



## Country Energy Gas Networks

# *Access Arrangement Information* for the Wagga Wagga Natural Gas Distribution Network

1 July 2010

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Gas Networks

**countryenergy**

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# 1 INTRODUCTION

## 1.1 Basis for Access Arrangement Information

This *Access Arrangement Information* has been prepared by Country Energy Gas Pty Limited ACN 083 199 839 (*Country Energy Gas*) in accordance with the requirements of the *National Gas Law (NGL)* and the *National Gas Rules (NGR)* and applies to *Country Energy Gas*' natural Gas Distribution System serving Wagga Wagga, Uranquinty and the surrounding areas (the *Network*).

This *Access Arrangement Information* should be read in conjunction with the accompanying *Access Arrangement*.

## 1.2 Content of this Access Arrangement Information

The purpose of this document is to set out such information as is necessary to enable *Users* and *Prospective Users* to understand the background to and basis and derivation of the *Access Arrangement*.

In accordance with *NGR 48* this *Access Arrangement Information* includes the categories of information required. However, in accordance with *NGR 43(2)* some sensitive information has been aggregated or generalised to ensure that it is not unduly harmful to *Country Energy Gas*' legitimate business interests.

This document is structured as follows:

- Section 2 provides background to the *Network*, the operation of the *Network* and the *Access Arrangement* in the period to 30 June 2010
- Section 3 outlines the services to be offered to *Users* and *Prospective Users* and provides background to the proposed *Terms and Conditions* that will apply to the provision of *Services*
- Section 4 summarises *Country Energy Gas*' forecast demand for services in the *Access Arrangement*
- Section 5 provides information on how the *Capital Base* has been calculated and how the return on capital and return of capital elements have been calculated
- Section 6 provides information regarding forecast *Operating Costs*
- Section 7 explains how the total revenue requirement has been calculated
- Section 8 outlines how total costs have been allocated to services to determine *Reference Tariffs*, and the operation and rationale behind the *Reference Tariff Variation Mechanisms* that will apply
- Section 9 sets out the length of the *Access Arrangement* and the manner in which *Capacity* and *Extensions* or *Expansions* will be managed across this *Access Arrangement*, and
- Section 10 sets out the key performance indicators for the *Network* across this *Access Arrangement*.

### 1.3 Interpretation

In this *Access Arrangement Information* where a word or phrase is italicised the term has the meaning set out in the *NGL* and *NGR*, unless the word or phrase is defined in the Glossary which forms part of the *Access Arrangement*. In such a case the word or phrase has the meaning given to that word or phrase in the Glossary.

Further, in this *Access Arrangement Information* headings are for convenience only and do not affect interpretation unless the context indicates a contrary intention:

- A reference to any party includes that party's executors, administrators, successors, substitutes and assigns, including any person taking by way of novation
- A reference to this *Access Arrangement Information*, the *Access Arrangement* or to any other agreement, deed or document (including, without limitation any standard, code, guidelines or rule) includes, respectively, this *Access Arrangement Information*, *Access Arrangement* or that other agreement, deed or document as amended, novated, supplemented, varied or replaced from time to time
- Words importing the singular include the plural (and vice versa), words denoting a given gender include all other genders, and words denoting individuals include corporations (and vice versa)
- Unless the context indicates otherwise, a reference to a section is a reference to a section of this *Access Arrangement Information*
- References to currency are references to Australian currency unless otherwise specifically provided
- Reference to any legislation or to any section or provision thereof includes any statutory modification or re-enactment or any statutory provision substituted for it, and ordinances, by-laws, regulations, and other statutory instruments issued thereunder, and
- References to capital expenditure are references to net capital expenditure, exclusive of *Capital Contributions*, unless otherwise stated.

### 1.4 Contact Details

Inquiries regarding this *Access Arrangement Information* can be directed to:

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## 2 BACKGROUND TO THE NETWORK

### 2.1 Country Energy Gas Networks' Wagga Wagga Network

Gas has been available in Wagga Wagga since the late 1880s. Manufactured Gas was provided from this time until 1981 when supplies from the Cooper Basin became available. *Gas Supply* was managed by the Wagga Wagga City Council until the system was acquired by Great Southern Energy in June 1997.

Great Southern Energy, along with Advance Energy and NorthPower, were merged together to form Country Energy on 1 July 2001. As part of this merger *Country Energy Gas* became the owner and operator of the Wagga Wagga Gas Network.

At present the Network serves around 18,700 predominately domestic and small commercial *Customers*, although several large *Contract Customers* account for around 43 per cent of total Gas sales.

### 2.2 The previous Access Arrangement

The previous *Access Arrangement* was drafted and approved by the *Independent Pricing and Regulatory Tribunal (IPART)* and came into effect on 1 January 2006. In order to align the current *Access Arrangement* with financial years, it was designed to operate for the four and a half year period ending 30 June 2010. Revisions were required to be submitted by 1 July 2009.

### 2.3 Expenditure, revenue and volume outcomes

The tariffs and other arrangements set out in *IPART's* final approval of the current *Access Arrangement* were based upon a number of factors, including forecasts of capital and operating expenditure, and Gas sales. A brief summary of the outcomes of the current *Access Arrangement* are set out below.

#### 2.3.1 Volume of Gas Sold

Gas sales to *Contract Customers* have progressively increased above what was forecast in the previous *Access Arrangement*, due mainly to the gain of one major *Customer*. This increase is despite the loss of a significant proportion of load from one major *Customer* from 2007.

*Volume Customer* consumption was above levels forecast in the previous *Access Arrangement*. This occurred as a result of substantial growth in the Wagga Wagga housing market combined with seasonal variations that caused considerable fluctuations in volume consumption. For example, the 2005/06 financial year experienced very cold winter temperatures and therefore high consumption, however milder temperatures in the 2006/07 financial year saw consumption levels drop significantly from 2005/06 financial year levels.

<b>Customers (No), Volume (GJ)</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10 forecast</b>
<b>Volume load</b>					
Small Customers	17,084	17,188	17,811	18,196	18,476
Medium Customers	178	181	178	173	183
Large Customers	10	9	10	9	11
<b>Total volume Customers*</b>	<b>17,272</b>	<b>17,378</b>	<b>17,999</b>	<b>18,378</b>	<b>18,670</b>
Small Load	808,406	709,456	749,307	754,102	777,771
Medium Load	93,427	81,991	86,597	79,475	86,951
Large Load	22,271	19,545	20,643	17,327	29,245
<b>Total volume load</b>	<b>924,104</b>	<b>810,992</b>	<b>856,547</b>	<b>850,904</b>	<b>893,967</b>
<b>Contract load (Bomen and Central Zones)</b>					
<b>Total Contract Customers</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>15</b>	<b>15</b>
<b>Total contract load</b>	<b>627,876</b>	<b>628,662</b>	<b>705,879</b>	<b>723,569</b>	<b>681,694</b>
<b>Total load</b>	<b>1,551,980</b>	<b>1,439,654</b>	<b>1,562,426</b>	<b>1,574,473</b>	<b>1,575,661</b>

\* The total volume Customer numbers in Table 1 represent a decrease in reported Customer numbers compared to those included in the previous Access Arrangement. The variance is the result of a change of systems used for calculating Customer numbers. The original Customer numbers were derived from an internal database, however more accurate Customer numbers are derived from the billing system, which dynamically accounts for vacant premises and Disconnections providing a more overall annual average.

**Table 1 – Actual and forecast Customers and consumption for the previous Access Arrangement**

The average, maximum and minimum demands for the previous Access Arrangement are shown in Table 2 below.

<b>GJ/Day</b>	<b>Jan to Jun 2006</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10 forecast</b>
Minimum Demand	1,102	1,131	1,100	1,059	1,166
Maximum Demand	10,351	9,475	10,523	10,223	10,622
Average Demand	4,022	3,979	4,305	4,408	4,307

**Table 2 – Average, maximum and minimum demands for the previous Access Arrangement**

### 2.3.2 Capital Expenditure

In aggregate capital expenditure was substantially higher than forecast. The main areas where expenditure exceeded forecast in the previous *Access Arrangement* are as follows:

- The cast iron and galvanised iron steel refurbishment program has increased in scope because of integration with a 10 year program to upgrade the system pressures in a large number of suburbs within the *Network*. These areas are presently supplied at low pressure (< 7 kPa) and medium low pressure (20-40 kPa). Due to *Supply* pressure problems caused by long term demand growth these areas are being progressively converted to medium high pressure (80-250 kPa) through extensive pipe rehabilitation and *Network* reinforcement. Consequently costs associated with the refurbishment program have increased substantially because of the necessity to install extra system valves, upgrade all *Meter* installations and regulators and install additional *Network* pipe inter-connectors. Increased costs have also occurred because of compliance with new safety standards. The total additional expenditure is approximately \$1.5 million for the previous *Access Arrangement*.
- In the period to November 2008, the *Gas* pressure in the main APA transmission pipeline supplying Wagga Wagga was increased from 3,000-5,500 kPa to 8,500-10,000 kPa because of the progressive commissioning of the 640MW Uranquinty Gas fired power station from August 2008. As a consequence *Country Energy Gas* was required to completely rebuild the Bomen receipt point at a cost of approximately \$1.5 million, as the new pressure requirements were above its original design specifications.
- A major *Meter* replacement program commenced in 2007/08 in order to comply with regulatory requirements. This has resulted in a 25 per cent increase in *Meter* replacement costs, increasing capital expenditure by approximately \$0.2 million above regulatory allowances.
- Unforeseen growth in new *Customer Connections* over the previous *Access Arrangement* that have contributed to new an approximate 73 per cent increase in new *Customer Connections* above the levels forecast in the previous *Access Arrangement* (approximately \$2.2 million in additional capital expenditure).
- The Rail Infrastructure Corporation completed major repairs to the Murrumbidgee rail bridge in 2007 which required the complete removal of the critical high pressure *pipeline* from the bridge and replacement with an under-bore of the Murrumbidgee River at a cost of \$0.8 million.
- Material and labour cost increases have been strong in the current *Access Arrangement* and this is expected to continue into the future. *Country Energy Gas* engaged *Competition Economists Group* (CEG) to research and provide escalation trends in labour and materials for the previous and this *Access Arrangement*.
- In the previous *Access Arrangement*, gas network management costs were classified as operating expenditure. However, the actual costs were split between operating and capital expenditures consistent with the method adopted for allocation of corporate costs. This has meant an increase in actual capital expenditure against the IPART approved allowances of approximately \$1.4 million. *Country Energy Gas* has excluded this amount from its conforming capital expenditure.

