

Revised Access Arrangement for AGL Gas Networks

April 2005

Final Decision



IPART

**INDEPENDENT PRICING AND
REGULATORY TRIBUNAL
of New South Wales**

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Inquiries regarding this paper should be directed to:

Ruth Lavery ☎ 02 9290 8447
Ineke Ogilvy ☎ 02 9290 8473
Fiona Towers ☎ 02 9290 8420

Independent Pricing and Regulatory Tribunal of New South Wales

Level 2, 44 Market Street, Sydney NSW 2000

☎ (02) 9290 8400 Fax (02) 9290 2061

www.ipart.nsw.gov.au

All correspondence to: PO Box Q290, QVB Post Office NSW 1230

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FOREWORD

The Tribunal has made its final decision on AGL Gas Networks' (AGLGN's) proposed access arrangement—which is the first set of revisions to an access arrangement it has considered under the *National Third Party Access Code for Natural Gas Pipeline Systems* (the Code). This final decision is set out in full, on pages i to xiv of this document, and discussed in detail in the remainder of this report.

In summary, the Tribunal has decided not to approve AGLGN's proposed access arrangement because it considers that it does not meet the requirements of the Code. In particular, the Tribunal found that AGLGN's proposed rate of return, its proposed merger of trunk pricing zones, some of its proposed terms and conditions and some of its forecast new facilities investment and non-capital costs do not meet the requirements of the Code. The Tribunal also found that part of the Wilton to Wollongong transmission pipeline is redundant, and therefore requires that AGLGN remove this part from its capital base. The Tribunal has listed in the final decision the specific amendments that it requires AGLGN to make in order for it to approve the access arrangement.

The Tribunal reached its final decision after undertaking extensive public consultation and analysis, including considering numerous submissions and several consultants' reports, and holding public forums. It appreciates the contributions of all those who participated in this process. It would particularly like to thank AGLGN for the professional manner in which it participated in the review.

Michael Keating AC
Chairman
April 2005

FINAL DECISION

1. The Tribunal has considered AGL Gas Networks' (AGLGN's) proposed revisions to its access arrangement and submissions by interested parties under the principles set out in the *National Third Party Access Code for Natural Gas Pipeline Systems* (the Code).
2. The Tribunal does not approve AGLGN's proposed revisions to its access arrangement because the Tribunal is not satisfied that it contains the elements and satisfies the principles set out in sections 3.1 to 3.20 of the Code. The detailed reasons for this decision are set out in this document.
3. The Tribunal is also not satisfied that the submitted access arrangement information meets the requirements of section 2.6 and 2.7 of the Code for the reasons set out in this document. The Tribunal requires amendments as listed below in order to approve the access arrangement information.
4. The required amendments which must be made to the revisions to the access arrangement (and required changes to the access arrangement information) are listed below.
5. A revised access arrangement and access arrangement information must be submitted by AGLGN to the Tribunal by no later than 10 June 2005.

Required amendments

Amendment 1 - Postcode boundaries (chapter 3)

The explanatory note in Attachment 3 to the proposed access arrangement information must be amended to clarify the basis for the postcodes in that Attachment, and to make specific reference to AGLGN's proposed amended Station Identification codes.

Amendment 2 - Definition of 'coastal' and 'country' (chapter 3)

Definitions for 'coastal' and 'country' must be included in the proposed access arrangement information, and AGLGN must ensure that these and other associated terms are used consistently throughout the access arrangement information.

Amendment 3 - Definition of 'diversified MDQ' (chapter 3)

A definition for 'diversified MDQ' must be included in the proposed access arrangement information.

Amendment 4 - Correction of delivery pressure data (chapter 3)

Attachment 2 of the proposed access arrangement information must be amended to include the correct minimum delivery pressure of the Wilton-Mt Keira pipeline of 2,800 kpa.

Amendment 5 - Revision of the access arrangement information to reflect the amendments to the access arrangement (chapter 3)

The proposed access arrangement information must be amended to reflect the amendments to the access arrangement required by the final decision, and to ensure that it contains the most up-to-date information available.

Amendment 6 – Description of trunk-only service (chapter 4)

AGLGN is required to amend section 2.9 of its proposed access arrangement to include as a non-reference service, the following description of a trunk-only service:

Where it is technically and commercially reasonable, AGLGN will offer a Trunk Service without the linked Local Network Service where:

- The gas is transported from a Receipt Point to a Delivery Point along the Wilton/Newcastle and or Wilton/Wollongong Pipelines;
- The Delivery Point has metering equipment approved for this purpose by AGLGN; and
- The gas transported does not utilise any component of the AGLGN Local Network prior to its delivery at its ultimate Delivery Point (i.e. at a customer site at which the gas is consumed).

Where AGLGN offers a Trunk Service without a linked Local Network Service, then the Standalone Trunk Service will be offered under comparable Terms and Conditions to the equivalent Trunk Reference Services, subject to AGLGN's reasonable commercial and technical requirements.

Amendment 7 - Capital redundancy mechanism (chapter 5)

The capital redundancy mechanism at Section 4.2.1 of the proposed access arrangement must be amended to read as follows:

4.2.1 Capital Redundancy Mechanism

1. The Relevant Regulator may reduce the Capital Base with effect from the commencement of the Access Arrangement Period (immediately following the conclusion of the current Access Arrangement Period) if it is of the reasonable opinion that any of the following have occurred in relation to assets comprising some or all of the Capital Base:
 - (a) the assets have ceased to contribute to the delivery of Services;
 - (b) the assets have been sold or disposed of by AGLGN or AGLGN has entered into a binding agreement for their sale or disposal; or
 - (c) the assets have decreased in value because of a decrease in their utilisation.
2. In determining whether to reduce the Capital Base under paragraph 1, and the amount (to be determined by the Relevant Regulator) by which the Capital Base should be reduced, the Relevant Regulator may take into account:
 - (a) the value of the assets when the assets were first included in the Capital Base, and their current value;
 - (b) the value that the assets to be removed from the Capital Base represent as a proportion of the total Capital Base;

- (c) the cost to AGLGN of a reduction in Total Revenue resulting from a reduction of the Capital Base;
- (d) the impact of a reduction of the Capital Base on Tariffs paid by Users;
- (e) the objectives and principles of the Code; and
- (f) any other factors that in the reasonable opinion of the Relevant Regulator are relevant and not inconsistent with the Code.

Amendment 8 - Demand forecasts (chapter 6)

The proposed access arrangement must be amended so that the demand forecasts used to determine total revenue and reference tariffs are those set out in Table 6.3 below.

Table 6.3 Required forecasts of demand and customer numbers

	2005/06	2006/07	2007/08	2008/09	2009/10
Customer site numbers as at 30 June:	998,495	1,035,158	1,072,166	1,109,475	1,147,155
Tariff Market demand (TJ):					
Residential	22,998	23,976	25,036	26,112	27,207
Business	11,109	11,159	11,166	11,213	11,262
Contract Market demand (TJ):					
Total ACQ	65,000	66,238	66,230	66,369	66,608
Total MDQ	296.1	296.8	297.7	298.4	299.1

Amendment 9 - Regulatory asset register (chapter 7)

AGLGN must ensure that its regulatory asset register includes information on the rolled forward capital base at 1 July 2005 consistent with the values set out in Amendment 10 of this final decision.

Amendment 10 - Rolled forward capital base (chapter 7)

The proposed access arrangement must be amended so that the capital base used to determine total revenue and reference tariffs complies with the values set out in Tables 7.10 to 7.17 below:

Table 7.10 Roll Forward Of Regulatory Capital Base from 1999 to 2005 – Combined Total (\$million, nominal)

	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05
Opening Balance	1609.8	1669.0	1772.6	1814.7	1857.1	1899.2
Add Revaluation Of Assets	39.2	101.5	51.5	56.9	44.4	54.4
Add Capital Expenditure	78.2	70.3	57.6	60.2	70.7	89.7
Less Depreciation	-55.0	-59.5	-63.8	-67.9	-69.5	-72.5
Less Capital Contributions	0.0	-1.4	-0.5	-1.4	-1.2	-1.1
Less Disposals	-3.1	-7.3	-2.7	-5.5	-2.3	-2.1
Closing Balance	1669.0	1772.6	1814.7	1857.1	1899.2	1967.6

Columns may not add due to rounding.

Table 7.11 Roll Forward Of Capital Base – Wilton To Newcastle Transmission Pipeline from 1999 to 2005 (\$million, nominal)

	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05
Opening Balance	111.7	112.5	117.2	118.5	120.1	121.4
Add Revaluation Of Assets	2.7	6.7	3.4	3.7	2.8	3.4
Add Capital Expenditure	0.0	0.0	0.0	0.0	0.7	1.6
Less Depreciation	-1.9	-2.0	-2.1	-2.1	-2.2	-2.3
Less Capital Contributions	0.0	0.0	0.0	0.0	0.0	0.0
Less Disposals	0.0	0.0	0.0	0.0	0.0	0.0
Closing Balance	112.5	117.2	118.5	120.1	121.4	124.2

Columns may not add due to rounding.

Table 7.12 Roll Forward Of Capital Base – Wilton To Wollongong Transmission Pipeline from 1999 to 2005 (\$million, nominal)

	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05
Opening Balance	9.6	9.6	10.0	10.1	10.3	10.3
Add Revaluation Of Assets	0.2	0.6	0.3	0.3	0.2	0.3
Add Capital Expenditure	0.0	0.0	0.0	0.0	0.0	0.2
Less Depreciation	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Less Capital Contributions	0.0	0.0	0.0	0.0	0.0	0.0
Less Disposals	0.0	0.0	0.0	0.0	0.0	0.0
Closing Balance	9.6	10.0	10.1	10.3	10.3	10.6

Columns may not add due to rounding.

**Table 7.13 Roll Forward Of Capital Base – AGLGN Distribution System
from 1999 to 2005 (\$million, nominal)**

	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05
Opening Balance	1488.5	1546.9	1645.3	1686.0	1726.7	1767.5
Add Revaluation Of Assets	36.3	94.2	47.8	52.9	41.4	50.7
Add Capital Expenditure	78.2	70.3	57.6	60.2	70.0	87.9
Less Depreciation	-53.0	-57.3	-61.6	-65.5	-67.1	-70.0
Less Capital Contributions	0.0	-1.4	-0.5	-1.4	-1.2	-1.1
Less Disposals	-3.1	-7.3	-2.7	-5.5	-2.3	-2.1
Closing Balance	1546.9	1645.3	1686.0	1726.7	1767.5	1832.8

Columns may not add due to rounding.

