

Natural gas forecasts for the Queensland Envestra distribution regions to 2020

**A report for
Envestra**

**Prepared by the
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Contents

	Page no.
Executive summary	i
E.1 Summary of forecasts	i
1. Introduction and background	1
2. The economic outlook for Australia to 2019-20	2
2.1 Introduction	2
2.2 An overview of the medium term outlook for the world and Australian economies	4
2.2.1 Introduction	4
2.2.2 The outlook for the world economy	4
2.2.3 Australian economic outlook – strategic factors	5
2.2.4 The national Base case scenario: Indicator outcomes	8
3. The outlook for Queensland to 2019-20	18
3.1 Introduction	18
3.2 Summary of outlook	18
3.3 The base scenario outlook for Queensland to 2014-15	20
4. Methodological approach – natural gas forecasts for the Queensland network	24
4.1 Introduction	24
4.2 Information supplied by Envestra	24
4.3 Overall modelling approach	24
4.3.1 The econometric component – Tariff V business and Tariff D	25
4.4 Average residential gas usage in Queensland	28
4.4.1 Average residential gas use – recent history	28
4.4.2 Socio-demographic changes	29
4.4.3 Fuel substitution in the residential sector	31
4.5 End-use forecasts for gas and associated policy impacts	33
4.5.1 Introduction	33
4.5.2 Hot water	33
4.5.3 Federal and State incentives	34
4.5.4 The hot water modelling methodology	36
4.6 Gas prices and the CPRS	39
5. The economic outlook for the gas distribution regions in Queensland	41
5.1 Introduction	41
5.2 Regional economic outlook to 2020	41

Contents (cont.)

	Page no.
6. Natural gas demand forecasts to 2020 – Envestra Queensland	46
6.1 The base scenario – total natural gas sales by class	46
6.2 Sales and customer numbers by region	51
7. Natural gas demand forecasts to 2020 – price adjusted – Envestra Qld	63
7.1 Proposed distribution price increases, Envestra Qld	63
7.2 The impact on volumes by class, Envestra Qld	63
Appendix A: Concordances between Envestra’s Queensland gas distribution network zones and the Australian Bureau of Statistics’ Local Government Areas	65
Appendix B: Total sales and customers by class and region	67
Appendix C: Tariff D sales and customers by industry and region – two regions	72
Appendix D: Tariff D volumes by block and sector and MDQ by block	85

List of tables

	Page no.	
2.1	Australian GDP growth 2004-05 to 2019-20 – base growth scenario	3
2.2	Major Australian economic aggregates	13
3.1	Estimated and projected Australian and Queensland economic growth rate – base scenario – 2004-05 to 2019-20	19
3.2	Selected economic indicators – Queensland	20
4.1	Reconciliation of major customer class categories with ASIC industries	27
4.2	Average annual residential consumption, Queensland	28
4.3	Average residential gas consumption by year of connection, Queensland	29
4.4	Share of population by age group (excludes overseas visitors) – Queensland, Census 1996, 2001 and 2006	31
4.5	Queensland gas prices	40
5.1	Population by region – QLD	43
5.2	Dwelling stock by region – QLD	44
5.3	Gross regional product by region – QLD	45
6.1	Gas transmission system QLD – gas consumption by market sector – total Envestra QLD	53
6.2	Gas transmission system QLD – gas customers by market sector – total Envestra QLD	54
6.3	Residential gas use by zone – Envestra QLD	55
6.4	Gas transmission system QLD – residential gas consumption customers and volumes – QLD total	56
6.5	Gas transmission system – Tariff D gas consumption by industry sector – total Envestra QLD	57
6.6	Gas transmission system – Tariff D gas consumption by manufacturing sector – total Envestra QLD	58
6.7	Gas transmission system – Tariff D gas customers by industry sector – total	59
6.8	Gas transmission system – Tariff D gas customers by manufacturing sector – total	60
6.9	Gas transmission system – Tariff D MDQ by industry sector – total Envestra QLD	61
6.10	Gas transmission system – Tariff D MDQ by manufacturing sector – total	62
7.1	Proposed distribution price increases, Envestra Qld	63
7.2	Total volumes by class incorporating the distribution price increases	64

List of tables (cont.)

	Page no.	
B.1	Gas transmission system QLD – gas consumption by market sector – Brisbane	68
B.2	Gas transmission system QLD – gas consumption by market sector – Northern	69
B.3	Gas transmission system QLD – gas customers by market sector – Brisbane	70
B.4	Gas Transmission system QLD – gas customers by market sector – Northern	71
C.1	Gas transmission system – Tariff D gas consumption by industry sector – Brisbane	73
C.2	Gas transmission system – Tariff D gas consumption by manufacturing sector – Brisbane	74
C.3	Gas transmission system – Tariff D gas consumption by industry sector – Northern	75
C.4	Gas transmission system – Tariff D gas consumption by manufacturing sector – Northern	76
C.5	Gas transmission system – Tariff D gas customers by industry sector – Brisbane	77
C.6	Gas transmission system – Tariff D gas customers by manufacturing sector – Brisbane	78
C.7	Gas transmission system – Tariff D gas customers by industry sector – Northern	79
C.8	Gas transmission system – Tariff D gas customers by manufacturing sector – Northern	80
C.9	Gas transmission system – Tariff D MDQ by industry sector – Brisbane	81
C.10	Gas transmission system – Tariff D MDQ by manufacturing sector – Brisbane	82
C.11	Gas transmission system – Tariff D MDQ by industry sector – Northern	83
C.12	Gas transmission system – Tariff D MDQ by manufacturing sector – Northern	84
D.1	Tariff V by block and region – residential	86
D.2	Tariff V by block and region – commercial	87
D.3	Tariff V by block and region – industrial	88
D.4	Tariff D (demand) by block and region – MDQ	89

List of figures

	Page no.	
E.1	Total natural gas sales by class – average annual growth 2010-11 to 2015-16	i
E.2	Total gas customers – Queensland – average annual growth 2010-11 to 2015-16	ii
E.3	Average residential gas usage – actual, forecast and trend	iii
2.1	Australian GDP growth to 2019-20 – base scenario	2
2.2	World GDP growth rate	5
2.3	Australia – household savings and equity withdrawal	6
2.4	Australia – household debt and savings	7
2.5	Current account balance and foreign financing requirement as a % of GDP	8
2.6	Capacity utilisation rate, CPI growth rate and 90 day bill rate	11
2.7	Consumer spending and GDP	14
2.8	GDP and employment	14
2.9	Employment and unemployment	15
2.10	Consumer price index and wages	15
2.11	Domestic interest rates	16
2.12	Exchange rate	16
2.13	Housing sector	17
3.1	Queensland GSP growth – base scenario – 2004-05 to 2019-20	18
4.1	NIEIR's regional energy model	25
4.2	Mean household size – Queensland	30
4.3	Index of reverse cycle air conditioning sales – Queensland	32
4.4	Modelling process for hot water, change in average gas usage, Queensland 2008-2010	36
5.1	Projected population growth – Queensland regions 2010 to 2020 – base scenario	41
5.2	Dwelling stock growth – Queensland regions 2010 to 2020 – base scenario	42
5.3	Gross product growth – Queensland regions 2010 to 2020 – base scenario	42
6.1	Natural gas sales by class – average annual growth – 2010 to 2020 – baseline scenario	47
6.2	Natural gas sales by class – total – Envestra – base scenario	47
6.3	Natural gas sales by class – residential – Envestra – base scenario	48
6.4	Natural gas sales by class – commercial Tariff V – Envestra – base scenario	48
6.5	Natural gas sales by class – industrial Tariff V – Envestra – base scenario	49
6.6	Natural gas sales by class – industrial Tariff D – Envestra – base scenario	49
6.7	Natural gas sales by class – commercial Tariff D – Envestra – base scenario	50
6.8	Total natural gas sales – Queensland regions – average growth 2010 to 2020 – base scenario	51
6.9	Total Tariff V customers – Queensland regions – average growth 2010 to 2020 – base scenario	52

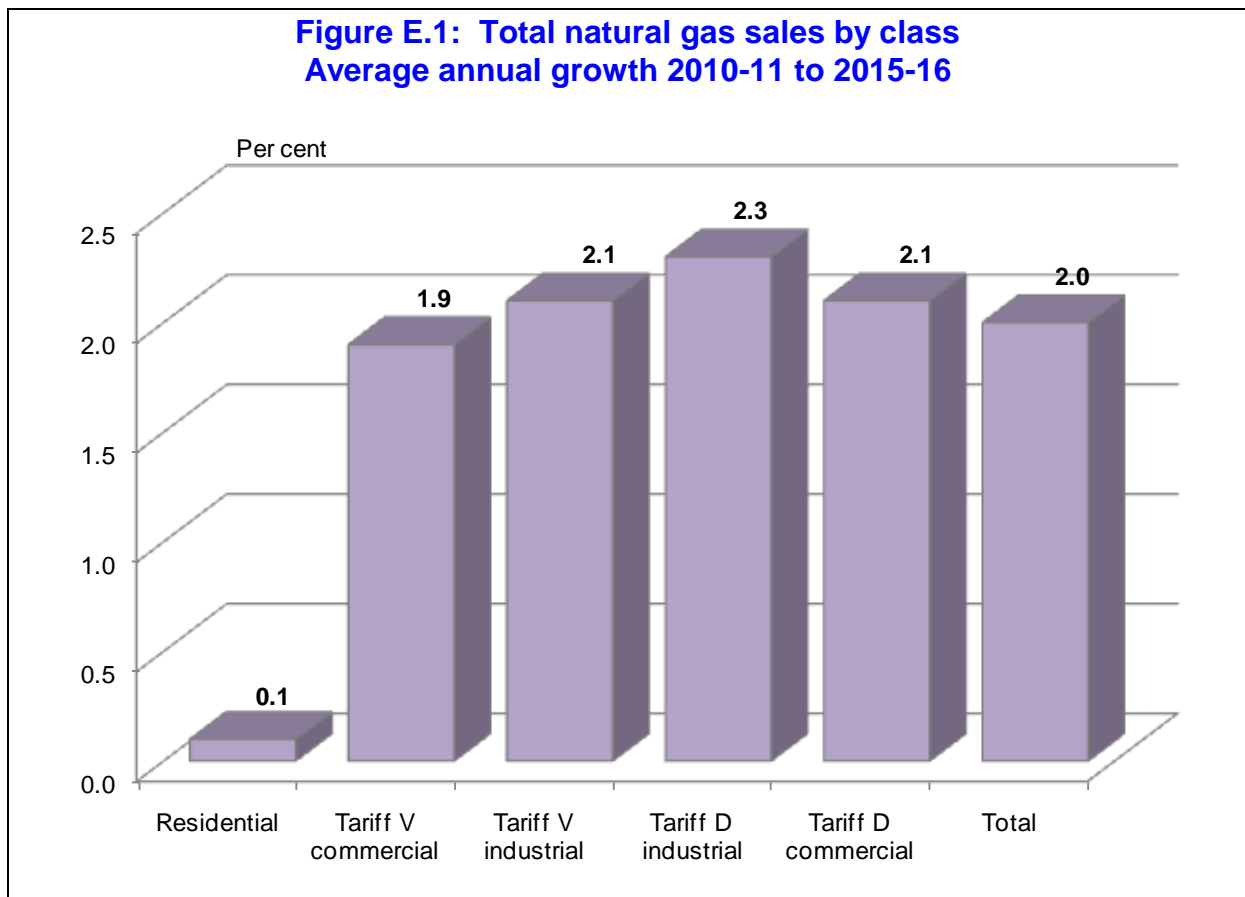
Executive summary

Envestra commissioned the National Institute of Economic and Industry Research to prepare forecasts of natural gas sales and customer numbers for the Queensland regulated natural gas distribution network.

The key findings of the forecasts are briefly summarised below. Importantly, a discussion is also provided on average residential gas usage.

E.1 Summary of forecasts

Figure E.1 shows the average volume growth by class from 2010-11 to 2015-16. Average annual growth in total sales between 2010-11 and 2015-16 is 2.0 per cent per annum.



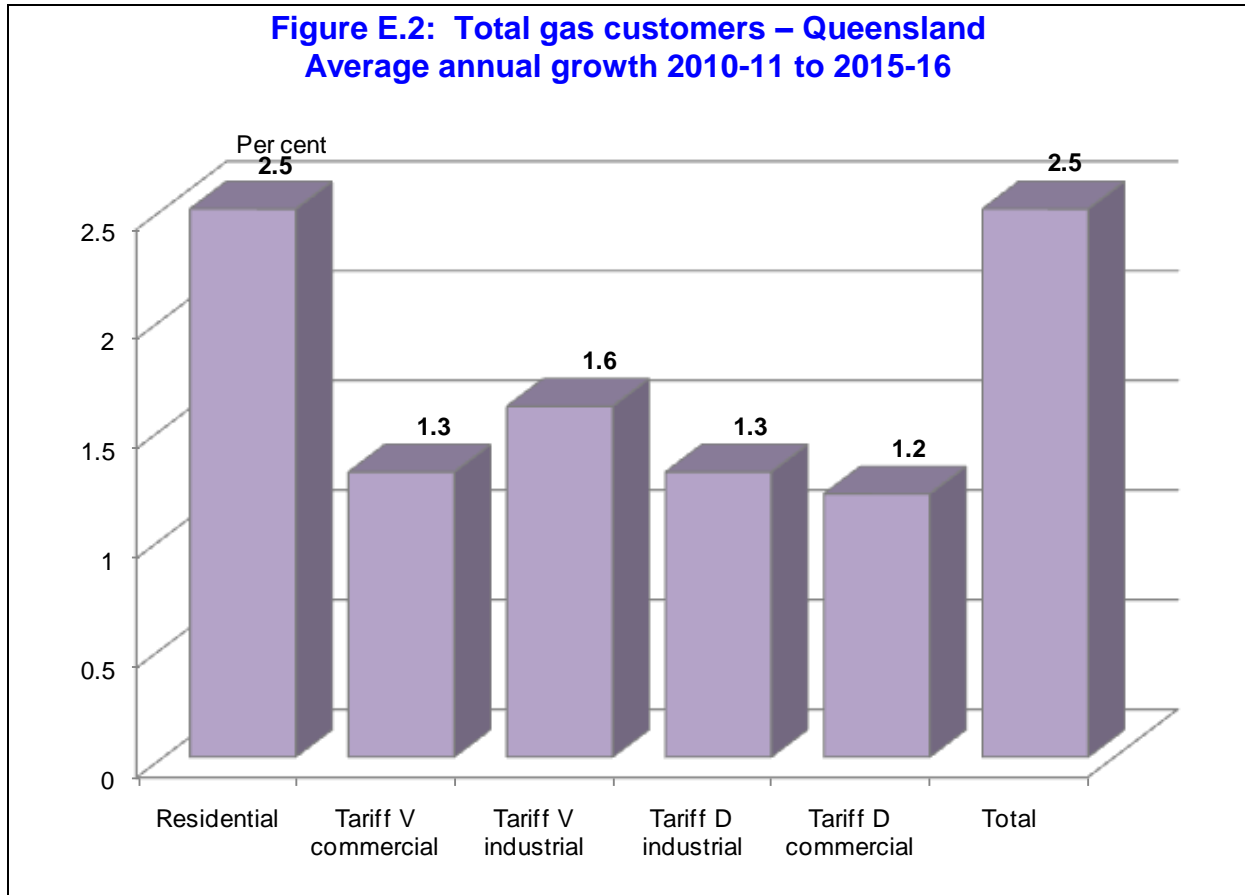
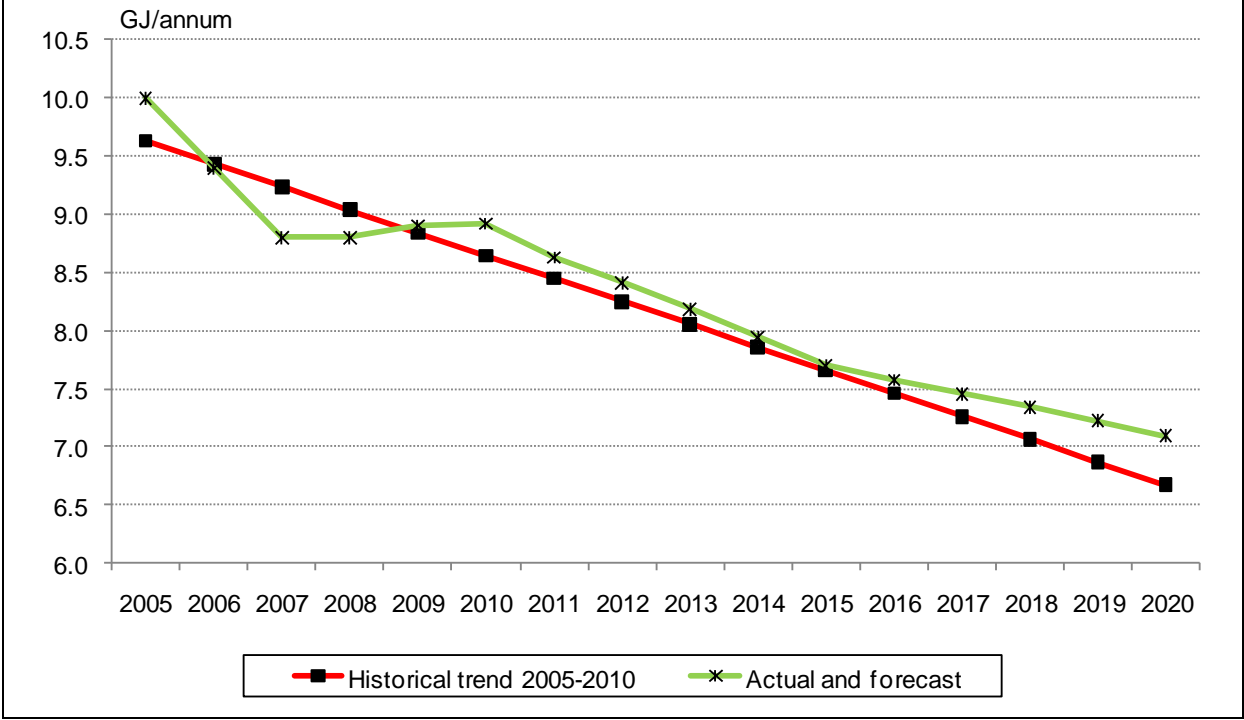


Figure E.2 shows the projected growth in customer number to 2015-16 by market sector for the regulated distribution network in Queensland.

Figure E.3 shows actual and forecast residential average consumption from 2004-05 to 2019-20. It also shows the extrapolated trend in average residential usage based on the 2004-05 to 2009-10 weather normalised usage (red line).

Actual usage fell from 10 GJ per residential connection in 2004-05 to 8.9 GJ per connection by 2008-09. The projection to 2019-20 implies average usage will fall at a slightly slower rate over the next 10 years, falling to around 7.1 GJ per residential connection by 2019-20 (green line in Figure E.3). That is, the actual average usage by 2020 is above the trend average usage in Figure E.3. This reflects directly the currently observed trend and the expected continued shift towards solar hot water in both the new and replacement markets in Queensland.

Figure E.3: Average residential gas usage – actual, forecast and trend



1. Introduction and background

In October 2009 Envestra requested the National Institute of Economic and Industry Research (NIEIR), to prepare projections of natural gas sales and customer numbers for Envestra's Queensland Gas Distribution Network. The scope of the project as outlined by Envestra was as follows:

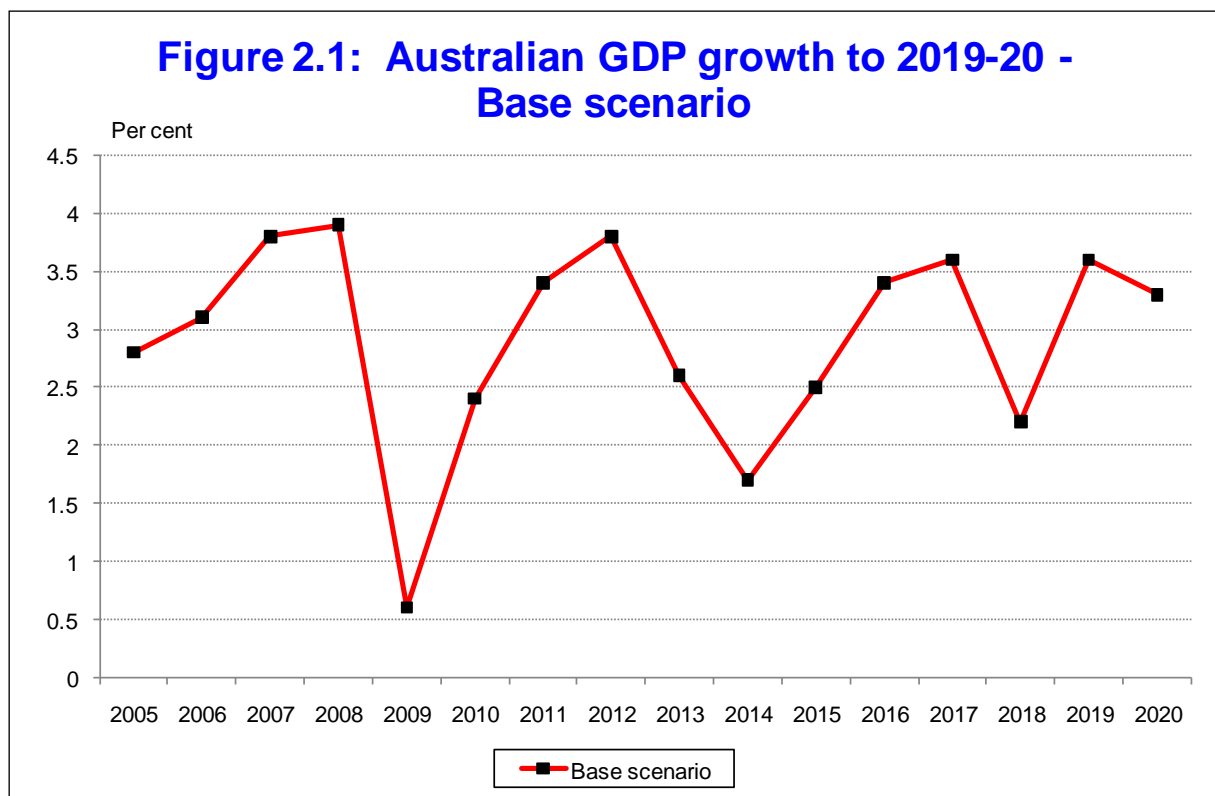
- A description of the methodology used to forecast gas consumption for each market segment, and key assumptions used to prepare forecasts, including the source of base data used, and an overview of forecasting models used. Particular consideration also needs to be given to the impact of substitute energy sources, government policy initiatives (e.g. rebate on solar water heaters) and global warming on gas consumption.
- An assessment of the expected industrial closures, manufacturing activity, investment levels and residential property prices in Queensland and the impact it will have on demand for natural gas over the forecast period.
- Estimates of gas consumption for the financial years 2009-10 to 2019-20 for:
 1. Domestic customers for the Brisbane Region (including Ipswich and suburbs north of the Brisbane River), and the Northern Region (serving Rockhampton and Gladstone);
 2. Commercial and small industrial in the Brisbane Region and the Northern Region (serving Rockhampton and Gladstone); and
 3. MDQ and annual volume forecasts for customers using greater than 10 TJ per annum (Tariff D) for the Brisbane Region and the Northern Region.
- Relevant commentary on the forecasts to interpret trends and to demonstrate consistency with expected movements in key economic variables.

These projections for Queensland gas usage were prepared in September 2010.

2. The economic outlook for Australia to 2019-20

2.1 Introduction

This section provides an outline of the economic outlook for Australia to 2019-20 for the base growth scenario. Figure 2.1 shows the outlook for Australian gross domestic product to 2019-20. Table 2.1 shows the projected annual Australian GDP growth rates to 2019-20 for the base scenario. Part 2.2 of this section provides a more detailed outlook for the Australian economy to 2014-15 for the base scenario.



Note: Financial years ending June.

Table 2.1 Australian GDP growth 2004-05 to 2019-20 – base growth scenario

	Base
Per cent change	
2005	2.8
2006	3.1
2007	3.8
2008	3.9
2009	0.6
2010	2.4
2011	3.4
2012	3.8
2013	2.6
2014	1.7
2015	2.5
2016	3.4
2017	3.6
2018	2.2
2019	3.5
2020	3.3
Compound growth rate (per cent)	
2010-2015	2.8
2010-2020	3.0

Note: All growth rates refer to financial years ending June.

2.2 An overview of the medium-term outlook for the world and Australian economies

2.2.1 Introduction

This section summarises the medium-term outlook for the world and Australian economies. The Australian economic outlook includes an assessment of the strategic factors that will influence Australian growth outcomes.

2.2.2 The outlook for the world economy

Total world GDP is estimated to have fallen by 1.5 per cent in 2009 and to increase by 2.6 per cent in 2010. Asia is projected to be back to near normal GDP growth rates (in excess of 5 per cent) by 2010. However, the developed world is projected to grow by less than 2 per cent (below normal growth rates).

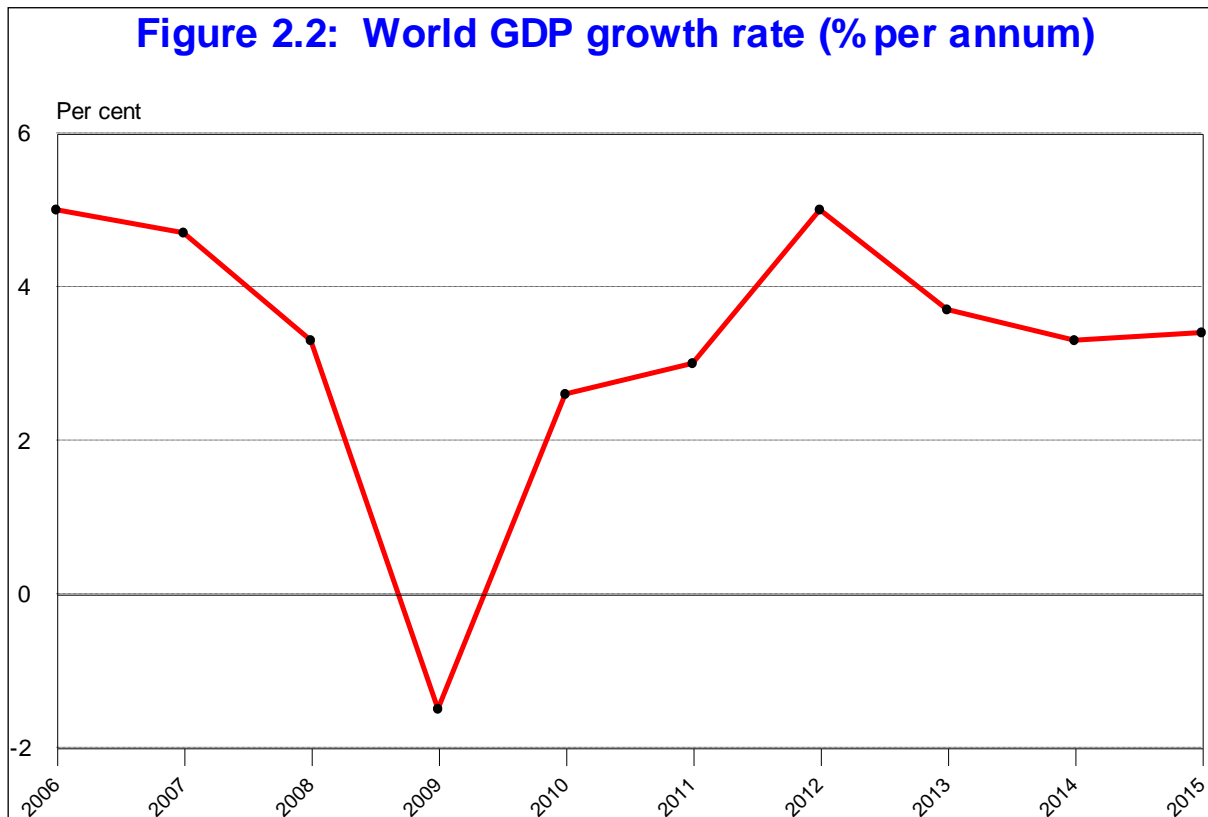
World economic growth over the 2008 to 2018 period (3.0 per cent per annum) is projected to be less than the world growth over the 1996-2008 period (3.6 per cent per annum). Nonetheless, post 2012, the average annual world growth rate returns to close to the 1996-2008 average.

The high income economies have suffered a severe financial shock and IMF estimates show that on average it takes 6 to 8 years for economies subject to severe financial shocks to recover to output levels that otherwise could have prevailed. The major reasons for this are:

- (i) the severity of the shock and the increase in excess capacity which dampens growth;
- (ii) the damage to confidence which takes a number of years to overcome; and
- (iii) the damage to bank and other financial institutions' balance sheets and the associated diversion of funds to restore the quality of financial sector balance sheets. This in effect imposes a long-term credit squeeze on the economy with 'less-than-blue-chip' borrowers' credit rationed.

In the past countries subject to severe financial shock did recover to previous output levels. This will not happen this time for two reasons. Firstly, what happened over 2009 and 2010 is that the financial crisis affected a range of countries simultaneously and in particular high income countries; individual countries subject to financial shock in the past could rely on a strong world economy to assist their recovery.

The second reason is the long term loss of competition of high income countries to the large emerging developing countries has been accelerated by the global financial crisis and will continue post 2012. The possibility of a carbon price regime would accelerate this trend.



2.2.3 Australian economic outlook – strategic factors

Strategic factors are those obstacles, barriers or, on the positive side, drivers which will play important roles in determining how Australia will perform economically over the next decade. Perhaps the most important strategic factor has already been discussed, namely the outlook for the world economy. The focus here is on the domestic strategic factors.

The most important domestic strategic factors which flow on from the GFC are:

1. household debt deleveraging;
2. balance of payments constraint and high interest rates; and
3. the disintegration of the Australian economy.

Household debt and savings

Australian household savings is likely to be significantly lower than estimated.

One of the mysteries of the last decade is that while Australia produced similar saving ratio outcomes as the other Anglo-sphere economies¹, the rate of growth of household debt compared to income has been faster in Australia than what appears to be the case in the other Anglo-sphere economies, such as the United States.

One possible reason is the relatively higher dwelling prices in Australia relative to income. Another is that the household savings ratio is being over-estimated in Australia.

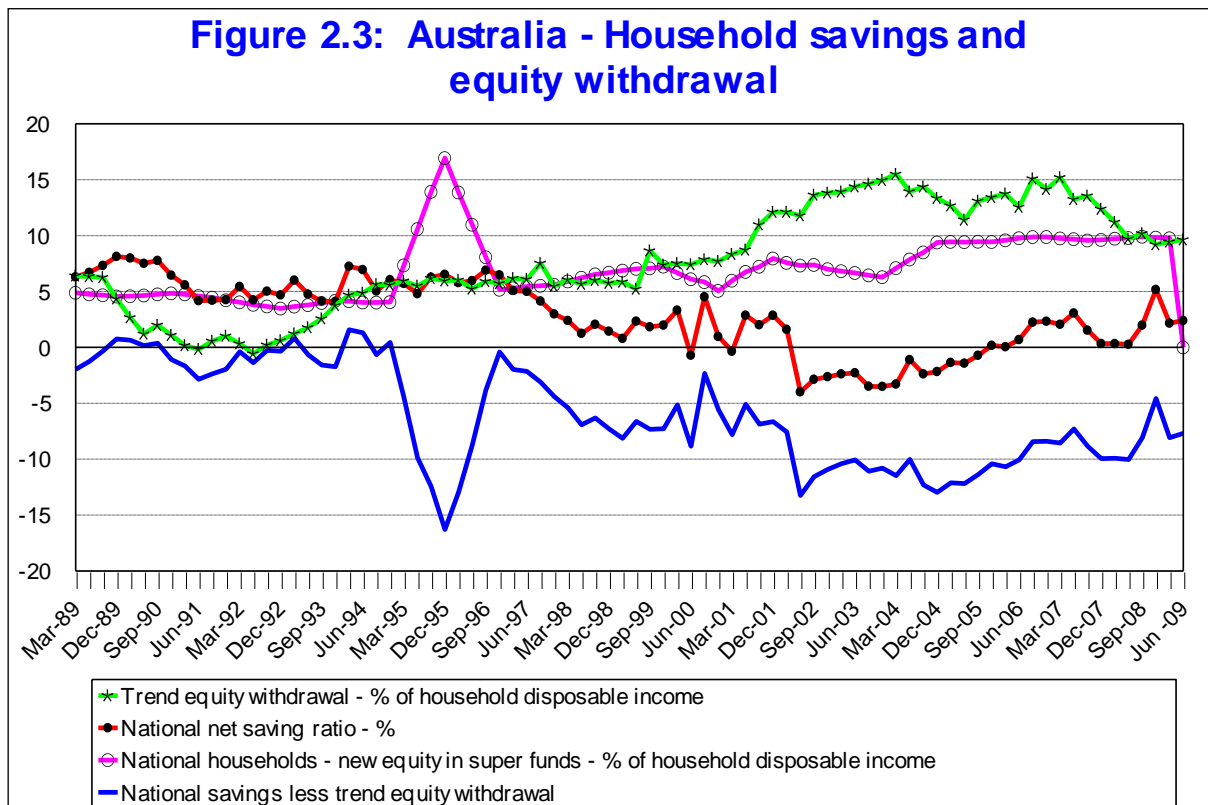
¹ That is, plus or minus around an average of near zero.

The United Nations' System of National Accounts recommends that superannuation contributions and interest receipts be either excluded from the household accounts or, if included, then explicitly entered on the income and outlay side of the accounts so that net savings excludes superannuation savings.