Table 3 sets out *Country Energy Gas*' actual and estimated capital expenditure over the previous *Access Arrangement*.

\$,000 (nominal)	Jan to Jun 2006	2006-07	2007-08	2008-09	2009-10 forecast	Total
Regulatory Allowance	827	1,603	1,692	1,909	2,089	8,120
Actual/Estimated Expenditure	1,727	2,191	3,816	3,636	4,411	15,782
Less Gas Network Management Costs	-	-	-	-	-	1,400
Total Capital Expenditure	1,727	2,191	3,816	3,636	4,411	14,382
Difference	(900)	(588)	(2,124)	(1,728)	(2,322)	(6,262)

**Table 3 – Actual vs regulatory allowances for total capital expenditure for the previous *Access Arrangement***

### 2.3.2.1 Asset replacement and refurbishment

#### ***Mains Rehabilitation***

The major component of the mains rehabilitation capital expenditure relates to a long term pressure upgrade program that began in 2006/07 to address *supply* pressure problems and an increasing number of *Gas Leaks* caused by ageing assets in Wagga Wagga which have new growth areas connected to them. Historically these areas have been supplied at low (<7 kPa) or medium-low (20-40 kPa) pressure however load growth has seen *supply* pressures fall to critically low levels in periods of high demand. Complete sections of streets are being progressively converted to medium-high pressure (80-250 kPa) which entails refurbishing a large percentage of the existing mains, consumer services and *Metering Installations*. *Country Energy Gas* has significant lengths of cast iron or galvanised steel pipes that prevent the supply of significantly higher pressures as a result of leakages of joints and possible corrosion spots under high pressures.

Total costs associated with the rehabilitation program increased substantially and were higher than expected because of the necessity to:

- install extra system valves
- upgrade all *Meter* installations and regulators to cope with the upgraded pressures and deliver 1.5 kPa to 2.75 kPa to the *Customer*
- replace the *Meter* installation piping as necessary to conform with modern construction standards
- comply with new safety standards
- comply with new construction and operating practices that prohibit working on live Gas, and
- reinforce the *Network* with some existing inter-connectors being increased in *Capacity* and the construction of new inter-connectors.



At 30 June 2009 *Country Energy Gas* operated approximately 110 kilometres of galvanised steel, the majority being constructed between 1950 and 1980. Field data and engineering forecasts suggest that a median asset life of 50 years for these distribution mains is likely, and probability analysis suggests that a growing proportion of the *Network* will require replacement during this *Access Arrangement*. *Country Energy Gas* proposes to replace 2 per cent of the galvanised steel/cast iron mains each year over the course of the *Access Arrangement*.

At 30 June 2009 *Country Energy Gas* operated approximately 35 kilometres of cast iron mains first installed in 1950. The last of the cast iron mains were laid in the early 1990s with a proportion of the original system having already been rehabilitated, mainly due to the previously described pressure upgrade projects. A section of cast iron mains will be replaced primarily where leak survey information indicates it is prudent to replace a section of mains compared to repairing individual leaks, or where insufficient *Capacity* on the mains is available. This program is planned to continue in the *Access Arrangement*.

The total expenditure on mains rehabilitation is shown below in Table 4.

\$,000 (nominal)	Jan to Jun 2006	2006-07	2007-08	2008-09	2009-10 forecast	Total
Regulatory Allowance	233	514	557	611	656	2,571
Actual/Estimated Expenditure	332	647	547	940	1,639	4,105
Variation	(99)	(133)	10	(328)	(983)	(1,534)

**Table 4 – Actual vs regulatory allowances for mains refurbishment for the previous *Access Arrangement***

### ***Meter Replacement***

The *Gas Supply (Gas Meters) Regulation 2002* requires meters to be replaced when they reach 15 years of age. In the period from July to September 2007 a full field audit was conducted of all Wagga Wagga domestic meter installations to accurately record installation dates. Following finalisation of an initial 3 year replacement tender a long term replacement program commenced in November 2007, and is planned to continue for 5 years. Most of this program has been tendered out to external contractors, however approximately 20 to 25 per cent of the programmed replacement meters are complex installations caused by a combination of the meter's position or the condition of the meter pipes and regulators. This adds significant extra costs as these more complex meter changes normally require a full replacement and possible relocation of the full meter installation.

Country Energy Gas' meter replacement costs are set out in Table 5 below.

\$,000 (nominal)	Jan to Jun 2006	2006-07	2007-08	2008-09	2009-10 forecast	Total
Regulatory Allowance	46	108	161	211	222	747
Actual/Estimated Expenditure	17	27	718	320	457	1,539
Variation	29	81	(557)	(110)	(235)	(792)

**Table 5 – Actual vs regulatory allowances for meter replacements for the previous Access Arrangement**

### 2.3.2.2 Growth Related

Growth related expenditure includes expenditure on new *Connections* and new mains. Expenditure on *Customer Connections* is greater than forecast due to total *Customer Connections* being significantly above forecasts for the previous *Access Arrangement*.

The expenditure on *Network* reinforcement was also higher primarily because of the unplanned upgrade of the *Bomen Receipt Point* in 2007/08 and 2008/09 at a cost of approximately \$1.5 million. This major reconstruction was forced by an increase in transmission pipe pressures supplying the *Wagga Wagga Network* from 5,000 kPa to 10,000kPa. The *Bomen Receipt Point* was only design rated for 7,000 kPa and therefore had to be totally reconstructed to operate with the higher pressure.

\$,000 (nominal)	Jan to Jun 2006	2006-07	2007-08	2008-09	2009-10 forecast	Total
New Connections/Mains	1,172	1,394	1,347	1,011	1,162	6,086
Network Reinforcement	206	123	1,204	1,366	1,153	4,052
<b>Total</b>	<b>1,379</b>	<b>1,517</b>	<b>2,551</b>	<b>2,377</b>	<b>2,315</b>	<b>10,138</b>
Regulatory Allowance	437	744	726	824	950	3,681
Variation	(942)	(773)	(1,825)	(1,553)	(1,365)	(6,457)

**Table 6 – Actual real capital expenditure for New Connections for the previous Access Arrangement**

### 2.3.2.3 Non-system assets

Non-system assets includes direct expenditure on IT systems and hardware, telephones, furniture and fittings and instruments, which are required to support the Gas distribution business. While IPART approved specific allowances for direct expenditure on each category of non system assets, *Country Energy Gas'* financial system captures and reports these costs as part of the corporate allocation that is distributed to the *Network*, consistent with the AER approved cost allocation method.

Therefore, the actual costs for non system assets for the current *Access Arrangement* are not individually identifiable, and the current *Access Arrangement* allowances have been added to total regulatory allowances in Table 3 above.

### 2.3.3 Operating Expenditure

The regulatory regime provided *Country Energy Gas* with a strong incentive to ensure operating expenditure was at efficient levels, as additional expenditure above levels approved in an *Access Arrangement* cannot be recouped from *Customers*.

#### 2.3.3.1 Comparison of Allowed Operating and Maintenance Expenditure

Table 7 shows *Country Energy Gas*' allowed level of operating costs over the previous *Access Arrangement* compared to the actual and estimated expenditure.

\$,000 (nominal)	Jan to Jun 2006	2006-07	2007-08	2008-09	2009-10 forecast	Total
Network Operations & Maintenance	340	1,272	1,213	1,193	1,246	5,265
Advertising, Marketing & Promotions	3	0	90	120	165	378
Direct Gas Network Management	218	243	355	370	387	1,573
Corporate Allocation	129	530	223	358	397	1,638
<b>Total Operating Expenditure</b>	<b>691</b>	<b>2,045</b>	<b>1,882</b>	<b>2,042</b>	<b>2,194</b>	<b>8,853</b>
Regulatory Allowance	1,111	2,297	2,346	2,444	2,504	10,702
Variation	421	252	464	402	310	1,849

**Table 7 – Actual and estimated operating expenditure vs regulatory allowances for the previous *Access Arrangement***

Operating expenditure, in aggregate, was lower than levels forecast in the previous *Access Arrangement*. The lower spending levels have occurred largely as a result of actual direct *Gas Network* management costs being allocated to both capital and operating expenditure, rather than the approach approved in the previous *Access Arrangement* of classifying all direct gas network management costs as operating expenditure.

The lower spending was achieved despite increased costs occurring as a result of events that largely have been outside *Country Energy Gas*' control, with input costs a major driver. The major cost increases outside of the control of *Country Energy Gas* are:

- Substantial staff training costs being incurred as a result of the necessity to comply with the competent persons criteria in the *Network Management Plan CEM7090*
- Corrective mains works increased substantially above forecast because of *gas leaks* identified in the annual leak survey
- Increases in workplace safety costs because of major changes in internal operating procedures to eliminate working with live *Gas*
- Increased costs due to internal and external environmental compliance policy and procedure changes
- Increased maintenance costs due to ageing of the *Network*

- Material and labour cost increases have been strong in the *current Access Arrangement* and this is expected to continue into the future. *Country Energy Gas* engaged Competition Economists Group (CEG) to research and provide escalation trends in labour and material costs for the current and next *Access Arrangement Periods*
- Higher than forecast growth in the Network and number of *Customers* served. This has resulted in higher system operating and maintenance costs
- The introduction of a number of legislative instruments relating to the management and operation of the *Network*, including those set out in section 2.3.4 below
- Additional costs associated with the operations within the NSW Gas Market
- Increased workplace health and safety related standards, and
- Increased security costs.