**Table 7.14 Roll Forward Of Regulatory Capital Base from 2006 to 2010 –
Combined Total (\$million, nominal)**

	2005/06	2006/07	2007/08	2008/09	2009/10
Opening Balance	1967.6	2077.7	2168.1	2253.4	2326.9
Adjustment for Redundant Capital	-2.1	0.0	0.0	0.0	0.0
Add Revaluation Of Assets	56.8	59.6	62.2	64.4	66.4
Add Capital Expenditure	126.1	107.8	106.6	95.4	92.1
Less Depreciation	-67.4	-73.6	-80.0	-82.6	-84.6
Less Capital Contributions	-1.1	-1.2	-1.2	-1.2	-1.3
Less Disposals	-2.2	-2.2	-2.3	-2.3	-2.4
Closing Balance	2077.7	2168.1	2253.4	2326.9	2397.1

Columns may not add due to rounding.

**Table 7.15 Roll Forward Of Capital Base – Wilton To Newcastle Transmission Pipeline
from 2006 to 2010 (\$million, nominal)**

	2005/06	2006/07	2007/08	2008/09	2009/10
Opening Balance	124.2	127.7	128.9	130.8	132.8
Add Revaluation Of Assets	3.5	3.6	3.6	3.7	3.7
Add Capital Expenditure	2.4	0.1	0.8	0.9	0.1
Less Depreciation	-2.4	-2.5	-2.5	-2.6	-2.7
Less Capital Contributions	0.0	0.0	0.0	0.0	0.0
Less Disposals	0.0	0.0	0.0	0.0	0.0
Closing Balance	127.7	128.9	130.8	132.8	133.9

Columns may not add due to rounding.

Table 7.16 Roll Forward Of Capital Base – Wilton To Wollongong Transmission Pipeline from 2006 to 2010 (\$million, nominal)

	2005/06	2006/07	2007/08	2008/09	2009/10
Opening Balance	10.6	9.6	9.7	9.8	9.9
Adjustment for Redundant Capital	-2.1	0.0	0.0	0.0	0.0
Add Revaluation Of Assets	0.3	0.3	0.3	0.3	0.3
Add Capital Expenditure	1.0	0.0	0.0	0.0	0.0
Less Depreciation	-0.2	-0.2	-0.2	-0.2	-0.2
Less Capital Contributions	0.0	0.0	0.0	0.0	0.0
Less Disposals	0.0	0.0	0.0	0.0	0.0
Closing Balance	9.6	9.7	9.8	9.9	9.9

Columns may not add due to rounding.

Table 7.17 Roll Forward Of Capital Base – AGLGN Distribution System from 2006 to 2010 (\$million, nominal)

	2005/06	2006/07	2007/08	2008/09	2009/10
Opening Balance	1832.8	1940.3	2029.5	2112.8	2184.2
Add Revaluation Of Assets	53.0	55.8	58.3	60.4	62.4
Add Capital Expenditure	122.7	107.7	105.8	94.4	92.0
Less Depreciation	-64.8	-71.0	-77.3	-79.8	-81.7
Less Capital Contributions	-1.1	-1.2	-1.2	-1.2	-1.3
Less Disposals	-2.2	-2.2	-2.3	-2.3	-2.4
Closing Balance	1940.3	2029.5	2112.8	2184.2	2253.2

Columns may not add due to rounding.

Amendment 11 - Pre-tax real rate of return (chapter 8)

The proposed access arrangement must be amended so that the pre-tax real rate of return used in the methodology to determine total revenue and reference tariffs must be 7.0 per cent.

Amendment 12 - Non-capital costs (chapter 9)

The proposed access arrangement must be amended so that the non-capital costs used to determine total revenue and reference tariffs comply with the values in Table 9.4 below.

Table 9.4 AGLGN's allowed non-capital costs (\$million, real 2005)

	2005/06	2006/07	2007/08	2008/09	2009/10	Total
Operation & Maintenance	61.7	62.6	63.1	63.6	64.2	315.3
Administration & Overheads	18.4	18.7	18.8	19.0	19.1	94.0
Market Operations	3.5	3.6	3.6	3.6	3.7	18.0
Marketing	16.6	16.9	17.0	17.2	17.3	85.0
Controllable non-capital costs	100.3	101.8	102.5	103.4	104.2	512.3
Government Levies	3.2	3.2	3.2	3.2	3.2	16.0
Retail Contestability	3.9	3.9	3.9	3.9	3.9	19.5
UAG	9.1	8.9	9.0	9.0	9.1	45.1
Total non-capital costs	116.5	117.8	118.6	119.5	120.4	592.9

Columns may not add due to rounding.

Amendment 13 - Net working capital (chapter 9)

The proposed access arrangement must be amended so that the working capital used to determine total revenue and reference tariffs is calculated using:

- tariff and contract debtors at 29 days of distribution revenue (tariff and contract markets)
- unbilled gas (accrued revenue) at 41 days of tariff market revenue
- inventories at no real change from the 2003/04 level
- operating cost creditors at 45 days of annual non-capital expenditure
- capital cost creditors at 27.7 days of annual capital expenditure.

The rate of return to be applied to the working capital must be 9.7 per cent (nominal pre-tax).

Amendment 14 - Number of trunk zones (chapter 10)

The proposed access arrangement must be amended so that the capital and non-capital trunk costs used to determine total revenue and reference tariffs are allocated to contract customers based on the existing seven trunk zones, and the trunk reservation capacity charge and trunk throughput charge is imposed in accordance with customers' use of each of these zones.

Amendment 15 - Allocation of disposals (chapter 10)

The proposed access arrangement must be amended so that the disposals used in the methodology to determine total revenue and reference tariffs are allocated to both tariff market and contract customers in accordance with each customer class' proportion of peak day MDQ on medium pressure assets, however minor that allocation may be.

Amendment 16 - Allocation of benefits and costs of future growth (chapter 10)

The proposed access arrangement must be amended so that the incremental benefits and costs of future growth in the contract market used in the methodology to determine total revenue and reference tariffs are allocated to contract customers and the incremental benefits and costs of future growth in the tariff market are allocated to tariff market customers.

Amendment 17 – Annual escalation of reference tariffs for CPI effects (chapter 12)

The Escalation of Reference Tariffs variation method must be amended so that the reference tariffs will be adjusted by the rate of change in the average of the CPI for the four quarters to December in the relevant year divided by the average of the CPI for the four quarters to December in the immediately preceding year.

Amendment 18 - Definitions of 'Tax' and 'Relevant Tax' (chapter 12)

The definition of 'Relevant Tax' in the proposed access arrangement must be amended, and a new definition of 'Tax' must be inserted, as follows:

'Relevant Tax' means any Tax other than:

- (a) any tax in the nature of an income tax or a capital gains tax;
- (b) penalties, charges, fees and interest on late payments, or deficiencies in payments, relating to any Tax;
- (c) stamp duty, or similar taxes and duties; and
- (d) any Tax that replaces or is the equivalent of or similar to any of the taxes referred to above.

'Tax' means any royalty (whether based on value, profit or otherwise), tax, duty, excise, levy, fee, rate or charge imposed from time to time during the term of this Access Arrangement by any government or any governmental, semi-governmental or other body authorised by law to impose that tax on or to:

- (a) the Network (or any of its components);
- (b) the operation of the Network; or
- (c) the provision of Services by AGLGN.

Amendment 19 - Amended gas reconciliation methodology (chapter 12)

The proposed access arrangement must be amended to allow for the removal of unaccounted-for-gas (UAG) provisions and an adjustment to reference tariffs should UAG be removed as a network cost during the access arrangement period.

Amendment 20 - Definition of 'Regulatory Event' (chapter 12)

The definition of a 'Regulatory Event' in the proposed access arrangement must be amended to exclude both a 'Change-in-tax Event' and the pass through of the cost of any Guaranteed Customer Service Standards as described in section 3.11(d) of the proposed access arrangement as set out in Amendment 23 below.

Amendment 21 - Symmetrical tariff variation methods (chapter 12)

The proposed access arrangement must clarify that tariff variation methods operate symmetrically.

Amendment 22 - Exclusion of 'Insurance Event', 'Unforeseen External Event' and 'Mines Subsidence Event' (chapter 12)

'Insurance Event', 'Unforeseen External Event' and 'Mines Subsidence Event' must be excluded from the cost pass-through mechanism in the proposed access arrangement.

Amendment 23 - Guaranteed Customer Service Standards (chapter 12)

Clause 3.11(d) (Guaranteed Customer Services Standards) of AGLGN's proposed access arrangement shall be amended so as to read as follows:

AGLGN may vary Reference Tariffs to recover:

- (a) The expected value of payments that may be required to be made to Users by AGLGN as a result of the imposition of Guaranteed Customer Service Standards (GCSS) as a result of a decision of the Minister for Energy and Utilities to introduce new GCSS payments in addition to those that apply in respect of AGLGN at the commencement of the Access Arrangement Period.
- (b) Incremental and efficient costs associated with the administration of any such additional or changed Guaranteed Customer Service Standards described in paragraph (a) above.

Amendment 24 - Date of reference tariff variations (chapter 12)

The proposed access arrangement must provide that AGLGN may only vary its reference tariffs for any year during the access arrangement period with effect from 1 July of that year (or any other date determined by the Tribunal).

Amendment 25 - Basis for allocating pass-through costs (chapter 12)

The proposed access arrangement must specify a cost allocation basis for recovery of pass-through amounts (such as allocating costs according to the same allocation methodology used in setting reference tariffs).

Amendment 26 - Notification and approval process (chapter 12)

The notification and approval process for tariff variations in the proposed access arrangement must provide that:

- (a) when AGLGN proposes to vary tariffs, it is required to provide the Tribunal with notice of 50 business days prior to the effective date of the variation;
- (b) in accordance with the Code, variations may be initiated by the Tribunal if AGLGN does not provide notice of an event;
- (c) variations are subject to the Tribunal's approval (deemed or otherwise), and reasonable satisfaction that the variation is based on incremental and efficient costs;
- (d) variation notices provided to the Tribunal must include:

- (i) the effective date of the variation; and
 - (ii) an explanation of how the proposed variation is consistent with the approved variation method;
- (e) variation notices provided to the Tribunal should include:
 - (i) details of the financial impact on AGLGN and users with supporting documentary evidence including a demonstration that costs are incremental and efficient;
 - (ii) an explanation of how the variation is to be recovered through tariffs.

Amendment 27 - Security for payment (chapter 13)

AGLGN is required to specify objective and non-discriminatory criteria related to clause 10, Schedule 2A of its proposed access arrangement as follows:

- That the amount of any security shall be determined by having regard to the user's credit rating, payment history and any additional factors which, in AGLGN's reasonable opinion, may have a material effect on the user's ability to perform any of its obligations under the service agreement or upon AGLGN's ability to recover any amounts payable or to be payable by the user.
- The amount of security should be proportionate to the charges for the proposed service.
- That the form of security is to be either (a) a parent company guarantee or (b) a refundable deposit or bank guarantee or (c) such other form of security as agreed between the user and AGLGN.
- To include an obligation on users to provide AGLGN with all information reasonably required to assess credit worthiness in a timely manner.

