

ActewAGL

Access Arrangement for the ActewAGL Gas Distribution System

**Response to the Independent
Competition and Regulatory
Commission's Issues Paper**

April 2004

ActewAGL is Australia's first genuine multi-utility, combining electricity and gas network and retail operations with interests in water and wastewater services management. The \$800 million Joint Venture partnership provides services to close to 140,000 electricity, water and wastewater customers and just over 97,000 natural gas customers in the Canberra region.

Ownership of ActewAGL is shared equally between AGL, the nation's largest energy provider, and the ACT Government, through ACTEW Corporation. ActewAGL is organised as two partnerships—distribution and retail. ActewAGL Distribution partners are ACTEW Distribution Limited and AGL Gas Company (ACT) Ltd.

ActewAGL

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1 Introduction

1.1 Purpose of the submission

The purpose of this submission is to respond to the questions raised by the Commission in its Issues Paper. The submission follows the same structure as the Issues Paper. As in the Issues Paper, related questions are grouped together.

ActewAGL has responded to each of the 63 separate questions raised in the Issues Paper. It should be noted that for some topics more detailed information has been provided to the Commission and its consultants as part of the wider review process. For example, in the Issues Paper only three questions are raised on ActewAGL's demand forecasts. These three questions are answered directly in this submission. However, ActewAGL has also provided extensive information, data and analysis to the Commission's consultants on the demand forecasts. Responses have been provided to more than 80 detailed questions on demand forecasts alone. ActewAGL also expects the opportunity to respond to the consultant's reports on demand forecasts, capital expenditure and operating expenditure, after the consultants' reports are completed at the end of April.

This submission does not, therefore, fully represent ActewAGL's position on broad topics such as capital expenditure and demand forecasts. It contains responses only to the specific questions raised in the Issues Paper, and should be considered in conjunction with all other information and analysis that ActewAGL has provided.

1.2 General comments

As noted by the Commission in the Issues Paper (p. 9), the proposed Access Arrangement is broadly similar to ActewAGL's 2001 Access Arrangement in terms of approach and content. Proposed changes are intended largely to provide additional clarity and detail and to take account of changes in the gas market and regulatory framework.

A theme running through ActewAGL's responses is that aspects of the Access Arrangement that were approved in 2001 and have worked well since should continue to meet the requirements of the Gas Code. For example, one of the questions raised by the Commission is whether the services are sufficiently well defined. The fact that they have worked well throughout the first Access Arrangement period, with no problems, suggests that they are.

Where changes are proposed, ActewAGL has been careful to ensure that the requirements of the Gas Code are met. The Gas Code leaves room for judgement on matters such as what is reasonable. As noted by the Commission (Issues Paper p. 77), section 2.24 of the Gas Code provides some guidance on factors to take into account when exercising discretion. These factors include, among other things, the legitimate business interests of the service provider and the interests of users and prospective users.

It is in ActewAGL's commercial interests to develop an Access Arrangement that meets the needs of users, while also meeting the requirements of the Gas Code. Gas is sold in an increasingly competitive energy market and it is in the interests of service providers to offer a fair, reasonable and clear Access Arrangement. This point is relevant to many of the questions about changes in terms and conditions and policies on trading and queuing.

Existing gas industry practice can provide a useful guide for what is reasonable for ActewAGL's Access Arrangement. This is relevant to questions about terms and conditions as well as operating and capital costs (including the cost of capital). Where appropriate, comparisons with other Access Arrangements and decisions by other regulators are made in ActewAGL's responses. However, in making comparison it is important to take account of the distinctive features of different markets.

2 Services policy

Are the services proposed by ActewAGL consistent with users' needs?

Are they sufficiently well-defined?

Are there any other services that are likely to be sought by a significant part of the market?

As in the 2001 Access Arrangement, six reference services are to be offered. No changes to the definitions of reference services are proposed. ActewAGL believes that the proposed services are consistent with users' needs. The existing services have met user needs during the current Access Arrangement period. ActewAGL has received no comments or feedback on the need for different services.

Negotiated services are to be offered under the same definition as in 2001. Due to lack of any user interest during the 2001 Access Arrangement period the partial use of network service has been omitted as a specific service. ActewAGL does not foresee any need for such a service in the coming Access Arrangement period, however in the event that a request did arise, the service could be requested as a negotiated service. Negotiated services are broadly defined and continue to allow individual users to request a unique service where their needs are not met by a reference service.

While the interconnection of embedded networks service is proposed as a new non-reference service, this service reflects terms and conditions which already exist in the 2001 Access Arrangement in schedule F Part B. The intention in specifying it separately is to provide users with a clearer definition.

The definitions of the six reference services and negotiated services have worked well throughout the first Access Arrangement period, with no problems or comments from users. ActewAGL is confident that the services are still sufficiently well defined, and the new non-reference service also meets the requirements of the Gas Code by being clearly defined.

In relation to services likely to be sought by a significant part of the market, the Commission's consultants have raised with ActewAGL the issue of whether ancillary services should be reference services. They are in the Access Arrangements of some service providers (for example Envestra, Multinet and TXU in Victoria), but not others (for example AGL Gas Networks (AGLGN) in New South Wales).

ActewAGL's decision to not include ancillary services as reference services is consistent with the Gas Code, which requires services to be included if they are likely to be sought by a significant part of the market. Ancillary services have in the past been requested by a small proportion of the market, and there are no strong reasons to suggest that the requests are likely to increase substantially in the future. In a market

of around 97 000 customers, only 159 disconnections and 566 special meter reads were completed in 2003.

Are the restrictions on the availability of reference services reasonable?

Restrictions on availability of reference services are unchanged from the 2001 Access Arrangement, with the exception of an additional condition which would only apply to non-tariff delivery points with poor and disproportionate hourly utilisation.

The proposed new condition (that the MDQ be at least 10 times MHQ) relates to non-tariff services, not non-reference services (as described on page 25 of the Issues Paper). It is designed to encourage efficient supply and use of services through the following mechanisms:

- Charges for non-tariff services are based on MDQ (maximum daily quantity) to encourage efficient daily utilisation of network capacity and to allocate network charges according to the amount of capacity utilised. In terms of network design and capacity utilisation, maximum hourly quantity (MHQ) is also an important parameter, however there is no direct incentive in the current Access Arrangement to encourage efficient hourly utilisation.
- Basing charges on hourly metered quantities would result in increased costs due to the changes required to metering and billing systems as well as an increase in volume of data to be collected, stored and validated. To avoid these increased costs, a limiting ratio between MDQ (on which charges are based) and MHQ is proposed so that reference services (and charges) continue to be available for new services with reasonable hourly utilisation which meet other existing requirements.
- Requests for services with an unreasonable relationship between hourly demand and MDQ would be addressed through requests for a negotiated service, at which time the individual requirements of the user can be explored in the context of technical/operational demand management solutions or in the context of negotiated charges which are more reflective of network utilisation.

ActewAGL considers the proposed new condition to be reasonable as it:

- a) encourages efficient network utilisation through promoting demand management measures and a cost of service approach;
- b) is limited in its application to requests where the cost of providing the service is not reasonably reflected by an MDQ based charge; and
- c) minimises the costs of implementing an incentive on hourly demand.

The proposed restriction meets the requirements of the Gas Code. Section 2.24 of the Code refers to the need to take account of the requirements for economically efficient operation of the pipeline and operational and technical requirements for the safe and reliable operation of the pipeline.

The other restriction, or potential restriction, that the Commission refers to is that the meter data service may no longer be offered as a reference service if the service becomes contestable. This is a reasonable clause, given the likelihood that meter data services will become contestable, in which case ActewAGL will need to compete in the contestable market, and the market will impose the controls on the provision of the service. It is also permitted under the Gas Code.

Under the Gas Code ActewAGL may withdraw the meter data service as a reference service, and a service, during the term of the Access Arrangement without having to submit the Access Arrangement to the Commission for approval and public consultation. If an effective Access Arrangement contains a process governing what will happen on the occurrence of an event (such as clause 1.5 of Appendix F), then if that event occurs, the process in the Access Arrangement will be triggered, but the Access Arrangement itself does not need to be ‘changed’ (requiring submission to a further process as set out in section 2 of the Gas Code).

Is the fee for request for service reasonable? Should ActewAGL be required to provide an estimate or cap on the cost of the service prior to a request being submitted?

The fee for request for service is reasonable. The fee was \$50 for the duration of the first Access Arrangement. It has not been adjusted to account for inflation since 2001. The increase to \$60 is necessary to make the charge cost reflective. Annual increases throughout the regulatory period are in line with inflation, using the escalation methodology specified for reference tariffs (in clause 6.9 in the proposed Access Arrangement).

