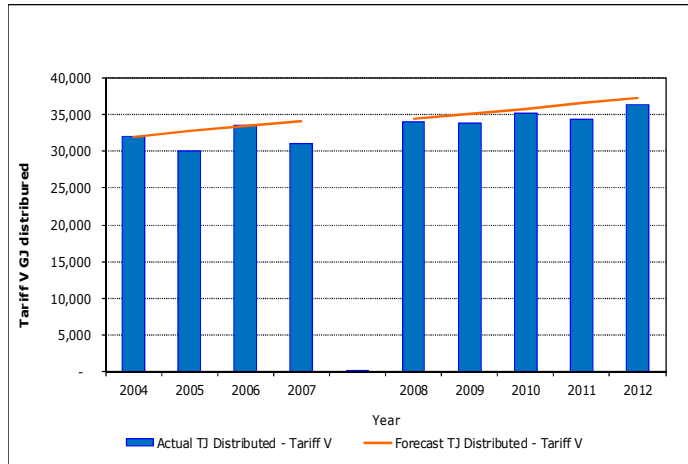


Figure 2.1.1 shows the actual gas distributed by Envestra to tariff V (small) customers compared to forecasts. Envestra has consistently distributed less gas than it has forecast. Since 2008 actual gas distributed has been between -1.5 per cent and -6.2 per cent less than forecast. This is largely driven by a decrease in average consumption per customer.

Figure 2.1.2 Actual Gas distributed to tariff D customers and maximum hourly quantity (MHQ)

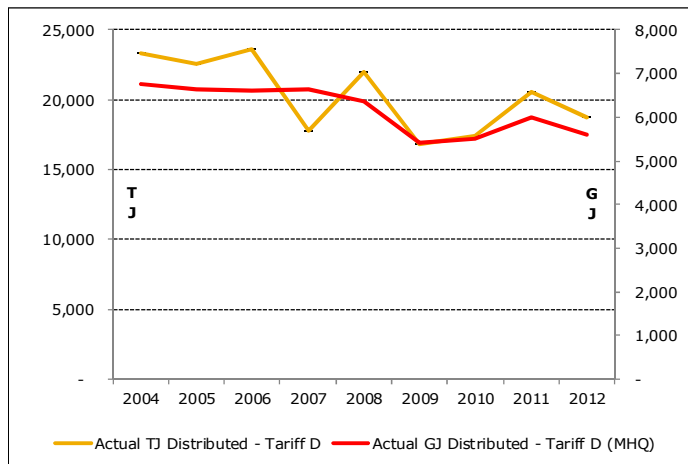


Figure 2.1.2 shows that the distribution of gas to tariff D MHQ for commercial and industrial customers has decreased since 2004. The greatest decline was in 2009 and 2010. Envestra commented that the decline reflects the ongoing structural change in the Victorian economy driven by the decline in manufacturing.

Financial Performance

Envestra earned less revenue overall between 2008 and 2012 than was forecast. This was largely reflective of gas consumption from both tariff V and D customers being less than forecast. Despite this Envestra was able to earn an actual pre-tax return on assets better than forecast of between 0.7 per cent and 3.24 per cent (see Table 4.5.1). The higher than forecast return on assets may be largely explained by Envestra spending less than its approved capex allowance during the global financial crisis.

Figure 2.1.3 Comparison of forecast and actual revenue

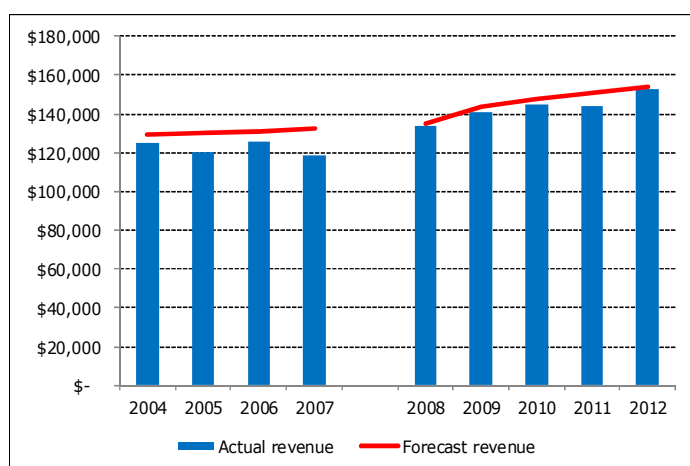


Figure 2.1.3 shows Envestra's actual revenue earned against forecast revenue. Over the 2008-12 access arrangement period, Envestra has earned 2.0 per cent less revenue than forecast.

Figure 2.1.4 Comparison of forecast and actual expenditure

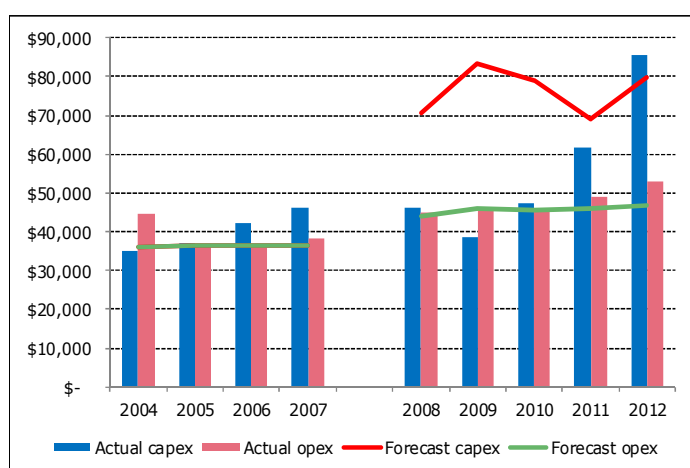


Figure 2.1.4 is Envestra's actual opex and capex against its forecasts. This shows that while Envestra's opex has largely reflected forecasts, capex has been significantly below forecasts. In particular, Envestra has only reached around 63 per cent of its target for replacing low pressure mains. Envestra has restored its capex program following the passing of the global financial crisis.

Figure 2.1.5 Cumulative actual capex against forecast capex

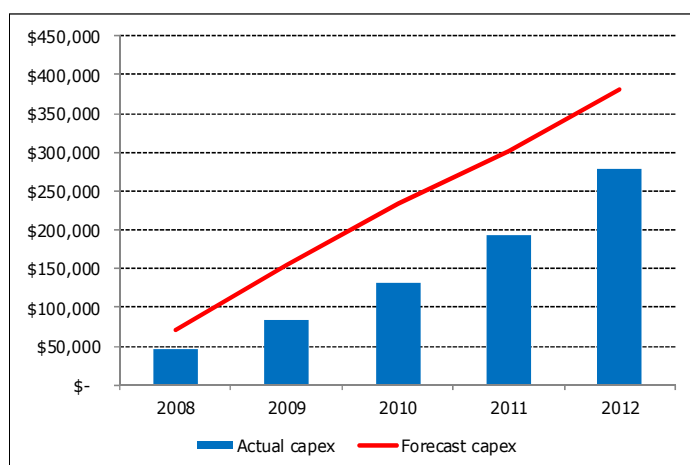
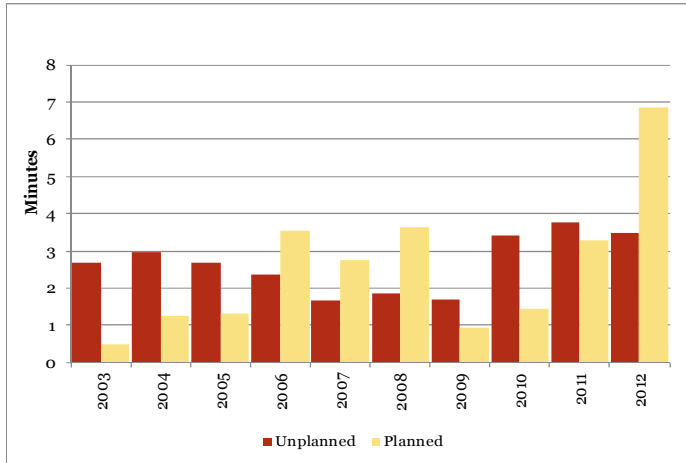


Figure 2.1.5 shows Envestra's actual cumulative capex compared to the 2008 forecast. At the end of 2012 Envestra's cumulative capex over the period was 27 per cent less than forecast. As already noted, Envestra temporarily curtailed its capex program in order to manage its way through the global financial crisis.

Reliability of supply

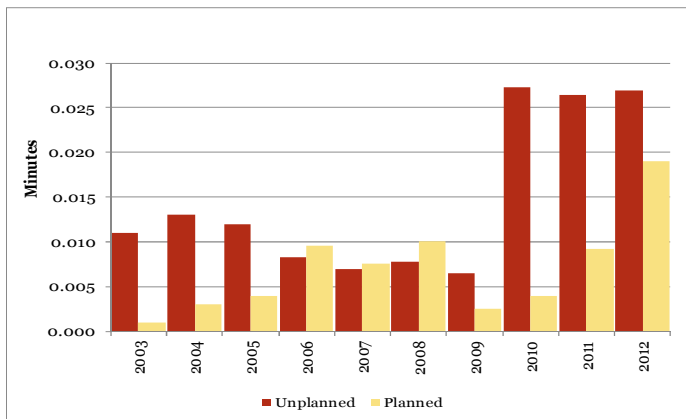
Figures 2.1.6, 2.1.7 and 2.1.8 indicate Envestra's reliability of supply.

Figure 2.1.6 Average minutes-off-supply per customer (SAIDI)



This shows that over the 2008 to 2012 period reliability of supply as reflected by SAIDI and SAIFI has deteriorated, in particular for planned interruptions. Envestra has however commented this is due to their asset replacement program. Envestra also notes that the increase in interruptions since 2010 reflects changes in reporting rather than deterioration in performance.

Figure 2.1.7 Average number of interruptions per customer (SAIFI)



See the above commentary.

Figure 2.1.8 Average interruption duration per customer (CAIDI)

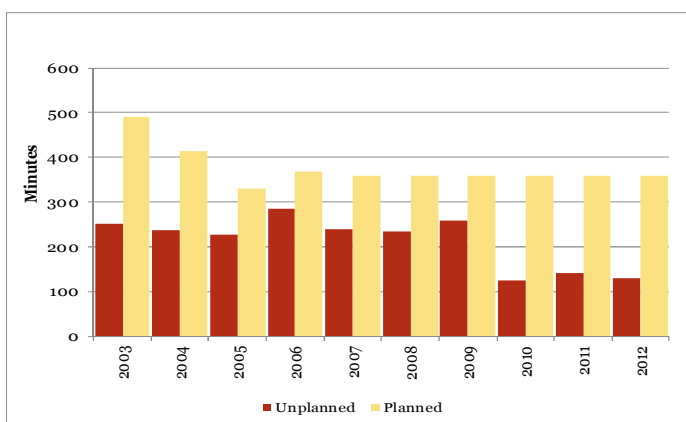
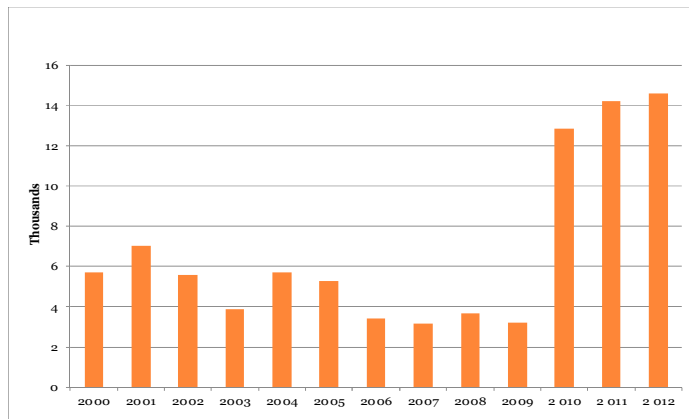


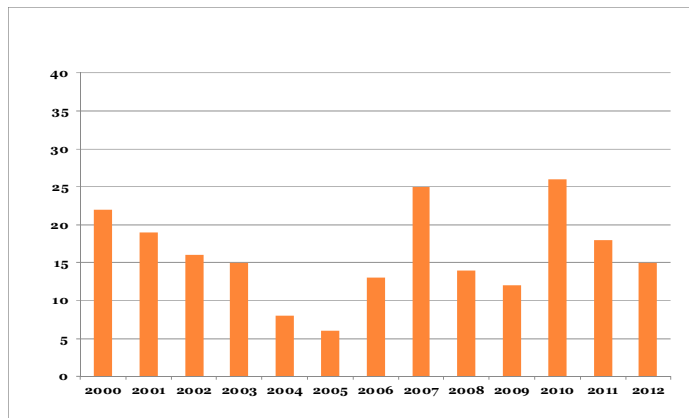
Figure 2.1.8 shows that CAIDI has been relatively stable for the last three years despite increases in the average minutes off supply per customer and the number of interruptions per customer (with declines in CAIDI for unplanned interruptions again attributable to reporting changes).

Figure 2.1.9 Number of outages affecting 5 customers or fewer



Figures 2.1.9 and 2.1.10 show the number of outages affecting 5 customers or fewer and the number of outages affecting more than five customers. In 2012 the number of outages affecting fewer than 5 customers has increased slightly by 2.5 per cent (again, driven by reporting changes and not a deterioration in network performance). The parameters for the scheme were altered in 2009. Consequently data before then should not be compared with the current period.

Figure 2.1.10 Number of outages affecting more than five customers



Between 2011 and 2012 there was a decrease of 16.7 per cent in the number of outages affecting more than five customers. This results in this metric being more in line with historical performance.

Network Integrity

Figure 2.1.11 Replacement of low pressure gas mains with high pressure against target

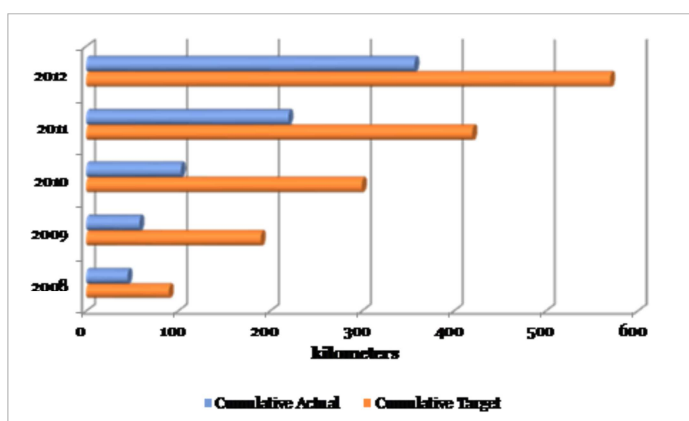


Figure 2.1.11 shows the replacement of low pressure gas mains with high pressure against target. Overall Envestra at the end of 2012 had achieved 63 per cent of its target to replace the low pressure network.

Customer service

Envestra experienced one GSL payment per 1,150 customers in 2012. Envestra paid an aggregate of \$81 954 (\$2006) in GSL payments. This is a decrease in performance since 2009 when there was one payment per 1,300 customers. Overall the number of payments made by Envestra increased from 412 in 2009 to 582 in 2012.

2.2 Multinet

Figure 2.2.1 Comparison of forecast and actual gas distributed to tariff V customers

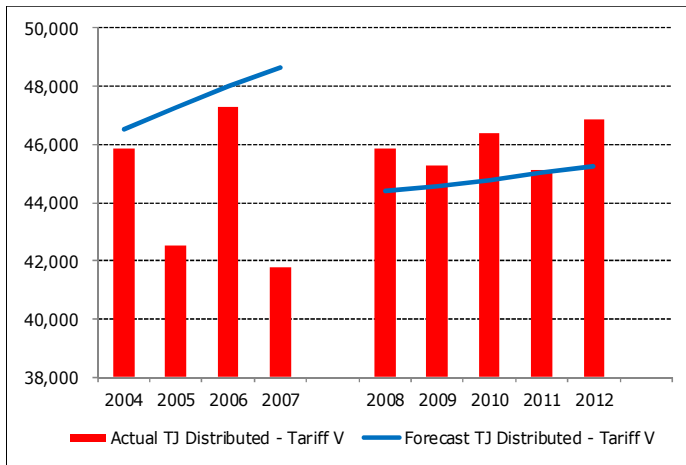


Figure 2.2.1 show that for this access arrangement period Multinet has consistently distributed more gas to tariff V customers than forecast. The aggregate gas distributed to tariff V customers between 2008 and 2012 was 2.4 per cent more than forecast.

Figure 2.2.2 Actual Gas distributed to tariff D customers and maximum hourly quantity (MHQ)

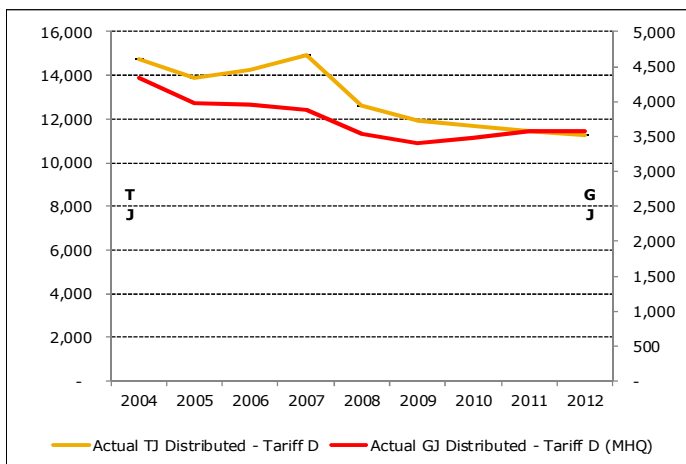
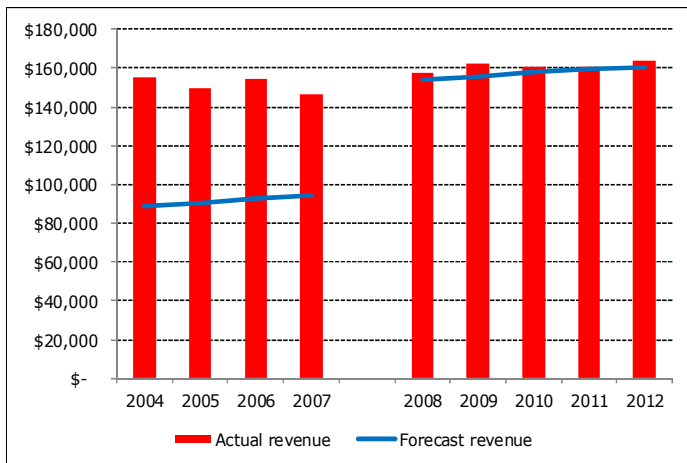


Figure 2.2.2 shows that since 2004 gas distributed to tariff D (commercial and manufacturing) customers has been declining. In 2012 MHQ tariff D (MHQ) was 17.3 per cent less than in 2004 and tariff D was 19.6 per cent less than in 2004.

Financial performance

In 2012 Multinet achieved an actual pre-tax return on assets of 7.38 per cent (refer to Table 4.5.1). This is most likely a result of Multinet's actual capex and opex being higher than forecast.

Figure 2.2.3 Comparison of forecast and actual revenue



Between 2008 and 2012 Multinet has consistently earned more revenue than forecast of between 0.92 to 1.63 per cent. The cumulative actual aggregate revenue from 2008 to 2012 is 0.4 per cent more than forecast.

Figure 2.2.4 Comparison of forecast and actual expenditure

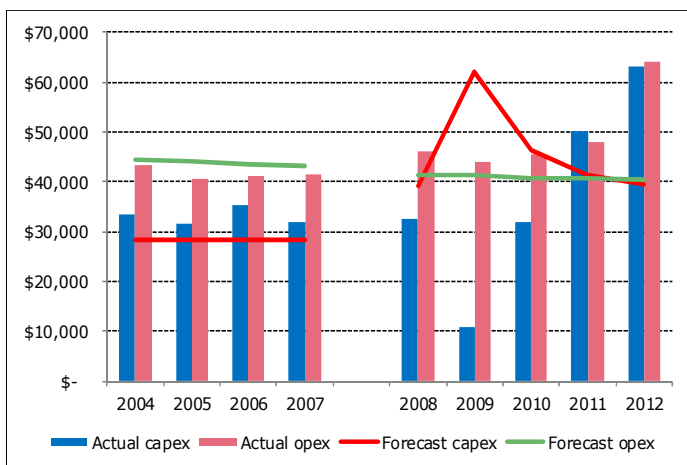


Figure 2.2.4 shows that Multinet has consistently spent more opex than forecast between 2008 and 2012. Ranging from 6.7 per cent in 2009 to 57.5 per cent in 2012.

