



# **Victorian Gas Distribution Business Comparative Performance Report 2009–2011**

March 2013

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# Preface

## The role of the Australian Energy Regulator

The 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 and conditions of these services, including tariffs are regulated by the Australian Energy Regulator (AER).

On July 1 2008, the Australian Energy Regulator (AER) became the economic regulator for covered natural gas transmission and distribution pipelines in all states and territories except Western Australia. As part of the transition to national regulation of gas distribution, the AER is responsible for exercising certain powers and functions previously undertaken by the Essential Services Commission of Victoria (ESCV) in Victoria.

The new responsibilities are conferred on the AER by the operation of the Victorian National Gas Act 2008 (NGVA) in accordance with the Trade Practices Act 1974 and the Australian Energy Market Agreement. The current Victorian distribution network revenue and service level targets were set by the ESCV for the current regulatory period (2008–2012). The NGVA delegates power to the AER to administer the ESCV's Gas Access Arrangement 2008–2012 (GAAR) under the Victorian regulatory framework.

In accordance with the National Gas Rules, the AER is responsible for approving the gas access arrangements including the service levels for the 2013-2017 access arrangement period. This review is scheduled to be completed shortly, in March 2013.

In addition to the administration of the GAAR, the AER is responsible for compliance monitoring and enforcement of the Gas Distribution Licence conditions of the Victorian gas distribution network service providers (DNSPs, or commonly referred to as gas DNSPs). This includes the monitoring of the service performance levels provided by the DNSPs. As public reporting of performance of these monopoly businesses is one of the key elements that underpin the economic regulatory frameworks under both the current Victorian system as well as under the national framework, the AER has decided to continue the performance reporting system of the ESCV for the current access arrangement period.

The AER has continued the ESCV's reporting format for the duration of the 2008–2012 GAAR to facilitate comparison of DNSPs over time. Therefore the key performance measures used by the ESCV in the previous report will continue to apply.

This report updated for 2009-2011 information is prepared by the AER under the Victorian regulatory framework as a continuation of the series of performance reports previously published by the ESCV.

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 distribution network businesses in Victoria: Envestra, Multinet and SP AusNet for the 2011 calendar year and also covers the period 2009-11.<sup>1</sup> This is to:

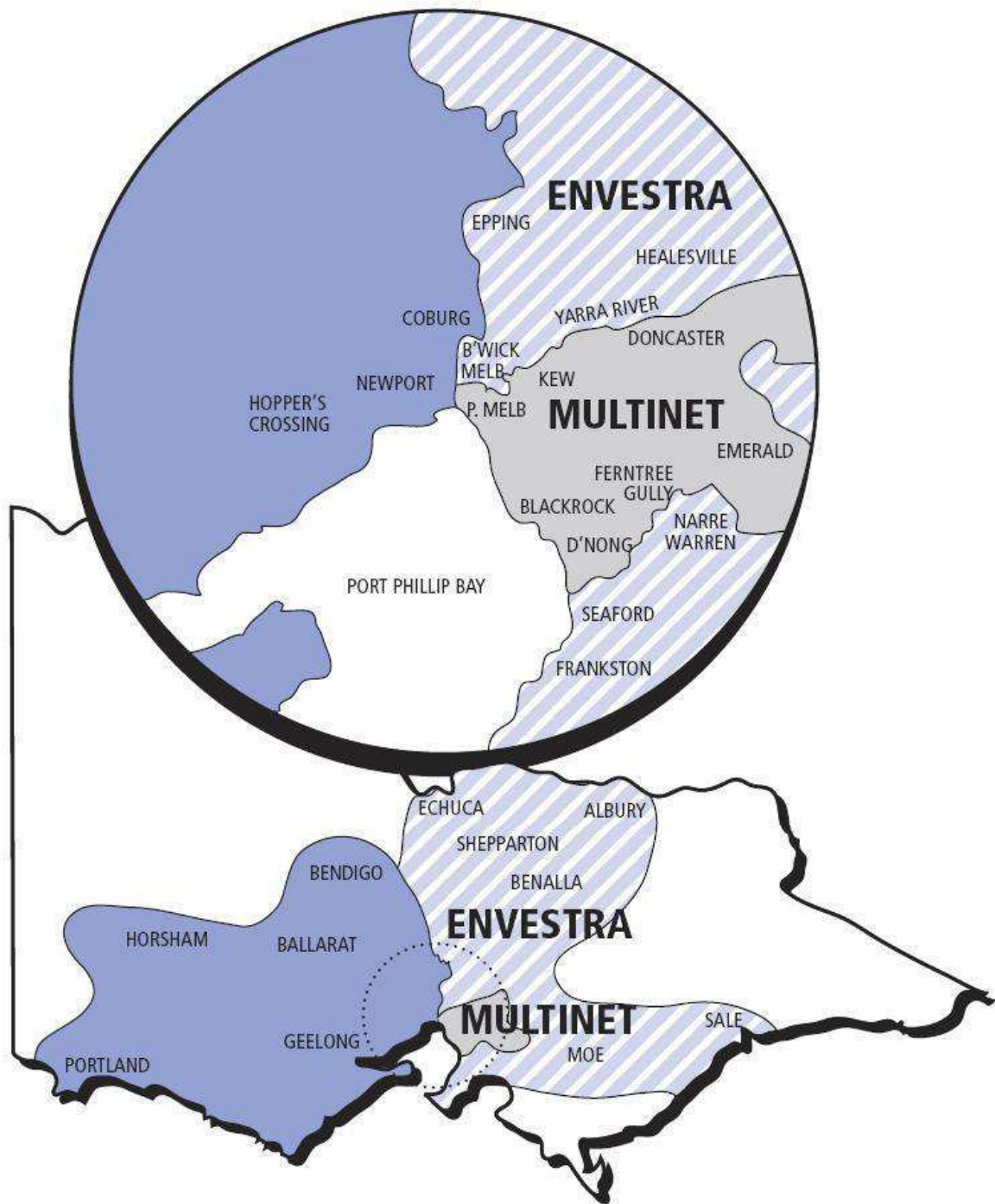
- promote transparency and assist with setting forecasts in future GAARs
- encourage competition between gas DNSPs through comparison
- provide an incentive for gas distribution businesses to improve performance relative to one another; and
- provide customers with information about the services they are receiving.

The report allows the financial performance, reliability, and quality of gas supply to be compared between the Victorian DNSPs. The financial and operating performance of the DNSPs is also compared against the measures and benchmarks established by the Regulator (i.e. the Essential Services Commission of Victoria) under the 2008 GAAR for the period 2008-12.

In this report the benchmark revenues and costs and the actual revenues and costs include revenue and costs relating to both reference and ancillary reference services.

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<sup>1</sup> The Energy Retailers performance report can be found on the ESCV website at [www.esc.vic.gov.au](http://www.esc.vic.gov.au)



## Overview

This report provides a summary of the performance of the three Victorian gas distribution businesses, in terms of financial performance, reliability of supply to customers, integrity of the network and customer service.

Annual financial and related non-financial information has been collected from each gas distribution business under the ESCV's *Gas Industry Guideline No. 17: Regulatory Accounting Information Requirements, Issue number 2*.

The reporting of financial performance such as actual energy and revenue outcomes and actual capital and operating expenditure has been compared with forecasts established in the 2008–2012 GAAR by the ESCV. Data for the 2003-2007 access arrangement period has also been included in some parts of this report.

The Financial performance of the gas distribution network businesses is largely affected by how much energy is distributed. For the current access arrangement the overall actual cumulative energy for small customers is 0.4 per cent higher than forecast for the years 2008 to 2011. This indicates that actual energy outcomes have been very close to forecasts made by the ESCV prior to the commencement of the period. Envestra was the only DNSP to have an actual energy outcome lower than forecast. Residential gas consumption is largely influenced by weather (in general residential gas usage increases with colder weather), differences between forecast and actual outcomes are most likely due to weather. The recent push towards more energy efficient appliances will also impact on gas usage and Envestra notes that this could explain in part the difference between forecast and actual energy of small residential customers in its area.

Gas consumption of large commercial and manufacturing customers is less influenced by weather, but rather the overall performance of the economy. Between 2008 and 2011 energy consumption of large gas customers decreased by 6 per cent across all businesses. With each business experiencing a decline in energy for large customers. This is most likely a reflection of the changing structure of the Victorian economy and in particular the ongoing decline in manufacturing in the state.

Despite delivering less energy than forecast, both SP AusNet and Multinet were able to achieve slightly better than forecast revenue in this period. Only Envestra achieved less revenue than forecast (2.3 per cent less). SP AusNet achieved cumulative revenues between 2008 and 2011 of 1.7 per cent higher than forecast and Multinet achieved cumulative revenues of 2.3 per cent higher than forecast.

All businesses also achieved a better than forecast return on assets over 2009-2011 by between 1.2 per cent and 2.1 per cent. In 2011, Envestra achieved a return on assets of 8.2 per cent compared to a forecast return of 7 per cent. Multinet achieved an 8.9 per cent return on assets compared to 7.9 per cent. SP AusNet achieved a 9.2 per cent return on assets compared to 7.8 per cent forecast. These higher than forecast returns on assets are mainly due to the businesses spending less on capital investment (capex) over the period than approved. Between 2008 and 2011 Envestra spent 36 per cent less capex than forecast, Multinet spent 33 per cent less capex and SP AusNet spent 5 per cent less capex than forecast. SP AusNet also spent 15 per cent less on operating expenditure than forecast over the period.

This underspend in capex is largely reflected in the businesses not achieving targets set at the start of the period for replacing old low pressure gas mains with higher pressure mains. Envestra has achieved only 53 per cent of its target, followed by Multinet (64 per cent) and SP AusNet (83 per cent).



Maintaining the network is critical to service reliability to customers. In 2011 the total number of supply interruptions per customer was 0.020 times per year. This represents one supply interruption every 40<sup>2</sup> years for the average Victorian customer. There was some variation in the number of supply interruptions between the businesses. In particular, one supply interruption in 28 years for Envestra customers, 75 years for Multinet's customers and 38 years for SP AusNet customers. The average for all businesses since 2003 is one supply interruption every 48 years. For Envestra it is one interruption every 66 years, Multinet one every 55 years and SP AusNet one every 40 years. In 2011 Multinet was the only business to perform better than its average as measured since 2003.

Customer service by the DNSPs is measured in term of their performance in responding to customer calls about service incidents, meeting customers' appointments on time, making supply connections and maintaining supply reliability above the minimum reliability level.

In 2008 the ESCV revised its Guaranteed Service Level (GSL) scheme as part of the 2008-12 Gas access arrangement review. 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. Since 2009 there has been an increasing trend in the total number of GSL payments made to customers. In 2011, Envestra made the most GSL payments (617) totalling around \$94,000. Most of these payments were for interruptions lasting longer than 12 hours but less than 18 hours. SP AusNet made the least number of payments (263) totalling around \$30,000.

This report provides more detailed comparisons between the businesses with respect to financial performance, reliability of supply, network integrity and customer service. It also provides a business by business summary showing the main outcomes for each business.

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<sup>2</sup> 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

The Victorian gas distribution network consists of three distribution companies; SP AusNet (central and Western Victoria); Multinet (inner and outer east, the Yarra Ranges and South Gippsland); and Envestra (central north and north of the state and south east to Moe and Sale). In total these businesses distribute gas to over 1.85 million domestic and non-domestic customers<sup>3</sup>, and have a total pipeline length of 30,441 kilometres. Appendix A.1 sets out the main features of the Victorian gas distribution network businesses.

## 1.2 Financial performance

The Financial performance of the gas distribution network businesses is affected in part by how much energy is distributed. In 2011 the amount of Tariff V (small customers) energy distributed in Victoria was 3 per cent lower than in 2010. In 2011 the total amount of Tariff V energy distributed also represented the second lowest amount to date for the 2008–2012 access arrangement period.

In 2011 both Envestra and SP AusNet distributed less Tariff V energy than was forecast at the time of the 2008-12 Gas Access Arrangement Review (GAAR): SP AusNet by 1.1 per cent and Envestra by 6.2 per cent. In contrast, Multinet distributed 0.1 per cent more Tariff V energy than forecast. However, across all DNSPs for the current access arrangement period, the actual cumulative tariff V energy is 0.4 per cent higher than forecast for the years 2008 to 2011.

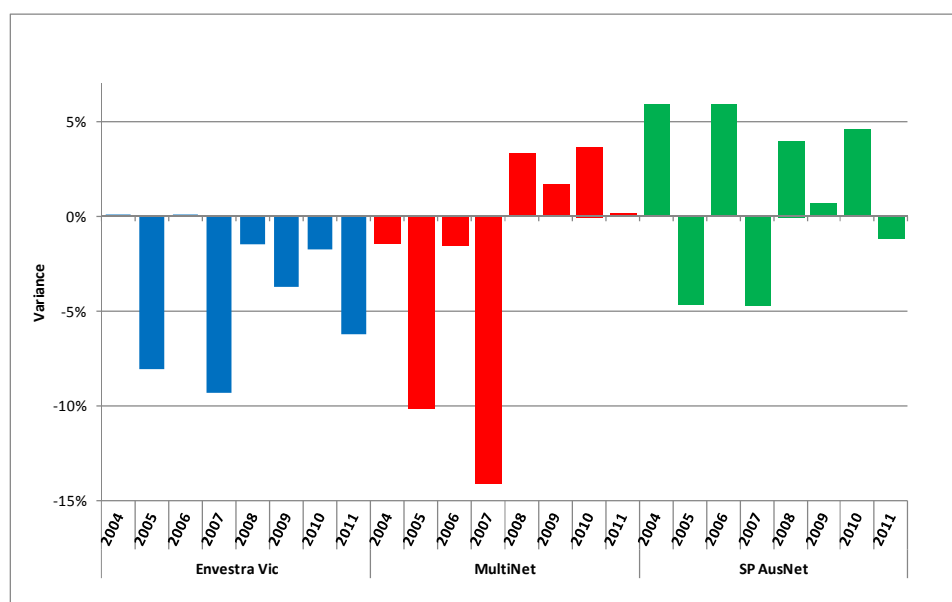
Figure 1.2.1 shows the difference between forecasts of tariff V energy and actual tariff V energy distributed since 2004. This shows that Envestra has consistently reported less actual tariff V energy than forecast over the access arrangement period, with differences in individual years of between 1.5 per cent and 6.2 per cent (in 2011).

Multinet and SP AusNet on the other hand have had both positive and negative variances between actual distributed energy and forecast energy. However, since 2008 Multinet has consistently delivered more energy compared to forecast since 2008.

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<sup>3</sup>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 tariff V energy distributed.**



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

Note: A positive percentage represents actual tariff V energy higher than the 2003 and 2008 GAAR forecasts.

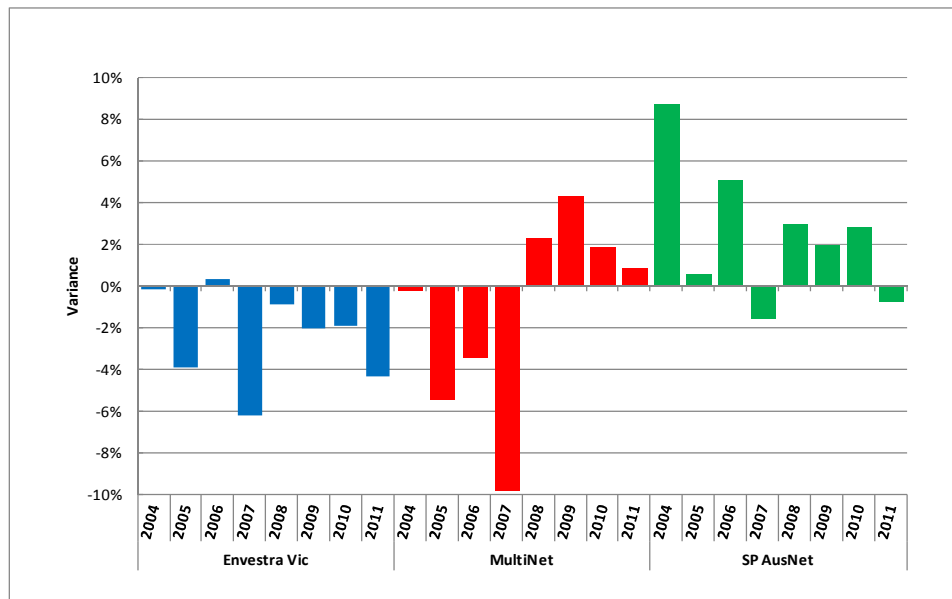
Tariff D (industrial and commercial customers) energy was not forecast at the time of the 2008-12 GAAR and hence comparisons to forecasts cannot be made for Tariff D. However, for Tariff D customers, the maximum hourly quantity (MHQ) or peak demand increased by 0.2 per cent across all DNSPs in 2011 compared to 2010. Actual tariff D energy distributed across all DNSPs increased by 7 per cent. This increase in energy distributed between 2010 and 2011 does not reflect the trend for the access arrangement period. In particular, since 2008 Tariff D MHQ decreased by 5 per cent and tariff D energy decreased by 6 per cent across all DNSPs. Further information relating to energy distributed is provided in section 4 of this report.

In 2011 the aggregate revenue across all DNSPs was 0.3 per cent below the revenue forecast for 2011. Revenue for Envestra and SP AusNet was lower than forecast by 4.3 per cent and 0.7 per cent, respectively. In contrast, Multinet reported revenue 0.85 per cent above forecast.

Despite SP AusNet's actual revenue being lower than forecast for 2011, SP AusNet has achieved cumulative revenues since 2008 of 1.7 per cent higher than forecast. Multinet has achieved cumulative revenues since 2008 of 2.3 per cent higher than forecast. This is a reflection of Multinet's energy delivered which was higher than forecast. In contrast, Envestra's revenue was 2.3 per cent lower than forecast, which also reflects that actual energy distributed was lower than forecast.

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

**Figure 1.2.2 Percentage difference between forecast and actual revenue including revenue for ancillary reference services (ARS)<sup>4</sup>**

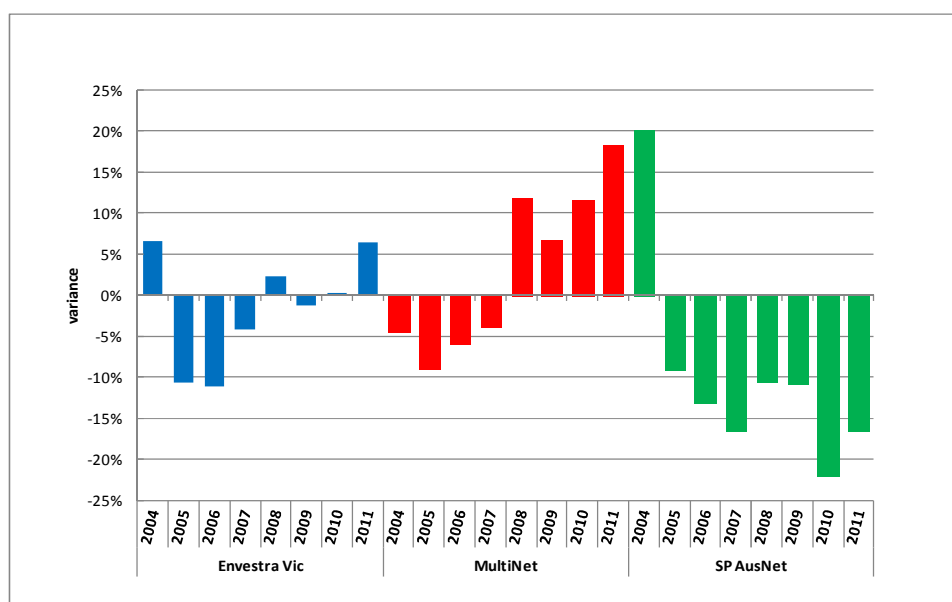


Source: ESCV 2008-12 GAAR, ESCV 2002 GAAR and DNSP regulatory accounting reports and quarterly reports  
 Note: A positive percentage represents actual revenue higher than the 2003 and 2008 GAAR forecasts.

Overall, DNSPs spent 7.1 per cent more on operating expenditure in 2011 compared to 2010. In 2011, operating expenditure (opex) was also 2.4 per cent above that forecast for 2011. Envestra and MultiNet's opex for 2011 was higher than forecast by 6.4 per cent and 18.3 per cent, respectively. In contrast, SP AusNet's opex was 16.4 per cent below its 2011 forecast. Figure 1.2.3 shows the difference between forecast and actual operating expenditure. Further information relating to operating expenditure is provided in section 4 of this report.

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

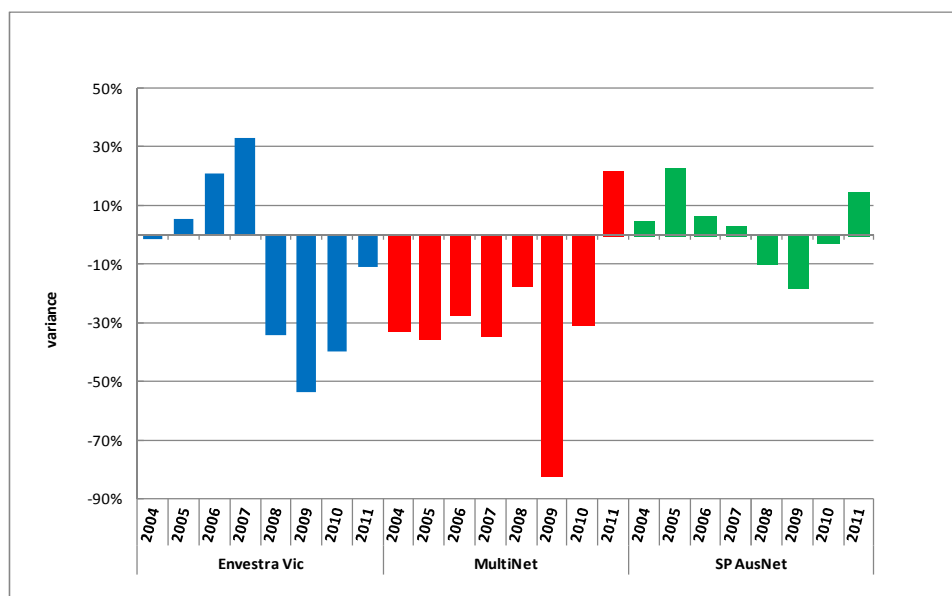
**Figure 1.2.3 Percentage difference between forecast and actual operating expenditure**



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 capital expenditure (capex) for 2011 increased by 28.4 per cent across all DNSPs compared to 2010 and was 6 per cent above the forecast for 2011. Envestra's capital expenditure for 2011, however, was 11 per cent below the forecast for 2011. Whereas MultiNet and SP AusNet's capital expenditure was 21.7 per cent and 14.6 per cent above the forecast level, respectively. Figure 1.2.4 shows the difference between forecast and actual capital expenditure. 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 of the DNSPs compared to forecasts made at the time of the 2008 GAAR.

**Table 1.2.1 Return on assets 2011**

Distributor	Forecast pre-tax return on assets	Actual pre-tax return on assets	Variance
Envestra	7.0%	8.2%	1.2%
Multinet	7.9%	8.9%	1.0%
SP AusNet	7.8%	9.2%	1.5%

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

Table 1.3.1 shows that for 2011, the DNSPs have been able to achieve a higher than forecast return on assets. In particular:

- For Envestra, distribution revenue was less than forecast and opex was higher than forecast but this was more than offset by lower levels of capex than forecast during the access arrangement period.
- For Multinet, opex was higher than forecast but this was more than offset by higher distribution revenue than forecast and lower levels of capex than forecast during the access arrangement period.
- For SP AusNet, capex was higher than forecast but this was more than offset by higher distribution revenue than forecast, lower levels of opex than forecast and from lower levels of capex than forecast for the prior years of the access arrangement period.

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

## 1.3 Reliability of supply

For the DNSPs, the total number of supply interruptions per customer was 0.020, times per year. This represents one supply interruption every 40<sup>5</sup> years for the average Victorian customer, and is a 6 per cent decrease when compared to 2010.