Providing a cap for the cost of processing a request for service would be unreasonable. Costs are likely to vary widely, depending on the nature and complexity of the request. ActewAGL considers it reasonable to provide an estimate of the cost, if the customer seeks one.

Are the service standards proposed by ActewAGL consistent with users’ needs and sufficiently well defined?

Should ActewAGL be required to ensure that service standards do not drop below existing levels?

ActewAGL’s minimum service standards are set by external instruments including the Consumer Protection Code and the Minimum Network Standards. The standards are clearly defined and performance in relation to the standards is reported to the Commission annually.

The question of whether current service standards meet users’ needs is a complex one. In response to a comment by the Commission (IPARC 1999) that it was difficult for it to establish whether existing service standards for electricity and water supply were reasonable, ActewAGL initiated a major study of customers’ willingness to pay for service standards (NERA and ACNeilson 2003). The study covers gas as well as electricity and water and wastewater.

The survey results show that both residential and commercial customers value reliability of the gas service provided by ActewAGL.

The key findings for gas are that ActewAGL's customers rate extremely highly both the standard of their gas supply and ActewAGL as a gas supplier.

In relation to gas service reliability, as measured by the length and duration of outages, ActewAGL's service level is near the optimum. A degraded level of service is less preferred to existing service levels. Similarly, an increase in reliability is less preferred to existing service levels.

Overall, the study results suggest that customers are willing to pay for existing service levels, and would not prefer a lesser reliability in return for a discount in price.

Establishing a scheme to ensure that service standards do not drop below existing levels would involve some complex issues such as how to define and measure appropriate service standards at the start of the scheme and each subsequent review period, how to structure penalties and rewards and how to deal with the impact of external events such as bushfires and third party damage to the network.

While ActewAGL supports the concept of ensuring that service standards meet customer needs, it is not convinced that a formal regulatory scheme is warranted. Results from the willingness to pay study suggest that gas customers would not value a reduction in service standards. As noted in the introductory comments to this submission, in an increasingly competitive energy market, ActewAGL has a strong commercial incentive to identify and respond to consumer preferences.

3 Terms and conditions

Are the revisions to general terms and conditions proposed by ActewAGL appropriate?

Are the other general terms and conditions appropriate?

Each of the proposed changes to the general terms and conditions is appropriate in that it meets the requirements of the Gas Code.

Most of the proposed revisions are designed to provide further detail and clarity compared with the 2001 Access Arrangement. For example, the changes to the clauses on receipt points and delivery points (3.20 to 3.38) clarify the rights and obligations of users and ActewAGL and therefore reduce uncertainty.

Some of the revisions take account of changes in the market and more flexible supply options since the 2001 Access Arrangement commenced. For example, the provisions on receipt point pressures in clause 3.20 and Attachment 7 have been amended so that the minimum pressures are based on a typical combination of supply from Watson and Hoskinstown during a winter peak. The 2001 Access Arrangement pressures were based on the total load being supplied from a single point. The provisions are consistent with the Gas Code in that they are necessary for the safe and efficient operation of the network.

The other (unchanged) general terms and conditions satisfied Code requirements when approved, and there have been no changes since then to suggest they are no longer appropriate. They have also worked well, with no disputes or complaints recorded during the first Access Arrangement period.

Are the specific terms and conditions proposed by ActewAGL appropriate?

The unchanged specific terms and conditions have worked well during the first Access Arrangement period and therefore continue to be appropriate. The proposed changes are largely designed to provide greater detail and certainty for users and ActewAGL. The provisions are consistent with the Gas Code in that they are necessary for the safe and efficient operation of the network.

Are the revisions to the curtailment of supply policy proposed by ActewAGL appropriate?

The curtailment of supply policy has been revised with the addition of two clauses. The first says that ActewAGL may suspend delivery of gas if a user fails to comply with the load shedding procedure in the Access Arrangement. The second additional clause says that ActewAGL will not be liable for damages incurred by the user or

user's customers arising from load shedding, and the user will be liable for and indemnify ActewAGL against any claims made by the user's customers arising out of load shedding procedures.

These clauses are designed to provide greater detail and certainty for users and ActewAGL. They reflect conditions of the current Access Arrangement (schedule 2F part A and schedule 2A conditions 25-27). Each of the additional clauses continue to be consistent with the Gas Code requirements (section 2.24) that the legitimate business interests of the service provider be taken into account and that the operational and technical requirements necessary for the safe and reliable operation of the pipeline be taken into account.

In relation to the second clause, it is reasonable for ActewAGL to require this liability arrangement because the user has a contractual arrangement with the end customer in which it can protect itself against claims from the customer regarding load-shedding procedures. ActewAGL does not have a contractual arrangement with the end customer and cannot protect itself from end customer claims in these circumstances. The user is responsible for ensuring the end customer understands the potential for load shedding and takes the required steps to protect itself in the event those procedures are implemented.

Are the gas balancing arrangements proposed by ActewAGL appropriate?

The gas balancing arrangements in attachment 5 of the proposed Access Arrangement have been amended to take account of changing circumstances in the market. The amendments became necessary following the unwillingness of parties to sign the Operational Balancing Agreement (OBA) recently proposed by ActewAGL. In NSW, the uncertainty surrounding the establishment and ongoing survival of an OBA between network and pipeline operators is also evident, where the OBA for AGL Gas Networks' Wilton network was recently terminated due to one of the three parties withdrawing from the agreement.

In the 2001 Access Arrangement, the arrangement for gas balancing when there is no OBA in place involves ActewAGL purchasing and selling operational balancing gas. This is not ActewAGL's preferred position, as it is a network owner, not a gas trader.

The balancing mechanisms in the revised Access Arrangement provide the flexibility for suppliers and their pipeline shippers to reach their own agreements, with agreement and overview from ActewAGL, without the need for ActewAGL to be involved in purchasing and selling gas. They are therefore consistent with the Gas Code requirement to take account of the interests of both the service provider and users.

The gas balancing arrangements in attachment 5 also take account of potential changes in the market. Clause 1.3 takes account of the possibility that the New South Wales and ACT Gas Market Company may introduce a market-based gas balancing scheme.

Are the revisions to the gas quality specifications proposed by ActewAGL appropriate?

The gas quality specifications are revised to take account of changes in statutory requirements and are therefore appropriate. The proposed specifications are consistent with the Network (Network Safety Management) Regulation in New South Wales. The Regulation is currently being reviewed by the New South Wales Department of Energy, Utilities and Sustainability.

Are the provisions relating to establishment of receipt points proposed by ActewAGL appropriate?

Are the terms and conditions proposed by ActewAGL appropriate?

Are the terms sufficiently well specified that a reference tariff can credibly be defined for the services being offered?

Are the terms and conditions sufficiently well specified to minimise disputes over the terms and conditions of access?

The proposed clauses on establishment of receipt points are appropriate in that they meet the requirements of the Gas Code. Clause 1.2 relates specifically to the need to ensure that the ‘integrity, safety and operability of the network is not compromised’, consistent with section 2.24 of the Gas Code. Clauses 1.4 and 1.5 also relate to safety and operational matters. Clause 1.3 requires that the cost of establishing the receipt point be borne by the person wishing to establish the new receipt point (unless ActewAGL notifies otherwise). ActewAGL considers it appropriate and efficient for the user of the new receipt point to bear the cost, instead of the alternative of spreading the cost across all users. This is also consistent with the Gas Code requirement that the economically efficient operation of the pipeline be encouraged.

4 Operating cost forecasts

Can trends in historical non-capital expenditure be used to forecast future expenditure?

Are the performance indicators provided by ActewAGL appropriate benchmarks for an efficient organisation?

Is the 1.5 per cent efficiency improvement proposed by ActewAGL appropriate?

Is it reasonable to include the projected level of marketing expenditure in the forecast?

Forecasting non-capital expenditure

Trends in historical non-capital expenditure are relevant for forecasting non-capital expenditure. ActewAGL's forecasts are a function of the key drivers of growth that were relevant in the first Access Arrangement period plus adjustments for additional factors or changes expected in the forecast period.

The key driver of non-capital expenditure is market growth – as the network is extended and more customers are connected, the costs of maintaining and operating the network increase. Market growth will continue to be the key driver of non-capital costs in the forecast period. ActewAGL has therefore used the non-capital cost growth formula approved by the Commission for the 2001 Access Arrangement (see ICRC 2000, p. 103) to forecast non-capital costs for the forthcoming Access Arrangement. Asset services and asset management costs increase in line with total market growth, with equal weightings for growth in customer numbers and volumes. Marketing costs increase in line with growth in the tariff segment of the market only. Corporate overheads do not increase with the growth formula, but are instead held constant at the real 2004/05 level. This assumes an efficiency improvement as no allowance is made for increases in employee costs above CPI, despite current projections showing wage increases above inflation.