On the other hand Multinet underspent on capex in 2008, 2009 and 2010 by 17.5 per cent, 82.2 per cent and 31 per cent respectively. However, in 2011 and 2012 Multinet spent 26.2 and 59.5 per cent more capex than forecasts.

Figure 2.2.5 Comparison of actual against forecast capex

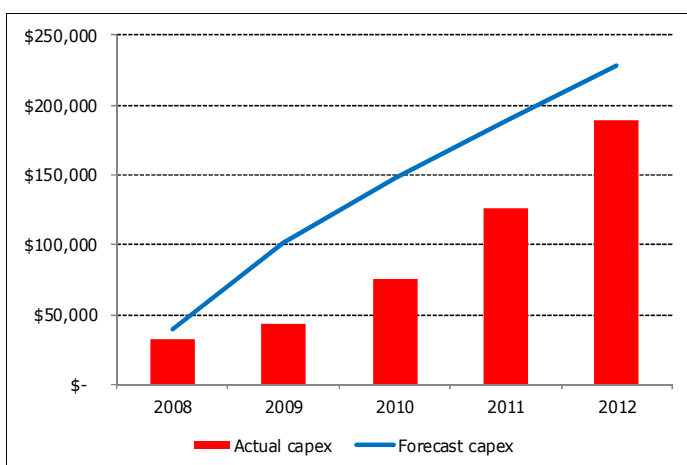
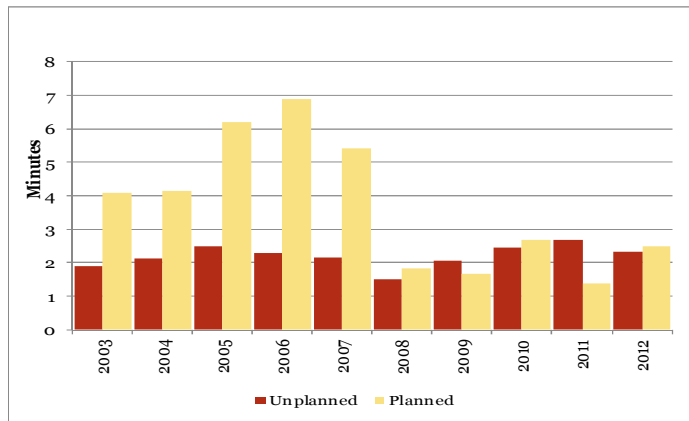


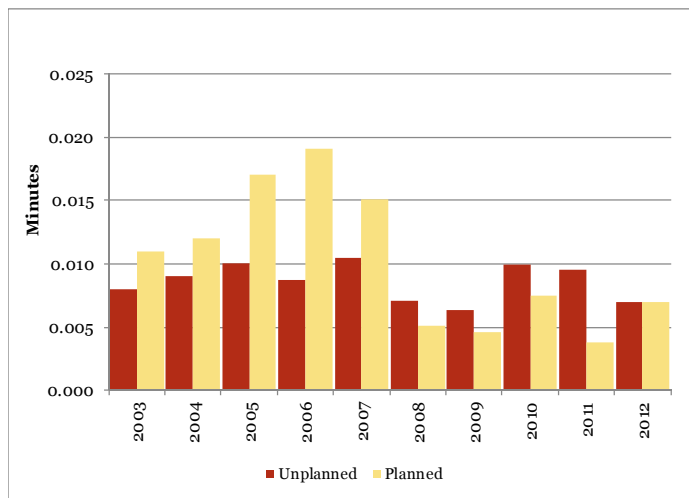
Figure 2.2.5 shows cumulative actual capex against forecast capex. At the end of 2012 Multinet had spent 17 per cent less on capex than forecast for the period 2008 to 2011. This underspending in capex has resulted in less replacement of old assets than target for the period. Figure 2.2.11 shows that Multinet has only replaced 83 per cent of its target.

Figure 2.2.6 Average minutes-off-supply per customer (SAIDI)



Figures 2.2.6, 2.2.7 and 2.2.8 measure Multinet's reliability of supply. The data for 2012 for all three reliability measures remained stable.

Figure 2.2.7 Average number of interruptions per customer (SAIFI)



See the above commentary.

Figure 2.2.8 Average interruption duration per customer (CAIDI)

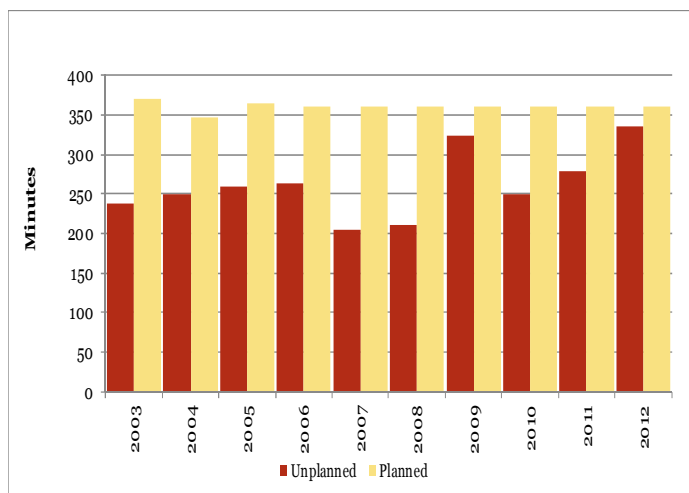
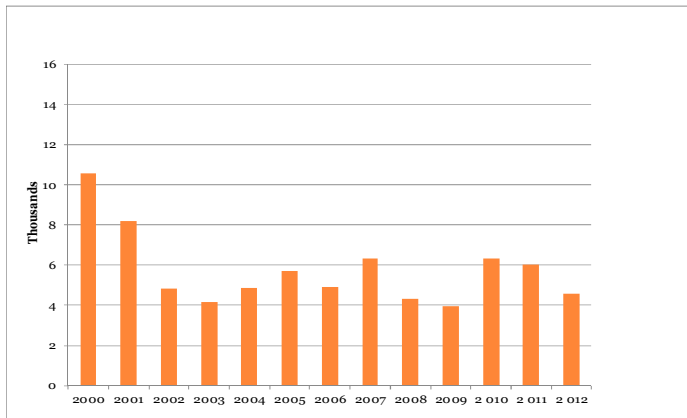


Figure 2.2.9 Number of outages affecting 5 customers or fewer



In 2012 the number of outages affecting 5 customers or fewer declined by 24 per cent compared to 2011.

Figure 2.2.10 Number of outages affecting more than five customers

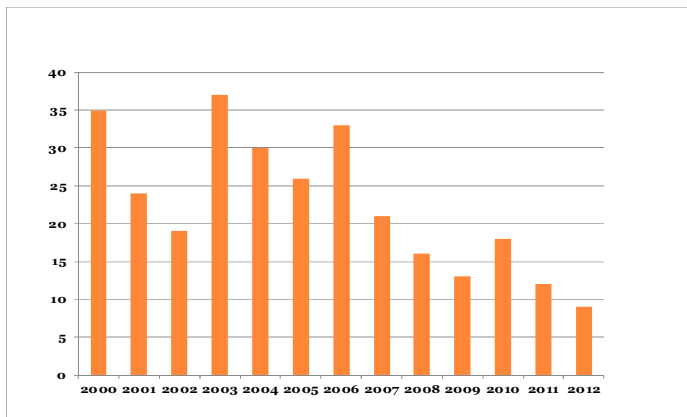


Figure 2.2.10 shows that since 2008 there has been an improvement in the number of outages affecting more than 5 customers. In 2012 Multinet recorded 9 outages.

Network Integrity

Figure 2.2.11 Replacement of low pressure gas mains with high pressure against target

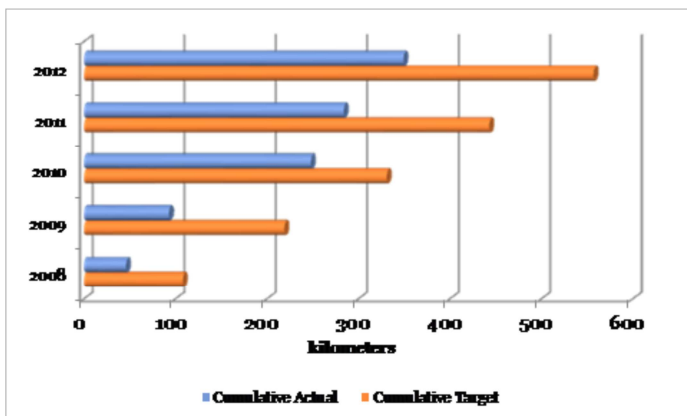


Figure 2.2.11 shows that by 2012 Multinet had achieved 63 per cent of its target to replace low pressure gas mains with high pressure gas mains.

Customer service

Multinet service performance improved in 2012 compared to the previous year, from one payment per 1 621 customers to one payment per 3 174 customers. The total number of payments declined by 55 per cent from 413 in 2011 to 187 in 2012, totalling \$28 831 (\$2006) in GSL payments to customers.

Multinet has not made any payments for late appointments since 2009. Multinet also performed consistently in relation to connection payments by only making one connection payment in 2009 and 2010 and none since.

2.3 SP AusNet

Figure 2.3.1 Comparison of forecast and actual gas distributed to tariff V customers

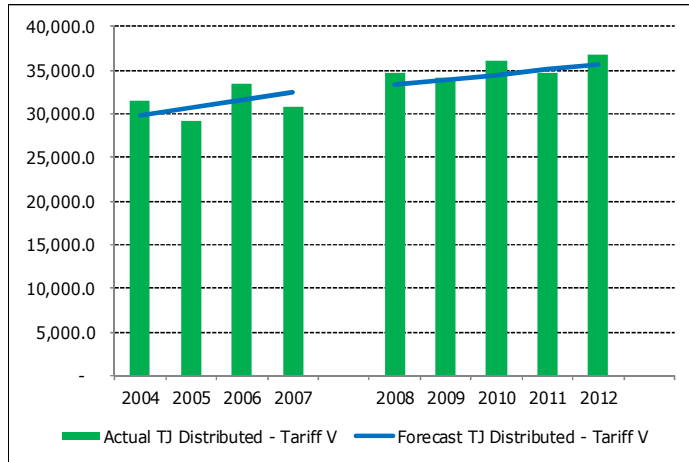


Figure 2.3.1 shows that for the 2008–12 access arrangement SP AusNet has distributed more gas to tariff V residential customers than forecast in each year except for 2011. Overall cumulative gas distributed since is 2.2 per cent more than forecast for the period.

Figure 2.3.2 Actual Gas distributed to tariff D customers and maximum hourly quantity (MHQ)

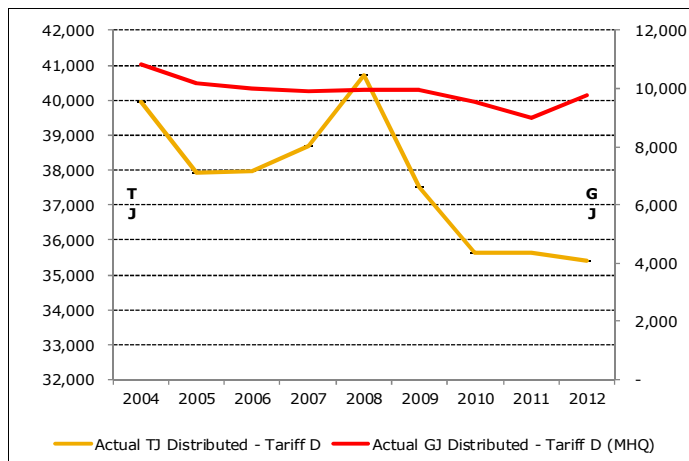
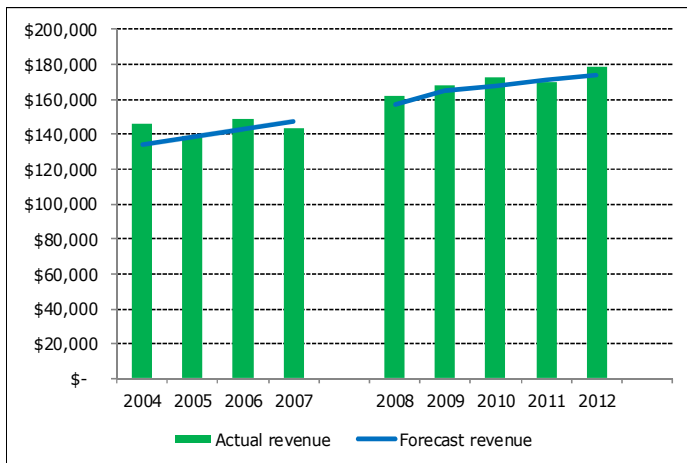


Figure 2.3.2 shows that gas distributed to tariff D customers and tariff D (MHQ) for commercial and manufacturing customers has decreased since 2004 by 11.4 per cent and 9.8 per cent respectively.

Financial performance

Between 2008 and 2012 SP AusNet has earned a better return on assets than forecast of between 1.2 per cent and 2.2 per cent (see Table 4.5.1).

Figure 2.3.3 Comparison of forecast and actual revenue



Overall for the period 2008—2012 SP AusNet earned cumulative revenue of 1.9 per cent more than forecast. For each year of the period, except 2011, actual revenue earned was more than forecast. In 2011 it was 0.7 per cent less than forecast for the year.

Figure 2.3.4 Comparison of forecast and actual expenditure

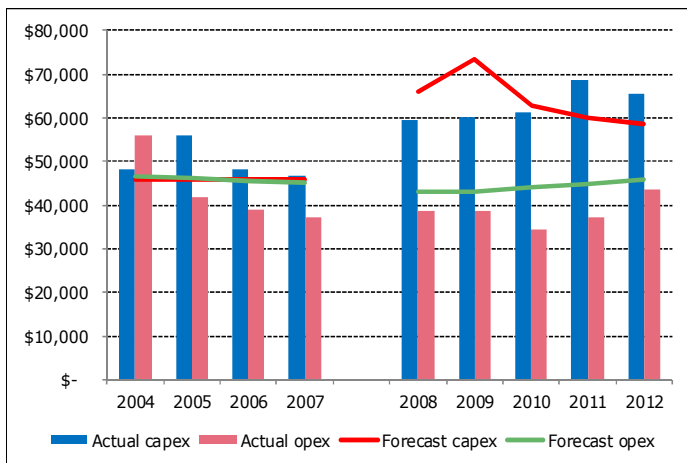


Figure 2.3.4 shows SP AusNet's actual opex and capex against forecast. It has consistently underspent on opex. SP AusNet commented that delivered cost efficiencies have offset the upward pressure on costs due to network growth and input price escalation. These savings have been passed on to customers in the 2013-17 Gas Access Arrangement. The overspend in capital expenditure in 2012 was due to the connection of more customers than benchmark and 126.5km of Low Pressure to High Pressure mains replacement completed.

Figure 2.3.5 Cumulative actual against forecast capex

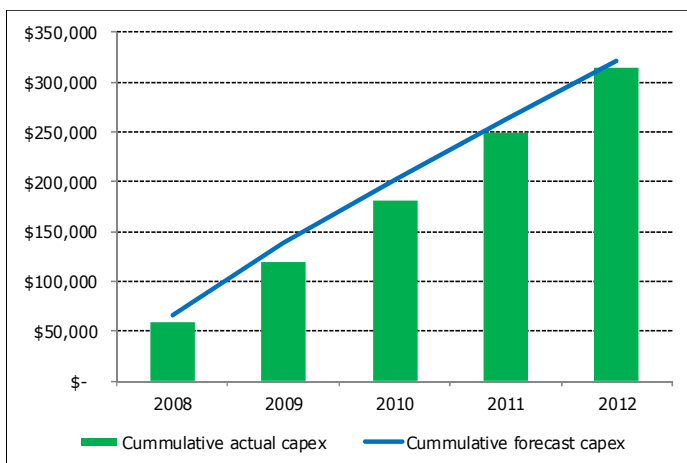
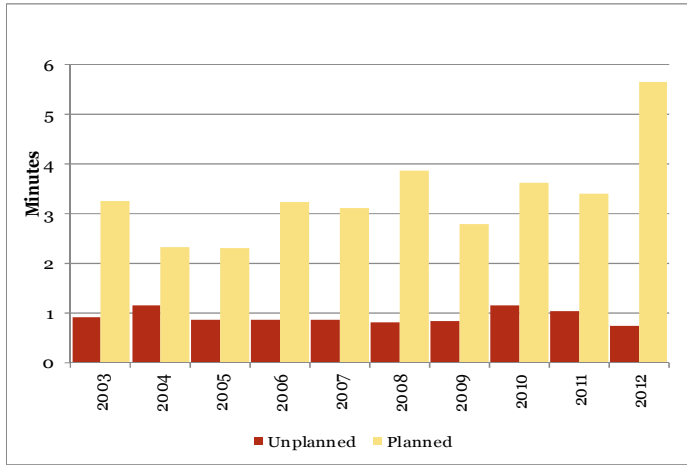


Figure 2.3.5 shows SP AusNet's actual cumulative capex between 2008 and 2012 compared to cumulative forecast capex. This shows that by the end of the period SP AusNet's cumulative actual capex was only 2 per cent less than forecast.

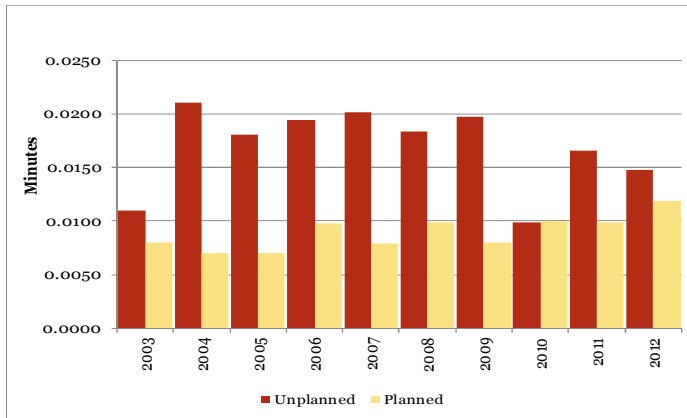
Reliability of supply

Figure 2.3.6 Average minutes-off-supply per customer (SAIDI)



In terms of reliability of supply SP AusNet achieved the lowest unplanned average minutes-off-supply per customer compared to counterparts Envestra and Multinet.

Figure 2.3.7 Average number of interruptions per customer (SAIFI)



SP AusNet's average number of interruptions per customer (SAIFI) for 2012 was relatively consistent with its 2011 level.

Figure 2.3.8 Average interruption duration per customer (CAIDI)

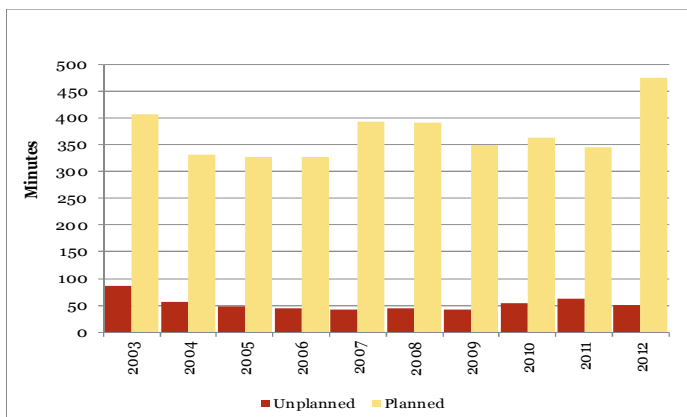


Figure 2.3.8 shows SP AusNet's average interruption duration (CAIDI) for those customers affected by supply interruptions.

Figure 2.3.9 Number of outages affecting 5 customers or fewer

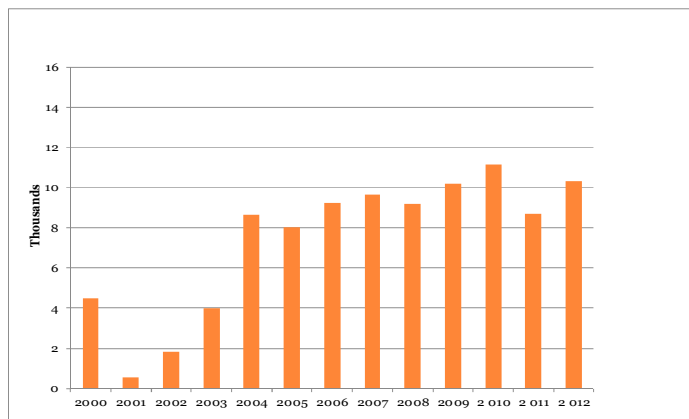


Figure 2.3.9 shows the number of outages affecting 5 customers or fewer. In 2012 SP AusNet's performance deteriorated by 18.6 per cent, but was consistent with performance achieved in 2009 and 2010.