There was some variation in the number of supply interruptions between the DNSPs, as reported by the DNSPs. In particular, one supply interruption in 28 years for Envestra customers, 75 years for Multinet's customers and 38 years for SP AusNet customers.

Reliability of supply is typically measured by the following reliability performance reporting indicators<sup>6</sup>:

- 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.

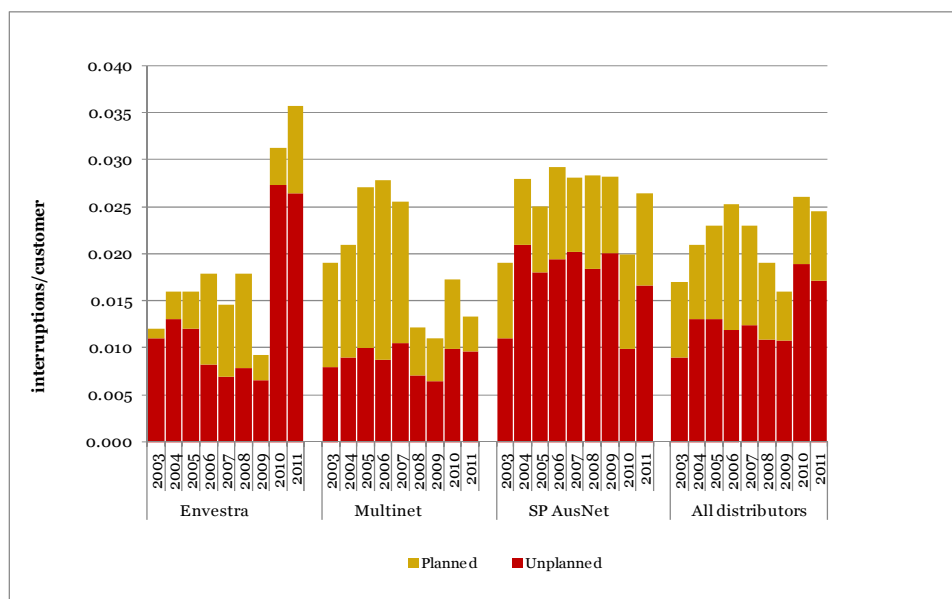
<sup>5</sup> This is calculated by dividing one by the number to total planned and unplanned interruptions.

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

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 2011 by 5.8 per cent, the overall minutes off supply per customer (SAIDI) increased 3.4 per cent compared to 2010. This was driven by the duration of interruptions per customer (CAIDI), which increased by 2.7 per cent across all DNSPs largely as a result of Envestra and Multinet's performance. Envestra commented that the increase in supply interruptions in 2010 can be explained by changes in reporting, which now include all interruptions (i.e. leaks that cause supply interruptions and momentary interruptions for unplanned maintenance work which were previously not reported).

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

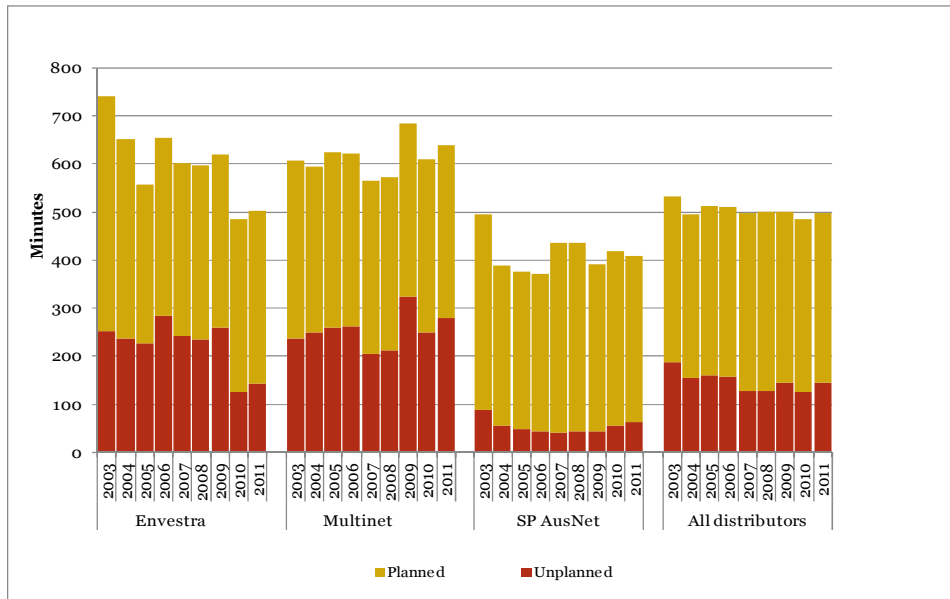


Source: AER calculations based on DNSP quarterly KPI reports

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.

Note: 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)**

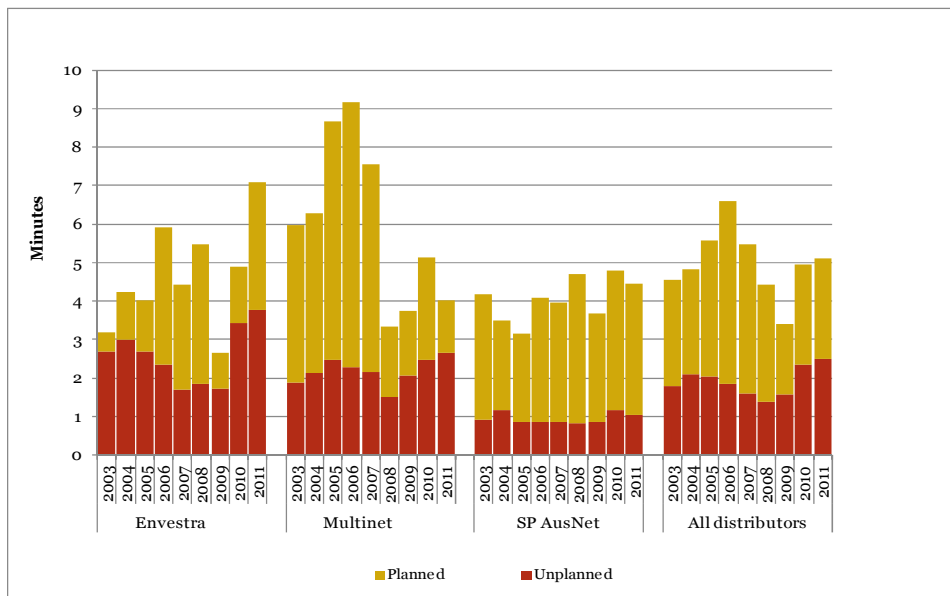


Source: AER calculations based on DNSPs quarterly KPI reports

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).

Note: 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 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).



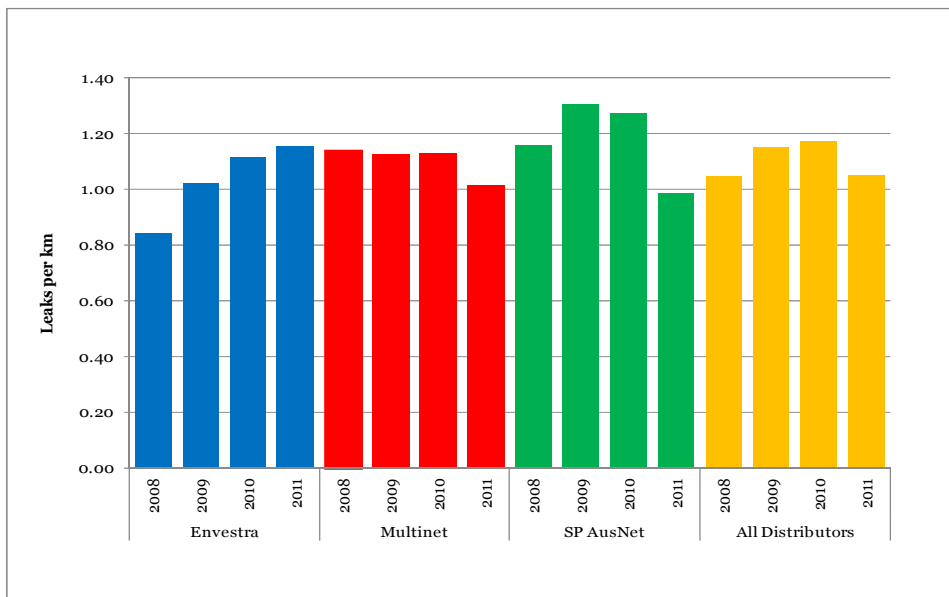
## 1.4 Network integrity

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 2010.

### Loss of containment

Figure 1.4.1 shows the number of publicly reported and repaired gas leaks per distributor. In 2011 the total number of gas leaks reported and repaired across all DNSPs decreased by 10 per cent compared to 2010.

**Figure 1.5.1 Repaired leaks per kilometre of gas pipe**



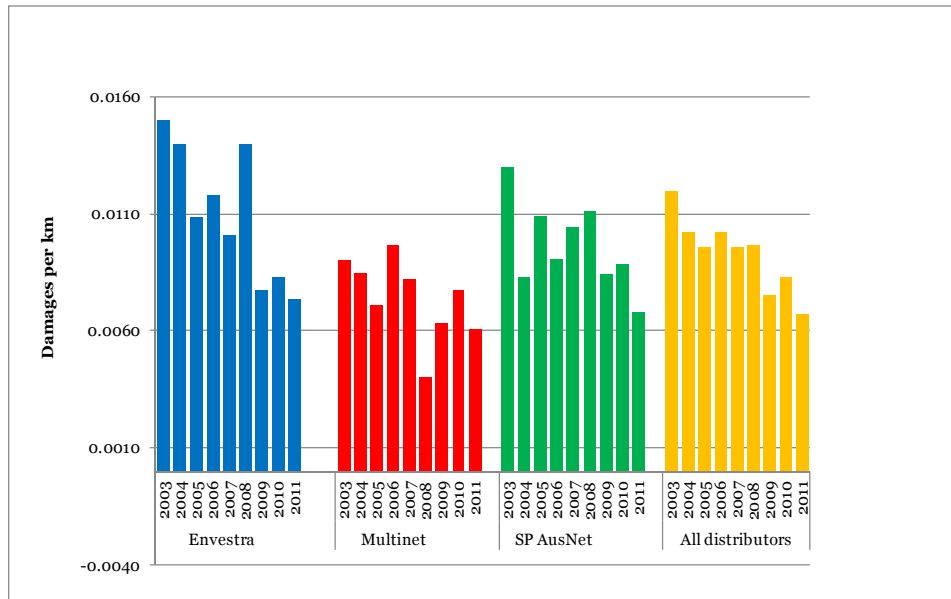
Source: DNSP quarterly KPI reports

### Mechanical damage

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

Figure 1.4.2 shows the number of incidents of mechanical damage to mains per kilometre. In 2011, DNSPs reported an 18 per cent decrease of damage to gas distribution mains.

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

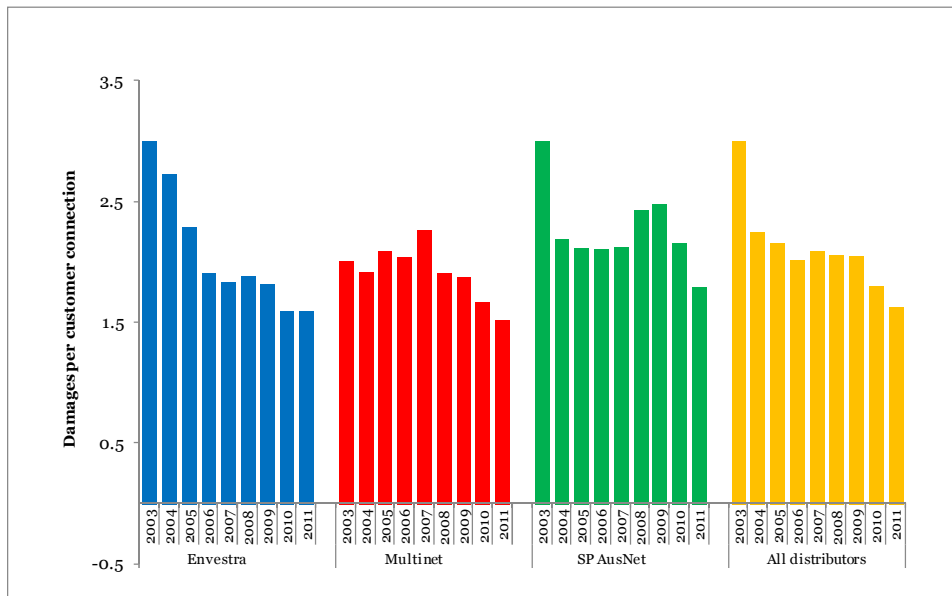


Source: DNSP quarterly KPI reports

### Service connection damage

Figure 1.4.3 shows the damage to service connections for the 2003-2011 period. There were 2987 incidents of damage to customer service connections in 2011. This represents a decrease of approximately 255 incidents or an 8 per cent improvement since 2010.

**Figure 1.4.3 Service damage per customer 2004–2011**

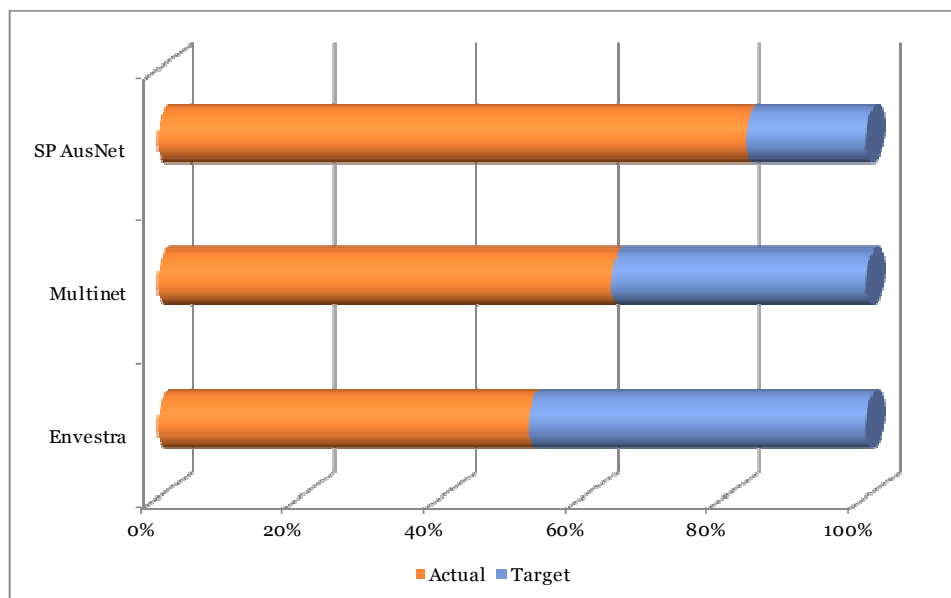


Source: DNSP quarterly KPI reports

## 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 2008–2012 access arrangement period. This shows that all DNSPs are significantly below target.

**Figure 1.4.4 Replacement of low pressure gas mains with high pressure against target up to 2011**



Source: DNSP quarterly KPI reports

## 1.5 Customer service

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

### Response to customer calls

DNSEs are required to report on their response time to customer calls in relation to targets established by the ESCV.<sup>7</sup> 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 Guaranteed Service Level (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

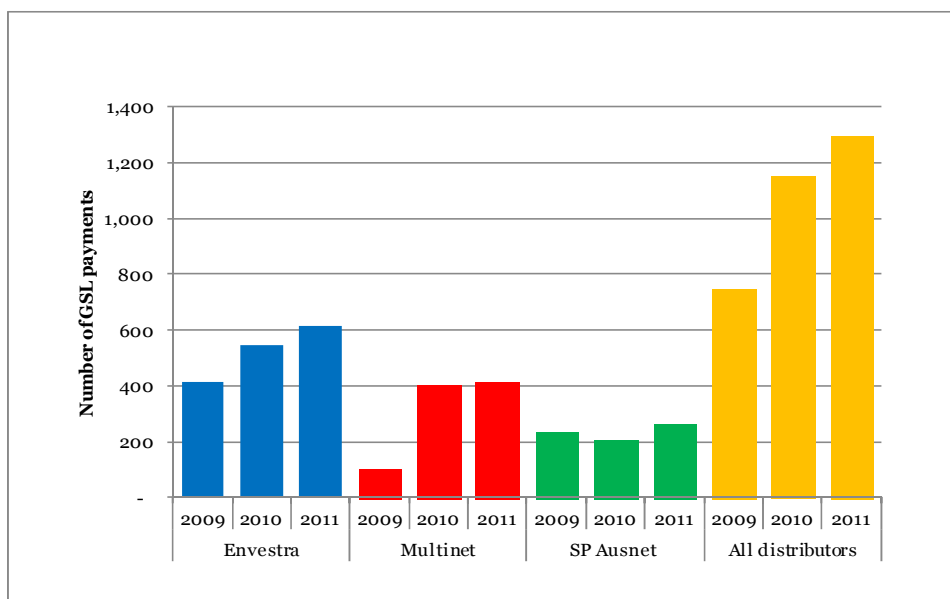
<sup>7</sup> Metropolitan target – to respond to 95 per cent of calls within 60 minutes during business hours and 90 per cent within 60 minutes after hours; Non-metropolitan target – to respond to 90 per cent within 60 minutes, all hours.

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.

Since 2009 there has been an increasing trend in the total number of GSL payments made to customers. Figure 1.5.1 below shows the number of payments made to customers since 2009. Figure 1.5.2 shows the aggregate dollars for all GSL payments paid to customers for each DNSP.

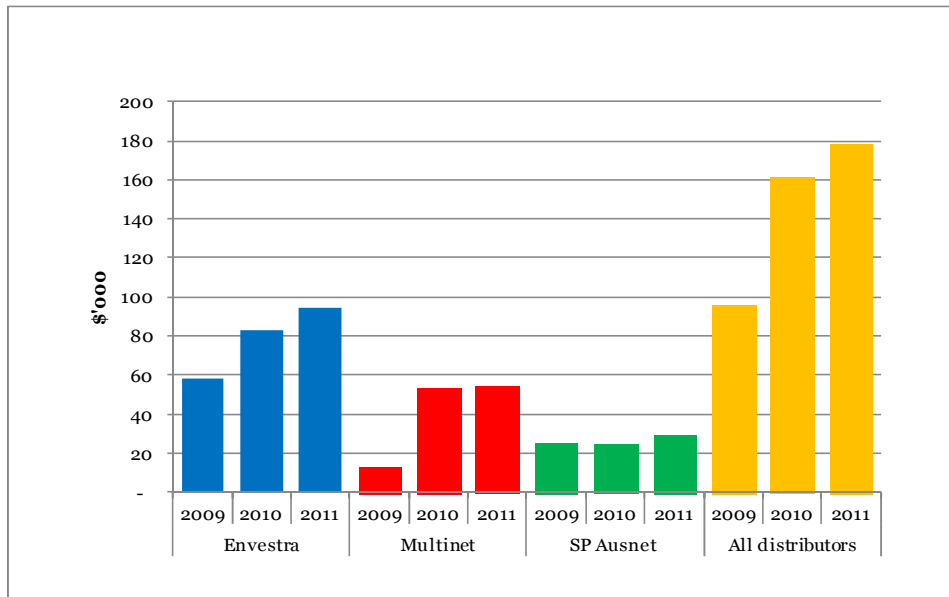
In 2011 Envestra made the most GSL payments (617) totalling around \$94,000. Most of these payments were for interruptions lasting longer than 12 hours but less than 18 hours. SP AusNet made the least number of payments (263) totalling around \$30,000.

**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)**

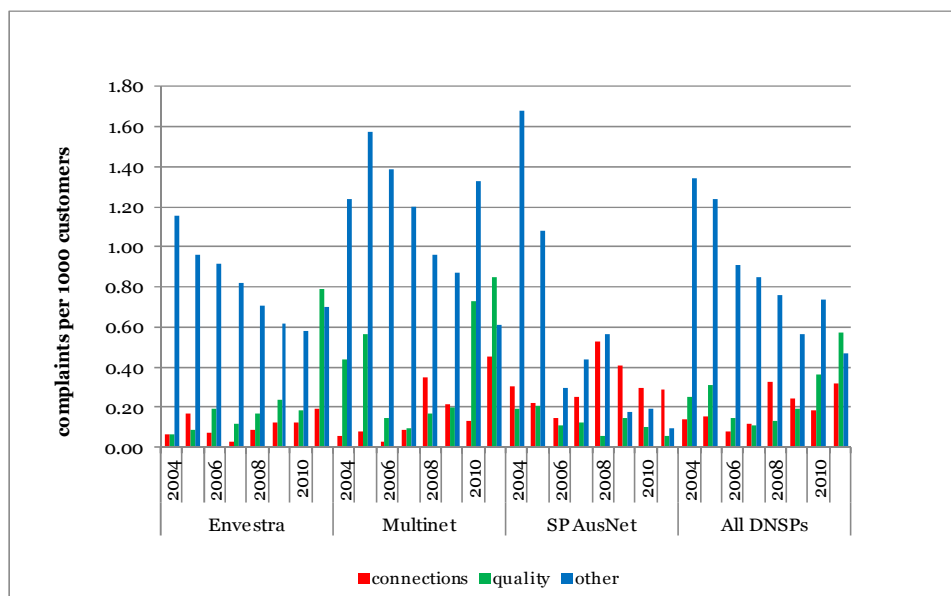


### Customer complaints

In 2011, the total number of customer complaints received by the DNSPs increased from the 2010 level by 7 per cent. In particular, for 2011, customer complaints in relation to connection and augmentation increased by 74 per cent, and complaints in relation to quality and reliability of supply increased by 59 per cent; whereas 'other' complaints reduced by 36 per cent (refer to Figure 1.5.3).

In addition, in 2011 the total number of GSL payments increased by 16 per cent compared to 2010.

**Figure 1.5.3 Number of complaints received by distributors per 1000 customers**

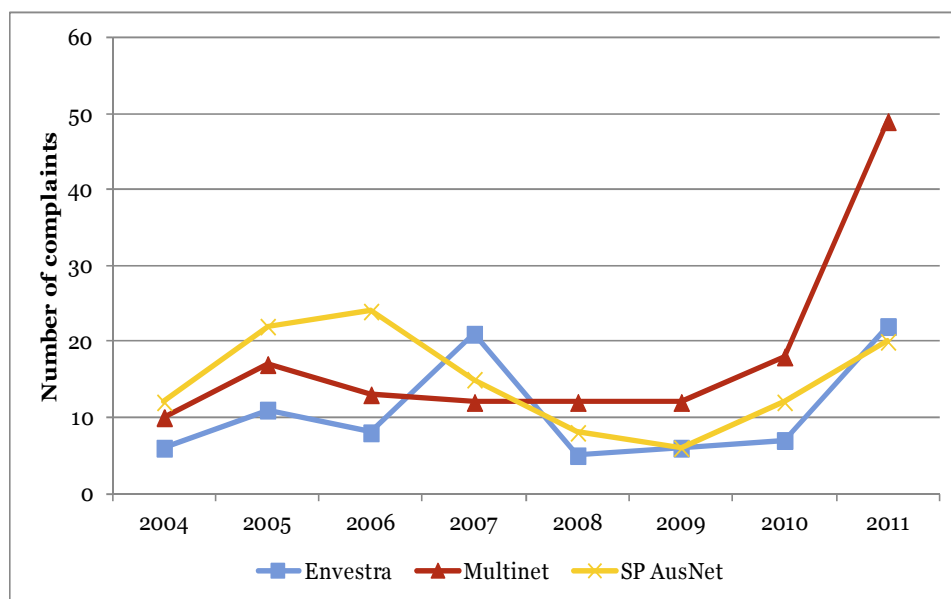


Source: DNSP quarterly KPI reports.

Complaints received for full investigation by the Energy and Water Ombudsman Victoria (EWOV) also increased significantly in 2011 compared to 2010 by 146 per cent from 37 in 2010 to 91 in 2011.

Figure 1.5.4 illustrates the total number of complaints received by EWOV for full investigation for each of the DNSPs since 2004.