The approach of allowing a trend based on market growth, and making adjustments to account for specific changes such as changes in the scope of operations, has been adopted by most regulators of Australian gas networks, including IPART in New South Wales, the ESC in Victoria and the Queensland Competition Authority.

Performance indicators

The key performance indicators for ActewAGL presented in table 9.1 of the Access Arrangement Information (and shown as table 4.1 below) were chosen as they were used in the 2001 Access Arrangement Information. The indicators (non-capital costs per customer, per kilometre and per terajoule of gas sold) are commonly used in assessments of gas Access Arrangements and reported in Access Arrangement Information documents.

**Table 4.1 Key Performance Indicators for ActewAGL's Gas Distribution System
(2004/05 \$)**

<i>Year ending 30 June</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Opex/customer	150.0	130.3	129.7	119.2	134.4	130.7	128.9	125.5	122.3	113.2
Opex/km	3611.3	3234.9	3311.5	3117.4	3591.4	3550.1	3549.8	3503.4	3449.8	3398.7
Opex/TJ	1908.3	1751.1	1784.2	1630.4	1837.2	1805.2	1795.7	1762.3	1728.4	1695.7

Note: Opex means total non-capital costs

As noted by IPARC in the draft decision for ActewAGL's 2001 Access Arrangement (IPARC 2000, p. 120), there are many possible performance indicators, each with limitations. A range of indicators should be used if possible and different operating environments should be taken into account when making comparisons across service providers.

The performance indicators used by IPARC in the draft decision for the 2001 Access Arrangement are shown in table 4.2. The table also shows other relevant statistics for each service provider.

**Table 4.2 Industry Operating Costs and Statistics (2002/03 \$)
from IPARC Draft Decision**

<i>Company</i>	<i>AGLGN</i>	<i>AGL(ACT)</i>	<i>Envestra</i>	<i>Envestra</i>	<i>Multinet</i>	<i>Stratus</i>	<i>Westar</i>
<i>State</i>	<i>NSW</i>	<i>ACT</i>	<i>SA</i>	<i>Qld</i>	<i>Vic</i>	<i>Vic</i>	<i>Vic</i>
<i>Year</i>	<i>1999</i>	<i>1999</i>	<i>1999</i>	<i>1999</i>	<i>1999</i>	<i>1999</i>	<i>1999</i>
Statistics							
Customer #s	751,613	64,912	329,412	74,790	587,179	416,327	410,976
Km of lines	21,589	3,410	6,892	2,046	8,601	7,314	7,195
Sales Volume (TJ)	101,469	5,115	46,178	10,639	87,730	57,053	62,594
Customers/km	35	19	48	37	68	57	57
Deliveries (TJ/km)	5	2	7	5	10	8	9
Utilisation (TJ/Cust)	0.14	0.08	0.14	0.14	0.15	0.14	0.15
Total O&M costs (\$m)	104.5	12.5	37.7	10.0	51.4	45.8	37.8
Opex Ratios							
Opex/customer (\$)	139	192	114	133	87	110	92
Opex/km (\$)	4,842	3,651	5,468	4,879	5,973	6,257	5,254
Opex/delivery (\$/TJ)	1,030	2,434	816	938	586	802	604

Updated performance indicators and related statistics are provided in table 4.3. The updated information is taken from annual reports and Access Arrangement Information documents for each service provider.

Table 4.3 Industry Operating Costs and Statistics – Recent Data (2002/03 \$)

<i>Company</i>	<i>AGLGN</i>	<i>ActewAGL</i>	<i>Envestra</i>	<i>Envestra</i>	<i>Multinet</i>	<i>TXU</i>	<i>Envestra</i>	<i>Allgas</i>
<i>State</i>	<i>NSW</i>	<i>ACT</i>	<i>SA</i>	<i>Qld</i>	<i>Vic</i>	<i>Vic</i>	<i>Vic</i>	<i>Qld</i>
<i>Year (end 30 June)</i>	<i>2003</i>	<i>2003</i>	<i>2002</i>	<i>2003</i>	<i>2003</i>	<i>2003</i>	<i>2003</i>	<i>2003</i>
Statistics								
Customers	892,920	92,656	350,488	73,736	631,637	466,277	459,555	58,979
Km of lines	22,880	3,628	6,897	2,026	9,100	8,000	7,943	1,843
Sales volume (TJ)	97,127	6,734	41,800	13,300	60,653		53,600	9,992
Customers/km	39	26	51	36	69	58	58	32
Deliveries (TJ/km)	4.25	1.86	6.06	6.56	6.67	-	6.75	5.42
Utilisn (TJ/Cust)	0.11	0.07	0.12	0.18	0.10	-	0.12	0.17
Total O&M (\$m)	93.0	10.0	37.3	10.6	51.1	44.6	43.6	8.2
(excl tax and UAG)								
Opex Ratios								
Opex/cust (\$)	104	108	106	144	81	96	95	139
Opex/km (\$)	4,065	2,764	5,408	5,252	5,615	5,575	5,489	4,449
Opex/TJ (\$)	958	1,489	892	800	842		813	821

The information in the tables shows that ActewAGL has improved its performance since 1999. It also illustrates the influence of different market characteristics such as customer density (customers/kilometre).

In 1999 ActewAGL's operating costs per customer and per TJ delivered were relatively high, but costs per kilometre of lines were the lowest among the distributors shown. Over the 4-year period to 2003 ActewAGL's operating cost per customer has been reduced by around 44 per cent in real terms. ActewAGL's operating costs per customer in 2003 compare favourably with other distributors with higher customer density. Lower density tends to increase costs per customer as fixed costs must be spread across a smaller customer base. The Victorian distributors have the most dense networks and also the lowest costs per customer.

ActewAGL's operating costs per kilometre remain much lower than other Australian gas distribution businesses. Operating costs per TJ delivered remain relatively high, reflecting the fact that ActewAGL serves a market comprising mainly small customers (TJ per delivery are the lowest of those shown).

The performance indicators presented are useful benchmarks for efficient organisations, provided they are used in conjunction with further information about differences in operating environments.

Efficiency improvements

The proposed 1.5 per cent efficiency improvement is appropriate. It represents a significant ongoing commitment to reduce costs, building on the improvements already achieved, as illustrated by the performance indicators in the previous section.

Further constraints on operating costs would impose considerable risks that basic maintenance and safety requirements for the network will be compromised. ActewAGL is committed to maintaining its industry position as a highly efficient gas distribution business with a strong record in safety and service provision.

Marketing expenditure

Marketing is an essential strategy for encouraging gas demand and ensuring efficient use of network capacity. ActewAGL's marketing expenditure covers not generic advertising but specific programs designed to increase use of the network and generate additional throughput and revenue. There is considerable scope to encourage greater use of gas by customers already connected. Around one third of all gas homes use the gas for cooking only. The focus of the proposed marketing program is to encourage homes that currently use gas for cooking only to use it more widely and to encourage gas use in high-rise and medium density dwellings where gas use has traditionally been low. A major potential growth area is gas hot water systems. Greater demand for gas for hot water could increase overall network utilisation and improve utilisation in summer.

Marketing expenditures which are designed to increase throughput and reduce average prices for users should be included in allowed costs. In a regulated environment the benefits of additional throughput are distributed at each regulatory review among users of the network through lower reference prices. A rational network owner has no incentive to incur marketing expenditure that is not allowed in operating costs as it does not retain benefits derived from the expenditure, other than the small amount of additional revenue that occurs in the current regulatory period.

ActewAGL's proposed marketing expenditure is within the reasonable bounds identified by the Commission in the final decision for the 2001 Access Arrangement. In deciding on the appropriate marketing allowance for the 2001 Access Arrangement, the Commission noted that for other gas distributors, marketing costs ranged from 2 to 17 per cent of non-capital costs. ActewAGL was allowed marketing expenditures above this range for the 2001 Access Arrangement, as the Commission concluded that a higher level may be warranted where particular factors impact adversely on ActewAGL (ICRC 2000, p. 100). ActewAGL's forecast marketing expenditures for 2005 to 2010 represent an average of 13 per cent of total non-capital expenditure for each year – within the range identified by the Commission as reasonable in the 2001 final decision.

The projected level of marketing expenditure is therefore reasonable and should be included in the non-capital cost forecasts.

Which areas are most likely to be susceptible to cost misallocation?

What benchmarks and methodologies would be applicable in assessing ActewAGL's allocation of joint costs?