Figure 2.3.10 Number of outages affecting more than 5 customers

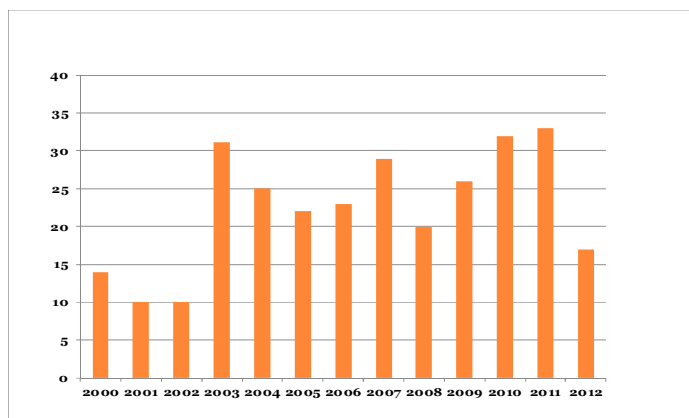


Figure 2.3.10 shows the number of outages affecting more than 5 customers. In 2012 SP AusNet recorded 16 fewer outages than in 2011.

Network Integrity

Figure 2.3.11 Replacement of low pressure gas mains with high pressure against target

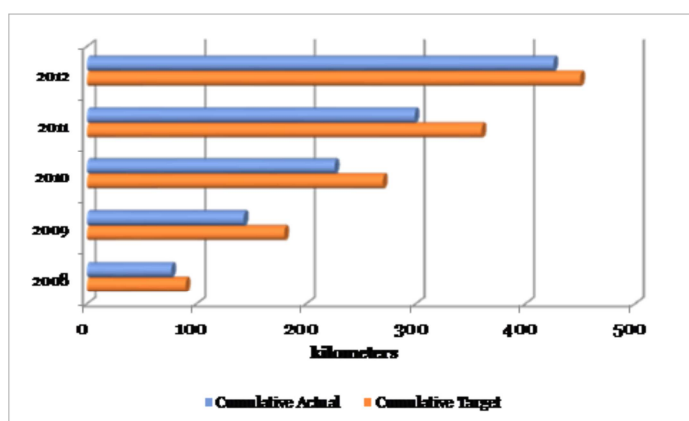


Figure 2.3.11 shows SP AusNet's replacement of low pressure gas mains with high pressure against target. Overall SP AusNet has achieved 95 per cent of its target to replace the low pressure network.

Customer service

In 2012, SP AusNet experienced one GSL payment per 2,960 customers and paid \$20,817 (\$2006) to customers in GSL payments. This represents a decrease compared to 2011 where SP AusNet made one GSL payment per 2,257 customers and paid \$29,606 (\$2006) to customers.

3 Source of information and background information

This section covers the sources of information and other background material relevant to the preparation and understanding of this report.

3.1 Sources of information

This comparative performance report is based on:

- the regulatory accounting statements lodged by the DNSPs
- information provided by the DNSPs on network performance and customer-service statistics
- complaint information supplied by the Energy and Water Ombudsman (Victoria) (EWOV)
- performance reports for the prior regulatory period 2003 – 2007 prepared by the ESCV
- performance report for 2008 prepared by the AER

3.1.1 Accuracy of the financial information submitted by the distributors

The financial performance of distribution businesses is based on the regulatory accounting statements submitted by the businesses under the ESCV's Guideline 17.

The financial information submitted in accordance with the guideline is still subject to review. To ensure timely publication of this report, financial information reported by the DNSPs under the guideline has been used. It should not, however, be assumed that inclusion of the financial information of individual distribution businesses in this report indicates the AER's acceptance of this information for regulatory analysis purposes.

4 Financial performance

Victorian gas DNSPs were required to forecast revenue, operating expenditure and capital expenditure as part of the Victorian GAAR 2008—2012.

The tariffs for regulated gas distribution services that can be charged by each DNSP during an access arrangement period recognise a number of costs, which include:

- the forecast (benchmark) expenditure associated with the delivery of the regulated distribution services
- the forecast (benchmark) rate of return deemed necessary to attract investment capital to the regulated distribution activities.

As part of the 2008 GAAR, the ESCV had in place an efficiency incentive framework which is intended to encourage DNSPs to achieve ongoing efficiencies. Under the ESCV's incentive framework, DNSPs who perform better than the cost benchmarks are entitled to retain benefits for the access arrangement period, whilst DNSPs who underperform face a cost penalty for the access arrangement period. Through the efficiency incentive framework the ESCV sought to encourage DNSPs to share efficiency gains with customers through lower prices in the long term.⁸

4.1 Inflation adjustment

Consistent with the 2008 GAAR this report presents forecasts and actual results as the dollar value as at 1 July 2006.

4.2 Gas distributed

The quantity of gas distributed by each gas DNSP is primarily determined by the annual average temperature and the number of customers connected to the distribution network.⁹ The amount of gas distributed—measured in joules—is an important consideration when assessing the financial performance of each DNSP as this has a direct impact on the amount of revenue the business receives.

This section reports on the levels of the gas being distributed according to the types of distribution tariff.

DNSPs currently charge two types of tariffs (known as Haulage Reference Tariffs):

- Tariff V, which is a volume based tariff and applies to small customers (both residential and non-residential).
- Tariff D (including Tariff M), are demand based tariffs and apply to larger customers. Annual customer charges are determined by the Maximum Hourly Quantity (MHQ) of gas delivered to the customer during the calendar year. To qualify for a demand tariff a customer should be using either more than 10,000 Gigajoules of gas in a 12 month period or more than 10 Gigajoules in an hour¹⁰.

⁸ The AER has a similar approach, through the efficiency benefits sharing scheme.

⁹ Customer numbers are detailed in table A.1.1 in Appendix A1.

¹⁰ More details on gas haulage tariffs are set out in Appendix A.2.

4.3 Tariff V

Table 4.3.1 shows the total gas distributed to tariff V customers by DNSPs over a nine year period. Overall the quantity of gas distributed to Tariff V customers in 2012 was 1.4 per cent higher than forecast.

Table 4.3.1 Gas distributed to Tariff V customers terajoules (TJ) 2004–2012

Distributor	2004	2005	2006	2007	2008	2009	2010	2011	2012
Envestra	32,000	30,100	33,400	31,000	34,000	34,000	35,000	34,300	36,257
Multinet	45,900	42,500	47,300	41,800	45,800	45,000	46,000	45,100	46,839
SP AusNet	31,500	29,200	33,300	30,900	34,600	34,100	36,000	34,700	36,694
All distributors	109,400	101,800	114,000	103,700	114,400	113,100	117,000	114,100	119,789

Source: DNSP annual regulatory accounting reports

The increase in gas distributed to tariff V customers over the access arrangement period were:

- 6.7 per cent for Envestra
- 6.2 per cent for SP AusNet, and
- 2.1 per cent for Multinet.

Envestra noted that the growth in tariff V over time was driven by growth in customer numbers of 10.9 per cent, which was however offset by the decline in average consumption of 3.9 per cent over the period. Customer number growth reflects general population growth, while the decline in average consumption largely reflects warmer weather, improved appliance efficiency and changes in appliance preferences. Multinet commented that the Tariff V volume variance is consistent with the growth in customers and weather trends experienced throughout the regulatory period

SP AusNet noted that the growth in tariff V demand over time had steadily increased (in absolute terms) driven by population growth, especially in the inner west growth corridors. However, per capita demand over the same period had on average declined due a number of factors including increased housing and appliance efficiency, and government efficiency policies.

SP AusNet further commented that gas volumes can materially vary year-to-year depending on weather conditions and, therefore, caution should be used when comparing annual volumes. For example the large difference between SP AusNet's 2007 and 2008 volumes in Table 4.3.1 is largely due to weather.

Overall since 2008, average consumption has decreased by 3 per cent across the DNSPs, with SP AusNet experiencing the largest decrease of 5 per cent. Table 4.3.2 shows the average consumption per customer (Tariff V).

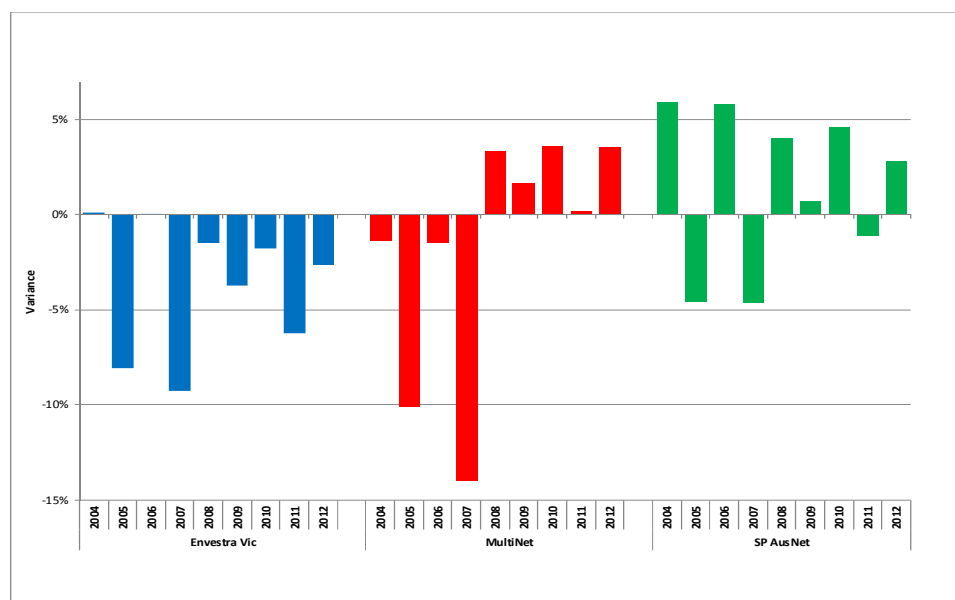
Table 4.3.2 Average consumption per customer on tariff V (gigajoules)

	2008	2009	2010	2011	2012
Envestra Vic	64	62	63	60	62
Multinet	70	68	69	67	69
SP AusNet	64	61	62	58	60
All distributors	66	64	65	62	64

Source: DNSP annual regulatory accounting reports

Figure 4.3.1 details the variance (percentage difference) of each DNSP’s actual annual gas distributed to Tariff V customers compared with the forecasts for the period.

Figure 4.3.1 Difference between Forecast and Actual TJ Distributed - Tariff V



Source: ESCV 2008-12 GAAR and DNSP annual regulatory accounting reports

In 2012 Envestra distributed 2.7 per cent less gas than forecast while both SP AusNet and MultiNet distributed 2.8 and 3.5 per cent respectively, more than forecast.

Table 4.3.3 shows the cumulative total gas being distributed to tariff V customers from 2008 to 2012 against the cumulative forecast to 2012. This shows that during the access arrangement actual gas distributed was closely aligned (0.6 per cent) to the forecasts made for the period.

Table 4.3.3 Comparison of actual and forecast aggregate gas distributed to tariff V (TJ) forecast for 2008–2012

Distributor	Envestra	Multinet	SP AusNet	All DNSPs
Aggregate total Forecast Tariff V 2008-2012	179,212	223,971	172,326	575,509
Aggregate total Actual Tariff V 2008- 12	173,492	229,433	176,061	578,986
Difference (per cent)	-3.2	2.4	2.2	0.6

Source: ESCV 2008-2012 GAAR and DNSPs annual regulatory accounting reports

Over the access arrangement period Envestra distributed 3.2 per cent less gas to tariff V customers than forecast. On the other hand, Multinet and SP AusNet distributed 2.2 per cent and 2.4 per cent more than anticipated, respectively. Envestra was consistently unable to meet the aggressive volume forecasts that were set for the 2008-12 period. SP AusNet commented that stronger than forecast customer growth had led to an increase in total gas distributed to tariff V customers relative to forecast. Colder weather conditions in three out of the five years in the regulatory period also contributed to higher than forecast volume. Multinet commented that the Tariff V volume variance is consistent with the growth in customers and weather trends experienced throughout the regulatory period.

4.4 Tariff D

Tariff D is based on the maximum hourly quantity (MHQ) demanded rather than the volume of gas distributed. For the 2008 GAAR, the ESCV did not request forecasts for Tariff D consumption. It is therefore not possible to provide information regarding differences between the forecast and actual Tariff D consumption.

Tables 4.4.1 and 4.4.2 shows that since 2004 gas distributed to tariff D and tariff D MHQ has decreased across all gas businesses. In particular, compared to 2004 gas distributed to tariff D and tariff D MHQ declined by 16.1 per cent and 13.6 per cent respectively.

Distributing gas to tariff D customers is not affected by changes in weather as commercial and industrial customer demand is not as weather dependant. Since 2008 the quantity of gas distributed to tariff D customers has been decreasing, and in 2012 it was 13.1 per cent less than in 2008. The total tariff D MHQ has also decreased since 2008 and is now 4.6 per cent below 2008 levels. For the current access arrangement period, Envestra experienced the largest decline in gas distributed to tariff D customers with MHQ decreasing by 12.1 per cent.

Table 4.4.1 Tariff D gas distributed 2004–2012 (Gigajoules)

Distributor	2004	2005	2006	2007	2008	2009	2010	2011	2012
Envestra	23,312	22,526	23,633	17,748	22,015	16,807	17,379	20,593	18,755
Multinet	14,719	13,895	14,242	14,950	12,575	11,945	11,685	11,454	11,264
SP AusNet	39,968	37,920	37,976	38,701	40,731	37,500	35,646	35,631	35,420
All distributors	21,933	20,815	20,560	20,427	19,860	18,749	18,511	18,552	18,947

Source: DNSP annual regulatory accounting reports.

Table 4.4.2 Tariff D demand - maximum hourly quantity (MHQ) 2004–2012

Distributor	2004	2005	2006	2007	2008	2009	2010	2011	2012
Envestra	6,770	6,649	6,601	6,629	6,375	5,411	5,511	5,981	5,601
Multinet	4,331	3,975	3,964	3,887	3,534	3,405	3,473	3,580	3,571
SP AusNet	10,832	10,191	9,995	9,911	9,951	9,933	9,527	8,991	9,775
All distributors	78,000	74,341	75,851	71,399	75,322	66,251	64,710	67,678	65,439

Source: DNSP annual regulatory accounting reports.

Envestra commented that the decline in tariff D volume and MHQ reflects the ongoing structural change in the Victorian economy, driven primarily by the relative decline of the manufacturing sector over time.

Multinet commented that Tariff D customer numbers peaked in 2007, and since then, both customer numbers and usage/customer have decreased due to economic conditions in the industrial sector.

SP AusNet commented that the decline in Tariff D gas distributed and demand is due to a number of industrial and commercial consumers either closing down or relocating.

4.5 Return on assets

Return on assets is a measure of a business' overall financial performance. An increase in distribution revenue or a reduction in operating and capital expenditure will drive up the return on assets compared to businesses' original forecasts. The actual pre-tax return on assets has been compared with the pre-tax returns on assets forecast in the 2008 GAAR. The pre-tax return on assets is calculated as revenue less operating expenditure and depreciation divided by the average asset base.

Table 4.5.1 shows the pre-tax return on assets compared to forecast for each business over the gas access arrangement period. It shows they all have had better returns than they forecast which may be due to a number of factors. Envestra commented that the gas businesses concluded that the primary reason for this result was the temporary curtailment of capex during the global financial crisis and changes in weather over the 2008–12 period (which impacts revenue recovery).

SP AusNet commented that the increase in return on assets can be attributed to a reduction in operating expenditure for 2012 compared to the value forecast and an increase in demand above what was forecast.

Table 4.5.1 Return on assets (per cent)

	2008	2009	2010	2011	2012
Envestra					
Actual Return on Assets (Real pre-tax)	8.16	9.29	9.2	8.17	8.19
Forecast Return on Assets (Real pre-tax)	7.42	7.46	7.21	7.00	6.81
Variance	0.73	1.83	1.99	1.17	1.4
Multinet					
Actual Return on Assets (Real pre-tax)	8.34	9.47	9.14	8.95	7.38
Forecast Return on Assets (Real pre-tax)	7.93	7.81	7.79	7.94	8.06
Variance	0.42	1.66	1.34	1.02	-0.68
SP AusNet					
Actual Return on Assets (Real pre-tax)	8.81	9.10	9.74	9.23	9.43
Forecast Return on Assets (Real pre-tax)	7.61	7.81	7.64	7.75	7.74
Variance	1.20	1.29	2.10	1.48	1.69

Source: ESCV 2008-12 GAAR and revisions to GAAR and DNSP annual regulatory accounting reports.

4.6 Revenue

Distributors' revenues are determined by the average customer consumption and total customers numbers. Table 4.6.1 summarises the distribution revenue earned by each company during 2004 to 2012.¹¹

Table 4.6.1 indicates that in 2012 the aggregate revenue earned by the industry was 4.3 per cent higher than in 2011. Compared with 2011, Envestra's revenue increased by 5.9 per cent, Multinet's revenue increased by 2.2 per cent and SP AusNet's revenue increased by 5.1 per cent.

¹¹ Revenue figures include Ancillary Reference Services (ARS).

Table 4.6.1 Distribution revenue 2004–2012 (\$ million, real 2006)

Distributor	2004	2005	2006	2007	2008	2009	2010	2011	2012
Envestra	124.8	120.2	125.5	118.3	133.9	140.9	144.7	144.2	152.7
Multinet	155.3	149.3	154.4	146.8	155.8	158.4	157.1	157.7	161.0
SP AusNet	146.2	138.7	148.4	143.3	161.7	168.0	172.7	169.9	178.6
All distributors	426.3	408.2	428.3	408.3	451.4	467.3	474.5	471.8	492.3

Source: DNSP annual regulatory accounting reports.

Since 2008 the aggregate revenue received by Victorian gas distributors was \$2.36 billion or 0.8 per cent higher than expected (refer to table 4.6.2).

Table 4.6.2 Aggregate total revenue and percentage difference between forecast and actual 2008–2012 (\$ million, real 2006)

	Envestra	Multinet	SP AusNet	Total
Aggregate total Forecast Revenue 2008-2012	9731.1	786.9	835.0	2,353.0
Aggregate total Actual Revenue 2008-2012	716.4	804.8	850.8	2357.3
Difference (per cent)	-2.8	2.3	1.9	0.2

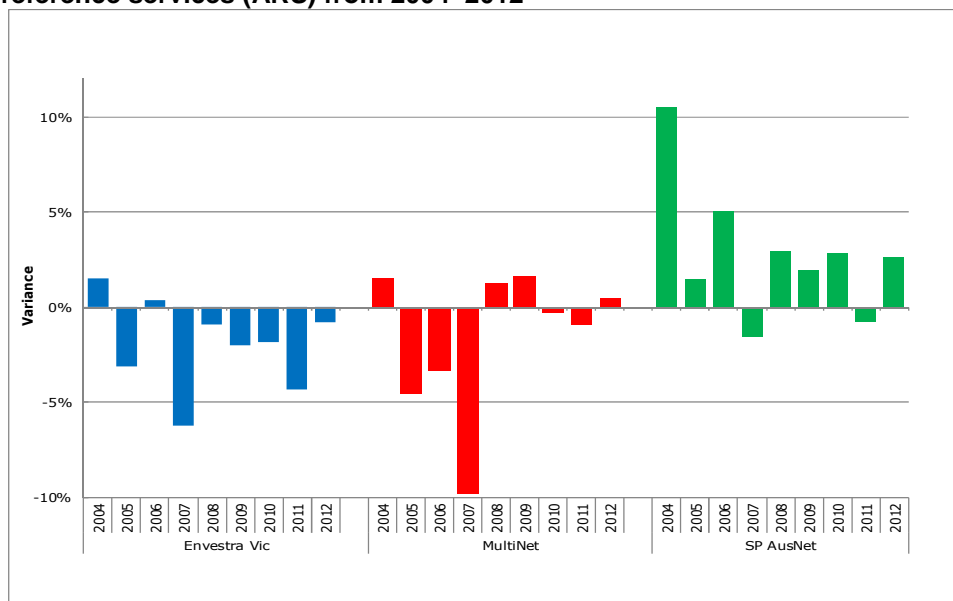
Source: ESCV 2008-12 GAAR and DNSP annual regulatory accounting reports.