**Figure 1.5.4 Complaints received by EWOV for full investigation**



Source: Energy and Water Ombudsman Victoria

## 1.6 Format of Report

The remainder of the report is structured as follows:

- Part 2 provides a business by business summary for each business.
- Part 3 details information sources and the accuracy of the information reported to the AER.
- Part 4 outlines DNSP's reported financial performance against the forecasts made in the 2008 GAAR.
- Part 5 covers the reliability of gas supply to customers, providing information about the measures of supply reliability and the performance of the DNSPs in their supply areas.
- Part 6 covers network integrity, and provides an assessment of networks from a safety aspect, covering gas leakages, third party damage and replacement of aged assets.
- Part 7 covers customer service which sets out the levels of customer service achieved by the DNSPs and the levels of complaints received by the DNSPs.

## 2 Business by Business Summary

### 2.1 Envestra

#### Energy

**Figure 2.1.1 Comparison of forecast and actual tariff V energy**

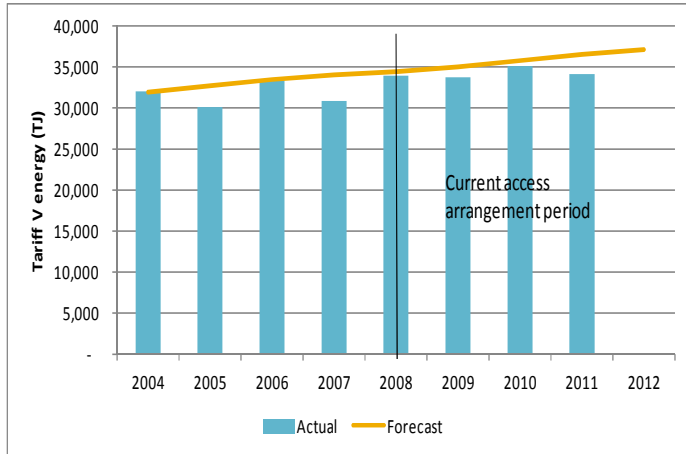


Figure 2.1.1 shows actual tariff V energy compared to forecast tariff V energy. Envestra has consistently reported less actual energy for its small residential customers (tariff V customers) than forecast. Since 2008 actual tariff V energy has been between 1.5 per cent and 6.2 per cent less than forecast. This is largely driven by a decrease in average consumption per customer. The average consumption for a residential tariff V customer fell by 7 per cent from 64 GJ in 2008 to 60 GJ per annum in 2011.

**Figure 2.1.2 Tariff D energy and maximum hourly quantity (MHQ)**

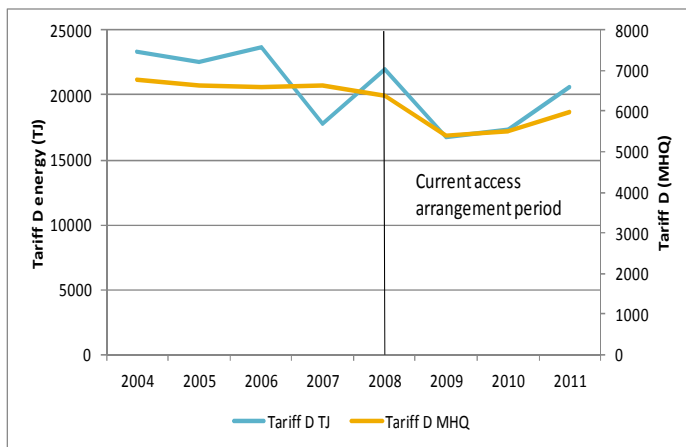


Figure 2.1.2 shows that both energy and MHQ for Tariff D customers (commercial and industrial customers) has decreased since 2004. The greatest decline was in 2009 and 2010. Envestra commented that the decline in tariff D energy reflects the changing structure of the Victorian economy and the decline of manufacturing in the state.

#### Financial Performance

Envestra earned less revenue between 2008 and 2011 than was forecast. This is largely reflective of tariff V consumption being less than forecast and an overall decline in tariff D consumption. Despite actual revenue being less than forecast Envestra has been able to earn an actual pre-tax return on assets better than forecast of between 1.2 per cent and 1.9 per cent. The higher than forecast return on assets can largely be explained by Envestra spending less than its approved capex allowance for the period.

**Figure 2.1.3 Comparison of forecast and actual revenue**

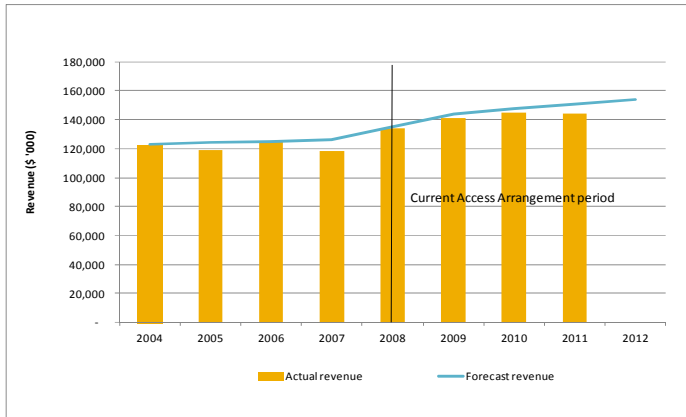


Figure 2.1.3 shows Envestra's actual revenue earned against forecast revenue. Over the current access arrangement period, Envestra has earned 2.3 per cent less revenue than forecast

**Figure 2.1.4 Comparison of forecast and actual expenditure**

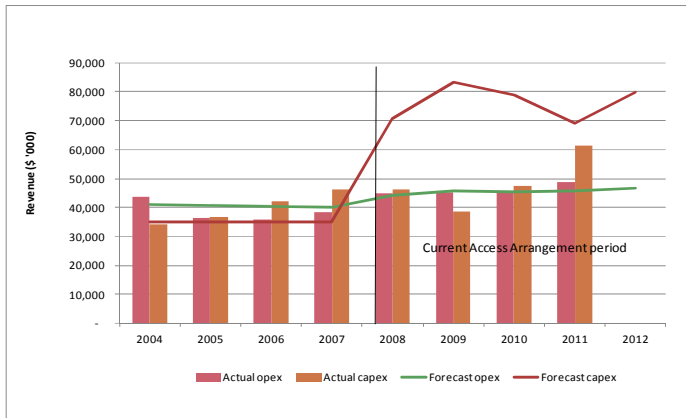


Figure 2.1.4 shows Envestra's actual operating costs and capital expenditure against forecast operating and capital expenditures. This shows that whilst Envestra's operating costs have largely reflected forecasts, capex has been significantly below forecast. In particular, Envestra has only reached around 53 per cent of its target for replacing low pressure mains.

**Figure 2.1.5 Cumulative actual capex against forecast capex**

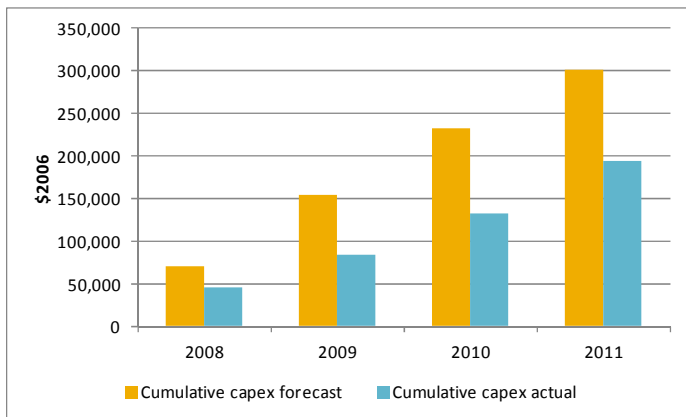
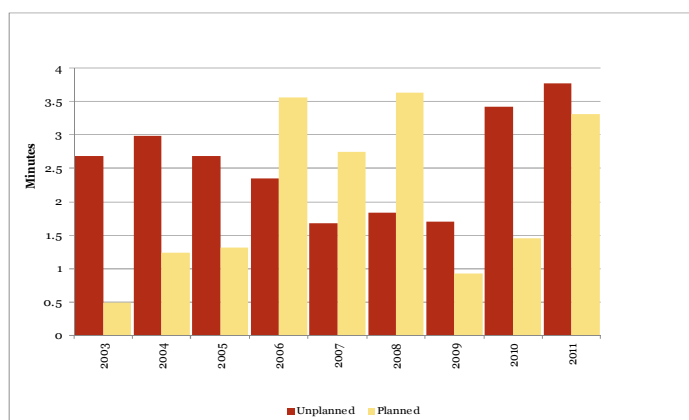


Figure 2.1.5 shows Envestra's actual cumulative capex compared to the 2008 forecasts. At the end of 2011 Envestra's cumulative capex over the period was 35 per cent less than forecast. Envestra commented that the reductions in capex were highest over the 2008 to 2010 period, which corresponded with the worst period of the global financial crisis. This underspending in capex has resulted in less replacement of old assets than target for the period (Figure 2.1.11).



## Reliability of supply

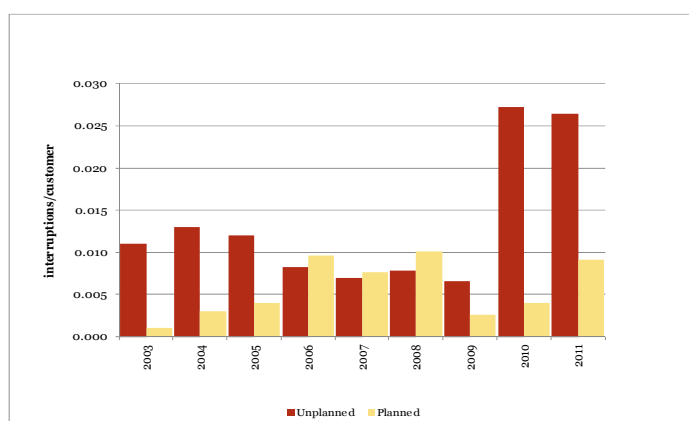
**Figure 2.1.6 Average minutes-off-supply per customer (SAIDI)**



Figures 2.1.6, 2.1.7 and 2.1.8 indicate Envestra's reliability of supply. This shows that over the 2008 to 2011 period reliability of supply as reflected by SAIDI and SAIFI has deteriorated, in particular for planned interruptions. Envestra has commented this is due to their asset replacement program. Envestra notes however, since 2010 changes in reporting now include all supply interruptions (i.e. leaks that cause supply interruptions for unplanned maintenance

work which were previously not included).

**Figure 2.1.7 Average number of interruptions per customer (SAIFI)**



Envestra commented that the increase in unplanned interruptions in 2010 and 2011 compared to earlier years was related to water in the mains issues as a result of increased rainfall in those years.

**Figure 2.1.8 Average interruption duration per customer (CAIDI)**

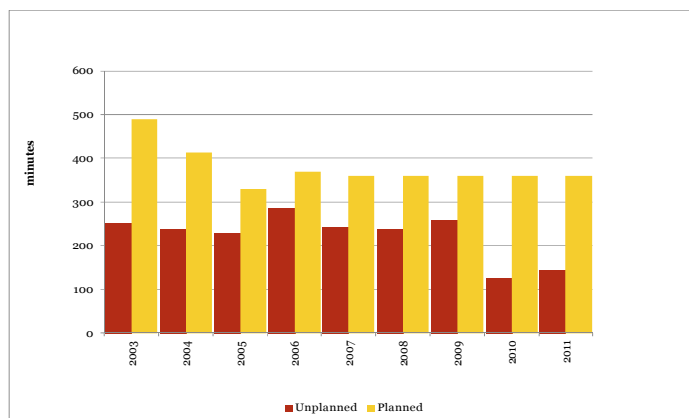
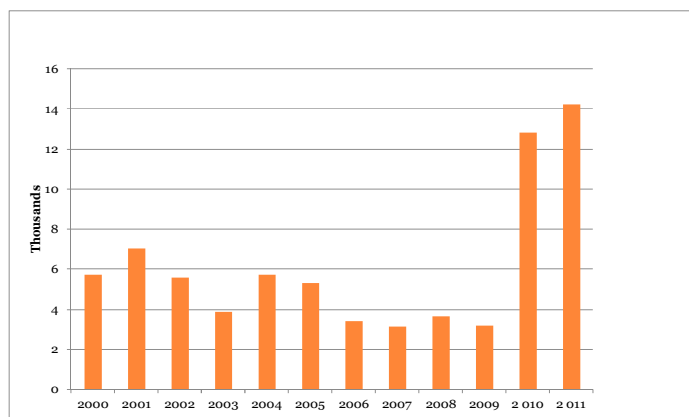


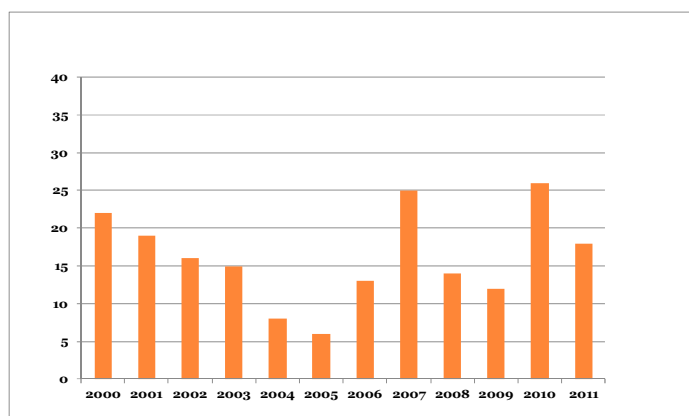
Figure 2.1.8 shows that despite the average minutes off supply per customer and the number of interruptions per customer increasing, the average interruption duration for those customers effected has decreased for unplanned outages. This could be a result of Envestra responding more quickly to problems with supply.

**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 2010 and 2011 the number of outages affecting customers has increased significantly. Between 2009 and 2010 the number of outages affecting 5 customer or few increased by 300 per cent and again by 11 per cent between 2010 and 2011.

**Figure 2.1.10 Number of outage affecting more than five customers**



Between 2009 and 2010 the number of outages affecting more than five customers increased by 116 per cent. However between 2010 and 2011 there was a decrease of 33 per cent in the number of outages affecting more than five customers. Bringing more in line with historical data.

## Network Integrity

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

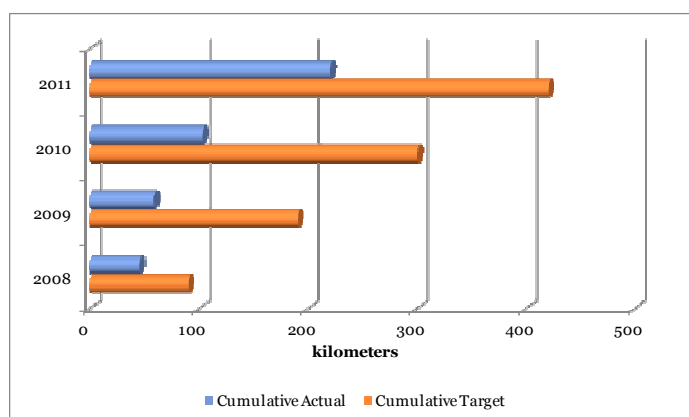


Figure 2.1.11 shows the replacement of low pressure gas mains with high pressure against target. Overall Envestra at the end of 2011 had achieved 53 per cent of its target to replace the low pressure network.

## **Customer service**

Envestra experienced one GSL payment per 928 customers in 2011. In 2011 Envestra paid an aggregate of \$94,271 (\$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 617 in 2011.

## 2.2 Multinet Energy

**Figure 2.2.1 Comparison of forecast and actual tariff V energy**

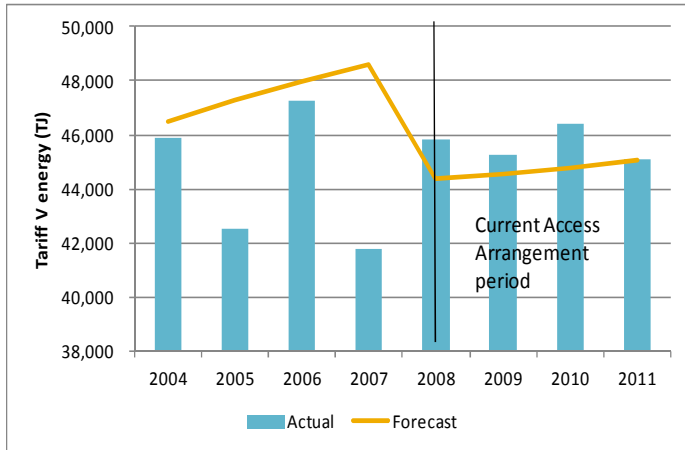


Figure 2.2.1 shows that for this access arrangement period Multinet has consistently distributed more tariff V energy to its residential customers than forecast. The aggregate tariff V energy distributed between 2008 and 2011 is 2.2% more than forecast.

**Figure 2.2.2 Tariff D energy and maximum hourly quantity (MHQ)**

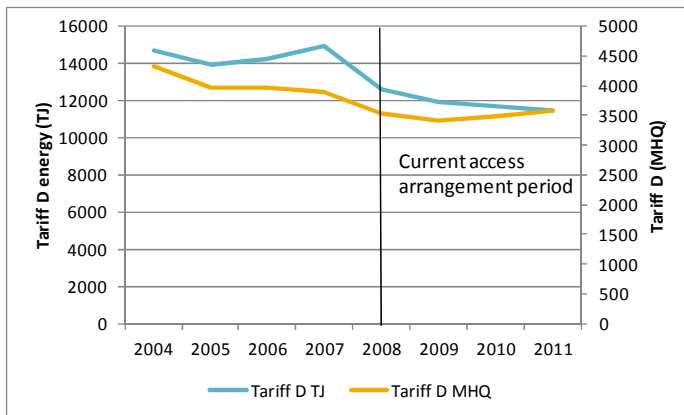
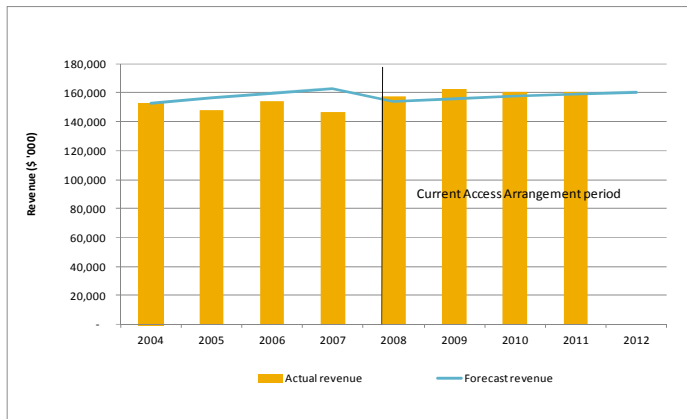


Figure 2.2.2 shows that since 2004 energy distributed to tariff D (commercial and manufacturing) customers has been declining. In 2011 MHQ is 17 per cent less than in 2004 and energy is 22 per cent less than in 2004.

### Financial performance

Between 2009 and 2011 Multinet achieved an actual pre-tax return on assets of between 1.6 per cent and 1.8 per cent better than forecast. . This is most likely a result of Multinet's actual capex being less than forecast.

**Figure 2.2.3 Comparison of forecast and actual revenue**



Between 2008 and 2011 Multinet has consistently earned more revenue than forecast. Ranging between 0.85 per cent more in 2011 to 4.32 per cent more in 2009. The cumulative actual aggregate revenue from 2008 to 2011 is 2.3 per cent more than forecast.

**Figure 2.2.4 Comparison of forecast and actual expenditure**

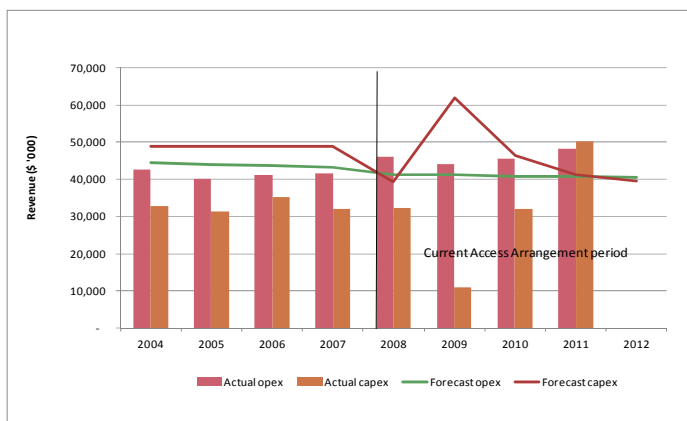


Figure 2.2.4 shows that Multinet has consistently spent more opex than forecast. Ranging from 6.7 per cent in 2009 to 18.3 per cent in 2011.

On the other hand Multinet underspent on capex in 2008, 2009 and 2010 by 17.5 per cent, 82 per cent and 31 per cent respectively. However, in 2011 Multinet spent 22 per cent more capex than forecast.

**Figure 2.2.5 Comparison of actual capex against forecast**

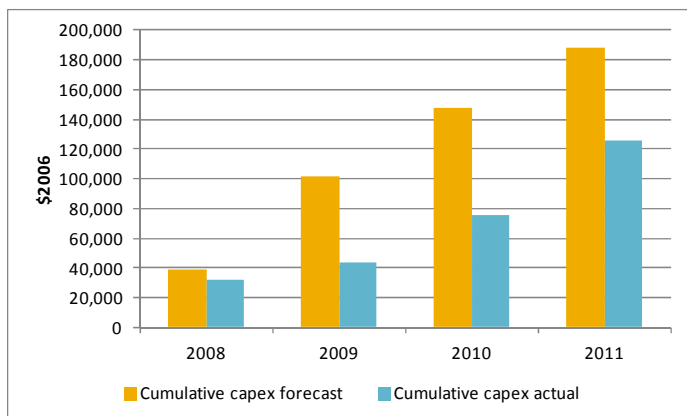
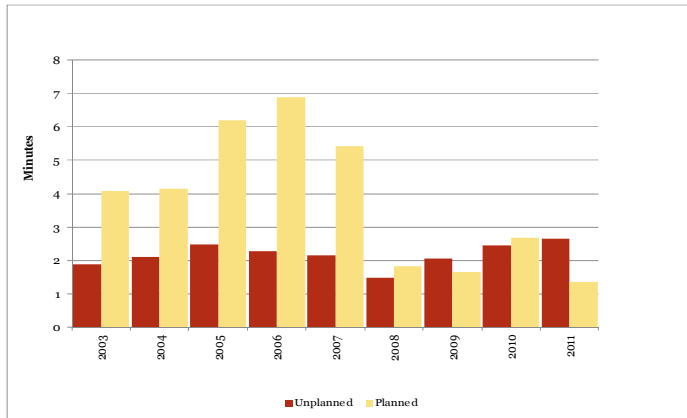


Figure 2.2.5 shows cumulative actual capex against forecast capex. At the end of 2011 Multinet had spent 33 per cent less on capex than forecast for the period 2008 to 2011. This underspending in capex has resulted in less replacement of old assets than target for the period Figure 2.2.11 shows that Multinet has only replaced 64 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. In 2010 and 2011 reliability of supply deteriorated as indicated by the average minutes-off-supply (SAIDI) for unplanned interruptions.