What are the pitfalls in assessing the joint cost allocation of multi-utilities like ActewAGL?

Joint cost allocation

Joint costs cannot be allocated according to direct cost drivers such as customer numbers so they must be allocated in line with some proxy which best reflects the actual cost drivers. Joint or shared costs include costs of services, processes, materials and equipment used to produce more than one output, service or product. The corporate overheads included in ActewAGL's proposed non-capital costs include some components that are shared with ActewAGL's electricity, water and wastewater businesses. The joint costs include those for the CEO, audit services, business systems, commercial executive, legal and secretariat, finance, management and services provided by the Energy Networks Division (including processing, support, management and fleet services), human resources and corporate facilities.

Methodologies and benchmarks

Joint or shared costs for ActewAGL's individual businesses are allocated in a way that ensures that costs are not inappropriately loaded onto ActewAGL's regulated activities, to the advantage of its unregulated activities. The cost allocation also ensures that the cost of assets used by more than one regulated business is allocated appropriately between the businesses, and only the allocated cost is recovered from regulated charges.

Fixed Price Service Charges are used to attribute the cost of corporate services, shared services and other corporate overhead costs to the operating business. The charges are fixed at the beginning of the year based on expected use of services and a proportion of corporate overhead costs are charged to the businesses on a monthly basis. Service charges are attributed to businesses based on the most appropriate driver of cost and the consumption by each business of that service.

As far as possible, the costs of corporate areas and shared service areas are directly attributed to divisions using those services. Expenditure incurred relating to a specific division is charged to that division. Costs not directly attributable to a division are attributed using the most appropriate and practicable cost driver. The basis of cost attribution for shared services is summarised in Table 4.4

Table 4.4 ActewAGL fixed price service contracts—basis of attribution

<i>Provider and service</i>	<i>Basis of attribution</i>
<i>Corporate Divisions</i>	
Audit services	Estimated effort on planned internal audit program projects and attributed to areas based on which area the work relates to
CEO Office	Estimated effort of the CEO's office in dealing with issues arising from Division's activities
Commercial Executive	Estimated effort on planned commercial projects and attributed to areas based on which area the work relates to
Finance	Estimated effort on projects and ongoing management and corporate governance issues
Human Resources	Number of staff in each Division

Legal and Secretariat	Estimated effort on projects and ongoing activities based on areas issues are arising or Division being provided with the service
Corporate Facilities	Square metres of space occupied by each Division
<i>Business Systems Division</i>	
Customer services	Number of calls received and made
IT Infrastructure	Number of PCs, servers, communications and computer equipment utilising the IT infrastructure
Applications	Estimated effort by application maintained and supported attributed to the user supported
<i>Energy Networks Division – Logistics</i>	
Warehousing	Square metres used and staff time of removal and other jobs
Processing & Support	Staff time to each division using services
Fleet	Number of vehicles in each Division
<i>Energy Networks Division – Gas</i>	
Management fee	Management of the Gas Networks previously part of Commercial Executive
<i>Retail partnership</i>	
Customer accounts	Volume of each service used by divisions
Communications & Marketing	Estimated effort on projects attributed to the Divisions using those projects

The result is the appropriate and reasonable allocation of costs between the various utility businesses.

ActewAGL's cost allocation methodologies were reviewed by consultants for the Commission in 2003 (BRW et al 2003). Allocated costs were compared with industry benchmarks. The appropriate benchmarks were selected from a study by KPMG, which was commissioned by the Office of the Regulator General (the Victorian regulator at the time of the study). The Commission's consultants concluded that most of the cost drivers and the basis of allocation used by ActewAGL are appropriate.

Pitfalls and benefits of multi-utilities like ActewAGL

ActewAGL has interpreted the Commission's question 'what are the pitfalls in assessing joint cost allocation of multi-utilities like ActewAGL?' to mean what are the possible problems if costs are misallocated. ActewAGL agrees with the Commission's comments that inappropriate cost allocation may not only inflate the costs to be allocated to consumers of regulated services, but also distort gas retail competition. BRW also noted these concerns in its review, but concluded that ActewAGL has attempted to accurately reflect the costs incurred in their joint cost centres by allocating costs to the appropriate areas (BRW 2003, p. 62).

Multi-utility arrangements are typically seen to provide significant benefits to customers. ActewAGL is Australia's first genuine multi-utility, combining electricity and gas network and retail operations with interests in water and wastewater services management. The \$800 million Joint Venture partnership provides services to close to 140,000 electricity, water and wastewater customers and just over 97,000 natural gas customers in the Canberra region.

The final report from the ACT Legislative Assembly Standing Committee on Finance and Public Administration (August 2000) listed the key benefits from the Joint Venture partnership as:

- a reduction in the risk associated with energy trading for ACTEW's electricity and gas businesses;
- employee and shareholder benefits, specifically 'employment security and enhanced opportunities for ACTEW employees';
- delivery of synergies from the retail and distribution partnership for gas and electricity businesses; and
- public interest protection, since ACTEW would continue to be subject to ACT legislative controls.

The Commission has also recognised the efficiency benefits from a multi-utility arrangement. In releasing its ring-fencing guidelines for the ACT, the ICRC stated (ICRC 2002):

... The ACT arrangements are different to other jurisdictions by virtue of the market presence of a large vertically integrated multi-utility that is partially government owned. The Commission has been careful to weigh up the benefits to consumers arising from the benefits inherent in the scale economies of the ActewAGL joint venture arrangement and the risk of those benefits being diminished by enforced separations that are inappropriate or unnecessary.

The Joint Venture has minimised duplication between the different business functions by utilisation of common systems. The task of complying with the different codes of practice applying to gas, electricity, water and wastewater services is also made easier by sharing information across the various utilities, especially where there are common requirements. Shared overheads include provision of audit services; business services and IT; commercial; corporate finance; human resources; legal and secretariat; facilities; logistics and management; and customer accounts.

The ACT was the first Australian jurisdiction to integrate the regulation of gas, electricity, and water and wastewater services and was also the first jurisdiction to have codes of practice covering the water and wastewater industry. This provided a challenge for ActewAGL to seek synergies in the implementation process. For example, four separate Standard Customer Contracts were needed to cover the provision of gas, electricity, water and wastewater services. By developing the contracts in parallel, common provisions were applied to all businesses, considerably reducing development time.

Are there any issues arising from the ring-fencing guidelines or the extent to which ActewAGL may have operated in a manner which may breach those guidelines, which may be relevant to the commission's assessment of the proposed revisions?

ActewAGL believes that the ring-fencing guidelines are appropriate for a multi-utility operation and consistent with the requirements of the Gas Code and that no changes to the guidelines are warranted. ActewAGL reports annually to the Commission on compliance with the guidelines.

The Commission's consultants' review in 2003 stated:

The policies adopted by ActewAGL for its Gas Distribution business largely comply with the ICRC ring-fencing guidelines. ActewAGL has also developed and imposed appropriate policy requirements on Agility, its Gas Distribution contractor, in order to meet ActewAGL's ring-fencing obligations and to ensure that the actions of Agility do not cause ActewAGL to breach these guidelines (BRW et al, 2003 p. 57).

Therefore, ActewAGL does not believe there are any issues arising from the ring-fencing guidelines which are relevant to the Commission's assessment of the proposed access arrangement.

5 Capital expenditure and the capital base

Does the current service level warrant the extent of capital expenditure for ActewAGL to stay-in-business?

Has the system capacity been adequately utilised to justify the additional growth in capital expenditure?

The 2009 capital expenditure indicates a significant increase in capital expenditure for growth capacity. Given the trend in more efficient energy utilisation, is this a reasonable assumption?

Stay-in-business capital expenditure and service levels

ActewAGL's proposed stay-in-business capital expenditure assumes continuation of current service levels. Forecasts are based on detailed modelling and analysis of the condition of assets and statutory service requirements.

Stay-in-business capital expenditure accounts for a relatively small share (around one quarter) of total forecast capital expenditure, reflecting the fact that ActewAGL's network assets are relatively new. The proposed average annual stay-in-business expenditure represents less than 1 per cent of the value of the asset base. This is below the industry accepted long term average of 2 per cent a year required to ensure that the quality of the infrastructure is not degraded. As the network ages, stay-in-business expenditure will need to increase to around the long term average.

The main component of the stay-in-business forecast is meter renewal and upgrade. The replacement program is conducted in accordance with statutory requirements set out in the Gas General Metering Code for the ACT.

Another important component of the stay-in-business forecast is the upgrade of security around facilities and pipelines. A recent detailed review of network security identified several projects necessary to ensure the safe operation and maintenance of network assets. These projects have been included in the forecasts.