Figure 4.6.1 shows the variance in distribution revenue compared with the 2008–12 GAAR forecasts. Multinet received more revenue than forecast. SP AusNet's actual revenue also exceeded forecast for each year, except 2011, while Envestra under-recovered against forecasts for each year over the access arrangement period.

Revenue variations were due to a number of factors. In the case of Envestra, the under-recovery of revenue relative to forecast for each year of the access arrangement period is an outcome of actual volumes delivered being consistently less than the forecast volumes.

Multinet commented that the revenue outperformance is consistent with higher volumes throughout the period. SP AusNet commented that its revenue variance was closely aligned with the higher than forecast volume delivered to customers. As already noted, SP AusNet's volumes exceeded forecast due to strong customer growth and colder weather conditions in three out of the five years of the regulatory period.

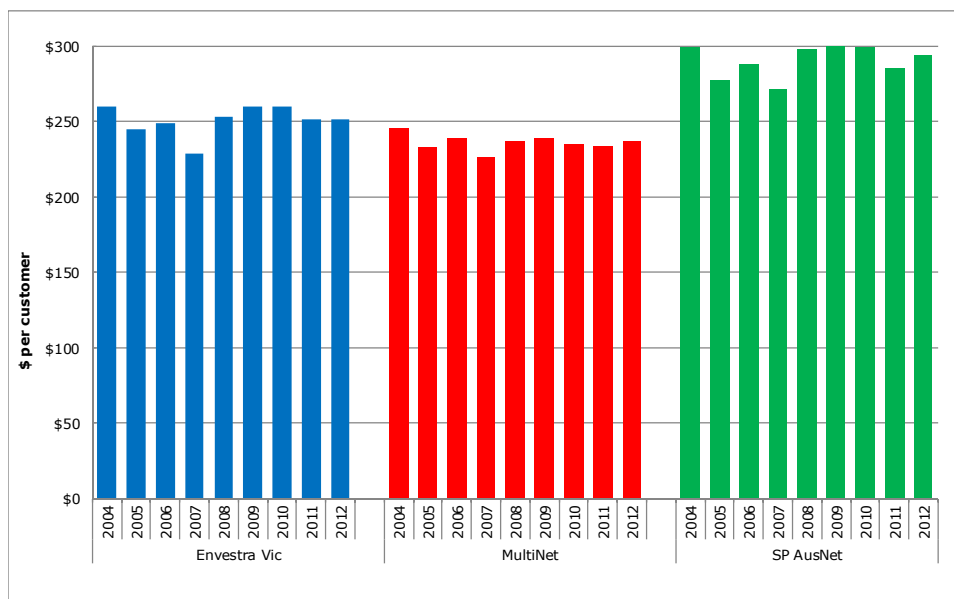
Figure 4.6.1 Percentage difference between forecast and actual revenue including ancillary reference services (ARS) from 2004–2012



Source: ESCV 2008-12 GAAR and DNSP annual regulatory accounting reports

Figure 4.6.2 shows that network revenue per customer for each of the businesses. SP AusNet received more revenue per customer than Envestra and MultiNet. Overall network revenue per customer has remained relatively stable over the period 2004 to 2012.

Figure 4.6.2 Network revenue per customer (\$ million, real 2006)



Source: DNSP annual regulatory accounting reports.

4.7 Distribution expenditure

There are two categories of expenditure that determine each distributor's expenditure profile on regulated distribution services—operating expenditure (opex) and capital expenditure (capex).

4.7.1 Operating expenditure

Operating expenditure includes costs associated with functions such as:

- maintenance
- network operations
- billing and revenue collection
- market development activities
- customer connections
- maintenance of meters
- management and administration.

The GAAR established an annual opex forecast for each company for the years 2008 to 2012. Table 4.7.1. summarise each distributor's actual opex over the period.

Table 4.7.1 Actual annual operating expenditure (in \$million, real 2006)

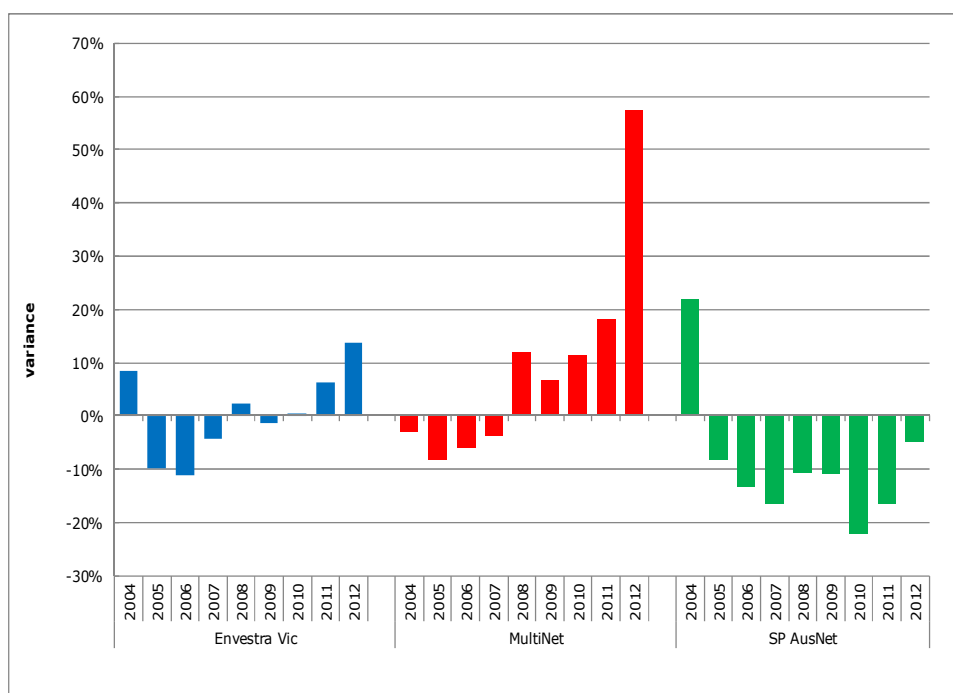
	2008	2009	2010	2011	2012
Envestra	45.1	45.2	45.6	48.8	53.1
Multinet	46.1	44.0	45.5	48.1	63.8
SP AusNet	38.5	38.5	34.3	37.3	43.6
All distributors	129.7	127.8	125.4	134.2	160.6

Source: DNSP annual regulatory accounting reports

In 2012, industry level opex increased by 19.6 per cent from 2011. Envestra's and Multinet's actual opex was 13.8 per cent and 57.5 per cent above forecast, respectively. In contrast, SP AusNet reported that actual opex was 4.7 per cent below forecast.

Figure 4.7.1 shows the long term variance of each businesses total annual opex. It reveals that Multinet have consistently spent more than GAAR forecasts since 2008, while SP AusNet has consistently spent less.

Figure 4.7.1 Percentage difference between forecast and actual opex (including ancillary reference services)



Source: ESCV 2002 GAAR, 2008 GAAR and annual regulatory accounting reports.

Overall SP AusNet has underspent the access arrangement benchmarks. SP AusNet commented that total opex has remained relatively flat since 2005, with delivery cost efficiencies offsetting the upward pressure on costs due to network growth and input price escalation (labour and materials).

Envestra and Multinet have both spent more than forecast by 4.4 and 21.1 per cent, respectively. Multinet commented that the benchmarks set by the ESCV were too low to operate the network in a safe and reliable manner. Accordingly the business undertook expenditure that it considered was necessary to safely and reliably manage the network.

Envestra commented that the higher than benchmark opex reflect increases in:

- Leak repair costs—due to the continued deterioration of old mains that needed to be repaired and challenging environmental conditions, which triggered a significant increase in the number of water-in-mains incidents, with a commensurate increase in restoration and repair costs; and
- Regulatory obligations—expanding environmental control obligations and traffic management costs driven by changes to State and Local Government laws, which have had a material impact on the cost of maintenance activities over the period.

Table 4.7.2 shows the cumulative actual opex from 2008 to 2012 compared to the forecast for the same period.

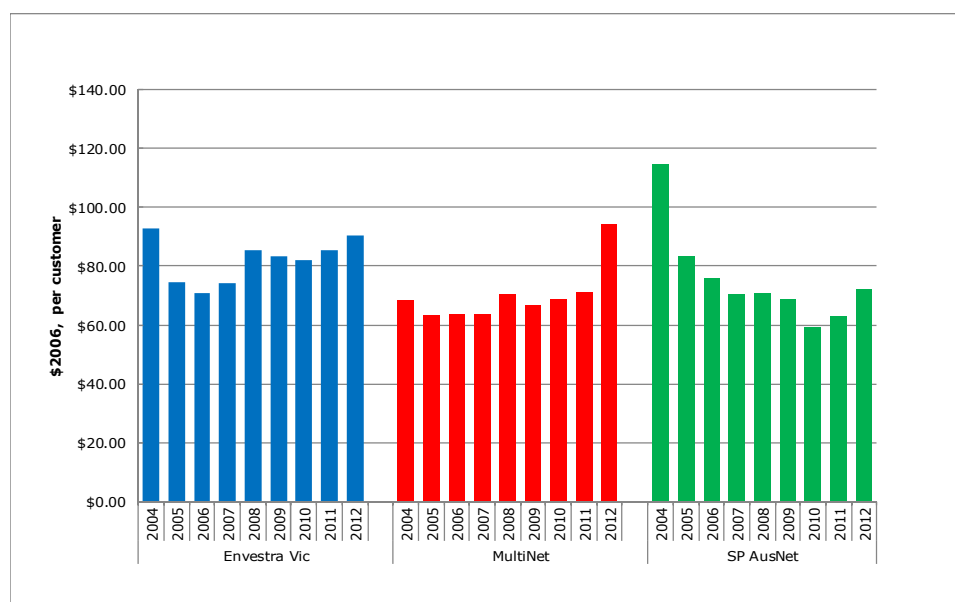
Table 4.7.2 Aggregate operating expenditure and percentage difference between forecast and actual 2008–2012 (\$ million, real 2006)

	Envestra	Multinet	SP AusNet	Total
Aggregate total Forecast operating expenditure 2008–2012	227.76	204.47	220.57	652.79
Aggregate total Actual operating expenditure 2008–2012	237.77	247.58	192.25	677.67
Difference (per cent)	4.4	21.1	-12.8	3.8

Source: DNSP annual accounting reports

Figure 4.7.2 shows that operating expenditure per customer increased for every business in 2012 compared to the prior year.

Figure 4.7.2 Operating Expenditure per customer, including ancillary reference services (\$ million, real 2006)



Source: DNSP annual accounting reports.

4.7.2 Capital expenditure

Capital expenditure (capex) includes costs associated with functions such as:

- renewal of low pressure mains
- growth-related network augmentation
- new and replacement meters
- other (including expenditure on information technology, and supervisory control and data acquisition systems).

The capex reported by the distribution businesses only represents the portion that is financed by them. It excludes the value of any assets paid for directly by customers—known as 'customer contributions'.

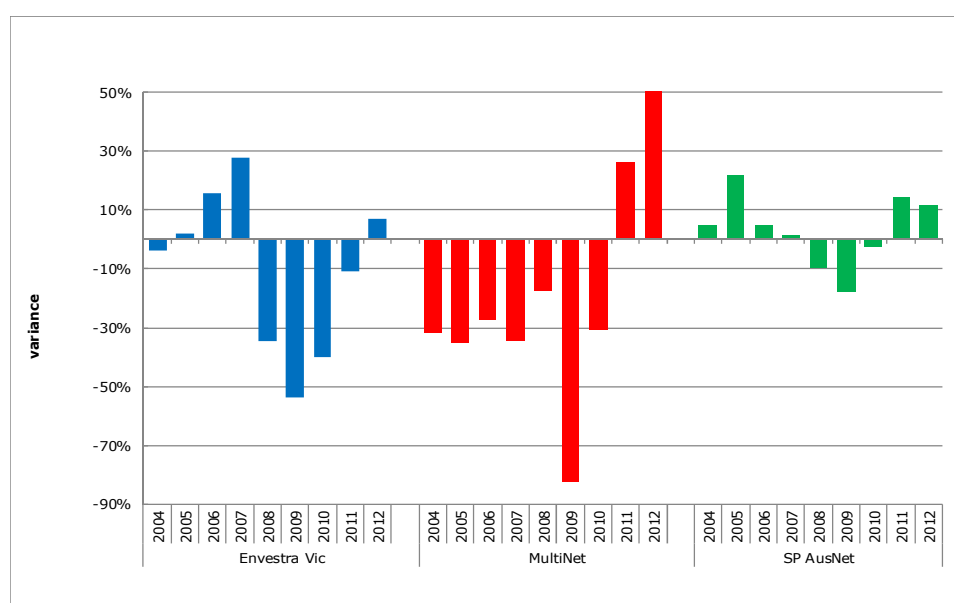
Tables 4.7.3 summarises each company's actual capex during 2008–2012. In 2012, net capital expenditure increased by 18.6 per cent compared to a year earlier and was the highest amount spent by the businesses during the access arrangement period. Nevertheless, this was still 15.9 per cent lower than set benchmarks. Figure 4.7.3 shows the percentage differences between forecast and actual capex.

Table 4.7.3 Actual net capital expenditure (\$ million, real 2006)

	2008	2009	2010	2011	2012
Envestra	46.3	38.6	47.4	61.5	85.3
Multinet	32.4	11.0	32.0	52.0	63.2
SP AusNet	59.5	60.3	61.0	68.6	65.2
All distributors	138.3	109.9	140.5	182.1	213.8

Source: DNSP annual accounting reports.

Figure 4.7.3 Percentage difference between forecast and actual capital expenditure



Source: ESCV 2002 GAAR and 2008-12 GAAR and DNSP annual accounting reports.

Envestra commented that the mains replacement program has significantly ramped up in the last two years of the access arrangement as the difficulties arising from the global financial crisis have mostly passed. Envestra is now replacing mains at rates far higher than it has ever done historically. Actual capex would have been significantly higher than benchmark levels in 2012 had it not been for lower customer connections relative to forecast levels.

Multinet commented that actual capital expenditure was affected because Multinet and capital markets were unprepared for the ESCV's reduction in the equity beta from 1 to 0.8 in the 2008–12 access arrangement. Multinet considered that the lower beta combined with the impact of the global financial crisis adversely affected its ability to access capital markets and the true cost of funding. As

a consequence, Multinet argues, it had no choice but to defer a proportion of the pipework replacement program.

SP AusNet commented that the overspend in capital expenditure in 2012 was due to the connection of more customers than the set benchmark and completion of 126.5km of Low Pressure to High Pressure mains replacement.

Table 4.7.4 shows the total aggregate actual capex versus the total aggregate forecast capex from 2008 to 2012.

Table 4.7.4 Total capital expenditure (including ancillary reference services)

	Investra	Multinet	SP AusNet	All DNSPs
Total aggregate Capital Expenditure Forecast 2008 -2012	381.8	228.3	320.3	930.4
Total aggregate Capital Expenditure Actual 2008–2012	279.3	190.6	314.7	782.8
Difference in per cent	-26.9	-16.5	-1.7	-15.9

Source: ESCV 2008-12 GAAR and DNSP annual regulatory accounting reports.

5 Reliability of supply

Reliability of supply is a measure of the level of availability of gas supply to customers. This section provides the performance indicators for the average customer's time off supply, interruption frequency, number of outages on the supply network and major supply interruption events in 2012. Appendix A.3 defines the performance measures used for supply reliability.

On average, customers could expect to experience an unplanned gas outage once every 45 years as:

- gas distributors prefer to carry out their works without causing supply interruptions to customers. This avoids the time needed to completely drain a length of pipeline of its pressure, and the considerable time to purge air out of gas pipes prior to reconnection. It also avoids the additional need for the gas business staff or customers to purge the gas pipes inside customers' premises and to re-ignite pilot lights of gas appliances after supply interruptions.
- gas pipes are predominantly buried underground and are generally not affected by bad weather.

In reviewing supply reliability, it is important to recognise that network reliability is best examined when analysed as a trend over a long period of time. There can be significant short-term variations in reliability measures that are not directly related to changes in the condition of the gas supply network.

Details of supply reliability are set out in tables A.3.1 to A.3.4 of appendix A.3. In terms of minutes-off-supply and frequency and duration of interruptions, the highlights are discussed in the following sections.

5.1 Average Minutes-off-supply per customer (SAIDI)

Figure 5.1.1 shows the performance of the three businesses. The average total minutes-off-supply in 2012 for all Victorian customers was 7.1 minutes,¹² 38.0 per cent more than in 2011.

In 2012, Envestra recorded the highest average total minutes-off-supply per customer at 10.32 minutes (an increase of 46 per cent compared to 2011) followed by SP AusNet at 6.38 minutes (a decline of 43.6 per cent). Multinet experienced the lowest minutes-off-supply at 2.5 minutes (a 42.1 per cent increase compared to 2011). Envestra notes the significant increase in the mains renewal program is the reason for the significant increase in planned SAIDI. This is also reflected in the total SAIDI.

Figure 5.1.1 also shows that in 2012 the level of average minutes-off-supply caused by unplanned outages for Victorian customers declined by 12.6 per cent.

In 2012, average minutes-off-supply per customer caused by unplanned outages for Envestra fell to 3.48 minutes; for Multinet it declined by 12.7 per cent to 2.33 minutes; for SP AusNet the average minutes-off-supply decreased by 28.7 per cent, to 0.74 minutes. Historically, SP AusNet's average minutes-off-supply per customer for unplanned outages have been the most stable and the lowest among the distributors.

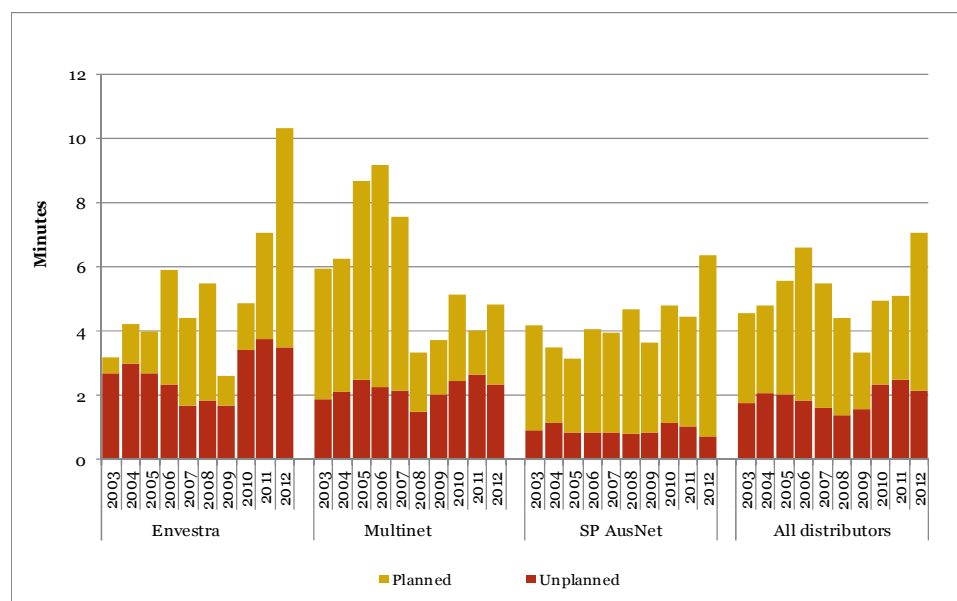
¹² SAIDI—system average interruption duration index—the total minutes, on average, that a customer could expect to be without gas over a specific time period. Total SAIDI comprises both planned and unplanned minutes off supply. Calculated as the sum of the duration of each customer interruption (in minutes), divided by the total number of connected customers averaged over the specific period of time.

Overall there was an increase in the industry average minutes-off-supply due to planned outages of 85.8 per cent in 2012 compared to a year earlier. In particular:

- Envestra reported an increase of 107 per cent to 6.84 minutes
- Multinet reported an increase of 83 per cent to 2.5 minutes and
- SP AusNet reported an increase of 66 per cent to 5.64 minutes.

Envestra and SP AusNet both commented that the significant increase in the mains renewal program is the reason for the increase in planned minutes-off-supply in 2012.