In Australia the premiums paid and imputed interest revenue from superannuation is included in the household income, but is not explicitly entered as a household outlay, which means that the household balancing items, net savings, is somewhat overstated.

Figure 2.3 shows selected household savings measures for the Australian economy to June quarter 2009. Also shown in the figure is (trend) equity withdrawal for Australian households as a per cent of household income. Australian ABS annual net household savings is now back to historically low levels, continuing its tendency over the last decade to average around zero. Equity withdrawal is the change in total household debt less activities of:

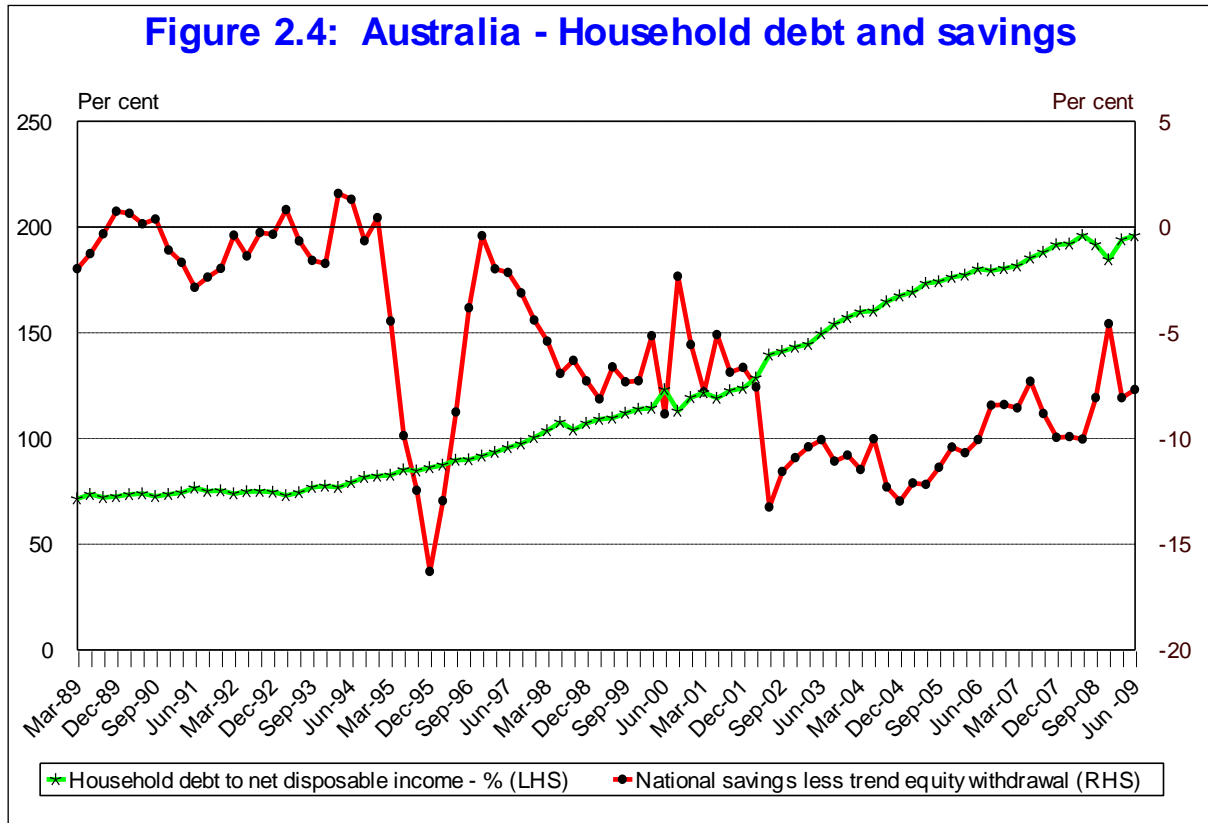
- (i) borrowings for new dwelling construction; and
- (ii) borrowings for unincorporated investment.



A large part of equity withdrawal seems to have been used to finance consumption. Moreover, equity withdrawal matches fairly closely the estimated change in households' equity in superannuation funds. As the national net savings ratio line indicates, net Australian savings ratio (adjusted for superannuation) has been significantly negative from 1997 to 2008. As Figure 2.4 indicates, this is connected with the acceleration in Australian household debt to income ratio between 1997 and 2008. During this period Australian household debt to income has increased from 80 to 190 per cent of net disposable income.

This cannot continue in the same manner going forward, both because of approaching debt saturation and constraints on the availability of finance arising from the global financial crisis.

In practical terms what this means is that Australia may well recover strongly over the next three years. This will continue to drive up the debt to income ratio. However, debt saturation and borrowing costs will act as powerful deflationary influences on the economy post 2012.

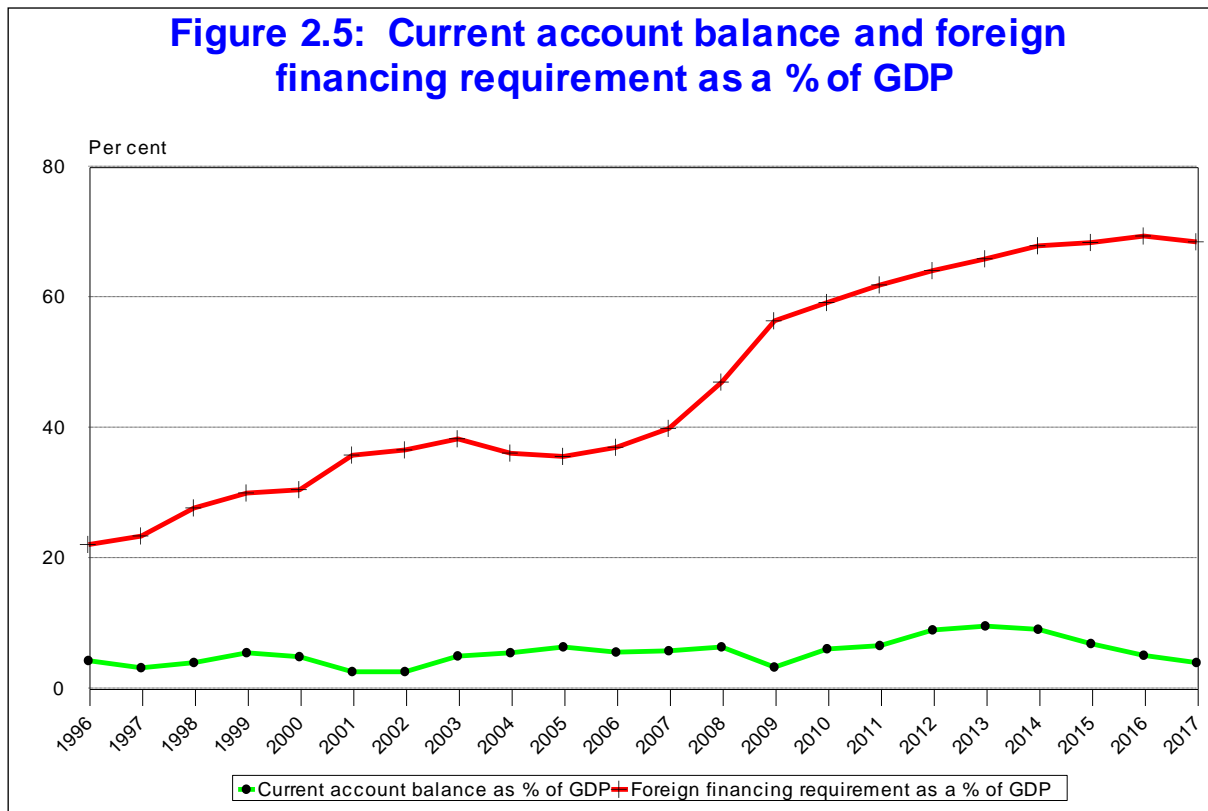


The balance of payments constraint to growth and high interest rates

Given the high current account deficits over the last 30 years, Australia now has an annual international debt roll-over requirement equal to over 50 per cent of GDP (Figure 2.5). With the recovery this debt roll-over burden is projected to increase towards 70 per cent of GDP. Mining expansion, and in particular LNG expansion, will not greatly assist in preventing this rise. This is because of:

- (i) low local content in construction of new mines;
- (ii) high foreign borrowings to finance construction; and
- (iii) high profitability and high foreign content which means that most of the profits are a negative for the current account deficit.

Australia's financing ratio is now well above those of South Korea and Argentina before their exchange rate-lending crisis of 1997 and 2001 respectively, and with 60 per cent of foreign debt held by the banking system, Australia will have to run a high interest rate regime when the world recovers (Figure 2.5).



The disintegration of the Australian economy

As a result of the rapid Asian growth over the next decade, resource development is likely to be a key driver of Australian economic growth. The resource States will grow significantly faster than the national average and, unfortunately, the faster the growth in the resource States the relatively slower will be the rate of growth in the non-resource States. This is because of:

- (i) the weakening interstate trade flow impacts of resource developments on Australian States as imports of goods and services displace domestic production; and
- (ii) the non-resource States' rising debt levels become more adversely affected by any increase in interest rates and inflationary impacts of resources expansion on the domestic economy.

2.2.4 The national Base case scenario: Indicator outcomes

The Base case GDP profile is one of:

- (i) reducing growth to 2010-11;
- (ii) followed by high growth in 2011-12;
- (iii) which leads to unacceptable inflation outcomes and a rapid increase in the current account deficit;
- (iv) which in turn provokes a return to higher interest rates and cuts in government expenditures;
- (v) which returns the Australian economy to the low growth rates of the 2009-2011 period.

After 2015 the economic growth rate is constrained by inflationary and balance of payments pressures, despite the fast growing resource States.

The exchange rate and the current account deficit

The IMF in a report on the AUS\$, concluded that the approximate “equilibrium” exchange rate is around 75 to 80 cents, or a weighted average of 60. This is the exchange rate which is required to maintain the current account deficit at its sustainable level of around 4.5 per cent of GDP.

The projections indicate that equilibrium conditions are not maintained for the next few years. The current account deficit increases with the recovery, reaching 9 per cent of GDP by the end of 2012. This, along with inflation, triggers a policy response which results in a decline in economic growth post the middle of 2012.

Why does the current account deficit deteriorate so quickly? The reasons are:

- (i) a strong investment recovery;
- (ii) low domestic content of the equipment component of the investment; and
- (iii) high foreign ownership and gross operating surplus of the fast expanding mining sector.

Indeed, a rule of thumb established by NIEIR models over the years is that over the long term resource expansion probably has a neutral impact on the current account deficit. Over the construction phase the current account deficit deteriorates. Over the production phase the:

- (i) interest payments on foreign debt;
- (ii) the remitted profits; and
- (iii) the undistributed profits which are fully credited to the current account deficit,

mean that any positive impact on the current account balance during the production phase is relatively small and struggles to offset the accumulated negative impact from the construction phase.

However, the fact a significant part of the current account deficit is undistributed profits that are used in Australia to fund new investment means that the current account deficit are not quite as encouraging as the case where all debt is financed. And this is why high current account deficits in the Australian context are not as worrying as elsewhere. However, as the IMF points out, this is at 4.5 per cent of GDP, not 8 to 9 per cent.

Despite the return of high current account deficits, Australia’s exchange rate will remain strong over the next few years supported by the positive sentiment associated with the next round of resource expansion.

However, with the recovery in the world economy, world credit markets will increasingly become squeezed and Australia will have more difficulty in securing finance from global wholesale markets. This will force domestic banks to rely on domestic funding sources and especially the RBA. This will cut the level of new capital inflow and put downward pressure on the exchange rate, which is why the exchange rate weakens in 2012-13. If Australia does reduce GDP growth sharply over this period, as per the projection, then the exchange rate could well fall to 60 cents or below, which in turn would force policy contraction. That is,

during the 2012-13 period there may be a time when the exchange rate does fall temporarily to very low levels.

Through all this, and especially to 2013, there is a steady weakening of the US\$. By 2014 the Chinese currency rises against the US\$. This means that the weighted average exchange rate returns to its "equilibrium" level by the end of 2011, despite the high US\$.

After 2013 the weighted average Australian exchange rate is held below its equilibrium level once it becomes obvious that the next round of resource expansion is not going to make a substantial contribution to solving Australia's chronic current account deficit. This has a long term deflationary impact on the economy, which helps to maintain growth at sustainable levels.

Interest rates

The interest rate profile is derived by a Taylor Rule equation which has worked well in explaining interest rates over the last decade.

The components in the Taylor Rule equation are:

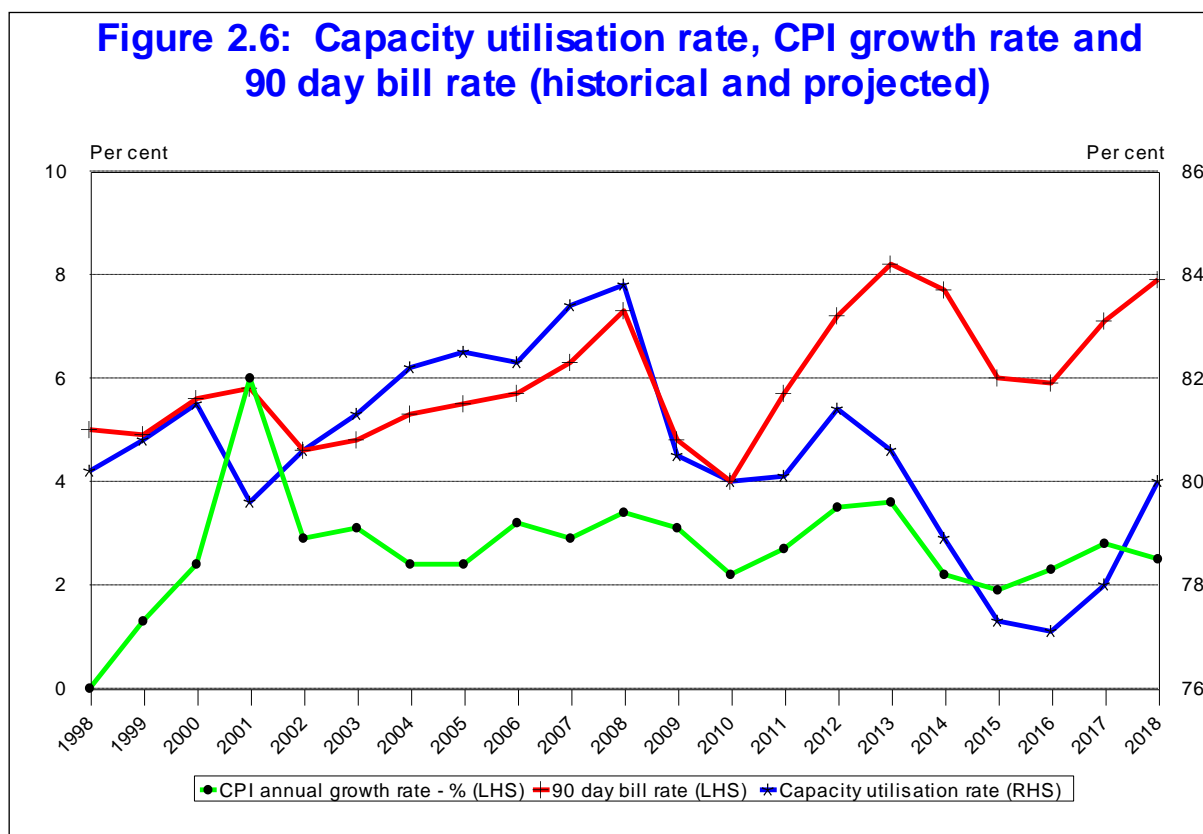
- (i) the inflation rate;
- (ii) 0.5 times the gap between the inflation rate and 2 per cent;
- (iii) 0.5 times the gap between the capacity utilisation rate and nominal or non-inflationary capacity utilisation rates;
- (iv) 0.1 times the gap between the current account deficit as a % of GDP and -4.5 per cent where the latter is the sustainable level.

The increase in the inflation rate by 2012, given this rule, explains the majority of the increase in interest rates.

However, significant contributions are expected to be made by the built up in capacity utilisation rates and the current account deficit. By the end of 2012 the excess capacity utilisation rate (above normal) is approaching 4 percentage points; the same as the early 2008 period when inflationary pressures were strong. This, plus the return of high current account deficits, could drive the short-term rate up to 9 per cent.

Pressure eases with the increase in household savings (forced by the high level of interest rates) which takes pressure out of the economy. However, the economy stays on an inflationary knife edge for the remainder of the projection period with the result that interest rates stay within the range of 6.0 to 8.5 per cent to 2018.

In part this is because capacity utilisation rates stay high. The check to growth in 2013 means that the economy does not build up enough momentum to make more capacity sufficient to remove inflationary bottlenecks from the economy. The vicious cycle is caused by the fact that the economy cannot build up the momentum because of the lack of capacity, in part due to the 2008 to 2011 slow growth period.



Inflation

With the recovery will come a return of inflation. In part this will be due to the recovery in world commodity prices in general, and oil prices in particular. The current modelling of the Australian exchange rate reflects this expectation. When the prices do rise, it will therefore fall in domestic inflation.

The same mechanism works for other inflationary drivers. That is, the low inflation during a period of low economic growth suppresses inflation because:

- (i) employees are fearful of losing their jobs with nominal wages growth falling to low levels;
- (ii) governments hold back on increasing fees and charges in line with underlying inflation because imposts on real incomes is not politically acceptable; and
- (iii) firms suppress margins to hold market share in line with the lowest price competitors.

With general recovery this constricts revenue and “catch-up” occurs. That is, employees, governments and firms attempt to replace some, but not all, of the revenue lost during the period of low economic growth.

Thus, over 2011 the CPI rate of growth accelerates, reaching the upper acceptable range by the end of 2011. During 2012 the inflation rate threatens to exceed 4 per cent which forces contractionary policies inducing high interest rates. This forces back down the rate of GDP growth and moderation in wages growth. The increased excess capacity in the economy brings the rate of inflation back to the 2 per cent mark by the middle of 2014.

From 2014 the economy is run with a level of excess capacity 1 to 2 per cent above the long run average. This maintains the rate of inflation in check.

Gross domestic product

The most important contribution to the slowdown in fiscal year 2009 growth was the decline in stocks, which took 1.3 percentage points off the GDP growth rate. The other major contribution to the growth slowdown was private consumption expenditure, where the contribution to growth fell from 2.2 percentage points in 2007-08 to 0.8 percentage points in 2008-09.

The recovery in GDP growth in 2009-10 will be led by:

- (i) the rebuilding of stocks; and
- (ii) a recovery in the contribution of private consumption expenditure.

It will be held back by the recovery in imports.

The fiscal year 2010-11 will be similar to 2009-10, with the exception that the combined contribution to growth from private dwelling investment and private investment will offset the fact that stocks will be a negative contribution to growth.

In 2011-12 Australian GDP growth will accelerate significantly. This will be driven by:

- (i) household consumption expenditure contribution returning to its historical levels as a growth driver;
- (ii) private investment contributing 1.2 percentage points to growth;
- (iii) stock making a positive contribution to growth and exports making its highest contribution to growth since the 2000-01 Olympics year; and
- (iv) public demand making a near 1 percentage point contribution to growth, reflecting the tail end of the stimulus.

In 2012-13 GDP growth declines significantly. A leading driver is the reduction in public demand as governments rein in expenditures to bring public sector deficits back under control. This alone takes 1 percentage point off GDP growth. Also, the turndown in the dwelling cycle under higher interest rates over the 2012-13 period results in dwellings making a negative contribution to growth.

In 2013-14 the high interest rates and inflation pressures of the previous fiscal year results in the private consumption expenditure contribution to GDP growth falling back to the 2008-09 levels as the household savings ratio increases to stabilise household debt.

The 2014-15 fiscal year is similar to the 2013-14 fiscal year, with the exception that private investment turns down, aggravating the period of slow growth.

The growth profile of a constrained economy labouring under the impact of high household and international debt and high public sector borrowing requirements continues post 2014-15.

**Table 2.2 Major Australian economic aggregates: fiscal year averages
(annual per cent rate of change)**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
International										
World GDP (fiscal year)	5.0	4.7	3.3	-1.5	2.6	3.0	5.0	3.7	3.3	3.4
Demand										
Private consumption	2.8	4.2	4.1	1.9	2.6	2.9	3.3	3.2	2.0	1.8
Business investment	15.2	7.2	13.5	3.1	0.2	4.7	6.8	8.3	-1.4	8.0
Housing	-3.9	2.1	1.3	-2.0	3.7	6.4	10.6	-1.9	-5.7	0.5
Public expenditure	3.8	4.3	4.9	4.3	6.1	6.4	-0.4	-0.6	0.6	2.9
Total expenditure	4.3	4.5	5.6	2.7	3.7	4.7	3.0	3.3	0.2	3.4
GDP	3.1	3.8	3.9	0.6	2.4	3.4	3.8	2.6	1.7	2.5
External sector										
Current account deficit (\$B)	-54.3	-59.4	-73.2	-38.0	-68.6	-79.8	-80.8	-113.2	-104.7	-108.5
CAD as per cent of nominal GDP	5.4	5.4	6.2	3.0	5.2	5.5	5.2	6.8	6.1	6.1
Labour market										
Employment	2.9	2.9	2.6	1.1	1.0	1.9	2.0	1.1	0.4	1.1
Unemployment rate (%)	5.0	4.5	4.2	4.9	5.6	5.5	5.4	6.1	7.0	7.5
Participation rate(%)	64.6	65.0	65.4	65.4	65.2	65.2	65.3	65.4	65.5	65.4
Finance										
90 day bank bill (%)	5.7	6.3	7.3	4.8	4.1	5.7	7.2	8.2	7.7	6.0
10 year bond rate (%)	5.4	5.8	6.2	5.0	5.7	6.2	7.2	8.4	7.4	5.9
\$US/\$A	74.9	78.6	89.7	74.6	89.5	90.7	87.3	79.5	80.9	84.8
Trade weighted index	63.3	64.8	69.7	60.2	69.7	68.2	62.8	55.4	54.9	56.4
Wages and prices										
Wage cost Index	4.1	3.3	5.0	5.1	5.2	4.3	4.2	4.4	2.8	2.6
CPI	3.2	2.9	3.4	3.1	2.2	2.7	3.6	3.6	2.2	1.8

Figures 2.7 to 2.13 show graphically selected indicators for the base scenarios for the Australian economy over the medium term.

Figure 2.7: Consumer spending and GDP**Figure 2.8: GDP and employment**

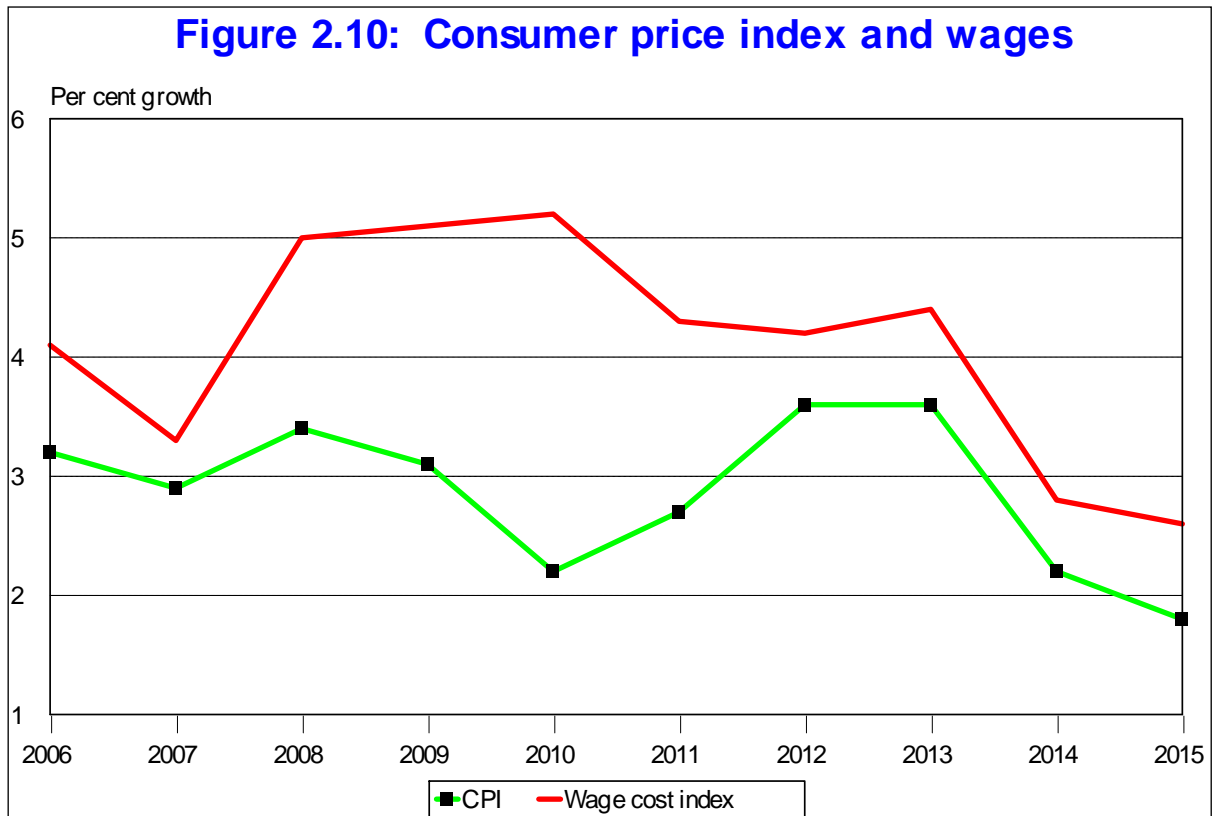
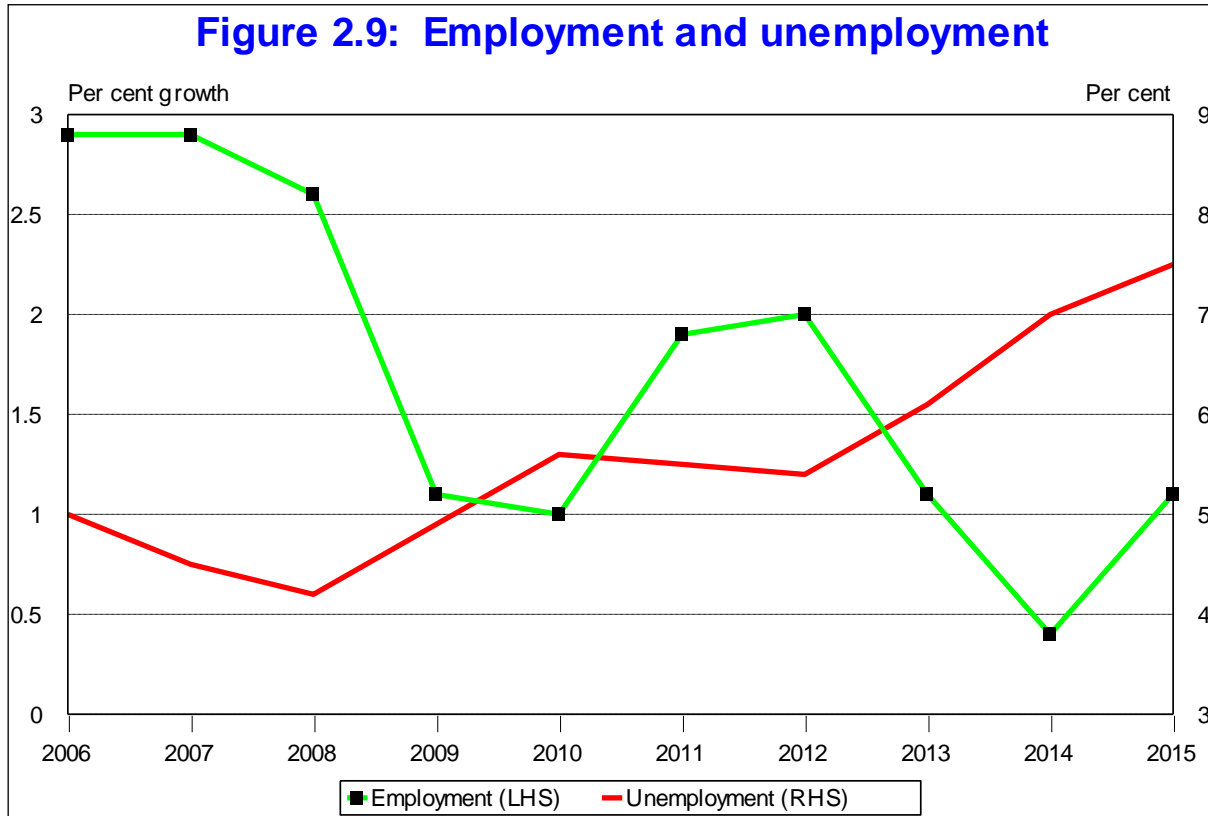


Figure 2.11: Domestic interest rates**Figure 2.12: Exchange rate**

Figure 2.13: Housing sector

3. The outlook for Queensland to 2019-20

3.1 Introduction

This section outlines the economic outlook for Queensland to 2019-20 focusing on the period to 2014-15.

3.2 Summary of scenarios

Figure 3.1 shows the outlook for growth in Queensland Gross State Product (GSP) over the period to 2019-20 for the base scenario. Queensland GSP growth is expected to average 3.8 per cent per annum under the base scenario between 2009-10 and 2019-20. Table 3.1 shows the projected annual economic growth rates in GSP for Australia and Queensland for the period 2004-05 to 2019-20.

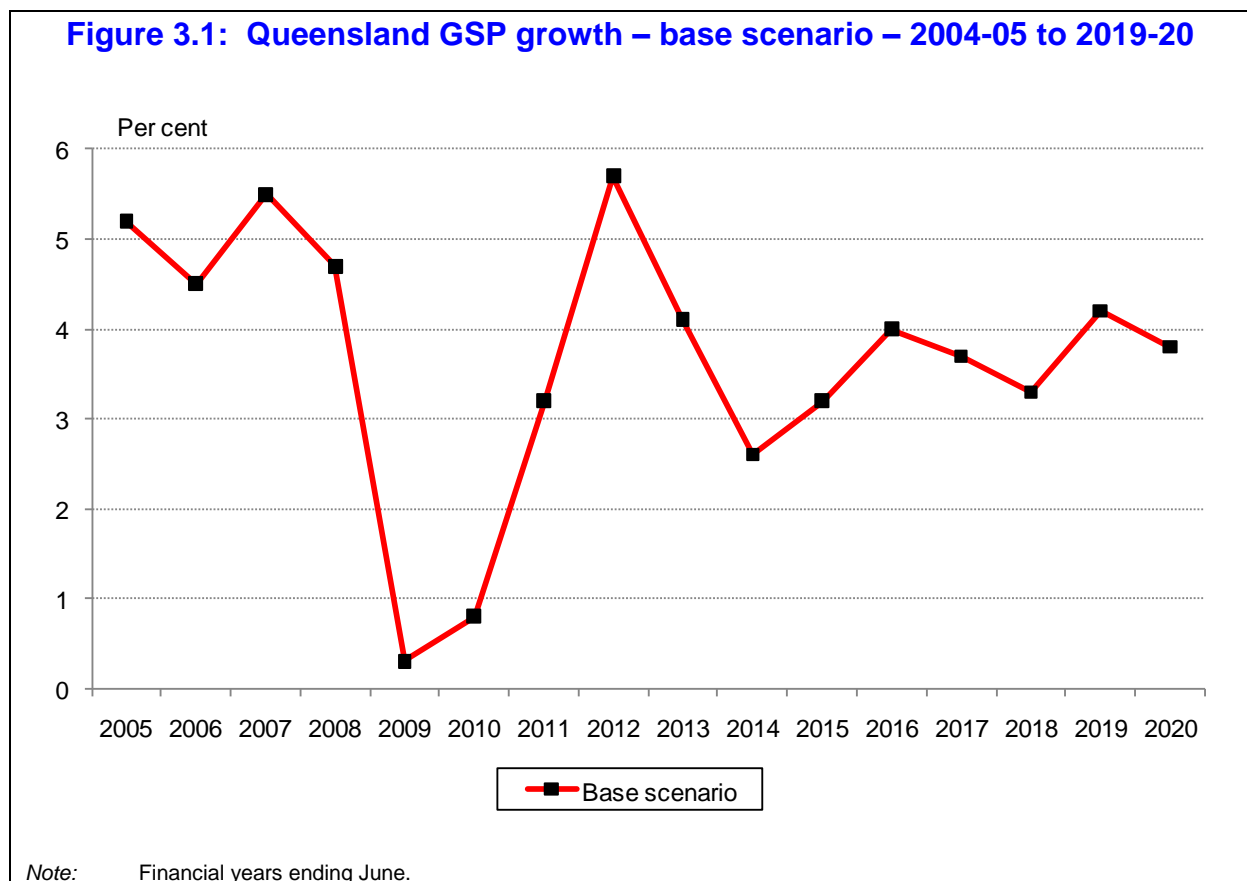


Table 3.1 Estimated and projected Australian and Queensland economic growth rate – base scenario – 2004-05 to 2019-20

	Australia	Queensland
	Base	Base
Per cent change		
2005	2.8	5.2
2006	3.1	4.5
2007	3.8	5.5
2008	3.9	4.7
2009	0.6	0.3
2010	2.4	0.8
2011	3.4	3.2
2012	3.8	5.7
2013	2.6	4.1
2014	1.7	2.6
2015	2.5	3.2
2016	3.4	4.0
2017	3.6	3.7
2018	2.2	3.3
2019	3.5	4.2
2020	3.3	3.8
Compound growth rate (per cent)		
2009-10 – 2014-15	2.8	3.8
2009-10 – 2019-20	3.0	3.8

Note: All growth rates refer to financial years ending June.