The proposed stay-in-business expenditure is warranted by current service standards, which are largely determined by statutory requirements, and consumer preferences as indicated by ActewAGL's recent willingness to pay study.

Capacity utilisation

ActewAGL's gas network was designed for a 20 year capacity capability in 1981. Natural gas was expected to be predominantly used by residential and commercial customers for hot water and space heating applications. The network was initially designed for an average domestic usage in the order of 35 GJ per annum. By the late 1990s sections of the network were fully utilised. Over a 20 year period the average household has increased gas consumption with the availability of new gas applications such as central heating units and swimming pool heaters. The average domestic load is

currently around 49 GJ per annum. The network continues to grow between 3000 and 4000 customers per year. Significant capital expenditure is therefore required to develop capacity beyond the original 20 year horizon to maintain safe and reliable supply to existing and new customers.

Identification and implementation of the capacity development projects is based on the combination of demand forecasting and network analyses. Network growth is monitored and forecasts revised annually based on factors such as new land releases and trends in gas applications.

The principle indicator of the level of utilisation in a network is the minimum operating pressures. The minimum design pressure criteria for secondary and medium pressure networks is 525 kPa and 70 kPa, respectively. As the network pressures approach these levels, the network is considered fully utilised. Below these levels there may be problems with supply continuity and reliability.

Each year Agility, manager of ActewAGL's gas network, conducts a process known as network supply performance validation using computer modelling, physical gauging/telemetry data and demand forecasts, as per technical policy *Gas Network Design Criteria and Performance for Supply Reliability and Growth*.

The network validation process:

- Confirms the capacity status/performance of the network;
- Identifies capacity limitations in the network; and,
- Defines or confirms the short and long term capacity planning strategies of the network.

This process, coupled with risk assessments on supply reliability, enables maximisation of network utilisation and timely initiation of capital expenditure.

Growth capacity and energy efficiency trends

The trend to more efficient energy utilisation is taken into account in the demand forecasts, which are then used to determine growth based capital requirements. While customers are assumed to gradually improve energy efficiency over the forecast period, customer numbers and total demand are growing and so therefore is the need for capacity expansion.

6 Demand forecasts

What are the likely key drivers of gas usage in the ActewAGL network?

Is it reasonable to forecast decreases in average consumption for new residential customers and existing business tariff customers?

Is it reasonable to assume a continued warming trend in the gas consumption forecasts?

Key drivers of demand

ActewAGL's demand forecasts are split into three parts – residential, business and contract. For each of these market segments, the key drivers from the first Access Arrangement period are expected to continue to be the key drivers next period. Historical trends therefore provide a good basis for the forecasts, which are 'best estimates' arrived at on a 'reasonable basis' as required by the Gas Code (section 8.2).

The demand forecasting methodology was independently reviewed by consultants ACIL (2003). ACIL concluded that:

- the methodology used to develop the projections is appropriate and sound;
- the projections of gas and network demand are reasonable; and
- together, they meet the Code criterion.

For the residential market, the key drivers include:

- the number of new residences;
- trends in average consumption by new customers;
- the number of customers in existing residences converting from electricity to gas; and,
- changes in consumption by existing customers.

These key drivers are in turn influenced by a range of factors. Growth in new residences is driven by economic and demographic changes which are incorporated in the building activity forecasts provided by BIS Shrapnel (2003). Trends in average consumption are driven by trends in temperatures as well as energy efficiency trends, which are influenced by energy policies as well as water policies which influence the demand for gas for water heating.

The business market is more diverse than the residential market, with a wide range of factors influencing demand for different business customers. ActewAGL expects no significant changes in the factors driving the business market over the forecast period. The best estimates of growth are a continuation of current trends.

The contract market is small, comprising only 39 customers – 11 in health and education, 11 in offices and 17 others. The drivers of demand vary across the individual customers. ActewAGL believes that in this small and stable market (no new customers since 2001) the most reasonable forecasts are a continuation of historical trends in annual consumption quantities (ACQs) for each of the three groups, with adjustments where major new customers are expected. Over the forecast period one new customer – Action buses – is expected to enter the market.

Details on ActewAGL’s demand forecasting methodology have been provided to the Commission’s consultants. In response to comments from the consultants, some adjustments have been made to ActewAGL’s original forecasts which were presented in the Access Arrangement Information.

Average consumption

For new residential customers the forecast fall in average consumption is driven by the introduction of more energy-efficient appliances, particularly hot-water saving devices. For example, the ACT Government’s *Think Water, Act Water* report indicates that all new dwellings will be constructed in an environment which subsidises/stipulates the installation of AAA rated showerheads. Given the heightened awareness of energy efficiency and other environmental drivers among policy makers, appliance manufacturers and consumers, it is inevitable that the average consumption of newly equipped households will decrease relative to prior periods where such drivers were less influential. Accordingly, ActewAGL believes that a forecast of decreasing average demand in new homes is reasonable.

For existing business customers, the forecast fall in average consumption is a continuation of the historical trend. The trend reflects the introduction of energy efficiency measures. In the absence of other drivers, it is reasonable to assume that historical trends will continue.

Weather adjustment

Weather has a major influence on residential and business gas demand. Cooler temperatures tend to increase gas demand. Any significant trend to warmer (or cooler) temperatures should therefore be taken into account in gas demand forecasts.

ActewAGL’s analysis confirms that there is a strong relationship between the number of Heating Degree Days (HDD)¹ recorded at Canberra Airport and consumption by

¹ The HDD value for a day is the amount (in degrees Celsius) by which the average of the maximum and minimum temperatures for the day is less than 18°C. The HDD value is zero if the average temperature is greater than or equal to 18°C. This is an industry standard measure and reflects the fact that it is only when the average temperature falls below about 18°C, that gas demand is significantly affected by temperature.

tariff customers on the ActewAGL distribution network. Based on 2003 data each HDD increases consumption by 1.3 TJ. The analysis also confirms that there is a trend to warmer temperatures in the ACT.

The analysis of HDDs is based on 37 years of historical data. It shows that there is a statistically significant declining trend in HDDs over time. HDDs recorded at Canberra Airport are reducing by an average of 5.4 HDD per year. This is a significant trend, observed over a long period, and is reflected in the forecasts.

7 Cost of capital

ActewAGL proposes a real pre-tax WACC of 7.9 per cent. The WACC estimate is based on an independent assessment by Network Economics Consulting Group (NECG). ActewAGL has provided the Commission's consultants with a copy of the NECG report.

NECG adopted the forward (market) transformation in converting from a nominal post-tax WACC. Both the Commission and IPART have used the method in previous decisions on gas Access Arrangements. The parameters used to calculate the WACC are shown in table 7.1.

Table 7.1: WACC parameters

Parameter	Value
Nominal risk free rate (%)	5.65
Forecast inflation (%)	2.33
Market risk premium (%)	6.50 – 7.00
Equity beta	0.98 – 1.09
Debt beta	0.00 – 0.06
Cost of equity (%)	12.05 – 13.31
Debt premium (%)	1.43
Cost of debt (%)	7.08
Tax rate (%)	30
Gearing ratio (%)	60
Franking credits (%)	40
Nominal post-tax WACC (%)	7.09 – 7.52
Nominal pre-tax WACC (%)	10.12 – 10.74
Real Pre-Tax WACC (%)	7.62 – 8.22

Is it appropriate for the commission to use a pre-tax approach to the calculation of the WACC?

Should the commission use a statutory tax rate or an effective tax rate?

ActewAGL believes that it is appropriate for the Commission to use a pre-tax approach to the calculation of the WACC, with tax calculated at the statutory rate. The pre-tax approach is appropriate because:

- It is consistent with the Commission's previous price directions and investigations; and

- The level of intrusion, complexity and cost required to calculate the effective tax rate (which would be lower than the statutory rate) would be likely to exceed any benefits.

ActewAGL proposes to use the statutory tax rate of 30 per cent in calculating the pre-tax WACC.

What is the appropriate value of dividend imputation credits in the WACC?

ActewAGL proposes to use a gamma of 0.4 when calculating the WACC. A gamma of 0.4 is at the mid-point of the range adopted by the ICRC and the IPART in previous regulatory decisions in the ACT and NSW.

NECG (2003) identified the key issues in determining a gamma for the WACC as follows:

- the identity of the marginal investor. Although the gamma used in the CAPM is typically a market average, it is the marginal (not average) value of gamma that is likely to be more appropriate for setting a forward-looking value consistent with the aims of the CAPM. This is because share prices are set by price setting (marginal) investors. For publicly listed Australian companies, the marginal investor is likely to be an international investor given the extent of foreign ownership of Australian companies and the relative size of the Australian market in global terms; and
- the net impact of recent taxation changes. There is little reason to suggest any change to the valuation of imputation credits as a result of the impact of domestic tax law changes. Tax law would only impact on gamma to the extent that those investors affected by any changes to taxation law are marginal investors, and as discussed above, it is unlikely that Australian tax residents are marginal investors.