Amendment 28 - Responsibility for gas and UAG (chapter 13)

AGLGN is required to amend clause 12, Schedule 2A of its proposed access arrangement such that the provisions relating to responsibility for gas and UAG cease to have effect in the event of a change in the treatment of UAG as a result of new Gas Retail Market Business Rules during the access arrangement period.

Amendment 29 – Overruns (chapter 13)

AGLGN is required to amend the provisions in Schedule 2A of the proposed access arrangement relating to overruns to indicate that where a delivery point is served under two or more service agreements then an overrun is only deemed to occur where withdrawals at that delivery point exceed the total for all service agreements of MDQ in any day or MHQ in any hour.

Amendment 30 - New receipt points and receipt stations (chapter 13)

AGLGN is required to amend clause 32, Schedule 2A of its proposed access arrangement to limit the ability of AGLGN to recover costs incurred by AGLGN in undertaking works required to enable a new receipt point to be established and integrated into the AGLGN network to those costs *reasonably* incurred.

Amendment 31 - Alteration of receipt points and receipt stations (chapter 13)

AGLGN is required to amend:

- Clause 33, Schedule 2A of its proposed access arrangement to indicate that AGLGN may require users to make alterations to receipt stations for the purpose of upgrading measurement performance or accommodating changes to gas demand characteristics only to the extent that the alterations are in accordance with good industry practice and/or appropriate Australian and internationally recognised standards and codes.
- Clause 34, Schedule 2A of its proposed access arrangement to indicate that AGLGN's rights to recover costs are limited to recovery of costs *reasonably* incurred.

Amendment 32 - Suspension of supply (chapter 13)

AGLGN is required to amend clause 49, Schedule 2A of its proposed access arrangement to limit the value of charges imposed on a user in connection with the cessation or suspension of supply to costs *reasonably incurred* by AGLGN in complying with the request of the user to stop or suspend delivery of gas.

Amendment 33 - Liabilities and indemnity (and gas swap service) (chapter 13)

AGLGN is required to amend Section 2.7 of its proposed access arrangement so that the second sentence in the penultimate bullet point reads:

The user will be liable for and indemnify AGLGN against any costs, penalties, expenses or any other loss or damage suffered or incurred by AGLGN arising from inaccurate or misleading information supplied by the user to AGLGN in connection to a Gas Swap, or the users participating in the Gas Swap failing to time and coordinate Gas Swap notifications and gas balancing nominations (made in accordance with Schedule 3) to ensure that their daily withdrawal requirements and completed Gas Swaps reflect their arrangements for delivery of gas to receipt points for each day.

Amendment 34 - Additional terms and conditions applicable to reference services except tariff services (chapter 13)

AGLGN is required to amend its proposed access arrangement as follows:

- Clause 3, Schedule 2B must indicate the period over which a service may be continued.
- Clause 4, Schedule 2B must indicate that an application of a user for a service in the circumstances contemplated by clause 4 is not subject to the queuing policy of the access arrangement.
- To remove reference to Schedule 2B as part of the terms and conditions for the Meter Data Service and Gas Swap Service in Sections 2.6 and 2.7 of the proposed access arrangement.

Amendment 35 - Operational principles (chapter 13)

AGLGN is required to amend Schedule 4 of the proposed access arrangement such that the liability of AGLGN for "any losses, liabilities or expenses incurred by the User and/or the Users' customers arising from load shedding" is limited only in circumstances where AGLGN acts in good faith and in accordance with the principles of the access arrangement.

Amendment 36 - Delivery point, receipt point and nominated delivery points (chapter 13)

AGLGN is required to amend Section 2 of its proposed access arrangement as follows:

- The terms and conditions for the Local Network Multiple Delivery Point Service and Trunk Multiple Delivery Point Service should be amended to include mechanisms used in AGLGN's existing service agreements for the deletion of delivery points during the term of the agreement in circumstances of customer churn.
- The terms and conditions for the Trunk Capacity Reservation Service, Trunk Managed Capacity Reservation Service and Trunk Throughput Service should be amended to make it clear that a service agreement for these services may provide for gas to be delivered to only a single delivery point.

Amendment 37 - MDQ and MHQ (chapter 13)

AGLGN is required to amend Section 2 of its proposed access arrangement as follows:

- Sections 2.1, 2.2, 2.3 and 2.5 should be amended to clearly state that AGLGN's obligation to deliver gas extends to MDQ and MHQ plus any authorised overrun.
- Section 2.1 should be amended so as to explicitly indicate that the MDQ under a service agreement for Capacity Reservation Services includes capacity obtained as summer tranche, short-term or additional capacity.

Amendment 38 – Summer tranche, short-term and additional capacity (chapter 13)

AGLGN is required to amend Section 2.1 of its proposed access arrangement so as to explicitly indicate that additional capacity for Capacity Reservation Services is obtained under an existing service agreement.

AGLGN is required to amend Section 2.1 of its proposed access arrangement to add to the words under the second dot point under the title *Short Term Capacity for User Supplying Customers above 30TJ per annum at a Delivery Point* 'and such other exceptional physical circumstances beyond the reasonable control of a Customer.'

Amendment 39 - Charges for ancillary services (chapter 13)

AGLGN is required to amend Section 3.15 of its proposed access arrangement to amend its ancillary charges (GST inclusive, 2004/05 dollars) and to include, as a minimum, the descriptions of each ancillary service as set out below:

- Request for Service - \$60 per hour
- Special meter read - \$25
- Residential disconnection/reconnection - \$75
- Business disconnection/reconnection - \$300

Request for Service — for time spent collating the information and writing the letter of offer to a retailer when the retailer requests a new/additional/change for a contract customer.

Special Meter Read — for reads requested by a retailer rather than ordinary reads (for instance when the meter reader makes a special visit to read a particular meter out of the usual meter reading route). This service must be scheduled with a minimum 5-day notice period.

Residential Disconnection Fee — this charge covers disconnection of meters with a capacity of less than or equal to 6m³/hr. The specific method of disconnection will be at the discretion of AGLGN to ensure the site is able to be left in a safe state. The fee also covers the cost of subsequent reconnection.

Business Disconnection Fee — this charge covers disconnection of meters with a capacity of greater than 6m³/hr. The specific method of disconnection will be at the discretion of AGLGN to ensure the site is able to be left in a safe state. The fee also covers the cost of subsequent reconnection.

Amendment 40 - Method to be applied to determine whether an extension or expansion will be treated as part of the covered pipeline (chapter 17)

The first paragraph of the extensions and expansions policy at Section 7 of the proposed access arrangement must be amended to read as follows:

- The following method shall be used to determine whether an extension or expansion of a Covered Pipeline should be taken to form part of the Covered Pipeline:
 - (a) Subject to this clause, an extension or expansion of a Covered Pipeline will be taken to form part of the Covered Pipeline (and will be treated for all purposes as part of the Covered Pipeline) from the date of completion of the extension or expansion.
 - (b) AGLGN may apply to the Relevant Regulator in writing for a declaration by the Relevant Regulator that paragraph (a) will not apply to the extension or expansion referred to in the application.
 - (c) After considering an application and undertaking such consultation as the Relevant Regulator considers appropriate, the Relevant Regulator must advise AGLGN whether or not it makes the declaration.
 - (d) A declaration may be made on such reasonable conditions determined by the Relevant Regulator and will have the operation specified in the declaration.
- An extension includes any pipes laid in NSW in a distribution system owned and operated by AGLGN at any time during the Access Arrangement (where “distribution system” has the meaning given to it in the Gas Supply Act).

1 INTRODUCTION

The Independent Pricing and Regulatory Tribunal of New South Wales (the Tribunal) has made its final decision on AGL Gas Networks' (AGLGN's) proposed access arrangement (located at the front of this report). AGLGN's proposed access arrangement is the first set of revisions to a current access arrangement considered by the Tribunal under the *National Third Party Access Code for Natural Gas Pipeline Systems* (the Code). It applies to the four covered pipelines that comprise AGLGN's NSW network, including:

- the pipeline from Wilton, via Horsley Park, Plumpton and Killingworth, to Walsh Point (the Wilton to Newcastle trunk line)
- the pipeline from Wilton to Wollongong (the Wilton to Wollongong trunk line)
- the pipelines within the AGL NSW distribution system
- the pipelines within the AGL Central West distribution system.

AGLGN's current access arrangement (and access arrangement information) for its NSW network was approved by the Tribunal on 14 September 2000, and came into effect on 1 October 2000 (current access arrangement). In December 2003, AGLGN submitted to the Tribunal proposed revisions to its current access arrangement (proposed access arrangement), together with its proposed access arrangement information as required by the Code.

Having assessed the proposed access arrangement to decide whether or not to approve it in accordance with the Code, and whether the proposed access arrangement information complies with the information disclosure requirements of the Code, the Tribunal's final decision is that it does not approve AGLGN's proposed access arrangement, and that it requires AGLGN to make the amendments listed in the decision in order for it to approve the proposed access arrangement.

AGLGN proposed that its revisions would commence on 1 January 2005. Under the Code the access arrangement cannot commence until after the Tribunal has issued its final approval. In this report the financial year 2004/05 has been treated as part of the current access arrangement period and consequently the expected access arrangement period is 5 years commencing 1 July 2005.

Further information on the review process under the Code is provided in Chapter 2 of this report.

1.1 Impact of the final decision

AGLGN proposed no real increases (on average) in revenue from tariff market customers over the proposed access arrangement period and decreases (on average) for contract customers. In terms of revenue per GJ, it proposed an average real reduction in revenue, for contract customers, of 9 per cent over the proposed access arrangement period. This equated to forecast total revenue over the proposed access arrangement period of \$1514.6m (in net present value terms). In response to the Tribunal's draft decision, AGLGN proposed forecast total revenue over the proposed access arrangement period of \$1513.2m (in net present value terms).

However, based on the amendments required in the Tribunal's final decision, the Tribunal estimates that the amended access arrangement would result in a reduction of approximately 7 per cent to \$1402m in total revenue (in net present value terms) over the proposed access arrangement period compared to the AGLGN's revised proposal total revenue of \$1513m.

It is not possible to determine the impact on individual reference tariffs, as AGLGN proposes (as it is entitled to do under the Code) the price path for contract and tariff market customers by allocating total revenue between different users and over the access arrangement period.