3.3 The base scenario outlook for Queensland to 2014-15

Table 3.2 presents growth rates of selected economic indicator for the Queensland economy to 2014-15 under the base scenario.

Table 3.2 Selected economic indicators – Queensland (per cent change)									
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Compound growth rate 2009-10 to 2014-15
Private consumption	5.4	2.0	1.1	2.9	4.2	4.3	3.0	2.7	3.4
Private business investment	14.8	4.3	-13.7	8.4	6.4	15.5	2.1	7.0	7.8
Private dwelling investment	-1.0	-7.7	-3.6	5.2	16.7	7.0	-9.7	-4.3	2.6
Government consumption	5.3	4.3	3.3	7.6	3.9	4.4	3.9	3.5	4.7
Government investment	13.6	7.5	6.2	8.4	-13.0	-12.9	-10.0	1.6	-5.5
State final demand	7.1	2.5	-1.3	5.2	3.9	5.3	1.2	3.2	3.7
Gross state product	4.7	0.3	0.8	3.2	5.7	4.1	2.6	3.2	3.8
Population	2.6	2.8	2.5	2.2	2.0	2.0	1.9	1.9	2.0
Employment	2.4	2.2	0.3	1.2	2.6	2.2	1.1	1.5	1.7

Source: NIEIR and ABS.

Gross state product

Queensland Gross State Product (GSP) grew by just 0.3 per cent in 2008-09 following growth of 4.7 per cent in 2007-08. Growth in Queensland GSP is expected to recover slightly in the current financial year before accelerating in the next year; Queensland GSP is projected to grow by 0.8 per cent in 2009-10 and by 3.2 per cent in 2010-11. Queensland GSP growth is expected to peak at 5.7 per cent in 2011-12 before moderating in 2012-13.

Reflecting broader domestic and international economic pressures as well as a contraction in the government sector expenditure in the state, GSP growth is anticipated to slow considerably in 2013-14; Queensland GSP is projected to grow by a moderate 2.6 per cent. Given the continued economic pressures, Queensland GSP growth is expected to recover only slightly in 2014-15.

Despite the recent and anticipated instability in growth over the medium term, Queensland GSP is expected to grow, on average, by 3.8 per cent per annum over the 2009-10 to 2014-15 period. This is 1.0 percentage point per annum higher than the average national growth rate expected over the same period.

Population

The global economic recession has led to a significant increase in Australia's population growth rate. This reflects the fact that the economic slowdown has been far more severe in other economies than in Australia. In terms of Australian population growth, there has been a large net increase in long-term visitor arrivals as well as an increase in Australian residents returning home. These population flows are expected to moderate somewhat as the employment markets in these economies begin to return to full employment.

Queensland population is estimated to have grown by 2.8 per cent in 2008-09 following growth of 2.6 per cent in 2007-08. Over the first decade of the 2000s, Queensland population growth has averaged around 2.3 per cent per annum. The recent strong growth has put substantial pressure on housing and infrastructure in Queensland.

Population growth is expected to moderate slightly in the current financial year and again in the next financial year. Queensland population is projected to grow by 2.5 per cent in 2009-10 and by 2.2 per cent in 2010-11.

Going further forward, population is expected to grow by around 2.0 per cent per annum over the period 2011-12 to 2014-15. Despite this, projected slowdown for the period 2011-12 to 2014-15, population growth in Queensland is expected to be around 0.5 per cent per annum above than the national average growth rate.

Employment

Over the first decade of the 2000s, employment growth in Queensland averaged around 3.2 per cent per annum. Employment is estimated to have grown by 2.2 per cent in 2008-09 following growth of 2.4 per cent in 2007-08.

Employment growth is expected to slump to a meagre 0.3 per cent in the current financial year (2009-10) before recovering modestly to 1.2 per cent in next year (2010-11). Employment growth is expected to pick up further in 2011-12, growing by 2.6 per cent.

Consistent with the weakening domestic and international economic outlooks, employment growth is expected to slow slightly in 2012-13 before decelerating considerably in 2013-14. Given the continued economic pressures, Queensland employment growth is only expected to recover slightly in 2014-15.

Despite the projected slowdown for the period 2011-12 to 2014-15, employment growth in Queensland is expected to be around 0.3 per cent per annum above than the national average growth rate for the same period.

Private consumption expenditure

The initial shockwave of the global financial economic crisis led to a significant curtailment of spending by the household sector across the Australian economy. In response to this, Australian Governments moved quickly to restore confidence in the economy by introducing a number of fiscal stimulus measures. These measures coupled with significant reduction in the official interest rates by the Reserve Bank of Australia counterbalanced some of the weakness in household spending.

Arguably without the macroeconomic policy stimulus – notably the one-off household bonus payments – growth in household consumption expenditure in Queensland would have slowed further in 2008-09. Private consumption expenditure in Queensland is estimated to have grown by 2.0 per cent in 2008-09, down from 5.4 per cent in 2007-08.

Despite the relative success of the stimulus measures in preventing a ‘technical recession’² from occurring in 2009, labour markets across Australia cooled considerably in 2009-10; notably in Queensland and Western Australia where employment growth had been the strongest. As a result, growth in household spending continued to moderate in 2009-10.

In 2009-10, growth in private consumption expenditure in Queensland is anticipated to be just 1.1 per cent. Growth is projected to pick up moderately next year (2010-11), before returning to more typically rates of growth in 2011-12 and 2012-13.

The reversal of fiscal policy stimulus and significant tightening of monetary policy during 2012 and 2013 is expected to cause another slowdown in consumption growth in the post-2013 period. Private consumption expenditure in Queensland is projected to grow by 3.0 per cent and 2.7 per cent in 2013-14 and 2014-15 respectively.

Private business investment

Private business investment in Queensland grew by 4.3 per cent in 2008-09, down from growth of 14.8 per cent in 2007-08. Given the lead times for some business investments, private business investment tends to lag the economic cycle. Hence, the impacts of the global economic recession on business investment will be concentrated in the current financial year (2009-10); private business investment in Queensland is projected to contract by almost 14 per cent in 2009-10. Business investment is expected to increase strongly in 2010-11 – up to 8.4 per cent – and again in 2011-12 – up 6.4 per cent. Reflecting large industrial and resource projects, private business investment in Queensland is expected to jump by a further 15.5 per cent in 2012-13.

Over past decade, private business investment as a share of State Final Demand has been trending up in Queensland. In 2000, it accounted for around 12 per cent of State Final Demand. By 2008-09, the share had increased to 19.1 per cent. In this financial year (2009-10), the share is expected to fall back to 16.7 per cent a result of the contraction in investment and increased expenditure in other areas (notably Government expenditure). However, by 2014-15, private business investment is projected to account for around 20 per cent of State Final Demand, passing the 2008-09 peak. The high investment share bodes well for the long-term productive capacity of the Queensland economy but it also makes the economy more vulnerable to short-term shocks and swings in business confidence.

Private dwelling investment

Before the global financial crisis hit in September 2008, the dwelling investment cycle in Queensland had already fallen and begun to turn downwards. Rising mortgage rates and subdued house prices in 2007 and 2008 had put downward pressure on investment in new housing in Queensland; private dwelling investment is estimated to have fallen by 1.0 per cent in 2007-08.

² That is, two consecutive quarters of negative growth.

Given the already softened demand for dwelling investment in Queensland, the impact of the global financial crisis on the housing sector may seem moderate. Queensland private dwelling investment is estimated to have contracted by just 7.7 per cent in 2008-09. The sharp fall in official interest rates coupled with the other stimulus measures – such as the extension of first home owner's grant – no doubt provided some upward support to investment in 2008-09. Further, very strong population flows into Queensland is also likely to have provided support to dwelling investment.

Private dwelling investment is anticipated to contract by 3.6 per cent in the current financial year (2009-10). An upswing in the housing cycle is projected to begin in 2010-11, accelerating in 2011-12 with dwelling investment growing by 16.7 per cent. Private dwelling investment is expected to increase again in 2012-13 before the contracting in 2013-14. Rising mortgage rates through 2012 and 2013 is expected to put downward pressure again on dwelling investment. Private dwelling investment in Queensland is projected to decline by 9.7 per cent and 4.3 per cent in 2013-14 and 2014-15 respectively.

Government consumption and investment expenditures

Before the global financial crisis, Government consumption and investment expenditure in Queensland had already been growing very strongly. This strong growth reflected in large part significant increases in Government investment expenditure and to a lesser extent, rising Government consumption expenditure. Between 2004-5 and 2007-08, Government investment expenditure had increased by almost 100 per cent. The increase in Government investment following the global financial crisis, therefore, came off an already very high level of investment.

In 2008-09, Government investment expenditure is estimated to have grown by 7.5 per cent. It is expected to grow by a further 6.2 per cent in the current financial year (2009-10). Going forward, Government investment expenditure is projected to increase again in 2010-11 – up 8.4 per cent – before contracting by over 30 per cent between 2010-11 and 2013-14. Government consumption expenditure is projected to grow, on average, by around 4.7 per cent per annum over the period 2009-10 and 2014-15.

4. Methodological approach – natural gas forecasts for the Queensland network

4.1 Introduction

This section outlines the methodology that has been employed in developing the forecasts for Envestra. The forecasts have been developed for Envestra's Queensland gas distribution network.

The gas network includes the following regions:

- Brisbane region (including Ipswich and suburbs north of Brisbane River); and
- Northern region (serving Rockhampton and Gladstone).

4.2 Information supplied by Envestra

Envestra has provided the following information to NIEIR to develop the forecasts.

- Tariff V volumes and customer numbers by class and by region (Brisbane and Northern) on an annual basis from 2006-07 to 2008-09.
- Tariff D volumes billed for each customer for every month from 2004 to 2009.
- Daily sent out volumes of data for the period 1998 to 2009 by various meter points for the Queensland gas network.
- Other information describing the Queensland gas network and background papers.

4.3 Overall modelling approach

The overall modelling approach for forecasting Envestra's natural gas sales consisted of a combination of:

- (a) econometric based approach for Tariff D and business Tariff V; and
- (b) an end-use based approach for modelling residential sector sales.

As explained below, NIEIR's Queensland gas model was used to forecast Tariff D sales, customers and MDQ. This is an industry based forecasting model and based on estimated econometric equations.

An end-use model was developed to forecast residential sales. This model separated average residential gas usage into:

- hot water; and
- cooking.

The main strength of end-use modelling is that the specific Commonwealth and State policies that affect each of these end-uses can be factored directly into the forecast. The end-use forecast was also reconciled against an econometric based forecast of residential gas sales. This combination of econometric and end-use modelling has been standard

practice in gas modelling and was used for the last Victorian Gas Access Arrangement Review.

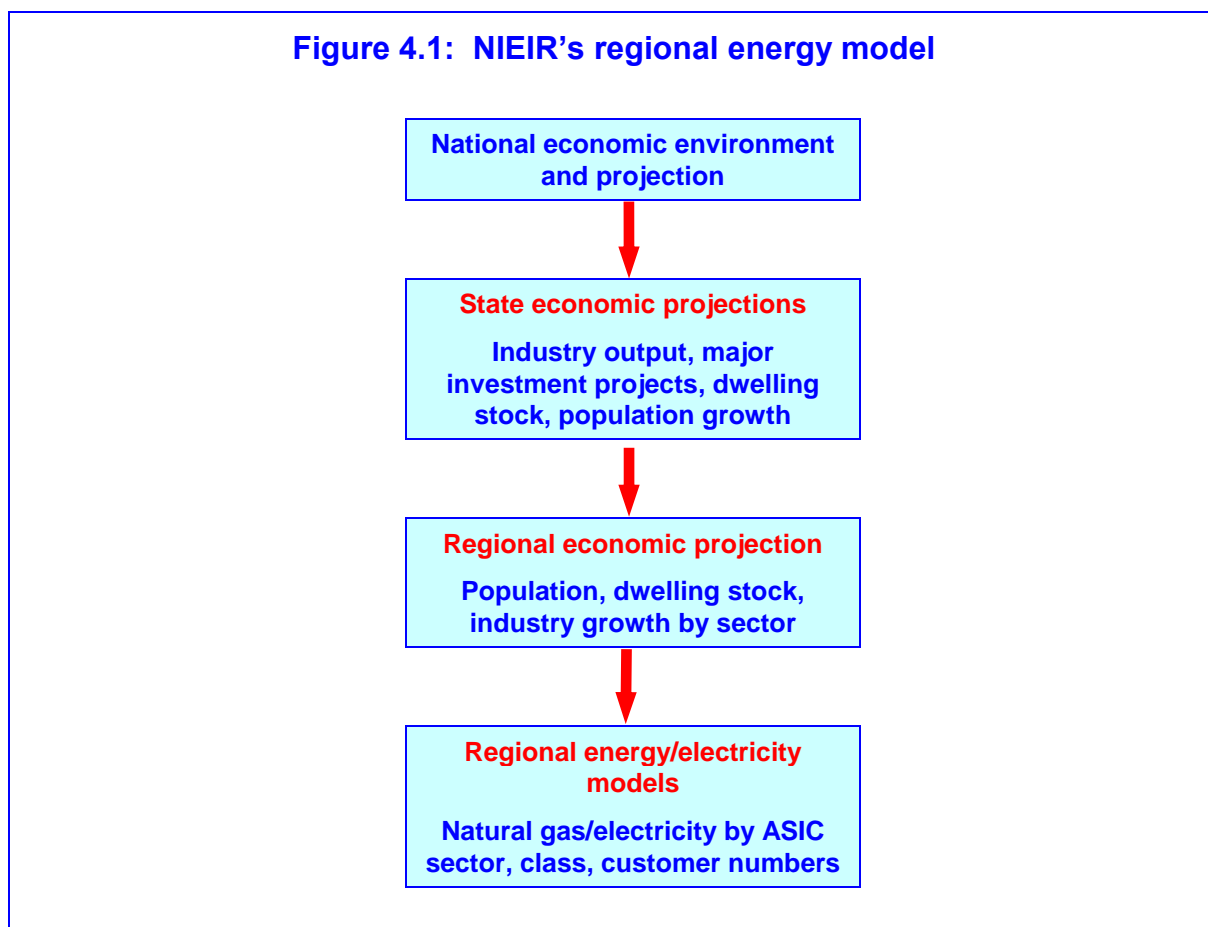
4.3.1 The econometric component – Tariff V business and Tariff D

Forecasts of the Envestra natural gas (sales) volumes have been developed within a regional economic model of the Queensland economy. This model utilises NIEIR's state forecast of gross state product (by industry) and disaggregates it to the Local Government Areas (LGAs) level. These forecasts have been mapped to Envestra's distribution regions classification. The concordance between the LGAs and Envestra's zones are presented in Appendix A. Figure 4.1 illustrates the link between NIEIR's national economic models and regional natural gas (sales) volumes.

Forecasts of economic outlook

NIEIR's national and State economic models have been used to generate forecasts of the base or most likely scenario. See Chapter 3 for a discussion of the economic forecasts. The regional economic model of Queensland implies how the economic scenario maps down to each of the gas distribution network areas.

Key indicators at the regional level are population, dwelling stock and gross regional product (by industry).



Forecasts of gas (sales) volumes and number of customers

Forecasts of gas (sales) volumes for Tariff D have been developed at industry and regional levels. The industry structure of this model is shown in Table 4.1. NIEIR has assigned an industry classification to every Tariff D customer.

The industry regression models relate Tariff D gas consumption to:

- the change in output for that industry within the zone; and
- the change in real gas prices for that industry (incorporating lags in real prices to proxy the long run response or price elasticity).

The output and price elasticities at the zone level have been adjusted to reflect differences in the gas intensity between industries and regions.

The Tariff D forecasts by industry and zone have, therefore, been determined by:

- the outlook for the industry growth in each of the zones; and
- the structural parameters and relationships embodied in NIEIR's industry based Queensland natural gas demand model.

The forecasts of natural gas (sales) volumes for Tariff V by class (residential, commercial and industrial) have been developed for the two distribution network areas.

Residential sector sales forecasts were developed **initially** using a regression model incorporating real household disposable income and real residential gas prices. The income and price elasticities for the residential model are based on NIEIR's Queensland gas model estimates. Weather normalised volumes were used as the basis for the forecast.

The residential forecasts derived from the econometric model were then adjusted to be consistent with a State-wide end-use model of residential gas usage. This model, which is explained in detail in Section 4.5, disaggregates average gas usage into existing and new customers and by end-use: hot water and cooking.

The end-use model makes specific assumptions regarding appliance lives, appliance efficiencies and the changing penetration of conventional and new technologies in the hot water segment. Key Commonwealth and State policy impacts are factored directly into the end-use model forecast.

Residential customer number forecasts have been linked to NIEIR's forecasts of the dwelling stock for each of the two distribution network areas.

Forecasts for Tariff V (small commercial and industrial) have been linked to a general equation for gas sales, where sales are related to gas prices and total commercial and industrial output for the distribution network areas.

The Queensland gas volume data was not weather normalised for this forecasting exercise.

Table 4.1 Reconciliation of major customer class categories with ASIC industries

Customer class category	ASIC
Residential	
Commercial	Water and sewerage Construction Wholesale and retail trade Transport and storage Communication Finance, property, business services Public administration and defence Community services Recreation, personal and other services
Industrial	Mining Food, beverages, tobacco manufacturing Textiles, clothing and footwear manufacturing Wood, wood products manufacturing Chemicals, petroleum, coal manufacturing Paper, paper products manufacturing Non-metallic minerals manufacturing Basic metal products manufacturing Fabricated metal products manufacturing Transport equipment manufacturing Other machinery and equipment manufacturing Miscellaneous manufacturing
Farm¹	Agriculture, forestry, fishing, hunting

Notes: ASIC refers to Australian Standard Industrial Classification.

4.4 Average residential gas usage in Queensland

Another key element in the forecast prepared by NIEIR for Envestra was an analysis of average residential gas usage. This included a historical analysis and an assessment of the key factors that will influence future usage per customer.

Average small customer gas consumption is an important element in forecasting total volume growth for each of the two pricing zones.

This section outlines recent trends in average consumption, as well as identifying the key drivers of movements in average consumption. This section also focuses on average residential gas consumption per connection.

The analysis of average consumption of gas by residential customers is complex and shaped by a large number of inter-related factors. These include:

- (i) gas appliance penetration rates and their efficiency;
- (ii) existing and future Federal and State Government energy policy initiatives;
- (iii) fuel substitution between gas, electricity and solar combinations;
- (iv) changes in dwelling characteristics including building shell;
- (v) socio-demographic changes; and
- (vi) the impact of weather on average usage, or weather normalisation issues.

4.4.1 Average residential gas use – recent history

Average residential gas usage connection trends for new and total dwellings in Queensland are presented in Tables 4.2 and 4.3.

Average consumption per residential connection has fallen from 10.7 gigajoules per annum (GJ/a) in 1999-00 to 8.9 GJ/a in 2008-09, a decline of 16.8 per cent.

Year	Average residential consumption (GJ/a)*
1999-00	10.7
2000-01	10.4
2001-02	10.2
2002-03	10.3
2003-04	10.0
2004-05	10.0
2005-06	9.4
2006-07	8.8
2007-08	8.8
2008-09	8.9

Table 4.3 Average residential gas consumption by year of connection, Queensland

Read year	Installed year				
	2003-04	2004-05	2005-06	2006-07	2007-08
2003-04	10.08				
2004-05	12.09	5.92			
2005-06	11.39	8.18	5.33		
2006-07	10.97	8.66	7.07	4.88	
2007-08	10.62	8.41	8.05	7.12	6.37
Average	11.03	8.42	7.56	7.12	6.37

- Notes:
1. A full year of consumption does not occur in the year of connection; full year consumption by 2008-09 connections is probably around 7 GJ.
 2. The data for 2003-04 also includes data for connections that occurred prior to that year.

The decline in new dwelling usage over the 2003-04 to 2007-08 period is around 37 per cent. The lower usage in new connections reflects higher efficiencies in water heating units, solar hot water penetration and water usage efficiencies. This partly reflects the introduction of the 5 Star Energy Standard in Queensland in 2006. New connection requests are monitored to identify the appliance types and combination being installed. Expected consumption per connection is tested by Envestra against the average consumption per appliance in Queensland, taken to be 2 GJ/a for a cooker, 10 GJ/a for a high efficiency instantaneous hot water service and 4 GJ/a (seems high) for a gas boosted solar hot water service.

4.4.2 Socio-demographic changes

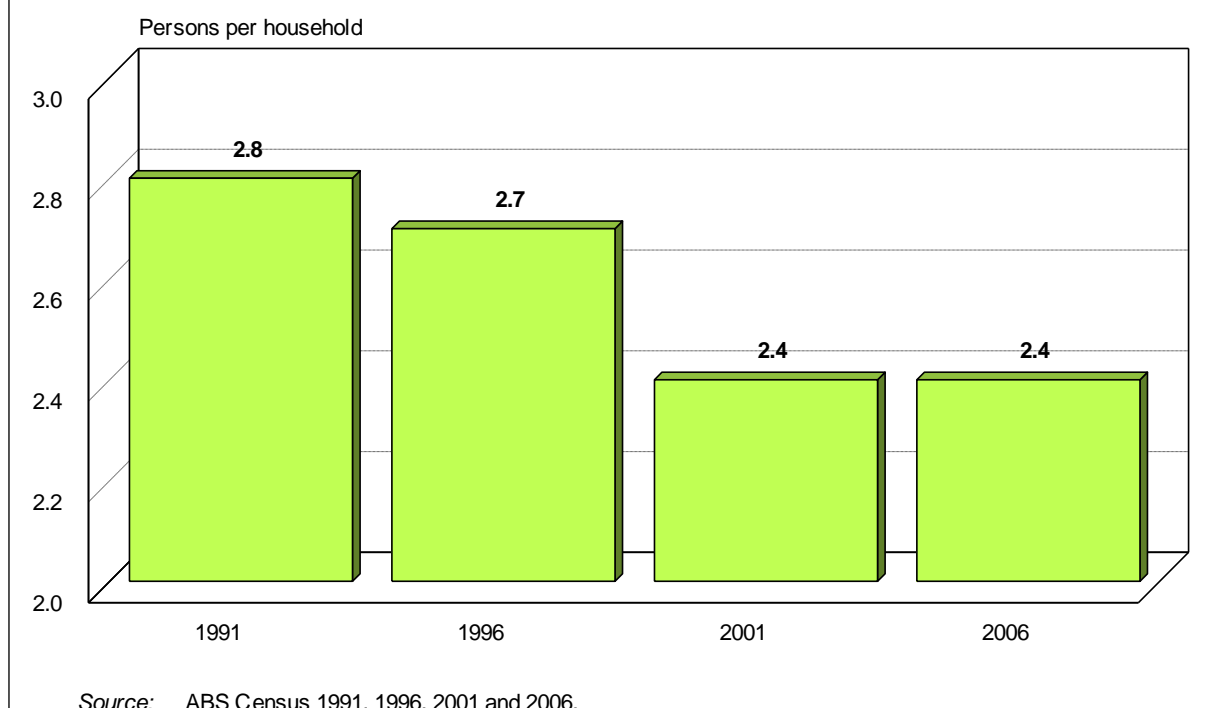
Long term socio-demographic trends in Queensland also reinforce the decline in average residential gas consumption. The key factors in this area include:

- the fall in the number of persons per dwelling;
- the associated increase in the number of single person dwellings; and
- the ageing of the South Australian population.

Persons per dwelling and single person dwellings

The Australian Bureau of Statistics' (ABS) Census provides accurate data on the characteristics of persons and dwellings. The number of persons per dwelling in Queensland has fallen from 2.8 persons in 1991, to 2.7 persons in 1996 and 2.4 persons in 2001 and again in 2006. The decline in persons per dwelling reflects factors such as a declining fertility rate, rising divorce rates, and an increase in the number of persons living alone.

The fall in household size reduces demands for appliances, such as cookers and water heaters. Single person households would only require spot or room heating and not space or area heating. Many single person households would be in apartments or high rise residential developments which would use electric heating (RCA) rather than gas heating appliances.

Figure 4.2: Mean household size - Queensland

The ageing of the population

Falls in household size also reflect the ageing of the population in Queensland. Table 4.4 shows the percentage distribution of persons by age groups for Queensland from Census 1996, 2001 and 2006. This table highlights a number of trends:

- the fall in share of population in younger age groups;
- the marked increase in the 40 to 59 year age group's share of total Queensland population; and
- the increase in the share of the above 70 years of age groups given higher life expectancy.

Table 4.4 Share of population by age group (excludes overseas visitors) – Queensland, Census 1996, 2001 and 2006

	1996	2001	2006
0-4 years	7.3	6.9	6.6
5-9 years	7.4	7.4	6.9
10-14 years	7.6	7.4	7.2
15-19 years	7.3	7.3	6.9
20-24 years	7.8	6.7	6.9
25-29 years	7.7	7.0	6.4
30-34 years	7.7	7.3	7.0
35-39 years	7.9	7.5	7.4
40-44 years	7.4	7.6	7.4
45-49 years	7.1	7.0	7.2
50-54 years	5.6	6.7	6.6
55-59 years	4.4	5.3	6.3
60-64 years	3.6	4.2	4.9
65-69 years	3.5	3.3	3.8
70-74 years	3.1	3.1	2.9
75-79 years	2.2	2.5	2.5
80-84 years	1.4	1.6	1.8
85 years and over	1.0	1.3	1.5
Total	100	100	100

Source: ABS Census 1996, 2001 and 2006.

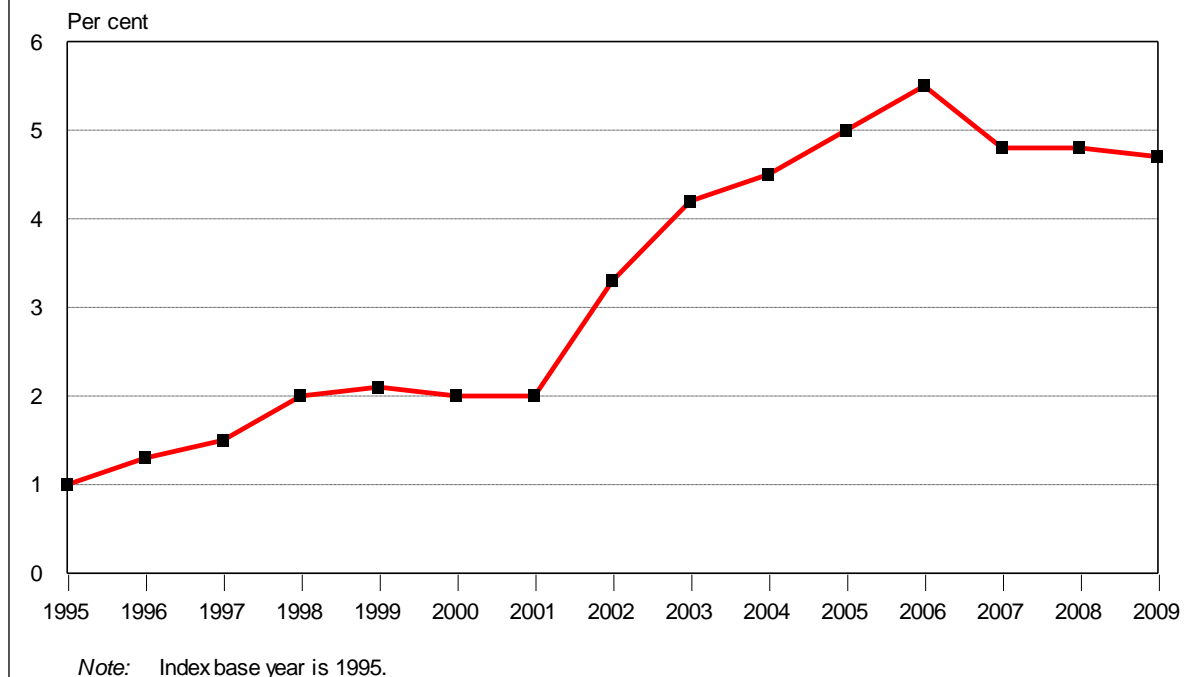
4.4.3 Fuel substitution in the residential sector

Air conditioning sales (including reverse cycle – RCA) have increased dramatically over recent years, both in Queensland and nationally. Figure 4.4 shows an index of reverse cycle sales for Queensland since 1995. Sales over recent years have been four times higher than in the early 1990s.

The fall in the cost of RCA and improved design features, combined with changes in the Building Code in Queensland, implies RCA is the preferred option for heating and cooling for many residential customers. The shift towards multi-unit dwellings, or flats, in Queensland reinforces the trend toward RCA.

The high penetration of RCA in Queensland implies that gas space heating loads in Queensland are negligible.

Figure 4.3: Index of reverse cycle air conditioning sales - Queensland



4.5 End-use forecasts for gas and associated policy impacts

4.5.1 Introduction

Envestra data indicates average residential consumption fell from 10.7 GJ/a in 1999-00 to 8.9 GJ/a in 2008-09 (8.8 GJ/a in 2006-07 and 2007-08, Table 4.2).

But new residence consumption has fallen from 11.03 GJ/a (average over 2003-04 to 2007-08) for 2003-04 connected homes to 7.12 GJ/a in 2007-08 for 2006-07 connected homes.

Over the period to 2020 NIEIR estimate that **average** per household connection cooking usage may remain constant, and water heating usage per connection will fall as gas-solar proportion of gas water heating increases along with MEPS and water management improvements.

The key assumptions regarding the main end-uses for gas in the Queensland market are outlined below. These are:

- (i) hot water usage; and
- (ii) cooking.

4.5.2 Hot water

Recent policy developments will have a very significant impact on future gas usage for hot water for both new and existing customers in Queensland. These policy developments are summarised below.

Policy impacts on hot water gas usage

Initiatives affecting electric/gas water heating over the period to 2020 encompass the following.

1. The MCE announced in December 2008 its intention to phase-out conventional electric resistance water heaters. This would apply to new and established homes in gas reticulated areas from 2010. It would also apply to new flats and apartments and established homes in gas non-reticulated areas from 2012.

This measure will probably be implemented through a performance standard specifying the maximum of CO₂e per MJ of delivered water (at a specified temperature) which would be met by solar hybrid, heat pumps and gas water heaters.

No final proposals have been developed for implementation of this policy.

2. Federal rebate of \$1,600 to replace electric resistance water heaters with solar water heaters (solar gas in gas areas) until 2013. Either this rebate **or** the Federal insulation rebate can be taken up by a household (**not** both). There is also a rebate available for landlords to replace electric resistance water heaters.
3. Solar hot water and heat pump installations remain eligible for RECs under RET, including commercial sector applications.

4. 5 star building standard which requires installation of a solar water heater or a plumbed water tank in new residences.
5. Hot water management, particularly regulations and incentives for installation of low flow shower heads.

4.5.3 Federal and State incentives

State Solar Hot Water Program

From 1 July 2009, the Queensland Government Solar Hot Water Program was available to State residents. It was cancelled in April 2010.

Federal Solar Hot Water Rebate

Under this program, the Australian Government is offering a rebate of \$1,000 to install a solar hot water system or \$600 to install a heat pump hot water system. The new hot water systems must replace electric storage hot water systems in existing privately owned homes.

The boosted Solar Hot Water Rebate under the Energy Efficient Homes Package began on 3 February 2009 and will terminate on 30 June 2012 or until the date when program funds have been fully allocated, whichever occurs first.

Eligible systems must generate 20 renewable energy certificates (RECs) or more at the time of purchase at the installation address.

Renewable Energy Certificates (RECs)

Under the Federal Renewable Energy Target (RET) most new solar and heat pump hot water heaters are eligible to create renewable energy certificates (RECs), the quantity of which for each SHW/HP unit is set out in a RET schedule. Householders can create and trade these certificates on their own, but it is more common for Registered Agents to create and trade RECs on behalf of householders. The RECs benefit for consumers usually comes as a point of sale discount. Most retailers will advise potential buyers how many RECs are provided by each solar or heat pump hot water system model and how much each of those RECs are worth at sale date prices. The retailers then provide a discount to the buyer, meaning the cost of the hot water system to the householder is reduced.

In May 2010 the price of RECs was about \$45 and for SHW/HP a minimum price of \$40 is guaranteed. In Queensland installation of solar hot water systems could attract, through RECs, an average discount of about \$1,500.

Under the Federal Renewable Energy Target solar hot water (SHW) and heat pump (HP) units are eligible to create Renewable Energy Certificates (RECs). Prices of RECs under the Renewable Energy Target (RET) dropped to about \$30 (in January 2010) from \$50 earlier in mid-2009 and then rose to \$46 in May 2010 due to proposed changes to RET that would commence on 1 January 2011.

In 2009 NIEIR estimates that from REC registry data that about 7.6 million SHW/HP RECs (Australia) were created, plus 2.6 million from photovoltaics (PV). The REC requirement in 2009 was about (including Green Power and voluntary acquittals) 9 million and about 6 million RECs were banked on 1 January 2009. Thus there was a substantial surplus of

RECs in 2009. In 2010 total REC requirements will be about 14 million and REC price movements will depend on REC creation from SHW/HPs, PVs and renewable electricity plants.

Rebates

In 2009, from the data base of the Office of the Renewable Energy Regulator (RET administrator), 1,375,312 RECs were registered representing about 34,000 SHW/HP installations. Federal rebates (\$1,000 for SHW, \$600 for heat pumps) for **replacing** electric resistance units are available.

These subsidies to SHW/HPs significantly improve the economics of SHW and HPs relative to straight gas and electric resistance units.

Regulation

Prohibition of electric resistance hot water systems in new homes and from 1 January 2010 extended to **replacement** of electric resistance units in existing homes in gas reticulated areas.

Replacement raises “like for like”/disruption of hot water service issues. Thus, changing the type of hot water system may take up to a month **unless** temporary replacements are available to provide continuity of service.