ActewAGL notes that while recent regulatory practice in Australia has been to assume a gamma of 0.3–0.5, a gamma of zero is consistent with the marginal investor being an international investor. ActewAGL therefore proposes that the Commission adopt a gamma at the midpoint of this range, or 0.4. This proposal is supported by NECG which sees no credible case for the Commission to shift above its well-established position of a range of 0.3–0.5.

What is the appropriate debt margin to adopt in the WACC?

ActewAGL's proposed debt premium is 1.425 per cent. The proposal comprises two elements: the cost of debt of 1.30 per cent and debt raising costs of 0.125 per cent.

Recent regulatory decisions by IPART, the ACCC and the Essential Services Commission of South Australia (ESCOSA) on the cost of debt component have been based on results from the CBA Spectrum model. Advice provided by National Economic Research Associates (NERA), (as presented in ActewAGL's supplementary submission to the electricity review) states that if CBA Spectrum estimates of the debt

margin are to be adopted it is appropriate to use the average CBA Spectrum debt margin over the previous regulatory period for BBB+ bonds with 10 years to maturity, rather than short term averages used by IPART and the ACCC. NERA's proposed approach has been used by the Essential Services Commission of South Australia (ESCOSA) The only BBB+ observation in CBA Spectrum's database which has a maturity greater than 3 years is Snowy Hydro which has a 9 year maturity and a debt margin of 1.37 per cent, which is in line with ActewAGL's proposed 1.30 per cent.

For the debt raising costs, NECG has advised ActewAGL that regulatory present understates the appropriate allowance for the cost of debt issuance and that US data suggests the allowance should be in the order of 50 basis points (NECG 2003). In NECG's opinion it is appropriate to increase the debt raising cost to 0.25 per cent in line with the Australian Competition Tribunal's decision on the WACC parameters for GasNet's Access Arrangement. This is above ActewAGL's proposal of 0.125 per cent.

Based on independent advice provided by NECG and NERA, ActewAGL believes that it proposed 1.43 per cent debt margin is reasonable.

What is the appropriate market risk premium to adopt in the WACC?

The market risk premium (MRP) is the amount an investor expects to earn from an investment in the market above the return earned on a risk-free investment. The key difficulty in estimating the MRP arises from it being an expectation and therefore not being directly observable. Generally a range of plausible values is identified and the MRP is chosen within the range.

ActewAGL's proposed range for the MRP is 6.5 to 7 per cent. The proposal is based on an assessment of historical evidence together with a review of recent regulatory decisions. Based on a review of empirical studies of historical data, NECG concluded that the generally accepted range for the MRP among corporate finance professionals in Australia has been 6 to 8 per cent. Results from several studies are shown in table 7.2.

Table 7.2 Historical estimates of MRP

<i>Source</i>	<i>Market risk premium (%)</i>
Officer (1989) (based on 1882-1987)	7.9
Hathaway (1996) (based on 1882-1991)	7.7
Hathaway (1996) (based on 1947-91)	6.6
NEC (based on 1952-99)	6.6
AGSM (based on 1964-95, including October 1987)	6.2
AGSM (based on 1964-95, excluding October 1987)	8.1
Dimson, Marsh, Staunton (2002) (based on 1900-2000)	7.0

NECG also reviewed recent regulatory decisions, and found that most regulators have adopted a figure at the bottom end of this range, 6 per cent (see table 7.3).

Table 7.3 MRPs adopted in recent regulatory decisions

Regulator	Range/value applied	Notes
ICRC	5.0-6.0%	All decisions to date
IPART	5.0-6.0%	All decisions to date
ACCC	6.0%	All final decisions and outstanding draft decisions
ORG/ESC	6.0%	All final decisions and outstanding draft decisions
QCA	6.0%	All final decisions and outstanding draft decisions
Offgar	6.0%	All final decisions and outstanding draft decisions
Otter (Tas)	6.0%	All decisions to date
SAIPAR	6.0%	All decisions to date

What are the appropriate beta values to adopt in the WACC?

ActewAGL has proposed a range for the equity beta of 0.98 to 1.09, with a debt beta of 0.00 to 0.06. NECG recommend that, given the inherent volatility of beta values, the beta values for a company such as ActewAGL should be based on a consideration of a number of factors and not rely exclusively on a limited number of current observations for listed utility businesses in Australia.

Regulatory precedent is consistent with a range for the equity beta for businesses with 60 per cent gearing of 1.00 to 1.20 for gas distribution (based on adopting the mid-range value of IPART's range), and 1.00 to 1.30 for gas transmission. If a debt beta of zero is assumed, this is equivalent to ranges for the asset beta of 0.40 to 0.48 for gas distribution and 0.40 to 0.52 for gas transmission (see table 7.4).

Table 7.4: Asset and equity beta - recent gas regulatory decisions

Year	Regulator	Decision	Asset beta	Debt beta	Equity beta
Gas distribution					
Oct-02	ESC	Vic gas distribution	0.40	0.00	1.00
Dec-01	SAIPAR	SA distribution system	0.50	0.12	1.06
Oct-01	QCA	Qld gas distribution	0.55	0.26	0.98
Dec-00	OffGAR	Alinta (Mid West/South West)	0.55	0.20	1.07
Nov-00	ICRC	ActewAGL	0.45	0.06	1.03
Jun-00	IPART	AGL Gas Network	0.40-0.50	0.06	0.90-1.14
Dec-99	IPART	Albury gas distribution system	0.40-0.50	0.06	0.90-1.14
Mar-99	IPART	Gt Southern energy gas	0.40-0.50	0.06	0.90-1.14
Oct-98	ORG	Victorian gas distributors	0.55	0.12	1.19
Gas transmission					
May-03	Offgar	Dampier to Bunbury	0.60	0.20	1.19
Dec-02	ACCC	ABDP (NT Gas)	0.50	0.15	1.02
Nov-02	ACCC	GasNet	0.50	0.18	0.98
Sep-01	ACCC	Moomba to Adelaide	0.50	0.06	1.16
Dec-00	ACCC	EAPL	0.50	0.06	1.16
Jun-00	ACCC	Central West Pipeline	0.60	0.00	1.50
Oct-98	ACCC	TPA (GasNet)	0.55	0.12	1.19
Oct-01	Offgar	Tubridgi	0.65	0.20	1.32
Apr-01	Offgar	Goldfields (draft)	0.60	0.20	1.19
Oct-00	Offgar	Parmelia pipeline	0.65	0.20	1.32

NECG also examined estimated betas for Australian and international utilities. For the Australian utilities the small sample size (only 4 companies) and the volatility of the estimates limit the usefulness of the estimates. An alternative approach is to consider the asset betas of gas distribution companies listed in overseas markets. This approach was implemented by using data obtained from Bloomberg, which calculates and publishes beta and financial analysis data on all publicly listed companies. The international data suggested an asset beta of around 0.4 (or an equity beta of around 1.00, assuming 60 per cent gearing and debt beta equal to zero).

What is the appropriate gearing ratio to adopt in the WACC?

ActewAGL proposes a gearing ratio of 60 per cent. Gearing of 60 per cent has been adopted in all gas distribution and transmission decisions in Australia to date, including the Commission's Final Decision for the 2001 Access Arrangement.

Is it appropriate that reference tariffs for reference services reflect a return on working capital?

ActewAGL believes that reference tariffs should reflect a return on working capital. Working capital is the capital required to provide for timing differences between cash inflows (revenues) and cash outflows (expenses) over the operating cycle of the entity and is universally accepted as a necessary and efficient cost incurred by businesses.

The justification for a return on working capital is no different to the requirement for a return on capital assets. In both cases, investors commit funds at a point in time, have their funds returned at some time in the future, and in the meantime require a return to compensate for the opportunity cost of the capital employed. The only difference between the treatment of working capital and capital costs is the length of time during which the funds are tied up within the regulated entity—for working capital, funds may be tied up for a matter of weeks, for infrastructure capital, funds may be tied up for decades.

The inclusion of working capital in the revenue requirement recognises the capital committed to receivables and other normal business activities at any one point in time. The value of this committed capital should earn the same regulated return as capital invested in the system assets, as it is an intrinsic aspect of running a business, regulated or otherwise. ActewAGL therefore submits that the Commission should include an allowance for a return on working capital in calculating the revenue requirement, in order to align with commercial practice and ensure financial capital maintenance.