1.2 Key issues considered by the Tribunal

In assessing AGLGN's proposed access arrangement, the Tribunal considered each of the matters that it is required to consider under the Code. The matters that were most significant, in terms of their impact on the access arrangement, were the rate of return on the capital base, the value of new facilities investment included when rolling forward the capital base, the redundant capital removed when rolling forward the capital base, AGLGN's proposal to merge the three pricing zones on the Sydney section of the Wilton to Newcastle trunk line, and AGLGN's proposed terms and conditions.

1.3 Structure of this report

This report explains the Tribunal's final decision on AGLGN's proposed access arrangement and highlights the differences between the Tribunal's draft and final decisions. It also sets out the Tribunal's reasons for its final decision:

- Chapter 2 provides an overview of the Code requirements that have governed the Tribunal's assessment of whether or not to approve the proposed access arrangement and the process it followed in making this assessment
- Chapter 3 discusses AGLGN's proposed access arrangement information and the Tribunal's assessment of whether this information complies with the Code
- Chapter 4 outlines AGLGN's proposed services policy and explains the Tribunal's assessment of this policy
- Chapter 5 provides an overview of AGLGN's proposed reference tariff policy, and explains the Tribunal's assessment of two aspects of this policy—the capital redundancy mechanism and the incentive mechanisms
- Chapter 6 describes AGLGN's proposed demand forecasts, and explains the Tribunal's assessment of these forecasts and the methodologies used to derive them
- Chapters 7 to 9 outline AGLGN's proposals for each of the cost 'building blocks' used to estimate the total revenue for the purpose of deriving the reference tariffs—the capital base, the rate of return, and non-capital costs. They also explain the Tribunal's assessment of the proposed values for each of these costs and the methodologies used to calculate them
- Chapter 10 summarises AGLGN's proposed allocation of the total cost of service (total revenue) between assets and customer classes for the purpose of deriving the reference tariffs, and explains the Tribunal's assessment of this proposal
- Chapter 11 provides an overview of the resulting value for the total revenue and presents the impacts of the Tribunal's amendments on AGLGN's cost of service and forecast revenue

- Chapter 12 discusses a further aspect of AGLGN's proposed reference tariff policy – the variation of reference tariffs over the expected access arrangement period – and sets out the Tribunal's assessment of this policy
- Chapter 13 provides an overview of the Tribunal's assessment of the terms and conditions AGLGN included in its proposed access arrangement
- Chapters 14 to 17 outline AGLGN's proposed policies for capacity management, trading, queuing, and extensions/expansions, and the Tribunal's assessment of each policy
- Chapter 18 discusses AGLGN's proposed dates for the submission of revisions to the access arrangement and for the commencement of those revisions (the term of the access arrangement period), and the Tribunal's assessment of the dates. This Chapter also includes whether to include a review trigger mechanism and considers the reference tariffs that will apply if the access arrangement continues beyond the date expected.

A revised access arrangement and access arrangement information must be submitted by AGLGN to the Tribunal no later than 10 June 2005. To assist the Tribunal in satisfying itself that the revisions to the access arrangement incorporate the amendments specified in the its final decision, the Tribunal has asked AGLGN to provide it with independently audited pricing models for the contract market and the tariff market that allocate total revenue in accordance with AGLGN's proposed allocation methodology and the required amendments set out in Section 10.5 of this report. If the revised access arrangement complies with the final decision, the Tribunal proposes to issue its final approval prior to 30 June 2005. The likely commencement date for the revised access arrangement is 1 July 2005.

The Tribunal members who considered this matter were Dr Michael Keating AC (Chairman), Mr James Cox (Chief Executive Officer and Full Time Member) and Ms Cristina Cifuentes (Member).

2 BACKGROUND

In 1997, a national framework for third party access to gas pipelines was established by agreement of the Commonwealth, State and Territory Governments. The Gas Pipelines Access Law, including the *National Third Party Access Code for Natural Gas Pipeline Systems* (the Code) regulates the provision of third party access to gas pipelines.¹

The *Gas Pipelines Access (New South Wales) Act 1998* (the Act) applies the Gas Pipelines Access Law (which includes the Code) in NSW.² Under the Act, the Tribunal is the relevant regulator in relation to AGLGN's natural gas pipeline system in NSW.³

AGLGN's natural gas pipeline system in NSW is 'covered' under the Code.⁴ Accordingly, AGLGN is required under the Code to submit, and have approved by the Tribunal (as the relevant regulator), an access arrangement that sets out the terms and conditions (including tariffs) under which existing and prospective third-party users can obtain access to services provided by its pipeline system.

AGLGN's current access arrangement (and access arrangement information) for its natural gas system in NSW was approved by the Tribunal on 14 September 2000, and came into effect on 1 October 2000 (current access arrangement). In December 2003, AGLGN submitted to the Tribunal proposed revisions to its current access arrangement (proposed access arrangement), together with the access arrangement information required by the Code.

The Tribunal is required to decide whether or not to approve the proposed access arrangement in accordance with the Code, and to assess whether the access arrangement information complies with the information disclosure requirements of the Code.

On 17 December 2004, the Tribunal released its draft decision, and the accompanying statement of reasons (draft decision report),⁵ to not approve AGLGN's proposed access arrangement. On 7 February 2005, AGLGN submitted its response to the draft decision.

This chapter provides an overview of the regulatory framework of the Code in relation to the Tribunal's assessment of AGLGN's proposed access arrangement and access arrangement information. It also outlines the Code requirements for the process the Tribunal must follow in making its assessment, and notes the Productivity Commission's 2004 review of the Code and Gas Pipelines Access Law. Finally, it summarises the Tribunal's actual assessment and consultation process in making its final decision.

¹ South Australia acted as a lead legislator for the Gas Pipelines Access Law and the Code under the *Gas Pipelines Access (South Australia) Act 1997*, which commenced on 30 July 1998 (the South Australian Act).

² Commenced (except Schedule 1.1), 14 August 1998 (Schedule 1.1: not in force). Section 3 of the Act, the Gas Pipelines Access Law, is defined to mean Schedule 1 to the South Australian Act and the Code (set out at Schedule 2 to the South Australian Act). Section 7 of the Act gives effect to the Gas Pipelines Access Law in NSW.

³ 'Relevant regulator' is defined under the Gas Pipelines Access Law and Section 15 of the Act confers the relevant functions upon the Tribunal as the local regulator in NSW for distribution pipelines. Clauses 7(1) and 7(2) of Schedule 2 to the Act deem AGLGN's transmission pipelines in NSW to be distribution pipelines despite any provision of the Code until 1 July 2002, later postponed until 1 July 2007 by clause 10 to the *Gas Pipelines Access (New South Wales) (Savings and Transitional) Regulation 1999*.

⁴ Section 1 of the Code sets out how a pipeline may be 'covered' under the Code.

⁵ IPART, *Revised Access Arrangement for AGL Gas Networks – Draft Decision*, December 2004.

2.1 Code requirements in relation to assessment

The Code sets out the regulatory objectives, principles, and processes that the Tribunal must follow when assessing AGLGN's (and any other service provider's) proposed access arrangement and subsequent proposed revisions to it.

Under section 2.24 of the Code, the Tribunal may approve AGLGN's access arrangement only if it is satisfied the proposed access arrangement contains the elements and satisfies the principles set out in sections 3.1 to 3.20 of the Code,⁶ having regard to the factors set out in section 2.24.

2.1.1 Elements and principles in sections 3.1 to 3.20 of the Code

The elements and principles set out in sections 3.1 to 3.20 of the Code that the Tribunal is required (under section 2.24 of the Code) to be satisfied the proposed access arrangement contains, include the following:

- a services policy, which must include a description of one or more services that the service provider will make available to users and prospective users (sections 3.1 and 3.2 of the Code)
- one or more reference tariffs and a reference tariff policy with tariffs determined according to the reference tariff principles in section 8 of the Code (sections 3.3 to 3.5 of the Code)
- the terms and conditions on which the service provider will supply each reference service (section 3.6 of the Code)
- a statement of whether a contract carriage or market carriage capacity management policy is applicable (sections 3.7 and 3.8 of the Code)
- a trading policy that enables a user to trade its right to obtain a service (on a contract carriage pipeline) to another person (sections 3.9 to 3.11 of the Code)
- a queuing policy to determine users' priority in obtaining access to spare and developable capacity on a pipeline (sections 3.12 to 3.15 of the Code)
- an extensions and expansions policy to determine the treatment of extensions and expansions of a pipeline under the Code (section 3.16 of the Code)
- a revisions submission date and revisions commencement date (sections 3.17 to 3.20 of the Code).

2.1.2 Factors in section 2.24 of the Code

In assessing a service provider's proposed access arrangement, the Tribunal must (under section 2.24 of the Code) take the following factors into account:

- the service provider's legitimate business interests and investment in the covered pipeline (section 2.24(a) of the Code)
- firm and binding contractual obligations of the service provider or other persons (or both) already using the covered pipeline (section 2.24(b) of the Code)

⁶ Also section 2.29 of the Code provides that the access arrangement as revised by the proposed revisions may include any relevant matter but must include at least the elements described in sections 3.1 to 3.20 of the Code.

- the operational and technical requirements necessary for the safe and reliable operation of the covered pipeline (section 2.24(c) of the Code)
- the economically efficient operation of the covered pipeline (section 2.24(d) of the Code)
- the public interest, including the public interest in having competition in markets (whether or not in Australia) (section 2.24(e) of the Code)
- the interests of users and prospective users (section 2.24(f) of the Code)
- any other matters that it (as the relevant regulator) considers to be relevant (section 2.24(g) of the Code).

2.1.3 Reference tariff principles and objectives in section 8 of the Code

Each reference tariff and a reference tariff policy contained in an access arrangement must in the Tribunal's opinion comply with the reference tariff principles in section 8 of the Code.⁷

Section 8.1 of the Code requires it to consider whether it is satisfied that a reference tariff and reference tariff policy are designed with a view to achieving the following objectives:

- providing the service provider with the opportunity to earn a stream of revenue that recovers the efficient costs of delivering the reference service over the expected life of the assets used in delivering that service (section 8.1(a) of the Code)
- replicating the outcome of a competitive market (section 8.1(b) of the Code)
- ensuring the safe and reliable operation of the pipeline (section 8.1(c) of the Code)
- not distorting investment decisions in pipeline transportation systems or in upstream and downstream industries (section 8.1(d) of the Code)
- efficiency in the level and structure of the reference tariff (section 8.1(e) of the Code)
- providing an incentive to the service provider to reduce costs and to develop the market for reference and other services (section 8.1(f) of the Code).

To the extent that any of these objectives conflict in their application to a particular reference tariff determination, the Tribunal may (under section 8.1 of the Code) determine the manner in which they can best be reconciled, or which of them should prevail.