**Figure 2.2.7 Average number of interruptions per customer (SAIFI)**

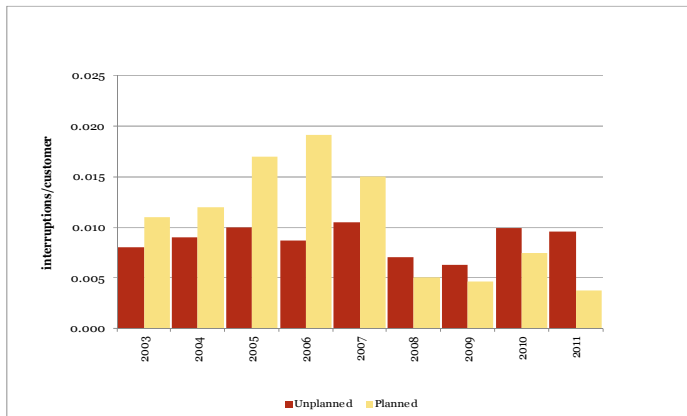
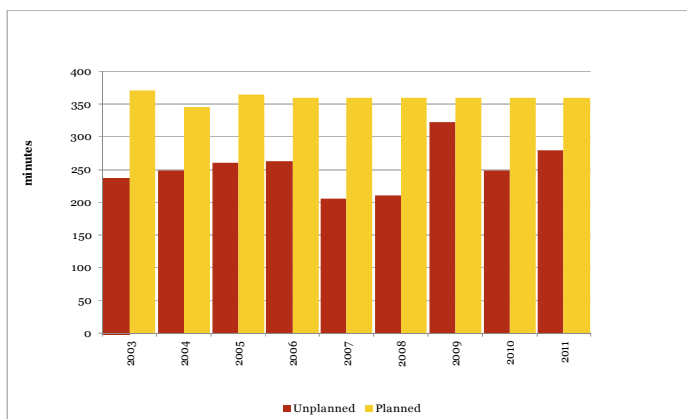


Figure 2.2.7 shows the average number of unplanned interruptions per customer (SAIFI). This shows that in 2010 and 2011 there was an increase in unplanned interruptions, indicating a deterioration in reliability of supply. Multinet commented that the deterioration in supply largely a result of increased rainfall in 2010 and 2011.

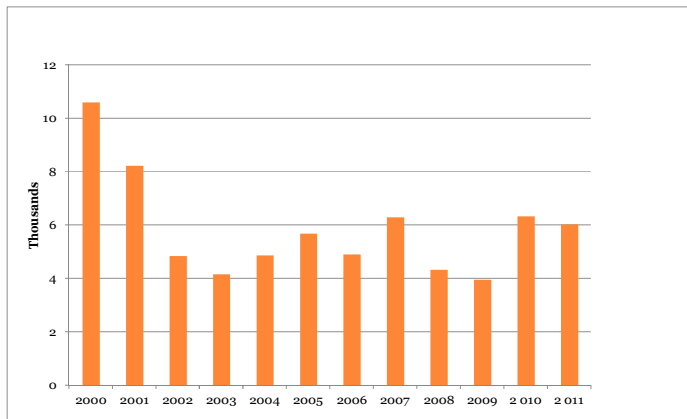
**Figure 2.2.8 Average interruption duration per customer (CAIDI)**



The average interruption duration for customers affected by supply interruptions has remained stable for planned interruptions, but is higher in the period from 2008 than in the previous period. Multinet commented that gas performance statistics are very sensitive due to the high level of reliability experienced in the system. Multinet stated that generally performance deteriorated in 2012 largely due to the weather which hampered crews in

repairing the faults when compared to previous year.

**Figure 2.2.9 Number of outages affecting 5 customers or fewer**



In 2010 the number of outages affecting 5 customers or fewer increased by 60 per cent compared to 2009, but in 2011 there was a decrease in outages by 5 per cent compared to 2010. But at 6,019 is the fifth highest since 2000.

**Figure 2.2.10 Number of outage affecting more than five customers**

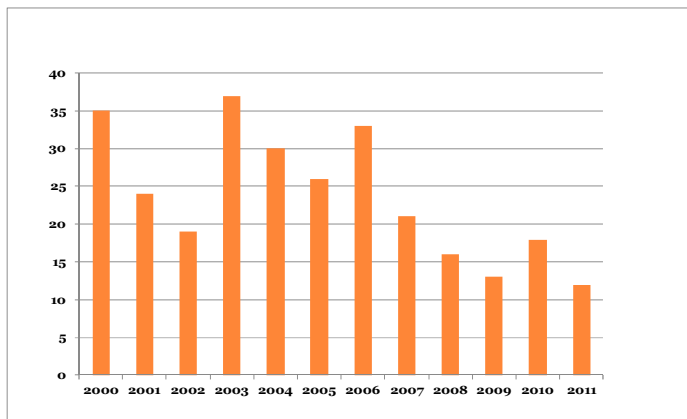


Figure 2.2.10 shows that since 2008 there has been an improvement in the number of outages affecting more than 5 customers. In 2011, at 12 outages, is Multinet's best performance.

## Network Integrity

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

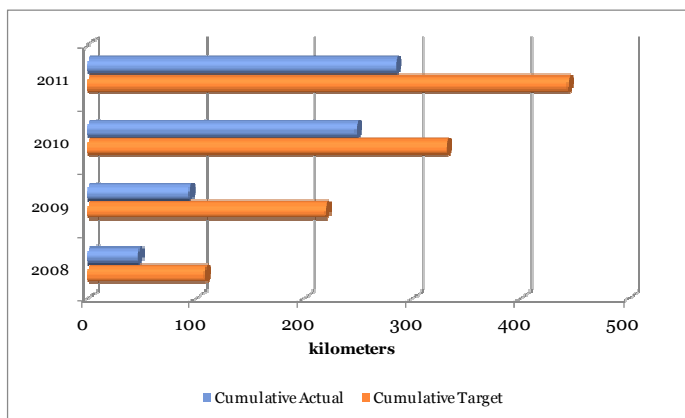


Figure 2.2.11 shows that by 2011 Multinet had achieved 64 per cent of its target to replace low pressure gas mains with high pressure gas mains.

## Customer service

Overall Multinet experienced a decrease in performance in 2011 compared to 2009 from one payment per 6,482 customers to one payment per 1,621 customers. The total number of payments increased by 309 per cent from 101 in 2009 to 413 in 2011. In 2011 Multinet paid \$54,198 (\$2006) as GSL payments to customers.

Multinet has not made any payments for late appointments since 2009. Multinet also performed consistently also in relation to connection payments by only making one connection payment in 2009 and 2010 and no payments in 2011.

However, Multinet's performance for repeat interruptions and lengthy interruptions has deteriorated significantly between 2009 and 2011, from 38 to 135 for more than 5 unplanned interruptions; from 42 to 84 for interruptions lasting greater than 12 hours but less than 18 hours; and from 19 to 175 for interruptions lasting greater than 18 hours. Multinet commented that the increase in GSL payments in general and for repeat interruptions and lengthy interruptions is due to the increase in the level of faults as a result of the weather. In particular the significantly increased rainfall had a major impact on the function of the low pressure system (which comprises more than 25 per cent of Multinet's network) and the vast majority of repeat outage and long duration outage GSL's were restricted to this part of the network during that period.



## 2.3 SP AusNet

### Energy

**Figure 2.3.1 Comparison of forecast and actual tariff V energy**

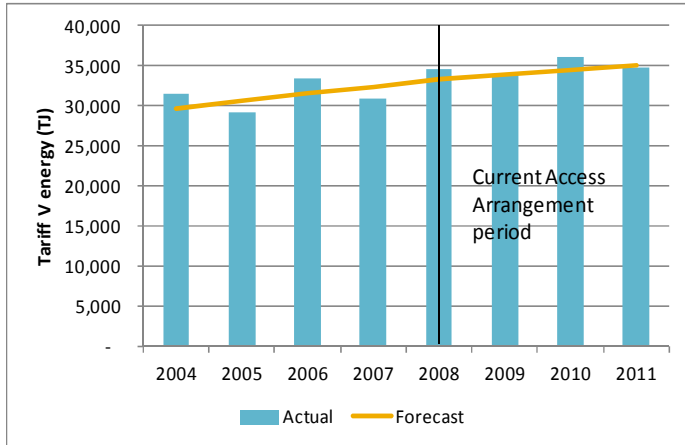


Figure 2.3.1 shows that for the current access arrangement period SP AusNet has distributed more tariff V energy to residential customers than forecast in each year except for 2011, which was 1.1 per cent below forecast. Overall cumulative energy between 2008 and 2011 is 2 per cent more than forecast for the period.

**Figure 2.3.2 Tariff D energy and maximum hourly quantity (MHQ)**

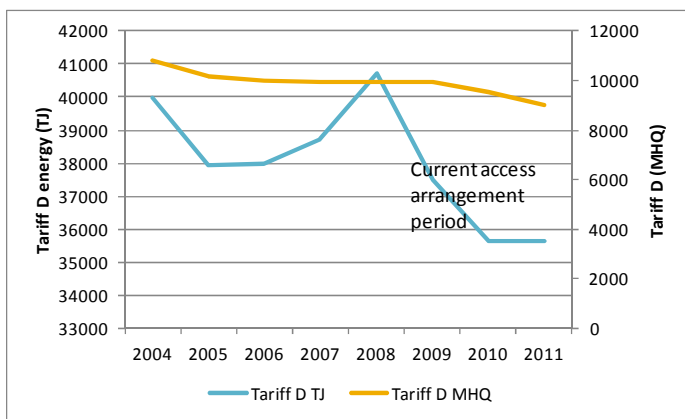
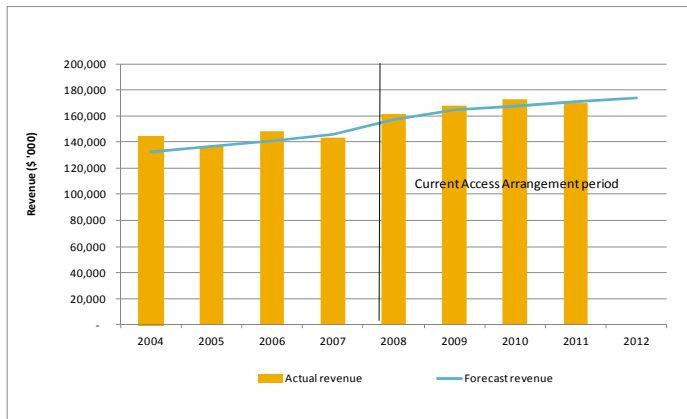


Figure 2.3.2 shows that tariff D energy and MHQ for commercial and manufacturing customers has decreased since 2004 by 17 per cent and 11 per cent respectively.

### Financial performance

Between 2009 and 2011 SP AusNet has earned a better return on assets than forecast of between 1.29 per cent and 2.11 per cent.

**Figure 2.3.3 Comparison of forecast and actual revenue**



Overall for the period 2008 – 2011 SP AusNet earned cumulative revenue of 1.7 per more than forecast. For each year of the period, except 2011 actual revenue earned was more than forecast. In 2011 it was 0.85 per cent less than forecast for the year.

**Figure 2.3.4 Comparison of forecast and actual expenditure**

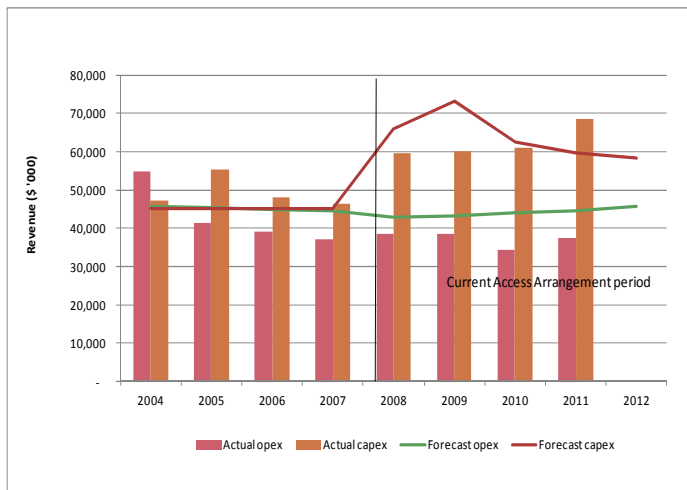


Figure 2.3.4 shows SP AusNet's actual revenues, opex and capex against forecast. SP AusNet has consistently underspent on opex. SP AusNet comments that delivered cost efficiencies have offset the upward pressure on costs due to network growth and input price escalation. SP AusNet also underspent on capex. 2011 was the first year of the current period where capex was more than forecast (3 per cent). SP AusNet commented that the difference between its forecast and actual capex is largely explained through significant variations

to the IT expenditure profile (caused by program changes and deferrals) over the period.

**Figure 2.3.5 Cumulative actual capex against forecast capex**

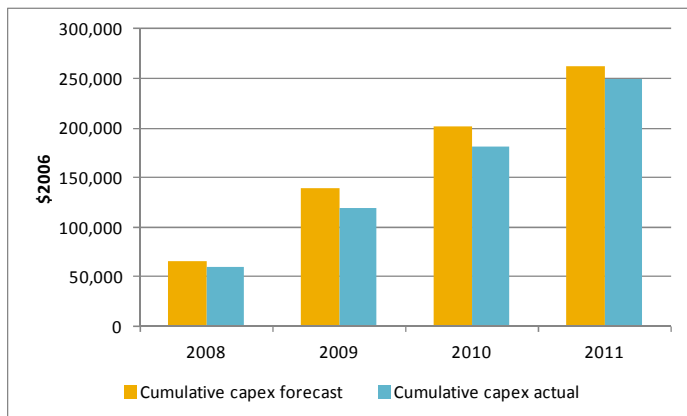
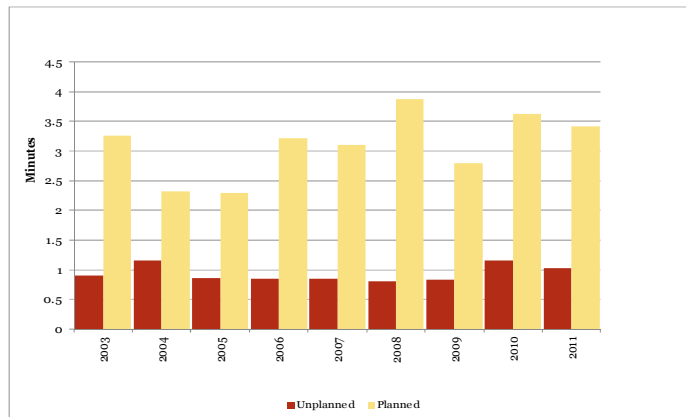


Figure 2.3.5 shows SP AusNet's actual cumulative capex between 2008 and 2011 compared to cumulative forecast capex. This shows that by the end of 2011 SP AusNet's cumulative actual capex was only 5 per cent less than forecast.

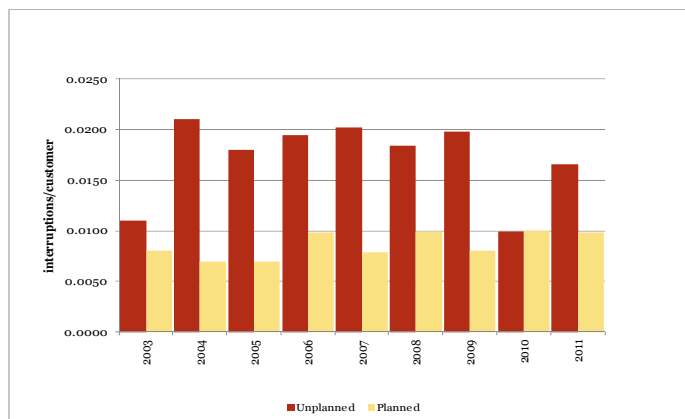
## Reliability of supply

**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 Envestra and Multinet.

**Figure 2.3.7 Average number of interruptions per customer (SAIFI)**



However, SP AusNet's average number of interruptions per customer (SAIFI) increased by 67 per cent in 2011.

**Figure 2.3.8 Average interruption duration per customer (CAIDI)**

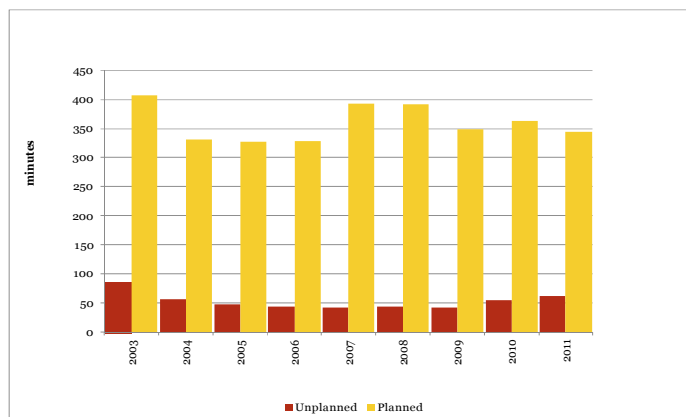


Figure 2.3.8 shows SP AusNet's average interruption duration (CAIDI) for those customers affected by supply interruptions.

**Figure 2.3.9 Number of outages affecting 5 customers or fewer**

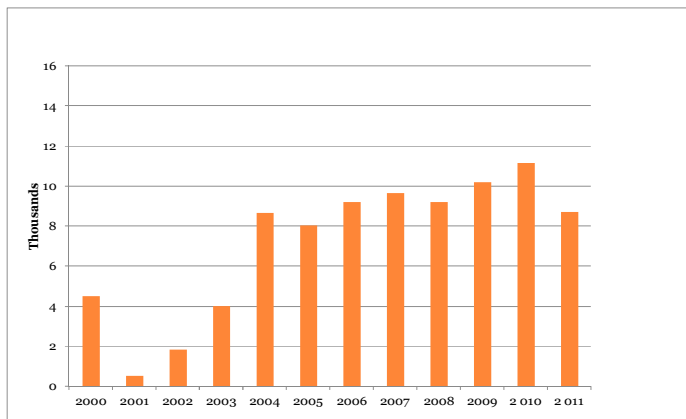


Figure 2.3.9 shows the number of outages affecting 5 customers or fewer. In 2011 SP AusNet reduced the number of unplanned outages affecting less than five customers by 22 per cent. However, overall SP AusNet has had more unplanned outages for five customers or fewer than Multinet and Envestra. Except for in 2010 and 2011 when Envestra experienced increases in unplanned outages for five customers or fewer.

**Figure 2.3.10 Number of outages affecting more than 5 customers**

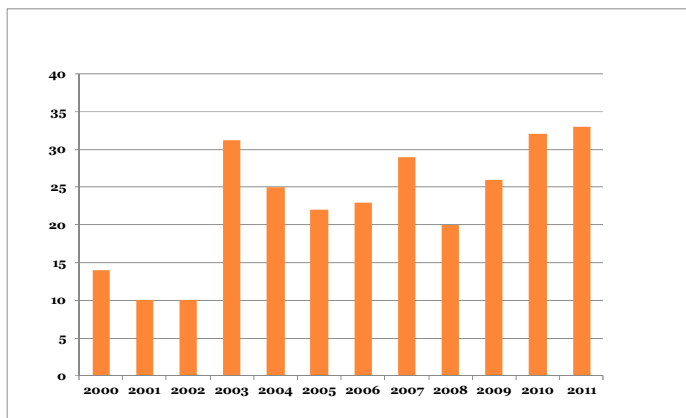


Figure 2.3.10 shows the number of outages affecting more than 5 customers. In 2011 SP AusNet recorded 33 outages this is 44 per cent higher than the average for the period of 22.

## Network Integrity

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

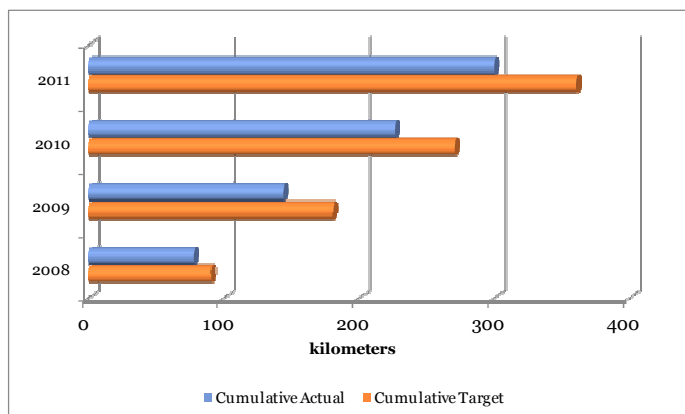


Figure 2.3.11 shows SP AusNet's replacement of low pressure gas mains with high pressure against target. Overall SP AusNet has achieved 83 per cent of its target to replace the low pressure network.

## Customer service

In 2011, SP AusNet experienced on GSL payment per 2,257 customers. This represents a decrease in performance compared to 2009, where one GSL payment was made per 2,367 customers. In 2011 SP AusNet paid \$29,606 (\$2006) to customers in GSL payments. Overall SP AusNet performed better than Multinet and Envestra in terms of GSL payments made to customers.

## 3 Source of information and background information

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

### 3.1 Sources of information

This comparative performance report is based on:

- the regulatory account 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

#### Accuracy of the financial information submitted by the distributors

The financial performance of distribution businesses is based on the regulatory account 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

The ESCV's 2008 Gas Access Arrangement Review (GAAR) established forecasts for the revenue, operating expenditure and net capital expenditure for Victorian gas DNSPs for the access arrangement period 1 January 2008 to 31 December 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 has in place an efficiency incentive framework which is intended to encourage DNSPs to achieve efficiency gains. 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.

### 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 Energy distributed

The level of energy distributed by each DNSP is primarily determined by the annual average temperature and the number of customers connected to the distribution network.<sup>8</sup> Energy 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 received by the DNSP.

This section reports on the levels of the energy 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 hour<sup>9</sup>.

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<sup>8</sup> Customer numbers are detailed in table in Appendix A1.

<sup>9</sup> More details on gas haulage tariffs are set out in Appendix A.2.

## 4.3 Tariff V

Table 4.3.1 shows that the total Tariff V energy distributed by DNSPs for the period 2004 to 2011. Overall Tariff V energy distributed in 2011 was 2.2 per cent less than forecast. Within the period tariff V energy has fluctuated from being 2.2 per cent above forecast in 2010 to 2.2 per cent below forecast in 2011.

**Table 4.3.1 Tariff V energy distributed terajoules (TJ) 2004–2011**

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

Source: DNSP annual regulatory accounting reports

The increase in tariff V energy over the current access arrangement period has been greatest for Envestra at 0.9 per cent. SP AusNet tariff V energy increased by only 0.4 per cent since 2008 and Multinet tariff V energy has decreased by 1.6 per cent since 2008.

Envestra notes that the growth in tariff V over time is driven by Melbourne population growth, which in turn results in increased connections. However, Envestra commented that this has been offset however by the decline in average consumption due to a number of factors such as customer appliance preferences and government efficiency policies. Overall since 2008, average consumption has decreased by 7 per cent across the DNSPs, with SP AusNet experiencing the largest decrease of 8 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)**

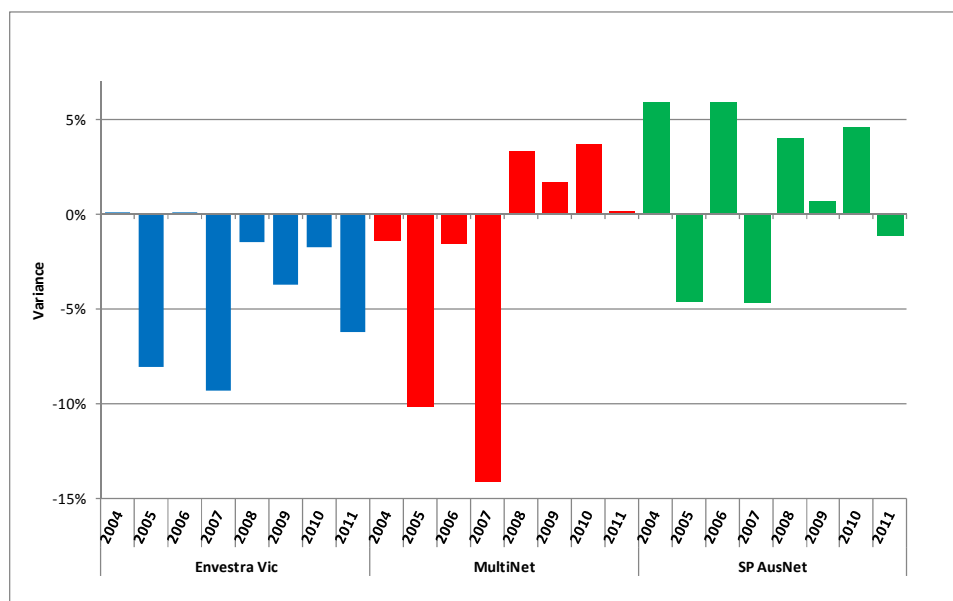
	2008	2009	2010	2011
Envestra Vic	64	62	63	60
Multinet	70	69	70	67
SPI	64	61	62	58
All distributors	66	64	65	62

Source: DNSP annual regulatory accounting reports

Figure 4.3.1 details the variance (percentage difference) of each DNSP's actual annual Tariff V energy distributed for each year of the period compared with the forecasts for the period.