ActewAGL's proposed working capital allowance is calculated using the same payment cycle approach that was approved by the Commission for the 2001 Access Arrangement. IPART also includes an allowance for working capital in AGLGN's Access Arrangement, and in the regulated tariffs for electricity distribution service providers in New South Wales.

8 Reference tariffs and reference tariff policy

Does the approach to establishing tariffs proposed by ActewAGL satisfy the requirements of section 8.1 of the Code?

Should ActewAGL be required to develop and implement across-period arrangements for sharing of efficiency gains and losses?

Tariff methodology

The approach to establishing tariffs is essentially the same as approved and used for the 2001 Access Arrangement. It continues to satisfy the requirements of the Gas Code.

Reference tariffs are calculated in accordance with the principles set out in section 8 of the Gas Code. Consistent with section 8.2 of the Gas Code, a ‘price path’ approach is adopted. Tariffs are set for the period to generate the allowed revenue, and they are not adjusted to account for subsequent events (changes in demand or costs, aside from pass-through costs) until the next review. The price path approach provides incentives for ActewAGL to increase demand and reduce costs during the period.

As required by section 8.38 of the Gas Code, the tariff for each reference service is designed to cover those costs which can be directly attributable to providing the service plus a share of joint costs, where the share is determined in line with the objectives of section 8.1 of the Gas Code. As noted in the Gas Code (p. 48), the requirement is essentially that charges be cost reflective, although substantial flexibility is provided.

The only change in the structure of reference tariffs from the 2001 Access Arrangement is the reordering of the block structure of the tariff throughput charge so that the throughput rate reduces between all blocks as consumption increases. This change is cost reflective and continues to meet the requirements of the Gas Code.

Sharing of efficiency gains and losses across periods

ActewAGL believes that there may be net benefits from the introduction of an incentive carryover mechanism in the Access Arrangement, and would be prepared to work with the Commission to develop a mechanism that could apply to efficiency gains made in the forthcoming Access Arrangement period. ActewAGL considers that the mechanism adopted by the ESC in Victoria for both electricity and gas distribution businesses represents an appropriate starting point for the development of any arrangement to apply to ActewAGL’s gas and electricity businesses.

A cross-period efficiency sharing mechanism can increase the incentive on the regulated business to make efficiency gains. This is because it enables the business to retain a portion of any efficiency gains achieved within the current regulatory period into the *subsequent* regulatory period, rather than all efficiency benefits being immediately passed through to customers at the time of the next regulatory review.

An incentive carryover arrangement can also counteract the incentive regulated businesses may otherwise have under the CPI±X regime to make savings early in the regulatory period and to defer making savings towards the end of the period. That is, a carryover arrangement provides a continuous incentive for ActewAGL to make efficiency gains. This is because an incentive carryover arrangement ensures that the business is able to retain the benefit of any savings made for the same length of time, regardless of when in the regulatory period those savings are made. The carryover mechanism adopted by the ESC allows the business to retain the benefit of any efficiency savings for five years following the year in which the saving was made.

However, as the Commission explains in the Issues Paper, such mechanisms give rise to a number of practical issues before they can be implemented. ActewAGL is keen to ensure that no scheme is introduced until it can be established that the benefits of implementation are likely to more than offset the costs.

Is it appropriate for the access arrangement to include pass-through events?

If so, what should those events cover? Are ActewAGL's proposed events reasonable?

Should a minimum 'materiality' threshold be established?

Is the proposed process for pass-through events reasonable?

ActewAGL believes that the Access Arrangement should continue to have a pass-through mechanism. The proposed revisions to the pass-through provisions in the 2001 Access Arrangement are designed to provide an updated and more detailed list of the types of events to be covered. The proposals are also intended to ensure that the procedures for processing pass-through claims are consistent with changes to the Gas Code.

Cost pass-through mechanisms are designed to recognise and address the risk that a regulated business faces as a result of unexpected cost changes which are beyond its control. Cost pass-through has been approved in past decisions on gas Access Arrangements (see for example ACCC 2002 and ESC 2002a, QCA 2001). The ACCC and regulators in South Australia and Victoria have also approved cost pass-through arrangements for electricity businesses and the Commission has approved a pass-through mechanism for ActewAGL's electricity distribution business (ICRC 2004).

ActewAGL's pass-through proposal recognises that the definitions of pass-through events in the 2001 Access Arrangement need to be amended to reflect the complicated and changing business and regulatory environment ActewAGL faces. The definitions of the types of events which can trigger cost pass-through in the 2001 Access Arrangement do not cover all reasonable possibilities. The proposed definitions cover the following reasonable possibilities:

- Capital cost event – see detailed comments below.
- Change in tax event – this covers the events included under 'imposts and other statutory charges' in the 2001 Access Arrangement and is commonly allowed

as a cost-pass through, including in the Commission's recent final decision on electricity.

- Regulatory event – this covers potential changes to service standards or obligations, like the service standard event that the Commission has approved in its final decision on electricity. However, it is broader in that it specifically refers to possible changes to the Gas Code.
- Insurance event – this covers events where insurance becomes more costly, unavailable or only available on less favourable terms, and has been allowed in other gas access arrangements (see GasNet 2003).
- Unforeseen external event – covers events such as natural disasters and terrorism.

Clause 6.10 of the proposed Access Arrangement permits reference tariffs to be varied only if there are 'material' changes in costs. It is not in ActewAGL's commercial interests to pursue immaterial or insignificant cost claims. During the first Access Arrangement period, only one pass-through application was made, for contestability costs. Other unexpected and externally imposed costs were not judged by ActewAGL to be material and therefore no claims were made.

ActewAGL does not believe that it is reasonable to establish a minimum 'materiality' threshold. The appropriate threshold will vary, depending on the type of event, the costs associated with the event and the costs of preparing and processing the claim. For example, some claims may be for relatively small dollar amounts, say below the set threshold, but they may involve low processing costs and it may therefore be efficient for them to proceed. Other claims may involve costs that are just above the threshold, yet it may not be efficient for them to proceed if a detailed, complicated and costly assessment is required. The proposed option of relying on ActewAGL to only submit reasonable and material claims is preferred to the option of setting an arbitrary threshold.

ActewAGL's proposed mechanism for dealing with pass-through events is reasonable in that it meets the requirements of the Gas Code, sections 8.3A to 8.3H. These sections have been added to the Gas Code since the 2001 Access Arrangement was approved, and it is appropriate that the Access Arrangement be revised to recognise the changes.

Capital cost pass-through

ActewAGL would like to clarify the position relating to the capital cost pass-through provision in the proposed access arrangement. This provision is not intended to work only with the regulatory event pass-through provision. The intention is to allow ActewAGL to vary the reference tariffs during the proposed access arrangement period, where there is a material impact on the cost of providing Reference Services as a result of new facilities investment which exceeds the forecast (sections 6.10 and 6.11).

Although the capital cost pass-through provision may seem open-ended on a first reading, in fact, the pass-through is expressly limited to capital cost investment satisfying section 8.16 of the Gas Code. The key limitation in section 8.16 of the Code is that the investment must not exceed the amount that would be invested by a **prudent** service provider, acting **efficiently**, in accordance with accepted **good industry practice**, and to achieve the **lowest sustainable cost** of providing services. In addition, the investment must:

- be **necessary** to maintain the safety, integrity or contracted capacity of Services; or
- have system-wide benefits (to the satisfaction of the Commission); or
- otherwise satisfy section 8.16.

ActewAGL believes that the requirement that there be a “material impact” on the cost of providing the reference services, together with the limitations imposed by section 8.16 of the Code (which are incorporated into the proposed Access Arrangement by reference), impose reasonable limitations on ActewAGL’s ability to seek a capital cost pass-through under section 6.10 of the proposed Access Arrangement.

In summary, although the capital cost pass-through provision may seem broadly drafted on its face, it in fact imposes rigorous, objective tests which ActewAGL must meet before being able to access a pass-through for a capital cost event.

An example of a capital cost event is where ActewAGL upgrades the network to comply with additional design standards or changes in design standards.

Is it appropriate for the access arrangement to include a redundant capital policy?

If so, should the commission retain the ability to remove assets where they are likely to cease contributing to services, or where sales volumes are likely to fall?

Is it appropriate for the cost of service building blocks to include an amount for redundant capital?

It is essential that the risk of asset redundancy is allowed for in determining the regulated return, as the Capital Asset Pricing Model (CAPM) used to estimate the WACC only allows for diversifiable risk. The Gas Code (section 8.27) stipulates that a redundant capital policy may be included by the service provider or required by the regulator. The 2001 Access Arrangement included a redundant capital policy and ActewAGL proposes that a redundancy policy be retained. The proposed policy reduces potential uncertainty about whether and how redundant assets may be treated.