Certain factors about which the Tribunal must be satisfied in determining to approve a reference tariff and reference tariff policy are set out in section 8.2 of the Code. These are discussed in more detail in Chapters 5, 6 and 7 of this report.

2.1.4 Access arrangement information

Along with its proposed access arrangement, a service provider is also required to submit to the Tribunal, applicable access arrangement information, containing such information as described in sections 2.6 and 2.7 of the Code.⁸ These information requirements, together with the Tribunal's assessment of AGLGN's proposed access arrangement information are discussed in more detail in Chapter 3 of this report.

⁷ Sections 3.4 and 3.5 of the Code.

⁸ Section 2.2 of the Code.

2.2 Code requirements in relation to the assessment process

The process the Tribunal is required to follow in deciding whether or not to approve the proposed revisions is set out in sections 2.28 to 2.48 of the Code. This includes requirements that the Tribunal:

- After receiving a proposed access arrangement, inform parties it believes have an interest in the matter, and publish a notice in a national daily newspaper that describes the covered pipeline, states how copies of the proposed access arrangement may be obtained, and requests submissions by a specified date (section 2.31 of the Code).
- After considering submissions received (section 2.34 of the Code), issue a draft decision that either proposes to approve or not approve the proposed access arrangement, provides reasons for this decision and states the amendments (or nature of the amendments) that are required in order for the Tribunal to approve the proposed access arrangement (section 2.35 of the Code).
- Provide a copy of its draft decision to the service provider, any person who made a submission on the matter and any other person who requests a copy (section 2.36(a) of the Code).
- Request submissions on the draft decision and consider those submissions in making its final decision (sections 2.36(b) and 2.37 of the Code).
- After considering submissions received (section 2.37 of the Code), issue a final decision within six months of receiving proposed revisions to an access arrangement (sections 2.38 and 2.43 of the Code). The final decision is to either approve or not approve the revisions to the access arrangement; if the Tribunal does not approve the revisions, the final decision must state the amendments (or nature of the amendments) which would have to be made to the revisions in order for it to approve them, and the date by which the amended revisions must be resubmitted to it (section 2.38 of the Code). The Tribunal may extend the six month period by two months on one or more occasions by publishing a notice in a national newspaper (section 2.44 of the Code).
- If the service provider fails to submit revisions as required by the final decision, the Tribunal may draft and approve its own revisions provided it follows the same consultation procedure set out in sections 2.31 – 2.37 inclusive of the Code (section 2.45 of the Code).
- Provide a copy of its final decision to the service provider, any person who made a submission on the matter and any other person who requests a copy (section 2.39 of the Code).

2.3 Review of the National Gas Access Regime

In 2003, the Australian Government referred the Code and Gas Pipelines Access Law to the Productivity Commission for review. The Australian Government released the Productivity Commission's final report in August 2004.⁹

The report contains a number of recommendations covering a range of gas access issues, including how the Code might better facilitate a competitive market for energy services, the appropriateness of an industry specific access regime, the Code's effect on investment in pipeline networks and the Code's consistency with other access regimes.

However, the Australian Government has yet to issue its response to the Productivity Commission's report and currently no Bill exists further to this inquiry. As such, the Productivity Commission's report is not binding on the Tribunal's assessment of AGLGN's proposed access arrangement and its final decision.

2.4 Tribunal's assessment and consultation process

In making its draft and final decisions, the Tribunal considered AGLGN's proposed revisions to its access arrangement under the Code. It considered whether it is satisfied that this proposed access arrangement contains the elements and satisfies the principles set out in sections 3.1 to 3.20 of the Code. It also took into account the factors of section 2.24 of the Code, and considered the consistency of the proposed access arrangement with these factors.

In reaching its draft and final decisions, the Tribunal also considered recent judicial developments that relate to the interpretation of the Code and its supporting legislation, including the:

- Decision of the Supreme Court of Western Australia in *Re: Dr Ken Michael AM; ex parte EPIC Energy (WA) Nominees Pty Ltd & Anor* [2002] WASCA 231 (23 August 2002) (*Epic*)
- Decision of the Australian Competition Tribunal in *Application by GasNet Australia (Operations) Pty Ltd* [2003] ACompT 6 (23 December 2003) (*Gasnet*)
- Decision of the Australian Competition Tribunal in *Application by East Australian Pipeline Limited* [2004] ACompT 8 (8 July 2004) (*Moomba*).¹⁰

In undertaking its assessment, the Tribunal followed the process outlined in 2.2 above. In accordance with the requirements of the Code,¹¹ it informed interested parties that it had received a proposed access arrangement from AGLGN, and published a notice in a national daily newspaper requesting, among other things, that initial submissions to the proposed access arrangement be made by 16 April 2004.¹² Prior to releasing its draft decision, the Tribunal provided a further opportunity for stakeholders to make written submissions and held public forums to facilitate stakeholder discussion on the proposed access arrangement

⁹ Productivity Commission, *Review of the Gas Access Regime*, Inquiry Report No. 31, 11 June 2004.

¹⁰ Following the Tribunal's draft decision, the Australian Competition Tribunal released its decision – *Application by East Australian Pipeline Limited* [2005] ACompT 1 (18 March 2005).

¹¹ Sections 2.31 to 2.34 of the Code.

¹² An advertisement appeared in the *Australian Financial Review*, *Sydney Morning Herald* and *Daily Advertiser (Wagga Wagga)* on Monday 12 January 2004, and emails and letters were sent to stakeholders requesting submissions by 16 April 2004.

and on the findings of its consultants' reviews of AGLGN's forecast demand, total cost and terms and conditions.

As part of the draft decision report, the Tribunal requested that AGLGN submit a response to the draft decision by 7 February 2005 and that other stakeholders should make submissions by 28 February 2005. Upon receipt of AGLGN's response to the draft decision¹³, the Tribunal held further public forums to facilitate stakeholder discussion on the draft decision and AGLGN's response.

In making its draft decision, the Tribunal considered 33 written submissions received prior to its draft decision. In making its final decision, it considered all of these and a further 15 submissions to the draft decision and AGLGN's response to it. It also considered the comments made in the public forums. In addition, as part of its considerations for the draft and final decisions, it met with several stakeholders, at their request, to discuss issues of specific concern and asked a number of stakeholders to clarify their submission comments. It also facilitated discussion between its consultants and AGLGN, including their attending Tribunal meetings to assist it in its consideration of forecast demand, total costs and terms and conditions.

A list of the written submissions received and public forums held is provided in **Appendix 2**.

¹³ After the date of the draft decision, AGLGN is permitted to resubmit the revisions to the access arrangement, but is not required to do so, under Section 2.37A of the Code.

3 INFORMATION PROVISION

A service provider's access arrangement information, which must accompany its proposed access arrangement, is required to contain sufficient information to enable users to understand the access arrangement and assess its compliance with the Code requirements.

3.1 Tribunal's findings

The Tribunal is not satisfied that AGLGN's access arrangement information meets the requirements of the Code. It requires AGLGN to amend its access arrangement information as set out in 3.5 below.

The Tribunal notes that AGLGN has agreed to implement these amendments.

3.2 Code requirements

Section 2.28 of the Code requires the service provider to submit its proposed access arrangement to the regulator, together with the applicable access arrangement information.

Section 2.6 of the Code requires that the access arrangement information contain such information as, in the regulator's opinion, would enable users and prospective users to understand how the elements of the proposed access arrangement have been derived, and to form an opinion on whether the access arrangement complies with the provisions of the Code.

Section 2.7 of the Code states that the access arrangement information may include any relevant information but must include at least the six categories of information described in Attachment A to the Code. These six categories of information relate to:

- access and pricing principles
- capital costs
- operations and maintenance
- overheads and marketing costs
- system capacity and volume assumptions
- key performance indicators.

Attachment A to the Code also lists specific items of information under each of the six categories, which it refers to as 'examples' of the minimum disclosure requirements for each category.

If the regulator is not satisfied that the access arrangement information meets the requirements of the Code it may, at any time before it decides to approve an access arrangement, require the service provider to make changes to the access arrangement information to comply.¹⁴ It may also allow for certain information to be aggregated, categorised or not disclosed to ensure the disclosure of information is not unduly harmful to the legitimate business interests of the service provider or a user or prospective user.¹⁵

¹⁴ Section 2.30 of the Code.

¹⁵ Section 2.8 of the Code.

3.3 AGLGN's proposal

In addition to the proposed access arrangement it submitted on 23 December 2003, AGLGN submitted its proposed access arrangement information as required by the Code. This information is presented in sections that partly reflect the categories of information described in Attachment A to the Code. AGLGN stated that the access arrangement information meets the requirements of section 2.6 of the Code.¹⁶ It also provided a self-assessment of its compliance with the requirements of section 2.7 of the Code.¹⁷

3.4 Tribunal's analysis and considerations

In making its draft decision¹⁸, the Tribunal assessed whether AGLGN's access arrangement information complies with the information disclosure requirements of the Code, including the six categories of information in Attachment A to the Code.¹⁹ It also assessed whether the access arrangement information would enable users and prospective users to understand how the elements of the proposed access arrangement have been derived, and to form an opinion on whether the access arrangement complies with the Code.²⁰

In doing so, the Tribunal took into account submissions that commented on the access arrangement information, as well as AGLGN's response to these comments.²¹ It also noted that AGLGN submitted a number of non-confidential submissions on various access arrangement matters (see Appendix 2), and provided a range of clarifying information to the Tribunal, its Secretariat and independent experts to assist with assessing the compliance of its access arrangement.²²

In making its final decision, the Tribunal reconsidered each of these matters, taking into account the views expressed by AGLGN and other stakeholders in their responses to the draft decision. However, it has not changed its position on most of the matters discussed in its report on the draft decision.

Specifically, the Tribunal remains satisfied that AGLGN's access arrangement information includes the six categories of information required by section 2.7 of the Code (and identified in Attachment A to the Code). However, after considering section 2.6 of the Code and stakeholder comments, it is not satisfied that the access arrangement information is sufficient to enable users and prospective users to understand how the elements of the access arrangement have been derived, and to form an opinion on whether the access arrangement complies with the provisions of the Code.

The Tribunal therefore requires AGLGN to make four specific amendments to the access arrangement information, related to postcode boundaries, the definitions of 'coastal' and 'country' regions, the definition of 'diversified MDQ', and minimum delivery pressure data. In addition, it requires AGLGN to amend the access arrangement information wherever necessary to reflect the amendments to the access arrangement required by the final decision, and to ensure that it contains the most up-to-date information available.

¹⁶ AGLGN, *Access Arrangement Information for NSW Network, December 2003*, Introduction, p 1.

¹⁷ AGLGN, *Access Arrangement Information for NSW Network, December 2003*, Attachment 4, pp 86-87.