As the majority of these events are not one-off items, but rather have created a ‘step’ increase in expenditure, they are reflected in operating expenditure for this *Access Arrangement*. The 2008/09 financial year is an accurate representation of operating expenditure with no abnormal expenditure occurring during the year, and as such has been used as a base year for future projections.

Expenditure on advertising and marketing has increased progressively during the previous *Access Arrangement* due to the *Country Energy Gas*’ appliance incentive program, and the participation in a state based generic marketing campaign, under the “natural Gas natural choice” program run by the New South Wales natural Gas *Networks* industry group.

### **2.3.4 Operation of the previous *Access Arrangement***

The previous *Access Arrangement* has proven to be relatively robust with:

- *Transportation Agreements* signed with 2 new *Users*
- No queues for access to services formed
- No requests for trading of *Capacity* made, and
- The Associate Contract with *Country Energy Retail* being revised and approved by *IPART*.

Since the commencement of the previous *Access Arrangement* on 1 January 2006, a number of additional compliance and other regulatory obligations have been imposed on NSW Gas distribution businesses. These include obligations imposed by statutory and regulatory bodies, and cover matters including:

- The introduction of the *NGL*, *NGR* and National Gas Regulations on 1 July 2008
- The revision of the NSW Gas *Supply* (Safety and Network Management) Regulation 2008, and

- Compulsory membership of Dial Before You Dig.

### 2.3.5 Material Changes compared to the Previous Access Arrangement

Due to the robustness of the previous *Access Arrangement*, the next *Access Arrangement* does not incorporate any major changes, however a number of amendments have been incorporated, with key differences including:

- Amendments to the *Access Arrangement*, and particularly the standard *Terms and Conditions* to ensure consistency with the new *NGL*, *NGR* and Codes noted above
- Reintroduction of provisions relating to queuing
- Introduction of a *Deactivation Service* to the list of *Additional Services*. The *Deactivation Service* has been included to cover the costs of removing our assets from disconnected premises
- A change from a *Reference Service Agreement* to separate *Terms and Conditions*
- A change from a pre tax framework to a post tax framework consistent with AER practice
- A change in the naming of volume *Reference Tariffs* from residential, commercial and industrial to small, medium and large to reduce confusion between definitions and naming conventions for *Users*
- The merger of the Central and Fringe contract zones. With a detailed cost of supply study indicated roughly equal costs to *supply* each of the central and fringe zones and in order to minimise the number of contract zones it was considered equitable to merge these zones; and
- A change in reporting of the *Capital Base* from physical classes to asset classes. This allows easier management by pressure zones and is consistent with standard industry practice.
- The inclusion of an allowance for unaccounted for gas in forecast operating expenditure, rather than as an uplift volume factor charged at the reference tariff. This provides appropriate incentives for *Country Energy Gas* to minimise unaccounted for gas in the *Network*.

### 2.3.6 Physical Characteristics of the Network

#### 2.3.6.1 Network Description

Gas enters the *Network* through *Receipt Points* (located at Bomen and Uranquinty) where it is preheated to approximately 35°C. The pressure at each city gate is reduced from approximately 3,000-10,000 *kPa* to approximately 1000 *kPa*. The *Bomen Receipt Point* incorporates twin streams of two stage pressure reduction regulators with monitor override and over pressure protection. The *Uranquinty Receipt Point* comprises a single stream single stage pressure reduction using an active/monitor configuration with over pressure protection.



The Gas is then supplied from the *Receipt Points* via steel mains (API 5L) to the various *Supply* districts in Wagga Wagga. Each district is supplied through a district regulator. The small volume metering pressure in Wagga Wagga is predominately 1.5 kPa, however 2.75 kPa can be found in some districts. Medium & Large volume metering pressures will vary from 7 kPa to 100 kPa. *Contract Customers* are typically supplied from the high pressure steel mains.

A schematic diagram of the *Network* is set out in Appendix 3 of the *Access Arrangement*.

### **2.3.6.2 Network Operation**

*Country Energy Gas* operates the *Network* at various pressures depending on the location and the piping medium. As set out in section 5, a rehabilitation program is in place targeting pipe with a condition score of poor or less. Typically these pipes are galvanised steel and cast iron which are inserted with polyethylene, and where this is not possible, new pipe is laid. System pressures will be increased as the rehabilitation program is progressed. The reticulation system operates under the following pressure regime:

- High Pressure (400-1050 kPa)
- Medium High Pressure (80-250 kPa)
- Medium Low Pressure (20-40 kPa)
- Low Pressure (<7 kPa)

### **2.3.6.3 Network Capacity**

Peak flows within the system generally occur during normal *Business Days* at around 8 - 10am. Hourly flow rates of up to 20,000 standard cubic *Meters* per hour have been registered at various winter peak times over the past several years. Coincident peak demand is driven by the temperature sensitive volume load and hence occurs in winter for the *Network*.

# 3 PIPELINE SERVICES TO BE OFFERED

NGR 48 requires *Country Energy Gas* to describe the distribution *Pipeline* services that will be made available to *Users* or *Prospective Users*, including:

- specifying the *Reference Services*, and
- specifying for each *Reference Service*:
  - the *Reference Tariff*; and
  - the other *Terms and Conditions* on which the *Reference Service* will be provided.

Consistent with the previous *Access Arrangement*, *Country Energy Gas* proposes to offer a *Contract Transportation Service* and a *Volume Transportation Service* to *Users*. These services are likely to be sought by a significant part of the market and will be *Reference Services* attracting a *Reference Tariff*.

*Country Energy Gas* also proposes to offer seven non-transportation *Reference Services* in the next *Access Arrangement Period*, known as *Additional Services*. In time, *Country Energy Gas* will examine whether *Additional Services* are contestable services or services not sought by a significant part of the market and should therefore be withdrawn from the *Access Arrangement*.

As in the previous *Access Arrangement*, *Country Energy Gas* will continue to offer *Negotiated Services* to *Users*.

## 3.1 Reference Services

As noted above, *Country Energy Gas* will continue to offer the same *Transportation Reference Services* as in the previous *Access Arrangement*. *Country Energy Gas* has not received any requests for other forms of *Reference Services*, and is not aware of any changes in circumstances or future developments that suggest that these services will not continue to be sought by a significant part of the market during the *Access Arrangement Period*.

### 3.1.1 Contract Transportation Service

The *Contract Transportation Service* is provided to the *User* in respect of the *Delivery Point* of a *Contract Customer* and consists of:

- Receiving natural Gas at a *Receipt Point*
- Transporting the natural Gas from a *Receipt Point* through the *Network*
- Delivering the natural Gas to the *Delivery Point*
- Installing, maintaining and repairing *Metering Facilities* at the *Delivery Point*
- Reading the *Metering Facilities* at the *Delivery Point* at a frequency of every 24 hours

- Providing data, including metering data, to the *User* and other entities in accordance with the requirements of the *Retail Market Procedures*, and
- In the case of a *Customer* who is not connected to the *Network*, the provision of a distribution *pipeline* from the *Network* to the nearest point on the *Customer's* property, where the provision of such a distribution *pipeline* is consistent with the *Extensions/Expansions Policy* set out in section 7 of the *Access Arrangement* and satisfies the new capital expenditure criteria of NGR 79.

A *Contract Customer* is a *Customer* who has (or is reasonably expected by *Country Energy Gas* to have) an annual consumption of 10TJ or greater at a single *Delivery Point* provided that after the *Contract Customer* is connected, their annual consumption is less than 10TJ for a period of two consecutive years, the *Contract Customer* will remain a *Contract Customer* for that period. *Country Energy Gas* may at the end of the period of two consecutive years classify the *Contract Customer* as a *Volume Customer* upon providing the *User* with written notice.

If *Country Energy Gas* classifies a *Customer* as a *Volume Customer*, *Country Energy Gas* may remove the *Communications Equipment* from the *Customer's Metering Facilities*.

### 3.1.2 Volume Transportation Service

The *Volume Transportation Service* is provided to the *User* in respect of the *Delivery Point* of a *Volume Customer* and consists of:

- Receiving natural Gas at a *Receipt Point*
- Transporting the natural Gas from a *Receipt Point* through the *Network*
- Delivering the natural Gas to the *Delivery Point*
- Installing, maintaining and repairing *Metering Facilities* at the *Delivery Point*
- Reading the *Metering Facilities* at the *Delivery Point* at a frequency of at least quarterly
- Providing data, including metering data, to the *User* and other entities in accordance with the requirements of the *Retail Market Procedures*; and
- In the case of a *Customer* who is not connected to the *Network*, the provision of a distribution *pipeline* from the *Network* to the nearest point on the *Customer's* property, where the provision of such distribution *pipeline* is consistent with the arrangements set out in section 7 of the next *Access Arrangement* and satisfies the new capital expenditure criteria of NGR 79.

A *Volume Customer* is a *Customer* who has (or is reasonably expected by *Country Energy Gas* to have) an annual consumption of less than 10TJ at a single *Delivery Point*.

### 3.1.3 Additional Services

The *Additional Services* offered in the previous *Access Arrangement* will continue to be offered in the next *Access Arrangement*, with the addition of the *Deactivation Service*. *Country Energy Gas* will examine whether these *Additional Services* should be withdrawn from the next *Access Arrangement* if they are found to be a contestable service or a

service that is not sought by a significant part of the market. The *Additional Services* are as follows:

- 1) a *Residential Meter Testing Service*;
- 2) a *Special Meter Reading Service*;
- 3) a *Reconnection Service*;
- 4) a *Disconnection Service*;
- 5) a *Business Disconnection/Reconnection Service*;
- 6) an *After Hours Reconnection Service*; and
- 7) a *Deactivation Service*.

These services will be provided consistent with the requirements of the relevant regulatory Law and *Rules*.

### **3.2 Non-Reference Services - Negotiated Services**

*Country Energy Gas* will continue to offer *Negotiated Services* in the *Access Arrangement Period*. A *Negotiated Service* is a service that is different from a *Reference Service*. As required by the *NGL* and *NGR*, *Country Energy Gas* will negotiate in good faith with a *User* or *Prospective User* to provide a *Negotiated Service*.