Envestra data indicates that in gas areas gas boosted SHW units have been running at around 50 per cent in new homes since 2006-07, compared to less than 10 per cent in the early 2000’s. This trend is likely to continue if rebates and REC prices remain above \$40.

In 2010 gas (solar and straight) usage for water heating will increase in gas available areas.

Water conservation

Regulations and incentives in this area will dampen hot water demands to some extent); also a trend to cold water supply to washing machines would further reduce hot water demands. We estimate that over 2010-20 these factors could reduce hot water demands by 10 per cent per household.

New efficient appliances

Technological developments backed up by Minimum Energy Performance Standards (MEPS) have, and will continue to have, an energy use reducing impact on appliances delivering a specified level of service (for example a volume of water heated to a specified temperature).

In the gas appliance area, water heating units and space heating units are becoming more efficient under the influence of MEPS. Solar-gas units are displacing significant quantities of gas per unit of delivered hot water under the influence of incentives. In cooking there may be some displacement of gas by electricity (conventional induction) but no reliable data is available of future trends.

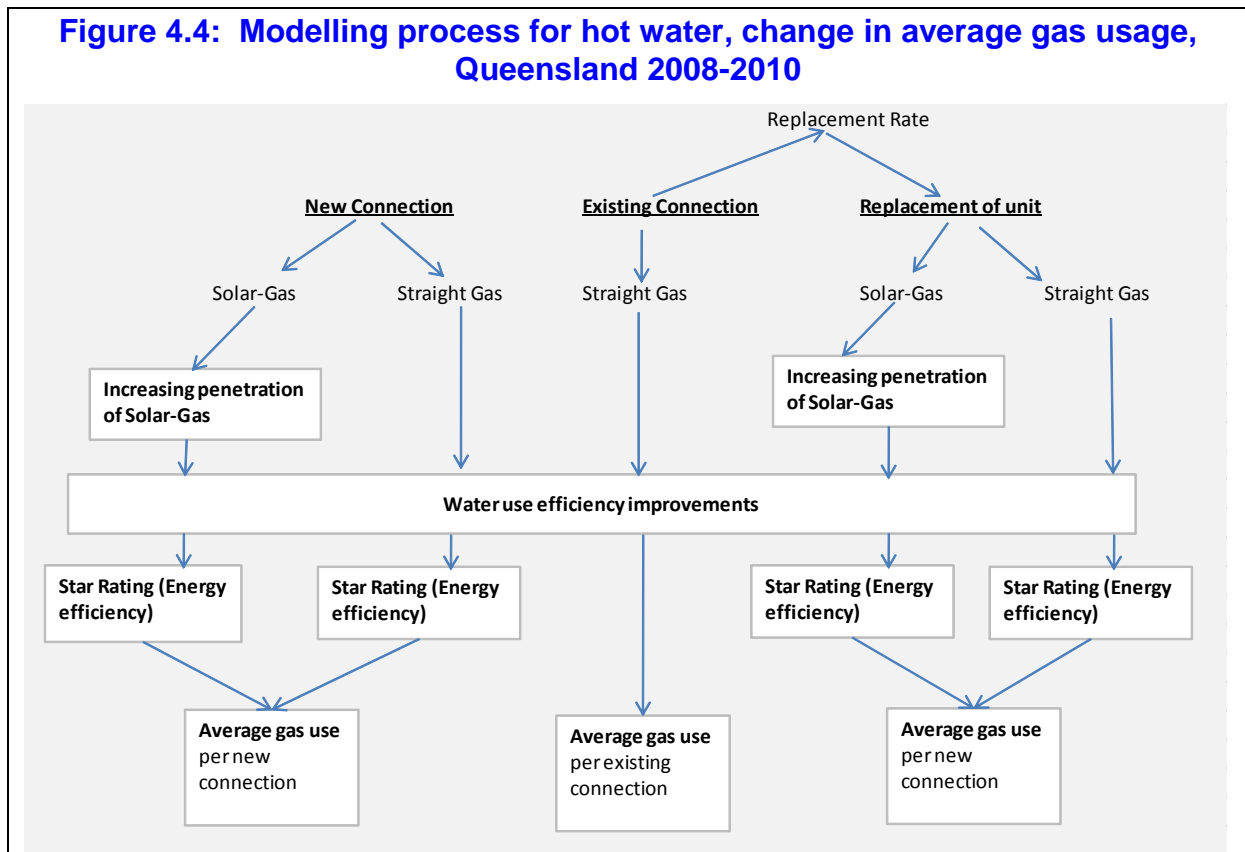
These trends (efficiencies, MEPS) mean that when units are replaced, **or** when they are installed in new applications, less gas will be used unless offset by increased service levels (for example, greater hot water usage per connection through rebound effects or personal preferences).

4.5.4 The hot water modelling methodology

The market for gas hot water in South Australia consists of the following:

- (i) new customers or connections for new dwellings;
- (ii) replacement of existing gas hot water in existing dwellings; and
- (iii) replacement of electric or other hot water in existing dwellings (electric to gas are sometimes known as E to G).

Figure 4.4 describes the modelling process in determining the declining average gas use in hot water heating. The diagram shows how various measures impact the average gas usage in both new and existing dwellings



The modelling process and assumptions in forecasting average gas use of customer connections consist of the following.

(i) **Replacement rate**

Over time energy using appliances will be replaced as they approach their technical (wear out) and economic (when replacement is economical) lives. The assumption used for modelling the average appliance life of a hot water heater is estimated as 12 years. A replaced unit can be one of many types of hot water systems.

(ii) **Penetration rate –**

In estimating a mix of the type of units currently in dwellings, and estimating the future mix for gas water heating customers it is important to look at the current penetration rate in Queensland gas reticulated dwellings, and to estimate a future mix of unit types based on current trends as well as policy influences such as available national and state rebates and the impact of the banning of electric resistance hot water heaters.

Unit types considered in the modelling:

- straight gas hot water heater:
 - instantaneous;
 - storage;
- solar-gas hot water heaters; and
- solar-electric/heat pump.

The increasing popularity of solar-gas hot water heaters is evident in the ABS cat. 6402.0.55. Together with REC benefits, state and national subsidies, the incentive to purchase solar-gas is higher than before. For new connections in Queensland, the share of solar-gas hot water heaters is forecast to increase to 30 per cent of all new units, compared to one per cent currently. Over the period 2008 to 2020 the share of solar-gas in existing dwellings is forecast to rise to 10 per cent from 1 per cent.

A forecast of the type of straight gas units installed is split between instantaneous and storage units. A BIS Shrapnel report indicated that the mix between instantaneous and storage units in South Australia in 2008 is 63 to 37 per cent respectively. Storage hot water tanks are estimated to drop as the overall average proportion of units to 7 per cent by 2020.

(iii) **Water use efficiency –** water efficient shower heads, water restrictions, and general awareness of water conservation will lead to lower demand for gas in hot water heating. It is estimated that a 5 per cent reduction in average gas use is achieved by 2020.

(iv) **Energy efficiency (star ratings)**

MEPS is a big driver of higher efficiency in appliance nationally therefore it is expected that the average efficiency of hot water heaters will improve beyond natural technological improvement, driven by policy aimed at energy efficiency, Some assumption in the modelling regarding the average efficiency ratings in South Australian hot water heaters are outlined below.

- **Solar-gas hot water** – an assumed 1 per cent efficiency improvement on average in the new solar-gas hot water systems per annum.

- **Straight gas hot water** – as the average star rating increases in the appliances, the average use of gas per connection will also increase. The average star rating for all appliances is forecast to be 7 stars by 2020, from 4 stars currently. That is an estimated 1 per cent efficiency improvement and therefore a reduction in the average use of gas for hot water heating.

Impacts in gas use for cooking (ovens, cook tops)

Life style and technology trends are probably reducing gas cooking demands but the assumption is to keep the projection due to cooking, constant.

Potential drivers of further reduction

NIEIR projects that wellhead prices for gas in Queensland will rise as:

- costs for development of new reserves increase;
- a tendency for prices to rise towards international levels (adjusted for liquefaction, transport and regas costs) as export LNG plants are commissioned in Queensland. This factor will increase gas prices. But note that as not all available gas can be exported there is likely to be a domestic/export gas wellhead price differential (as is the case with coal);
- a CPRS would increase gas prices depending on the CPRS design (caps, treatment of fugitive emissions); and
- electricity network prices are likely to rise significantly over the next 5 to 10 years and increase retail electricity prices relative to retail gas prices. Gas prices will increase over the next five years but gas is likely to increase its competitiveness over electricity.

4.6 Gas prices and the CPRS

Greenhouse policy

On the 15 December 2008, the Australian government released the White Paper on the Carbon Pollution Reduction Scheme. This paper confirmed an emissions trading scheme is to be introduced by 2010-11. The White Paper outlines the final design of the Carbon Pollution Reduction Scheme, and a target range for reducing carbon pollution. NIEIR's assessment of the White Paper and the implications for permit and electricity prices is provided below.

It was announced in May 2009 that the introduction of the CPRS has now been delayed to July 2011, and permits would be capped at \$10 per tonne in 2011-12. The full Market would commence in July 2012.

However, on 27 April 2010 the Federal Government announced deferment of the CPRS until 2013, at the earliest, due to:

- (i) inability of government to have the CPRS legislation passed in the Senate; and
- (ii) slow progress on global climate change negotiations.

Permit (CO₂e) prices and electricity prices (\$/MWh), 2010-2030

Despite the CPRS deferral, we still believe some form of carbon pricing will be in place and lead to increases in electricity and gas prices. The quantitative impact will be determined by a range of factors: the CPRS caps set, the costs of reducing GHG emissions domestically (which will depend on the prices of black coal and natural gas, and GHGA technologies such as CCS and renewables), the price, availability and Australian use of international permits, and other specific design features of the CPRS or its replacement.

In our base (most likely) scenario out to 2030, we now assume that carbon pricing will commence in 2014 and that carbon (CO₂e) will be gradually increased through 2030. Similar gas coal and renewables and CCS prices to Treasury and similar impacts (pass through) of CO₂e prices on electricity prices given in the White Paper.

We believe, despite uncertainties, that the magnitudes are reasonable in the absence at this time of better information and data.

Caps – domestic permits and international permits

The interaction of these two (unrestricted) sources of eligible CPRS permits could have a significant impact on GHGA under the CPRS or a policy package with a similar impact on Australian emissions.

International permit prices in A\$ will determine their contribution to attainment of CPRS caps. Some Treasury scenarios have international permits contributing over 50 per cent of cap attainment.

An emissions cap would determine the number of carbon pollution permits that will be issued by the Government. Allowable emissions across the sources covered by the Scheme will be able to exceed the cap only if the excess is matched by the surrender of eligible international units, additional domestic permits issued as a result of forestry activities, additional permits

issued under the price cap mechanism or, if allowed, Scheme offsets (see Chapter 6 of the White Paper).

In a system with little or no international linkage, the interaction between the cap and the demand for permits is the primary determinant of the carbon price: the more stringent the Scheme cap, the higher the price, all other things being equal. However, in the preferred CPRS design the Government had decided to allow unlimited imports of eligible international units from Scheme commencement and to review the scope for exporting permits over time (see Chapter 11 of the White Paper). This means, depending on the level of international prices and the longer term Scheme linking policy, the domestic Scheme cap may be a less significant determinant of domestic carbon (CO₂e) prices. Over time, the domestic carbon price is expected to converge on the international price, which in turn will be determined by global abatement demand and supply conditions.

The Scheme cap-setting arrangements would remain important, however, because the Scheme cap will reflect national emissions targets and Australia's international obligations. As the number of eligible international units that may need to be purchased will be determined by the ambition of national targets, targets would be the key to the overall cost to the Australian economy.

Table 4.5 Queensland gas prices – 2005-06 \$/gigajoule			
	Residential	Business	Total
2008-09	27.4	14.2	16.4
2009-10	27.4	14.2	16.4
2010-11	27.4	14.2	16.4
2011-12	27.4	14.2	16.4
2012-13	28.1	14.8	17.0
2013-14	28.7	15.4	17.6
2014-15	28.8	15.5	17.7
2015-16	28.9	15.7	17.9
2016-17	29.1	15.8	18.0
2017-18	29.3	16.0	18.2
2018-19	29.5	16.2	18.4
2019-20	29.7	16.4	18.7

5. The economic outlook for the gas distribution regions in Queensland

5.1 Introduction

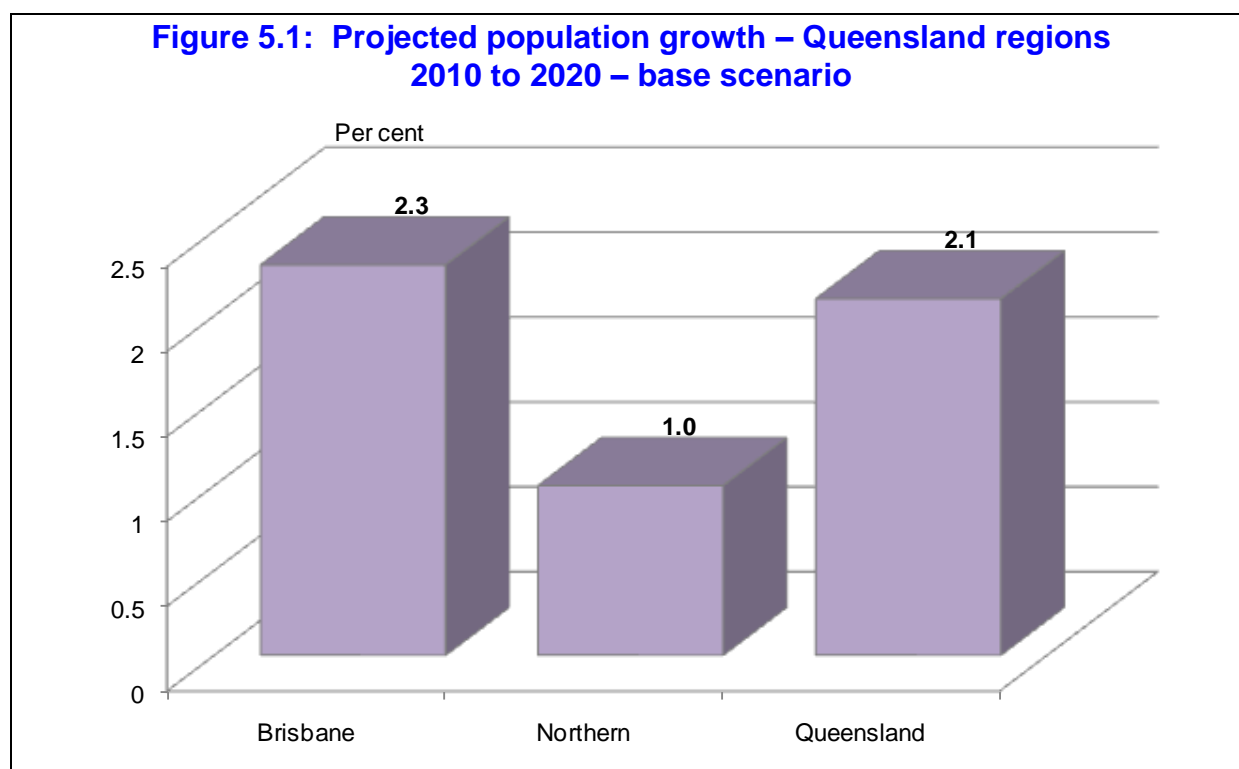
This section summarises the outlook for the region within Queensland. Forecasts of population, dwelling stock and gross regional product are presented to 2019-20 for the base scenario.

5.2 Regional economic outlook to 2020

The Queensland gas distribution network includes the following regions:

- Brisbane region (including Ipswich and suburbs north of Brisbane River); and
- Northern region (serving Rockhampton and Gladstone).

Table 5.1 shows projected population growth for each of the two regions. Figure 5.1 shows the projected growth in population by region.



Population growth averages 2.3 per cent per annum in the Brisbane region and 1.0 per cent average growth in the Northern region.

Table 5.2 shows projected dwelling stock growth for each of the two regions to 2019-20. Figure 5.2 shows the projected growth in the dwelling stock by region over the 2009-10 to 2019-20 period.

The strongest projected growth in the dwelling stock is in Brisbane region of Queensland.

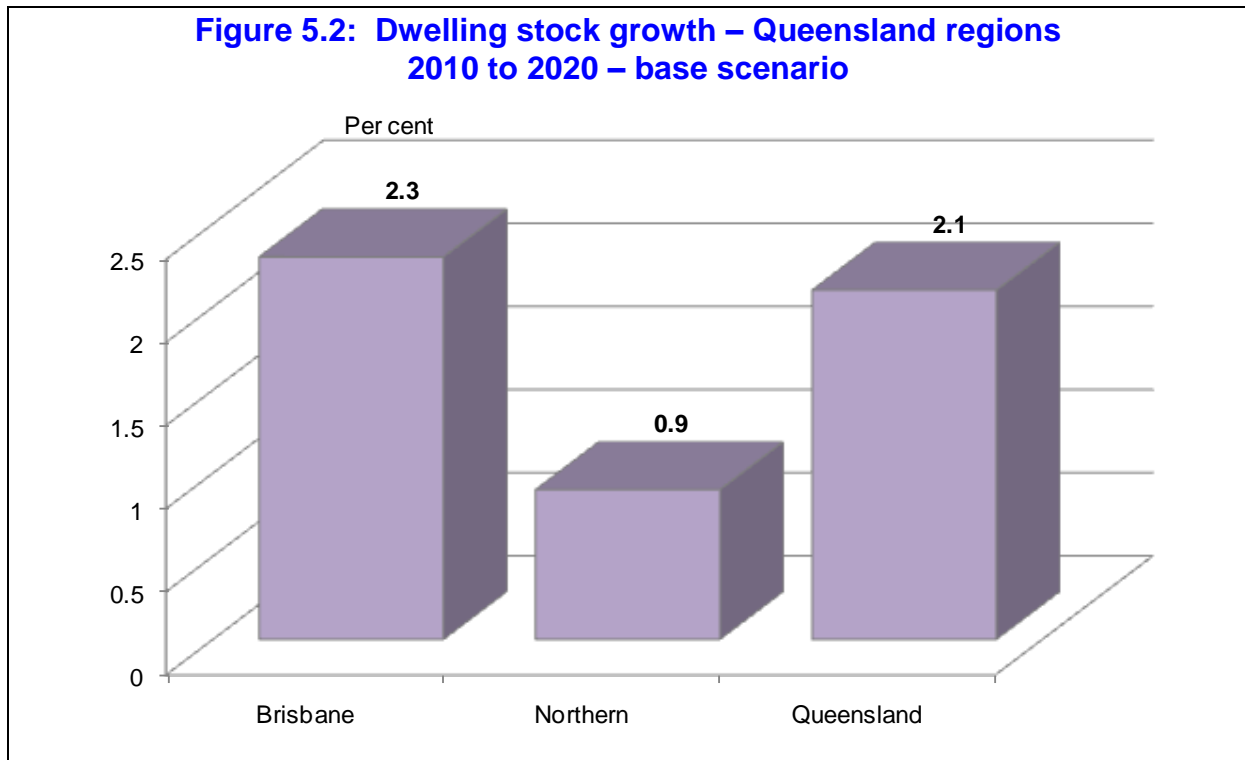
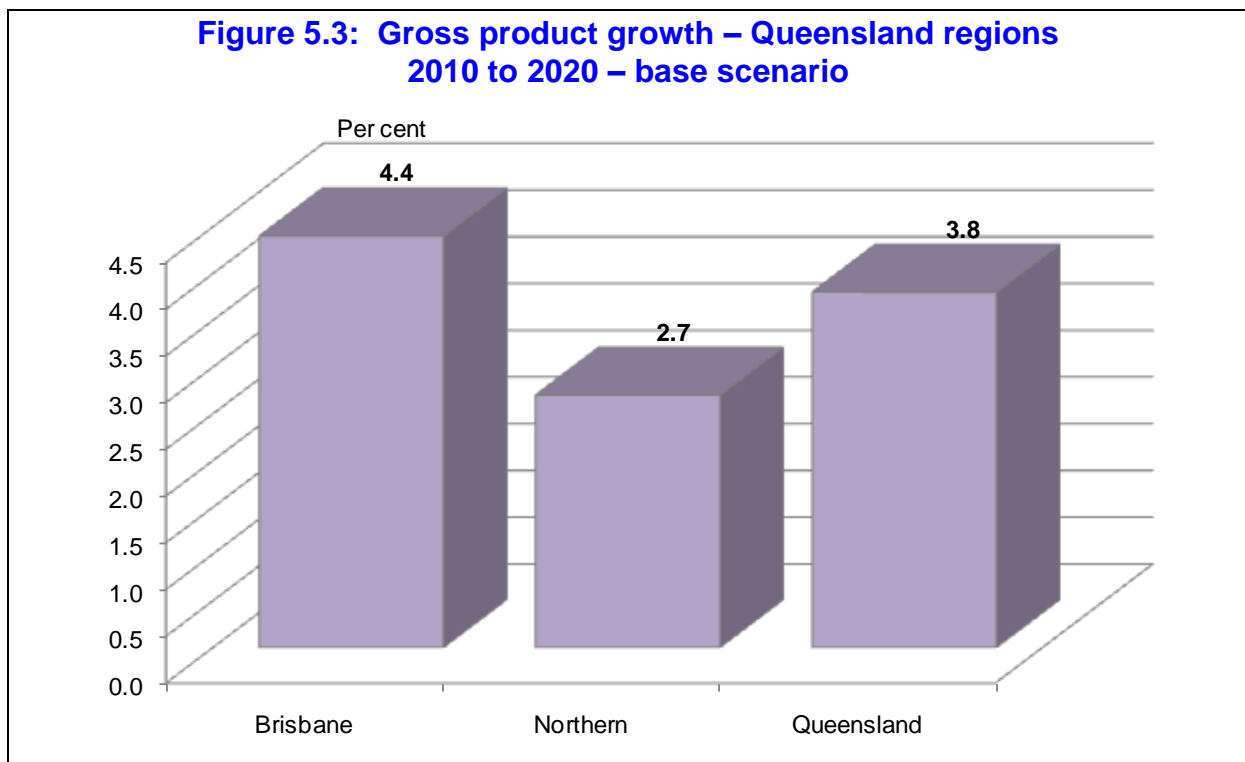


Table 5.3 shows forecasts of gross regional product by region to 2020. Figure 5.3 shows the projected growth in gross product by region over the 2009-10 to 2019-20 period.



The strongest gross product growth is forecast in the Brisbane region. The Northern region is projected to grow by 2.7 per cent over the 2010 to 2020 period.

TABLE 5.1 POPULATION BY REGION - QLD

	BRISBANE ZONE	NORTHERN ZONE	REMAINDER QLD	TOTAL QLD
UNIT	*****	'000	*****	*****
2006	2312.63	89.47	1642.93	4045.02
2007	2374.16	90.69	1679.28	4144.12
2008	2441.49	92.08	1719.36	4252.93
2009	2513.88	93.61	1762.60	4370.08
2010	2580.83	94.89	1801.64	4477.36
2011	2643.22	95.95	1837.13	4576.31
2012	2710.77	97.16	1875.85	4683.78
2013	2771.38	98.08	1909.41	4778.87
2014	2831.66	98.95	1942.42	4873.02
2015	2893.71	99.84	1976.32	4969.86
2016	2961.93	100.90	2014.07	5076.90
2017	3031.08	101.95	2052.09	5185.11
2018	3104.32	103.09	2092.50	5299.91
2019	3172.81	104.04	2129.32	5406.17
2020	3245.84	105.08	2168.81	5519.74
PERCENTAGE CHANGES				
2008	2.84	1.54	2.39	2.63
2009	2.96	1.66	2.52	2.75
2010	2.66	1.37	2.21	2.45
2011	2.42	1.12	1.97	2.21
2012	2.56	1.26	2.11	2.35
2013	2.24	0.94	1.79	2.03
2014	2.18	0.88	1.73	1.97
2015	2.19	0.90	1.74	1.99
2016	2.36	1.06	1.91	2.15
COMPOUND GROWTH RATE (PER CENT) -				
2001-2005	2.27	0.98	1.82	2.06
2011-2016	2.30	1.01	1.86	2.10
2010-2020	2.32	1.03	1.87	2.12

All data are for the financial year ending in June of the year specified.

TABLE 5.2 DWELLING STOCK BY REGION - QLD

	BRISBANE ZONE	NORTHERN ZONE	REMAINDER QLD	TOTAL QLD
UNIT	*****	'000	*****	*****
2006	865.44	33.12	609.95	1508.52
2007	886.46	33.47	622.48	1542.41
2008	908.47	33.84	635.61	1577.93
2009	932.28	34.26	649.88	1616.42
2010	951.11	34.49	660.59	1646.18
2011	967.24	34.60	669.33	1671.17
2012	987.67	34.86	680.98	1703.50
2013	1012.47	35.25	695.53	1743.25
2014	1037.34	35.64	710.01	1782.99
2015	1059.90	35.92	722.80	1818.63
2016	1083.06	36.21	735.89	1855.17
2017	1108.47	36.57	750.41	1895.45
2018	1134.52	36.92	765.23	1936.67
2019	1161.79	37.30	780.77	1979.86
2020	1189.48	37.68	796.45	2023.62
PERCENTAGE CHANGES				
2008	2.48	1.11	2.11	2.30
2009	2.62	1.24	2.25	2.44
2010	2.02	0.65	1.65	1.84
2011	1.70	0.33	1.32	1.52
2012	2.11	0.74	1.74	1.93
2013	2.51	1.14	2.14	2.33
2014	2.46	1.08	2.08	2.28
2015	2.17	0.80	1.80	2.00
2016	2.18	0.81	1.81	2.01
COMPOUND GROWTH RATE (PER CENT) -				
2001-2005	2.34	0.97	1.97	2.16
2011-2016	2.29	0.92	1.91	2.11
2010-2020	2.26	0.89	1.89	2.09

All data are for the financial year ending in June of the year specified.

TABLE 5.3 GROSS REGIONAL PRODUCT BY REGION - QLD

	BRISBANE ZONE	NORTHERN ZONE	REMAINDER QLD	TOTAL QLD
UNIT	*****	2001\$M	*****	*****
2006	94344.48	61674.53	4123.96	160142.97
2007	100431.71	64538.35	4326.55	169296.63
2008	105896.90	67129.00	4506.81	177532.70
2009	106224.49	67651.40	4521.82	178397.72
2010	107234.44	67984.98	4553.32	179772.73
2011	111382.90	69340.41	4681.72	185405.03
2012	118979.89	71764.67	4912.90	195657.47
2013	124635.15	74317.41	5092.05	204044.61
2014	128351.20	76138.14	5211.19	209700.53
2015	133179.39	77846.98	5357.04	216383.42
2016	139326.03	79987.01	5540.56	224853.61
2017	145299.31	82031.02	5716.70	233047.03
2018	150913.94	83922.33	5880.37	240716.64
2019	158196.11	86334.87	6090.08	250621.06
2020	165140.69	88595.77	6287.50	260023.97
PERCENTAGE CHANGES				
2008	5.44	4.01	4.17	4.86
2009	0.31	0.78	0.33	0.49
2010	0.95	0.49	0.70	0.77
2011	3.87	1.99	2.82	3.13
2012	6.82	3.50	4.94	5.53
2013	4.75	3.56	3.65	4.29
2014	2.98	2.45	2.34	2.77
2015	3.76	2.24	2.80	3.19
2016	4.62	2.75	3.43	3.91
COMPOUND GROWTH RATE (PER CENT) -				
2001-2005	7.12	3.69	2.58	5.58
2011-2016	4.58	2.90	3.43	3.93
2010-2020	4.41	2.68	3.28	3.76

All data are for the financial year ending in June of the year specified.

6. Natural gas demand forecasts to 2020 – Envestra Queensland

This section presents natural gas demand forecasts by class and tariff to 2020 for the Envestra distribution regions in Queensland. Forecast numbers were prepared on a financial year basis to 2020.

The economic and industry projections associated with these scenarios were outlined in Sections 3. The methodology and modelling assumptions relating to natural gas was outlined in Section 4.

Forecasts of natural gas sales are presented for the following:

- total by class; and
- total by tariff.

6.1 The base scenario – total natural gas sales by class

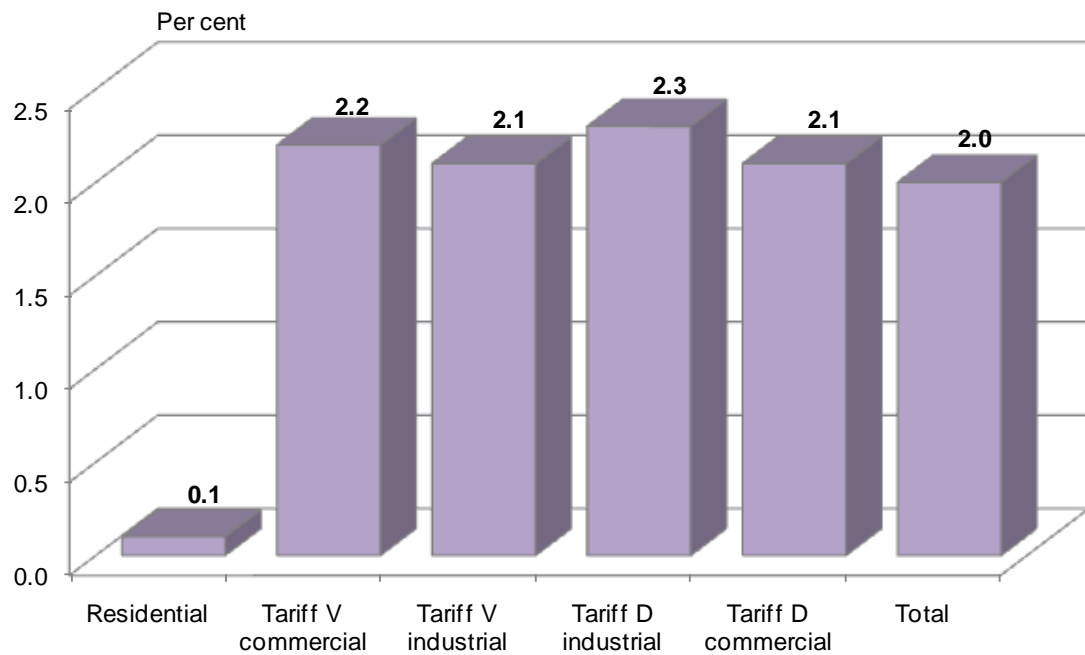
Under the base scenario, Queensland gross regional product grows by 3.8 per cent in average terms between 2010 and 2020. Population rises by an average rate of 2.1 per cent between 2010 and 2020.

Tables 6.1 and 6.2 show projections of natural gas sales and customer numbers by class and scenarios for financial years to 2019-10. Figure 6.1 shows the average volume growth by class between 2009-10 and 2019-20. These are actual volumes and weather corrected volumes were not calculated for this forecasting exercise. Average growth over the 2010 to 2020 period in total natural gas sales is 2.0 per cent per annum.

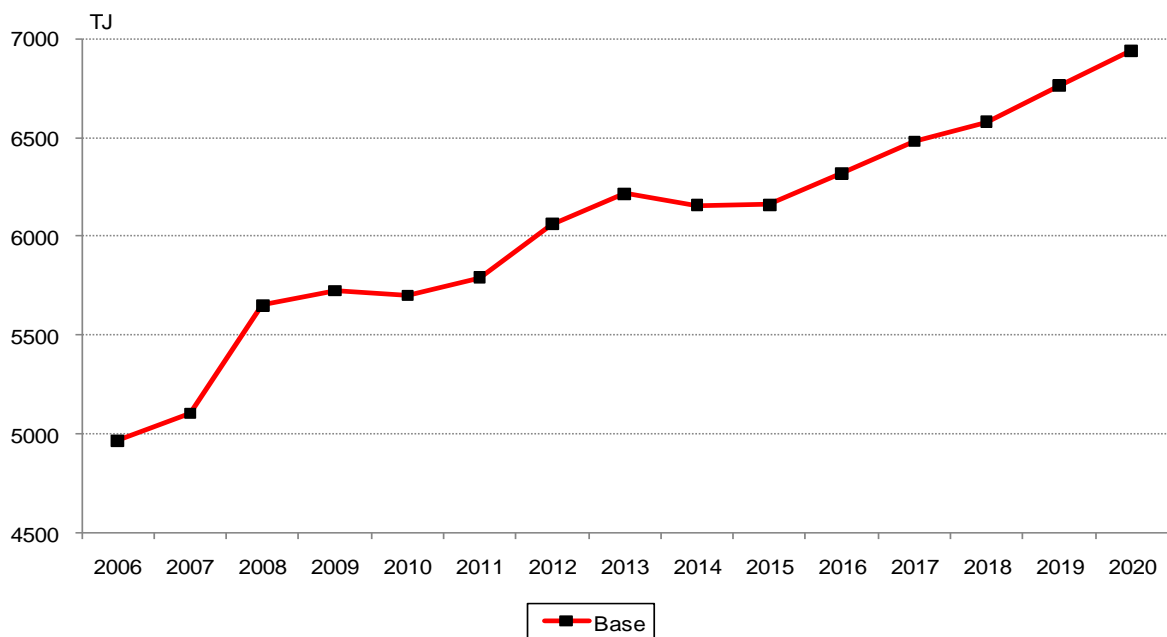
The main movements by class are:

- Residential natural gas sales volume growth is forecast to fall by 1.4 per cent in 2009-10 and then fall by 1.3 per cent in 2010-11. On average, residential sales rise by 1.0 per cent between 2010 and 2020. This decline reflects continued falls in average residential usage.
- Tariff V commercial volume growth is forecast to rise by 0.2 per cent in 2009-10. Commercial Tariff V sales growth is 5.1 per cent in 2011-12. On average, commercial sector Tariff V sales growth averages 2.2 per cent growth between 2010 and 2020; and
- the slowdown in Tariff D sales over 2009-10 reflects the expected fall in construction activity and its associated impact on non-metallic minerals gas usage. Industrial growth resumes with greater economic activity in 2011-12. Industrial Tariff D experiences growth through the forecast period averaging 2.3 per cent over the period 2010 to 2020. Commercial Tariff D sales growth averages 2.1 per cent per annum over the 2010 to 2020 period.