¹⁸ IPART, *Revised Access Arrangement for AGL Gas Networks – Draft Decision, December 2004*, Chapter 3.

¹⁹ In accordance with section 2.7 of the Code.

²⁰ In accordance with section 2.6 of the Code.

²¹ Information provided by AGLGN at request of IPART Secretariat on 22 November 2004.

²² Of a commercially sensitive nature.

The Tribunal's considerations in relation to the four specific amendments, the general amendment to reflect amendments to the access arrangement required by the final decision and to ensure that it contains the most up-to-date information available, as well as other matters raised in submissions, are summarised below.

3.4.1 Postcode boundaries

EnergyAdvice²³ and Hunter Gas Users Group²⁴ submitted that AGLGN should provide transparent information on the postcode boundaries it used to determine cost allocation to contract users. They contended that maps showing these boundaries should be made publicly available, as the boundaries have changed since the current access arrangement was approved.

As part of the process leading up to the draft decision, AGLGN explained that for the review of the current access arrangement, the cost allocation zones were based on postcode boundaries in the 1996 UBD street directory. While it did not have a map of these zones in a format that could be made readily available, it advised that it would be prepared to amend its coding of 'Station Identification' so that the first four digits of each station identification will represent the postcode used to aggregate stations for pricing purposes.²⁵ AGLGN also agreed to amend the explanatory note in Attachment 3 to the access arrangement information, to clarify the basis for the cost allocation zones and make specific reference to its amended Station Identification codes.²⁶

The Tribunal is satisfied that AGLGN's proposed amendments to its coding of 'Station Identification' and to the explanatory note in Attachment 3 will clarify the postcodes used to aggregate stations for the purpose of allocating costs to contract users. It therefore requires AGLGN to make these amendments and notes that AGLGN has agreed in its response to the draft decision to implement this amendment.²⁷

3.4.2 Definition of 'coastal' and 'country'

Orica²⁸ requested clarification of the terms 'coastal' and 'country' used by AGLGN in Table 4.9 of the access arrangement information, which defines regions for the contract users. AGLGN explained that 'coastal' refers to Newcastle, Sydney and Wollongong, including all networks 'downstream from Wilton', while 'country' refers to networks not included in 'coastal'.

In its report on its draft decision, the Tribunal expressed the view that AGLGN should ensure that it defines essential terms in its access arrangement information, and uses these terms consistently to enable users to understand what reference tariffs would apply to them. It maintains this view, and therefore requires AGLGN to amend its access arrangement information to define 'coastal' and 'country', and to ensure these and other associated terms

²³ EnergyAdvice submission, May 2004, p 15.

²⁴ Hunter Gas Users Group submission, 4 May 2004, p 7.

²⁵ The Station Identification codes are not contained within the access arrangement but are accessible to users.

²⁶ Correspondence with the Tribunal's Secretariat on 22 November 2004.

²⁷ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision, February 2005*, Section 5, Amendment 1.

²⁸ Orica submission, 3 May 2004, p 7.

are used consistently throughout the access arrangement information. It notes that AGLGN has agreed in its response to the draft decision to implement this amendment.²⁹

3.4.3 Definition of ‘diversified MDQ’

Although there were no stakeholder comments on the absence of a definition for ‘diversified MDQ’, the Tribunal noted in the report on its draft decision that this concept is fundamental to how costs are allocated and reference tariffs are derived. It put the view that it is not clear that a prospective user would be able to understand the derivation of reference tariffs without understanding the concept. It maintains this view, and therefore requires AGLGN to amend its access arrangement information to include a definition of ‘diversified MDQ’. It notes that AGLGN has agreed in its response to the draft decision to implement this amendment.³⁰

3.4.4 Minimum delivery pressure data

As part of its independent review of AGLGN’s redundant capital undertaken prior to the release of the draft decision,³¹ MMA identified an error in the delivery pressure information included in the access arrangement information. To ensure users have access to the most up-to-date and correct information, the Tribunal considers that AGLGN should correct this error.

It therefore requires AGLGN to amend Attachment 2 of the access arrangement information so that it includes the correct minimum delivery pressure of the Wilton-Mt Keira pipeline of 2,800 kpa. It notes that AGLGN has agreed in its response to the draft decision to implement this amendment.³²

3.4.5 Reflect amendments to the access arrangement required by the final decision

In its draft decision, the Tribunal proposed to require AGLGN to amend the access arrangement information to reflect the amendments to the access arrangement required in the draft decision, and to ensure that the access arrangement information contains the most up-to-date information available.

In its response to the draft decision, AGLGN agreed to ensure that the access arrangement information contains the most up-to-date information available. However, it did not agree to amend the access arrangement information to reflect the amendments in the draft decision because it disputed a number of the individual amendments in that decision.³³

²⁹ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision, February 2005*, Section 5, Amendment 2.

³⁰ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision, February 2005*, Section 5, Amendment 3.

³¹ MMA Report to IPART, *Assessment of the Wollongong Trunk Pipeline Depreciated Optimised Replacement Value*, November 2004 (www.ipart.nsw.gov.au)

³² AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision, February 2005*, Section 5, Amendment 4.

³³ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision, February 2005*, Section 5, Amendment 5.

Given that some of the amendments to the access arrangement contained in the draft decision have been revised in the final decision, the Tribunal considers it is now appropriate for AGLGN to amend its access arrangement information to reflect the amendments to the access arrangement required by the final decision.

3.4.6 Other matters

In the report on its draft decision, the Tribunal considered several other comments by stakeholders about information disclosure. These comments related to actual quantity data,³⁴ clarity of short-term capacity options,³⁵ and real data on pipeline usage and pressure.³⁶ It did not require AGLGN to make any amendments to address these comments.

The Tribunal received a further comment from Harrison Manufacturing in relation to the issue of actual quantity data in response to the draft decision.³⁷ Taking into account this additional comment, the Tribunal has not changed its position on this or any of these other matters.

However, it has noted the concerns raised by Harrison Manufacturing in relation to overrun charges, and has addressed these in its assessment of terms and conditions (see Chapter 13 of this report).

3.5 Amendments required

Amendment 1 - Postcode boundaries

The explanatory note in Attachment 3 to the proposed access arrangement information must be amended to clarify the basis for the postcodes in that Attachment, and to make specific reference to AGLGN's proposed amended Station Identification codes.

Amendment 2 - Definition of 'coastal' and 'country'

Definitions for 'coastal' and 'country' must be included in the proposed access arrangement information, and AGLGN must ensure that these and other associated terms are used consistently throughout the access arrangement information.

Amendment 3 - Definition of 'diversified MDQ'

A definition for 'diversified MDQ' must be included in the proposed access arrangement information.

Amendment 4 - Correction of delivery pressure data

Attachment 2 of the proposed access arrangement information must be amended to include the correct minimum delivery pressure of the Wilton-Mt Keira pipeline of 2,800 kpa.

³⁴ Harrison Manufacturing Limited submission, 13 April 2004, p 2.

³⁵ Harrison Manufacturing Limited submission, 13 April 2004, p 2.

³⁶ Macquarie Generation submission, 6 October 2004, pp 5-6.

³⁷ Harrison Manufacturing Limited submission, 18 February 2005.

Amendment 5 - Revision of the access arrangement information to reflect the amendments to the access arrangement

The proposed access arrangement information must be amended to reflect the amendments to the access arrangement required by the final decision, and to ensure that it contains the most up-to-date information available.

4 SERVICES POLICY

The services policy is a statement of the services that the service provider will offer under the access arrangement. This policy may include services that are offered with specified tariffs, terms and conditions, and services where the tariffs, terms and conditions are to be negotiated between the service provider and the prospective user.

4.1 Tribunal's findings

The Tribunal is not satisfied that AGLGN's proposed services policy meets the requirements of the Code. It requires AGLGN to amend its proposed access arrangement as set out in 4.5 below.

It notes AGLGN has agreed to implement this amendment.

4.2 Code requirements

Section 3.1 of the Code requires that the proposed access arrangement must include a services policy.

Section 3.2 of the Code requires that the services policy must include a description of one or more services that the service provider will make available to users and prospective users. These services must include one or more services that are likely to be sought by a significant part of the market, plus any services that in the regulator's opinion should be included in the policy. In addition, to the extent that is practicable and reasonable, the service provider should make services available in a way that allows users and prospective users to obtain only those elements they require, and set a separate tariff for each element.

Section 3.3 of the Code requires that an access arrangement must include a reference tariff for:

- at least one service that is likely to be sought by a significant part of the market (section 3.3(a)); and
- each (additional) service that is likely to be sought by a significant part of the market and for which the regulator considers a reference tariff should be included (section 3.3(b)).

If a service is determined to be a reference service with a reference tariff, section 3.4 of the Code requires that the reference tariff must comply with the reference tariff principles in section 8 of the Code. Further the terms and conditions of a reference service must meet the requirements of section 3.6 of the Code (discussed in Chapter 13 of this report).

4.3 AGLGN's proposal

AGLGN proposed to offer seven reference services and two non-reference services,³⁸ as summarised in Table 4.1 below. Six of these reference services and the non-reference services are included in the services policy in AGLGN's current access arrangement. The seventh reference service – gas swap service – is a new service.

³⁸ Reference services are distinguished from non-reference services in having an associated reference tariff and separate terms and conditions, which the regulator must approve under the Code.

Table 4.1 Summary of AGLGN's proposed services policy

Service	Brief description	Availability
<i>Reference services</i>		
1. Capacity reservation service	<ul style="list-style-type: none"> - Transportation service with charges based on capacity and overruns - Term: 1-2 years <ul style="list-style-type: none"> • Summer tranche option (1-7 months Oct – Apr) • Short term capacity option (1-4 weeks) • Additional capacity (min 1 year) 	<ul style="list-style-type: none"> - Delivery points withdrawing greater than 10TJ per annum - MDQ must be no less than 10 times MHQ
2. Managed capacity service	Transportation service with charges based on previous 12 months maximum withdrawal Term: 1 year (assumes 14 months metering data exists)	<ul style="list-style-type: none"> - Delivery points withdrawing greater than 10TJ per annum - MDQ must be no less than 10 times MHQ
3. Throughput service	Transportation service with charges based on throughput Term: 1 year	<ul style="list-style-type: none"> - Minimum annual bill amount based on 10TJ per annum - MDQ must be no less than 10 times MHQ
4. Multiple delivery point service	Transportation service for users with multiple delivery points, with charges based on above three services (as nominated by user) Minimum annual bill amount based on 10TJ per annum if throughput service nominated Term: as long as delivery points remain	<ul style="list-style-type: none"> - Delivery points withdrawing greater than 10TJ per annum
5. Tariff service	Transportation service with charges based on throughput, with a fixed charge Term: depends on access arrangement period and whether delivery points remain	<ul style="list-style-type: none"> - Delivery points withdrawing less than 10TJ per annum
6. Meter data service	Meter reading and provision of on-site data and communication equipment Term: depends on local network service	<ul style="list-style-type: none"> - In conjunction with local network service - On-site data and communication equipment available to delivery points withdrawing greater than 10TJ per annum, where economically feasible
7. Gas swap service	Enables trunk users to take gas from alternate receipt point and /or transfer gas to or from another user	<ul style="list-style-type: none"> - Trunk service only - Delivery points withdrawing greater than 10TJ per annum
<i>Non-reference services</i>		
1. Interconnection of embedded network service	For establishment of a single delivery point from the trunk or local network to an embedded network	Subject to negotiation
2. Negotiated service	Other services not listed above are open to negotiation	Subject to negotiation

Source: AGLGN, *Access Arrangement for NSW Gas Networks, December 2003*, Section 2 – Services Policy.