Figure 5.1.1 Average minutes-off-supply per customer (SAIDI)



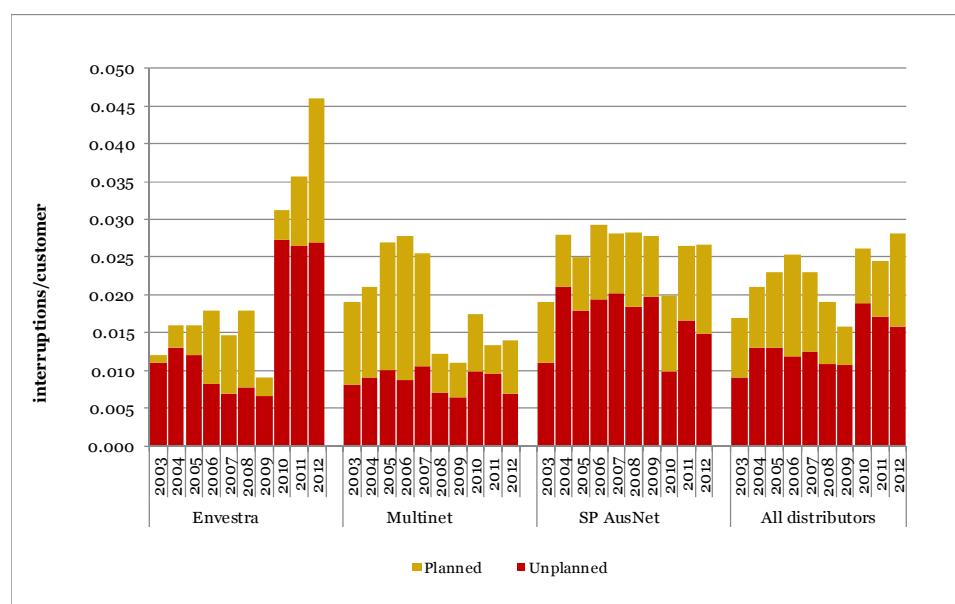
Source: DNSP quarterly KPI reports

5.2 Average number of interruptions per customer

Figure 5.2.1 shows that, on average, the total frequency of supply interruptions experienced by Victorian gas customers in 2012 was 0.028¹³, up 6.0 per cent compared to 2011.

¹³ SAIFI— system average interruption frequency index—the number of occasions per year when each customer could, on average, expect to experience an interruption. Calculated as the total number of customer interruptions, divided by the total number of connected customers averaged over the specific period of time.

Figure 5.2.1 Average numbers of interruptions per customer (SAIFI)



Source: DNSP quarterly KPI reports.

The 2012 results represent on average, one interruption every 36 years for Victorian customers. For Envestra this is one interruption in 22 years, for Multinet this is one interruption in 75 years and for SP AusNet this is one interruption in 38 years.

In 2012 all gas distributors experienced an increase in the number of planned interruptions with Envestra reporting an increase of 127 per cent, Multinet 83 per cent and SP AusNet 21 per cent.

Envestra commented that outage key performance indicators reported since 2010 now include all supply interruptions including reported supply faults, leaks and damages that cause loss of supply, unplanned service renewals and repairs that require short duration supply interruptions. Previously only reported supply faults, unplanned service renewals and service damages were included in outage KPI data. This explains the increase in average numbers of interruptions per customer in 2010. Envestra also stated that significant water related issues also contributed to higher SAIFI.¹⁴

¹⁴ Prior to 2010 Envestra reported the following for unplanned supply interruptions:

1. supply faults no gas reported by customers
2. Third party damages to gas service pipes.
3. Unplanned gas service pipe renewals.

Since 2010 the Envestra also includes the following for unplanned supply interruptions:

1. gas leaks causing supply loss (commences when leak is reported).
2. short (momentary) interruptions for unplanned maintenance (e.g. change of regulator) at consumers property.

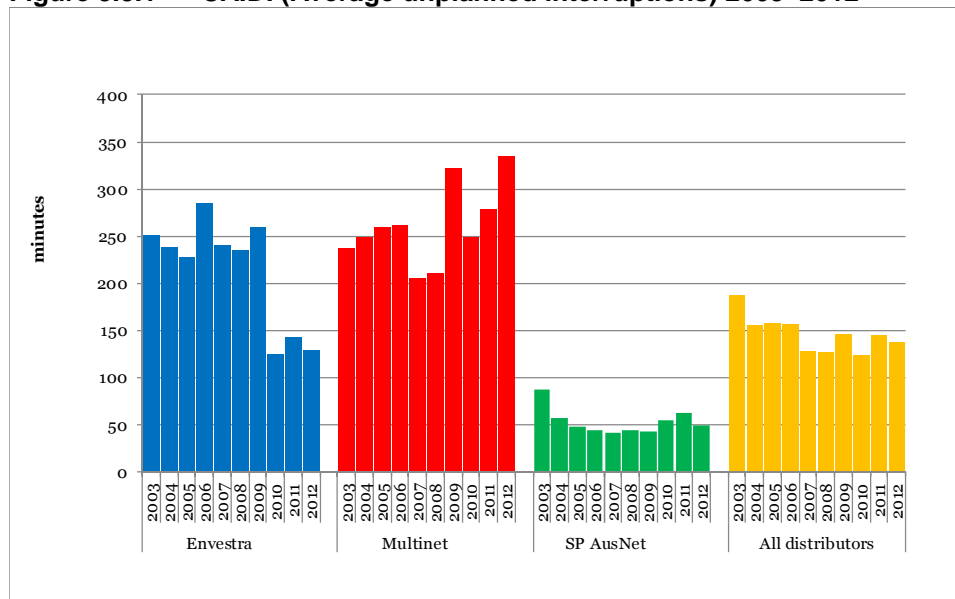
This inclusion since 2010 significantly increases the number of supply interruptions reported (SAIFI). It also results in a reduction to CAIDI as increased number and relative short duration of the additional supply interruptions significantly decreases the average duration of supply interruptions (CAIDI).

5.3 Average interruption duration (minutes per interruption) — Interruption duration CAIDI

Figure 5.3.1 shows that the reported average duration of unplanned interruptions in 2012 was 138 minutes¹⁵, a 5 per cent improvement on the previous year. The average duration of unplanned interruptions for Envestra decreased by 9 per cent to 129 minutes. For Multinet the increase was 20 per cent to 334 minutes and for SP AusNet the decline was 20 per cent to 50 minutes.

Envestra commented that, although in this case the average duration of unplanned interruptions did fall, unplanned interruptions are mostly due to circumstances outside of its control (e.g. third party damages, heavy rains). Given this, unplanned interruptions can fluctuate quite significantly from year to year for reasons not associated with actions of the distributor.

Figure 5.3.1 CAIDI (Average unplanned interruptions) 2003–2012



Source: DNSP quarterly KPI reports.

5.4 Number of unplanned outages

Regulated businesses are required to report all unplanned gas outages, which are classified according to whether they affect five or fewer customers, or more than five customers.

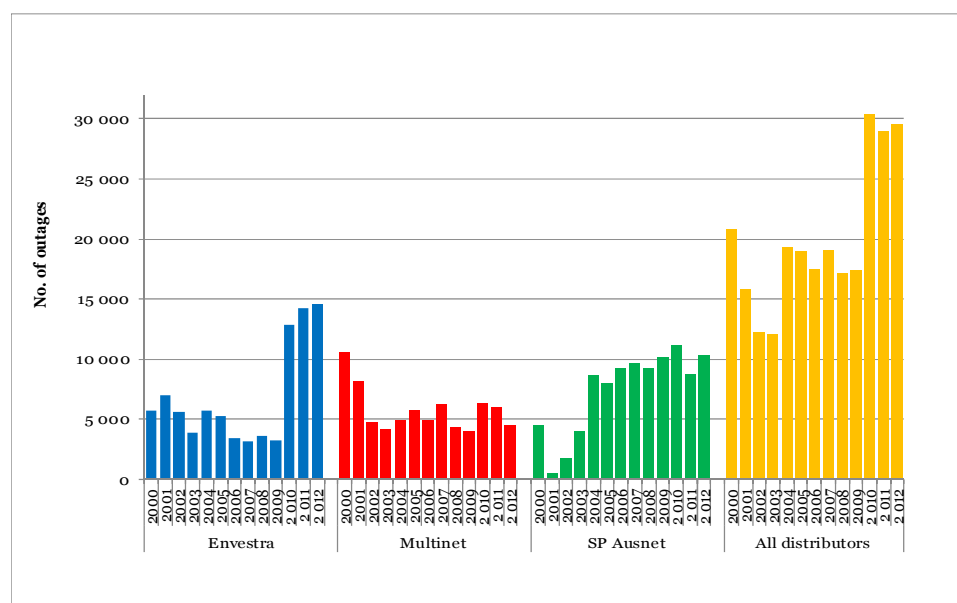
Figure 5.4.1 shows the number of outages affecting five customers or fewer for each entity since 2000:

- There was an aggregate increase of 2 per cent in 2012 compared with the previous year, from 28,959 to 29,493.
- For Envestra, the number of unplanned outages affecting less than five customers increased by 3 per cent in 2012, from 14,230 to 14,589.
- Multinet reduced the number of unplanned outages affecting less than five customers by 24 per cent from 6,019 to 4,576.

¹⁵ CAIDI—customer average interruption duration index— the average time taken for supply to be restored to a customer when an interruption has occurred. Calculated as the sum of the duration of each customer interruption (in minutes), divided by the total number of customer interruptions (SAIDI divided by SAIFI)

- SP AusNet suffered an increase in the number of unplanned outages affecting less than five customers by 19 per cent, from 8,710 to 10,328.

Figure 5.4.1 Number of outages affecting five customers or fewer

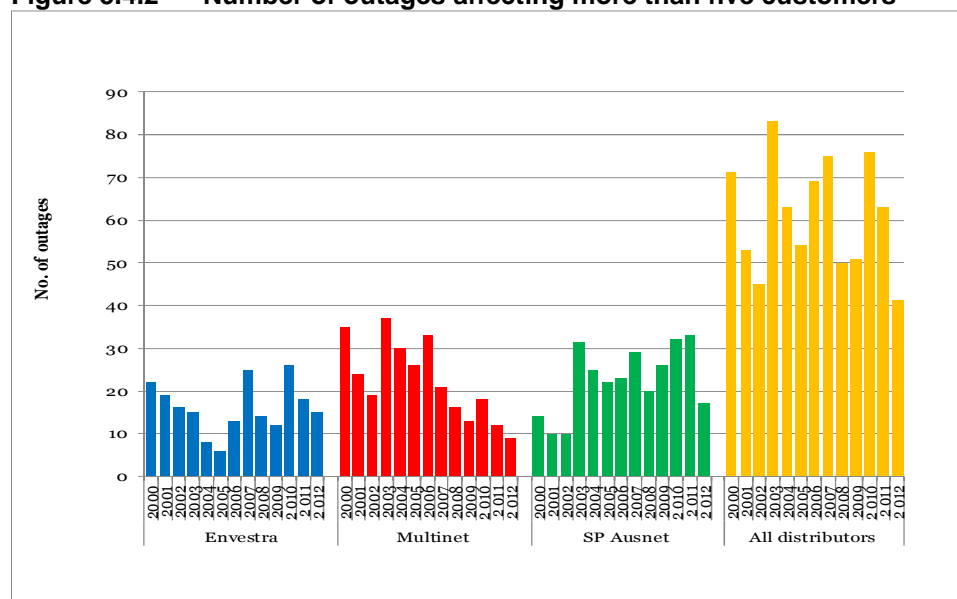


Source: DNSP quarterly KPI reports

Figure 5.4.2 shows the number of outages affecting five or more customers, for each business since the turn of the millennium. Compared to the outages that affect fewer than five customers, these incidents are far less common, and greater percentage variation might be expected from year to year. Appendix A.3 provides further details of gas supply reliability.

- Figure 5.4.2 shows that the total number of outages affecting more than five customers was 41 in 2012, an improvement of 34.9 per cent since 2011.
- In 2012 Envestra’s total number of outages affecting 5 or more customers decreased by 17 per cent—recording 15 outages—and is close to the average for the period since 2000 of 16.
- Multinet also decreased the number of outages affecting more than 5 customers by 47 per cent—recording 9 outages. The 2012 figure is the lowest for the 2000–2012 periods and is 47 per cent below the average of 23 for the period since 2000.
- SP AusNet decreased the number of outages affecting more than 5 customers by 49 per cent—recording 17 outages. The 2012 figure is 21 per cent higher than the average for the period since 2000.

Figure 5.4.2 Number of outages affecting more than five customers



Source: DNSP quarterly KPI reports

5.5 Significant supply interruption events in 2012

Investra reported no outages affecting 100 or more consumers. The following supply interruptions were the worst recorded in 2012:

- 11/11/12 - Barry St, Carlton, a block of 80 units for 3.3 hours due to water in service; and
- 13/08/12 - Martin St, Heidelberg, 50 houses for 5 hours - burst water main forcing water into gas main.

SP AusNet reported no outages affecting 100 or more customers in 2012.

Multinet reported no outages affecting 100 or more customers in 2012.

6 Network integrity

A critical aspect of gas supply safety is network integrity, which can be measured in terms of loss of containment (leakages), third-party damage and replacement of aged assets. These measures may also provide an indication of supply reliability. This report covers the assessment of network integrity in 2012 from a reliability perspective. Enquiries about gas safety should be directed to Energy Safe Victoria (ESV, formerly the Office of Gas Safety).

The steady improvements in network integrity indicators in 2012 suggest that the businesses have adequate asset management practices in place.

6.1 Loss of containment

The businesses are required to provide information on the number of priority A and B publicly reported leaks repaired. This indicator is not intended to count the number of leak reports or telephone calls. The indicator is based on the number of priority A and B publicly reported leak repair jobs completed during the month¹⁶. The industry is not required to report on outstanding publicly reported leaks because they must repair all priority A and B leaks within 24 hours.

We note that the distributors also identify and repair smaller leaks by conducting leakage surveys. As the approach used by each company differs, comparison between them is more difficult. Previously they provided information to the ESCV on the total number of outstanding leaks from their leakage surveys referred to as unrepaired leaks. That data is not required to be submitted to the AER. Information on distributors' historical comparative performance in relation to unrepaired leaks is available in the ESCV's previous comparative performance reports.

On this basis, we cannot compare unrepaired leaks information. Instead the average number of repaired gas leaks publically reported by each business during 2008–2011 has been summarised in Table 6.1.1

Table 6.1.1 Number of repaired gas leaks for 2008–2012

	Envestra	Multinet	SP AusNet
2008	8297	11,241	10,987
2009	10,249	11,275	12,655
2010	11,479	11,274	12,603
2011	11,707	10,401	9,898
2012	12,415	9,742	11,016

Source: DNSP quarterly KPI reports.

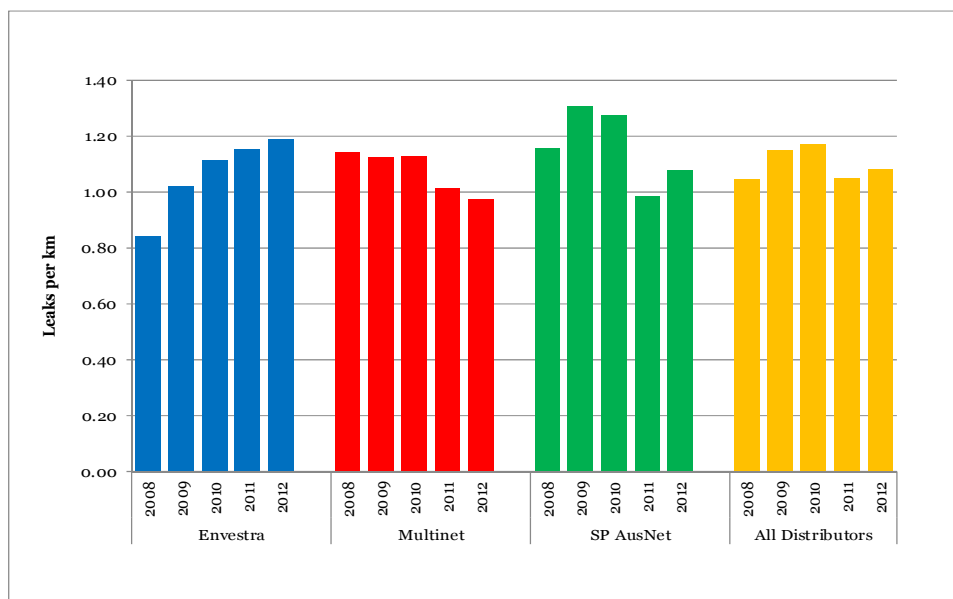
Figure 6.1.1 indicates that in 2012, the total number of repaired gas leaks per kilometre increased by 3 per cent from 2011. In particular:

- The number of gas leaks reported and repaired by Multinet decreased by 4 per cent.
- The number of gas leaks reported and repaired by SP AusNet increased by 9 per cent.

¹⁶ See appendix A.6 for a description of priority A and B gas escape jobs.

- The number of gas leaks reported and repaired by Envestra increased by 3 per cent.

Figure 6.1.1 Repaired leaks per kilometre of gas pipe



Source: DNSP quarterly KPI reports.

6.2 Mechanical damage

The reporting of mechanical damage and service damage monitors the structural and functional integrity of the distribution network. External damage to networks is a significant cause of gas escapes and customer supply interruptions.

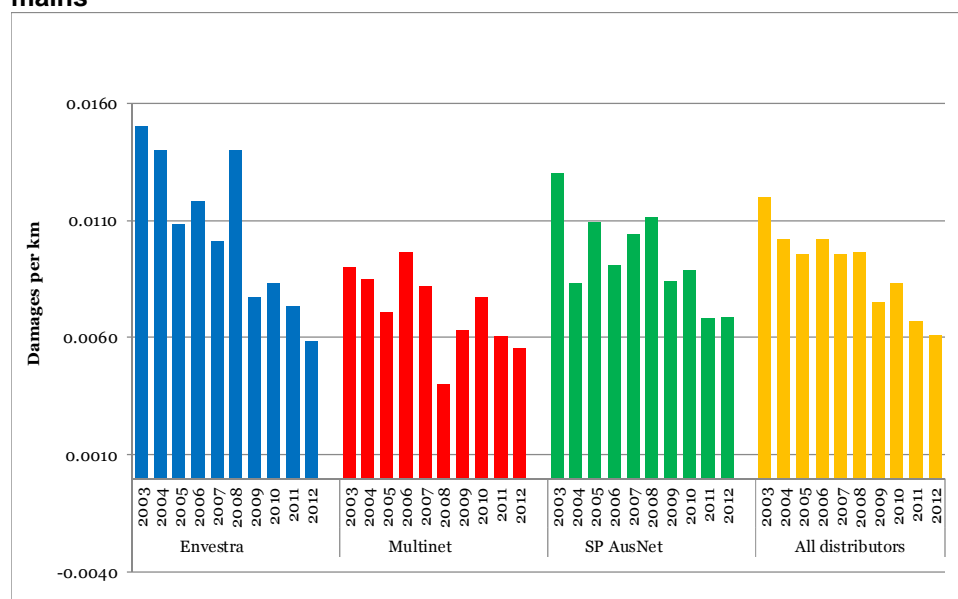
Figure 6.2.1 shows the number of incidents of mechanical damage to mains per kilometre. In 2012, distributors reported 183 instances of damage to gas distribution mains, 17 fewer than in 2011, approximately a 9 per cent reduction.¹⁷ This represents 0.00610 incidents per kilometre of distribution pipelines¹⁸. In particular:

- Envestra reported 59 incidents in 2012 or 18 per cent fewer incidents/kilometre compared to 2011
- Multinet reported 55 incidents in 2012 or 10 per cent fewer incidents/kilometre compared to 2011 and
- SP AusNet reported 69 in 2011 or 3 per cent more incidents/kilometre compared to 2011.

¹⁷ The number of damages to mains and services is derived by tallying the recorded mains damages and service damage jobs completed during each month.

¹⁸ The overall very low rate of mains damages (0.00672 incidents per kilo meter) can be attributed to the effective Dial-Before-You-Dig process that is well established in Victoria.