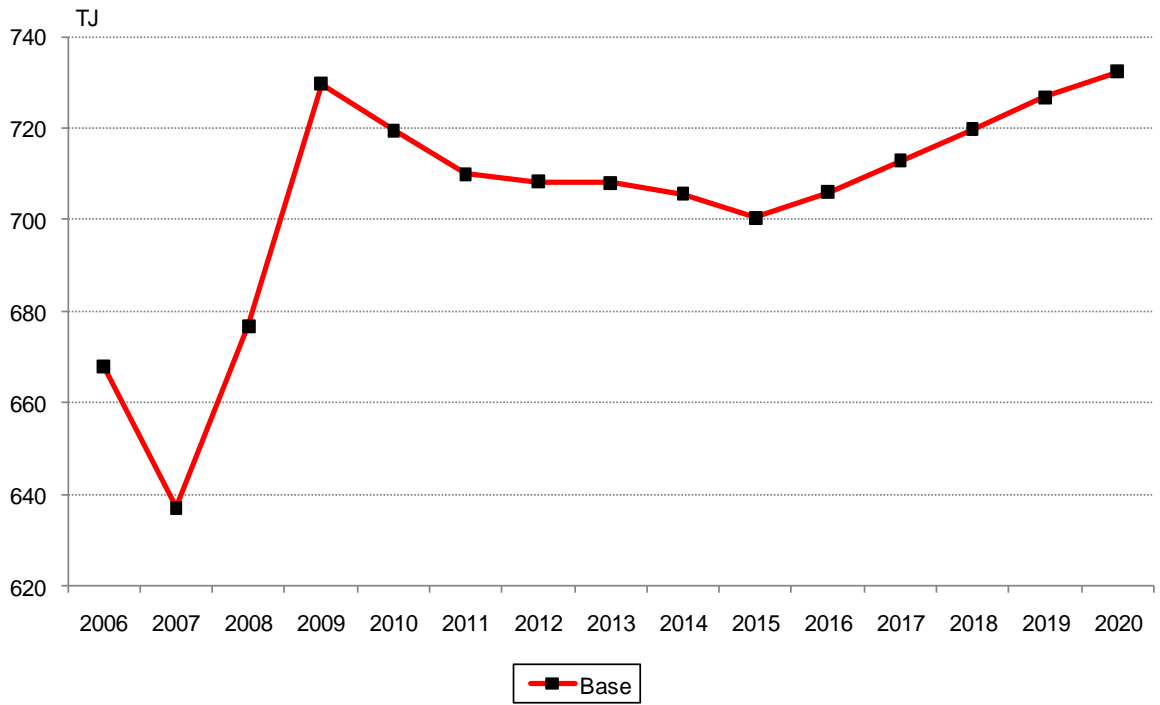
**Figure 6.1: Natural gas sales by class
Average annual growth – 2010 to 2020 – baseline scenario**



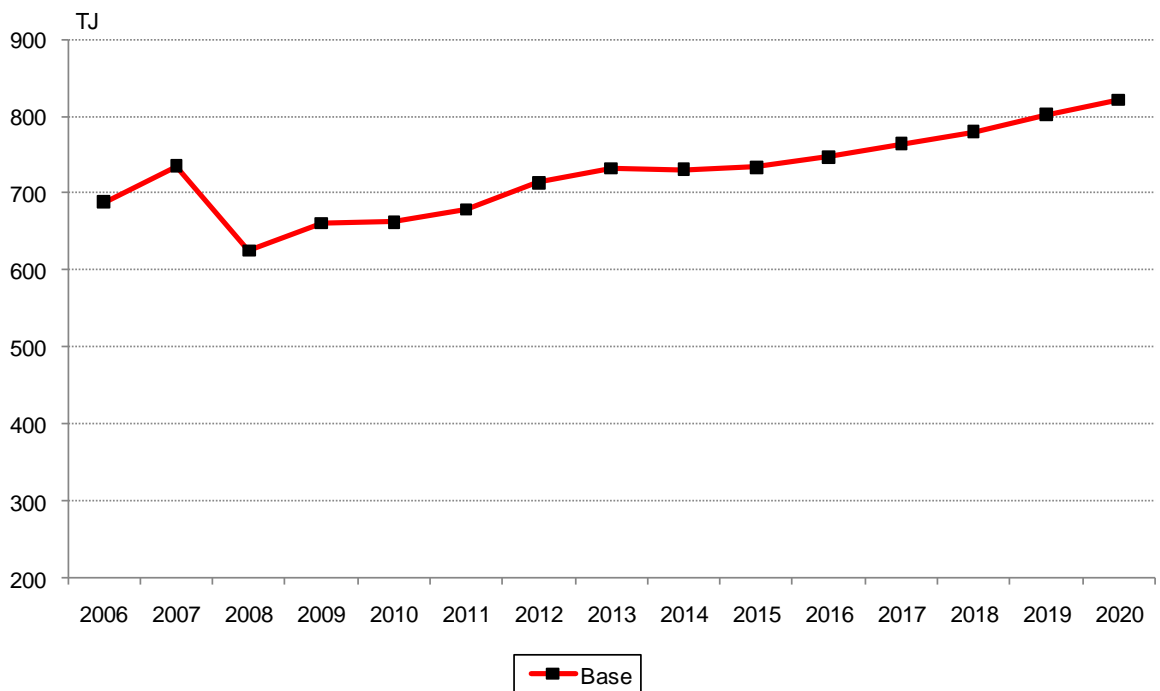
**Figure 6.2: Natural gas sales by class – total
Envestra (TJ)**



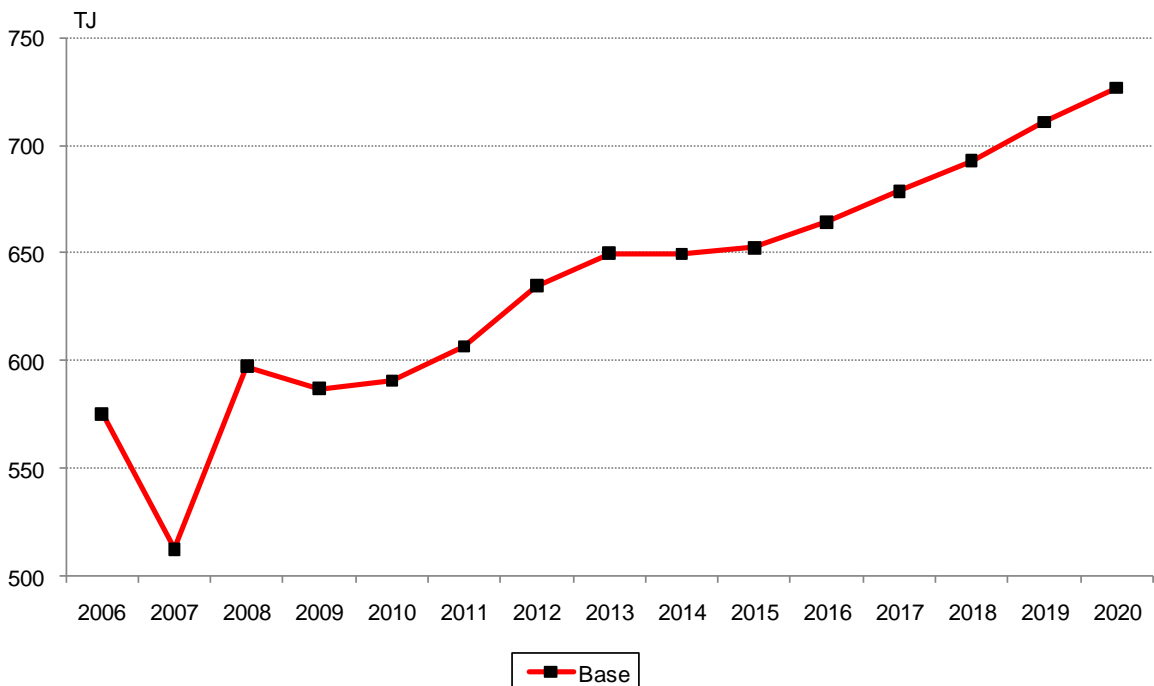
**Figure 6.3: Natural gas sales by class – residential
Envestra (TJ)**



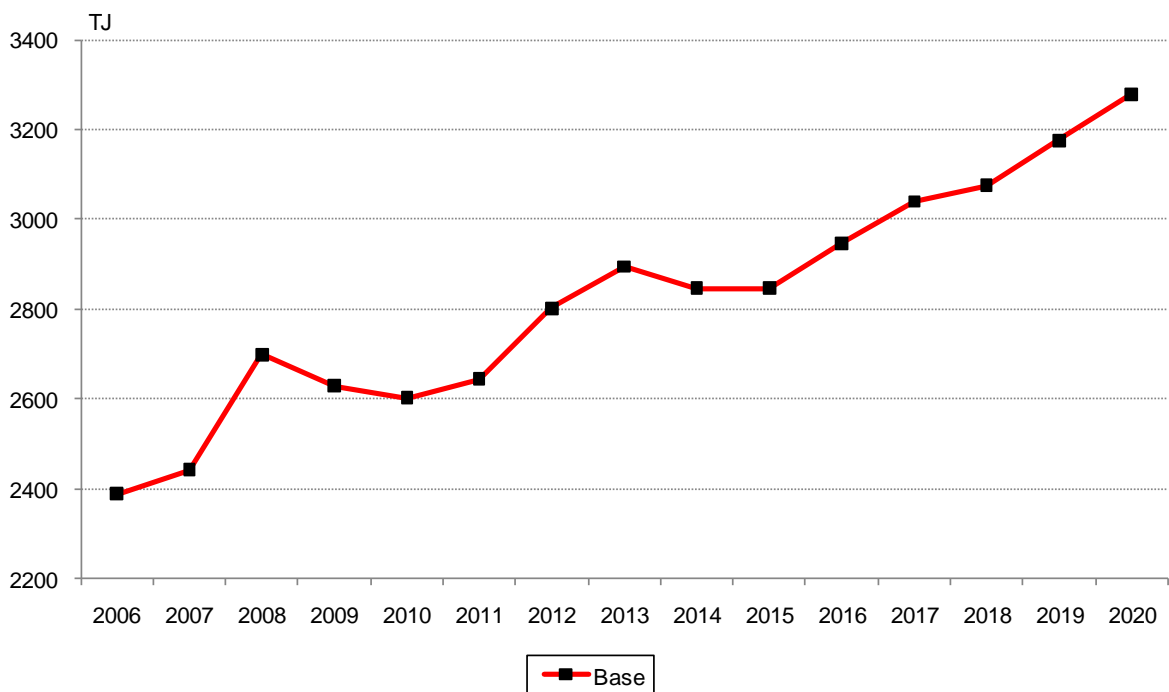
**Figure 6.4: Natural gas sales by class – commercial Tariff V
Envestra (TJ)**

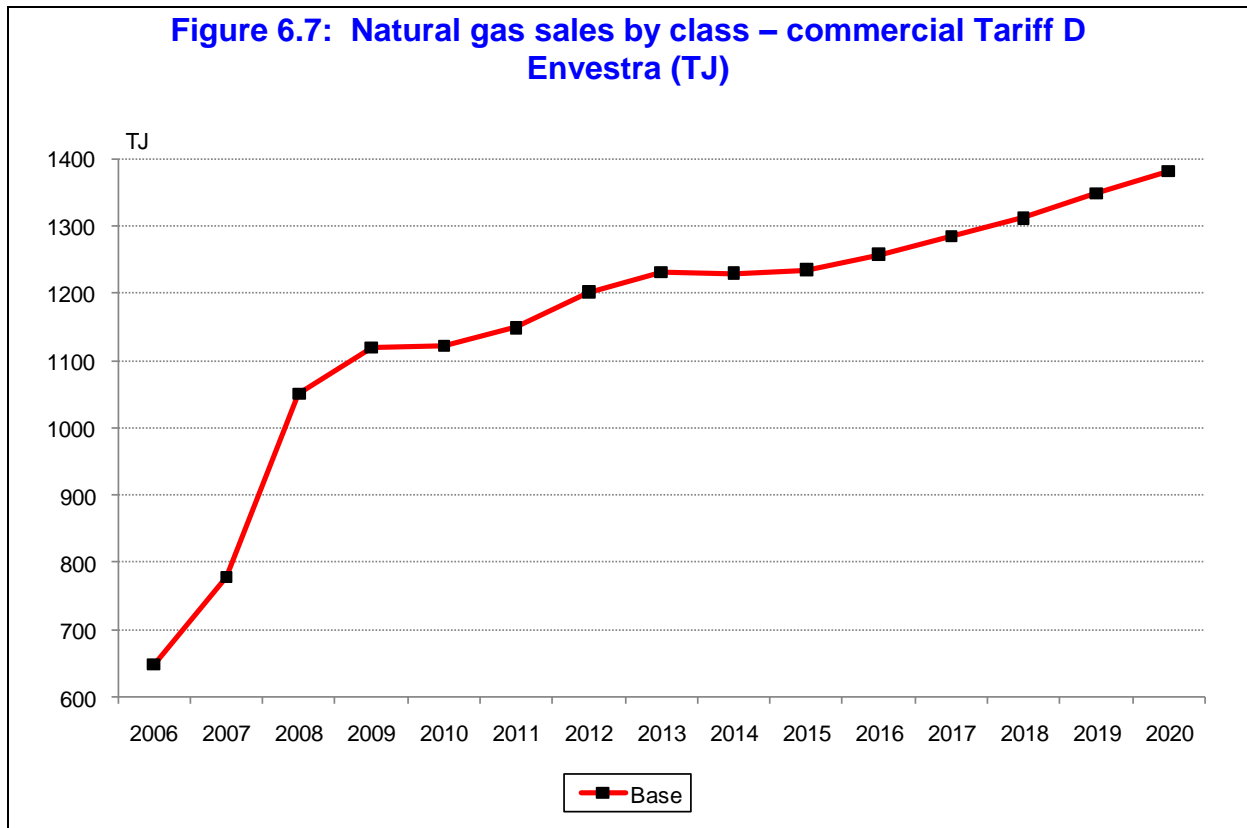


**Figure 6.5: Natural gas sales by class – industrial Tariff V
Envestra (TJ)**



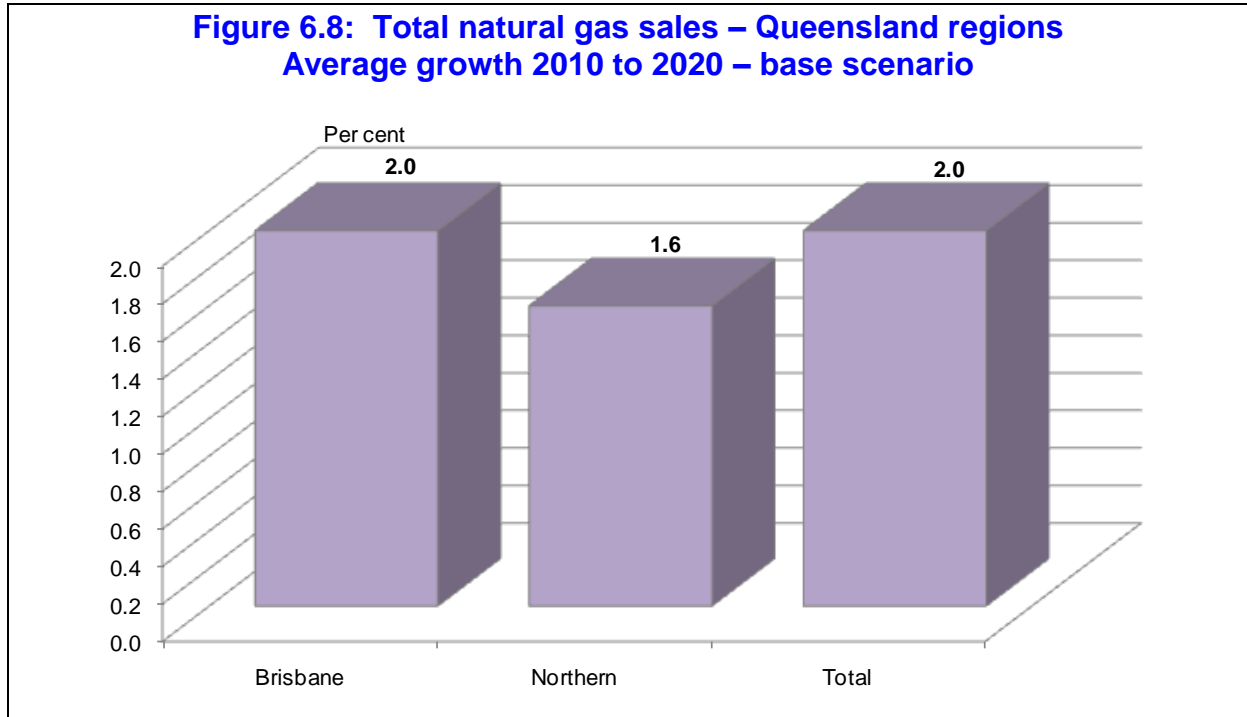
**Figure 6.6: Natural gas sales by class – industrial Tariff D
Envestra (TJ)**





6.2 Sales and customer numbers by region

Appendix B presents natural gas sales by class, tariff and region, both on an actual basis. Customer number forecasts are also included in this Appendix. Figures 6.8 and 6.9 present the outlook for sales growth and customer growth by region over the 2010 to 2020 period.



**Figure 6.9: Total Tariff V customers – Queensland regions
Average growth 2010 to 2020 – base scenario**

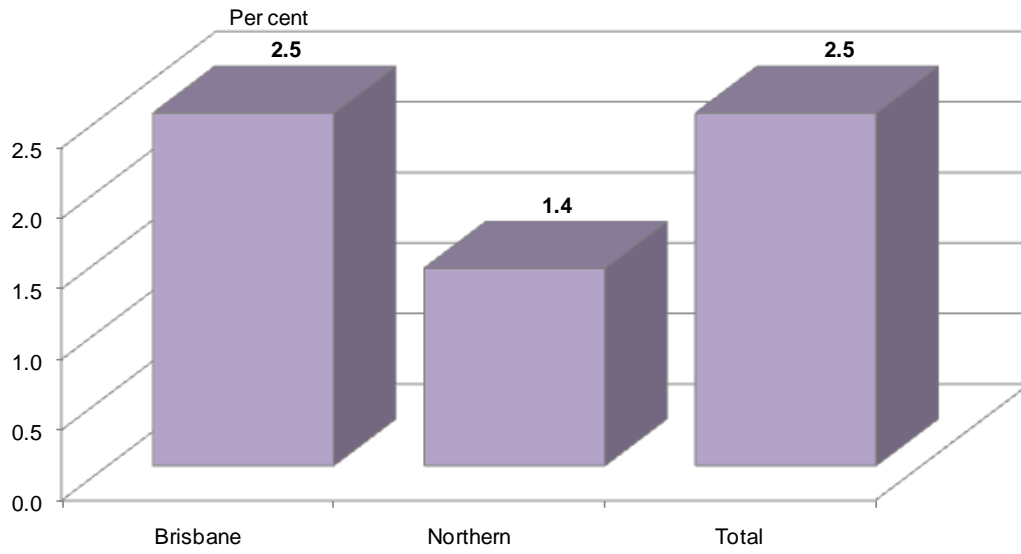


TABLE 6.1 GAS TRANSMISSION SYSTEM QLD - GAS CONSUMPTION BY MARKET SECTOR - TOTAL ENVESTRA QLD

UNIT	RESI-	COMMERCIAL		INDUSTRIAL		TOTAL	TARIFF	TARIFF
	DENTIAL	-----		-----		GTS	V	D
		TARIFF	TARIFF	TARIFF	TARIFF			
		V	D	V	D			
	***** TERAJOULES *****							
2006	667.85	688.67	648.22	575.43	2388.16	4968.33	1931.95	3036.38
2007	637.12	735.00	778.42	512.39	2441.55	5104.48	1884.51	3219.97
2008	676.76	625.37	1050.87	597.38	2699.14	5649.52	1899.51	3750.01
2009	729.66	661.05	1118.82	587.10	2629.65	5726.28	1977.81	3748.47
2010	719.57	662.11	1121.60	590.68	2602.94	5701.09	1972.36	3724.54
2011	709.91	678.94	1148.67	606.48	2644.61	5791.32	1995.32	3793.29
2012	708.30	713.86	1201.93	634.75	2801.92	6062.79	2056.91	4003.85
2013	708.02	732.31	1231.07	649.82	2894.28	6215.19	2090.14	4125.35
2014	705.65	730.98	1229.70	649.49	2846.25	6156.50	2086.12	4075.95
2015	700.40	733.42	1234.18	652.38	2846.72	6160.50	2086.20	4080.91
2016	706.00	747.40	1257.12	664.28	2947.16	6318.09	2117.67	4204.28
2017	712.93	764.06	1285.03	678.76	3040.30	6479.06	2155.75	4325.33
2018	719.80	779.64	1311.73	692.66	3075.24	6577.21	2192.11	4386.97
2019	726.75	801.90	1348.61	710.79	3175.71	6761.32	2239.44	4524.32
2020	732.37	821.37	1381.43	726.76	3278.53	6937.48	2280.51	4659.96
PERCENTAGE CHANGES								
2008	6.22	-14.92	35.00	16.59	10.55	10.68	0.80	16.46
2009	7.82	5.71	6.47	-1.72	-2.57	1.36	4.12	-0.04
2010	-1.38	0.16	0.25	0.61	-1.02	-0.44	-0.28	-0.64
2011	-1.34	2.54	2.41	2.67	1.60	1.58	1.16	1.85
2012	-0.23	5.14	4.64	4.66	5.95	4.69	3.09	5.55
2013	-0.04	2.58	2.42	2.37	3.30	2.51	1.62	3.03
2014	-0.33	-0.18	-0.11	-0.05	-1.66	-0.94	-0.19	-1.20
2015	-0.74	0.33	0.36	0.44	0.02	0.06	0.00	0.12
2016	0.80	1.91	1.86	1.82	3.53	2.56	1.51	3.02
COMPOUND GROWTH RATE (PER CENT) -								
2006-2010	1.88	-0.98	14.69	0.66	2.18	3.50	0.52	5.24
2011-2016	-0.11	1.94	1.82	1.84	2.19	1.76	1.20	2.08
2010-2020	0.18	2.18	2.11	2.09	2.33	1.98	1.46	2.27

All data are for the financial year ending in June of the year specified.

TABLE 6.2 GAS TRANSMISSION SYSTEM QLD - GAS CUSTOMERS BY MARKET SECTOR - TOTAL ENVESTRA QLD

UNIT	RESI-DENTIAL	COMMERCIAL		INDUSTRIAL		TOTAL	TARIFF	TARIFF
		TARIFF	TARIFF	TARIFF	TARIFF	GTS	V	D
		V	D	V	D			
	***** NUMBER *****							
2006	72838.00	2498.57	21.00	233.00	43.00	75610.57	75569.57	64.00
2007	74390.00	2527.00	21.00	246.00	44.00	77205.00	77163.00	65.00
2008	76307.00	2498.00	21.00	255.00	47.00	79105.00	79060.00	68.00
2009	78877.00	2569.00	22.00	258.00	45.00	81748.00	81704.00	67.00
2010	80674.36	2571.89	22.04	259.16	44.90	83549.31	83505.41	66.95
2011	82276.41	2611.19	22.35	264.27	45.39	85196.24	85151.86	67.74
2012	84221.38	2691.03	22.94	273.31	46.78	87231.47	87185.72	69.73
2013	86516.95	2732.77	23.26	278.09	47.58	89574.34	89527.80	70.83
2014	88832.51	2730.16	23.24	278.03	47.25	91886.90	91840.70	70.49
2015	90983.93	2735.95	23.29	278.98	47.29	94045.08	93998.85	70.57
2016	93195.77	2767.34	23.53	282.75	48.10	96292.88	96245.85	71.63
2017	95598.55	2804.46	23.83	287.29	48.89	98738.11	98690.30	72.73
2018	98066.30	2838.95	24.12	291.62	49.30	101245.08	101196.88	73.42
2019	100646.61	2887.53	24.51	297.23	50.17	103880.43	103831.37	74.68
2020	103276.45	2929.68	24.85	302.14	51.03	106558.16	106508.27	75.87
PERCENTAGE CHANGES								
2008	2.58	-1.15	0.00	3.66	6.82	2.46	2.46	4.62
2009	3.37	2.84	4.76	1.18	-4.26	3.34	3.34	-1.47
2010	2.28	0.11	0.20	0.45	-0.22	2.20	2.20	-0.08
2011	1.99	1.53	1.39	1.97	1.10	1.97	1.97	1.19
2012	2.36	3.06	2.64	3.42	3.06	2.39	2.39	2.92
2013	2.73	1.55	1.37	1.75	1.69	2.69	2.69	1.59
2014	2.68	-0.10	-0.08	-0.02	-0.68	2.58	2.58	-0.48
2015	2.42	0.21	0.21	0.34	0.07	2.35	2.35	0.12
2016	2.43	1.15	1.07	1.35	1.72	2.39	2.39	1.50
COMPOUND GROWTH RATE (PER CENT) -								
2006-2010	2.59	0.73	1.22	2.70	1.09	2.53	2.53	1.13
2011-2016	2.52	1.17	1.04	1.36	1.16	2.48	2.48	1.12
2010-2020	2.50	1.31	1.20	1.55	1.29	2.46	2.46	1.26

All data are for the financial year ending in June of the year specified.

TABLE 6.3 RESIDENTIAL GAS USE BY ZONE - ENVESTRA QLD

UNIT	BRIBANE SUPPLY ZONE				NORTHERN SUPPLY ZONE			
	** NUMBER**	PERCENT***	TJ ***	MJ ***	** NUMBER**	PERCENT***	TJ ***	MJ ***
2006	69912.00	8.08	651.28	9.32	2926.00	8.83	16.57	5.66
2007	71460.00	8.06	618.90	8.66	2930.00	8.75	18.22	6.22
2008	73327.00	8.07	653.29	8.91	2980.00	8.81	23.47	7.88
2009	75763.00	8.13	706.41	9.32	3114.00	9.09	23.25	7.47
2010	77524.41	8.15	696.64	8.99	3149.95	9.13	22.93	7.28
2011	79100.21	8.18	687.29	8.69	3176.20	9.18	22.61	7.12
2012	81005.59	8.20	685.75	8.47	3215.79	9.23	22.55	7.01
2013	83248.35	8.22	685.50	8.23	3268.59	9.27	22.51	6.89
2014	85512.02	8.24	683.25	7.99	3320.48	9.32	22.40	6.75
2015	87620.00	8.27	678.22	7.74	3363.93	9.36	22.18	6.59
2016	89787.50	8.29	683.69	7.61	3408.26	9.41	22.31	6.55
2017	92139.91	8.31	690.46	7.49	3458.65	9.46	22.47	6.50
2018	94556.41	8.33	697.18	7.37	3509.89	9.51	22.62	6.45
2019	97082.83	8.36	703.99	7.25	3563.79	9.55	22.76	6.39
2020	99658.66	8.38	709.53	7.12	3617.78	9.60	22.85	6.31
PERCENTAGE CHANGES								
2008	2.61	0.13	5.56	2.87	1.71	0.59	28.81	26.65
2009	3.32	0.68	8.13	4.65	4.50	3.21	-0.94	-5.20
2010	2.32	0.30	-1.38	-3.62	1.15	0.50	-1.36	-2.49
2011	2.03	0.33	-1.34	-3.31	0.83	0.50	-1.39	-2.21
2012	2.41	0.29	-0.22	-2.57	1.25	0.50	-0.29	-1.52
2013	2.77	0.25	-0.04	-2.73	1.64	0.50	-0.15	-1.76
2014	2.72	0.26	-0.33	-2.97	1.59	0.50	-0.51	-2.06
2015	2.47	0.28	-0.74	-3.12	1.31	0.50	-0.99	-2.27
2016	2.47	0.28	0.81	-1.63	1.32	0.50	0.59	-0.72
COMPOUND GROWTH RATE (PER CENT) -								
2006-2010	2.62	0.22	1.70	-0.90	1.86	0.84	8.46	6.48
2011-2016	2.57	0.27	-0.10	-2.61	1.42	0.50	-0.27	-1.67
2010-2020	2.54	0.28	0.18	-2.30	1.39	0.50	-0.04	-1.41

All data are for the financial year ending in June of the year specified.

TABLE 6.4 GAS TRANSMISSION SYSTEM QLD - RESIDENTIAL GAS CONSUMPTION CUSTOMERS AND VOLUMES - QLD TOTAL

UNIT	OLD CUSTOMERS			NEW CUSTOMERS				TOTAL RESIDENTIAL GAS USAGE		
	CUSTOMERS	AVERAGE USAGE	TOTAL GAS USE	CUSTOMERS	AVERAGE USAGE	TOTAL ANNUAL USE	CUMULATIVE GAS USE NEW CUTOMERS	CUSTOMERS	AVERAGE USAGE	TOTAL GAS USE
	NUMBER	GJ	TJ	NUMBER	GJ	TJ	TJ	NUMBER	GJ	TJ
2006	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72838.00	0.00	0.00
2007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74390.00	0.00	0.00
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76307.00	0.00	0.00
2009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78877.00	0.00	0.00
2010	78877.00	8.97	707.35	1797.36	6.80	12.23	12.23	80674.36	8.92	719.57
2011	78877.00	8.71	687.01	1602.04	6.66	10.67	22.89	82276.41	8.63	709.91
2012	78877.00	8.53	672.65	1944.98	6.56	12.76	35.65	84221.38	8.41	708.30
2013	78877.00	8.34	657.56	2295.56	6.45	14.81	50.46	86516.95	8.18	708.02
2014	78877.00	8.12	640.54	2315.56	6.33	14.65	65.11	88832.51	7.94	705.65
2015	78877.00	7.89	621.96	2151.42	6.19	13.32	78.43	90983.93	7.70	700.40
2016	78877.00	7.78	613.96	2211.84	6.15	13.61	92.04	93195.77	7.58	706.00
2017	78877.00	7.69	606.20	2402.79	6.12	14.69	106.73	95598.55	7.46	712.93
2018	78877.00	7.58	598.07	2467.75	6.07	14.99	121.73	98066.30	7.34	719.80
2019	78877.00	7.47	589.47	2580.31	6.03	15.56	137.28	100646.61	7.22	726.75
2020	78877.00	7.35	579.40	2629.84	5.97	15.69	152.97	103276.45	7.09	732.37
PERCENTAGE CHANGES										
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.58	0.00	0.00
2009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.37	0.00	0.00
2010	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.28	0.00	0.00
2011	0.00	-2.87	-2.87	-10.87	-2.13	-12.77	87.23	1.99	-3.26	-1.34
2012	0.00	-2.09	-2.09	21.41	-1.50	19.58	55.71	2.36	-2.53	-0.23
2013	0.00	-2.24	-2.24	18.03	-1.63	16.10	41.54	2.73	-2.69	-0.04
2014	0.00	-2.59	-2.59	0.87	-1.91	-1.05	29.04	2.68	-2.93	-0.33
2015	0.00	-2.90	-2.90	-7.09	-2.19	-9.12	20.45	2.42	-3.09	-0.74
2016	0.00	-1.29	-1.29	2.81	-0.61	2.18	17.35	2.43	-1.59	0.80
COMPOUND GROWTH RATE (PER CENT) -										
2006-2010	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.59	0.00	0.00
2011-2016	0.00	-2.22	-2.22	6.66	-1.57	4.99	32.08	2.52	-2.57	-0.11
2010-2020	0.00	-1.98	-1.98	3.88	-1.30	2.52	28.74	2.50	-2.27	0.18

All data are for the financial year ending in June of the year specified.