### **3.3 Service Standards and Quality**

*Country Energy Gas* will provide services in accordance with the service standards and the *Terms and Conditions* set out in:

- the *Access Arrangement*
- the *NGL*, as amended from time to time
- the *NGR*, as amended from time to time
- the *National Gas Regulations*, as amended from time to time
- the *Network Code*, as amended from time to time
- the *Retail Market Procedures*, as amended from time to time, and
- the standard *Terms and Conditions*, as amended by *Country Energy Gas*, from time to time.

# 4 FORECAST DEMAND FOR SERVICES

NGR 72 requires *Country Energy Gas* to provide information on matters including volume forecasts and *Customer* numbers.

The forecast of operating costs, capital costs and projected revenues set out in this *Access Arrangement Information* are based upon the demand forecasts prepared for *Country Energy Gas* by Infrastructure and Regulation Services (IRS).

## 4.1 Overview of Gas Demand in Wagga Wagga

The Wagga Wagga system serves approximately 18,700 *Customers* who collectively purchase approximately 1.58 PJ of Gas each year, which is transported through 680km of pipes/mains. The vast majority of the Gas consumers are *Volume Customers*, each using less than 10 TJ of Gas per year. The small volume market represents approximately 50 per cent of the total load, and 194 medium and large volume *Customers* represent approximately 7 per cent.

There are also a small number (currently 15) of *Contract Customers*, who consume the remaining 43 per cent of the total load. These *Customers* are concentrated in two zones:

- the Bomen Zone, covering all the area serviced by the *Network* that is north of the Murrumbidgee River
- the Central Zone, covering the main area of the City of Wagga Wagga and *Extensions* of the *Network* to the Kapooka and Forest Hills areas

The Bomen Zone is closest to the northern city gate, and historically, *Customers* in the Bomen Zone have been most susceptible to bypass.

Around 95 per cent of domestic households are connected to the *Network*. Commercial uses of Gas include wool combing, hospital services, plywood manufacture and asphalt production. Gas is also used by large army and air force establishments, and by educational institutions.

## 4.2 Forecast Capacity and Utilisation

NGR 72 (1)(d) requires *Country Energy Gas* to provide a forecast *Pipeline Capacity* and utilisation to the extent possible. The Wagga Wagga *Network* is a meshed network and *Country Energy Gas* is not able to provide this information.

## 4.3 Forecast

Details of the key drivers behind the demand forecasts and the methodology used to support the demand forecasts were developed by Infrastructure and Regulation Services (IRS). These demand forecasts have been further refined after the review and recommendations of ACIL Tasman in the AER's draft decision. *Country Energy Gas* has reviewed the recommendations of ACIL Tasman and adopted the forecast growth for customer numbers. These forecasts have been applied to the actual data from the 2008/09 financial year, combined with IRS' forecast growth in consumption per *Customer* to arrive at final demand forecasts for the *Access Arrangement*.



In late 2009, it came to *Country Energy Gas*' attention that a *Contract Customer* has curtailed its operations to minimum stand by status only. Its future is still to be determined and finalised, although *Country Energy Gas* understands it is unlikely to continue operations. However, in the same period, *Country Energy Gas* also connected one new *Contract Customer*. The contracted load for the new *Customers* is expected to be at similar levels to the *Customer* likely to cease operations, and therefore no adjustment has been made to the demand forecasts for *Contract Customers*.

The load forecast for the *Network* is summarised below in Table 8.

<b>Customers (No), Volume (GJ)</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
<b>Volume load forecasts</b>					
Volume Customers	18,959	19,249	19,539	19,829	20,119
Total volume load	905,392	917,699	928,016	939,215	950,339
<b>Contract load forecasts</b>					
Contract Customers	15	15	15	15	15
Bomen zone load	496,372	496,193	496,013	495,834	495,655
Central/Fringe zone load	184,972	184,802	184,632	184,461	184,291
Total contract load	681,344	680,995	680,645	680,295	679,946
<b>Total load</b>	<b>1,586,736</b>	<b>1,598,694</b>	<b>1,608,661</b>	<b>1,619,510</b>	<b>1,630,285</b>
<b>Contract MDQ</b>					
Bomen zone MDQ	3,099	3,099	3,099	3,099	3,099
Central/Fringe zone MDQ	1,084	1,084	1,084	1,084	1,084

**Table 8 – Total forecast load for the Access Arrangement**

The forecast average, maximum and minimum demands for the *Access Arrangement* are shown in Table 9 below.

<b>GJ</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
Minimum Demand	N/A	N/A	N/A	N/A	N/A
Maximum Demand	10,922	10,928	10,981	11,010	11,039
Average Demand	4,429	4,431	4,453	4,464	4,476

**Table 9 – Average, maximum and minimum demands for the Access Arrangement**

# 5 CAPITAL COSTS

Part 9 Division 4 of the *NGR* requires *Country Energy Gas* to provide information on matters including asset values, depreciation and planned capital investment.

## 5.1 The Opening Capital Base

Consistent with standard regulatory practice and the provisions of the *NGR* 77(2), the opening value of the *Capital Base* at 1 July 2010 reflects:

- The opening *Capital Base* as at the commencement of the previous *Access Arrangement* (adjusted for any difference between estimated and actual *Capital Expenditure* included in that opening *Capital Base*)
- **plus** *conforming Capital Expenditure* made, or to be made, during the previous *Access Arrangement*
- **plus** any amounts to be added to the *Capital Base* under *Capital Contributions* by *Users* to new *Capital Expenditure* (*NGR* 82), speculative capital expenditure account (*NGR* 84) and re-use of redundant assets (*NGR* 86) during the previous *Access Arrangement*
- **less** *depreciation* over the previous *Access Arrangement*
- **less** redundant assets identified during the course of the previous *Access Arrangement*
- **less** the value of distribution *pipeline* assets disposed of during the previous *Access Arrangement*.

*Country Energy Gas* has excluded *Capital Contributions* from the value of the *Capital Base*.

### 5.1.1 Initial Capital Base

The initial *Capital Base* of \$44.54m as at 1 January 2006 was determined by IPART when the previous *Access Arrangement* was approved in December 2005.

### 5.1.2 System Capital for the previous Access Arrangement

\$,000 (nominal)	Jan to Jun 2006	2006-07	2007-08	2008-09	2009-10 forecast	Total
Asset replacement & refurbishment	349	674	1,266	1,260	2,097	5,645
Growth related	1,379	1,517	2,551	2,377	2,316	10,139
Less Network Management Costs						1,400
<b>Total</b>	<b>1,727</b>	<b>2,191</b>	<b>3,816</b>	<b>3,636</b>	<b>4,413</b>	<b>14,383</b>

**Table 10 – Actual and estimated conforming capital expenditure for the previous Access Arrangement**

Figures in the table exclude *Capital Contributions* by third parties. All capital expenditure proposed has been assessed to ensure that it conforms to the new capital expenditure criteria as per NGR 79.

### 5.1.3 Regulatory Depreciation for the previous Access Arrangement

The amount used for *Depreciation* in rolling forward the *Capital Base* is the allowed *Depreciation* from the previous *Access Arrangement*, adjusted for actual CPI.

\$,000 (nominal)	Jan to Jun 2006	2006-07	2007-08	2008-09	2009-10
Total	564	1,226	1,332	1,474	1,588

**Table 11 – Regulatory depreciation in the previous Access Arrangement**

### 5.1.4 Redundant Capital and Asset Disposals

*Country Energy Gas* is not aware of any material assets that have become redundant or re-used over the previous *Access Arrangement*. Therefore no redundant capital has been deducted or removed in rolling forward the *Capital Base*.

No material assets are expected to be disposed of during the course of this *Access Arrangement*.

### 5.1.5 Speculative Capital Expenditure Account

*Country Energy Gas* does not maintain a speculative capital expenditure account nor does it propose to create a speculative capital expenditure account. All capital expenditure conforms with NGR 79 (2).

## 5.1.6 Opening Capital Base

The *Capital Base* as at 30 June 2010 has been calculated in Table 12 below.

\$,000 (nominal)	Jan to Jun 2006	2006-07	2007-08	2008-09	2009-10 forecast
Opening value	44,515	46,280	48,921	52,590	57,121
Conforming capital expenditure*	1,727	2,191	3,816	3,636	3,013
Depreciation	564	1,226	1,332	1,474	1,588
Disposals	0	0	0	0	0
Indexation	602	1,676	1,186	2,368	1,051
Difference between actual and forecast net capital expenditure	0	0	0	0	(25)
Return on difference - net capital expenditure	0	0	0	0	(13)
<b>Closing value</b>	<b>46,280</b>	<b>48,921</b>	<b>52,590</b>	<b>57,121</b>	<b>59,559</b>

\* 2009-10 capital expenditure also excludes gas network management costs of \$1.4 million

**Table 12 – Calculation of the *Capital Base* as at 30 June 2010**

Indexation of the *Capital Base* has taken place using the following CPI adjustment factors. These factors are based on the index number for the weighted average of eight capital cities as published by the Australian Bureau of Statistics (ABS).

CPI (per cent)	Jan to Jun 2006	2006-07	2007-08	2008-09	2009-10
Total	1.33%	3.54%	2.33%	4.35%	1.79%

**Table 13 – CPI indexation of *Capital Base***

The CPI figure for June 2006 is the half year CPI, whilst the remainder are full financial year figures. The *Capital Base* of \$59.56 million at 1 July 2010 represents a 34 per cent increase in value since 2006.

## 5.2 The Projected Capital Base

The projected *Capital Base* over the *Access Arrangement* reflects:

- the opening *Capital Base* as at 1 July 2010, as determined above
- **plus** forecast Conforming Capital Expenditure for the *Access Arrangement*
- **less** forecast *Depreciation* for the *Access Arrangement*
- **less** the forecast value of distribution *pipeline* assets to be disposed of or made redundant in the course of the *Access Arrangement*,
- **plus** adjustments for CPI.