Figure 6.2.1 Mechanical damage to mains - number of incidents per kilometre of distribution mains



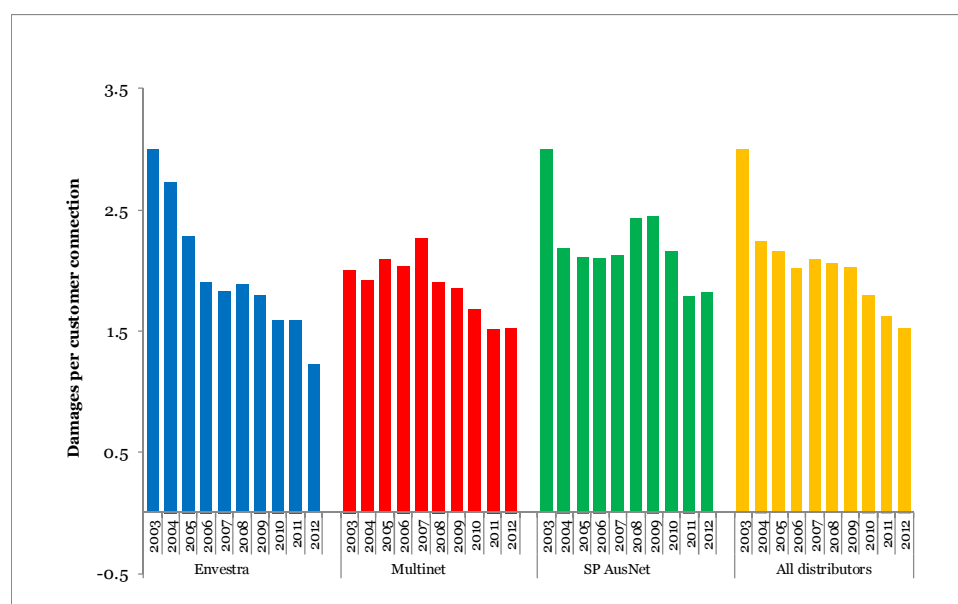
Source: DNSP quarterly KPI reports

6.3 Service connection damage

Figure 6.3.1 shows the damage to service connections for the 2003-2012 period. There were 2846 incidents of damage to customer service connections in 2012. This represents a decrease of approximately 141 incidents or a 5 per cent improvement since 2011. The 2012 figures indicate a decline relative to the previously steady levels since 2004. In particular:

- Envestra reported a 22 per cent reduction in incidents of damage to customer service connections in 2012 compared to 2011 from 911 incidents to 714 incidents
- Multinet reported a 1 per cent increase in incidents of damage to customer service connections in 2012 compared to 2011 from 1017 incidents to 1025 incidents
- SP AusNet reported a 5 per cent increase in incidents of damage to customer service connections in 2012 compared to 2011 from 1059 incidents to 1107 incidents.

Figure 6.3.1 Service damage per customer 2003–2012



Source: DNSP quarterly KPI reports.

6.4 Low pressure network replacement

Another significant cause of gas escapes is chronic leakage from older, generally low pressure network areas. For the current access arrangement period each business forecast its capital expenditure to replace old low pressure cast iron pipe that is more prone to leakage. They also forecast how many kilometres of pipeline they would replace each year. It is therefore important to monitor the progress of programmes to replace older, leakier parts of the networks. The industry is required to report each month to the AER:

- The length of low pressure gas mains decommissioned and replaced by high pressure gas mains (km) and
- The number of low pressure services replaced with high pressure services.

Figure 6.4.1 shows the cumulative number of low pressure kilometres of gas mains decommissioned and replaced with high pressure pipeline for each distributor compared to targets set at the commencement of the access arrangement period. This shows that all the businesses are below target. Specific details are set out in Appendix A.3, table A.3.8. To date for the target to 2012, SP AusNet has replaced 95 per cent, Multinet has replaced 63 per cent and Envestra has replaced 63 per cent of their respective targets (refer to Figures 6.4.1, 6.4.2, 6.4.3 and 6.4.4).

Figure 6.4.1 Replacement of low pressure gas mains with high pressure against target 2008–2012

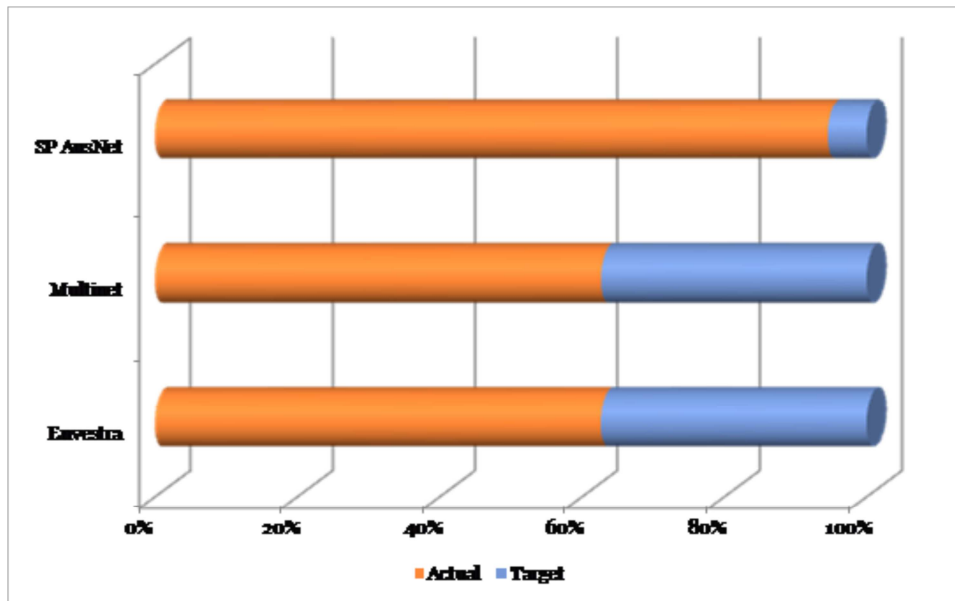
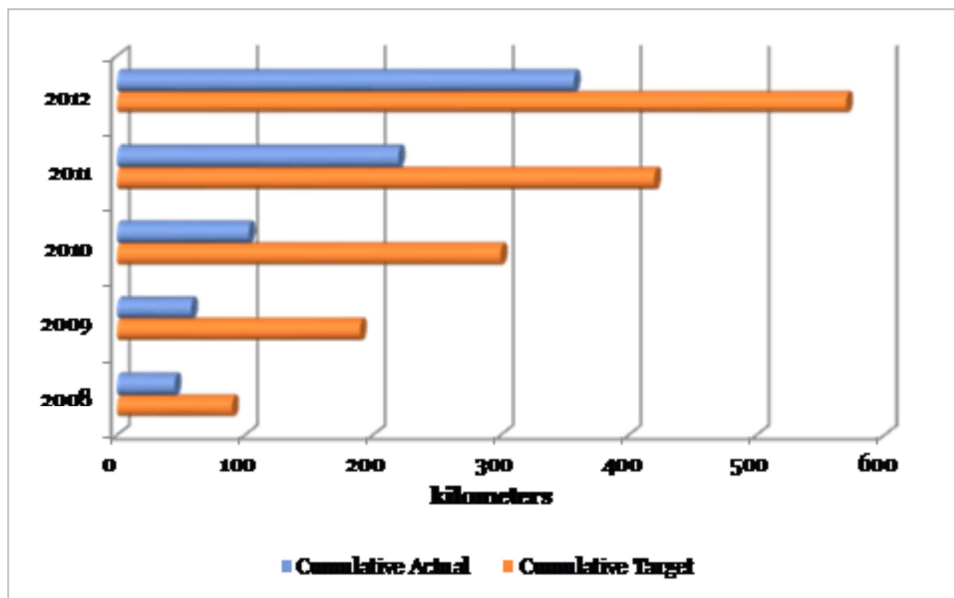


Figure 6.4.2 Envestra—Replacement of low pressure gas mains with high pressure against target 2008–12



Envestra commented that in response to the global financial crisis the mains replacement program was temporarily curtailed mid regulatory period. The program has since been ramped up, with mains replacement occurring at rates higher than at any other time in the past.

Figure 6.4.3 Multinet - Replacement of low pressure gas mains with high pressure against target

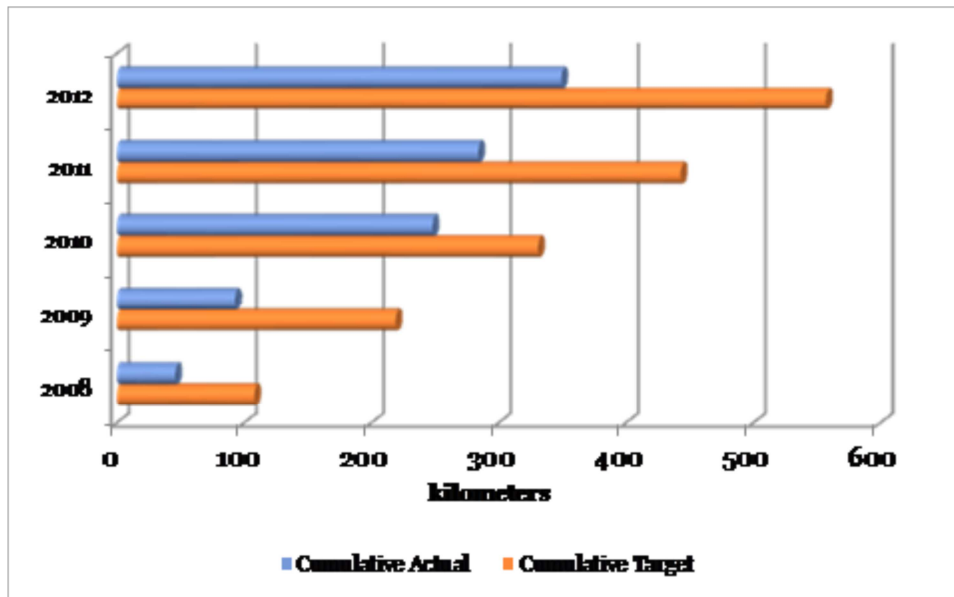
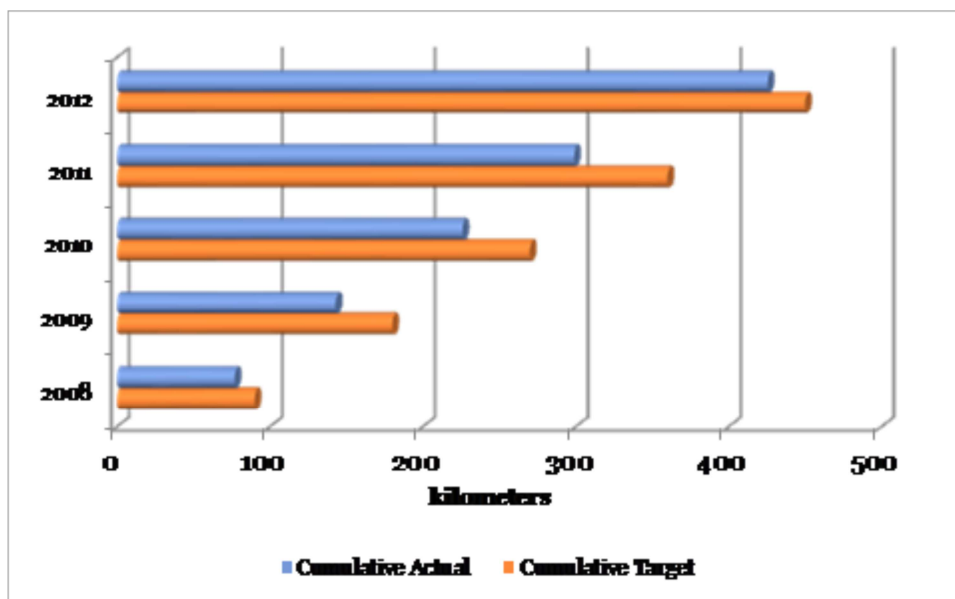


Figure 6.4.4 SP AusNet - Replacement of low pressure gas mains with high pressure against target



7 Customer Service

The levels of customer service achieved by the distributors are measured in terms of their performance in responding to customer calls about serious incidents, meeting customers' appointments on time, making supply connections and maintaining supply reliability above the minimum reliability level. Customer service is also measured in terms of the proportion of complaints received by the businesses, and received for full investigation by the Energy and Water Ombudsman (Victoria) (EWOV).

7.1 Response to customer calls

Distributors reported on their response times to customer calls about serious incidents. The response time is defined as the time elapsed from when a report classified as a 'priority A gas leak incident' is received by the business, to the time taken for a company representative to arrive on site.¹⁹ The following targets have been established:

- metropolitan business hours (7 am to 7 pm weekdays)—95 per cent within 60 minutes
- metropolitan after hours—90 per cent within 60 minutes
- country all hours—90 per cent within 60 minutes.

Table 7.1.1 summarises the response to customer calls.

Table 7.1.1 Response to customer calls- Percentage of response meeting target for 2012 (per cent)

DNSP	Metro Calls		Country calls
	Business Hours (target: 95 per cent)	After Hours (target: 90 per cent)	(target: 90 per cent)
Envestra	90	86	98
Multinet	97a	NA a	NA b
SP AusNet	99	99	99

Notes: a Multinet does not differentiate between business hours and after hours. Multinet instead targets a 95 per cent response rate for all hours.
b Multinet does not have country customers. Rounded off to the nearest whole number.

While Multinet and SP AusNet were able to achieve above the response to customer call targets, Envestra fell below the target for responding to customer calls during business and after hours.

Envestra and SP AusNet were both able to achieve above targets for responding to country customer calls.

¹⁹ A description of *Priority A* gas leak incidents is contained in appendix A.5 of this report.

7.2 Guaranteed Service Level payments

As part of the 2008 GAAR the ESCV required business to operate under the Guaranteed Service Level payment scheme. The scheme's main objective is to encourage distributors to improve service and reliability levels to the worst served customers. The scheme also addresses areas of service that customers regard as important and contains triggers and payment levels that provide an incentive for distributors to increase performance. These include repeat interruptions, lengthy interruptions, meeting appointments and connections. A distributor will be required to make payments to customers in the following instances:

- failure to attend an appointment within an agreed appointment window
- failure to connect a customer within one day of the agreed date
- unplanned interruptions to a customer in a calendar year period resulting from faults in the distribution system, and
- lengthy interruptions of gas supply to a residential customer not restored within 18 hours.

In the 2008 GAAR, the ESCV made amendments to improve the scheme. These included extending the new GSL scheme to apply to all Tariff V customers (residential and non-residential) instead of just residential tariff V customers. Tariff D customers are now also covered by GSLs. The new GSL scheme also has tighter timeframes for appointments and connections. The financial penalty for repeat and lengthy interruptions was also increased. Details of the GSL scheme and payments made of the payments are set out in appendix A.4.

However, a consequence of these amendments is that historical data prior to 2009 is no longer comparable with more recent years. Accordingly, this report discusses only GSL payments from 2009.

Table 7.2.1 shows that the distributors made a total of 975 payments in 2012 totalling \$131,602 (in \$2006 for comparative purposes). This represents a decrease of 25 per cent from a year earlier. It also represents a 26 per cent decline in the value of total GSL payments compared to 2011.

Table 7.2.1 Total GSL payments made to customers 2009– 2012 (\$2006)

	2009	2010	2011	2012
Envestra	57,921	83,018	94,255	81,954
Multinet	12,901	53,490	54,188	28,831
SP AusNet	25,650	24,735	29,601	20,817
All DNSPs	96,472	161,243	178,044	131,602

Source: DNSP quarterly KPI reports.

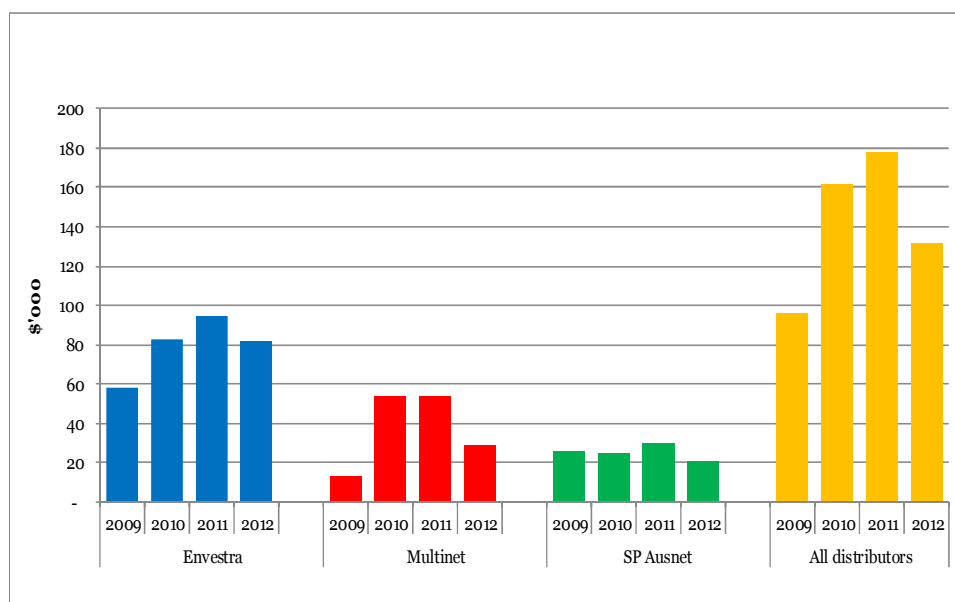
On average for 2012, one GSL payment per 1,523 customers was made, which indicates a significant increase in GSL payments from 2009 which were one payment for every 2,532 customers. In particular:

- SP AusNet experienced one GSL payment per 2,960 customers in 2012. This represents a decrease in performance compared to 2009, where one GSL payment was made per 2,367 customers.
- Envestra experienced one GSL payment per 1,004 customers in 2012. This is a decrease in performance since 2009 when there was one payment per 1,300 customers.
- Multinet experienced an increase in performance in 2012 compared to 2011 from one payment per 1,621 customers to one payment per 3,584 customers.

Figure 7.1.1 displays the total number of GSL payments made by each company since 2009.

- Envestra reported a decline in the number and amount of GSL payments for repeat interruptions (as a result of more than 5 unplanned interruptions) and lengthy interruptions in 2012 compared to 2011.
- Envestra also made no payments as a result of 10 interruptions within a calendar year.
- Multinet has continued its trend of not making any payments for late appointments since 2009. It has performed consistently also in relation to connection payments, with none made in 2012 while only making one payment from 2009–2011.
- However, Multinet's performance for repeat interruptions and lengthy interruptions has deteriorated significantly between 2009 and 2012, from 38 to 69 for more than 5 unplanned interruptions, from 84 to 67 for interruptions lasting greater than 12 hours but less than 18 hours and from 175 to 43 for interruptions lasting greater than 18 hours.
- SP AusNet experienced a significant increase in payments in relation to the number of GSL payments made to tariff V customers as a result of interruptions lasting longer than 12 hours but less than 18 hours. The increase was from 6 in 2009 to 17 in 2012. However, this is still considerably lower than Envestra (126 payments in 2012 and 95 in 2009) and Multinet (67 payments in 2011 and 42 in 2009).

Figure 7.1.1 Total GSL payments in \$'000 paid by DNSPs to customers (\$' 2006)



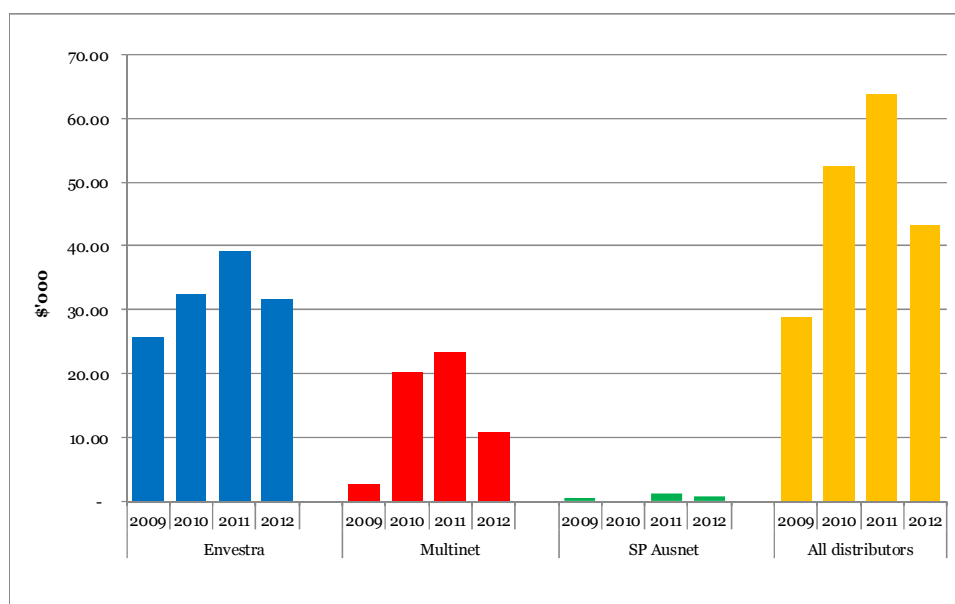
Source: DNSP quarterly KPI reports.