Note:

'MDQ' means Maximum daily quantity.

'MHQ' means Maximum hourly quantity.

AGLGN proposed to include in its access arrangement a general description of the services offered, and the associated terms and conditions and charges.³⁹ (These terms and conditions are discussed in Chapter 13 of this report.)

It also proposed that the availability of reference services will be affected by whether they are requested for tariff or non-tariff delivery points, as is the case under the current access arrangement. A tariff delivery point refers to delivery points expected to withdraw less than 10TJ of gas per annum, while a non-tariff (sometimes referred to as contract) delivery point refers to delivery points expected to withdraw more than 10TJ of gas per annum. The capacity reservation, managed capacity, throughput, multiple delivery point and gas swap services will only be available to non-tariff delivery points, while the tariff service will only be available for tariff delivery points. Meter data services are available to all delivery points, although equipment for daily metering is only available to non-tariff delivery points where the user has also taken a local network transportation service.

In addition, AGLGN proposed to make the capacity reservation, managed capacity and throughput services available to new delivery points on the local network subject to the condition that the maximum daily quantity (MDQ) is no less than ten times the maximum hourly quantity (MHQ). This condition does not apply under the current services policy.

Finally, with the exception of gas taken from the Eastern Gas Pipeline (EGP) via the Wilton to Wollongong trunk, AGLGN proposed to offer all transportation services (including the capacity reservation, managed capacity, throughput, multiple delivery point and tariff services) so that a corresponding trunk and local network service must be taken. All trunk reference services may be taken as either a forward haul or back haul.

4.4 Tribunal's analysis and considerations

In making its draft decision, the Tribunal considered whether AGLGN's proposed services policy meets the requirements of section 3.2 of the Code. It noted that the Code does not define what specific criteria and thresholds must be applied in assessing whether the services included in this policy are 'likely to be sought by a significant part of the market', and indeed what 'market' should be considered.

Furthermore, the Tribunal noted that AGLGN did not provide a breakdown of forecast demand by service in its access arrangement information. Rather, AGLGN stated that in deriving its contract charges, it allocated contract revenue to users assuming that users choose the capacity reservation service "because this represents the most cost-effective service where a user manages MDQ". However, AGLGN noted that in some cases, contract users prefer a throughput service.⁴⁰ In relation to its tariff charges, although it was not stated, the Tribunal understood that all tariff revenue is allocated to users assuming that users choose the tariff service.⁴¹

Without a breakdown of forecast demand for each proposed service, the Tribunal considered that it is not possible to definitively determine whether a proposed service would be sought by a significant part of the market (with the exception of the capacity reservation and tariff services). Given this fact, and that the Code only requires that services be *likely* to be sought

³⁹ AGLGN, *Access Arrangement Information for NSW Network*, December 2003, Section 2, pp 3-34.

⁴⁰ AGLGN, *Access Arrangement Information for NSW Network*, December 2003, Section 9.2.7, p 59.

⁴¹ There are no other reference service options for transportation of gas to tariff delivery points.

by a significant part of the market, the Tribunal assessed AGLGN's proposed services policy by considering stakeholder comments (or lack thereof), whether and to which users a service would be of consequence, and the potential for determining a cost reflective tariff. It proceeded on the basis that the 'market' encompasses the geographic region that is bound by the access arrangement as a whole.

In addition, where the Tribunal considered that the 'likely to be sought by a significant part of market' criterion was not satisfied, it applied the discretion afforded by the Code for it to require a service to be included where it is of the *opinion* that a service should be included in the services policy.⁴² In doing so, it was guided by the factors in section 2.24 of the Code.⁴³

The Tribunal concluded in its draft decision that, taking into account stakeholder submissions, AGLGN's proposed services policy meets the requirements of the Code.

In response to this draft decision, a number of stakeholders commented on the Tribunal's decisions to not require standalone or separate trunk and local network reference services and a separate meter data service for contract customers. Stakeholders also commented on the gas swap service in the context of the Tribunal's draft decision to not accept AGLGN's proposed trunk zone merger (see Chapter 10 of this report).

In making its final decision, the Tribunal considered whether any additional services should be included as 'reference' services with an associated reference tariff based on the requirements of section 3.3 of the Code. It applied the two-limbed criteria in section 3.3(b) of the Code on the basis that the access arrangement already meets the requirements of section 3.3(a) in that it includes a reference tariff for at least one service sought by a significant part of the market. It also considered whether AGLGN's proposed services policy meets the requirements of section 3.2 of the Code. In doing so, it took into account stakeholder submissions and further information received from AGLGN and stakeholders.⁴⁴

The Tribunal has not changed its finding on most of the matters it considered in its report on the draft decision. Specifically, it still considers that AGLGN's proposed services are appropriately included as reference and non-reference services in its services policy. However, it considers that AGLGN's description of its negotiated services does not meet the requirements of section 3.2 of the Code. For this reason, it is not satisfied that AGLGN's proposed services policy meets the requirements of the Code, and requires AGLGN to amend its proposed access arrangement as AGLGN proposed in its response to stakeholder comments (discussed under 4.4.2 and 4.4.4 below).

The Tribunal's considerations and conclusions on the six current reference services and two current non-reference services AGLGN proposed to retain, the new reference service it proposed to introduce, and five additional services that stakeholders suggested should be introduced are outlined below.

⁴² Section 3.2(a)(ii) of the Code.

⁴³ This is explained in Chapter 2 of this report.

⁴⁴ Following the 23 March public forum, AGLGN submitted to the Tribunal a response to stakeholders' submissions (1 April 2005) and the Tribunal sought further information from relevant stakeholders (correspondence to EnergyAdvice, Hydro Aluminium, Hunter Gas Pipeline and Weston Aluminium on 1 April 2005).

4.4.1 Current reference services

AGLGN proposed to retain the six reference services included in its current access arrangement: the capacity reservation service, managed capacity service, throughput service, multiple delivery point service, tariff service and meter data service.

As noted above, with the exception of the capacity reservation service and tariff services, the access arrangement information does not provide data on the forecast demand for each of these services. However, prior to the draft decision, AGLGN provided the Tribunal with additional information on current demand⁴⁵, which supported the statement in the access arrangement information that the capacity reservation service is the service most demanded by contract or non-tariff users. This additional information also confirmed that the meter data service is provided to all non-tariff delivery points and a portion of tariff delivery points, and that the tariff service is provided to all tariff customers.

In its report on its draft decision, the Tribunal noted that current demand is not necessarily a precise indicator of future demand. However, it considered that the proposed capacity reservation, meter data and tariff services are likely to be sought by a significant part of the market, and so should be included in the services policy as reference services. It also considered that the short-term flexibility provided by the summer tranche, short-term capacity and additional capacity options linked to the capacity reservation service provide a benefit to users and prospective users with seasonal or variable loads. Taking into account the factors in section 2.24 of the Code (in particular, the interests of users and prospective users), the Tribunal accepted AGLGN's proposal for these service options to be included in the services policy as reference services.

The proposed managed capacity, throughput, and multiple delivery point services are non-tariff transportation services that cater to the needs of users with loads that are more variable or involve more than one non-tariff delivery point. These services provide users and prospective users with the option to trade-off certainty and flexibility as their demands require, and allow users with more than one delivery point to obtain services for these delivery points under one service agreement. Taking into account the factors in section 2.24 of the Code (in particular, the interests of users and prospective users and the public interest, including having competition in markets), the Tribunal accepted AGLGN's proposal for these services to be included in the services policy as reference services.

In relation to AGLGN's proposal to make the availability of the capacity reservation, managed capacity and throughput services to new delivery points on the local network subject to the condition that MDQ is no less than ten times the MHQ, AGLGN advised the Tribunal that this restriction is designed to:

- encourage efficient network utilisation (including hourly utilisation) through promoting demand management measures and a cost of service approach
- minimise the costs of implementing an incentive on hourly demand – the alternative of applying a limiting ratio based on MDQ and MHQ would require costly changes to metering and billing systems as well as an increase in volume of data to be collected, stored and validated
- exclude requests for a service where the cost of providing the service is not reasonably reflected by an MDQ based charge – where requests are excluded AGLGN envisages

⁴⁵ AGLGN information provided 10 August 2004 in response to IPART Secretariat request.

that the demand for a service would be addressed through requests for a negotiated service.⁴⁶

AGLGN also submitted that this proposed change is consistent with section 2.24 of the Code, as it takes account of the economically efficient operation of the pipeline and operational and technical requirements for the safe and reliable operation of the pipeline. After considering these factors and given that it received no adverse stakeholder comments on the proposed change, the Tribunal found that the change is appropriate.

In relation to all six services, the Tribunal considered that the proposed services policy makes it possible for users and prospective users to obtain only those elements that they require, and specifies a reference tariff for each of those elements, as required by sections 3.2 and 3.3 of the Code.⁴⁷ In doing so, it considered stakeholders submissions that additional elements—particularly separate local network and trunk services and a separate meter data service for contract customers—should be included as reference services. It also addressed stakeholder comments on the proposed charge for the back haul trunk service (see 10.4.5 of this report).

For the reasons outlined above, the Tribunal was satisfied that the capacity reservation, managed capacity, throughput, multiple delivery point, tariff and meter data services AGLGN proposed to include in its services policy meet the requirements of the Code, as they are likely to be sought by a significant part of the market and (in the Tribunal's opinion) should be included in the services policy as reference services.

In making its final decision, the Tribunal reconsidered these matters. In doing so, it took into account stakeholder submissions it received in response to the draft decision that requested that separate local network and trunk services and a meter data service for contract customers be included as reference services. Its consideration on these matters is discussed in 4.4.4 below. However, it has not changed its position on these matters. It remains satisfied that the capacity reservation, managed capacity, throughput, multiple delivery point, tariff and meter data services AGLGN proposed to include in its services policy meet the requirements of sections 3.2 and 3.3 of the Code, and should be included in the services policy as reference services.