### 5.2.1 Forecast System Capital Expenditure for the *Access Arrangement*

Capital expenditure is assessed to ensure that it complies with the provisions of NGR 79. *Country Energy Gas* engaged Sinclair Knight Mertz (SKM) to provide an independent assessment of the reasonableness of proposed unit rates for gas system network asset expenditure (refer to Appendix B). SKM concluded that the *Country Energy Gas*' unit rate

estimates were reasonable cost estimates for the assets as described in the report. *Country Energy Gas* also tenders and outsources capital expenditure where appropriate, for example for the meter replacement program, thereby achieving the lowest cost for providing reference services.

Projects under each category of capital expenditure are assessed under *NGR 79(2)*. Mains replacement capital expenditure is necessary to maintain the safety and integrity of services, satisfying *NGR 79(2)(c)(i)* and *79(2)(c)(ii)*. Meter replacement capital expenditure is necessary to ensure compliance with *Gas Supply (Gas Meters) Regulation 2002*, satisfying *NGR 79(2)(c)(iii)*. Growth related capital expenditure is necessary to maintain *Country Energy Gas*' capacity to meet the growth in customer demand detailed in Appendix A, satisfying *NGR 79(2)(c)(iv)*.

Table 14 sets out *Country Energy Gas*' forecast conforming capital expenditure for the *Access Arrangement*.

\$,000 (real 2009-10)	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Asset replacement & refurbishment	2,002	1,703	1,862	1,915	1,436	8,918
Growth related	2,126	2,604	2,281	1,914	2,180	11,105
<b>Total</b>	<b>4,128</b>	<b>4,307</b>	<b>4,143</b>	<b>3,829</b>	<b>3,616</b>	<b>20,023</b>

**Table 14 – Forecast conforming capital expenditure for the *Access Arrangement***

#### 5.2.1.1 Asset replacement and refurbishment related expenditure

The major component of the asset and refurbishment capital expenditure relates to a long term pressure upgrade program. This program commenced in 2006/07 to address *supply* pressure problems and *gas leaks* caused by ageing assets in Wagga Wagga which have new growth areas connected to them. Historically these areas have been supplied at low (<7 kPa) or medium-low (20-40 kPa) pressure, however load growth has seen *supply* pressures fall to critically low levels in periods of high demand. Large areas are being progressively converted to medium-high pressure (80-250 kPa), which entails refurbishing a large percentage of the existing mains, consumer services and *Metering Installations*.

Some of the localities within Wagga Wagga that are programmed to have pressure upgrades over the *Access Arrangement* are:

- Lake Albert pressure increase stage 6
- Glenfield pressure increase stage 2
- Ashmont pressure increase stages 1, 2 & 3
- CBD Fitzmaurice St low pressure increase to 240 kPa, and
- Koorringal pressure increase.

In order to deliver sufficient Gas volumes into the upgraded pressure areas some existing inter-connectors will have to be increased in *Capacity* and new inter-connectors constructed.



The forecast expenditure for these projects is depicted in Table 15 below:

\$,000 (real 2009-10)	2010-11	2011-12	2012-13	2013-14	2014-15
Refurbishment Cost	1,601	1,471	1,648	1,525	932

**Table 15 – Forecast Mains Refurbishment expenditure for the Access Arrangement**

In order to comply with *Gas Supply (Gas Meters) Regulation 2002*, *Country Energy Gas* has forecast to replace *meters* when they reach 15 years of age. In the first quarter of the 2007/08 financial year, all Wagga domestic *meter* installations were audited to accurately record installation dates. This data has been used to structure a long term replacement program, which commenced in November 2007. The projected *meter* replacement costs of the program are shown in Table 16 below.

\$,000 (real 2009-10)	2010-11	2011-12	2012-13	2013-14	2014-15
Meter replacement cost	401	232	214	390	504

**Table 16 – Forecast meter replacement expenditure for the Access Arrangement**

#### 5.2.1.2 Growth related expenditure

Growth related expenditure includes expenditure on new *Connections* and new mains.

New *Connection* expenditure is based upon the number of new *Connections* to the system set out in *Country Energy Gas*' demand forecast including expenditure on the *Connection* to the main, the service *pipeline* and the cost of a *meter*. It is assumed that a proportion of the new *Connections* will be funded through *Capital Contributions* from *Customers* or *Developers*, and hence forecast expenditure is adjusted to take this into account.

With respect to growth related capital expenditure, the major expenditure areas are:

- New mains associated with the previously described pressure upgrade program in various parts of Wagga Wagga
- Various *Extensions* or upgrades to cater for system growth
- Wagga Wagga critical line valve installation program
- Mains *Extensions* to *Supply* new *Connections* and system augmentations, and
- *Connection* of 315 new *Customers* per year and the accompanying mains *Extensions*, based upon a forecast of 25 metres of mains per new *Customer Connection*.

\$,000 (real 2009-10)	2010-11	2011-12	2012-13	2013-14	2014-15
New Connections and Mains	1,176	1,184	1,190	1,191	1,194
Network Reinforcement	950	1,420	1,091	722	986
<b>Total</b>	<b>2,126</b>	<b>2,604</b>	<b>2,281</b>	<b>1,914</b>	<b>2,180</b>

**Table 17 – Forecast New Connection expenditure for the Access Arrangement**

### 5.2.1.3 Forecast Non System Capital Expenditure for the Access Arrangement

*Country Energy Gas*' financial system captures and reports non system capital expenditure as part of the corporate allocation that is distributed to the *Network*. This corporate allocation is consistent with the approved cost allocation method contained in the *AER*'s New South Wales distribution determination 2009-10 to 2013-14 (the electricity distribution determination).

Therefore, the actual costs for non system assets for the *Access Arrangement* are not individually identifiable, but are included in the forecast system capital expenditure categories above.

### 5.2.2 Asset Sales and Redundant Capital

No redundant capital or material asset disposals are forecast over the *Access Arrangement*.

### 5.2.3 Depreciation

Consistent with the approach adopted in the previous *Access Arrangement*, *Depreciation* has been calculated on a straight line basis utilising economic asset lives applied to the opening regulatory asset value at the beginning of each year. However, *Country Energy Gas* has made a change in reporting of the *Capital Base* from physical classes to asset classes. This change was made as it allows easier management by pressure zones and is consistent with standard industry practice.

*NGR 88* and *89* outline the method for deriving the depreciation schedule. In accordance with these *Rules* *Country Energy Gas* has used the following principles in designing the depreciation schedule:

- The assets are only depreciated once over their economic life
- It reflects changes in the economic lives of the assets
- It allows for *Reference Tariffs* to vary over time in a way that promotes efficient growth in the market

The economic asset lives, remaining lives and written down values for each asset category as at 30 June 2010 are shown in Table 18 below. The remaining lives of each asset category were calculated on 30 June 2010 as the sum of the written down values multiplied by the remaining lives, divided by the sum of the written down values.

Asset Category	Economic Life (yrs)	Remaining Life (yrs)	WDV (\$,000 nominal)
<b>System Assets</b>			<b>58,590</b>
High Pressure	80	59	9,089
Medium-High Pressure	50	35	11,294
Medium-Low Pressure	50	25	17,426
Low Pressure	50	31	137
Services	50	30	14,940
Meters & Regulators	15	8	1,812
District Regulators	40	18	736
Gate Stations	50	45	3,077
SCADA & Telemetry	20	12	79
<b>Non System Assets</b>	<b>5</b>	<b>1</b>	<b>969</b>

**Table 18 – Economic asset lives, remaining lives and written down values as at 30 June 2010**

Table 19 below shows the opening regulatory written down values, weighted average regulatory economic lives, weighted average remaining lives, and the calculated depreciation amounts forecast for the *Access Arrangement* for each asset class. Land & buildings have not been included in the depreciation calculation.

\$,000 (nominal)	Total Economic Life (yrs)	Average Remain. Life	WDV 30/06/10	2010-11	2011-12	2012-13	2013-14	2014-15
System Assets	52.6	33.4	58,590	2,063	2,222	2,382	2,548	2,724
Non-System Assets	5.0	1.0	969	223	0	0	0	0
<b>Total</b>			<b>59,559</b>	<b>2,285</b>	<b>2,222</b>	<b>2,382</b>	<b>2,548</b>	<b>2,724</b>

**Table 19 – Forecast depreciation for the Access Arrangement**

#### 5.2.4 Equity Raising Costs

*Country Energy Gas* believes that equity raising costs are a legitimate cost that form part of the *Capital Base* calculation. *Country Energy Gas* has not included any equity raising costs due to the immaterial level calculated, based on the *Access Arrangement* building blocks.

## 5.2.5 The Projected Capital Base

The *Capital Base* forecast by *Country Energy Gas* for the *Access Arrangement* is as follows:

\$,000 (nominal)	2010-11	2011-12	2012-13	2013-14	2014-15
Opening value	59,559	63,119	67,132	71,016	74,582
Capex/Additions (net of cap cons)	4,386	4,689	4,620	4,374	4,232
Depreciation	2,285	2,222	2,382	2,548	2,724
Disposals	0	0	0	0	0
Indexation	1,459	1,546	1,645	1,740	1,827
<b>Closing value</b>	<b>63,119</b>	<b>67,132</b>	<b>71,016</b>	<b>74,582</b>	<b>77,918</b>

**Table 20 – Forecast Capital Base as at 30 June for each year of the Access Arrangement**

## 5.3 Cost of Capital

*NGR 87* requires that the rate of return on capital is to be commensurate with prevailing conditions in the market for funds and the risks involved in providing *Reference Services*. The appropriate weighted average cost of capital (WACC) to apply to *Country Energy Gas*' *Capital Base* is intended to reflect the commercial rate of return that an investor in the *Network* would require, at a minimum, to commit to investing capital into the business.

The rate of return has been determined using the Capital Asset Pricing Model (CAPM) to establish the Weighted Average Cost of Capital (WACC). The WACC has been expressed in nominal vanilla terms.