Most of the GSL payments were made for repeat and lengthy interruptions. The most significant being payments made to tariff V customers as a result of interruptions lasting longer than 18 hours. The total payment in 2012 for this service was \$43,121 (refer to Figure 7.1.2). This represents a 32 per cent decline in payments made compared to 2011 (or 50 per cent compared to 2009). Of these payments Envestra made 128 in 2012 compared to 95 in 2009, and Multinet made 43 in 2012 compared to 19 in 2009. SP AusNet made 6 payments in 2012 compared to 4 in 2009.

Envestra commented that the high incidence of water in mains, due to heavy rainfall in recent years, has contributed to numerous GSL payments for lengthy interruptions.

Multinet also commented that significant rainfall experienced in the period under review resulted in an increase in planned supply interruptions; primarily as a result of water ingress to the low pressure portion of the Multinet network.

Figure 7.1.2 GSL payments paid by DNSPs to customers for lengthy interruptions > 18 hours (\$' 2006)



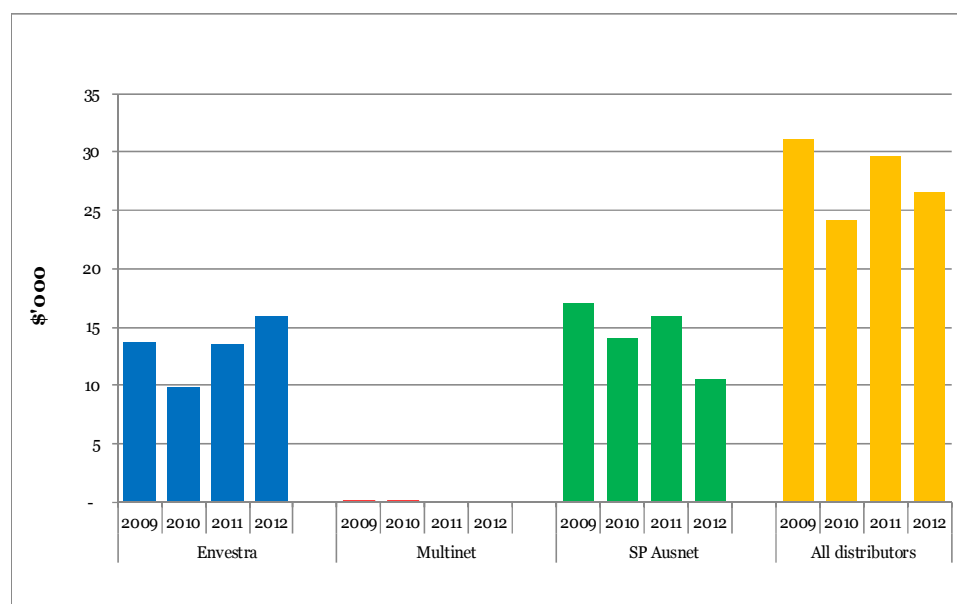
Source: DNSP quarterly KPI reports.

In contrast to the increase in payments made for repeat and lengthy interruptions the best performing service was for meeting appointment time frames. In 2009 and again in 2012 there were no payments made for appointments not met within in 2 hours of scheduled time where the customer was present. In 2010 SP AusNet was the only entity to make a payment for an appointment not met within 2 hours of scheduled time with the customer present.

The payments made for appointments not met by the agreed date where the customer was not present increased slightly in 2012. Envestra's service declined by 10 per cent in that year while SP AusNet's payments decreased from 46 in 2009 to 34 in 2012 (a decrease of 26 per cent). Multinet was the only organisation not to make a payment for appointments not met by the agreed date where the customer was not present.

Since 2009 the total number of GSL payments made to customers for connection delays has declined by 3 per cent from 246 in 2009 to 238 in 2012. The total payments are shown in Figure 7.1.3. SP AusNet decreased from 137 payments made in 2009 to 101 in 2012. Multinet made one payment in 2009 and made no payments from 2010. Envestra's number of payments increased (from 103 in 2009 to 137 in 2012).

Figure 7.1.3 Total GSL payments paid by DNSPs to customers for connection delays (\$' 2006)



Source: DNSP quarterly KPI reports.

7.3 Complaints

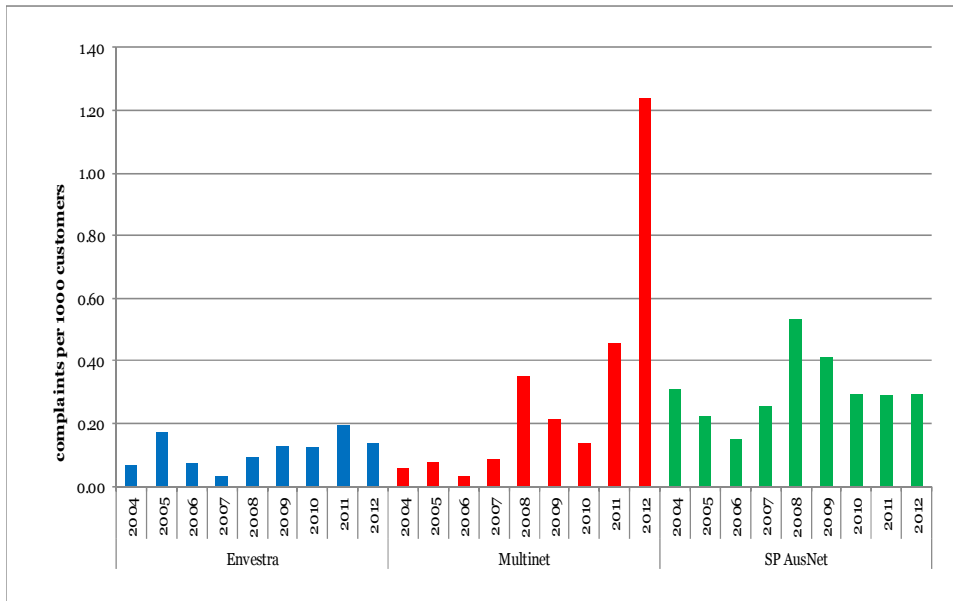
Customer complaints to distributors

Figures 7.3.1 to 7.3.3 show that the level of complaints recorded by all the businesses. In particular:

- Envestra's complaints for connection and augmentation declined by 27 per cent and 19 per cent respectively. Other complaints increased by 8.8 per cent. Envestra commented the incidence of water in mains following heavy rainfall, and the increased field activity associated with higher levels of mains replacement, has contributed to the level of complaints in the other category.
- Multinet's complaints for quality and other declined by 52 per cent and 23 per cent respectively. Connection and augmentations complaints increased by 8.8 per cent. Multinet commented the increase in this category was associated with the time expired meter program. More than 65,000 meters (a much higher work-volume than previous years) were replaced with the major issues being notification prior to, and reights following, the changeover. Although Multinet routinely notifies customers of these works, they found that the householder does not always realise this has occurred. The decline in quality complaints was driven by the completion of a number of network augmentation projects targeting the worst performing areas.
- SP AusNet's complaints for connection, augmentation and other all increased by 1.3 per cent, 0.1 per cent and 230 per cent respectively. SP AusNet commented that although an increase has been noted in 2012, the number of 'other' complaints (0.32 complaints per 1000 customers) remains relatively low.

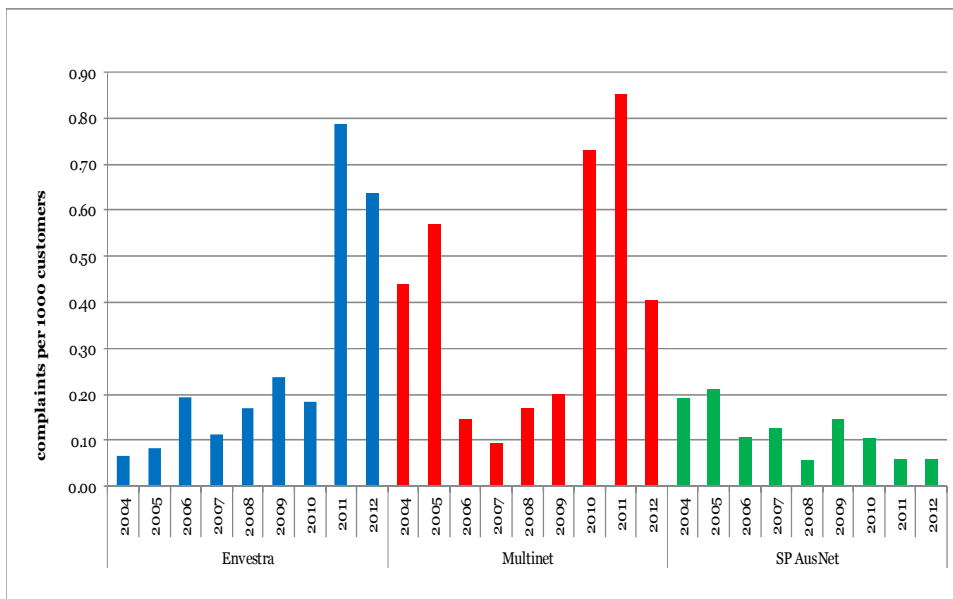
Appendix A.3 table A.3.7 sets out the number of complaints per thousand customers for each company.

Figure 7.3.1 Connection and Augmentation - number of complaints per 1000 customers



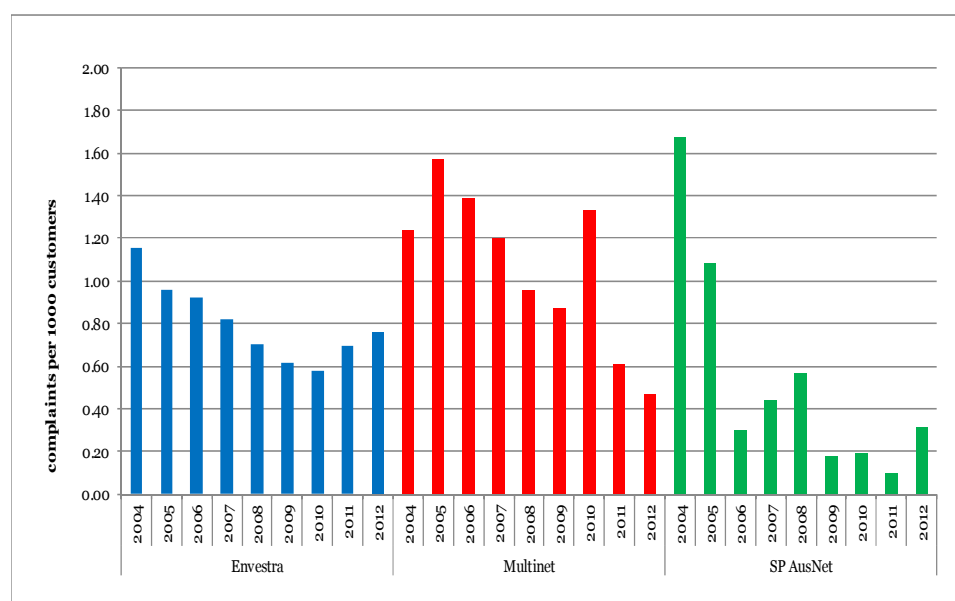
Source: DNSPs quarterly KPI reports.

Figure 7.3.2 Quality - number of complaints per 1000 customers



Source: DNSPs quarterly KPI reports.

Figure 7.3.3 Other complaints - number of complaints per 1000 customers



Source: DNSPs quarterly KPI reports.

Complaints to the Energy and Water Ombudsman Victoria

Figure 7.3.4 shows the number of complaints about gas distribution received from EWOV for full investigations for the following: quality and reliability; connection and augmentation; and other²⁰.

The number of complaints received by EWOV for full investigation in 2008 declined from 91 to 34 complaints in 2012 compared to the previous calendar year. Complaints relating to Envestra declined by 59 per cent (from 22 to 9). Complaints for Multinet declined by 61 per cent from 49 to 19; and for SP AusNet by 70 per cent, from 20 to 6. The majority of complaints received by EWOV were about Multinet (56 per cent), followed by Envestra (26 per cent) and SP AusNet (18 per cent).

In 2012 most of the complaints received by EWOV were for quality and reliability (44 per cent), followed by connection and augmentation (29 per cent).

20

Explanatory note:

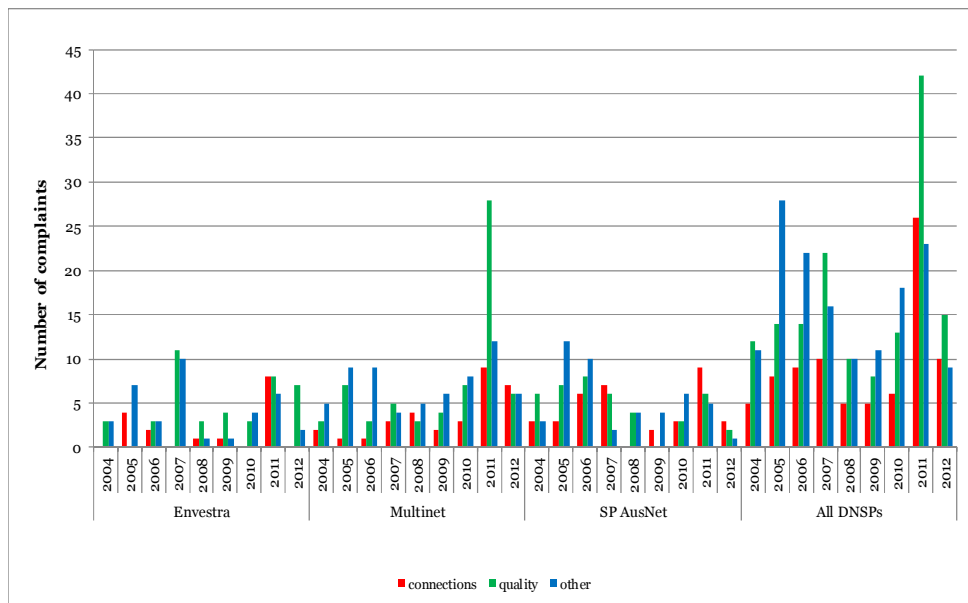
EWOV defines a complaint as an expression of dissatisfaction regarding a policy, practice or customer service performance of an energy or water provider that is a participant in the EWOV scheme, where a response or resolution is explicitly or implicitly expected.

The material above shows only 'complaints received for full investigation'. EWOV's normal process is to fully investigate complaints that remain unresolved following two or more contacts between the customer and the provider.

In addition to 'complaints received for full investigation', the two other types of complaint are:

1. Un assisted referrals: if a customer has not yet spoken with the energy or water provider about their complaint, EWOV generally refers them back to the provider's call centre, or to a more relevant agency.
2. Assisted referrals: If the customer has spoken once with someone at the provider's call centre about their complaint but it remains unresolved, EWOV usually refers them to a higher-level contact at the provider.

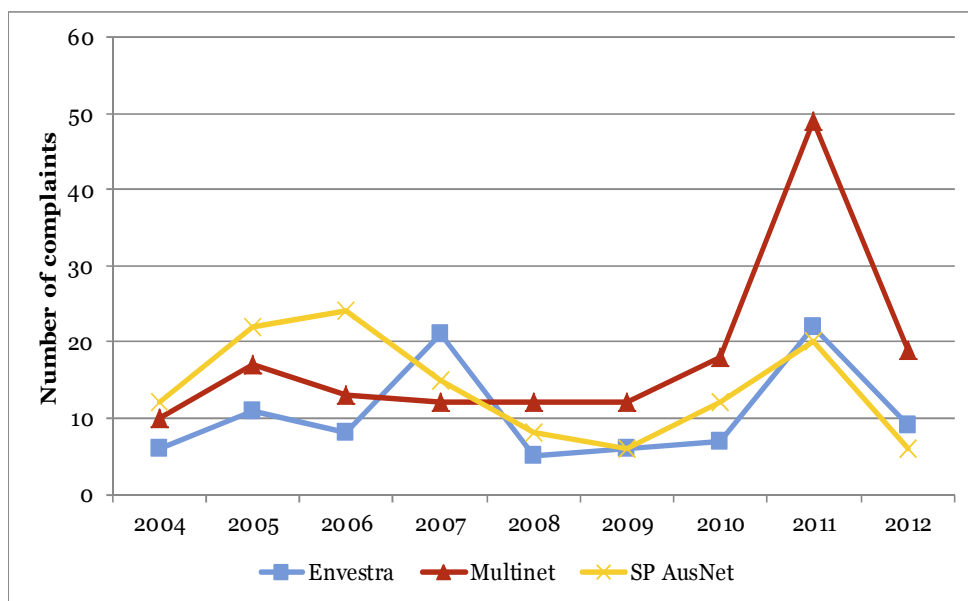
Figure 7.3.4 Complaints received by EWOV for full investigation for connection, quality and other, 2004–2012



Source: Energy and Water Ombudsman Victoria.

Figure 7.3.5 shows the total number of complaints received by EWOV for full investigation from 2004 to 2012.

Fig 7.3.5 Complaints received by EWOV for full investigation



Source: Energy and Water Ombudsman Victoria

A APPENDICES

A.1 Network Characteristics

Table A.1.1 Number of customers (domestic and non-domestic) for 2012

	Domestic ²¹	Non-domestic ²²	Total
Envestra	564 645	23 268	587 913
Multinet	646 880	23 300	670 180
SP AusNet	600 132	16 192	616 324
All DNSPs	1 811 657	62 760	1 874 417

Source: DNSPs' quarterly reports.

Table A.1.2 Network composition for 2012

DNSP	Transmission mains (km)	Distribution mains (km)	Customers per km of distribution mains
Envestra	331	10 251	57.4
Multinet	157	9 853	68.1
SP AusNet	182	10 041	61.4
All	670	30 145	62.2

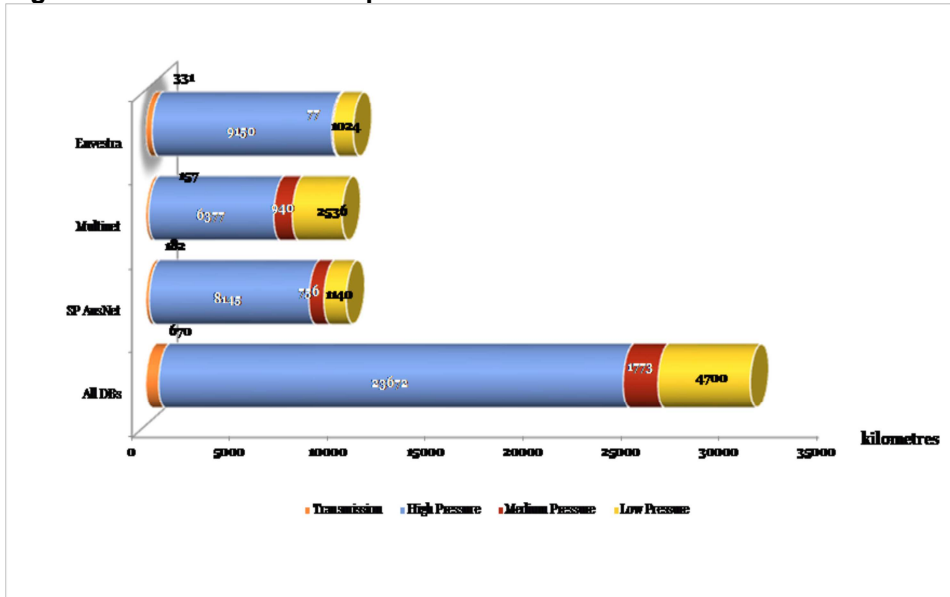
Source: DNSPs' quarterly reports.

Gas transmission pipelines have a MAOP of more than 1,050 kPa and gas distribution pipelines have a MAOP of less than or equal to 1,050 kPa. The total length of transmission pipeline is only about 2 per cent of the Victorian gas distributors' total pipeline length. Figure A.1.1 shows the composition of gas pipelines for each of the Victorian distributors, and Figure A.1.2 shows the Victorian gas distribution network by material.