**Figure 4.3.1 Percentage difference between actual tariff V energy distributed and forecast tariff V energy distribution**



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

In 2011 Envestra distributed 6.2 per cent and SP distributed 1.1 per cent less Tariff V energy than forecast in the 2008 GAAR. Whereas Multinet distributed 0.1 per cent more than forecast.

Table 4.3.3 shows the cumulative total tariff V energy actually distributed from 2008 to 2011 against the cumulative forecast to 2011. This shows that overall for the current access arrangement period actual tariff V energy distributed has been closely aligned to the forecasts made for the period. The cumulative actual energy being only 0.4 per cent more than forecast.

**Table 4.3.3 Comparison of aggregate tariff V energy (TJ) forecast for 2008–2011 to actual tariff V energy distributed**

Distributor	Envestra	Multinet	SP Ausnet	All DNSPs
Aggregate total Forecast Tariff V energy 2008 -2011	142,000	178,800	136,600	457,300
Aggregate total Actual Tariff V forecast 2008-11	137,200	182,600	139,400	459,200
% Difference	-3.3%	2.2%	2.0%	0.4%

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

Over the current access arrangement period Envestra distributed 3.3 per cent less tariff V energy than forecast, whereas Multinet and SP AusNet distributed 2.2 per cent and 2.0 per cent more than forecast, respectively. Envestra commented that actual energy distributed is below the forecast as customer number growth was overstated and the decline in average consumption was understated at the time of the 2008 GAAR determination. Multinet commented that this is due to higher than expected colder days than forecast. SP AusNet also commented that its actual outcome in 2011 compared to 2010 for tariff V energy distributed was due to the abnormal winter weather experienced in August and September 2011.

## 4.4 Tariff D

Tariff D is based on the maximum hourly quantity (MHQ) demanded rather than the volume of energy 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 show that since 2004, tariff D energy and GJ MDQ has decreased across all DNSPs. In particular, compared to 2004, both the total energy and GJ MHQ have decreased across all DNSPs by 15.4 per cent and 13.2 per cent, respectively.

Tariff D energy is not affected by changes in weather in the same way as Tariff V given commercial and industrial customer demand is not as weather dependant. Since 2008 the total Tariff D energy distributed has been decreasing, and in 2011 was 10 per cent less than in 2008. The total tariff D MHQ has also decreased since 2008 and in 2011 was 7 per cent less than in 2008. Over this period SP AusNet experienced the largest decreases in tariff D energy and MHQ of 13 per cent and 10 per cent, respectively.

**Table 4.4.1 Tariff D energy distributed 2004–2011 (terajoules)**

Distributor	2004	2005	2006	2007	2008	2009	2010	2011
Envestra	25,600	24,700	23,600	17,700	22,000	16,800	17,379	20,593
Multinet	14,700	13,900	14,200	14,900	12,575	11,945	11,685	11,454
SP AusNet	40,000	37,900	38,000	38,700	40,700	37,500	35,646	35,631
All distributors	80,300	76,500	75,800	71,300	75,275	66,245	64,710	67,678

Source: DNSP annual regulatory accounting reports

**Table 4.4.2 Tariff D demand - maximum hourly quantity (MHQ) 2004–2011**

Distributor	2004	2005	2006	2007	2008	2009	2010	2011
Envestra	6740	6649	6601	6629	6375	5411	5511	5981
Multinet	4331	3975	3964	3887	3534	3405	3473	3580
SP AusNet	10,832	10,191	9995	9911	9951	9933	9527	8991
All distributors	21,903	20,815	20,560	20,427	19,860	18,749	18,511	18,552

Source: DNSP annual regulatory accounting reports

Envestra commented that Tariff D comprises mainly large industrial manufacturing facilities. Envestra considers that the decline in tariff D MHQ and energy over time reflects the changing structure of the Victorian economy and in particular the decline in manufacturing in the state. Multinet supports this view stating that volumes (tariff D energy) have steadily decreased due to the closure of industry/production in Multinet's territory.

However in 2011 there was an increase in the total GJ MHQ and Tariff D energy distributed across all DNSPs compared to 2010, of 0.2 per cent and 4.6 per cent, respectively. This increase was due to Envestra where Envestra's GJ MHQ energy distributed increased by 8.5 per cent and Tariff D energy increased by 18.4 per cent. Envestra commented that the volatility in tariff D energy and MHQ relates to the consumption patterns of some of its largest Tariff D customers.

## 4.5 Return on assets

Return on assets is a measure of the DNSP's overall financial performance. An increase in distribution revenue, or a reduction in operating expenditure and in capital expenditure will increase the DNSP's return on assets compared to the forecast. The DNSPs 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 actual pre-tax return on assets compared to the forecast pre-tax return on assets for each business for 2009 to 2011. Over 2009 to 2011 Multinet has had an actual pre-tax return on assets of between 1.5 and 1.8 per cent greater than forecast. SP AusNet's pre-tax return on assets has been between 1.3 per cent to 2 per cent greater than forecast. Envestra has had a pre-tax return on assets of between 1.2 per cent and 1.9 per cent greater than that forecast for this period.

**Table 4.5.1 Return on assets**

Distributor	2009 Forecast pre-tax ROA	2009 Actual pre-tax ROA	Variance	2010 Forecast pre-tax ROA	2010 Actual pre-tax ROA	Variance	2011 Forecast pre-tax ROA	2011 Actual pre-tax ROA	Variance
Envestra	7.5%	9.3%	1.8%	7.2%	9.2%	2.0%	7.0%	8.2%	1.2%
Multinet	7.8%	9.7%	1.8%	7.8%	9.4%	1.6%	7.9%	9.6%	1.7%
SP AusNet	7.8%	9.1%	1.3%	7.6%	9.8%	2.1%	7.8%	9.2%	1.5%

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

In the current access arrangement period actual energy distributed has overall only been slightly higher than forecasts. Consequently, the higher than forecast return on assets can largely be explained by the businesses spending less on distribution costs than forecast. In particular, Multinet and Envestra both underspent on capex compared to forecast, while SP AusNet has underspent on both opex and capex compared to forecast over the period. The DNSPs performance in respect of opex and capex are discussed in more detail in section 4.7.

## 4.6 Revenue

The DNSP's revenues are determined by the average customer consumption and the total number of customers. Table 4.6.1 summarises the distribution revenue earned by each DNSP during the period 2004 to 2011.<sup>10</sup>

Table 4.6.1 indicates that in 2011 the aggregate revenue earned by the DNSPs was less than one per cent lower than in 2010. Compared with 2010, Envestra's revenue decreased by 0.3 per cent; Multinet's revenue increased by 0.06 per cent and SP AusNet's revenue decreased by 1.5 cent.

**Table 4.6.1 Distribution revenue 2004–2011(\$ million, real 2006)**

Distributor	2004	2005	2006	2007	2008	2009	2010	2011
Envestra	127.2	123.0	130.1	118.3	133.9	140.9	144.6	144.3
Multinet	152.7	148.0	154.4	146.8	157.5	162.9	160.4	160.5
SP AusNet	143.8	137.4	148.4	143.3	161.7	168.0	172.5	169.9
All distributors	423.9	408.3	432.9	408.4	457.7	476.3	482.6	479.5

Source: DNSP annual regulatory accounting reports

Overall in the 2008–2011 period the aggregate revenue received by Victorian gas DNSPs was \$1.88 billion compared to the aggregate forecast for this period of \$1.86 billion or 0.7 per cent above the aggregate forecast (refer to table 4.6.2).

**Table 4.6.2 Aggregate total revenue and percentage difference between forecast and actual 2008–2011 (\$ million, real 2006)**

	Envestra	Multinet	SP AusNet	All DNSPs
Aggregate total Forecast Revenue 2008 -2011	577.2	626.6	660.9	1 864.7
Aggregate total Actual Revenue 2008-20 11	563.7	641.0	672.1	1 896.0
% Difference	-2.3%	2.3%	1.7%	0.7%

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

Figure 4.6.1 shows the variance (percentage difference) of each DNSP's total distribution revenue compared with the 2008 GAAR forecasts for the 2008 to 2011 period. Multinet received more revenue than forecast. SP AusNet's actual revenue also exceeded forecast revenue for each year, except 2011, whilst Envestra under-recovered against forecasts for each year over the access arrangement period.

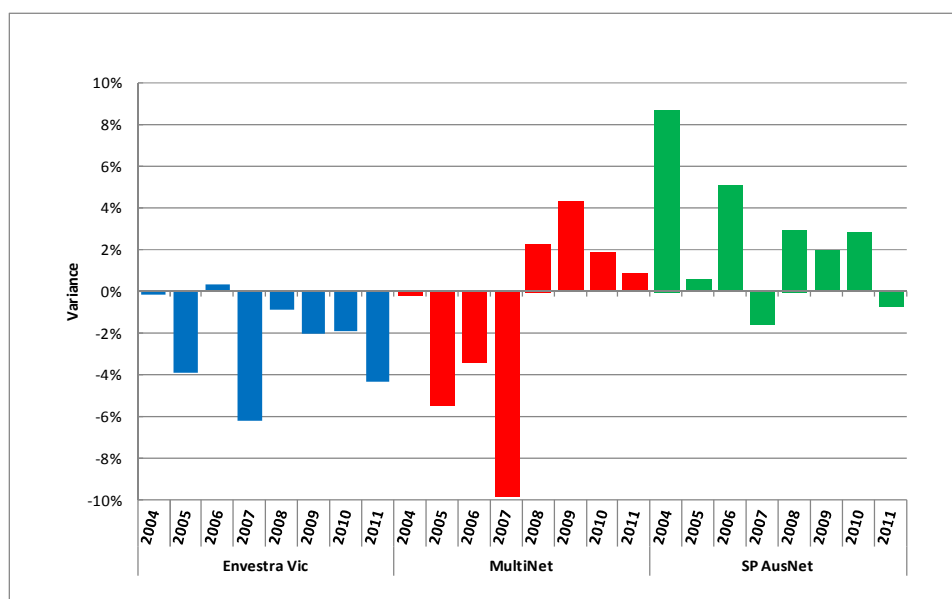
<sup>10</sup> Revenue figures include Ancillary Reference Services (ARS).

In 2011 Envestra and SP AusNet received revenues of 4.3 per cent and 0.7 per cent below forecast, respectively. In contrast, Multinet's revenue was 0.9 per cent above forecast.

Envestra commented that the lower than expected revenue can be explained by the original volume forecasts being set too high. SP AusNet commented that it has been able to recover revenue consistent with the forecast despite a decrease in Tariff D volumes. SP AusNet noted that tariff D contributes about three per cent of revenue such that overall impact of reductions in tariff D volumes has not impacted on revenue.

Multinet commented that the higher than forecast revenue for the period is due to Multinet experiencing a higher proportion of colder days than was forecast.

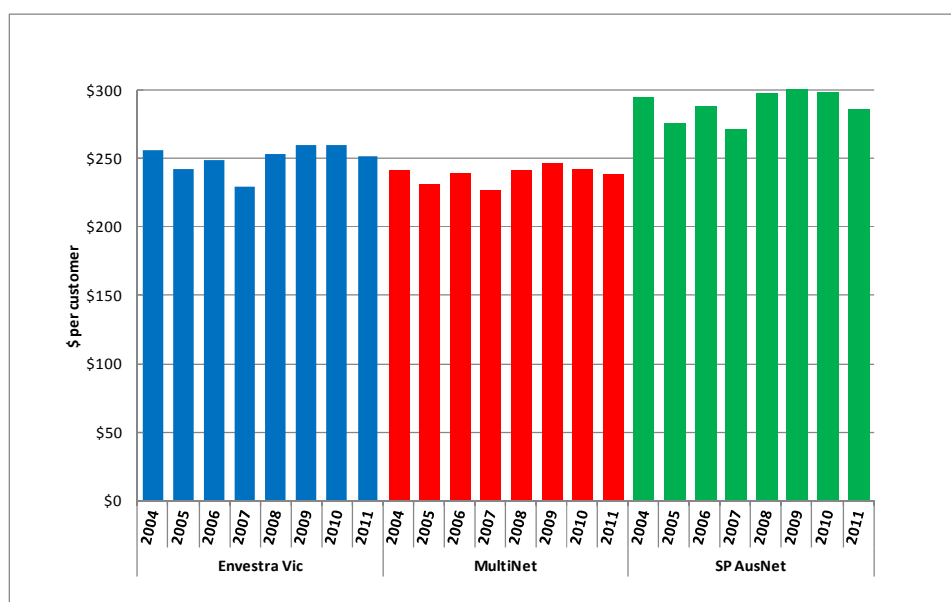
**Figure 4.6.1 Percentage difference between forecast and actual revenue including ancillary reference services (ARS) from 2004–2011**



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 2011, decreasing slightly for each DNSP compared to 2010.

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



Source: DNSP annual regulatory accounting reports

## 4.7 Distribution costs

There are two categories of cost that determine each DNSP'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 2008 GAAR established an annual opex forecast for each DNSP for the years 2008–2012. Tables 4.7.1.1 and 4.7.1.2 summarise each DNSP's actual and forecast annual opex over the period 2008 to 2011.

**Table 4.7.1.1 Actual annual operating expenditure (in \$million, real 2006)**

	2008	2009	2010	2011
Envestra	45.1	45.2	45.6	48.8
Multinet	46.1	44.0	45.5	48.1
SP AusNet	38.5	38.5	34.2	37.4
All distributors	129.7	127.8	125.3	134.3

Source: DNSP annual regulatory accounting reports

**Table 4.7.1.2 Forecast operating expenditure (in \$million, real 2006)**

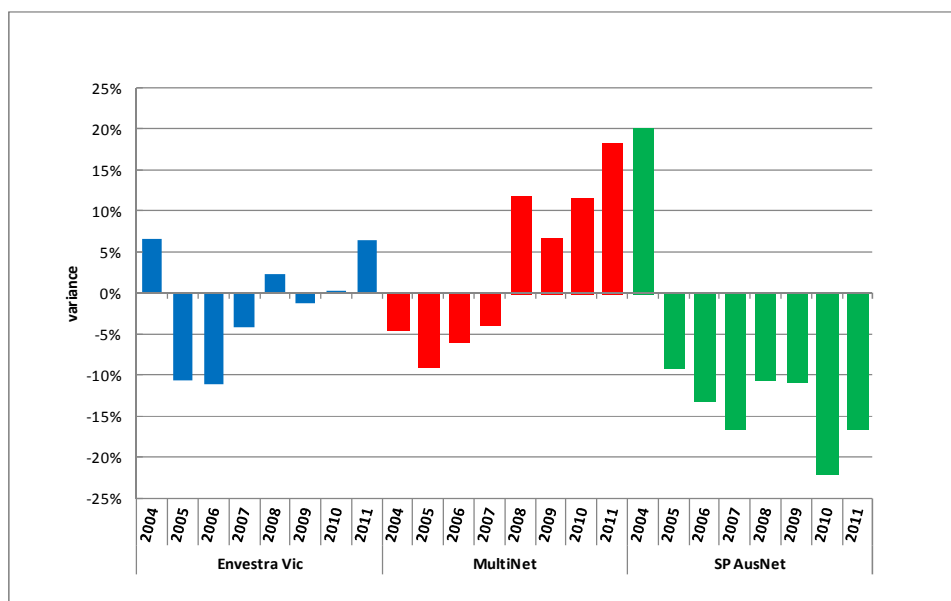
Distributor	2008	2009	2010	2011
Envestra	44.0	45.8	45.4	45.8
Multinet	41.2	41.3	40.8	40.7
SP AusNet	43.0	43.2	44.0	44.7
All distributors	128.3	130.2	130.2	131.2

Source: DNSP annual regulatory accounting reports

In 2011, aggregate opex across all DNSPs increased by 6 per cent. In 2011, Envestra's and Multinet's actual opex was 7 per cent and 18.3 per cent above forecast, respectively. In contrast, SP AusNet reported an actual opex below forecast of 16.4 per cent.

Figure 4.7.1.1 shows the variance of each DNSP's total annual opex from 2004 to 2011. This shows that since 2008 Multinet have consistently spent more than forecast in the 2008 GAAR, while SP AusNet has consistently spent less than forecast.

**Figure 4.7.1.1 Percentage difference between forecast and actual opex including ancillary reference services (ARS) from 2004–2011**



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

Table 4.7.1.3 shows the cumulative actual opex from 2008 to 2011 compared to the forecast for the same period.

Overall SP AusNet has underspent by 15 per cent. SP AusNet commented that total opex has remained flat throughout the period (2005-2011), where SP AusNet has stated that delivered cost efficiencies have offset the upward pressure on costs due to network growth and input price escalation (labour and materials). SP AusNet also commented that for some of its opex activities, input cost increases have been absorbed by SP AusNet's outsourced service provider under the current contract arrangements. SP AusNet also commented that other cost savings have been the result of savings (synergies) from the operation of SP AusNet's three regulated energy networks.

Envestra and Multinet have both spent more than forecast by 2 and 12.1 per cent, respectively. Multinet comments that the reason for its actual opex being more than forecast is because the Essential Services Commission (ESC) allowance was set too low.

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

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



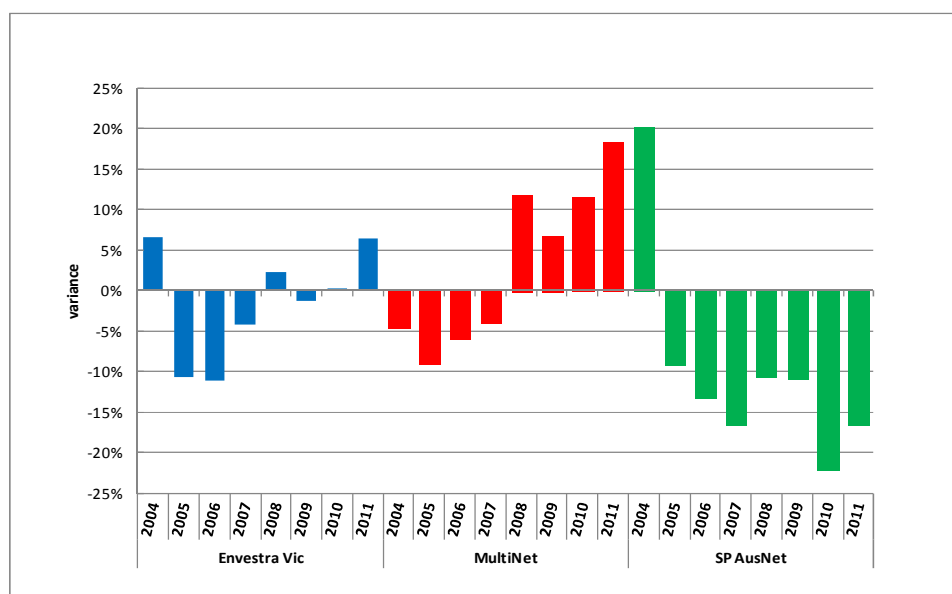
**Table 4.7.1.3 Aggregate operating expenditure and percentage difference between forecast and actual 2008–2011 (\$ million, real 2006)**

	Envestra	Multinet	SP AusNet	All DNSPs
Aggregate total Forecast operating expenditure 2008– 2011	181.1	163.9	174.7	519.8
Aggregate total Actual operating expenditure 2008– 2011	184.8	183.8	148.6	526.2
Difference in %	2.0%	12.1%	-15.0%	1.2%

Source: DNSP annual accounting reports

Figure 4.7.1.2 shows that operating expenditure per customer increased for all the DNSPs in 2011 compared to 2010. For SP AusNet this is a reversal in what has been a general downward trend since 2004.

**Figure 4.7.1.2 Operating Expenditure per customer 2004–2011 includes ARS (\$ 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 the DNSPs. It excludes the value of any assets paid for directly by customers — otherwise referred to as customer contributions.

The 2008 GAAR established net annual capital expenditure forecasts for each DNSP for the years 2008–2012.

Tables 4.7.2.1 and 4.7.2.2 summarises each DNSP's actual and forecast capex over the period 2008–2011. The DNSP's overall have spent less on capex than forecast. However in 2011, net capital expenditure increased by 28.4 per cent compared to 2010 and in aggregate across all DNSPs capex was 10.1 per cent greater than forecast. The 2011 aggregate net capital expenditure represents the highest amount spent by distribution businesses since 2008.

**Table 4.7.2.1 Actual net capital expenditure includes ARS (\$ million, real 2006)**

	2008	2009	2010	2011
Envestra	46.3	38.6	47.4	61.5
Multinet	32.3	11.0	32.0	50.2
SP AusNet	59.5	60.3	61.0	68.0
All distributors	138.3	109.9	140.4	180.3

Source: DNSP annual accounting reports

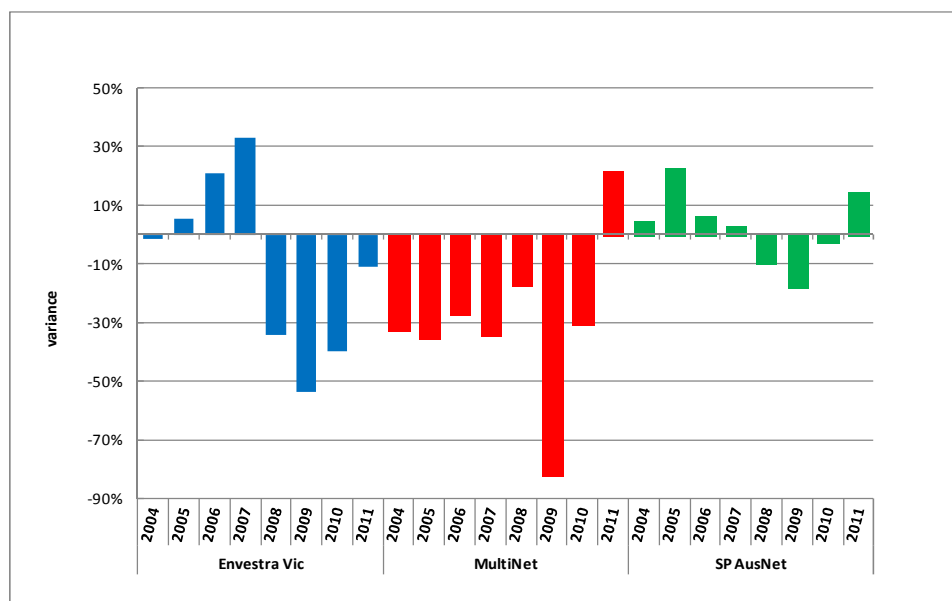
**Table 4.7.2.2 Forecast net capital expenditure includes ARS (\$ million, real 2006)**

	2008	2009	2010	2011
Envestra	70.6	83.4	79.0	69.1
Multinet	39.3	61.9	46.3	41.2
SP AusNet	66.0	73.3	62.7	59.8
All distributors	175.9	218.6	188.0	170.2

Source: ESCV 2008-12 GAAR

Figure 4.7.2.1 shows the variance between forecasts and actual capex since 2004.

**Figure 4.7.2.2 Percentage difference between forecast and actual capital expenditure by DNSP**



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

In 2011, Envestra spent below forecast, whereas Multinet and SP AusNet spent above the 2008 GAAR forecasts. In particular:

- Envestra's capital expenditure was 11 per cent below forecast
- Multinet's capital expenditure was 22 per cent above the forecast; and
- SP AusNet's capital expenditure was 14.6 per cent above forecast.

Envestra has consistently underspent on capex compared to the 2008 forecasts where this underspend between its forecast and actual capital expenditure has varied from almost 34 per cent in 2008 and 54 per cent in 2009 to 11 per cent in 2011. Envestra commented that the reductions in capex were highest over the 2008 to 2010 period, which corresponded with the worst period of the global financial crisis (GFC). Envestra also commented that the reductions to capex made during the GFC were primarily made to mains replacement expenditure. Envestra stated that while global uncertainty remains, particularly due to ongoing economic issues in Europe, the constraints on raising capital are not as severe as they were during the GFC and the mains replacement program has now been restored to forecast levels.