### 5.3.1 Nominal Risk Free Rate

The nominal risk free rate has been determined by *Country Energy Gas* on a moving average basis from the annualised yield on Commonwealth Government bonds with a maturity of 10 years using the indicative mid rates published by the Reserve Bank of Australia. *Country Energy Gas* has adopted a nominal risk free rate of 5.47 per cent observed over the 15 day averaging period ending on 10 December 2009. *Country Energy Gas* understands this rate will be updated closer to the time of the AER's final decision.

### 5.3.2 Inflation

*Country Energy Gas* has utilised the inflation rate from the AER's draft decision of 2.45 per cent.

### 5.3.3 Market Risk Premium

*Country Energy Gas* has adopted a conservative value of 6.5 per cent linked to the lower gamma value described in section 6.2.5 below.

### 5.3.4 Debt Risk Premium

*Country Energy Gas* has calculated the debt risk premium with reference to the same averaging period that was adopted in determining the risk free rate. *Country Energy Gas*

has also used an average of Bloomberg and CBASpectrum data observations in calculating a debt risk premium of 4.40 per cent, based on extending the Bloomberg AAA fair yield curve out to 10 years. Country Energy Gas understands this premium will be updated closer to the time of the AER's final decision over the same averaging period as the nominal risk free rate.

### 5.3.5 Equity Beta

Country Energy Gas notes that both CEG and the AER have on occasion had the view that the equity beta for gas distribution networks are likely to be higher than that for electricity distribution networks. However, Country Energy Gas has taken a conservative approach in adopting the AER's draft decision of 0.80.

### 5.3.6 Summary of WACC parameters

Table 21 summarises the WACC parameters adopted by Country Energy Gas, resulting in a nominal vanilla WACC of 10.84 per cent.

WACC Parameter	Parameter Value (%)
Nominal risk free rate	5.47%
Inflation	2.45%
Real risk free rate	2.95%
Market risk premium	6.50%
Debt risk premium	4.40%
Debt to total assets	60.00%
Equity Beta	0.80
<b>Nominal vanilla WACC</b>	<b>10.19%</b>

Table 21 – WACC parameters adopted for the Access Arrangement

## 5.4 Return on Capital

The return on capital component of the building block has been calculated as follows:

\$,000 (nominal)	2010-11	2011-12	2012-13	2013-14	2014-15
Return on <i>Capital Base</i>	6,069	6,432	6,841	7,237	7,600

Table 22 – Forecast return on capital calculation for the Access Arrangement

# 6 OPERATING EXPENDITURE

## 6.1 Overview

NGR 72 requires *Country Energy Gas* to provide information on matters including operating expenditure – which includes operating, maintenance and other costs of a non-capital nature.

In accordance with NGR 91 forecast costs are consistent with the operating expenditure that would be incurred by a prudent Service Provider to efficiently operating the *Network*, in accordance with accepted and good industry practice to achieve the lowest sustainable cost of delivering *Reference Services*.

## 6.2 Forecast Operating and Maintenance Expenditure

*Country Energy Gas* has used the 2008/09 actuals as the base for projecting forecast operating expenditure over the *Access Arrangement*.

*Country Energy Gas* recognises that operating and maintenance requirements change during an *Access Arrangement Period* for a range of reasons including growth in new *Customer Connections*, *Maximum Daily Quantity*, pipe length, inflation, real wage growth, and real cost increases in materials and equipment.

The incremental rate of change in operating expenditure expected over the *Access Arrangement*, due to the impact of these factor changes, can be adjusted annually according to the formula:

$$\text{Opex}_{t+1} = \text{Opex}_t * (1+F+G)$$

Where:

- F is a real wage and material cost growth factor
- G is a network growth factor

Accordingly it is necessary to determine the annual rate of change in expenditure level over the *Access Arrangement Period*.

### **Demand growth**

Most of the forecast operating expenditure is associated with the existing asset base. However, growth related capital expenditure increases the size of the *Network* and the number of assets to be maintained, operated and managed. Accordingly, there is a need to establish a relationship between demand growth and real increases in operating expenditure.

The rate of change should reflect the marginal cost associated with providing that additional output. To be able to quantify this, it is necessary to first identify the measure(s) that are considered important for explaining the anticipated incremental costs to be incurred. The approach taken should be administratively simple and aim to provide the right incentives.

There are a number of appropriate measures including:

- Asset growth
- Energy consumption



- *Maximum Daily Quantity*
- Number of distribution *Customers*, and
- Length of the *Network*.

*Country Energy Gas* believes the rate of change should be correlated with the growth capital expenditure. *Country Energy Gas* has increased its operating expenditure by the proportion of average annual growth related capital expenditure over the total replacement costs of distribution assets. This ratio is then reduced by 25 per cent to reflect that new assets will not incur condition based asset maintenance. The one exception to this application of the asset growth escalator is for marketing. Given the marketing and advertising programs are specific targeted programs in this instance, *Country Energy Gas* has not incorporated an asset growth escalator for this category of operating expenditure.

### ***Real wage and material cost increases***

It is necessary to determine a price index relevant to the inputs employed in operating and maintenance activities. IPART adopted CPI only as the cost inflator for the previous *Access Arrangement*, however actual wage and material cost growth has exceeded inflation. For this *Access Arrangement*, *Country Energy Gas* has presented the expenditure forecasts in real terms including market expectations of real wage increases. No real material cost increases have been applied to the forecast operating expenditures for the *Access Arrangement*.

The forecast labour cost escalators have been based on the report prepared by KPMG Econtech for the AER's final decision for NSW electricity distribution network service providers<sup>1</sup>. This report is in the process of being updated with the latest forecast information for the purposes of the AER's final decision. This updated report will be lodged at the time when submissions are due on 12 February 2010.

Table 23 below shows *Country Energy Gas*' forecast level of *Operating Expenditure* over the *Access Arrangement*.

<b>\$,000 (real 2009-10)</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
<i>Network operations and maintenance</i>	1,283	1,315	1,345	1,370	1,397
Marketing	167	156	115	115	115
Direct Gas <i>Network</i> management	398	408	418	425	434
Corporate allocation	409	419	429	437	445
Self insurance	1	1	1	1	1
Debt raising costs	37	38	40	41	42
<b>Unaccounted for gas</b>	<b>546</b>	<b>520</b>	<b>491</b>	<b>466</b>	<b>442</b>
<b>Total non-capital costs</b>	<b>2,841</b>	<b>2,858</b>	<b>2,839</b>	<b>2,856</b>	<b>2,877</b>

**Table 23 – Forecast operating expenditure for the *Access Arrangement***

<sup>1</sup> Australian Energy Regulator, *Final Decision: NSW distribution determination*, April 2009.

### 6.2.1 Network operating and maintenance costs

Network operating and maintenance costs include the direct operating and maintenance costs of operating the *Network*. This category includes such things as *Receipt Point* maintenance, regulator maintenance, leak repairs, inventory and supplies, network engineering, environmental management, technical assurance, training, subscriptions to standards and code preparation bodies, cost of Gas control and network planning, design and scheduling.

### 6.2.2 Marketing costs

Marketing costs includes the cost of *Country Energy Gas*' promotional program, including increases to ensure new properties are connected to the *Network*, and (predominately) the promotion of Gas and Gas appliances to existing *Connections*. *Country Energy Gas* also participates in a state based generic marketing campaign, under the "natural Gas natural choice" program run by the New South Wales natural Gas networks industry group.

The generic marketing campaign was developed two years ago and was offered to network operators in NSW on a shared cost arrangement. The campaign was developed to fill a void created by retailers as retailers were promoting their company brands but were not directly promoting a particular fuel type. The cost structure is based on customer numbers and the Wagga Wagga gas distribution network's share for 2008/09 was \$108,768.

The generic marketing campaign covers the website, media and print advertising, and is focused on the benefits of natural gas. Advertisements do not promote particular network operators, nor do they use any brands except for the "natural Gas the natural choice" logo. While initially promoting natural gas as an alternative fuel source and seeking new connections, the latest campaign will be focused on appliances and working with appliance manufacturers.

*Country Energy Gas* also operates an incentive program across its gas distribution networks. The program is currently offered to retailers to operate as they have the interface directly with customers. In Wagga Wagga, the incentive program is offered only to existing households that connect to the network and install gas appliances, as well as those households that are already connected and install additional gas appliances. New houses in Wagga are not eligible for the incentive program. The incentive program runs across autumn and winter in each calendar year and commenced in autumn 2009. Therefore, only a minor number of payments were made in the 2008/09 base year. The step change in marketing to 2009/10 reflects payments for a full year.

### 6.2.3 Direct gas network management

Direct *Gas Network* management costs include the directly attributable costs of managing the *Gas Network*. Relevant functions include asset management functions, network data and billing, and strategic planning and compliance activities.

*Country Energy Gas* does not have any fuel compressors that use natural Gas and therefore the annual value is nil. However, *Country Energy Gas* does utilise natural Gas for heating purposes at the gate stations. The annual *Quantity* of natural Gas used for this purpose is approximately 7TJ and its cost is accounted for in the operating costs of the gas network management category.

Gas *Network* management costs have been allocated to the *Network* on the basis of its relative share of direct expenditure as a proportion of total *Gas Network* expenditure.

#### 6.2.4 Corporate allocation

Corporate costs are allocated to *Country Energy Gas* consistent with the AER approved cost allocation method. The corporate allocation includes *Country Energy Gas*' corporate costs which have been allocated to the *Network* on a causal basis (see below for details). The corporate costs include billing, accounts payable, credit control, call centres, emergency response, finance and accounting, payroll, business development, property management, regulatory affairs, *Customer* relations, and human resources.

The causal basis for allocation means one of the following relationships:

- A directly traceable cause and effect relationship between the item and the provision of the service
- A verifiable relationship between the item and the provision of the services
- A direct relationship with a pool of common costs or revenue, with the allocation of that pool on the basis of a relevant, reliable and verifiable factor.

The manner in which these costs have been allocated to the *Network* is:

- Total corporate costs have been allocated based on the cost allocation method that was approved by the AER as part of the electricity distribution determination, and
- These corporate costs have been allocated between the *Network* and *Country Energy Gas*' uncovered Gas distribution networks based on the *Network*'s share of budgeted direct total costs as a proportion of the total direct costs for all Gas distribution networks.