TABLE 6.5 GAS TRANSMISSION SYSTEM - TARIFF D GAS CONSUMPTION BY INDUSTRY SECTOR - TOTAL ENVESTRA QLD

	AGRI- CULTURE, FORESTRY, FISHING + HUNTING DIV A	MINING DIV B	MANUFA- CTURING DIV C	ELEC- TRICITY, GAS + WATER DIV D	CONSTR- UCTION DIV E	COMMERCE- WHOLESALE AND RETAIL DIV F	TRANSPORT, STORAGE, AND COMMUNI- CATION DIV G+H	FINANCE, PROPERTY AND BUSINESS SERVICES DIV I	PUBLIC ADMIN, DEFENCE, COMMUNITY SERVICES DIV J+K	RECREATION, PERSONAL AND OTHER SERVICES DIV L	TOTAL D TARIFF
UNIT	***** TERAJOULES *****										
2006	22.63	0.00	2365.53	0.00	0.00	0.00	253.04	0.00	311.56	83.62	3036.38
2007	26.09	0.00	2415.46	0.00	0.00	0.00	328.32	0.00	354.39	95.71	3219.97
2008	21.78	0.00	2677.36	0.00	0.00	0.00	554.94	0.00	383.12	112.81	3750.01
2009	15.40	0.00	2614.25	5.35	0.00	4.69	640.66	0.00	365.57	102.55	3748.47
2010	15.53	0.00	2587.41	5.35	0.00	4.76	643.15	0.00	364.96	103.37	3724.54
2011	15.82	0.00	2628.79	5.35	0.00	4.95	662.02	0.00	369.42	106.93	3793.29
2012	16.28	0.00	2785.65	5.35	0.00	5.29	698.48	0.00	379.02	113.79	4003.85
2013	16.59	0.00	2877.69	5.35	0.00	5.50	719.84	0.00	382.50	117.88	4125.35
2014	16.72	0.00	2829.53	5.35	0.00	5.57	721.98	0.00	378.22	118.58	4075.95
2015	16.94	0.00	2829.79	5.35	0.00	5.67	727.57	0.00	375.60	119.99	4080.91
2016	17.27	0.00	2929.90	5.35	0.00	5.86	744.68	0.00	377.80	123.42	4204.28
2017	17.58	0.00	3022.71	5.35	0.00	6.08	764.63	0.00	381.68	127.30	4325.33
2018	17.88	0.00	3057.36	5.35	0.00	6.29	783.67	0.00	385.44	130.98	4386.97
2019	18.24	0.00	3157.46	5.35	0.00	6.57	809.62	0.00	391.10	135.98	4524.32
2020	18.58	0.00	3259.96	5.35	0.00	6.82	832.98	0.00	395.77	140.51	4659.96
PERCENTAGE CHANGES											
2008	-16.52	0.00	10.84	0.00	0.00	0.00	69.02	0.00	8.11	17.87	16.46
2009	-29.29	0.00	-2.36	0.00	0.00	0.00	15.45	0.00	-4.58	-9.09	-0.04
2010	0.84	0.00	-1.03	0.00	0.00	1.56	0.39	0.00	-0.17	0.80	-0.64
2011	1.87	0.00	1.60	0.00	0.00	4.02	2.93	0.00	1.22	3.44	1.85
2012	2.89	0.00	5.97	0.00	0.00	6.73	5.51	0.00	2.60	6.42	5.55
2013	1.90	0.00	3.30	0.00	0.00	4.08	3.06	0.00	0.92	3.59	3.03
2014	0.81	0.00	-1.67	0.00	0.00	1.23	0.30	0.00	-1.12	0.59	-1.20
2015	1.29	0.00	0.01	0.00	0.00	1.77	0.78	0.00	-0.69	1.19	0.12
2016	1.95	0.00	3.54	0.00	0.00	3.38	2.35	0.00	0.59	2.86	3.02
COMPOUND GROWTH RATE (PER CENT) -											
2006-2010	-8.98	0.00	2.27	0.00	0.00	0.00	26.26	0.00	4.03	5.44	5.24
2011-2016	1.77	0.00	2.19	0.00	0.00	3.42	2.38	0.00	0.45	2.91	2.08
2010-2020	1.81	0.00	2.34	0.00	0.00	3.66	2.62	0.00	0.81	3.12	2.27

All data are for the financial year ending in June of the year specified.

TABLE 6.6 GAS TRANSMISSION SYSTEM - TARIFF D GAS CONSUMPTION BY MANUFACTURING SECTOR - TOTAL ENVESTRA QLD

	FOOD, BEV. + TOBACCO AND FOOTWEAR ASIC 21	TEXTILES, CLOTHING AND FURNITURE ASIC 23/24	WOOD, PROD'S AND PRINTING + PUBLISHING ASIC 25	PAPER, PRODUCTS ASIC 26	CHEMICAL, PETROLEUM AND COAL ASIC 27	NON-METALLIC MINERAL PRODUCTS ASIC 28	BASIC METAL PRODUCTS ASIC 29	FABRI-CATED METAL PRODUCTS ASIC 31	TRANSPORT EQUIPMENT ASIC 32	OTHER MACHINERY AND EQUIPMENT ASIC 33	MISCELL-ANEOUS MANUFA-CTURING ASIC 34	TOTAL MANUFA-CTURING DIV C
UNIT	***** TERAJOULES *****						*****					
2006	511.39	0.00	37.09	146.94	136.82	1290.94	19.99	170.37	43.84	0.00	8.15	2365.53
2007	538.54	0.00	46.63	135.78	152.52	1287.20	19.25	179.78	47.29	0.00	8.47	2415.46
2008	617.03	0.00	46.75	188.50	169.11	1288.82	18.78	286.08	51.55	0.00	10.74	2677.36
2009	744.42	0.00	31.48	195.28	147.21	1171.80	16.62	254.36	42.93	0.00	10.15	2614.25
2010	753.39	0.00	31.75	192.81	149.02	1133.48	16.71	256.76	43.28	0.00	10.20	2587.41
2011	779.14	0.00	32.23	196.99	153.30	1132.60	17.07	263.21	43.84	0.00	10.41	2628.79
2012	822.32	0.00	32.90	208.08	160.11	1215.34	17.70	273.80	44.59	0.00	10.79	2785.65
2013	847.97	0.00	33.15	213.31	164.05	1265.44	18.01	279.86	44.91	0.00	10.98	2877.69
2014	853.11	0.00	32.87	211.66	164.51	1213.90	17.94	280.03	44.57	0.00	10.93	2829.53
2015	862.91	0.00	32.66	211.64	165.90	1201.58	17.93	282.03	44.17	0.00	10.97	2829.79
2016	885.04	0.00	32.76	215.42	169.48	1265.85	18.13	287.84	44.20	0.00	11.16	2929.90
2017	910.76	0.00	33.04	219.68	173.80	1316.24	18.41	294.92	44.48	0.00	11.39	3022.71
2018	935.83	0.00	33.34	223.27	178.08	1309.84	18.69	301.89	44.81	0.00	11.61	3057.36
2019	967.21	0.00	33.68	229.30	183.32	1357.14	19.05	310.67	45.18	0.00	11.91	3157.46
2020	995.85	0.00	33.98	234.17	188.11	1412.14	19.37	318.66	45.50	0.00	12.17	3259.96
PERCENTAGE CHANGES												
2008	14.57	0.00	0.26	38.83	10.88	0.13	-2.44	59.13	9.01	0.00	26.80	10.84
2009	20.65	0.00	-32.66	3.60	-12.95	-9.08	-11.50	-11.09	-16.72	0.00	-5.49	-2.36
2010	1.21	0.00	0.85	-1.26	1.23	-3.27	0.56	0.94	0.82	0.00	0.47	-1.03
2011	3.42	0.00	1.52	2.17	2.88	-0.08	2.16	2.51	1.29	0.00	2.10	1.60
2012	5.54	0.00	2.09	5.63	4.44	7.30	3.69	4.03	1.71	0.00	3.66	5.97
2013	3.12	0.00	0.74	2.51	2.46	4.12	1.76	2.21	0.72	0.00	1.73	3.30
2014	0.61	0.00	-0.83	-0.77	0.28	-4.07	-0.40	0.06	-0.77	0.00	-0.44	-1.67
2015	1.15	0.00	-0.66	-0.01	0.85	-1.02	-0.10	0.71	-0.88	0.00	0.35	0.01
2016	2.56	0.00	0.32	1.79	2.16	5.35	1.14	2.06	0.06	0.00	1.71	3.54
COMPOUND GROWTH RATE (PER CENT) -												
2006-2010	10.17	0.00	-3.81	7.03	2.16	-3.20	-4.38	10.80	-0.32	0.00	5.76	2.27
2011-2016	2.58	0.00	0.33	1.81	2.03	2.25	1.21	1.81	0.16	0.00	1.39	2.19
2010-2020	2.83	0.00	0.68	1.96	2.36	2.22	1.48	2.18	0.50	0.00	1.78	2.34

All data are for the financial year ending in June of the year specified.

TABLE 6.7 GAS TRANSMISSION SYSTEM - TARIFF D GAS CUSTOMERS BY INDUSTRY SECTOR - TOTAL

	AGRI- CULTURE, FORESTRY, FISHING + HUNTING DIV A	MINING DIV B	MANUFA- CTURING DIV C	ELEC- TRICITY, GAS + WATER DIV D	CONSTR- CTION DIV E	COMMERCE- WHOLESALE AND RETAIL TRADE DIV F	TRANSPORT, STORAGE, AND COMMUNI- CATION DIV G+H	FINANCE, PROPERTY AND BUSINESS SERVICES DIV I	PUBLIC ADMIN, DEFENCE, COMMUNITY SERVICES DIV J+K	RECREATION, PERSONAL AND OTHER SERVICES DIV L	TOTAL D TARIFF										
UNIT	*****										NUMBER	*****									
2006	2.00	0.00	41.00	0.00	0.00	0.00	4.00	0.00	10.00	7.00	64.00										
2007	2.00	0.00	42.00	0.00	0.00	0.00	4.00	0.00	10.00	7.00	65.00										
2008	2.00	0.00	45.00	1.00	0.00	0.00	4.00	0.00	9.00	7.00	68.00										
2009	1.00	0.00	44.00	1.00	0.00	1.00	4.00	0.00	9.00	7.00	67.00										
2010	1.01	0.00	43.90	1.00	0.00	1.01	4.01	0.00	8.99	7.03	66.95										
2011	1.02	0.00	44.38	1.00	0.00	1.03	4.08	0.00	9.06	7.18	67.74										
2012	1.03	0.00	45.75	1.00	0.00	1.07	4.21	0.00	9.20	7.46	69.73										
2013	1.05	0.00	46.53	1.00	0.00	1.10	4.29	0.00	9.25	7.62	70.83										
2014	1.05	0.00	46.20	1.00	0.00	1.11	4.30	0.00	9.19	7.64	70.49										
2015	1.06	0.00	46.23	1.00	0.00	1.12	4.32	0.00	9.15	7.70	70.57										
2016	1.07	0.00	47.03	1.00	0.00	1.14	4.38	0.00	9.18	7.83	71.63										
2017	1.09	0.00	47.81	1.00	0.00	1.17	4.45	0.00	9.24	7.98	72.73										
2018	1.10	0.00	48.21	1.00	0.00	1.19	4.51	0.00	9.29	8.12	73.42										
2019	1.11	0.00	49.06	1.00	0.00	1.22	4.60	0.00	9.37	8.31	74.68										
2020	1.12	0.00	49.90	1.00	0.00	1.25	4.68	0.00	9.44	8.47	75.87										
PERCENTAGE CHANGES																					
2008	0.00	0.00	7.14	0.00	0.00	0.00	0.00	0.00	-10.00	0.00	4.62										
2009	-50.00	0.00	-2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.47										
2010	0.51	0.00	-0.23	0.00	0.00	0.93	0.23	0.00	-0.10	0.49	-0.08										
2011	1.15	0.00	1.09	0.00	0.00	2.39	1.75	0.00	0.73	2.07	1.19										
2012	1.78	0.00	3.09	0.00	0.00	3.98	3.27	0.00	1.55	3.84	2.92										
2013	1.17	0.00	1.70	0.00	0.00	2.43	1.82	0.00	0.55	2.16	1.59										
2014	0.50	0.00	-0.71	0.00	0.00	0.74	0.18	0.00	-0.67	0.37	-0.48										
2015	0.80	0.00	0.06	0.00	0.00	1.06	0.46	0.00	-0.42	0.73	0.12										
2016	1.20	0.00	1.73	0.00	0.00	2.02	1.40	0.00	0.35	1.73	1.50										
COMPOUND GROWTH RATE (PER CENT) -																					
2006-2010	-15.80	0.00	1.72	0.00	0.00	0.00	0.06	0.00	-2.62	0.12	1.13										
2011-2016	1.09	0.00	1.17	0.00	0.00	2.04	1.42	0.00	0.27	1.76	1.12										
2010-2020	1.11	0.00	1.29	0.00	0.00	2.18	1.56	0.00	0.49	1.88	1.26										

All data are for the financial year ending in June of the year specified.

TABLE 6.8 GAS TRANSMISSION SYSTEM - TARIFF D GAS CUSTOMERS BY MANUFACTURING SECTOR - TOTAL

	FOOD, BEV. + TOBACCO AND FOOTWEAR ASIC 21	TEXTILES, CLOTHING AND FURNITURE ASIC 23/24	WOOD, PROD'S AND PRINTING + PUBLISHING ASIC 25	PAPER, PETROLEUM AND COAL ASIC 26	CHEMICAL, AND ASIC 27	NON-METALLIC MINERAL PRODUCTS ASIC 28	BASIC METAL PRODUCTS ASIC 29	FABRI- CATED METAL PRODUCTS ASIC 31	TRANSPORT EQUIPMENT ASIC 32	OTHER MACHINERY AND EQUIPMENT ASIC 33	MISCELL- -ANEOUS MANUFA- CTURING ASIC 34	TOTAL MANUFA- CTURING DIV C
UNIT	***** NUMBER *****											
2006	9.00	0.00	3.00	3.00	2.00	13.00	1.00	7.00	2.00	0.00	1.00	0.00
2007	9.00	0.00	3.00	3.00	2.00	14.00	1.00	7.00	2.00	0.00	1.00	0.00
2008	10.00	0.00	3.00	3.00	2.00	16.00	1.00	7.00	2.00	0.00	1.00	1.00
2009	10.00	0.00	3.00	3.00	2.00	15.00	1.00	7.00	2.00	0.00	1.00	1.00
2010	10.09	0.00	3.02	2.98	2.01	14.75	1.00	7.04	2.01	0.00	1.00	1.00
2011	10.30	0.00	3.04	3.02	2.05	14.77	1.02	7.15	2.03	0.00	1.02	1.00
2012	10.64	0.00	3.08	3.12	2.10	15.37	1.04	7.32	2.05	0.00	1.04	1.00
2013	10.84	0.00	3.09	3.16	2.13	15.73	1.05	7.41	2.06	0.00	1.05	1.00
2014	10.89	0.00	3.08	3.15	2.14	15.39	1.05	7.42	2.05	0.00	1.05	1.00
2015	10.98	0.00	3.07	3.15	2.15	15.31	1.05	7.45	2.04	0.00	1.05	1.00
2016	11.15	0.00	3.07	3.18	2.18	15.76	1.05	7.54	2.04	0.00	1.06	1.00
2017	11.35	0.00	3.09	3.22	2.21	16.11	1.06	7.65	2.05	0.00	1.07	1.00
2018	11.55	0.00	3.11	3.25	2.24	16.09	1.07	7.76	2.05	0.00	1.08	1.00
2019	11.79	0.00	3.12	3.30	2.28	16.42	1.09	7.89	2.06	0.00	1.10	1.00
2020	12.00	0.00	3.14	3.35	2.32	16.80	1.10	8.01	2.07	0.00	1.11	1.00
PERCENTAGE CHANGES												
2008	11.11	0.00	0.00	0.00	0.00	14.29	0.00	0.00	0.00	0.00	0.00	0.00
2009	0.00	0.00	0.00	0.00	0.00	-6.25	0.00	0.00	0.00	0.00	0.00	0.00
2010	0.85	0.00	0.51	-0.76	0.73	-1.67	0.34	0.57	0.48	0.00	0.28	0.00
2011	2.11	0.00	0.91	1.29	1.72	0.14	1.29	1.50	0.79	0.00	1.25	0.00
2012	3.30	0.00	1.25	3.34	2.64	4.07	2.20	2.40	1.08	0.00	2.18	0.00
2013	1.93	0.00	0.45	1.50	1.47	2.32	1.05	1.32	0.45	0.00	1.03	0.00
2014	0.46	0.00	-0.50	-0.46	0.17	-2.16	-0.24	0.04	-0.47	0.00	-0.26	0.00
2015	0.77	0.00	-0.40	-0.01	0.51	-0.50	-0.06	0.43	-0.52	0.00	0.21	0.00
2016	1.59	0.00	0.19	1.07	1.29	2.91	0.68	1.23	0.05	0.00	1.03	0.00
COMPOUND GROWTH RATE (PER CENT) -												
2006-2010	2.89	0.00	0.13	-0.19	0.18	3.21	0.08	0.14	0.12	0.00	0.07	0.00
2011-2016	1.61	0.00	0.20	1.08	1.21	1.30	0.72	1.08	0.12	0.00	0.83	0.00
2010-2020	1.76	0.00	0.41	1.17	1.41	1.31	0.89	1.30	0.32	0.00	1.06	0.00

All data are for the financial year ending in June of the year specified.

TABLE 6.9 GAS TRANSMISSION SYSTEM - TARIFF D MDQ BY INDUSTRY SECTOR - TOTAL ENVESTRA QLD

	AGRI- CULTURE, FORESTRY, FISHING + HUNTING DIV A	MINING DIV B	MANUFA- CTURING DIV C	ELEC- TRICITY, GAS + WATER DIV D	CONSTR- CTION DIV E	COMMERCE- WHOLESALE AND RETAIL TRADE DIV F	TRANSPORT, STORAGE, AND COMMUNI- CATION DIV G+H	FINANCE, PROPERTY AND BUSINESS SERVICES DIV I	PUBLIC ADMIN, DEFENCE, COMMUNITY SERVICES DIV J+K	RECREATION, PERSONAL AND OTHER SERVICES DIV L	TOTAL D TARIFF
UNIT	*****					TJ	*****				
2006	4244.98	0.00	11935.00	0.00	0.00	0.00	1852.00	0.00	2191.00	7.00	16524.00
2007	121.00	0.00	11657.00	0.00	0.00	0.00	1811.00	0.00	2191.00	7.00	16205.00
2008	121.00	0.00	15632.00	67.00	0.00	0.00	2376.00	0.00	2113.00	7.00	20703.00
2009	63.00	0.00	15107.00	67.00	0.00	88.00	2297.00	0.00	2244.00	7.00	20264.00
2010	63.30	0.00	15018.19	67.00	0.00	88.75	2301.91	0.00	2241.92	7.03	20181.15
2011	63.96	0.00	15140.70	67.00	0.00	90.70	2338.81	0.00	2256.95	7.18	20367.03
2012	65.00	0.00	15625.48	67.00	0.00	94.01	2408.80	0.00	2289.02	7.46	20974.92
2013	65.70	0.00	15905.01	67.00	0.00	96.09	2449.03	0.00	2300.58	7.62	21318.74
2014	66.00	0.00	15748.43	67.00	0.00	96.74	2453.03	0.00	2286.39	7.64	21154.59
2015	66.48	0.00	15743.76	67.00	0.00	97.68	2463.47	0.00	2277.66	7.70	21156.41
2016	67.21	0.00	16051.73	67.00	0.00	99.49	2495.16	0.00	2284.98	7.83	21513.93
2017	67.91	0.00	16329.82	67.00	0.00	101.50	2531.70	0.00	2297.85	7.98	21853.03
2018	68.56	0.00	16424.12	67.00	0.00	103.44	2566.20	0.00	2310.27	8.12	22005.17
2019	69.34	0.00	16715.47	67.00	0.00	105.89	2612.59	0.00	2328.87	8.31	22375.88
2020	70.05	0.00	17012.19	67.00	0.00	108.14	2653.79	0.00	2344.12	8.47	22741.97
PERCENTAGE CHANGES											
2008	0.00	0.00	34.10	0.00	0.00	0.00	31.20	0.00	-3.56	0.00	27.76
2009	-47.93	0.00	-3.36	0.00	0.00	0.00	-3.32	0.00	6.20	0.00	-2.12
2010	0.47	0.00	-0.59	0.00	0.00	0.86	0.21	0.00	-0.09	0.49	-0.41
2011	1.05	0.00	0.82	0.00	0.00	2.19	1.60	0.00	0.67	2.07	0.92
2012	1.63	0.00	3.20	0.00	0.00	3.65	2.99	0.00	1.42	3.84	2.98
2013	1.07	0.00	1.79	0.00	0.00	2.22	1.67	0.00	0.50	2.16	1.64
2014	0.46	0.00	-0.98	0.00	0.00	0.67	0.16	0.00	-0.62	0.37	-0.77
2015	0.73	0.00	-0.03	0.00	0.00	0.97	0.43	0.00	-0.38	0.73	0.01
2016	1.10	0.00	1.96	0.00	0.00	1.85	1.29	0.00	0.32	1.73	1.69
COMPOUND GROWTH RATE (PER CENT) -											
2006-2010	-65.06	0.00	5.91	0.00	0.00	0.00	5.59	0.00	0.58	0.12	5.13
2011-2016	1.00	0.00	1.18	0.00	0.00	1.87	1.30	0.00	0.25	1.76	1.10
2010-2020	1.02	0.00	1.25	0.00	0.00	2.00	1.43	0.00	0.45	1.88	1.20

All data are for the financial year ending in June of the year specified.

TABLE 6.10 GAS TRANSMISSION SYSTEM - TARIFF D MDQ BY MANUFACTURING SECTOR - TOTAL

	FOOD, BEV. + TOBACCO AND FOOTWEAR ASIC 21	TEXTILES, CLOTHING AND FURNITURE ASIC 23/24	WOOD, PROD'S AND PRINTING + PUBLISHING ASIC 25	PAPER, PAPER PRODUCTS ASIC 26	CHEMICAL, PETROLEUM AND COAL ASIC 27	NON-METALLIC MINERAL PRODUCTS ASIC 28	BASIC METAL PRODUCTS ASIC 29	FABRI- CATED METAL PRODUCTS ASIC 31	TRANSPORT EQUIPMENT ASIC 32	OTHER MACHINERY AND EQUIPMENT ASIC 33	MISCELL- -ANEOUS MANUFA- CTURING ASIC 34	TOTAL MANUFA- CTURING DIV C
UNIT	*****					TJ	*****					
2006	3048.00	0.00	201.00	577.00	654.00	5926.00	99.00	1119.00	264.00	0.00	47.00	11935.00
2007	3048.00	0.00	201.00	577.00	654.00	5661.00	99.00	1106.00	264.00	0.00	47.00	11657.00
2008	3936.00	0.00	201.00	667.00	422.00	7725.00	99.00	2204.00	264.00	0.00	47.00	15632.00
2009	3785.00	0.00	237.00	690.00	547.00	7060.00	99.00	2249.00	293.00	0.00	80.00	15107.00
2010	3809.97	0.00	238.11	685.19	550.68	6932.80	99.30	2260.66	294.27	0.00	80.21	15018.19
2011	3881.00	0.00	240.09	693.31	559.34	6930.23	100.48	2291.68	296.45	0.00	81.13	15140.70
2012	3997.85	0.00	242.84	714.52	572.87	7203.70	102.50	2341.99	299.46	0.00	82.75	15625.48
2013	4065.92	0.00	243.83	724.35	580.57	7365.24	103.49	2370.36	300.72	0.00	83.53	15905.01
2014	4079.40	0.00	242.72	721.26	581.46	7199.43	103.26	2371.14	299.43	0.00	83.33	15748.43
2015	4105.06	0.00	241.84	721.22	584.17	7159.37	103.20	2380.41	298.01	0.00	83.49	15743.76
2016	4162.59	0.00	242.26	728.28	591.07	7366.93	103.85	2407.29	298.18	0.00	84.27	16051.73
2017	4228.61	0.00	243.38	736.16	599.31	7526.47	104.74	2439.67	299.24	0.00	85.23	16329.82
2018	4292.17	0.00	244.60	742.75	607.37	7506.76	105.61	2471.21	300.49	0.00	86.15	16424.12
2019	4370.68	0.00	245.99	753.73	617.14	7654.48	106.73	2510.47	301.91	0.00	87.34	16715.47
2020	4441.33	0.00	247.17	762.48	625.97	7823.24	107.69	2545.80	303.13	0.00	88.38	17012.19
PERCENTAGE CHANGES												
2008	29.13	0.00	0.00	15.60	-35.47	36.46	0.00	99.28	0.00	0.00	0.00	34.10
2009	-3.84	0.00	17.91	3.45	29.62	-8.61	0.00	2.04	10.98	0.00	70.21	-3.36
2010	0.66	0.00	0.47	-0.70	0.67	-1.80	0.31	0.52	0.43	0.00	0.26	-0.59
2011	1.86	0.00	0.83	1.19	1.57	-0.04	1.18	1.37	0.74	0.00	1.15	0.82
2012	3.01	0.00	1.15	3.06	2.42	3.95	2.01	2.20	1.02	0.00	2.00	3.20
2013	1.70	0.00	0.41	1.38	1.34	2.24	0.96	1.21	0.42	0.00	0.95	1.79
2014	0.33	0.00	-0.46	-0.43	0.15	-2.25	-0.22	0.03	-0.43	0.00	-0.24	-0.98
2015	0.63	0.00	-0.36	-0.01	0.47	-0.56	-0.06	0.39	-0.47	0.00	0.19	-0.03
2016	1.40	0.00	0.18	0.98	1.18	2.90	0.63	1.13	0.06	0.00	0.94	1.96
COMPOUND GROWTH RATE (PER CENT) -												
2006-2010	5.74	0.00	4.33	4.39	-4.21	4.00	0.08	19.22	2.75	0.00	14.29	5.91
2011-2016	1.41	0.00	0.18	0.99	1.11	1.23	0.66	0.99	0.12	0.00	0.76	1.18
2010-2020	1.55	0.00	0.37	1.07	1.29	1.22	0.81	1.19	0.30	0.00	0.98	1.25

All data are for the financial year ending in June of the year specified.

7. Natural gas demand forecasts to 2020 –price adjusted – Envestra Qld

This section presents total natural gas demand forecasts for Envestra Queensland, incorporating the proposed distribution price increases by Envestra over the 2012 to 2016 period.

7.1 Proposed distribution price increases, Envestra Qld

The proposed distribution price increases modelled are presented in Table 7.1 below for the period 2011-12 to 2015-16.

Table 7.1 Proposed distribution price increases, Envestra Qld – \$2010 total retail price increase (percentage)		
	Residential	Business
2011-12	7.9	3.1
2012-13	6.2	2.5
2013-14	4.7	1.8
2014-15	1.6	0.6
2015-16	1.0	0.4

7.2 The impact on volumes by class, Envestra Qld

Table 7.2 presents the total volumes by class for Envestra Qld. As indicated in Table 7.1, the proposed real price increases are quite significant and through the price elasticities in NIEIR's sectoral model of gas usage, reduce forecast volumes.

By 2015-16 residential volumes for total Queensland are some 56 terajoules, or 8.0 per cent, lower than the forecasts presented in Chapter 6 of this report. Tariff V business volumes are around 6.0 per cent lower by 2015-16.

Table 7.2 Total volumes by class incorporating the distribution price increases						
	Residential	Commercial Tariff V	Commercial Tariff D	Industrial Tariff V	Industrial Tariff D	Total
2006	667.9	688.7	648.2	575.4	2388.2	4968.4
2007	637.1	735.0	778.4	512.4	2441.6	5104.5
2008	676.8	625.4	1050.9	597.4	2699.1	5649.5
2009	729.7	661.1	1118.8	587.1	2629.6	5726.2
2010	719.6	662.1	1121.6	590.7	2602.9	5696.9
2011	709.9	678.9	1148.6	606.5	2644.6	5788.5
2012	701.4	711.4	1197.7	632.5	2792.2	6035.2
2013	686.1	721.0	1212.1	639.7	2849.9	6108.8
2014	668.9	708.4	1191.7	629.2	2758.5	5956.7
2015	652.5	700.1	1178.2	622.5	2718.2	5871.5
2016	649.7	705.2	1186.2	626.5	2781.7	5949.3
2017	651.5	715.5	1203.3	635.2	2848.0	6053.4
2018	655.9	728.0	1224.8	646.4	2872.4	6127.4
2019	661.5	748.3	1258.6	662.9	2964.6	6295.9
2020	666.4	766.5	1289.1	677.8	3060.7	6460.5

Appendix A

Concordances between Envestra's Queensland gas distribution network zones and the Australian Bureau of Statistics' Local Government Areas

LGA ID	LGA Name	LGA ID from map	Region
267	Beaudesert Shire	515	Brisbane
276	Brisbane City	505	Brisbane
284	Caboolture Shire	520	Brisbane
314	Gold Coast City	510	Brisbane
321	Ipswich City	525	Brisbane
333	Logan City	530	Brisbane
357	Pine Rivers Shire	540	Brisbane
360	Redcliffe City	545	Brisbane
361	Redland Shire	550	Brisbane
363	Rockhampton City	3005	Northern
313	Gladstone City	3350	Northern

Appendix B

Total sales and customers by class and region

TABLE B.1 GAS TRANSMISSION SYSTEM QLD - GAS CONSUMPTION BY MARKET SECTOR - BRISANE

UNIT	RESI-	COMMERCIAL		INDUSTRIAL		TOTAL	TARIFF	TARIFF
	DENTIAL					GTS	V	D
		TARIFF	TARIFF	TARIFF	TARIFF			
		V	D	V	D			
	***** TERAJOULES *****							
2006	651.28	577.22	641.61	497.42	2322.37	4689.90	1725.92	2963.98
2007	618.90	618.37	761.85	443.96	2357.71	4800.79	1681.23	3119.56
2008	653.29	551.47	1032.75	522.11	2615.55	5375.17	1726.87	3648.30
2009	706.41	586.32	1101.00	513.73	2569.97	5477.43	1806.46	3670.97
2010	696.64	586.55	1103.68	517.12	2542.37	5450.65	1800.31	3646.05
2011	687.29	600.97	1130.31	532.01	2582.64	5536.07	1820.27	3712.95
2012	685.75	631.79	1182.76	558.66	2738.02	5799.24	1876.20	3920.78
2013	685.50	647.67	1211.44	573.10	2829.13	5946.81	1906.27	4040.57
2014	683.25	645.79	1210.06	573.52	2780.93	5888.37	1902.56	3990.99
2015	678.22	647.39	1214.49	577.07	2781.16	5892.09	1902.67	3995.65
2016	683.69	659.26	1237.09	588.80	2880.66	6046.09	1931.75	4117.75
2017	690.46	673.42	1264.59	602.74	2972.50	6202.08	1966.62	4237.09
2018	697.18	686.55	1290.88	616.07	3006.08	6295.26	1999.80	4296.96
2019	703.99	705.66	1327.23	633.42	3104.98	6473.21	2043.08	4432.21
2020	709.53	722.23	1359.57	648.77	3206.32	6643.77	2080.53	4565.89
PERCENTAGE CHANGES								
2008	5.56	-10.82	35.56	17.60	10.94	11.96	2.71	16.95
2009	8.13	6.32	6.61	-1.61	-1.74	1.90	4.61	0.62
2010	-1.38	0.04	0.24	0.66	-1.07	-0.49	-0.34	-0.68
2011	-1.34	2.46	2.41	2.88	1.58	1.57	1.11	1.83
2012	-0.22	5.13	4.64	5.01	6.02	4.75	3.07	5.60
2013	-0.04	2.51	2.42	2.58	3.33	2.54	1.60	3.06
2014	-0.33	-0.29	-0.11	0.07	-1.70	-0.98	-0.19	-1.23
2015	-0.74	0.25	0.37	0.62	0.01	0.06	0.01	0.12
2016	0.81	1.83	1.86	2.03	3.58	2.61	1.53	3.06
COMPOUND GROWTH RATE (PER CENT) -								
2006-2010	1.70	0.40	14.52	0.98	2.29	3.83	1.06	5.31
2011-2016	-0.10	1.87	1.82	2.05	2.21	1.78	1.20	2.09
2010-2020	0.18	2.10	2.11	2.29	2.35	2.00	1.46	2.28

All data are for the financial year ending in June of the year specified.

TABLE B.2 GAS TRANSMISSION SYSTEM QLD - GAS CONSUMPTION BY MARKET SECTOR - NORTHERN

UNIT	RESI- DENTIAL	COMMERCIAL		INDUSTRIAL		TOTAL GTS	TARIFF V	TARIFF D
		TARIFF V	TARIFF D	TARIFF V	TARIFF D			
	***** TERAJOULES *****							
2006	16.57	111.45	6.61	78.01	65.79	278.43	206.03	72.40
2007	18.22	116.63	16.57	68.43	83.84	303.69	203.28	100.41
2008	23.47	73.90	18.12	75.27	83.59	274.35	172.64	101.71
2009	23.25	74.73	17.82	73.37	59.68	248.85	171.35	77.50
2010	22.93	75.56	17.92	73.56	60.57	250.45	172.05	78.49
2011	22.61	77.97	18.36	74.47	61.97	255.25	175.05	80.34
2012	22.55	82.08	19.17	76.09	63.90	263.56	180.71	83.07
2013	22.51	84.64	19.63	76.72	65.15	268.38	183.87	84.78
2014	22.40	85.18	19.63	75.97	65.33	268.13	183.56	84.96
2015	22.18	86.04	19.70	75.31	65.56	268.40	183.53	85.26
2016	22.31	88.14	20.03	75.48	66.50	272.01	185.93	86.53
2017	22.47	90.63	20.44	76.02	67.80	276.98	189.13	88.24
2018	22.62	93.10	20.85	76.59	69.16	281.95	192.31	90.01
2019	22.76	96.23	21.38	77.37	70.73	288.11	196.36	92.11
2020	22.85	99.14	21.86	77.99	72.21	293.71	199.98	94.07
PERCENTAGE CHANGES								
2008	28.81	-36.64	9.35	10.00	-0.30	-9.66	-15.07	1.29
2009	-0.94	1.12	-1.66	-2.52	-28.60	-9.29	-0.75	-23.80
2010	-1.36	1.11	0.56	0.26	1.49	0.64	0.41	1.28
2011	-1.39	3.19	2.49	1.24	2.32	1.92	1.75	2.36
2012	-0.29	5.27	4.39	2.17	3.11	3.26	3.23	3.40
2013	-0.15	3.12	2.39	0.83	1.96	1.83	1.75	2.06
2014	-0.51	0.64	0.02	-0.97	0.27	-0.09	-0.17	0.21
2015	-0.99	1.00	0.31	-0.87	0.36	0.10	-0.02	0.35
2016	0.59	2.44	1.69	0.23	1.44	1.34	1.31	1.49
COMPOUND GROWTH RATE (PER CENT) -								
2006-2010	8.46	-9.26	28.32	-1.46	-2.05	-2.61	-4.41	2.04
2011-2016	-0.27	2.48	1.75	0.27	1.42	1.28	1.21	1.50
2010-2020	-0.04	2.75	2.01	0.59	1.77	1.61	1.52	1.83

All data are for the financial year ending in June of the year specified.