²¹ Domestic customers are all customers that are subject to the domestic tariffs (Tariff V).

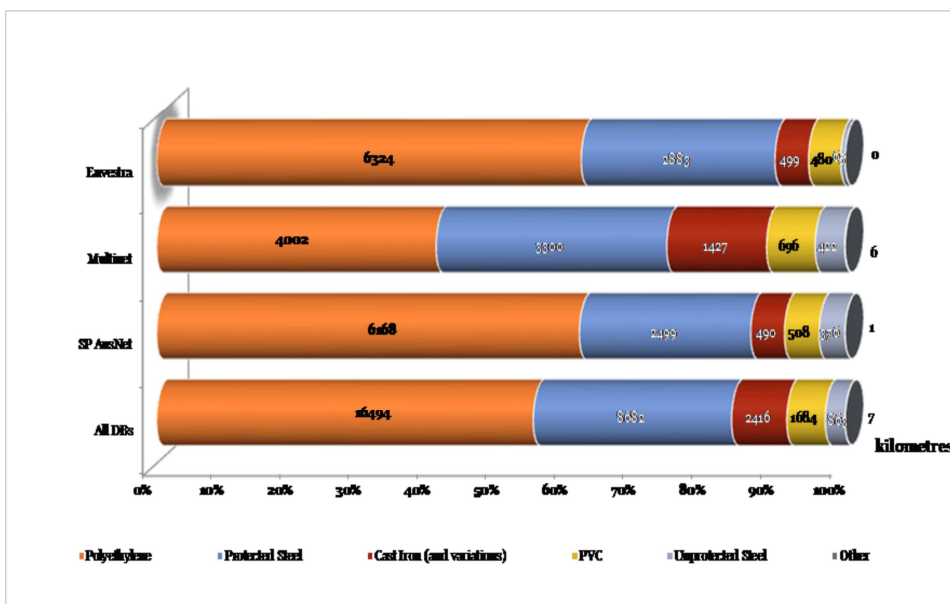
²² Non-domestic customers are all customers that are subject to the tariffs other than domestic tariffs reported in the following categories: remainder of tariff V supply points not included as "domestic"; or Tariff D or Tariff M supply points.

Figure A.1.1 Network composition Victorian Gas 2012



Source: DNSP regulatory quarterly reports.

Figure A.1.2 Victorian Gas distribution network by material 2012



Source: DNSP regulatory quarterly reports.

A.2 Gas haulage tariffs

DNSPs currently charge two types of Haulage Reference Tariffs (tariffs)—Volume Tariff V and demand Tariff D (including Tariff M).

Tariff V is applicable to customers using less than 10 terajoules (TJ)²³ per year. Such customers are typically residential and small commercial users. The tariff includes a fixed charge and a variable component.²⁴ Different tariffs are charged across geographic zones—Envestra maintains four pricing zones (Central, North, Murray Valley and Bairnsdale); SP AusNet, four (Central, West, Central New and West New) and Multinet, a single metropolitan zone and two regional zones (South Gippsland and Yarra Valley).

Charges also vary according to customer categories—classified as residential and non-residential. Envestra applies the same tariff, while Multinet and SP AusNet charge different Tariff V rates to residential and non-residential customers. Envestra's and SP AusNet's Tariff V structures include tariff 'bands' for peak and off-peak periods. Multinet applies a greater number of tariff bands, including a shoulder period.²⁵

SP AusNet also has a Tariff M which applies to existing Tariff V customers that exceed the Tariff V consumption limits of 10 TJ in any 12 month period, or the maximum hourly quantity (MHQ) limit of 10 gigajoules in any hour (1 gigajoule, GJ = 109 joules).

Tariff D applies to customers using more than 10 TJ per year. It is based on the MHQ of gas consumed. These customers are typically large industrial users such as bakeries and large manufacturing plants. Tariff D does not incorporate a fixed charge. As Tariff D is based on the MHQ, charges are generally common across each distributor's area.²⁶ Tariff D structures vary across each of the businesses.

²³ One TJ = 10¹² joules (J), or 1000 GJ.

²⁴ Under the 2008–12 Access Arrangements, the Reference Service for Tariff V customers comprises gas haulage, connection to the gas system and provision of a gas meter.

²⁵ The shoulder period applies to May and October and, according to Multinet, is designed to account for usage in these months that is more reflective of the peak period than the off-peak period.

²⁶ Envestra applies higher charges in its Murray Valley zone.

A.3 Performance measures for reliability of supply

Reliability is primarily measured in terms of the average frequency and duration of supply interruptions. Gas supply interruptions can be either planned or unplanned. Planned interruptions occur when a distribution company needs to disconnect supply to undertake maintenance or construction work. It is required to give customers at least 10 business days' notice of planned interruptions.

Unplanned interruptions occur mainly due to leakages or damaged pipes requiring immediate repair. These outages are often caused by third parties damaging pipes and by water entering low-pressure pipes.

The key reliability measures used to analyse the performance of distributor in Victoria are:

- Minutes-off-supply—the performance indicator for customer minutes-off-supply is called System Average Interruption Duration Index (SAIDI). It measures the total minutes, on average, that a customer could expect to be without gas over the reporting period. Total SAIDI comprises both planned and unplanned minutes-off-supply.
- Interruption frequency—the performance indicator for interruption frequency is called System Average Interruption Frequency Index (SAIFI). It measures the number of occasions per year when each customer could, on average, expect to experience an interruption. It is calculated as the total number of customer interruptions, divided by the total number of connected customers averaged over the reporting period.
- Interruption duration—the performance indicator for interruption duration is called Customer Average Interruption Duration Index (CAIDI). It measures the average time taken for supply to be restored to a customer when an interruption has occurred. It is calculated as the sum of the duration of each customer interruption (in minutes), divided by the total number of customer interruptions (SAIDI divided by SAIFI). Unplanned CAIDI is the average time taken by the distribution company to find and repair faults on the network.
- Numbers of unplanned outages—the numbers of outages in the reporting period resulting in customers experiencing an unplanned gas supply interruption. Note that the performance indicator for the number of outages does not take account of variations between distributors in the size of their gas networks or the number of customers supplied.

Gas supply reliability

Table A.3.1 Envestra

	2008	2009	2010	2011	2012
Average minutes-off-supply per customer (SAIDI)					
Planned	3.63	0.94	1.45	3.31	6.84
Unplanned	1.84	1.72	3.43	3.77	3.48
Total	5.48	2.66	4.88	7.08	10.32
Average number of interruptions per customer (SAIFI)					
Planned	0.010	0.003	0.004	0.009	0.019
Unplanned	0.008	0.007	0.027	0.026	0.027
Total	0.018	0.009	0.031	0.036	0.046
Average interruption duration (CAIDI)					
Planned	360	360	360	360	360
Unplanned	236	260	249	142	129
Mechanical damage – gas mains					
Number of incidents	133	75	83	72	59
Damage per km	0.014	0.008	0.008	0.007	0.006
Mechanical damage – service connections					
Number of incidents	994	975	884	911	714
Damage per customer	0.002	0.002	0.002	0.002	0.001

Notes: Since 2010 all supply interruptions (other than planned meter changes) are now included in supply reliability measures.

Table A.3.2 Multinet

	2008	2009	2010	2011	2012
Average minutes-off-supply per customer (SAIDI)					
Planned	1.83	1.68	2.68	1.36	2.5
Unplanned	1.49	2.07	2.45	2.67	2.3
Total	3.33	3.74	5.13	4.03	4.8
Average number of interruptions per customer (SAIFI)					
Planned	0.005	0.005	0.007	0.004	0.007
Unplanned	0.007	0.006	0.010	0.010	0.007
Total	0.012	0.011	0.017	0.013	0.014
Average interruption duration (CAIDI)					
Planned	360	360	360	360	360
Unplanned	211	323	126	279	334
Mechanical damage – gas mains					
Number of incidents	39	62	75	61	55
Damage per km	0.004	0.006	0.008	0.006	0.006
Mechanical damage – service connections					
Number of incidents	1240	1223	1116	1017	1025
Damage per customer	0.002	0.002	0.002	0.002	0.002

Notes:

- 1 Multinet cannot specify the causes for unplanned interruptions affecting one customer.
- 2 Multinet assumes six hours for each planned interruption.
- 3 Multinet assumes four hours for each unplanned single premise interruption.

Table A.3.3 SP AusNet

	2008	2009	2010	2011	2012
Average minutes-off-supply per customer (SAIDI)					
Planned	3.88	2.84	3.63	3.41	5.64
Unplanned	0.81	0.85	1.16	1.03	0.74
Total	4.68	3.69	4.79	4.44	6.38
Average number of interruptions per customer (SAIFI)					
Planned	0.010	0.008	0.010	0.010	0.012
Unplanned	0.018	0.020	0.021	0.017	0.015
Total	0.028	0.028	0.031	0.026	0.027
Average interruption duration (CAIDI)					
Planned	391	348	363	345	474
Unplanned	44	43	55	62	50
Mechanical damage – gas mains					
Number of incidents	103	80	86	67	69
Damage per km	0.011	0.008	0.009	0.005	0.007
Mechanical damage – service connections					
Number of incidents	1314	1368	1242	1059	1107
Damage per customer	0.002	0.002	0.002	0.001	0.002

Source: DNSP quarterly report

Table A.3.4 All distributors

	2008	2009	2010	2011	2012
Average minutes-off-supply per customer (SAIDI)					
Planned	3.03	1.82	2.60	2.63	4.89
Unplanned	1.38	1.58	2.34	2.48	2.17
Total	4.41	3.39	4.95	5.11	7.06
Average number of interruptions per customer (SAIFI)					
Planned	0.008	0.005	0.007	0.007	0.012
Unplanned	0.011	0.011	0.019	0.017	0.016
Total	0.019	0.016	0.026	0.025	0.028
Average interruption duration (CAIDI)					
Planned	372	354	361	354	396
Unplanned	127	146	124	145	138
Mechanical damage – gas mains					
Number of incidents	275	217	244	200	183
Damage per km	0.010	0.007	0.008	0.007	0.006
Mechanical damage – service connections					
Number of incidents	3,548	3,566	3,242	2,987	2,846
Damage per customer	0.006	0.006	0.005	0.005	0.005

Notes:

- 1 Multinet cannot specify the causes for unplanned interruptions affecting one customer.
- 2 Multinet assumes six hours for each planned interruption.

Table A.3.5 Number of outages affecting fewer than five customers

	2008	2009	2010	2011	2012
Envestra	3648	3210	12,843	14,230	14,589
Multinet	4332	3941	6325	6019	4,576
SP AusNet	9192	10,181	11,161	8710	10,328
All distributors	17,172	17,332	30,329	28,959	29,493

Table A.3.6 Number of outages affecting five or more customers

	2008	2009	2010	2011	2012
Envestra	14	12	26	18	15
Multinet	16	13	18	12	9
SP AusNet	20	26	32	33	17
All distributors	50	51	76	63	41

Table A.3.7 Number of complaints per 1000 customers

	Connection and augmentation				Quality and reliability of supply				Other complaints			
	'09	'10	'11	'12	'09	'10	'11	'12	'09	'10	'11	'12
Envestra	0.13	0.12	0.19	0.14	0.24	0.18	0.79	0.64	0.62	0.58	0.70	0.76
Multinet	0.21	0.14	0.45	1.24	0.20	0.73	0.85	0.40	0.87	1.33	0.61	0.47
SP AusNet	0.41	0.29	0.28	0.29	0.15	0.10	0.06	0.06	0.18	0.19	0.10	0.32
All DNSPs	0.25	0.18	0.32	0.58	0.20	0.36	0.57	0.36	0.57	0.73	0.47	0.51

Table A.3.8 Kilometres of low pressure gas mains replaced with high pressure

	Envestra		Multinet		SP AusNet	
	Target	Actual	Target	Actual	Target	Actual
2008	90	45	108	46	90	77
2009	100	13	111	47	90	66
2010	110	45	112	155	90	83
2011	120	117	112	36	90	73
2012	150	137	114	65	90	127
Cumulative Total	570	357	557	349	450	426
Percentage of final target		63		63		95

Source: ESCV Gas Access Arrangement 2008–2012 and DNSP quarterly KPI Reports.

A.4 Guaranteed Service Levels

Table A.4.1 Guaranteed Service Level (GSL) payment threshold items

Area of service	Level of service to incur GSL payment a	Level of GSL payment
Appointments b	Failure to attend appointment within agreed appointment window:	
	Customer present–2 hours	\$50 per event
	Customer absent–agreed date	
Connections	Failure to connect a customer within one day of agreed date	\$80 per day (subject to a maximum of \$240)
Repeat interruptions c	Unplanned interruptions to a customer in a calendar year period resulting from faults in the distribution system:	
	Upon fifth interruption	\$150
	Upon tenth interruption	Additional \$150
Lengthy interruptions d	Gas supply interruption to a residential customer not restored:	
	Within 12 hours	\$150 per event
	Within 18 hours	Additional \$150

Notes:

- a. An appointment window of two hours applies if the customer is required or requests to be present. A one day appointment window applies if the customer is not required or does not request to be present. Appointments rescheduled by the distributors are counted as missed appointments. Appointments rescheduled by the customer are excluded from payments.
- b. Excluding force majeure, faults in gas installations, transmission faults, upstream events and third party events.
- c. Excluding force majeure, faults in gas installations, transmission faults, upstream events and third party events impacting large diameter mains affecting more than 50 customers. Large diameter mains are high pressure mains of nominal diameter 100 mm or greater, and medium pressure or low pressure mains of nominal diameter 150 mm or greater.

Table A.4.2 Guaranteed Service Level payments made (\$2006)

	No. of customer payments				Amount paid			
	2009	2010	2011	2012	2009	2010	2011	2012
Repeat interruptions - No. of GSL payments to tariff V customers as a result of more than 5 unplanned interruptions within a calendar year								
Envestra	15	108	94	91	2,024	14,404	12,186	11,407
Multinet	38	122	135	69	4,318	16,271	17,501	8,649
SP AusNet	40	54	57	42	5,398	7,202	7,389	5,265
Total	93	284	286	202	11,741	37,877	37,076	25,321
Repeat interruptions - No. of GSL payments to tariff V customers as a result of more than 10 unplanned interruptions within a calendar year								
Envestra	-	2	-	0	-	267	-	-
Multinet	1	20	19	8	135	2,667	2,463	1,003
SP AusNet	-	6	3	6	-	800	389	752
Total	1	28	22	14	135	3,734	2,852	1,755
Lengthy interruptions — No. of GSL payments to tariff V customers as a result of interruptions lasting greater than 12 hours but less than 18 hours								
Envestra	84	180	208	161	11,336	24,006	26,965	20,181
Multinet	42	108	84	67	5,668	14,404	10,890	8,398
SP AusNet	6	7	25	17	810	934	3,241	2,131
Total	132	295	317	245	17,814	39,344	41,095	30,711
Appointments - No. of payments not met within 2 hours of scheduled time where customer was present								
Envestra	-	-	-	-	-	-	-	-
Multinet	-	-	-	-	-	-	-	-
SP AusNet	-	1	-	-	-	44	-	-
Total	-	1	-	-	-	44	-	-

Number of appointments not met by the agreed date where customer not present

Envestra	115	43	54	67	5,173	1,912	2,333	2,799
Multinet	–	–	–	0	-	-	-	-
SP AusNet	46	36	35	34	1,844	1,600	1,512	1,421
Total	161	79	89	101	7,017	3,512	3,846	4,220

Number of connections made more than 1 day but within 2 days of agreed date (\$80)

Envestra	54	59	48	78	3,887	4,197	3,319	5,215
Multinet	–	–	–	0	-	-	-	-
SP AusNet	74	51	83	71	5,326	3,628	5,739	4,747
Total	128	110	131	149	9,213	7,824	9,057	9,961

Number of connections made more than 2 days but within 3 days of agreed date (\$160)

Envestra	10	10	37	16	1,439	1,423	5,116	2,139
Multinet	–	1	–	0	-	142	-	-
SP AusNet	26	21	12	7	3,743	2,987	1,659	936
Total	36	32	49	23	5,182	4,552	6,776	3,075

Number of connections not made within 3 days of agreed date (\$240)

Envestra	39	20	25	43	8,421	4,268	5,185	8,624
Multinet	1	–	–	0	216	-	-	-
SP AusNet	37	32	41	24	7,989	6,828	8,504	4,813
Total	77	52	66	67	16,626	11,096	13,690	13,438

Number of GSL payments made to customers for connection delays

Envestra	103	89	110	137	13,747	9,887	13,621	15,978
Multinet	1	1	–	0	216	142	-	-
SP AusNet	137	104	136	101	17,058	14,155	15,902	10,496
Total	241	194	246	238	31,021	24,184	29,523	26,474

Source: DNSP quarterly report.

A.5 Gas escape / job priority classification

Priority A leaks

CSL Critical Supply loss (e.g. Hospital Equipment).

To be used where the loss of supply is life-threatening (such as when hospital equipment is affected), or when loss of supply could adversely affect the state's economy (major industry impacted). Replaces old enquiry code AHEZ—hospital equipment out of use.

EBD Escape—bad. Any uncontrollable gas leak or presence of gas inside/under a house, other building or inside a basement or a severe escape outside a building not already covered by other A Priority codes. In determining the severity of an escape outside a building the operator must rely on the callers description, considering factors such as length of time noticed, how strong or bad the odour is, can the gas be heard escaping etc. Special instruction field must be populated with further detail.

EBS Escape—bad, street A bad street escape is generally the result of a main or service pipe being broken by workmen involved in some form of excavation work. In most cases the broken pipe will already have been exposed by the workmen. Advise not to attempt to cover or hose the leak, keep bystanders away from the immediate area, and do not start or move machinery at the site (may ignite). Ground movement may also cause a main or service pipe to be broken resulting in a bad street escape.

EFB Police and/or fire brigade. Used if notification of a fire or gas escape is received from either the police or fire brigade.

EMG Emergency. Used in situations that would require corporate management to be advised, or would result in a level 4 or 5 Emergency.

EXP Explosion. An explosion in a main, service pipe, fitting line or appliance. For explosion in transmission pressure main or facility refer to EMG.

FAP Fire—appliance A fire can occur at a gas appliance without the appliance burning and it can spread to adjoining fixtures in the house. If the appliance is the cause of the fire this enquiry code should be used.

Information Specification for gas distributors—Version 4— January 2009 Essential Services Commission & Energy Safe Victoria Page 20 of 34 FAT Fatalities. If fatal accident or serious injury has resulted from a problem in the gas reticulation network. This would include death caused by a gas escape, fire or explosion.

FHS Fire—house. When a house fire is reported at the address which has gas supplied. Fires reported by the fire brigade must be processed using this enquiry code.

FMN Fire—main. When a gas escape from a main has ignited. The gas escape may be the result of damage to the main during excavation in the street. A fire at a main can also be reported as a nature strip or road fire. Gas leaking from the underground main escapes to the surface and ignites.

FMT Fire—meter. While gas meters do not burn, (lead connections, meter gaskets and regulator diaphragms can melt / burn fuelling fire) gas escaping from the meter can ignite, engulfing it in flames. This can be a threat to a house, depending on the meter location.

FSV Fire—Service. A customer reporting a fire in either yard may have a gas escape in either their Service Pipe or Fitting Line. If the fire is in the area between their house and the gas meter, the fire could be the result of a gas escape in the fitting line. This type of escape can be made safe by turning off the gas meter. If the fire is in between the gas meter and the property boundary, it should be treated as a FSV.

EMT Escape Meter. When gas is reported escaping around the meter location. In many cases the gas escape can be controlled by turning off the gas meter. However if this does not stop the gas escaping it may be necessary depending on the degree of the gas escape to process the enquiry as an EBD.

Priority B leaks

EOT Escape Other. Used for a controllable gas escape which does not warrant the use of an 'A Priority' code, in a location not already identified by any other escape code. If the escape is not controlled or is severe the A priority code EBD should be used. Special Instruction field must be populated with further detail.

ESE Street Excavations. Used when a caller reports an excavation, or the warning lights or barricade around an excavation or work site is considered unsafe, has collapsed, or protection removed/damaged. (Now includes old ESB and ESL codes)

EST Escape Street. Refers to a slight escape in the street caused by a leaky joint or broken main. If the escape is more severe of the result of workmen excavating in the street.