The small increase between 2008/09 and 2009/10 reflects step changes in several corporate services categories including:

- Health and safety – Increased staff training requirements, increased workplace trainer requirements, changes in work practices within the field to improve safety for employees.
- Learning and development – Skills and competency development programs, assessment validations, course development, competency assessments, project management, leadership development, staff training to achieve competency for field staff, expenditure to address recommendations from a Coroners Inquest in relation to field staff.
- Information services – Upgrades to financial systems and the service desk.

#### 6.2.5 Cost of tax

As part of the post tax nominal framework, a separate allowance must be made in the revenue requirement for corporate income tax, net of the value ascribed to dividend imputation credits. The estimated cost of corporate income tax has been calculated in accordance with the following formula:

$$ETC_t = (ETI_t \times r_t) (1 - \gamma)$$

where:

- ETIt is an estimate of the taxable income for that regulatory year that would be earned by a benchmark efficient entity as a result of the provision of standard control services if such an entity, rather than Country Energy Gas, operated the business of Country Energy Gas, such estimate being determined in accordance with the post-tax revenue model (PTRM)
- $r_t$  is the expected statutory income tax rate for that regulatory year as determined by the AER, and
- $\gamma$  is the assumed utilisation of imputation credits, which is 0.3 consistent with that approved by IPART in the previous Access Arrangement.

Country Energy Gas notes the lack of consensus among financial experts on gamma during the AER's WACC review and is not convinced that there is enough persuasive evidence to move from the previously adopted value of 0.3. This view was supported in submissions made by the Joint Industry Association (JIA)<sup>23</sup> and NSW Treasury<sup>4</sup> to the AER's electricity WACC review.

More recently, the Independent Pricing and Regulatory Tribunal of NSW (IPART) released a discussion paper on WACC<sup>5</sup> confirming that the greater amount of evidence supports a gamma value towards the lower end of the range between 1 and 0. In its discussion paper, IPART concluded that there was insufficient evidence to warrant a move away from the current gamma value range. IPART also stated that it is '*not convinced that there is conclusive evidence underpinning the values adopted by the AER for the payout ratio and theta*'. These values adopted by the AER were used in part to justify the adoption of a gamma value of 0.65.

#### 6.2.5.1 Forecast Tax Depreciation for the Access Arrangement

In order to move from the pre tax framework of the previous *Access Arrangement* to the AER's post tax framework, it is necessary for *Country Energy Gas* to calculate tax depreciation for the *Access Arrangement*. The *Post Tax Revenue Model (PTRM)* provides more information on tax depreciation schedules.

For the purpose of estimating the cost of corporate income tax, *Country Energy Gas* has calculated tax depreciation in accordance with tax law on a straight line basis. Table 24 shows the forecast tax depreciation for the *Access Arrangement*.

\$,000 (nominal)	2009-10	2010-11	2011-12	2012-13	2013-14
Forecast tax depreciation	1,915	2,022	2,125	2,226	2,333

**Table 24 – Forecast tax depreciation for the Access Arrangement**

<sup>2</sup> Joint Industry Association, *Network industry submission—AER Issues Paper—Review of the WACC parameters for electricity transmission and distribution*, September 2008

<sup>3</sup> Joint Industry Association, *Network industry submission—AER Proposed Determination—Review of the WACC parameters for electricity transmission and distribution*, February 2009

<sup>4</sup> NSW Treasury, *Weighted Average Cost of Capital: Response to the Australian Energy Regulator Review of Electricity Transmission and Distribution WACC Parameters*, January 2009

<sup>5</sup> Independent Pricing and Regulatory Tribunal, *Discussion Paper: IPART's cost of capital after the AER's WACC review*, November 2009

Country Energy Gas has calculated the net tax allowance for the Access Arrangement as summarised in Table 25. Country Energy Gas has calculated this tax allowance using a PTRM and the tax depreciation allowances discussed above.

\$,000 (nominal)	2009-10	2010-11	2011-12	2012-13	2013-14
Tax payable	552	512	561	612	663
Less value of imputation credits	(165)	(154)	(168)	(184)	(199)
<b>Net tax allowance</b>	<b>386</b>	<b>358</b>	<b>393</b>	<b>429</b>	<b>464</b>

**Table 25 – Tax allowance for the Access Arrangement**

### 6.2.6 Self Insurance

Self insurance is a significant cost that needs to be recognised in operating expenditure considerations. It is common for companies like Country Energy Gas to carry a level of self insurance to account for situations where self insurance is more cost effective. In order to reflect the efficient costs of achieving the operating expenditure objectives, Country Energy Gas has included a cost for self insurance.

Country Energy Gas has accepted the AER's recommended level of self insurance premium and notes that many self insurance events not considered under operating expenditure may be covered under the pass through provisions contained in section 12 of the Access Arrangement. The total self insurance premium is shown in Table 26 below.

\$,000 (real 2009-10)	2010-11	2011-12	2012-13	2013-14	2014-15
Self insurance	1	1	1	1	1

**Table 26 – Self Insurance for the Access Arrangement**

### 6.2.7 Debt Raising Costs

Country Energy Gas has adopted a conservative approach and included total debt raising costs of 10.4 basis points per annum for this Access Arrangement. The projected debt raising costs for each year over the Access Arrangement are summarised in Table 27 below.

\$,000 (real 2009-10)	2010-11	2011-12	2012-13	2013-14	2014-15
Debt raising costs	37	38	40	41	42

**Table 27 – Debt raising costs for the Access Arrangement**

### 6.2.8 Unaccounted for Gas

Country Energy Gas has included an allowance for the cost of Unaccounted for Gas in its operating expenditure forecasts, in order for it to be reflected in Reference Tariffs. This provides transparency and appropriate incentives for Country Energy Gas to minimise Unaccounted for Gas in the Network over the Access Arrangement.

Country Energy Gas has adopted the methodology proposed by the AER. Country Energy Gas also reviewed the forecast delivered Gas price and has found that, at this point in time, it appears reasonable. The projected *Unaccounted for Gas* costs for each year over the *Access Arrangement* are summarised in Table 28 below.

\$,000 (real 2009-10)	2010-11	2011-12	2012-13	2013-14	2014-15
Debt raising costs	37	38	40	41	42

**Table 28 - Unaccounted for gas costs for the *Access Arrangement***

### 6.2.9 Incentive Mechanism

Country Energy Gas has not included an incentive mechanism in this *Access Arrangement*.



# 7 TOTAL REVENUE REQUIREMENT AND X FACTORS

## 7.1 Total revenue requirement

Table 29 contains the derived elements of the total revenue requirement as set out in the previous sections.

\$,000 (nominal)	2010-11	2011-12	2012-13	2013-14	2014-15
Return on Capital	6,069	6,432	6,841	7,237	7,600
Return of Capital	826	675	737	808	896
Operating Expenditure	2,910	3,000	3,052	3,146	3,247
Benchmark Tax Liability	386	358	393	429	464
<b>Total costs</b>	<b>10,192</b>	<b>10,466</b>	<b>11,023</b>	<b>11,619</b>	<b>12,207</b>

**Table 29 – Forecast total revenue requirements for the Access Arrangement**

## 7.2 X Factors

Country Energy Gas has adopted the X Factors shown in Table 30 below.

X factor (Real)	2010-11	2011-12	2012-13	2013-14	2014-15
Option 1	(19.73%)	(2.5%)	(2.5%)	(2.5%)	(2.5%)

**Table 30 – Real price adjustments for the Access Arrangement**

# 8 REFERENCE TARIFFS AND REFERENCE TARIFF VARIATION MECHANISMS

## 8.1 Calculation of Reference Tariffs

### 8.1.1 Allocation of Total Revenue Requirement to Services

In order to provide information on the cost of providing services to various *Customer* classes, and to enable tariff levels to be determined, *Country Energy Gas* engaged *IRS* to undertake a cost of supply analysis for the *Network*. The approach adopted in the analysis was as follows:

- All asset related costs and all operating expenses were identified, including corporate overheads. In aggregate these costs equalled the total revenue requirement
- The function that each cost is incurred to perform was determined. These functions generally relate to the services provided by the business, for example metering, high pressure mains and low pressure mains. These functions were chosen to assist in the cost allocation across rate classes. Where some costs are incurred to perform more than one function, additional analysis was undertaken to determine the extent to which a cost can be attributed to each function
- The costs were classified according to the drivers which cause the functionalised costs to vary. Some costs vary by system throughput, some are driven by the number of *Customers*, and others are driven by the level of peak demand. For example, billing costs are largely driven by *Customer* numbers, while distribution costs may be driven by a combination of a need to meet annual throughput and also to meet peak demand. Some costs, for example high pressure mains, vary through a combination of drivers, and some analysis and judgement was required to ascertain the extent to which each driver causes variability in the relevant cost. This classification process also allowed *Country Energy Gas* to determine the extent to which fixed costs were recovered through fixed *Charges*, demand-related costs were recovered through demand *Charges* and volume-based costs were recovered through volumetric *Charge*
- Costs were then distributed to the various *Customer* classes (and even particular *Customers*) based on the extent to which those *Customers* impact the system. For example, the billing function tends to vary by the number of *Customers*, therefore the largest *Customer* class (Volume small) bore the majority of those costs.

This process allowed the costs associated with providing each service to be determined according to the cost of providing each component of the service. For example, this process ensured that Contract (high pressure) *Customers* did not bear costs associated with the low pressure system, but that Volume (low pressure) *Customers* carried a fair share of the costs associated with their use of the high pressure system supplying the low pressure system. This process also enabled the costs assigned to each *Customer* class to be identified, and for *Country Energy Gas* to identify if current revenue levels are consistent with costs.

*Country Energy Gas* has completed a cost of supply model based on the building blocks calculated as part of this *Access Arrangement*. Each *Reference Tariff* class differs slightly in terms of cost reflectivity in the first year of the *Access Arrangement*.