TABLE B.3 GAS TRANSMISSION SYSTEM QLD - GAS CUSTOMERS BY MARKET SECTOR - BRISBANE

UNIT	RESI- DENTIAL	COMMERCIAL		INDUSTRIAL		TOTAL GTS	TARIFF V	TARIFF D
		TARIFF V	TARIFF D	TARIFF V	TARIFF D			
	*****	*****		NUMBER	*****		*****	
2006	69912.00	2137.57	20.00	208.00	38.00	72294.57	72257.57	58.00
2007	71460.00	2169.00	20.00	219.00	39.00	73886.00	73848.00	59.00
2008	73327.00	2145.00	20.00	229.00	42.00	75742.00	75701.00	62.00
2009	75763.00	2213.00	21.00	231.00	41.00	78247.00	78207.00	62.00
2010	77524.41	2213.52	21.04	232.11	40.86	80009.91	79970.05	61.90
2011	79100.21	2246.01	21.33	236.97	41.29	81623.46	81583.19	62.62
2012	81005.59	2314.42	21.90	245.58	42.59	83607.15	83565.59	64.48
2013	83248.35	2349.16	22.20	250.20	43.32	85889.98	85847.71	65.52
2014	85512.02	2345.08	22.18	250.33	42.98	88149.37	88107.44	65.16
2015	87620.00	2348.55	22.22	251.46	43.00	90261.95	90220.01	65.22
2016	89787.50	2374.29	22.46	255.18	43.77	92459.67	92416.98	66.23
2017	92139.91	2404.77	22.75	259.58	44.50	94847.66	94804.25	67.25
2018	94556.41	2432.78	23.02	263.76	44.85	97296.70	97252.95	67.87
2019	97082.83	2473.20	23.39	269.16	45.65	99869.72	99825.19	69.04
2020	99658.66	2507.88	23.72	273.90	46.43	102485.77	102440.45	70.15
PERCENTAGE CHANGES								
2008	2.61	-1.11	0.00	4.57	7.69	2.51	2.51	5.08
2009	3.32	3.17	5.00	0.87	-2.38	3.31	3.31	0.00
2010	2.32	0.02	0.19	0.48	-0.34	2.25	2.25	-0.16
2011	2.03	1.47	1.38	2.09	1.04	2.02	2.02	1.16
2012	2.41	3.05	2.65	3.63	3.15	2.43	2.43	2.98
2013	2.77	1.50	1.37	1.88	1.72	2.73	2.73	1.60
2014	2.72	-0.17	-0.08	0.05	-0.78	2.63	2.63	-0.54
2015	2.47	0.15	0.21	0.45	0.04	2.40	2.40	0.10
2016	2.47	1.10	1.07	1.48	1.78	2.43	2.44	1.54
COMPOUND GROWTH RATE (PER CENT) -								
2006-2010	2.62	0.88	1.28	2.78	1.83	2.57	2.57	1.64
2011-2016	2.57	1.12	1.04	1.49	1.17	2.52	2.53	1.13
2010-2020	2.54	1.26	1.20	1.67	1.29	2.51	2.51	1.26

All data are for the financial year ending in June of the year specified.

TABLE B.4 GAS TRANSMISSION SYSTEM QLD - GAS CUSTOMERS BY MARKET SECTOR - NORTHERN

UNIT	RESI- DENTIAL	COMMERCIAL		INDUSTRIAL		TOTAL GTS	TARIFF V	TARIFF D
		TARIFF V	TARIFF D	TARIFF V	TARIFF D			
	***** NUMBER *****							
2006	2926.00	361.00	1.00	25.00	5.00	3316.00	3312.00	6.00
2007	2930.00	358.00	1.00	27.00	5.00	3319.00	3315.00	6.00
2008	2980.00	353.00	1.00	26.00	5.00	3363.00	3359.00	6.00
2009	3114.00	356.00	1.00	27.00	4.00	3501.00	3497.00	5.00
2010	3149.95	358.36	1.00	27.05	4.04	3539.40	3535.36	5.04
2011	3176.20	365.18	1.02	27.30	4.11	3572.78	3568.67	5.12
2012	3215.79	376.60	1.04	27.73	4.20	3624.32	3620.12	5.24
2013	3268.59	383.61	1.06	27.89	4.26	3684.35	3680.09	5.32
2014	3320.48	385.09	1.06	27.70	4.27	3737.53	3733.26	5.33
2015	3363.93	387.40	1.06	27.52	4.29	3783.13	3778.85	5.35
2016	3408.26	393.05	1.07	27.56	4.33	3833.21	3828.88	5.41
2017	3458.65	399.69	1.09	27.71	4.39	3890.45	3886.05	5.48
2018	3509.89	406.17	1.10	27.86	4.46	3948.38	3943.92	5.56
2019	3563.79	414.34	1.12	28.07	4.53	4010.71	4006.19	5.64
2020	3617.78	421.80	1.13	28.23	4.59	4072.40	4067.81	5.72
PERCENTAGE CHANGES								
2008	1.71	-1.40	0.00	-3.70	0.00	1.33	1.33	0.00
2009	4.50	0.85	0.00	3.85	-20.00	4.10	4.11	-16.67
2010	1.15	0.66	0.33	0.19	1.01	1.10	1.10	0.88
2011	0.83	1.90	1.49	0.90	1.63	0.94	0.94	1.60
2012	1.25	3.13	2.61	1.58	2.21	1.44	1.44	2.29
2013	1.64	1.86	1.43	0.61	1.42	1.66	1.66	1.42
2014	1.59	0.39	0.01	-0.71	0.32	1.44	1.44	0.26
2015	1.31	0.60	0.19	-0.64	0.41	1.22	1.22	0.36
2016	1.32	1.46	1.01	0.17	1.09	1.32	1.32	1.07
COMPOUND GROWTH RATE (PER CENT) -								
2006-2010	1.86	-0.18	0.08	1.99	-5.19	1.64	1.64	-4.25
2011-2016	1.42	1.48	1.05	0.20	1.09	1.42	1.42	1.08
2010-2020	1.39	1.64	1.20	0.43	1.29	1.41	1.41	1.27

All data are for the financial year ending in June of the year specified.

Appendix C

**Tariff D sales and customers by
industry and region – two regions**

TABLE C.1 GAS TRANSMISSION SYSTEM - TARIFF D GAS CONSUMPTION BY INDUSTRY SECTOR - BRISBANE

	AGRI- CULTURE, FORESTRY, FISHING + HUNTING DIV A	MINING DIV B	MANUFA- CTURING DIV C	ELEC- TRICITY, GAS + WATER DIV D	CONSTR- UCTION DIV E	COMMERCE- WHOLESALE AND RETAIL TRADE DIV F	TRANSPORT, STORAGE, AND COMMUNI- CATION DIV G+H	FINANCE, PROPERTY AND BUSINESS SERVICES DIV I	PUBLIC ADMIN, DEFENCE, COMMUNITY SERVICES DIV J+K	RECREATION, PERSONAL AND OTHER SERVICES DIV L	TOTAL D TARIFF
UNIT	***** TERAJOULES *****										
2006	13.34	0.00	2309.03	0.00	0.00	0.00	253.04	0.00	311.56	77.01	2963.98
2007	13.00	0.00	2344.71	0.00	0.00	0.00	328.32	0.00	354.39	79.14	3119.56
2008	13.21	0.00	2602.34	0.00	0.00	0.00	554.94	0.00	383.12	94.69	3648.30
2009	13.09	0.00	2556.88	5.35	0.00	4.69	640.66	0.00	365.57	84.73	3670.97
2010	13.20	0.00	2529.17	5.35	0.00	4.76	643.15	0.00	364.96	85.46	3646.05
2011	13.46	0.00	2569.18	5.35	0.00	4.95	662.02	0.00	369.42	88.57	3712.95
2012	13.86	0.00	2724.17	5.35	0.00	5.29	698.48	0.00	379.02	94.62	3920.78
2013	14.13	0.00	2815.00	5.35	0.00	5.50	719.84	0.00	382.50	98.25	4040.57
2014	14.25	0.00	2766.68	5.35	0.00	5.57	721.98	0.00	378.22	98.94	3990.99
2015	14.44	0.00	2766.73	5.35	0.00	5.67	727.57	0.00	375.60	100.29	3995.65
2016	14.72	0.00	2865.94	5.35	0.00	5.86	744.68	0.00	377.80	103.40	4117.75
2017	15.00	0.00	2957.50	5.35	0.00	6.08	764.63	0.00	381.68	106.85	4237.09
2018	15.26	0.00	2990.81	5.35	0.00	6.29	783.67	0.00	385.44	110.13	4296.96
2019	15.58	0.00	3089.40	5.35	0.00	6.57	809.62	0.00	391.10	114.60	4432.21
2020	15.87	0.00	3190.45	5.35	0.00	6.82	832.98	0.00	395.77	118.65	4565.89
PERCENTAGE CHANGES											
2008	1.62	0.00	10.99	0.00	0.00	0.00	69.02	0.00	8.11	19.65	16.95
2009	-0.91	0.00	-1.75	0.00	0.00	0.00	15.45	0.00	-4.58	-10.52	0.62
2010	0.86	0.00	-1.08	0.00	0.00	1.56	0.39	0.00	-0.17	0.86	-0.68
2011	1.92	0.00	1.58	0.00	0.00	4.02	2.93	0.00	1.22	3.64	1.83
2012	2.98	0.00	6.03	0.00	0.00	6.73	5.51	0.00	2.60	6.84	5.60
2013	1.95	0.00	3.33	0.00	0.00	4.08	3.06	0.00	0.92	3.83	3.06
2014	0.84	0.00	-1.72	0.00	0.00	1.23	0.30	0.00	-1.12	0.71	-1.23
2015	1.33	0.00	0.00	0.00	0.00	1.77	0.78	0.00	-0.69	1.37	0.12
2016	2.00	0.00	3.59	0.00	0.00	3.38	2.35	0.00	0.59	3.09	3.06
COMPOUND GROWTH RATE (PER CENT) -											
2006-2010	-0.26	0.00	2.30	0.00	0.00	0.00	26.26	0.00	4.03	2.64	5.31
2011-2016	1.82	0.00	2.21	0.00	0.00	3.42	2.38	0.00	0.45	3.14	2.09
2010-2020	1.86	0.00	2.35	0.00	0.00	3.66	2.62	0.00	0.81	3.34	2.28

All data are for the financial year ending in June of the year specified.

TABLE C.2 GAS TRANSMISSION SYSTEM - TARIFF D GAS CONSUMPTION BY MANUFACTURING SECTOR - BRISBANE

	FOOD, BEV. + TOBACCO AND FOOTWEAR ASIC 21	TEXTILES, CLOTHING AND FURNITURE ASIC 23/24	WOOD, WOOD PROD'S AND PRINTING ASIC 25	PAPER, PAPER AND COAL ASIC 26	CHEMICAL, PETROLEUM AND COAL ASIC 27	NON- METALLIC MINERAL PRODUCTS ASIC 28	BASIC METAL PRODUCTS ASIC 29	FABRI- CATED METAL PRODUCTS ASIC 31	TRANSPORT EQUIPMENT ASIC 32	OTHER MACHINERY AND EQUIPMENT ASIC 33	MISCELL -ANEOUS MANUFA- CTURING ASIC 34	TOTAL MANUFA- CTURING DIV C
UNIT	***** TERAJOULES *****											
2006	496.63	0.00	37.09	146.94	136.82	1274.39	19.99	170.37	18.65	0.00	8.15	2309.03
2007	525.30	0.00	46.63	135.78	152.52	1258.42	19.25	179.78	18.56	0.00	8.47	2344.71
2008	604.95	0.00	46.75	188.50	169.11	1258.04	18.78	286.08	19.39	0.00	10.74	2602.34
2009	733.22	0.00	31.48	195.28	147.21	1151.33	16.62	254.36	17.23	0.00	10.15	2556.88
2010	741.77	0.00	31.75	192.81	149.02	1112.80	16.71	256.76	17.35	0.00	10.20	2529.17
2011	766.96	0.00	32.23	196.99	153.30	1111.40	17.07	263.21	17.61	0.00	10.41	2569.18
2012	809.43	0.00	32.90	208.08	160.11	1193.32	17.70	273.80	18.01	0.00	10.79	2724.17
2013	834.52	0.00	33.15	213.31	164.05	1242.94	18.01	279.86	18.17	0.00	10.98	2815.00
2014	839.32	0.00	32.87	211.66	164.51	1191.38	17.94	280.03	18.03	0.00	10.93	2766.68
2015	848.77	0.00	32.66	211.64	165.90	1178.96	17.93	282.03	17.88	0.00	10.97	2766.73
2016	870.37	0.00	32.76	215.42	169.48	1242.85	18.13	287.84	17.92	0.00	11.16	2865.94
2017	895.45	0.00	33.04	219.68	173.80	1292.75	18.41	294.92	18.05	0.00	11.39	2957.50
2018	919.87	0.00	33.34	223.27	178.08	1285.87	18.69	301.89	18.20	0.00	11.61	2990.81
2019	950.52	0.00	33.68	229.30	183.32	1332.58	19.05	310.67	18.37	0.00	11.91	3089.40
2020	978.44	0.00	33.98	234.17	188.11	1387.04	19.37	318.66	18.51	0.00	12.17	3190.45
PERCENTAGE CHANGES												
2008	15.16	0.00	0.26	38.83	10.88	-0.03	-2.44	59.13	4.47	0.00	26.80	10.99
2009	21.20	0.00	-32.66	3.60	-12.95	-8.48	-11.50	-11.09	-11.14	0.00	-5.49	-1.75
2010	1.17	0.00	0.85	-1.26	1.23	-3.35	0.56	0.94	0.70	0.00	0.47	-1.08
2011	3.40	0.00	1.52	2.17	2.88	-0.13	2.16	2.51	1.52	0.00	2.10	1.58
2012	5.54	0.00	2.09	5.63	4.44	7.37	3.69	4.03	2.26	0.00	3.66	6.03
2013	3.10	0.00	0.74	2.51	2.46	4.16	1.76	2.21	0.89	0.00	1.73	3.33
2014	0.58	0.00	-0.83	-0.77	0.28	-4.15	-0.40	0.06	-0.79	0.00	-0.44	-1.72
2015	1.13	0.00	-0.66	-0.01	0.85	-1.04	-0.10	0.71	-0.80	0.00	0.35	0.00
2016	2.54	0.00	0.32	1.79	2.16	5.42	1.14	2.06	0.21	0.00	1.71	3.59
COMPOUND GROWTH RATE (PER CENT) -												
2006-2010	10.55	0.00	-3.81	7.03	2.16	-3.33	-4.38	10.80	-1.79	0.00	5.76	2.30
2011-2016	2.56	0.00	0.33	1.81	2.03	2.26	1.21	1.81	0.35	0.00	1.39	2.21
2010-2020	2.81	0.00	0.68	1.96	2.36	2.23	1.48	2.18	0.65	0.00	1.78	2.35

All data are for the financial year ending in June of the year specified.

TABLE C.3 GAS TRANSMISSION SYSTEM - TARIFF D GAS CONSUMPTION BY INDUSTRY SECTOR - NORTHERN

	AGRI- CULTURE, FORESTRY, FISHING + HUNTING DIV A	MINING DIV B	MANUFA- CTURING DIV C	ELEC- TRICITY, GAS + WATER DIV D	CONSTR- UCTION DIV E	COMMERCE- WHOLESALE AND RETAIL TRADE DIV F	TRANSPORT, STORAGE, AND COMMUNI- CATION DIV G+H	FINANCE, PROPERTY AND BUSINESS SERVICES DIV I	PUBLIC ADMIN, DEFENCE, COMMUNITY SERVICES DIV J+K	RECREATION, PERSONAL AND OTHER SERVICES DIV L	TOTAL D TARIFF
UNIT	***** TERAJOULES *****										
2006	9.29	0.00	56.50	0.00	0.00	0.00	0.00	0.00	0.00	6.61	72.40
2007	13.09	0.00	70.75	0.00	0.00	0.00	0.00	0.00	0.00	16.57	100.41
2008	8.57	0.00	75.02	0.00	0.00	0.00	0.00	0.00	0.00	18.12	101.71
2009	2.31	0.00	57.37	0.00	0.00	0.00	0.00	0.00	0.00	17.82	77.50
2010	2.33	0.00	58.24	0.00	0.00	0.00	0.00	0.00	0.00	17.92	78.49
2011	2.36	0.00	59.61	0.00	0.00	0.00	0.00	0.00	0.00	18.36	80.34
2012	2.42	0.00	61.48	0.00	0.00	0.00	0.00	0.00	0.00	19.17	83.07
2013	2.46	0.00	62.69	0.00	0.00	0.00	0.00	0.00	0.00	19.63	84.78
2014	2.48	0.00	62.85	0.00	0.00	0.00	0.00	0.00	0.00	19.63	84.96
2015	2.50	0.00	63.06	0.00	0.00	0.00	0.00	0.00	0.00	19.70	85.26
2016	2.54	0.00	63.96	0.00	0.00	0.00	0.00	0.00	0.00	20.03	86.53
2017	2.58	0.00	65.22	0.00	0.00	0.00	0.00	0.00	0.00	20.44	88.24
2018	2.62	0.00	66.54	0.00	0.00	0.00	0.00	0.00	0.00	20.85	90.01
2019	2.66	0.00	68.06	0.00	0.00	0.00	0.00	0.00	0.00	21.38	92.11
2020	2.70	0.00	69.51	0.00	0.00	0.00	0.00	0.00	0.00	21.86	94.07
PERCENTAGE CHANGES											
2008	-34.53	0.00	6.04	0.00	0.00	0.00	0.00	0.00	0.00	9.35	1.29
2009	-73.05	0.00	-23.53	0.00	0.00	0.00	0.00	0.00	0.00	-1.66	-23.80
2010	0.77	0.00	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.56	1.28
2011	1.58	0.00	2.35	0.00	0.00	0.00	0.00	0.00	0.00	2.49	2.36
2012	2.39	0.00	3.14	0.00	0.00	0.00	0.00	0.00	0.00	4.39	3.40
2013	1.61	0.00	1.97	0.00	0.00	0.00	0.00	0.00	0.00	2.39	2.06
2014	0.63	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.21
2015	1.02	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.35
2016	1.62	0.00	1.43	0.00	0.00	0.00	0.00	0.00	0.00	1.69	1.49
COMPOUND GROWTH RATE (PER CENT) -											
2006-2010	-29.25	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	28.32	2.04
2011-2016	1.45	0.00	1.42	0.00	0.00	0.00	0.00	0.00	0.00	1.75	1.50
2010-2020	1.50	0.00	1.78	0.00	0.00	0.00	0.00	0.00	0.00	2.01	1.83

All data are for the financial year ending in June of the year specified.

TABLE C.4 GAS TRANSMISSION SYSTEM - TARIFF D GAS CONSUMPTION BY MANUFACTURING SECTOR - NORTHERN

	FOOD, BEV. + TOBACCO AND FOOTWEAR ASIC 21	TEXTILES, CLOTHING AND FURNITURE ASIC 23/24	WOOD, PROD'S AND PRINTING ASIC 25	PAPER, PAPER AND COAL ASIC 26	CHEMICAL, PETROLEUM AND COAL ASIC 27	NON- METALLIC MINERAL PRODUCTS ASIC 28	BASIC METAL PRODUCTS ASIC 29	FABRI- CATED METAL PRODUCTS ASIC 31	TRANSPORT EQUIPMENT ASIC 32	OTHER MACHINERY AND EQUIPMENT ASIC 33	MISCELL -ANEOUS MANUFA- CTURING ASIC 34	TOTAL MANUFA- CTURING DIV C
UNIT	***** TERAJOULES *****											
2006	14.76	0.00	0.00	0.00	0.00	16.55	0.00	0.00	25.19	0.00	0.00	56.50
2007	13.24	0.00	0.00	0.00	0.00	28.78	0.00	0.00	28.73	0.00	0.00	70.75
2008	12.08	0.00	0.00	0.00	0.00	30.78	0.00	0.00	32.16	0.00	0.00	75.02
2009	11.20	0.00	0.00	0.00	0.00	20.47	0.00	0.00	25.70	0.00	0.00	57.37
2010	11.62	0.00	0.00	0.00	0.00	20.69	0.00	0.00	25.93	0.00	0.00	58.24
2011	12.18	0.00	0.00	0.00	0.00	21.20	0.00	0.00	26.23	0.00	0.00	59.61
2012	12.88	0.00	0.00	0.00	0.00	22.01	0.00	0.00	26.58	0.00	0.00	61.48
2013	13.45	0.00	0.00	0.00	0.00	22.50	0.00	0.00	26.74	0.00	0.00	62.69
2014	13.79	0.00	0.00	0.00	0.00	22.53	0.00	0.00	26.54	0.00	0.00	62.85
2015	14.15	0.00	0.00	0.00	0.00	22.62	0.00	0.00	26.29	0.00	0.00	63.06
2016	14.68	0.00	0.00	0.00	0.00	23.00	0.00	0.00	26.28	0.00	0.00	63.96
2017	15.30	0.00	0.00	0.00	0.00	23.49	0.00	0.00	26.43	0.00	0.00	65.22
2018	15.96	0.00	0.00	0.00	0.00	23.97	0.00	0.00	26.61	0.00	0.00	66.54
2019	16.69	0.00	0.00	0.00	0.00	24.56	0.00	0.00	26.81	0.00	0.00	68.06
2020	17.41	0.00	0.00	0.00	0.00	25.10	0.00	0.00	26.99	0.00	0.00	69.51
PERCENTAGE CHANGES												
2008	-8.76	0.00	0.00	0.00	0.00	6.95	0.00	0.00	11.94	0.00	0.00	6.04
2009	-7.28	0.00	0.00	0.00	0.00	-33.50	0.00	0.00	-20.09	0.00	0.00	-23.53
2010	3.78	0.00	0.00	0.00	0.00	1.05	0.00	0.00	0.91	0.00	0.00	1.52
2011	4.80	0.00	0.00	0.00	0.00	2.48	0.00	0.00	1.14	0.00	0.00	2.35
2012	5.77	0.00	0.00	0.00	0.00	3.84	0.00	0.00	1.35	0.00	0.00	3.14
2013	4.38	0.00	0.00	0.00	0.00	2.20	0.00	0.00	0.61	0.00	0.00	1.97
2014	2.51	0.00	0.00	0.00	0.00	0.13	0.00	0.00	-0.76	0.00	0.00	0.26
2015	2.61	0.00	0.00	0.00	0.00	0.43	0.00	0.00	-0.94	0.00	0.00	0.33
2016	3.75	0.00	0.00	0.00	0.00	1.68	0.00	0.00	-0.04	0.00	0.00	1.43
COMPOUND GROWTH RATE (PER CENT) -												
2006-2010	-5.80	0.00	0.00	0.00	0.00	5.73	0.00	0.00	0.73	0.00	0.00	0.76
2011-2016	3.80	0.00	0.00	0.00	0.00	1.65	0.00	0.00	0.04	0.00	0.00	1.42
2010-2020	4.13	0.00	0.00	0.00	0.00	1.95	0.00	0.00	0.40	0.00	0.00	1.78

All data are for the financial year ending in June of the year specified.

TABLE C.5 GAS TRANSMISSION SYSTEM - TARIFF D GAS CUSTOMERS BY INDUSTRY SECTOR - BRISBANE

	AGRI- CULTURE, FORESTRY, FISHING + HUNTING DIV A	MINING DIV B	MANUFA- CTURING DIV C	ELEC- TRICITY, GAS + WATER DIV D	CONSTR- UCTION DIV E	COMMERCE- WHOLESALE AND RETAIL TRADE DIV F	TRANSPORT, STORAGE, AND COMMUNI- CATION DIV G+H	FINANCE, PROPERTY AND BUSINESS SERVICES DIV I	PUBLIC ADMIN, DEFENCE, COMMUNITY SERVICES DIV J+K	RECREATION, PERSONAL AND OTHER SERVICES DIV L	TOTAL D TARIFF										
UNIT	*****										NUMBER	*****									
2006	1.00	0.00	37.00	0.00	0.00	0.00	4.00	0.00	10.00	6.00	58.00										
2007	1.00	0.00	38.00	0.00	0.00	0.00	4.00	0.00	10.00	6.00	59.00										
2008	1.00	0.00	41.00	1.00	0.00	0.00	4.00	0.00	9.00	6.00	62.00										
2009	1.00	0.00	40.00	1.00	0.00	1.00	4.00	0.00	9.00	6.00	62.00										
2010	1.01	0.00	39.86	1.00	0.00	1.01	4.01	0.00	8.99	6.03	61.90										
2011	1.02	0.00	40.27	1.00	0.00	1.03	4.08	0.00	9.06	6.16	62.62										
2012	1.03	0.00	41.55	1.00	0.00	1.07	4.21	0.00	9.20	6.41	64.48										
2013	1.05	0.00	42.27	1.00	0.00	1.10	4.29	0.00	9.25	6.56	65.52										
2014	1.05	0.00	41.93	1.00	0.00	1.11	4.30	0.00	9.19	6.59	65.16										
2015	1.06	0.00	41.94	1.00	0.00	1.12	4.32	0.00	9.15	6.64	65.22										
2016	1.07	0.00	42.69	1.00	0.00	1.14	4.38	0.00	9.18	6.76	66.23										
2017	1.09	0.00	43.41	1.00	0.00	1.17	4.45	0.00	9.24	6.90	67.25										
2018	1.10	0.00	43.75	1.00	0.00	1.19	4.51	0.00	9.29	7.02	67.87										
2019	1.11	0.00	44.54	1.00	0.00	1.22	4.60	0.00	9.37	7.19	69.04										
2020	1.12	0.00	45.31	1.00	0.00	1.25	4.68	0.00	9.44	7.34	70.15										
PERCENTAGE CHANGES																					
2008	0.00	0.00	7.89	0.00	0.00	0.00	0.00	0.00	-10.00	0.00	5.08										
2009	0.00	0.00	-2.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
2010	0.51	0.00	-0.36	0.00	0.00	0.93	0.23	0.00	-0.10	0.51	-0.16										
2011	1.15	0.00	1.04	0.00	0.00	2.39	1.75	0.00	0.73	2.17	1.16										
2012	1.78	0.00	3.18	0.00	0.00	3.98	3.27	0.00	1.55	4.05	2.98										
2013	1.17	0.00	1.73	0.00	0.00	2.43	1.82	0.00	0.55	2.28	1.60										
2014	0.50	0.00	-0.81	0.00	0.00	0.74	0.18	0.00	-0.67	0.42	-0.54										
2015	0.80	0.00	0.02	0.00	0.00	1.06	0.46	0.00	-0.42	0.82	0.10										
2016	1.20	0.00	1.79	0.00	0.00	2.02	1.40	0.00	0.35	1.84	1.54										
COMPOUND GROWTH RATE (PER CENT) -																					
2006-2010	0.13	0.00	1.88	0.00	0.00	0.00	0.06	0.00	-2.62	0.13	1.64										
2011-2016	1.09	0.00	1.17	0.00	0.00	2.04	1.42	0.00	0.27	1.87	1.13										
2010-2020	1.11	0.00	1.29	0.00	0.00	2.18	1.56	0.00	0.49	1.99	1.26										

All data are for the financial year ending in June of the year specified.

TABLE C.6 GAS TRANSMISSION SYSTEM - TARIFF D GAS CUSTOMERS BY MANUFACTURING SECTOR - BRISBANE

	FOOD, BEV. + TOBACCO AND FOOTWEAR ASIC 21	TEXTILES, CLOTHING AND FURNITURE ASIC 23/24	WOOD, PROD'S AND PRINTING ASIC 25	PAPER, PAPER AND COAL ASIC 26	CHEMICAL, PETROLEUM AND COAL ASIC 27	NON- METALLIC MINERAL PRODUCTS ASIC 28	BASIC METAL PRODUCTS ASIC 29	FABRI- CATED METAL PRODUCTS ASIC 31	TRANSPORT EQUIPMENT ASIC 32	OTHER MACHINERY AND EQUIPMENT ASIC 33	MISCELL -ANEOUS MANUFA- CTURING ASIC 34	TOTAL MANUFA- CTURING DIV C
UNIT	***** NUMBER *****											
2006	8.00	0.00	3.00	3.00	2.00	11.00	1.00	7.00	1.00	0.00	1.00	37.00
2007	8.00	0.00	3.00	3.00	2.00	12.00	1.00	7.00	1.00	0.00	1.00	38.00
2008	9.00	0.00	3.00	3.00	2.00	14.00	1.00	7.00	1.00	0.00	1.00	41.00
2009	9.00	0.00	3.00	3.00	2.00	13.00	1.00	7.00	1.00	0.00	1.00	40.00
2010	9.06	0.00	3.02	2.98	2.01	12.74	1.00	7.04	1.00	0.00	1.00	39.86
2011	9.25	0.00	3.04	3.02	2.05	12.73	1.02	7.15	1.01	0.00	1.02	40.27
2012	9.55	0.00	3.08	3.12	2.10	13.28	1.04	7.32	1.03	0.00	1.04	41.55
2013	9.73	0.00	3.09	3.16	2.13	13.61	1.05	7.41	1.03	0.00	1.05	42.27
2014	9.76	0.00	3.08	3.15	2.14	13.27	1.05	7.42	1.03	0.00	1.05	41.93
2015	9.83	0.00	3.07	3.15	2.15	13.19	1.05	7.45	1.02	0.00	1.05	41.94
2016	9.98	0.00	3.07	3.18	2.18	13.61	1.05	7.54	1.02	0.00	1.06	42.69
2017	10.15	0.00	3.09	3.22	2.21	13.94	1.06	7.65	1.03	0.00	1.07	43.41
2018	10.31	0.00	3.11	3.25	2.24	13.89	1.07	7.76	1.03	0.00	1.08	43.75
2019	10.52	0.00	3.12	3.30	2.28	14.19	1.09	7.89	1.04	0.00	1.10	44.54
2020	10.70	0.00	3.14	3.35	2.32	14.54	1.10	8.01	1.04	0.00	1.11	45.31
PERCENTAGE CHANGES												
2008	12.50	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	7.89
2009	0.00	0.00	0.00	0.00	0.00	-7.14	0.00	0.00	0.00	0.00	0.00	-2.44
2010	0.70	0.00	0.51	-0.76	0.73	-2.02	0.34	0.57	0.42	0.00	0.28	-0.36
2011	2.02	0.00	0.91	1.29	1.72	-0.08	1.29	1.50	0.91	0.00	1.25	1.04
2012	3.29	0.00	1.25	3.34	2.64	4.36	2.20	2.40	1.35	0.00	2.18	3.18
2013	1.85	0.00	0.45	1.50	1.47	2.47	1.05	1.32	0.53	0.00	1.03	1.73
2014	0.34	0.00	-0.50	-0.46	0.17	-2.51	-0.24	0.04	-0.48	0.00	-0.26	-0.81
2015	0.67	0.00	-0.40	-0.01	0.51	-0.63	-0.06	0.43	-0.48	0.00	0.21	0.02
2016	1.52	0.00	0.19	1.07	1.29	3.22	0.68	1.23	0.12	0.00	1.03	1.79
COMPOUND GROWTH RATE (PER CENT) -												
2006-2010	3.17	0.00	0.13	-0.19	0.18	3.73	0.08	0.14	0.11	0.00	0.07	1.88
2011-2016	1.53	0.00	0.20	1.08	1.21	1.35	0.72	1.08	0.21	0.00	0.83	1.17
2010-2020	1.68	0.00	0.41	1.17	1.41	1.33	0.89	1.30	0.39	0.00	1.06	1.29

All data are for the financial year ending in June of the year specified.

TABLE C.7 GAS TRANSMISSION SYSTEM - TARIFF D GAS CUSTOMERS BY INDUSTRY SECTOR - NORTHERN

	AGRI- CULTURE, FORESTRY, FISHING + HUNTING DIV A	MINING DIV B	MANUFA- CTURING DIV C	ELEC- TRICITY, GAS + WATER DIV D	CONSTR- UCTION DIV E	COMMERCE- WHOLESALE AND RETAIL TRADE DIV F	TRANSPORT, STORAGE, AND COMMUNI- CATION DIV G+H	FINANCE, PROPERTY AND BUSINESS SERVICES DIV I	PUBLIC ADMIN, DEFENCE, COMMUNITY SERVICES DIV J+K	RECREATION, PERSONAL AND OTHER SERVICES DIV L	TOTAL D TARIFF										
UNIT	*****										NUMBER	*****									
2006	1.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	6.00									
2007	1.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	6.00									
2008	1.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	6.00									
2009	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	5.00									
2010	0.00	0.00	4.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	5.04									
2011	0.00	0.00	4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02	5.12									
2012	0.00	0.00	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	5.24									
2013	0.00	0.00	4.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	5.32									
2014	0.00	0.00	4.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	5.33									
2015	0.00	0.00	4.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	5.35									
2016	0.00	0.00	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07	5.41									
2017	0.00	0.00	4.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	5.48									
2018	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	5.56									
2019	0.00	0.00	4.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12	5.64									
2020	0.00	0.00	4.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13	5.72									
PERCENTAGE CHANGES																					
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00									
2009	-100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-16.67									
2010	0.00	0.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.88									
2011	0.00	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49	1.60									
2012	0.00	0.00	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.61	2.29									
2013	0.00	0.00	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43	1.42									
2014	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.26									
2015	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.36									
2016	0.00	0.00	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01	1.07									
COMPOUND GROWTH RATE (PER CENT) -																					
2006-2010	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	-4.25									
2011-2016	0.00	0.00	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05	1.08									
2010-2020	0.00	0.00	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	1.27									

All data are for the financial year ending in June of the year specified.