ActewAGL proposes removing the clause that the Commission can remove assets on the basis of events which are ‘likely’ to occur. The Gas Code does not provide scope for the removal of assets due to events that are ‘likely’ to occur. Section 8.27 explains that the redundancy mechanism should be designed to ‘ensure that assets which cease to contribute in any way to the delivery of services are not reflected in the capital

base'. The proposal therefore merely restates the policy in a manner that is consistent with the Gas Code.

ActewAGL's proposed allowance for accelerated depreciation typically represents assets that have ceased to operate effectively before their assumed economic life has expired (largely faulty meters requiring replacement). These assets are therefore not redundant as they need replacing. The redundant asset clause gives the regulator the option of removing assets that are genuinely redundant (eg by-passed assets, or a pipeline lateral to an abandoned minesite). It is therefore appropriate for the cost of service building blocks to include an amount for accelerated depreciation as proposed in the Access Arrangement.

Is the forecast cost associated with unaccounted-for gas appropriate?

Is the level of 0.7 per cent for unaccounted-for gas appropriate?

The forecast cost for unaccounted-for gas (UAG) is based on the assumption that the UAG level will be 1.5 per cent of throughput. The 1.5 per cent is reasonable, based on values observed over the past 4 years. Actual UAG values have been: 1.1 per cent in 2000, 1.6 per cent in 2001, 0.9 per cent in 2002 and 0.8 per cent in 2003. It should also be noted that the accuracy of metering equipment is within the range of +/- 2 per cent and therefore any UAG figure lower than 2 per cent is quite unrealistic in practice.

Is it appropriate for the access arrangement to include formal links between service standards and tariffs?

ActewAGL does not believe that it is appropriate for the forthcoming Access Arrangement to include a formal link between service standards and tariffs.

However, options and issues for the development of a service standard incentive scheme should be examined. As the Commission notes in its Issues Paper, the development of such a scheme would require resolution of a number of difficult issues. These include the appropriate measures of service performance to use; the practicalities of obtaining data on these measures; the levels at which the incentive rates should be set; and how the impact of external events (such as bushfires) on service outcomes should be treated.

These issues would be best resolved over the term of the next Access Arrangement and ActewAGL would be prepared to work closely with the Commission in the development of an appropriate S-factor regime, or some other appropriate mechanism. The results from ActewAGL's willingness to pay study will provide useful input into the development of a service incentive scheme via a service quality index. The willingness to pay study provides information on the value customers place on different service attributes and highlights cases where customers have expressed a willingness to pay for existing and changed service standards. Such information would be essential in determining which service quality measures should be captured under an incentive mechanism, and providing guidance on setting the incentive rates.

Is it appropriate for ActewAGL to include the fixed principles, as proposed?

The Gas Code defines a fixed principle as ‘an element of the reference tariff that cannot be changed without the agreement of the ‘service provider’ (section 8.47). Fixed principles exist for the benefit of the service provider – that is, they are only subject to change by agreement of the service provider. The purpose is to provide some certainty for service providers about how reference tariffs will be determined. ActewAGL believes that reducing uncertainty where possible, through fixed principles, is particularly important for the forthcoming access arrangement period given the likelihood that changes will be made to the Gas Code.

ActewAGL has not specified a period for the fixed principles, so the principles will apply until ActewAGL agrees that they do not apply.

9 Extensions/expansions policy

Is it reasonable for ActewAGL to have the flexibility to exclude certain extensions and expansions from being covered?

Should duplicate pipelines be treated as a special case for coverage, or can they be adequately dealt with by the existing Code provisions?

Flexibility to exclude some extensions/expansions is reasonable and permitted under the Gas Code (section 3.16). ActewAGL's proposed approach of removing the blanket coverage is also consistent with the policies in other revised gas access arrangements. For example, GasNet's revised Access Arrangement contains a very similar clause (GasNet 2003, p. 8). Envestra (Victoria, Queensland and South Australia) also have the flexibility to not automatically cover some extensions/expansions.

As noted by the ESC in its final decision on the Victorian distributors' revised Access Arrangements (ESC 2002a, p. 41), the decision on whether to automatically cover all pipelines involves trade-offs between a number of factors. Automatic coverage of all extensions may reduce uncertainty and regulatory costs, but it may not be in the distributor's legitimate business interests to have all new pipelines with different characteristics to the rest of the network covered by the initial Access Arrangement. ActewAGL agrees with recent decisions that, on balance, some limits on coverage may be warranted.

ActewAGL believes that there is no need to treat duplicate pipelines as a special case. The Commission's concern, raised in the final decision for the 2001 Access Arrangement (ICRC 2000 pp. 172-173), that duplicate pipelines may be uneconomic is addressed through the application of the prudent investment test in section 8.16 of the Code.

Does the proposed access arrangement adequately specify how extensions/expansions will affect reference tariffs?

Section 3.16 of the Gas Code says that the extensions/expansions policy must specify how an extension/expansion will affect reference tariffs. It provides examples of policies. One example says that reference tariffs will not be affected but a surcharge may be levied on incremental users where permitted under sections 8.25 and 8.26. Under the second example, reference tariffs may be reviewed (and then increased if the regulator approves).

In the 2001 Access Arrangement ActewAGL followed the first example – reference tariffs are not to be affected, but a surcharge may apply.

In the revised Access Arrangement, ActewAGL proposes using the flexibility that the Gas Code provides for determining how extensions/expansions may affect reference tariffs. Clause 7.5 says that, in accordance with the reference tariff policy in part 4 of

the revised Access Arrangement, a surcharge or capital contribution may apply or the capital base may be increased. The conditions under which the capital base may be adjusted (depending on whether the test in section 8.16 of the Gas Code is passed) are spelt out clearly.

10 Capacity management, trading and queuing policies

Does the proposed trading policy sufficiently explain the rights of a user to trade its right to obtain a service with another person?

Would it be useful for the trading policy to provide details of what might be ‘reasonable commercial and technical grounds’?

Are the timelines within which ActewAGL will respond to requests for trades reasonable?

There have been no trades or requests for trades during the first access arrangement period. It is therefore difficult to judge whether the policy is sufficiently detailed for users. ActewAGL’s intention in drafting the policy has been to meet the needs of users, while satisfying the Gas Code, and it believes the policy does both. ActewAGL also believes that the timelines are reasonable.

Is there sufficient detail in the proposed queuing policy to enable users and prospective users to understand how the queuing policy will operate?

Does the proposed queuing policy accommodate the legitimate business interests of the service provider, users and prospective users?

Is the queuing policy likely to generate efficient outcomes?

Given that no queues have formed during the first access arrangement period, it is difficult to judge whether the queuing policy is sufficiently detailed for users. However, the policy has been revised to set out queuing procedures and rights and obligations of users and ActewAGL in more detail than the 2001 Access Arrangement.

The proposed policy accommodates the legitimate business interests of the service provider and users. For users, the proposals provide more flexibility than the 2001 access arrangement. In the 2001 Access Arrangement, a user is allowed a fixed 30 days after an offer is made to enter into a Service Agreement (conditional if necessary on ActewAGL entering into Service Agreements with other users), failing which the request will lapse or lose priority. In the revised Access Arrangement, additional flexibility has been added. ActewAGL may agree to reserve capacity for a nominated time to allow a Transport Services Agreement to be finalised. ActewAGL’s interests are also recognised with the requirement that users compensate ActewAGL for costs of holding capacity. Users must re-imburse ActewAGL within 30 days of receipt of a notice setting out the details specified in the Access Arrangement.

The proposed queuing policy is likely to encourage efficient outcomes. By providing detailed information on queuing procedures and priorities on the queue, the Access Arrangement helps to reduce uncertainty, and therefore contributes to efficient

outcomes. Another key requirement for efficient outcomes is that the service provider not discriminate between different users in the queue. The first-come, first served principle helps to ensure that there is no discrimination.

11 Other issues

What is the appropriate length of the access arrangement period?

Given that the proposed access arrangement period is 5.5 years, should any mechanisms to address possible misforecasts be incorporated in the access arrangement? What might these be?

The typical Access Arrangement period is 5 years, but 5.5 years is proposed so that from the third access arrangement onward the regulatory period will align with financial years.

ActewAGL does not believe that mechanisms to address possible misforecasts should be included. Cost pass-through allows for significant unexpected events to be taken into account. The Commission has also raised the possibility of dealing with major changes through the period with a full review of the Access Arrangement (Issues Paper, p. 100). ActewAGL believes that the costs of the additional regulatory burden with a full review are likely to more than offset any benefits.

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