*Country Energy Gas* proposes to transition each *Customer* class to cost reflective levels throughout the *Access Arrangement*, so that by the 2014-15 financial year all *Customer* classes will be at cost reflective levels. The transitioning process will involve several steps, depending on the cost recovery starting point for each *Customer* class. The proposed *Reference Tariff* price paths are designed to minimise price volatility between years, while ensuring that cost reflective levels are achieved for all *Reference Tariff* classes by the end of the *Access Arrangement*.

*Country Energy Gas* has not included prudent discounts for any *Customer* in this *Access Arrangement*.

### **8.1.2 Reference Tariff Structure**

The structure of the *Reference Tariffs* for *Transportation Services* remains fundamentally unchanged from the previous *Access Arrangement*, with the exception of the merging of the central and fringe zone tariffs.

The tariff for the *Volume Transportation Service* comprises a *Monthly Fixed Charge* based on the flow rate of the *Metering Facilities*, plus a *Volumetric Charge* based on actual Gas deliveries.

The tariff for the *Contract Transportation Service* comprises a *Monthly Capacity Charge* (based on MDQ), plus a *Monthly Metering Charge* designed to recover the specific costs associated with *meter provision*, *meter reading* and data handling and provision.

### **8.1.3 Overruns**

The *Access Arrangement* proposes to continue the current arrangement for charging for *Overruns*.

*Country Energy Gas* proposes the following approach for the calculation for *Overruns*:

- *Users* may apply to have *Overruns* authorised (provided that no more than five authorisations have already been granted in that year) in which case no *Additional Charge* will apply; and
- where more than three unauthorised *Overruns* occur in a month, or a maximum of five unauthorised *Overruns* occur in any one financial year, the MDQ will be reset consistent with the highest unauthorised *Overrun*, and hence higher *Capacity Charges* will apply from the month in which the unauthorised *Overruns* occurred.

*Country Energy Gas* believes this approach is preferable, in that it:

- recognises that single or small *Overrun* events are unlikely to impose additional costs on the system in the short run, and hence there is limited justification for applying higher *Charges*
- recognises repeated *Overruns* indicate that system *Capacity* and security is reduced and hence that additional costs are likely to be incurred in the medium term, and

- is simple and easy to understand and administer.

#### 8.1.4 Unaccounted for Gas

An allowance for the cost of *Unaccounted for Gas* has been included in *Country Energy Gas*' operating expenditure.

### 8.2 Reference Tariff Variation Mechanism

#### 8.2.1 Form of Price Control

The *Access Arrangement* proposes that *Reference Tariffs* be adjusted in accordance with a tariff basket approach. *Country Energy Gas*' cost of supply model has been designed to equalise forecast revenue from *Reference Services* and apportion total revenue allocations to *Reference Services*. Under this approach:

- individual tariffs and tariff components can move consistent with a weighted average price cap which defines the overall movement in average prices
- average prices are determined by multiplying tariff components by relevant volumes incurred in the previous year
- *Country Energy Gas* takes the risk associated with higher or lower Gas usage

#### 8.2.2 Reference Tariffs

The clause sets out the manner in which *Reference Tariffs* (including *Monthly Metering Charges* and *Additional Services*) will change on 1 July 2011 and 1 July each Year thereafter throughout the *Access Arrangement Period*.

##### 8.2.2.1 Reference Tariff Control Formula

As occurred in the previous *Access Arrangement*, *Reference Tariffs* (excluding *Monthly Metering Charges*) will change on 1 July each year (starting from 1 July 2011) in accordance with the following formula:

$$\frac{\sum_{i=1}^n \sum_{k=1}^m p_{ik}^t \times q_{ik}^{t-2}}{\sum_{i=1}^n \sum_{k=1}^m p_{ik}^{t-1} \times q_{ik}^{t-2}} \leq (1 + \Delta CPI_t) \times (1 - X_t) \quad i = 1, \dots, n \text{ and } k = 1, \dots, m.$$

$$\sum_{i=1}^n \sum_{k=1}^m p_{ik}^{t-1} \times q_{ik}^{t-2}$$

Where:

- $p_{ik}^t$  is the proposed price for component 'k' of the relevant tariff 'l' for the year 't'
- $p_{ik}^{t-1}$  is the actual price for component 'k' of the relevant tariff 'l' for the years 't-1' (being the year which immediately precedes year 't')
- $q_{ik}^{t-2}$  is the audited quantity of component 'k' of the relevant tariff 'l' that was charged by *Country Energy Gas* in year 't-2' (being the year immediately preceding year 't-1')

- $x_t$  is the allowed real change in average prices from year 't-1' to year 't' of the access arrangement period in accordance with section 7.2
- $\Delta CPI_t$  as per the definition in section 14 of the *Access Arrangement*

#### Side constraints

$$\frac{\sum_{k=1}^m p_k^t \times q_k^{t-2}}{\sum_{k=1}^m p_k^{t-1} \times q_k^{t-2}} \leq (1 + \Delta CPI_t) \times (1 - X_t) \times (1 + 10\%) \quad k = 1, \dots, m.$$

Where: The tariff class has up to 'm' components:

- $p_k^t$  is the proposed price for component 'k' of the relevant tariff 'l' for the year 't'
- $p_k^{t-1}$  is the actual price for component 'k' of the relevant tariff 'l' for the years 't-1' (being the year which immediately precedes year 't')
- $q_k^{t-2}$  is the audited quantity of component 'k' of the tariff that was charged by Country Energy Gas in year 't-2'
- $x_t$  is the allowed real change in average prices from year 't-1' to year 't' of the access arrangement period in accordance with section 7.2. If  $X > 0$ , then X will be set equal to zero for the purposes of the side constraint formula.
- $\Delta CPI_t$  as per the definition in section 14 of the *Access Arrangement*

Amendments to *Reference Tariffs* as a result of a *Pass Through Event* will not be taken into account when determining compliance with the formulas in this section.

#### 8.2.2.2 Monthly Metering Charges and Additional Services

The fees provided in Appendix 2 for *Monthly Metering Charges* and *Additional Services* will change on 1 July each year by the *Change in the CPI*.

#### 8.2.3 Pass Through Events

In principle, a cost pass through should apply to those costs that are beyond the distributor's control and influence, whether they increase or decrease costs. There is likely to be a range of costs that will impact *Country Energy Gas* over the course of the *Access Arrangement* that cannot be included in the foreseeable regulated operating or capital expenditure forecasts.

Section 13.4 of the *Access Arrangement* permits material changes in certain cost items which are beyond *Country Energy Gas*' control and influence to be passed through to *Customers*. These include the following events:

- Regulatory change event
- Service Standard Change event

- Tax change event
- Terrorism or Natural Disaster event
- Force Majeure
- An Insurance event
- Retail Project event
- Emissions Trading Scheme event; or
- General pass through event

Pass through mechanisms are particularly important in respect of the *Network* due to its small size and the reduced opportunity to absorb cost increases simply by accepting a reduction in the return on capital compared to other larger networks.

The proposed approach to pass through events is consistent with sound risk management principles and similar provisions are a feature of other access arrangements. However, *Customers'* interests are protected to the maximum extent possible, in that:

- the *AER* must approve any tariff change and can appoint an auditor to review the effects of the costs
- the provision is symmetric and the *AER* is able to approve a change in tariffs should certain non-controllable costs be reduced or be removed; and
- unless prescribed otherwise by law, tariffs must be adjusted consistent with the basis upon which *Reference Tariffs* were originally determined. This ensures that individual *Customers* or *Customer* groups do not inappropriately bear the burden of price changes.

To minimise administrative costs and ensure that *Users* do not have to deal with more than one price change each year, *Country Energy Gas* proposes that changes to tariffs as a result of the *Pass Through Event* occur at the same time as the annual price changes.



## 9 OTHER MATTERS

### 9.1 Revisions and Submission Dates

*Country Energy Gas* has proposed an *Access Arrangement* of 5 years and a *Revisions Submission Date* of 1 July 2014. The *Revisions Commencement Date* will be 1 July 2015.

### 9.2 Incentive Mechanism

*Country Energy Gas* has not included an incentive mechanism in the *Access Arrangement*.

### 9.3 Extensions/Expansions Policy

Section 7 of the *Access Arrangement* sets out the regulatory arrangements applying to *Extensions* and *Expansions* of the *Network*. It identifies the circumstances under which any *Extensions* to or *Expansions* of the *Network* will be covered and the tariff arrangements to apply to any *Extension* or *Expansion*.

In the *Access Arrangement*, references to *Extensions* or *Expansions* are references to *Extensions* or *Expansions* to the *Network* as it will exist on 1 July 2010. In general, most *Extensions* and *Expansions* to the *Network* will be covered and prevailing *Reference Tariffs* will apply.

The *Access Arrangement* also contains provisions relating to the *Extension* of the *Network* into *New Developments*. Consistent with proposals to open up *Extensions* of the *Network* and *Connection of Customers* to competition, amongst other things the policy provides the ability for *Developers* to arrange for the construction of *Extensions* themselves (subject to compliance with relevant *Laws* and/or documentation issued by *Country Energy Gas*, and by paying for appropriate supervision and commissioning of facilities).

This approach is generally consistent with that adopted in the electricity industry in Wagga Wagga, where *Developers* are required to construct or pay for new facilities to serve *Customers*. It will allow capital expenditure to be provided on the most efficient basis and will thus lead to lower tariffs for all *Customers* over the longer term. Capital expenditure that is constructed or funded by *Developers* will not enter the *Capital Base* consistent with *NGR 82*.

### 9.4 Capacity Trading

The *Capacity* trading requirements in this *Access Arrangement* are consistent with *NGR 105*.

# 10 KEY PERFORMANCE INDICATORS

The projected KPIs for the *Network* are set out in Table 31 below.

\$ (real 2009-10)	2010-11	2011-12	2012-13	2013-14	2014-15
Operating costs/ <i>Customer</i>	118.95	119.36	117.95	118.28	118.79
Operating costs/metre	3.25	3.24	3.19	3.19	3.19

**Table 31 – Wagga Wagga Network KPI's for the Access Arrangement**