SP AusNet has also underspent in the 2008 to 2010 period, where the underspend ranged from almost 18 per cent in 2009 to 3 per cent in 2010. 2011 is the first year in which SP AusNet's has spent above forecast (by 14.6 per cent). SP AusNet commented that the difference between its forecast and actual capex is largely explained through significant variations to the IT expenditure profile (caused by program changes and deferrals) over the period.

Until 2011 Multinet had underspent on actual capex compared to forecast capex. In 2009 Multinet underspent by 82 per cent and 31 per cent in 2010, but in 2011 Multinet spent 22 per cent more on capex than forecast.

**Table 4.7.2.3 Aggregate total capital expenditure (includes ARS) and percentage difference between forecast and actual capex 2008–2011**

	Envestra	Multinet	SP Ausnet	All DNSPs
Total aggregate Capital Expenditure Forecast 2008 -2011	302.0	188.7	261.8	752.6
Total aggregate Capital Expenditure Actual 2008–2011	193.8	125.6	249.4	568.8
Difference in %	–36%	–33%	–5%	–24%

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 2011. Appendix A.3 defines the performance measures used for supply reliability.

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

- Gas DNSPs 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 gas 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 DNSPs. The average total minutes-off-supply in 2011 for all Victorian customers was 5.1 minutes<sup>11</sup>, 3.4 per cent more than in 2010.

In 2011, Envestra recorded the highest average total minutes-off-supply per customer at 7.08 minutes (an increase of 45 per cent compared to 2010); followed by SP AusNet at 4.4 minutes (a decrease of 7.2 per cent compared to 2010). Multinet experienced the lowest minutes-off-supply at 4.03 minutes (a 21 per cent reduction compared to 2010). 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 2011 the level of average minutes-off-supply caused by unplanned outages for Victorian customers increased by 6 per cent, continuing the increasing trend since 2009.

In 2011, average minutes-off-supply per customer caused by unplanned outages for Envestra increased by 10 percent to 3.77 minutes; for Multinet it increased by 8.6 per cent to 2.67 minutes; for SP AusNet the average minutes-off-supply decreased by 11 per cent to 1.01 minutes. SP AusNet's average minutes-off-supply per customer for unplanned outages have been the stable and the lowest amongst Victorian DNSPs.

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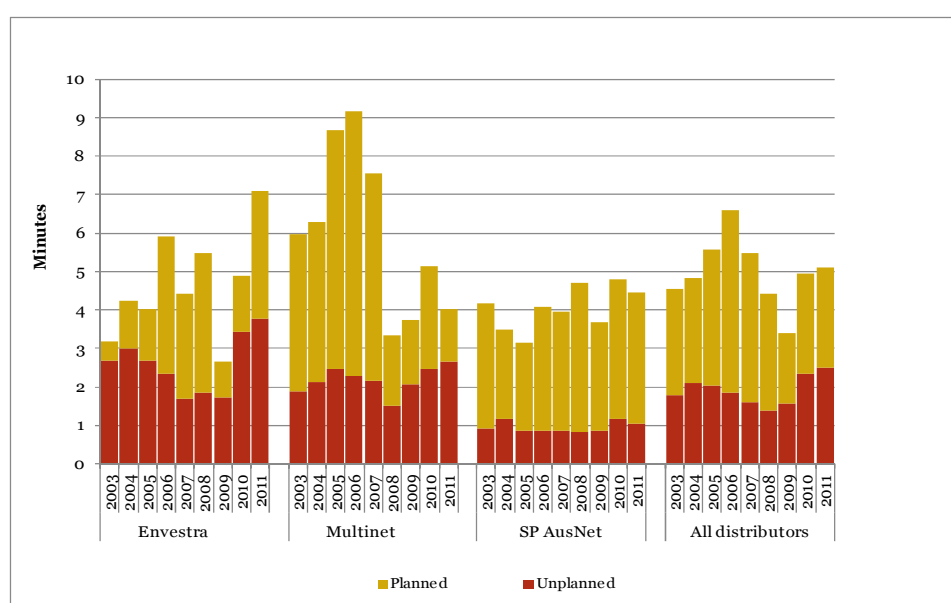
<sup>11</sup> SAIDI - system average interruption duration index - the total minutes, on average, that a customer could expect to be without gas over a specific time period. Total SAIDI comprises both planned and unplanned minutes off supply. Calculated as the sum of the duration of each customer interruption (in minutes), divided by the total number of connected customers averaged over the specific period of time.

Overall there was an increase in the average minutes-off-supply due to planned outages for all DNSPs by one per cent in 2011 compared to 2010. This was due to Envestra's performance where Envestra was the only DNSP to report an increase in average planned minutes-off-supply. In particular:

- Multinet reported a decrease of 49 per cent to 1.36 minutes
- SP AusNet reported a decrease of 6 per cent to 3.4 minutes; and
- Envestra reported an increase of 128 per cent to 3.31 minutes.

Envestra commented that water in mains related issues due to increased rainfall took longer to resolve and this contributed to its increase in average minutes-off-supply (SAIDI).

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



Source: DNSP quarterly KPI reports

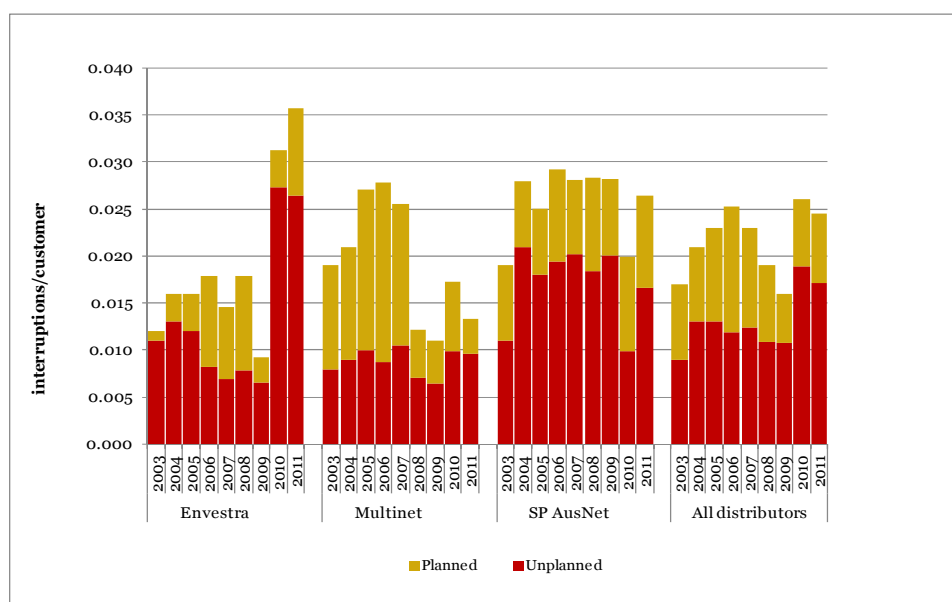
SP AusNet also commented that in 2010 and 2011, SP AusNet's unplanned SAIDI has been higher than in previous years due to higher than average rainfall causing water ingress to the low pressure system.

## 5.2 Average number of interruptions per customer - Interruption frequency (SAIFI)

Figure 5.2.1 shows that, on average, the total frequency of supply interruptions experienced by Victorian gas customers in 2011 was 0.0245<sup>12</sup>, which is a decrease of 5.8 per cent compared with 2010.

<sup>12</sup> 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 2011 results represent one interruption every 45 years for the average customer in Victoria. This varies across the DNSPs: for Envestra this is one interruption in 28 years; for Multinet this is one interruption in 75 years; and for SP AusNet this is one interruption in 38 years.

In 2011, the number of planned interruptions declined for Multinet by 49 per cent. Envestra reported an increase in the number of planned interruptions of 127 per cent and SP AusNet reported an increase of 1 per cent.

Envestra commented that outage KPIs reported in 2011 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. Envestra also noted that measurement of supply interruptions was changed to include all interruptions occurred in 2010. This can also explain the increase in average numbers of interruptions per customer in 2010. Envestra also stated that significant water related issues also contributed to higher SAIFI.<sup>13</sup>

In 2011, there was an overall decline in unplanned interruptions of 9 per cent; with Envestra and Multinet reporting a decrease of 3 per cent. SP AusNet reported an increase of 67 per cent.

<sup>13</sup> 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

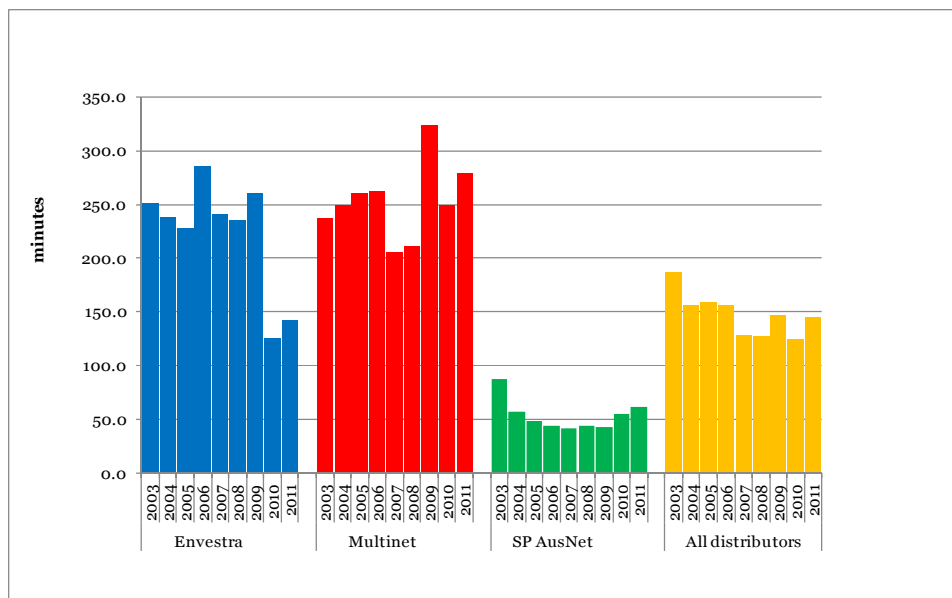
Figure 5.3.1 shows that the reported average duration of unplanned interruptions in 2011 was 145 minutes<sup>14</sup>, which is a 17 per cent increase compared to 2010. All businesses reported an increase compared to 2010. The average duration of unplanned interruptions for Envestra increased by 13 per cent to 142 minutes. For Multinet the increase was 12 per cent to 279 minutes and for SP AusNet the increase was 14 per cent to 62 minutes.

Envestra commented that the increase in unplanned interruptions between 2010 and 2011 was again related to more water in the mains issues, and therefore longer times to resolve these outages, and the inclusion of other supply interruption types in these KPIs as noted above.

Multinet commented that gas performance statistics are very sensitive due to the high level of reliability experienced in the system. Multinet stated that generally performance deteriorated in 2012 largely due to the weather which hampered crews in repairing the faults when compared to previous year.

SP AusNet commented the increase in unplanned CAIDI is explained through higher than average rainfall in 2011 (and previous years) which has resulted in saturated soil conditions and significant amounts of water ingress into SP AusNet's low pressure network. SP AusNet considered that as a whole, water logged soil impedes escapes from the distribution network (as seen in SP AusNet's unplanned SAIFI performance) but increased levels of water ingress into the low pressure network, increasing average restoration times when compared to other network faults (as seen in SP AusNet's unplanned CAIDI performance).

**Figure 5.3.1 CAIDI (Average unplanned interruptions) 2003–2011**



Source: DNSP quarterly KPI reports

<sup>14</sup> 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)



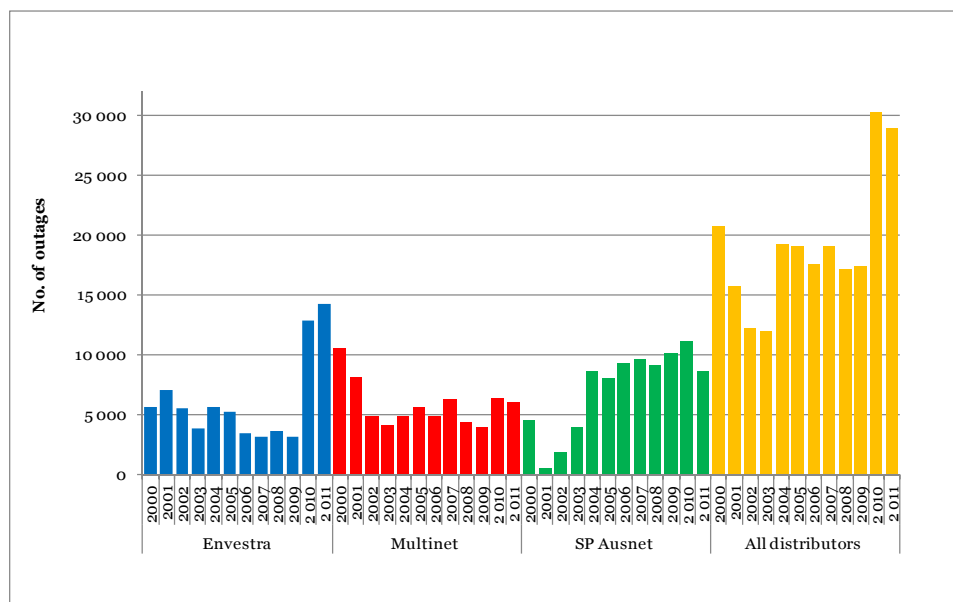
## 5.4 Number of unplanned outages

DNSPs 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 of the DNSPs since 2000.

- There was an aggregate decrease of 5 per cent in 2011 compared with the previous year, from 30,329 to 28,959.
- For Envestra, the number of unplanned outages affecting less than five customers increased by 11 per cent in 2011, from 12,843 to 14,230.
- Multinet reduced the number of unplanned outages affecting less than five customers by 5 per cent from 6,325 to 6,019.
- SP AusNet reduced the number of unplanned outages affecting less than five customers by 22 per cent, from 11,161 to 8,710.

**Figure 5.4.1 Number of outages affecting five customers or fewer**



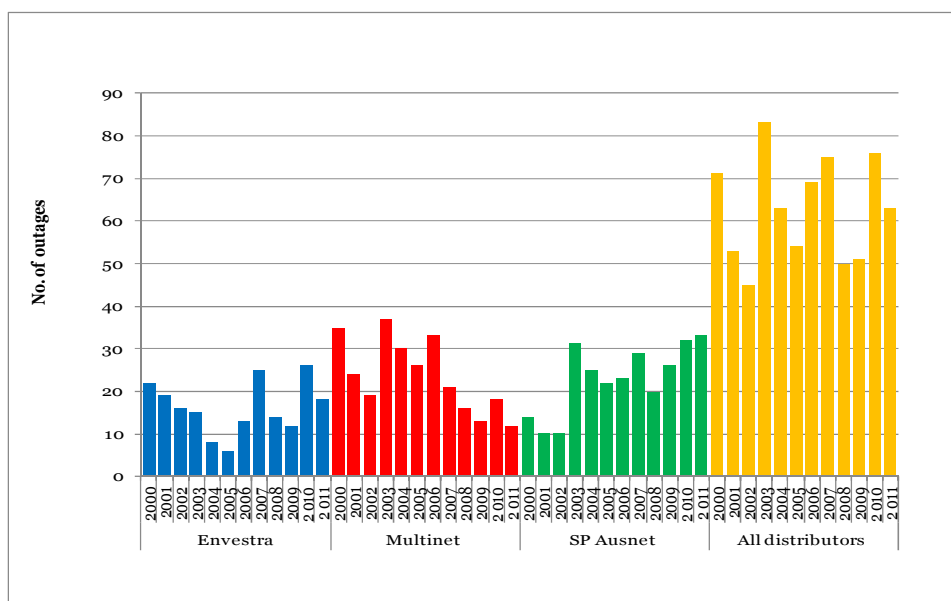
Source: DNSP quarterly KPI reports

Figure 5.4.2 shows the number of outages affecting five or more customers, for each of the DNSPs since 2000. 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 63 in 2011, an improvement of 17 per cent since 2010 and an 11 per cent improvement for the average of the whole period from 2000 of 63.
- In 2011 Envestra's total number of outages affecting 5 or more customers decreased by 31 per cent - recording 18 outages- and is close to the average for the period since 2000 period of 16).

- Multinet also decreased the number of outages affecting more than 5 customers by 33 per cent – recording 12 outages. The 2011 figure is the lowest for the 2000-2011 period and is 49 per cent below the average for the period since 2000 of 24).
- SP AusNet increased the number of outages affecting more than 5 customers by 3 per cent – recording 33 outages, and is 44 per cent higher than the average for the period since 2000 of 22.

**Figure 5.4.2 Number of outages affecting more than five customers**



Source: DNSP quarterly KPI reports

### Significant supply interruption events in 2011

Envestra reported the following supply interruptions:

- 24/02/2011 - Cameron Street Richmond, 50 residential consumers affected for 2 hours due to a third party damage to a gas main.
- 13 and 16 /04/2011 - Barnes Way Bundoora, 88 university student accommodation affected for 3 hours and 1.5 hours due to water-in-service issues.
- 14/07/2011 - Corner High & Clarke Street Northcote, 17 non-residential and 2 residential consumers were affected for 3.5 hours due to a third party damage to a gas main.
- 6/10/2011 - Bellevue, Ruthven & Grandview Streets Rosanna, 100 residential consumers affected for 1 hour due to a fault with district regulator P1-818.
- 09/12/2011 - 130 Separation Street Northcote, 48 residential consumers affected for 5.3 hours due to water-in-mains.

MultiNet reported one outage affecting 100 or more for the 2011 year. This was on the 11 August at Thompson Rd, Patterson Lakes. 107 customers were affected and total supply loss was 20,330 minutes.

SP AusNet reported two significant outages in 2011:

- 22/07/2011 - Wrixon St, Romsey. 100 customers were affected and the total minutes off supply was 12,500
- 27/11/2011- Macedon st, Maidstone, 115 customers were affected and the total minutes off supply was 10,620.

## 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 2011 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 2011 suggest that the businesses have adequate asset management practices in place.

### 6.1 Loss of containment

The DNSPs 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 month<sup>15</sup>. DNSPs are not required to report on outstanding publicly reported leaks because they must repair all priority A and B leaks within 24 hours.

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

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

**Table 6.1.1 Average number of repaired gas leaks for 2008–2011**

	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	9898

Source: DNSP quarterly KPI reports

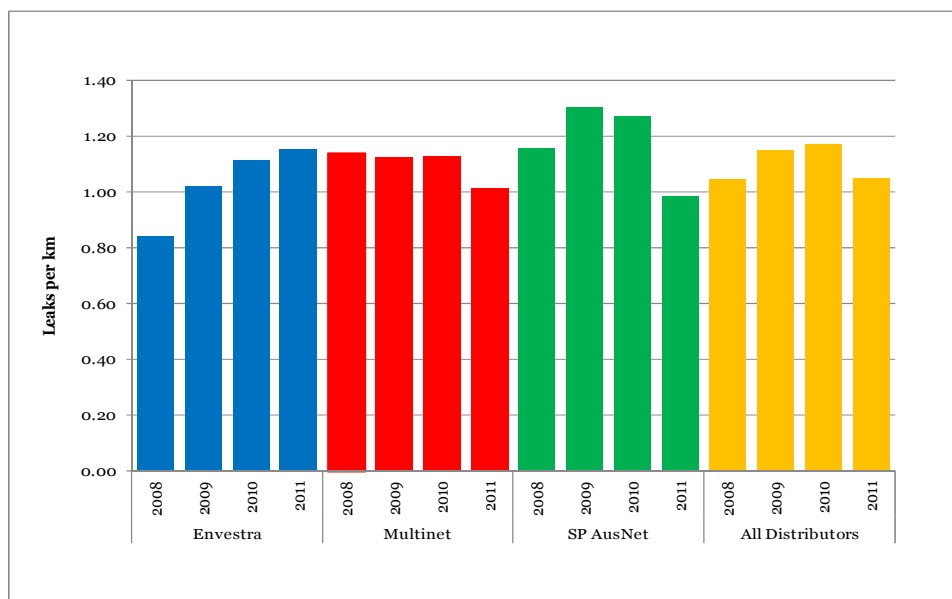
Figure 6.1.1 indicates that in 2011, the total number of repaired gas leaks per kilometre decreased by 10 per cent from 2010. In particular:

- The number of gas leaks reported and repaired by Multinet decreased by 10 per cent.

<sup>15</sup> See appendix A.6 for a description of priority A and B gas escape jobs.

- The number of gas leaks reported and repaired by SP AusNet decreased by 23 per cent.
- The number of gas leaks reported and repaired by Envestra increased by 4 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 DNSPs networks. External damage to networks is a significant cause of gas escapes and of customer supply interruptions.

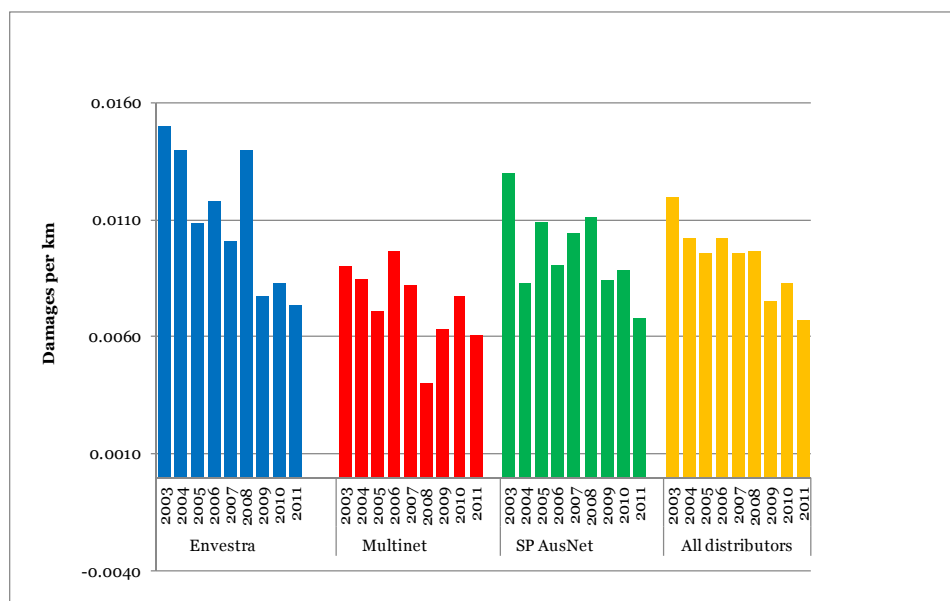
Figure 6.2.1 shows the number of incidents of mechanical damage to mains per kilometre. In 2011, DNSPs reported 200 instances of damage to gas distribution mains, 44 less than in 2010, representing approximately an 18 per cent decrease<sup>16</sup>. This represents 0.00672 incidents per kilometre of distribution pipelines<sup>17</sup>. In particular:

- Envestra reported 12 per cent less incidents/kilometre in 2011 compared to 2010 down from a total of 83 incidents to 72 incidents
- Multinet reported 22 per cent less incidents kilometre in 2011 compared to 2010 down from a total of 75 incidents to 61 incidents, and
- SP AusNet reported 23 per cent less incidents/kilometre in 2011 compared to 2010 down from a total of 86 incidents to 67 incidents.

<sup>16</sup> The number of damages to mains and services is derived by tallying the recorded mains damages and service damage jobs completed during each month.