TABLE C.8 GAS TRANSMISSION SYSTEM - TARIFF D GAS CUSTOMERS BY MANUFACTURING SECTOR - NORTHERN

	FOOD, BEV. + TOBACCO AND FOOTWEAR ASIC 21	TEXTILES, CLOTHING AND FURNITURE ASIC 23/24	WOOD, PROD'S AND PRINTING ASIC 25	PAPER, PAPER AND COAL ASIC 26	CHEMICAL, PETROLEUM AND COAL ASIC 27	NON- METALLIC MINERAL PRODUCTS ASIC 28	BASIC METAL PRODUCTS ASIC 29	FABRI- CATED METAL PRODUCTS ASIC 31	TRANSPORT EQUIPMENT ASIC 32	OTHER MACHINERY AND EQUIPMENT ASIC 33	MISCELL -ANEOUS MANUFA- CTURING ASIC 34	TOTAL MANUFA- CTURING DIV C
UNIT	***** NUMBER *****											
2006	1.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	1.00	0.00	0.00	4.00
2007	1.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	1.00	0.00	0.00	4.00
2008	1.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	1.00	0.00	0.00	4.00
2009	1.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	1.00	0.00	0.00	4.00
2010	1.02	0.00	0.00	0.00	0.00	2.01	0.00	0.00	1.01	0.00	0.00	4.04
2011	1.05	0.00	0.00	0.00	0.00	2.04	0.00	0.00	1.01	0.00	0.00	4.11
2012	1.09	0.00	0.00	0.00	0.00	2.09	0.00	0.00	1.02	0.00	0.00	4.20
2013	1.12	0.00	0.00	0.00	0.00	2.12	0.00	0.00	1.02	0.00	0.00	4.26
2014	1.13	0.00	0.00	0.00	0.00	2.12	0.00	0.00	1.02	0.00	0.00	4.27
2015	1.15	0.00	0.00	0.00	0.00	2.12	0.00	0.00	1.01	0.00	0.00	4.29
2016	1.18	0.00	0.00	0.00	0.00	2.15	0.00	0.00	1.01	0.00	0.00	4.33
2017	1.21	0.00	0.00	0.00	0.00	2.17	0.00	0.00	1.02	0.00	0.00	4.39
2018	1.24	0.00	0.00	0.00	0.00	2.20	0.00	0.00	1.02	0.00	0.00	4.46
2019	1.27	0.00	0.00	0.00	0.00	2.23	0.00	0.00	1.03	0.00	0.00	4.53
2020	1.30	0.00	0.00	0.00	0.00	2.26	0.00	0.00	1.03	0.00	0.00	4.59
PERCENTAGE CHANGES												
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	2.25	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.54	0.00	0.00	1.01
2011	2.85	0.00	0.00	0.00	0.00	1.48	0.00	0.00	0.68	0.00	0.00	1.63
2012	3.42	0.00	0.00	0.00	0.00	2.29	0.00	0.00	0.81	0.00	0.00	2.21
2013	2.60	0.00	0.00	0.00	0.00	1.32	0.00	0.00	0.36	0.00	0.00	1.42
2014	1.50	0.00	0.00	0.00	0.00	0.08	0.00	0.00	-0.46	0.00	0.00	0.32
2015	1.56	0.00	0.00	0.00	0.00	0.26	0.00	0.00	-0.57	0.00	0.00	0.41
2016	2.23	0.00	0.00	0.00	0.00	1.00	0.00	0.00	-0.02	0.00	0.00	1.09
COMPOUND GROWTH RATE (PER CENT) -												
2006-2010	0.56	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.14	0.00	0.00	0.25
2011-2016	2.26	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.02	0.00	0.00	1.09
2010-2020	2.46	0.00	0.00	0.00	0.00	1.17	0.00	0.00	0.24	0.00	0.00	1.29

All data are for the financial year ending in June of the year specified.

TABLE C.9 GAS TRANSMISSION SYSTEM - TARIFF D MDQ BY INDUSTRY SECTOR - BRISBANE

	AGRI- CULTURE, FORESTRY, FISHING + HUNTING DIV A	MINING DIV B	MANUFA- CTURING DIV C	ELEC- TRICITY, GAS + WATER DIV D	CONSTR- UCTION DIV E	COMMERCE- WHOLESALE AND RETAIL TRADE DIV F	TRANSPORT, STORAGE, AND COMMUNI- CATION DIV G+H	FINANCE, PROPERTY AND BUSINESS SERVICES DIV I	PUBLIC ADMIN, DEFENCE, COMMUNITY SERVICES DIV J+K	RECREATION, PERSONAL AND OTHER SERVICES DIV L	TOTAL D TARIFF
UNIT	*****					TJ	*****				
2006	63.00	0.00	11652.00	0.00	0.00	0.00	1852.00	0.00	2191.00	372.00	16130.00
2007	63.00	0.00	11374.00	0.00	0.00	0.00	1811.00	0.00	2191.00	372.00	15811.00
2008	63.00	0.00	15349.00	67.00	0.00	0.00	2376.00	0.00	2113.00	391.00	20292.00
2009	63.00	0.00	14771.00	67.00	0.00	88.00	2297.00	0.00	2244.00	395.00	19858.00
2010	63.30	0.00	14679.56	67.00	0.00	88.75	2301.91	0.00	2241.92	396.86	19772.31
2011	63.96	0.00	14797.75	67.00	0.00	90.70	2338.81	0.00	2256.95	404.74	19952.91
2012	65.00	0.00	15276.54	67.00	0.00	94.01	2408.80	0.00	2289.02	419.73	20553.11
2013	65.70	0.00	15552.33	67.00	0.00	96.09	2449.03	0.00	2300.58	428.51	20892.23
2014	66.00	0.00	15395.39	67.00	0.00	96.74	2453.03	0.00	2286.39	430.17	20727.72
2015	66.48	0.00	15390.17	67.00	0.00	97.68	2463.47	0.00	2277.66	433.39	20728.85
2016	67.21	0.00	15695.43	67.00	0.00	99.49	2495.16	0.00	2284.98	440.71	21082.98
2017	67.91	0.00	15969.80	67.00	0.00	101.50	2531.70	0.00	2297.85	448.76	21417.52
2018	68.56	0.00	16060.26	67.00	0.00	103.44	2566.20	0.00	2310.27	456.28	21565.00
2019	69.34	0.00	16347.18	67.00	0.00	105.89	2612.59	0.00	2328.87	466.36	21930.21
2020	70.05	0.00	16639.81	67.00	0.00	108.14	2653.79	0.00	2344.12	475.35	22291.26
PERCENTAGE CHANGES											
2008	0.00	0.00	34.95	0.00	0.00	0.00	31.20	0.00	-3.56	5.11	28.34
2009	0.00	0.00	-3.77	0.00	0.00	0.00	-3.32	0.00	6.20	1.02	-2.14
2010	0.47	0.00	-0.62	0.00	0.00	0.86	0.21	0.00	-0.09	0.47	-0.43
2011	1.05	0.00	0.81	0.00	0.00	2.19	1.60	0.00	0.67	1.99	0.91
2012	1.63	0.00	3.24	0.00	0.00	3.65	2.99	0.00	1.42	3.70	3.01
2013	1.07	0.00	1.81	0.00	0.00	2.22	1.67	0.00	0.50	2.09	1.65
2014	0.46	0.00	-1.01	0.00	0.00	0.67	0.16	0.00	-0.62	0.39	-0.79
2015	0.73	0.00	-0.03	0.00	0.00	0.97	0.43	0.00	-0.38	0.75	0.01
2016	1.10	0.00	1.98	0.00	0.00	1.85	1.29	0.00	0.32	1.69	1.71
COMPOUND GROWTH RATE (PER CENT) -											
2006-2010	0.12	0.00	5.94	0.00	0.00	0.00	5.59	0.00	0.58	1.63	5.22
2011-2016	1.00	0.00	1.18	0.00	0.00	1.87	1.30	0.00	0.25	1.72	1.11
2010-2020	1.02	0.00	1.26	0.00	0.00	2.00	1.43	0.00	0.45	1.82	1.21

All data are for the financial year ending in June of the year specified.

TABLE C.10 GAS TRANSMISSION SYSTEM - TARIFF D MDQ BY MANUFACTURING SECTOR - BRISBANE

	FOOD, BEV. + TOBACCO AND FOOTWEAR ASIC 21	TEXTILES, CLOTHING AND FURNITURE ASIC 23/24	WOOD, WOOD AND PROD'S ASIC 25	PAPER, PAPER PRINTING AND PUBLISHING ASIC 26	CHEMICAL, PETROLEUM AND COAL ASIC 27	NON- METALLIC MINERAL PRODUCTS ASIC 28	BASIC METAL PRODUCTS ASIC 29	FABRI- CATED METAL PRODUCTS ASIC 31	TRANSPORT EQUIPMENT ASIC 32	OTHER MACHINERY AND EQUIPMENT ASIC 33	MISCELL -ANEOUS MANUFA- CTURING ASIC 34	TOTAL MANUFA- CTURING DIV C
UNIT	*****											
	***** TJ *****											
2006	2995.00	0.00	201.00	577.00	654.00	5796.00	99.00	1119.00	164.00	0.00	47.00	11652.00
2007	2995.00	0.00	201.00	577.00	654.00	5531.00	99.00	1106.00	164.00	0.00	47.00	11374.00
2008	3883.00	0.00	201.00	667.00	422.00	7595.00	99.00	2204.00	164.00	0.00	47.00	15349.00
2009	3732.00	0.00	237.00	690.00	547.00	6906.00	99.00	2249.00	164.00	0.00	80.00	14771.00
2010	3755.87	0.00	238.11	685.19	550.68	6777.91	99.30	2260.66	164.63	0.00	80.21	14679.56
2011	3825.49	0.00	240.09	693.31	559.34	6773.23	100.48	2291.68	166.00	0.00	81.13	14797.75
2012	3940.60	0.00	242.84	714.52	572.87	7043.42	102.50	2341.99	168.05	0.00	82.75	15276.54
2013	4007.31	0.00	243.83	724.35	580.57	7203.02	103.49	2370.36	168.87	0.00	83.53	15552.33
2014	4019.98	0.00	242.72	721.26	581.46	7037.10	103.26	2371.14	168.13	0.00	83.33	15395.39
2015	4044.79	0.00	241.84	721.22	584.17	6996.66	103.20	2380.41	167.39	0.00	83.49	15390.17
2016	4101.09	0.00	242.26	728.28	591.07	7202.72	103.85	2407.29	167.59	0.00	84.27	15695.43
2017	4165.68	0.00	243.38	736.16	599.31	7360.37	104.74	2439.67	168.25	0.00	85.23	15969.80
2018	4227.77	0.00	244.60	742.75	607.37	7338.79	105.61	2471.21	168.99	0.00	86.15	16060.26
2019	4304.69	0.00	245.99	753.73	617.14	7484.23	106.73	2510.47	169.87	0.00	87.34	16347.18
2020	4373.77	0.00	247.17	762.48	625.97	7650.96	107.69	2545.80	170.60	0.00	88.38	16639.81
PERCENTAGE CHANGES												
2008	29.65	0.00	0.00	15.60	-35.47	37.32	0.00	99.28	0.00	0.00	0.00	34.95
2009	-3.89	0.00	17.91	3.45	29.62	-9.07	0.00	2.04	0.00	0.00	70.21	-3.77
2010	0.64	0.00	0.47	-0.70	0.67	-1.85	0.31	0.52	0.39	0.00	0.26	-0.62
2011	1.85	0.00	0.83	1.19	1.57	-0.07	1.18	1.37	0.83	0.00	1.15	0.81
2012	3.01	0.00	1.15	3.06	2.42	3.99	2.01	2.20	1.24	0.00	2.00	3.24
2013	1.69	0.00	0.41	1.38	1.34	2.27	0.96	1.21	0.49	0.00	0.95	1.81
2014	0.32	0.00	-0.46	-0.43	0.15	-2.30	-0.22	0.03	-0.44	0.00	-0.24	-1.01
2015	0.62	0.00	-0.36	-0.01	0.47	-0.57	-0.06	0.39	-0.44	0.00	0.19	-0.03
2016	1.39	0.00	0.18	0.98	1.18	2.95	0.63	1.13	0.11	0.00	0.94	1.98
COMPOUND GROWTH RATE (PER CENT) -												
2006-2010	5.82	0.00	4.33	4.39	-4.21	3.99	0.08	19.22	0.10	0.00	14.29	5.94
2011-2016	1.40	0.00	0.18	0.99	1.11	1.24	0.66	0.99	0.19	0.00	0.76	1.18
2010-2020	1.53	0.00	0.37	1.07	1.29	1.22	0.81	1.19	0.36	0.00	0.98	1.26

All data are for the financial year ending in June of the year specified.

TABLE C.11 GAS TRANSMISSION SYSTEM - TARIFF D MDQ BY INDUSTRY SECTOR - NORTHERN

	AGRI- CULTURE, FORESTRY, FISHING + HUNTING DIV A	MINING DIV B	MANUFA- CTURING DIV C	ELEC- TRICITY, GAS + WATER DIV D	CONSTR- UCTION DIV E	COMMERCE- WHOLESALE AND RETAIL TRADE DIV F	TRANSPORT, STORAGE, AND COMMUNI- CATION DIV G+H	FINANCE, PROPERTY AND BUSINESS SERVICES DIV I	PUBLIC ADMIN, DEFENCE, COMMUNITY SERVICES DIV J+K	RECREATION, PERSONAL AND OTHER SERVICES DIV L	TOTAL D TARIFF
UNIT	*****					TJ	*****				
2006	58.00	0.00	283.00	0.00	0.00	0.00	0.00	0.00	0.00	53.00	394.00
2007	58.00	0.00	283.00	0.00	0.00	0.00	0.00	0.00	0.00	53.00	394.00
2008	58.00	0.00	283.00	0.00	0.00	0.00	0.00	0.00	0.00	70.00	411.00
2009	0.00	0.00	336.00	0.00	0.00	0.00	0.00	0.00	0.00	70.00	406.00
2010	0.00	0.00	338.63	0.00	0.00	0.00	0.00	0.00	0.00	70.21	408.84
2011	0.00	0.00	342.95	0.00	0.00	0.00	0.00	0.00	0.00	71.17	414.12
2012	0.00	0.00	348.94	0.00	0.00	0.00	0.00	0.00	0.00	72.87	421.81
2013	0.00	0.00	352.68	0.00	0.00	0.00	0.00	0.00	0.00	73.82	426.50
2014	0.00	0.00	353.04	0.00	0.00	0.00	0.00	0.00	0.00	73.83	426.87
2015	0.00	0.00	353.59	0.00	0.00	0.00	0.00	0.00	0.00	73.96	427.55
2016	0.00	0.00	356.30	0.00	0.00	0.00	0.00	0.00	0.00	74.64	430.94
2017	0.00	0.00	360.01	0.00	0.00	0.00	0.00	0.00	0.00	75.49	435.51
2018	0.00	0.00	363.86	0.00	0.00	0.00	0.00	0.00	0.00	76.31	440.17
2019	0.00	0.00	368.28	0.00	0.00	0.00	0.00	0.00	0.00	77.38	445.67
2020	0.00	0.00	372.38	0.00	0.00	0.00	0.00	0.00	0.00	78.33	450.71
PERCENTAGE CHANGES											
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.08	4.31
2009	-100.00	0.00	18.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.22
2010	0.00	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.70
2011	0.00	0.00	1.28	0.00	0.00	0.00	0.00	0.00	0.00	1.36	1.29
2012	0.00	0.00	1.75	0.00	0.00	0.00	0.00	0.00	0.00	2.39	1.86
2013	0.00	0.00	1.07	0.00	0.00	0.00	0.00	0.00	0.00	1.31	1.11
2014	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.09
2015	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.16
2016	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.79
COMPOUND GROWTH RATE (PER CENT) -											
2006-2010	0.00	0.00	4.59	0.00	0.00	0.00	0.00	0.00	0.00	7.28	0.93
2011-2016	0.00	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.80
2010-2020	0.00	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.98

All data are for the financial year ending in June of the year specified.

TABLE C.12 GAS TRANSMISSION SYSTEM - TARIFF D MDQ BY MANUFACTURING SECTOR - NORTHERN

	FOOD, BEV. + TOBACCO AND FOOTWEAR ASIC 21	TEXTILES, CLOTHING AND FURNITURE ASIC 23/24	WOOD, PROD'S AND PRINTING ASIC 25	PAPER, PAPER AND COAL ASIC 26	CHEMICAL, PETROLEUM AND COAL ASIC 27	NON- METALLIC MINERAL PRODUCTS ASIC 28	BASIC METAL PRODUCTS ASIC 29	FABRI- CATED METAL PRODUCTS ASIC 31	TRANSPORT EQUIPMENT ASIC 32	OTHER MACHINERY AND EQUIPMENT ASIC 33	MISCELL -ANEOUS MANUFA- CTURING ASIC 34	TOTAL MANUFA- CTURING DIV C
UNIT	*****					TJ	*****					
2006	53.00	0.00	0.00	0.00	0.00	130.00	0.00	0.00	100.00	0.00	0.00	283.00
2007	53.00	0.00	0.00	0.00	0.00	130.00	0.00	0.00	100.00	0.00	0.00	283.00
2008	53.00	0.00	0.00	0.00	0.00	130.00	0.00	0.00	100.00	0.00	0.00	283.00
2009	53.00	0.00	0.00	0.00	0.00	154.00	0.00	0.00	129.00	0.00	0.00	336.00
2010	54.09	0.00	0.00	0.00	0.00	154.89	0.00	0.00	129.64	0.00	0.00	338.63
2011	55.51	0.00	0.00	0.00	0.00	156.99	0.00	0.00	130.45	0.00	0.00	342.95
2012	57.25	0.00	0.00	0.00	0.00	160.28	0.00	0.00	131.41	0.00	0.00	348.94
2013	58.61	0.00	0.00	0.00	0.00	162.22	0.00	0.00	131.85	0.00	0.00	352.68
2014	59.41	0.00	0.00	0.00	0.00	162.33	0.00	0.00	131.30	0.00	0.00	353.04
2015	60.26	0.00	0.00	0.00	0.00	162.71	0.00	0.00	130.62	0.00	0.00	353.59
2016	61.50	0.00	0.00	0.00	0.00	164.21	0.00	0.00	130.59	0.00	0.00	356.30
2017	62.92	0.00	0.00	0.00	0.00	166.10	0.00	0.00	130.99	0.00	0.00	360.01
2018	64.40	0.00	0.00	0.00	0.00	167.97	0.00	0.00	131.50	0.00	0.00	363.86
2019	66.00	0.00	0.00	0.00	0.00	170.24	0.00	0.00	132.04	0.00	0.00	368.28
2020	67.56	0.00	0.00	0.00	0.00	172.29	0.00	0.00	132.53	0.00	0.00	372.38
PERCENTAGE CHANGES												
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2009	0.00	0.00	0.00	0.00	0.00	18.46	0.00	0.00	29.00	0.00	0.00	18.73
2010	2.06	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.50	0.00	0.00	0.78
2011	2.61	0.00	0.00	0.00	0.00	1.36	0.00	0.00	0.62	0.00	0.00	1.28
2012	3.13	0.00	0.00	0.00	0.00	2.09	0.00	0.00	0.74	0.00	0.00	1.75
2013	2.38	0.00	0.00	0.00	0.00	1.21	0.00	0.00	0.33	0.00	0.00	1.07
2014	1.37	0.00	0.00	0.00	0.00	0.07	0.00	0.00	-0.42	0.00	0.00	0.10
2015	1.43	0.00	0.00	0.00	0.00	0.24	0.00	0.00	-0.52	0.00	0.00	0.16
2016	2.05	0.00	0.00	0.00	0.00	0.92	0.00	0.00	-0.02	0.00	0.00	0.76
COMPOUND GROWTH RATE (PER CENT) -												
2006-2010	0.51	0.00	0.00	0.00	0.00	4.48	0.00	0.00	6.71	0.00	0.00	4.59
2011-2016	2.07	0.00	0.00	0.00	0.00	0.90	0.00	0.00	0.02	0.00	0.00	0.77
2010-2020	2.25	0.00	0.00	0.00	0.00	1.07	0.00	0.00	0.22	0.00	0.00	0.95

All data are for the financial year ending in June of the year specified.

Appendix D

**Tariff D volumes by block and sector
and MDQ by block**

Table D.1 Tariff V by block and region – residential

	Brisbane and Dinmore							Northern							Total						
	0 - 0.2 GJ	0.2 - 0.5 GJ	0.5 - 1.0 GJ	1.0 - 2.0 GJ	2.0 - 7.0 GJ	> 7.0 GJ	Total	0 - 0.2 GJ	0.2 - 0.5 GJ	0.5 - 1.0 GJ	1.0 - 2.0 GJ	2.0 - 7.0 GJ	> 7.0 GJ	Total	0 - 0.2 GJ	0.2 - 0.5 GJ	0.5 - 1.0 GJ	1.0 - 2.0 GJ	2.0 - 7.0 GJ	> 7.0 GJ	Total
2007	287.1	62.2	61.9	64.9	90.0	52.7	618.9	4.6	2.3	2.5	2.5	3.2	3.0	18.2	291.8	64.6	64.5	67.4	93.2	55.7	637.1
2008	290.3	63.9	63.0	66.9	99.4	69.8	653.3	5.9	2.9	3.2	3.1	4.0	4.3	23.5	296.2	66.8	66.2	70.0	103.4	74.1	676.8
2009	315.5	70.5	69.7	73.9	103.9	72.9	706.4	5.8	3.0	3.2	3.2	4.0	4.1	23.3	321.2	73.5	72.9	77.1	107.9	77.0	729.7
2010	314.6	69.2	68.6	72.4	103.3	68.6	696.6	5.7	2.9	3.2	3.1	4.0	4.0	22.9	320.4	72.2	71.7	75.5	107.2	72.6	719.6
2011	310.4	68.3	67.6	71.4	101.9	67.6	687.3	5.7	2.9	3.1	3.1	3.9	3.9	22.6	316.1	71.2	70.8	74.5	105.8	71.6	709.9
2012	309.7	68.2	67.5	71.3	101.6	67.5	685.8	5.7	2.9	3.1	3.1	3.9	3.9	22.5	315.4	71.0	70.6	74.3	105.5	71.4	708.3
2013	309.6	68.1	67.5	71.2	101.6	67.5	685.5	5.6	2.9	3.1	3.1	3.9	3.9	22.5	315.2	71.0	70.6	74.3	105.5	71.4	708.0
2014	308.6	67.9	67.2	71.0	101.3	67.2	683.3	5.6	2.9	3.1	3.1	3.9	3.9	22.4	314.2	70.8	70.3	74.1	105.1	71.2	705.7
2015	306.3	67.4	66.7	70.5	100.5	66.7	678.2	5.6	2.8	3.1	3.0	3.8	3.9	22.2	311.9	70.2	69.8	73.5	104.4	70.6	700.4
2016	308.8	67.9	67.3	71.1	101.3	67.3	683.7	5.6	2.8	3.1	3.0	3.9	3.9	22.3	314.4	70.8	70.4	74.1	105.2	71.2	706.0
2017	311.8	68.6	67.9	71.8	102.3	68.0	690.5	5.6	2.9	3.1	3.1	3.9	3.9	22.5	317.5	71.5	71.1	74.8	106.2	71.9	712.9
2018	314.9	69.3	68.6	72.5	103.3	68.6	697.2	5.7	2.9	3.1	3.1	3.9	3.9	22.6	320.5	72.2	71.7	75.5	107.2	72.6	719.8
2019	317.9	70.0	69.3	73.2	104.3	69.3	704.0	5.7	2.9	3.1	3.1	3.9	4.0	22.8	323.7	72.9	72.4	76.3	108.3	73.3	726.8
2020	320.4	70.5	69.8	73.7	105.2	69.8	709.5	5.7	2.9	3.2	3.1	3.9	4.0	22.8	326.2	73.4	73.0	76.9	109.1	73.8	732.4

Table D.2 Tariff V by block and region – commercial

	Brisbane and Dinmore							Northern							Total						
	0 - 0.2 GJ	0.2 - 0.5 GJ	0.5 - 1.0 GJ	1.0 - 2.0 GJ	2.0 - 7.0 GJ	> 7.0 GJ	Total	0 - 0.2 GJ	0.2 - 0.5 GJ	0.5 - 1.0 GJ	1.0 - 2.0 GJ	2.0 - 7.0 GJ	> 7.0 GJ	Total	0 - 0.2 GJ	0.2 - 0.5 GJ	0.5 - 1.0 GJ	1.0 - 2.0 GJ	2.0 - 7.0 GJ	> 7.0 GJ	Total
2007	286.9	62.2	61.9	64.8	89.9	52.7	618.4	29.6	15.0	16.2	16.0	20.5	19.2	116.6	316.5	77.2	78.1	80.8	110.5	71.9	735.0
2008	245.0	53.9	53.2	56.4	83.9	59.0	551.5	18.5	9.3	10.1	9.9	12.7	13.4	73.9	263.5	63.2	63.3	66.3	96.6	72.4	625.4
2009	261.9	58.5	57.9	61.3	86.2	60.5	586.3	18.5	9.6	10.4	10.3	12.8	13.2	74.7	280.4	68.1	68.2	71.6	99.0	73.7	661.1
2010	264.9	58.3	57.7	61.0	86.9	57.7	586.6	18.9	9.6	10.5	10.3	13.1	13.2	75.6	283.8	67.9	68.2	71.3	100.0	70.9	662.1
2011	271.4	59.7	59.1	62.5	89.1	59.1	601.0	19.5	9.9	10.8	10.6	13.5	13.6	78.0	291.0	69.7	69.9	73.1	102.6	72.8	678.9
2012	285.3	62.8	62.2	65.7	93.6	62.2	631.8	20.6	10.4	11.4	11.2	14.2	14.3	82.1	305.9	73.2	73.5	76.9	107.8	76.5	713.9
2013	292.5	64.4	63.7	67.3	96.0	63.7	647.7	21.2	10.8	11.7	11.5	14.6	14.8	84.6	313.7	75.1	75.4	78.9	110.6	78.5	732.3
2014	291.7	64.2	63.6	67.1	95.7	63.6	645.8	21.3	10.8	11.8	11.6	14.7	14.9	85.2	313.0	75.0	75.3	78.7	110.4	78.4	731.0
2015	292.4	64.3	63.7	67.3	96.0	63.7	647.4	21.6	11.0	11.9	11.7	14.9	15.0	86.0	313.9	75.3	75.6	79.0	110.8	78.7	733.4
2016	297.7	65.5	64.9	68.5	97.7	64.9	659.3	22.1	11.2	12.2	12.0	15.2	15.4	88.1	319.8	76.7	77.1	80.5	113.0	80.3	747.4
2017	304.1	66.9	66.3	70.0	99.8	66.3	673.4	22.7	11.5	12.5	12.4	15.7	15.8	90.6	326.9	78.5	78.8	82.4	115.5	82.1	764.1
2018	310.1	68.2	67.6	71.4	101.8	67.6	686.6	23.3	11.9	12.9	12.7	16.1	16.3	93.1	333.4	80.1	80.4	84.1	117.9	83.8	779.6
2019	318.7	70.1	69.4	73.3	104.6	69.4	705.7	24.1	12.3	13.3	13.1	16.6	16.8	96.2	342.8	82.4	82.8	86.5	121.2	86.2	801.9
2020	326.2	71.8	71.1	75.1	107.1	71.1	722.2	24.8	12.6	13.7	13.5	17.1	17.3	99.1	351.0	84.4	84.8	88.6	124.2	88.4	821.4

Table D.3 Tariff V by block and region – industrial

	Brisbane and Dinmore							Northern							Total						
	0 - 0.2 GJ	0.2 - 0.5 GJ	0.5 - 1.0 GJ	1.0 - 2.0 GJ	2.0 - 7.0 GJ	> 7.0 GJ	Total	0 - 0.2 GJ	0.2 - 0.5 GJ	0.5 - 1.0 GJ	1.0 - 2.0 GJ	2.0 - 7.0 GJ	> 7.0 GJ	Total	0 - 0.2 GJ	0.2 - 0.5 GJ	0.5 - 1.0 GJ	1.0 - 2.0 GJ	2.0 - 7.0 GJ	> 7.0 GJ	Total
2007	206.0	44.6	44.4	46.6	64.6	37.8	444.0	17.4	8.8	9.5	9.4	12.0	11.3	68.4	223.3	53.4	53.9	55.9	76.6	49.1	512.4
2008	232.0	51.0	50.4	53.4	79.4	55.8	522.1	18.8	9.4	10.3	10.1	12.9	13.7	75.3	250.8	60.5	60.7	63.5	92.4	69.5	597.4
2009	229.4	51.3	50.7	53.7	75.5	53.0	513.7	18.2	9.4	10.2	10.1	12.5	13.0	73.4	247.6	60.7	60.9	63.9	88.1	66.0	587.1
2010	233.5	51.4	50.9	53.7	76.6	50.9	517.1	18.4	9.4	10.2	10.0	12.7	12.8	73.6	252.0	60.8	61.1	63.8	89.4	63.7	590.7
2011	240.3	52.9	52.4	55.3	78.9	52.4	532.0	18.7	9.5	10.3	10.2	12.9	13.0	74.5	258.9	62.4	62.7	65.4	91.7	65.4	606.5
2012	252.3	55.5	55.0	58.1	82.8	55.0	558.7	19.1	9.7	10.5	10.4	13.2	13.3	76.1	271.4	65.2	65.5	68.4	96.0	68.3	634.7
2013	258.8	57.0	56.4	59.6	84.9	56.4	573.1	19.2	9.8	10.6	10.5	13.3	13.4	76.7	278.1	66.7	67.0	70.0	98.2	69.8	649.8
2014	259.0	57.0	56.4	59.6	85.0	56.4	573.5	19.0	9.7	10.5	10.4	13.1	13.3	76.0	278.1	66.7	67.0	70.0	98.1	69.7	649.5
2015	260.6	57.4	56.8	60.0	85.5	56.8	577.1	18.9	9.6	10.4	10.3	13.0	13.1	75.3	279.5	66.9	67.2	70.2	98.6	69.9	652.4
2016	265.9	58.5	57.9	61.2	87.3	57.9	588.8	18.9	9.6	10.4	10.3	13.0	13.2	75.5	284.8	68.1	68.4	71.5	100.3	71.1	664.3
2017	272.2	59.9	59.3	62.6	89.3	59.3	602.7	19.0	9.7	10.5	10.4	13.1	13.3	76.0	291.3	69.6	69.8	73.0	102.5	72.6	678.8
2018	278.2	61.2	60.6	64.0	91.3	60.6	616.1	19.2	9.8	10.6	10.4	13.2	13.4	76.6	297.4	71.0	71.2	74.5	104.6	74.0	692.7
2019	286.1	63.0	62.3	65.8	93.9	62.3	633.4	19.4	9.8	10.7	10.5	13.4	13.5	77.4	305.5	72.8	73.0	76.4	107.3	75.8	710.8
2020	293.0	64.5	63.8	67.4	96.2	63.8	648.8	19.5	9.9	10.8	10.6	13.5	13.6	78.0	312.6	74.4	74.6	78.1	109.6	77.5	726.8

Table D.4 Tariff D (demand) by block and region – MDQ (years ending 30 June)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Brisbane and Dinmore – MDQ (GJ)															
0 - 50	2864	2914	3066	3069	2779	2804	2889	2936	2913	2913	2963	3010	3031	3082	3133
50 - 125	2901	2967	3326	3504	2857	2883	2969	3018	2995	2995	3046	3094	3116	3168	3220
125 - 275	3730	3786	4547	4723	3733	3767	3880	3944	3913	3913	3980	4043	4071	4140	4208
275 - 525	3476	3346	4147	4648	3537	3570	3677	3738	3708	3708	3772	3832	3858	3923	3988
525 - 1025	6295	5990	7985	7532	6164	6221	6408	6513	6462	6462	6573	6677	6723	6837	6950
1025 - 11025	594	594	1768	1105	703	709	731	743	737	737	749	761	767	780	792
> 11025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Brisbane and Dinmore MDQ (GJ)	16130	15811	20292	19858	19772	19953	20553	20892	20728	20729	21083	21418	21565	21930	22291
0 - 50	300	300	300	250	298	302	308	311	312	312	315	318	321	325	329
50 - 125	94	94	111	152	110	112	114	115	115	115	116	118	119	120	122
125 - 275					0	0	0	0	0	0	0	0	0	0	0
275 - 525					0	0	0	0	0	0	0	0	0	0	0
525 - 1025					0	0	0	0	0	0	0	0	0	0	0
1025 - 11025					0	0	0	0	0	0	0	0	0	0	0
> 11025					0	0	0	0	0	0	0	0	0	0	0
Total Northern MDQ	394	394	411	406	409	414	422	427	427	428	431	436	440	446	451
0 - 50	3164	3214	3366	3319	3077	3107	3196	3248	3225	3225	3278	3328	3352	3407	3462
50 - 125	2995	3061	3437	3656	2967	2994	3083	3134	3110	3110	3162	3212	3234	3289	3342
125 - 275	3730	3786	4547	4723	3733	3767	3880	3944	3913	3913	3980	4043	4071	4140	4208
275 - 525	3476	3346	4147	4648	3537	3570	3677	3738	3708	3708	3772	3832	3858	3923	3988
525 - 1025	6295	5990	7985	7532	6164	6221	6408	6513	6462	6462	6573	6677	6723	6837	6950
1025 - 11025	594	594	1768	1105	703	709	731	743	737	737	749	761	767	780	792
> 11025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total QLD	20254	19991	25250	24983	20181	20367	20975	21319	21155	21157	21514	21853	22005	22376	22742