<sup>17</sup> The overall very low rate of mains damages (0.00672 incidents per kilometer) 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**



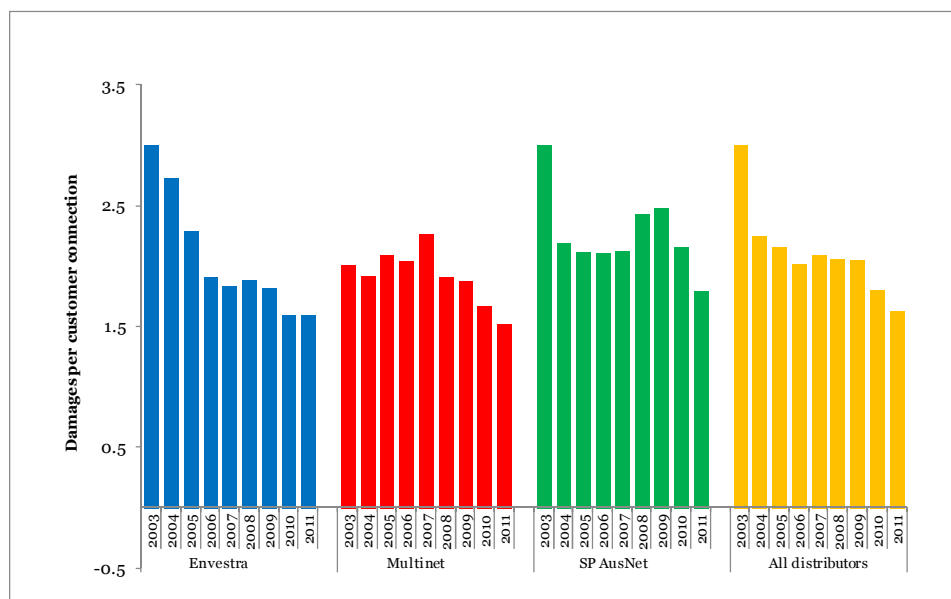
Source: DNSP quarterly KPI reports

### 6.3 Service connection damage

Figure 6.3.1 shows the damage to service connections for the 2003-2011 period. There were 2987 incidents of damage to customer service connections in 2011. This represents a decrease of approximately 255 incidents or an 8 per cent improvement since 2010. The 2011 figures indicate a decline relative to the previously steady levels since 2004. In particular:

- Envestra reported a 3 per cent increase in incidents of damage to customer service connections in 2011 compared to 2010 from 884 incidents to 911 incidents,
- Multinet reported a 9 per cent reduction in incidents of damage to customer service connections in 2011 compared to 2010 from 1,116 incidents to 1,017 incidents, and
- SP AusNet reported the least number of incidents of damage to customer service connections down 15 per cent to 1,059 incidents in 2011 compared to 1,242 incidents in 2010.

**Figure 6.3.1 Service damage per customer 2004–2011**



Source: DNSP quarterly KPI reports

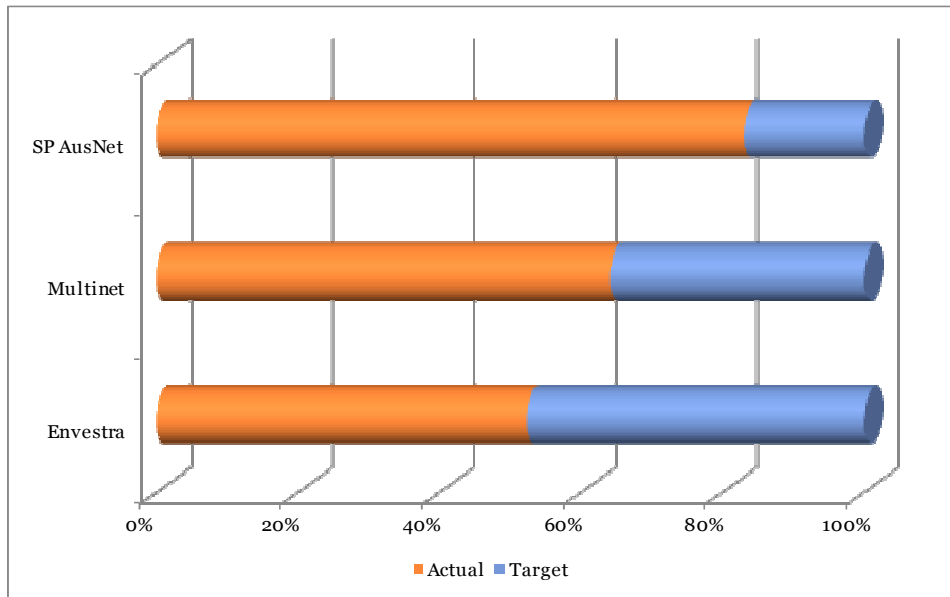
## 6.4 Low pressure network replacement

Another significant cause of gas escapes is chronic leakage from older, generally low pressure network areas. For the current access arrangement period each DNSP forecast its capital expenditure to replace old low pressure cast iron pipe that is more prone to leakage. The DNSPs 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 DNSPs are required to report each month to the AER:

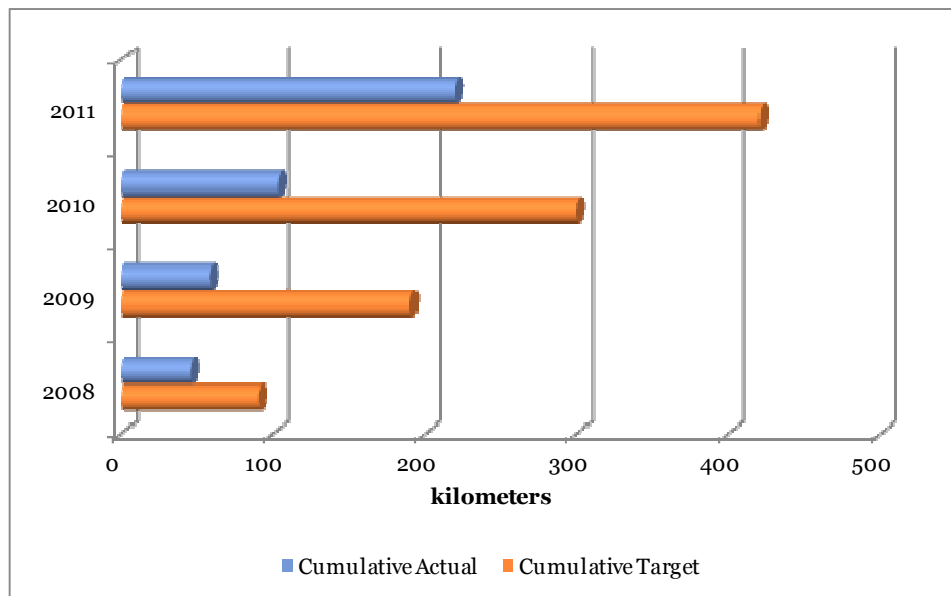
- The length of low pressure gas mains decommissioned and replaced by high pressure gas mains (km); and
- The number of low pressure services replaced with high pressure services.

Figure 6.4.1 shows the cumulative number of low pressure kilometres of gas mains decommissioned and replaced with high pressure pipeline for each DNSP compared to targets set at the commencement of the access arrangement period. This shows that all DNSPs are below target. Specific details are set out in Appendix A.3, table A.3.8. To date for the target to 2011, SP AusNet has replaced 83 per cent, Multinet has replaced 64 per cent and Envestra has replaced 53 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 up to 2011**

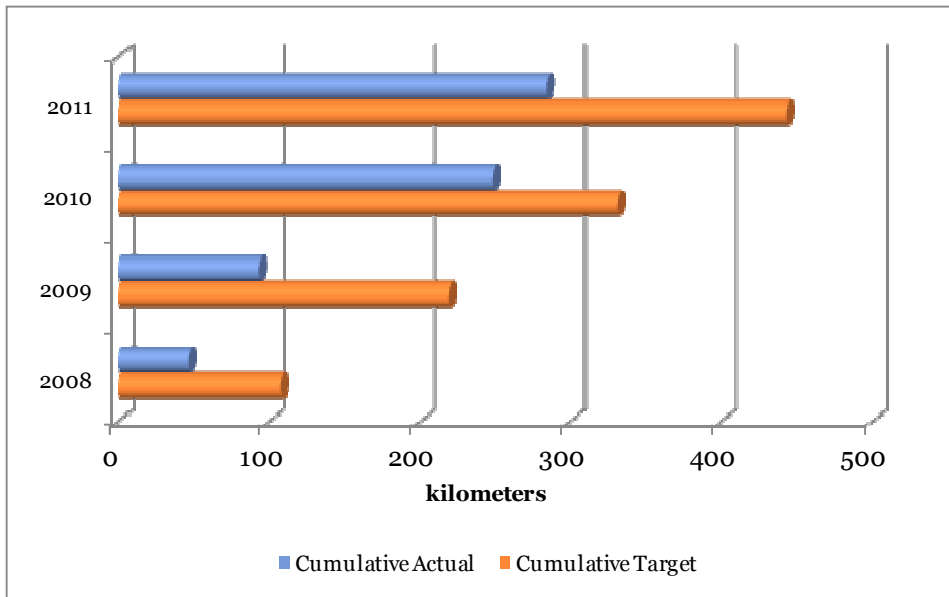


**Figure 6.4.2 Envestra - Replacement of low pressure gas mains with high pressure against target**

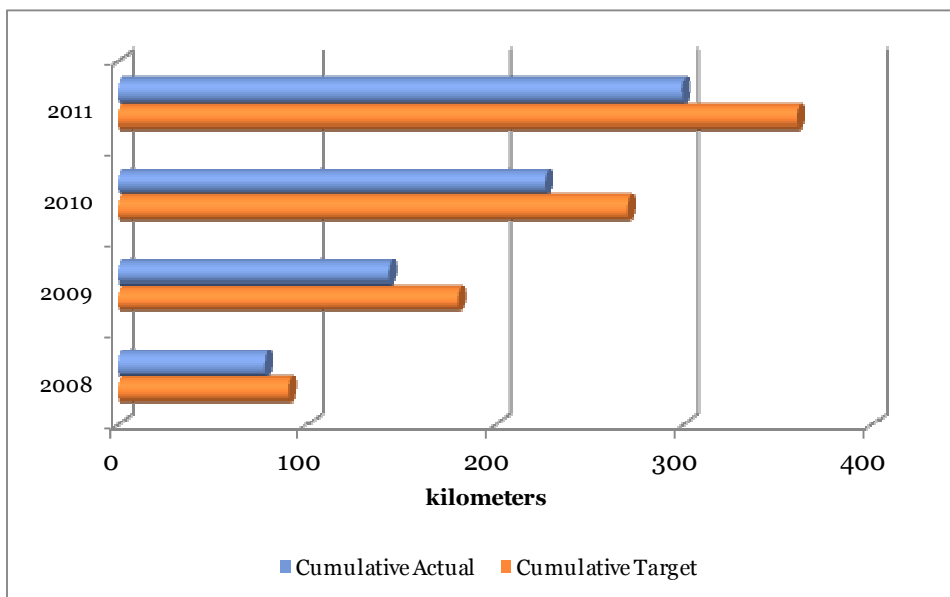




**Figure 6.4.3 Multinet - Replacement of low pressure gas mains with high pressure against target**



**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 DNSPs 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 distribution businesses, and received for full investigation by the Energy and Water Ombudsman (Victoria) (EWOV).

### 7.1 Response to customer calls

DNSPs 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 DNSP, to the time taken for a DNSP representative to arrive on site<sup>18</sup>. 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 2011**

DNSP	Metro Calls		Country calls
	BusinessHours (target: 95%)	AfterHours (target: 90%)	(target: 90%)
Envestra	92%	90%	97%
Multinet	97% <sup>a</sup>	NA <sup>a</sup>	NA <sup>b</sup>
SP AusNet	98.69%	98.16%	97.93%

*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 hours.

Envestra and SP AusNet were both able to achieve above targets for responding to country customer calls. (Multinet does not have any country customers). SP AusNet improved against target by 3.7 per cent, whereas Envestra fell below target by 3 per cent.

<sup>18</sup> A description of *Priority A* gas leak incidents is contained in appendix A.5 of this report.

## 7.2 Guaranteed Service Level (GSL) payments

As part of the 2008 GAAR the ESCV required DNSPs to operate under the GSL payment scheme. The main objective of the GSL scheme is to encourage DNSPs to improve service and reliability levels to the worst served customers. The scheme also addresses areas of service that customers consider to be important and contains triggers and payment levels that provide an incentive for the distributors to improve performance. These areas of service targeted by the scheme include repeat interruptions, lengthy interruptions, appointments and connections. A DNSP will be required to make payments to customers in the following instances:

- Failure to attend an appointment within 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 12 hours and 18 hours.

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

As a result of the ESCV's 2008 GAAR decision regarding GSL payments, historical data prior to 2009 is no longer comparable to the new parameters set out in the 2008–2012 GAAR and reported in this report. Accordingly, this report discusses only GSL payments from 2009.

Table 7.2.1 shows that DNSPs made a total of 1,293 payments in 2011 totalling \$178,074 (in \$2006 for comparative purposes). This represents an increase of 16 per cent in the number of GSL payments compared to 2010 (or an increase of 73 per cent compared to 2009) It also represents a 14 per cent increase in the value of total GSL payments compared to 2010 (or an increase of 85 per cent compared to 2009).

**Table 7.2.1 Total GSL dollar amount payments made to customers by distributors 2009–2011 (\$million, 2006)**

Aggregate dollars for all GSL payments (\$2006)			
	2009	2010	2011
Envestra	57,923	82,959	94,271
MultiNet	12,902	53,452	54,198
SP AusNet	25,650	19,387	29,606
All DNSPs	96,475	155,797	178,074

Source: DNSP quarterly KPI reports

On average for 2011, DNSPs made one GSL payment per 1,523 customers, 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 2,257 customers in 2011. 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 928 customers in 2011. 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 617 in 2011 (an increase of 50 per cent). During the same time period the average number of customers increased 7 per cent.
- Multinet experienced a decrease in performance in 2011 compared to 2009 from one payment per 6,482 customers to one payment per 1,621 customers. Over the period customer numbers increased by only 2 per cent, but the total number of payments increased 309 per cent from 101 in 2009 to 413 in 2011.

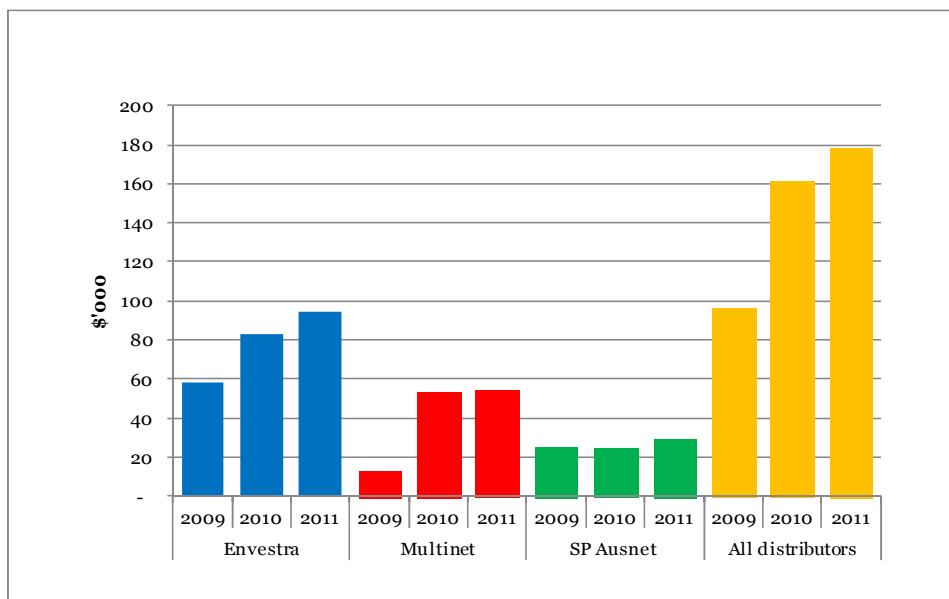
Figure 7.1.1 displays the total number of GSL payments made by DNSPs from 2009 to 2011.

- Envestra reported an increase in the number and amount of GSL payments for repeat interruptions (as a result of more than 5 unplanned interruptions) and lengthy interruptions in 2011 compared to 2010.
- However, Envestra 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. Multinet has performed consistently also in relation to connection payments by only making one connection payment in 2009 and 2010 and no payments in 2011.
- However, Multinet's performance for repeat interruptions and lengthy interruptions has deteriorated significantly between 2009 and 2011, from 38 to 135 for more than 5 unplanned interruptions, from 42 to 84 for interruptions lasting greater than 12 hours but less than 18 hours and from 19 to 175 for interruptions lasting greater than 18 hours. Multinet comments that

significantly increased rainfall had a major impact on the function of the low pressure system (which comprises more than 25 per cent of Multinet's network) and the vast majority of repeat outage and long duration outage GSL's were restricted to this part of the network during that period.

- SP AusNet experienced a significant increase in payments made 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 25 in 2011. (However is still considerably lower than Envestra (208 payments in 2011 and 84 in 2009) and Multinet (84 payments in 2011 and 42 in 2009).

**Figure 7.1.1 Total GSL payments in \$'000 paid by DNSPs to customers**



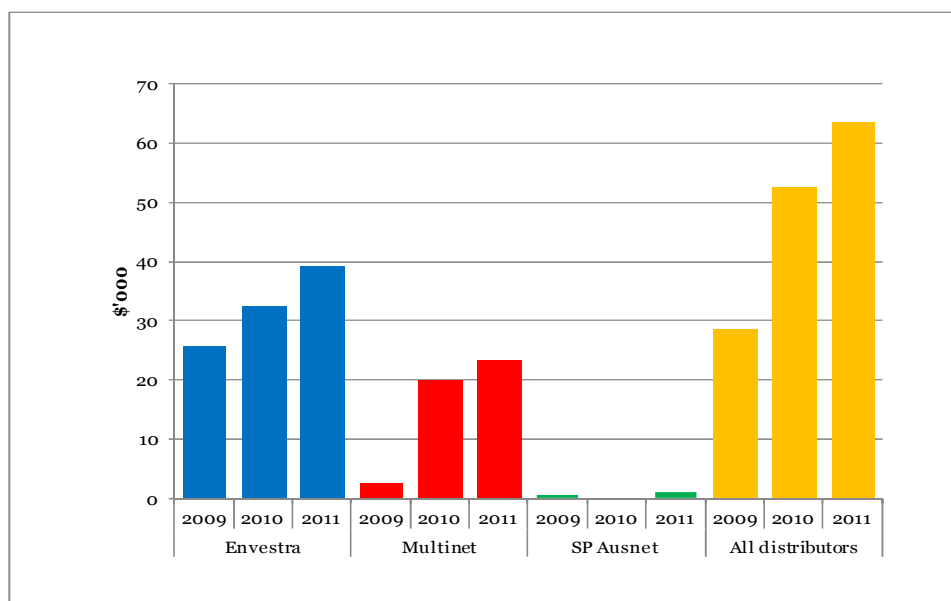
Source: DNSP quarterly KPI reports

Most of the GSL payments were made for repeat interruptions 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 payments in 2011 for this service was 333 totalling \$63,663 (refer to Figure 6.2). This represents a 25 per cent increase in payments made compared to 2010 (or 131 per cent compared to 2009). Of these payments Envestra made 151 in 2011 compared to 95 in 2009, and Multinet made 175 in 2011 compared to 19 in 2009. SP AusNet made 7 payments in 2011 compared to 4 in 2009.

Envestra commented that water in the mains due to increased rainfall took longer to resolve and that this was the main contributor to higher repeat interruption GSL payments being made and in general to higher GSL payments being made.

As noted above, Multinet also commented that the increase in GSL payments in general and for repeat interruptions and lengthy interruptions is due to the increase in the level of faults as a result of the weather.

**Figure 7.1.2 GSL payments paid by DNSPs to customers for lengthy interruptions > 18 hours (\$'000)**



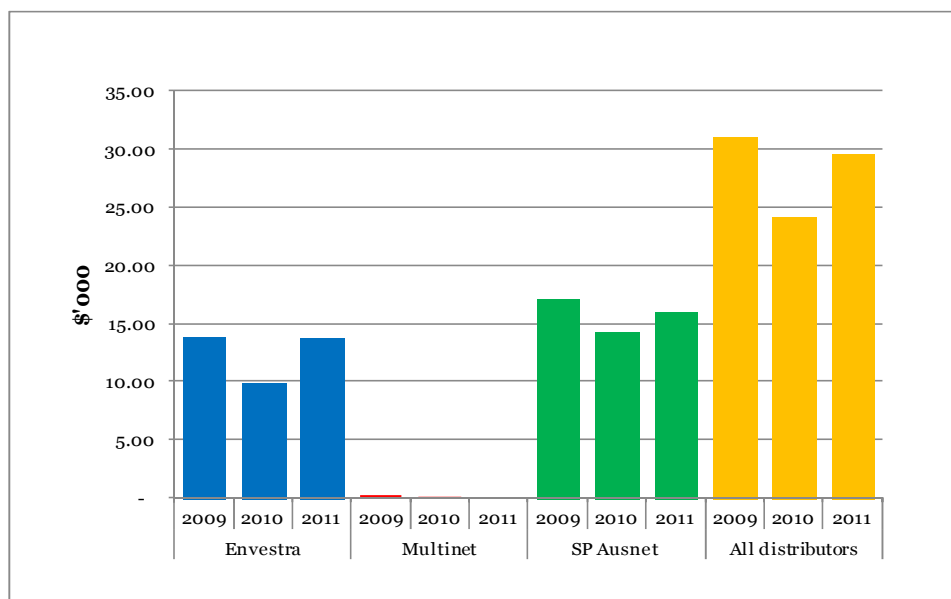
Source: DNSP quarterly KPI reports

In contrast to the increase in payments made for repeat and lengthy interruptions the best performing service was for meeting appointment time frames. In 2011 and 2009 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 DNSP to make no payments 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 has declined overall since 2009 from a total number of 161 payments made in 2009 to 89 in 2011. This reflects an improvement in Envestra’s service from 115 payments made in 2009 to 54 in 2011 (a decrease of 53 per cent). SP AusNet’s payments decreased from 46 in 2009 to 35 in 2011 (a decrease of 23 per cent). Multinet was the only DNSP 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 increased by 2 per cent from 241 in 2009 to 246 in 2011. The total payments are shown in Figure 7.1.3. SP AusNet decreased from 137 payments made in 2009 to 136 in 2011. Multinet made one payment in 2009 and in 2010 and no payments in 2011. Envestra’s number of payments increased (from 103 in 2009 to 110 in 2011).

**Figure 7.1.3 Total GSL payments paid by DNSPs to customers for connection delays (\$'000)**



Source: DNSP quarterly KPI reports

## 7.3 Complaints

### Customer complaints to distributors

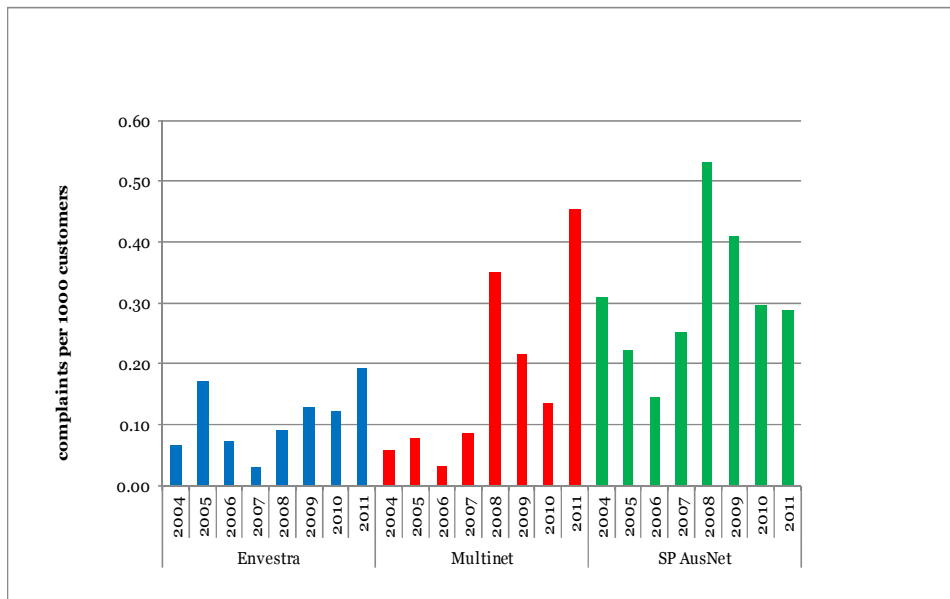
Figures 7.3.1 to 7.3.3 show that the level of complaints recorded by all DNSPs increased by 6.8 per cent in 2011 compared to 2010. There was an overall increase in the complaints of both connection and augmentation, and the quality and reliability of supply by 74 per cent and 59 per cent, respectively. In contrast there was a decrease in 'other' complaints by 36 per cent. In particular:

- Envestra's complaints for connection and augmentation increased by 56 per cent, complaints for quality and reliability of supply increased by 329 per cent, and complaints for 'other' increased by 20 per cent. Envestra commented that water related issues again contributed to the high number of complaints relating to quality and reliability of supply. Envestra also stated that the increased number of complaints for 'other' is related to the significant increase in mains replacement activity which caused more reinstatement issues for customers. In addition Envestra considered that improved classification of complaints in 2011 also contributed to the changes.
- Multinet's performance in 'other' complaints decreased by 54 per cent. In contrast, complaints for connection and augmentation increased by 36 per cent and complaints for quality and reliability of supply increased by 16 per cent. Multinet continues to have the largest number of complaints per 1000 customers compared with other DNSPs. Multinet commented that the increase in the level of faults as result of weather resulted in an increase in complaints as service levels deteriorated.

In contrast, SP AusNet's customer complaints decreased by 42 per cent on reliability and quality of supply, 50 per cent for 'other' complaints and a 2 per cent decrease in complaints on connections and network. SP AusNet commented that 'other' complaints outcome as driven by the management of customer expectations around reinstatement works.

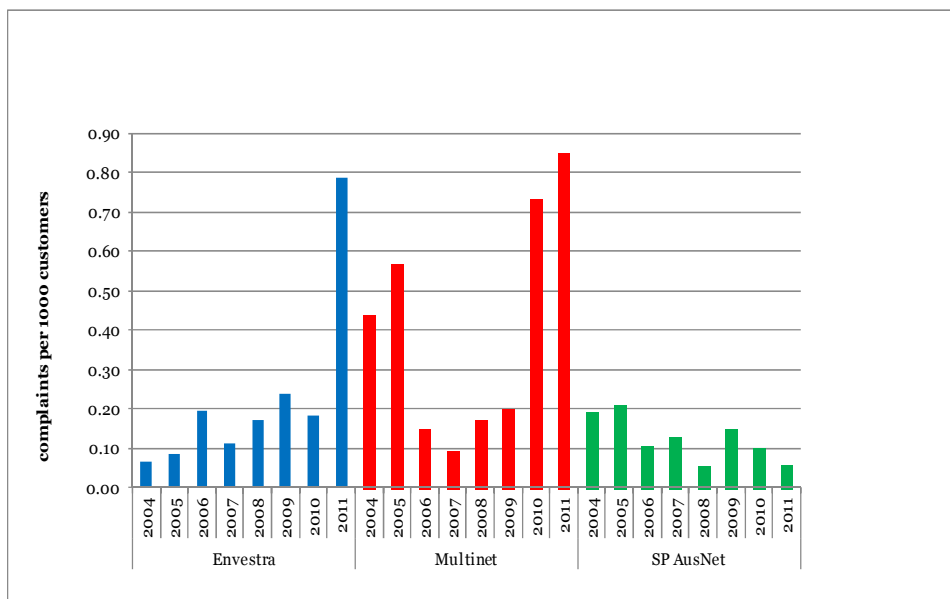
Appendix A.3 table A.3.7 sets out the number of complaints per thousand customers for each DNSP.

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



Source: DNSPs quarterly KPI reports

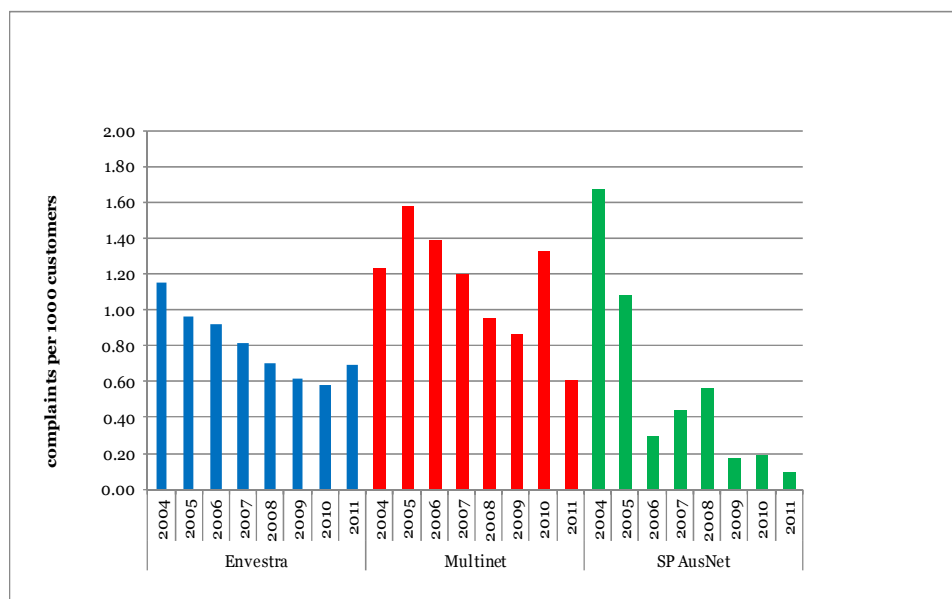
**Figure 7.3.2 Quality - number of complaints per 1000 customers**



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 (EWOV)

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 other<sup>19</sup>.

The number of complaints received by EWOV for full investigation in 2008 increased by 146 per cent in 2011 compared to 2010, (from 37 to 91 complaints). This is the highest number of complaints received by EWOV since 2004. Complaints received by EWOV for all DNSPs increased in 2011 compared to 2010. Complaints for Envestra increased by 214 per cent (from 7 to 22). Complaints for Multinet increased by 172 per cent from 18 to 49; and for SP AusNet by 67 per cent, from 12 to 20. The majority of complaints received by EWOV were about Multinet (54 per cent), followed by Envestra (24 per cent) and SP AusNet (22 per cent).

In 2011 most of the complaints received by EWOV were for quality and reliability (46 per cent), followed by connection and augmentation (29 per cent).

<sup>19</sup> Explanatory note:

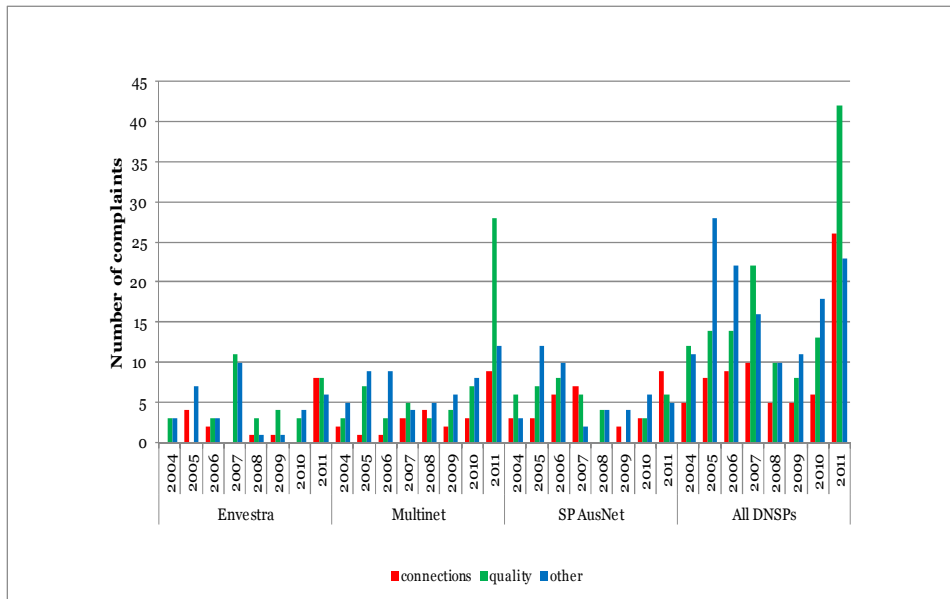
EWOV defines a complaint as an expression of dissatisfaction regarding a policy, practice or customer service performance of an energy or water provider that is a participant in the EWOV scheme, where a response or resolution is explicitly or implicitly expected.

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.

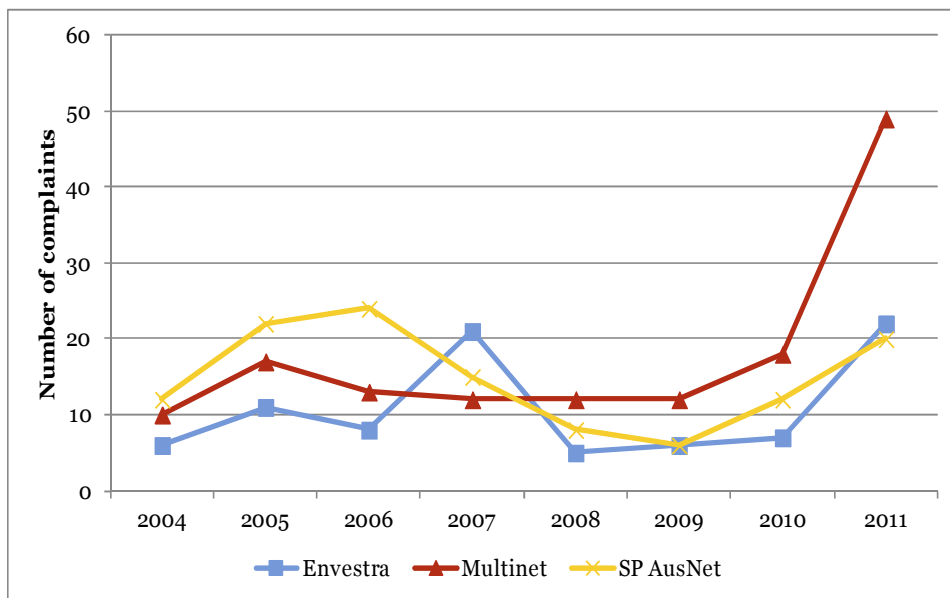
**Figure 7.3.4 Complaints against distributors received by EWOV for full investigation for connection, quality and other from 2004–2011**



Source: Energy and Water Ombudsman Victoria

Figure 7.3.5 shows the total number of complaints received by EWOV for full investigation by DNSP from 2004 to 2011.

**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 2011**

	Domestic <sup>20</sup>	Non-domestic <sup>21</sup>	Total
Envestra	557,002	23,401	580,403
Multinet	646,880	23,300	670,180
SP Ausnet	587,210	16,097	603,307
All DNSPs	1,791,092	62,798	1,853,890

Source: DNSPs quarterly reports

**Table A.1.2 Network composition for 2011**

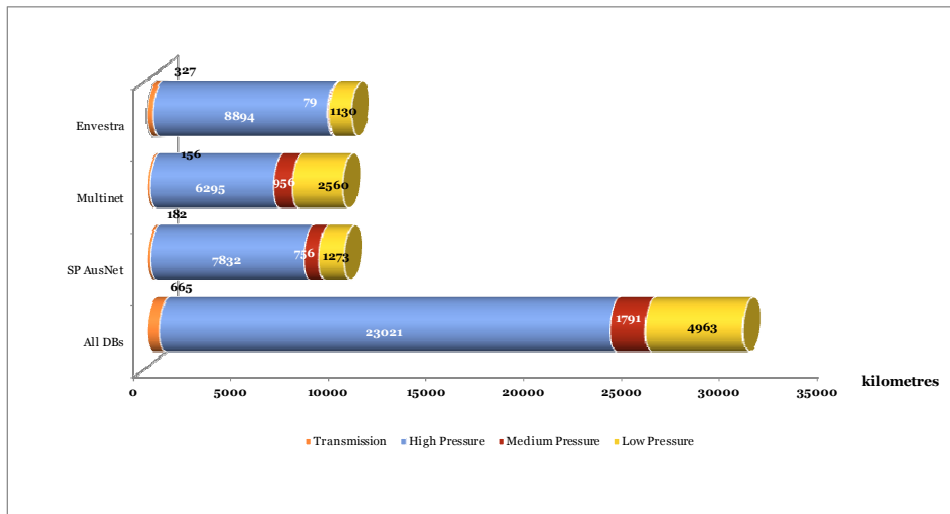
DNSP	Transmission mains (km)	Distribution mains (km)	Customers per km of distribution mains
Envestra	327	9811	59.2
MultiNet	156	10,103	66.3
SP AusNet	182	9862	61.2
All	665	29,776	186.7

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 DNSPs total pipeline length. Figure A.1.1 shows the composition of gas pipelines for each of the Victorian DNSPs, and Figure A.1.2 shows the Victorian gas distribution network by material.

<sup>20</sup> Domestic customers are all customers that are subject to the domestic tariffs (Tariff V).

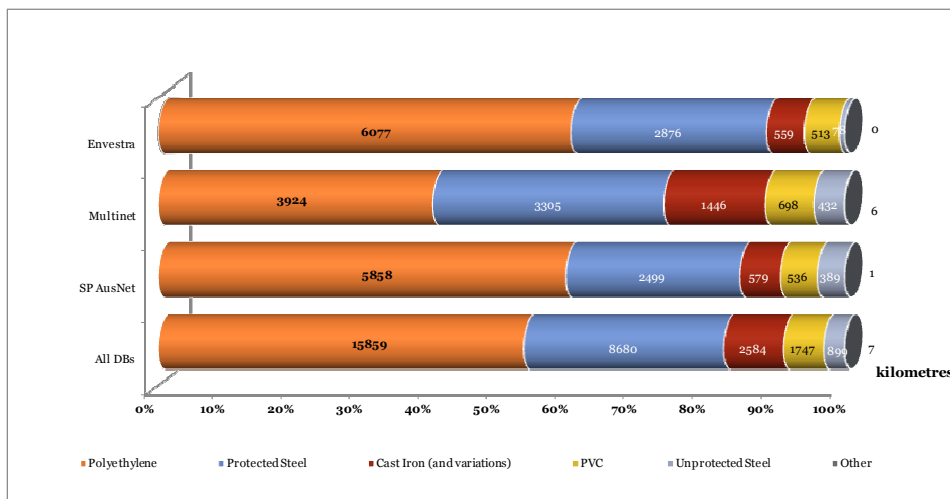
<sup>21</sup> Non-domestic customers are all customers that are subject to the tariffs other than domestic tariffs reported in the following categories: remainder of tariff V supply points not included as "domestic"; or Tariff D or Tariff M supply points.

**Figure A.1.1 Network composition Victorian Gas 2011**



Source: DNSP regulatory quarterly reports

**Figure A.1.2 Victorian Gas distribution network by material 2011**



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)<sup>22</sup> per year. Such customers are typically residential and small commercial users. The tariff includes a fixed charge and a variable component.<sup>23</sup> 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.<sup>24</sup>

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 DNSP's area.<sup>25</sup> Tariff D structures vary across each of the businesses.

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<sup>22</sup> One TJ = 10<sup>12</sup> joules (J), or 1000 GJ.

<sup>23</sup> Under the existing Access Arrangements, the Reference Service for Tariff V customers comprises gas haulage, connection to the gas system and provision of a gas meter.

<sup>24</sup> 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.

<sup>25</sup> 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 DNSP needs to disconnect supply to undertake maintenance or construction work. DNSPs are 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. Unplanned 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 DNSPs 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 DNSP 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 DNSPs 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
Average minutes-off-supply per customer (SAIDI)				
Planned	3.63	0.94	1.45	3.31
Unplanned	1.84	1.72	3.43	3.77
Total	5.48	2.66	4.88	7.08
Average number of interruptions per customer (SAIFI)				
Planned	0.010	0.003	0.004	0.009
Unplanned	0.008	0.007	0.027	0.026
Total	0.018	0.009	0.031	0.036
Average interruption duration (CAIDI)				
Planned	360	360	360	360
Unplanned	236	260	249	142
Mechanical damage – gas mains				
Number of incidents	133	75	83	72
Damage per km	0.014	0.008	0.008	0.007
Mechanical damage – service connections				
Number of incidents	994	975	884	911
Damage per customer	0.002	0.002	0.002	0.002

**Notes:**

1 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
Average minutes-off-supply per customer (SAIDI)				
Planned	1.83	1.68	2.68	1.36
Unplanned	1.49	2.07	2.45	2.67
Total	3.33	3.74	5.13	4.03
Average number of interruptions per customer (SAIFI)				
Planned	0.005	0.005	0.007	0.004
Unplanned	0.007	0.006	0.010	0.010
Total	0.012	0.011	0.017	0.013
Average interruption duration (CAIDI)				
Planned	360	360	360	360
Unplanned	211	323	126	279
Mechanical damage – gas mains				
Number of incidents	39	62	75	61
Damage per km	0.004	0.006	0.008	0.006
Mechanical damage – service connections				
Number of incidents	1240	1223	1116	1017
Damage per customer	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
Average minutes-off-supply per customer (SAIDI)				
Planned	3.88	2.84	3.63	3.41
Unplanned	0.81	0.85	1.16	1.03
Total	4.68	3.69	4.79	4.44
Average number of interruptions per customer (SAIFI)				
Planned	0.010	0.008	0.010	0.010
Unplanned	0.018	0.020	0.021	0.017
Total	0.028	0.028	0.031	0.026
Average interruption duration (CAIDI)				
Planned	391	348	363	345
Unplanned	44	43	55	62
Mechanical damage – gas mains				
Number of incidents	103	80	86	67
Damage per km	0.011	0.008	0.009	0.005
Mechanical damage – service connections				
Number of incidents	1314	1368	1242	1059
Damage per customer	0.002	0.002	0.002	0.001

**Table A.3.4 All distributors**

	2008	2009	2010	2011
Average minutes-off-supply per customer (SAIDI)				
Planned	3.03	1.82	2.60	2.63
Unplanned	1.38	1.58	2.34	2.48
Total	4.41	3.39	4.95	5.11
Average number of interruptions per customer (SAIFI)				
Planned	0.008	0.005	0.007	0.007
Unplanned	0.011	0.011	0.019	0.017
Total	0.019	0.016	0.026	0.025
Average interruption duration (CAIDI)				
Planned	372	354	361	354
Unplanned	127	146	124	145
Mechanical damage – gas mains				
Number of incidents	275	217	244	200
Damage per km	0.0097	0.0075	0.0083	0.0067
Mechanical damage – service connections				
Number of incidents	3548	3566	3242	2987
Damage per customer	0.0021	0.002	0.0018	0.0016

## Notes:

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

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

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

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

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

**Table A.3.7 Number of complaints per 1000 customers**

	Connection and augmentation				Quality and reliability of supply				Other complaints			
	'08	'09	'10	'11	'08	'09	'10	'11	'08	'09	'10	'11
Envestra	0.09	0.13	0.12	0.19	0.17	0.24	0.18	0.79	0.71	0.62	0.58	0.70
Multinet	0.35	0.21	0.14	0.45	0.17	0.20	0.73	0.85	0.96	0.87	1.33	0.61
SP AusNet	0.53	0.41	0.29	0.28	0.06	0.15	0.10	0.06	0.57	0.18	0.19	0.10
All DNSPs	0.33	0.25	0.18	0.32	0.13	0.20	0.36	0.57	0.76	0.57	0.73	0.47

**Table A.3.8 Number of kilometres of low pressure gas mains decommissioned and 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		114		90	
Cumulative Total	570	220	557	284	450	300
Percent of final target		39%		51%		66%

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
	Failure to attend appointment within agreed appointment window:	
Appointments b	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)
	Unplanned interruptions to a customer in a calendar year period resulting from faults in the distribution system:	
Repeat interruptions c	Upon fifth interruption	\$150
	Upon tenth interruption	Additional \$150
	Gas supply interruption to a residential customer not restored:	
Lengthy interruptions d	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 DNSPs 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 (GSL) payments made by distributors (\$2006)**

	No. of customer payments			Amount paid		
	2009	2010	2011	2009	2010	2011
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	2024	14,394	12,188
MultiNet	38	122	135	4319	16,259	17,504
SP AusNet	40	54	57	5398	7197	7391
<b>Total</b>	<b>93</b>	<b>284</b>	<b>286</b>	<b>11,741</b>	<b>34,850</b>	<b>37,083</b>
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	–	–	267	–
MultiNet	1	20	19	135	2665	2464
SP AusNet	–	6	3	–	800	389
<b>Total</b>	<b>1</b>	<b>28</b>	<b>22</b>	<b>135</b>	<b>3732</b>	<b>2853</b>
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	11,336	23,989	26,969
MultiNet	42	108	84	5668	14,394	10,891
SP AusNet	6	7	25	810	933	3241
<b>Total</b>	<b>132</b>	<b>295</b>	<b>317</b>	<b>17,814</b>	<b>39,316</b>	<b>41,102</b>
Appointments - No. of payments not met within 2 hours of scheduled time where customer was present.						
Envestra	–	–	–	–	–	–
MultiNet	–	–	–	–	–	–
SP	–	1	–	–	44	–

AusNet							
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Total	-	1	-	-	44	-
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Appointments no. of appointments not met by the agreed date where customer not present							
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Envestra	115	43	54	5173	1910	2334
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MultiNet	-	-	-	-	-	-
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SP AusNet	46	36	35	1844	1599	1513
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Total	161	79	89	7018	3510	3847
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Number of connections made more than 1 day but within 2 days of agreed date (\$80)							
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Envestra	54	59	48	3887	4194	3319
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MultiNet	-	-	-	-	-	-
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SP AusNet	74	51	83	5326	3625	5740
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Total	128	110	131	9213	7819	9059
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Number of connections made more than 2 days but within 3 days of agreed date (\$160)							
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Envestra	10	10	37	1440	1422	5117
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MultiNet	-	1	-	-	142	-
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SP AusNet	26	21	12	3743	2985	1660
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Total	36	32	49	5182	4549	6777
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Number of connections not made within 3 days of agreed date (\$240)							
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Envestra	39	20	25	8421	4265	5186
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MultiNet	1	-	-	216	-	-
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SP AusNet	37	32	41	7989	6824	8506
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Total	77	52	66	16,626	11,088	13,692
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Number of GSL payments made to customers for connection delays

Envestra	103	89	110	13,747	9880	13,623
MultiNet	1	1	–	216	142	–
SP AusNet	137	104	136	17,058	14,145	15,905
Total	241	194	246	31,022	24,167	29,528



## A.5 Significant supply interruption events

Envestra reported the following supply interruptions:

- 24/02/2011 - Cameron Street Richmond, 50 residential consumers affected for 2 hours due to a third party damage to a gas main.
- 13 and 16 /04/2011 - Barnes Way Bundoora, 88 university student accommodation affected for 3 hours and 1.5 hours due to water-in-service issues.
- 14/07/2011 - Corner High & Clarke Street Northcote, 17 non-residential and 2 residential consumers were affected for 3.5 hours due to a third party damage to a gas main.
- 6/10/2011 - Bellevue, Ruthven & Grandview Streets Rosanna, 100 residential consumers affected for 1 hour due to a fault with district regulator P1-818.
- 09/12/2011 - 130 Separation Street Northcote, 48 residential consumers affected for 5.3 hours due to water-in-mains.

MultiNet reported one outage affecting 100 or more for the 2011 year. This was on the 11 August at Thompson Rd, Patterson Lakes. 107 customers were affected and total supply loss was 20,330 minutes.

SP AusNet reported two significant outages in 2011:

- 22/07/2001 - Wrixon St, Romsey. 100 customers were affected and the total minutes off supply was 12,500
- 27/11/2011- Macedon st, Maidstone, 115 customers were affected and the total minutes off supply was 10,620.

## A.6 Gas escape /job priority classification

### Priority A leaks

CSL Critical Supply loss (eg 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 Use 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 – 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.