4.4.2 Current non-reference services

Although AGLGN proposed a set of reference services and tariffs, it may at any time offer additional services as non-reference services, whether or not they are expressly described in the access arrangement. As costs for these additional services will not have been built into the total revenue requirement, AGLGN should have an incentive to provide innovative services and tariffs that meet the emerging needs of users.

AGLGN proposed to retain two of the non-reference services included in its current access arrangement – the interconnection of embedded network service and negotiated services. The Tribunal's considerations and conclusions in relation to these services are discussed below. AGLGN also proposed to delete one non-reference service – partial use of local network service. This matter is discussed in 4.4.4 below.

⁴⁶ As advised in correspondence on 3 August 2004.

⁴⁷ A separate 'Charges' section exists for each of the reference services comprising fixed and/or variable charges.

Interconnection of embedded network service

An embedded network is a distribution system embedded within a larger network, which in the proposed access arrangement refers to one that is not owned or operated by AGLGN but receives gas from AGLGN's network.⁴⁸ The interconnection of embedded network service is to provide an operator of an embedded network with a service to interconnect with AGLGN's trunk or local network. This involves AGLGN providing and maintaining a delivery point that serves as the interconnection between the embedded network and AGLGN's covered pipeline.

In making its draft decision, the Tribunal did not consider that a significant part of the market would be likely to require this service. However, in view of the continued development of the gas market and the expressed interest in interconnection (see section 4.4.4 below), it considered that it is appropriate for the service to be included in AGLGN's services policy and that its inclusion meets the requirements of section 3.2 of the Code. It also noted that the Code envisages that a services policy might include a right to interconnect with a covered pipeline.⁴⁹

As the cost of embedded network interconnection (and therefore the associated tariffs) is likely to vary depending on the location and size of the embedded network, the Tribunal was also satisfied that it is appropriate that the service be included as a non-reference service, with tariffs and terms and conditions to be subject to negotiation.

In making its final decision, the Tribunal reconsidered these matters. Given that neither AGLGN nor any other stakeholders provided new comments on the interconnection of embedded network service, it has not changed its finding on these matters. It remains satisfied that this service should be included in the services policy as a non-reference service as proposed by AGLGN.

Negotiated services

Negotiated services aim to meet the needs of prospective users that are not covered by one of the reference services or the interconnection of embedded network service. As the name suggests, the nature of the service and the associated terms and conditions and tariffs are subject to negotiation between AGLGN and the prospective user.⁵⁰

In its draft decision, the Tribunal was satisfied that this service should be included in the services policy as it is consistent with the Code provision that the access arrangement should not limit the services that a service provider can agree to provide to a user.⁵¹

In making its final decision, the Tribunal noted that AGLGN, in response to stakeholders' comments to the draft decision on separate trunk and local network reference services, proposed to amend its description of negotiated services in its access arrangement to clarify its intentions to offer a separate trunk-only (non-reference) service on comparable terms and conditions to the equivalent linked trunk reference service.⁵²

⁴⁸ Schedule 1: Definitions and Interpretations, p 75.

⁴⁹ Definition of 'service' in Code definitions, s 10.8.

⁵⁰ Under section 6 of the Code, a prospective user may seek arbitration of a dispute over the terms and conditions of access, including for non-reference services.

⁵¹ Section 2.50(a) of the Code.

⁵² Further information submitted by AGLGN on 1 April 2005.

The Tribunal considers the provision of a trunk-only service would address some stakeholders' view that they should be able to obtain a trunk service without the linked local network service for transportation of gas to an embedded network. To the extent that this provides a description of a service that would meet the requirements of sections 3.2(b) and 3.2(c) – that is, it would allow a user or prospective user to obtain a service which includes only that element that a user wishes and at a separate tariff for that element – the Tribunal considers that AGLGN should be required to amend its proposed access arrangement to include a description of this service, as required by section 3.2(a).

A more detailed discussion on whether this service should be included as a reference or non-reference service is included in 4.4.4 below.

4.4.3 New reference service - gas swap service

AGLGN proposed to introduce one new reference service—the gas swap service. This service will enable trunk users to take gas from an alternative receipt point and/or transfer gas to or from another user. Prior to the draft decision, the Tribunal received a number of submissions supporting the introduction of such a service, but expressing concern about the flexibility of AGLGN's proposed service and the associated proposed trunk zone merger and its impact on trunk charges.⁵³

In making its draft decision, the Tribunal understood from AGLGN's public presentation on its proposed access arrangement⁵⁴ and the access arrangement information it provided,⁵⁵ that AGLGN proposed the new gas swap service in conjunction with the creation of a trading hub (in proposed trunk zone A), and in response to retail and market calls for flexibility in utilising different receipt points and different sources of gas for the short term and at short notice. Further information AGLGN submitted provided additional arguments in support of a gas swap service, but stressed that to obtain the greatest benefits from this service it would need to be introduced in conjunction with the proposed trunk zone merger.⁵⁶

Although there was no information on the forecast demand for this service, given that all users currently take gas from the MSP receipt point and/or the EGP receipt point (both of which would be affected by the service), the Tribunal formed the view that the proposed gas swap service has the potential to affect all users of AGLGN's trunk non-tariff reference services. Taking into account the comments in support of a gas swap service, it considered that the proposed service is likely to be sought by a significant part of the market.

Furthermore, as the service does not need to be taken as a corresponding trunk and local network service (it is a trunk-only service), the Tribunal considered that it allows a user to obtain only those elements that it requires, consistent with section 3.2(b) of the Code. It also has a separate reference tariff (a \$ per GJ charge), consistent with section 3.2(c) of the Code. For all these reasons, the Tribunal was satisfied that the proposed gas swap service meets the requirements of the Code and should be included as a reference service in the services policy, as proposed by AGLGN.

⁵³ EnergyAustralia submissions, dated 20 April 2004, s 5.3(f) and 6 October 2004, plus 15 September forum, TXU submission, 16 April 2004, s 2, Alinta submission, 21 June 2004, pp 4-5 and joint submission, 6 October 2004. Orica submission, 6 October 2004 and 15 September public forum comments. TXU submission, 6 October 2004. Origin Energy submission, 6 October 2004.

⁵⁴ 19 February 2004.

⁵⁵ AGLGN, *Access Arrangement Information for NSW Network*, December 2003, p 61.

⁵⁶ AGLGN submissions, 27 August 2004 and 6 October 2004.

In response to the draft decision, stakeholders submitted that the benefits of a gas swap service and short-term trading are likely to be limited as a result of the Tribunal's decision to not approve AGLGN's proposed trunk zone merger⁵⁷ (see Chapter 10 of this report).

In making its final decision, the Tribunal noted that one of the original reasons for providing a gas swap service – to enable trunk users to take gas from an alternative receipt point in a single zone – will not immediately exist, given the retention of the current trunk zone structure. However, this does not preclude multiple receipt points in a single zone from occurring in the future. In addition, the service still provides for the transfer of gas to or from another user, consistent with AGLGN's trading policy (see Chapter 15 of this report).

Taking into account the factors in section 2.24 of the Code (in particular, the interests of users and prospective users), the Tribunal accepts AGLGN's proposal for these services to be included in the services policy as reference services.

4.4.4 Additional new reference services proposed by stakeholders

Prior to the draft decision, a number of stakeholders argued that AGLGN should include additional new reference services in its services policy, to benefit the end-use customer, meet emerging needs of peak generators, and enhance consistency with services offered on gas transmission pipelines.⁵⁸ The new services proposed included standalone trunk and local network services, a meter data service for contract customers, a peak electricity generation service, an 'as available' transmission service, and a capacity trading transmission service.

In making its draft decision, the Tribunal considered these stakeholders' views. However, it was not satisfied that such additional proposed reference services meet the requirements of section 3.3 of the Code for a reference service, and therefore did not require AGLGN to include these services as reference services in its access arrangement.

In making its final decision, the Tribunal reconsidered these matters, taking into account further submissions from AGLGN and other stakeholders in response to the draft decision, which related specifically to standalone trunk and local network services and a meter data service for contract customers. However, it has not changed its finding on these matters.

The Tribunal still considers that the proposed additional reference services – those relating to standalone trunk and local network services, meter data service for contract customers, a peak electricity generation service, an 'as available' transmission service, and a capacity trading transmission service – do not meet the requirements of section 3.3 of the Code for a reference service. Specifically, it is not satisfied that these services are likely to be sought by a significant part of the market and, having taken into account the various factors in section 2.24 of the Code, is not persuaded that a reference tariff for these services should be included in AGLGN's access arrangement. It notes that AGLGN proposed to clarify its intention to offer a standalone trunk service as a negotiated service, and supports this proposal.

⁵⁷ Origin Energy and Orica submissions 28 February 2005 and comments by Orica at the 23 March 2005 public forum.

⁵⁸ EnergyAdvice submission May 2004, ss5.4 & 13 and comments at 15 September 2004 forum, EnergyAustralia submission 20 April 2004, s5.3(h), Macquarie Generation submission, 6 October 2004.

The Tribunal's considerations and conclusions on the two matters that were discussed in submissions in response to the draft decision – proposed standalone trunk and local network services and a meter data service for contract customers – are outlined below.

Standalone trunk and local network services

As noted in 4.4.1 above, AGLGN proposed to retain gas transportation reference services. Apart from those users who take gas from the EGP on the Wilton to Wollongong trunk, users must take these services as corresponding trunk and local network services.

Prior to the draft decision, EnergyAdvice and a stakeholder who made a confidential submission contended that for embedded networks, AGLGN should separate trunk and local network services, so they can be offered as standalone reference services. EnergyAdvice suggested that this would not require the creation of new reference services, but rather the removal of the requirement that transportation reference services must include corresponding trunk *and* local network services.⁵⁹ The comments in these submissions related to the proposed embedded network to service the Hunter Economic Zone via interconnection with the Sydney to Newcastle trunk of AGLGN's network (referred to as the Hunter Gas Pipeline (HGP)). If the HGP were to be constructed and connected, it would be the first embedded network interconnected to AGLGN's network.

Similarly, Macquarie Generation submitted that its proposed Tomago gas-fired peaking power plant will require access to AGLGN's trunk network only. However, it claimed that despite ongoing negotiations with AGLGN, it has not been able to book a commercially viable service.⁶⁰

In effect, these stakeholders sought the 'de-linking' of trunk and local network reference services, so that users of an embedded network do not have to pay for parts of the AGLGN network that they would not use. In the cases they referred to, it is envisaged that only a trunk service would be required.

In making its draft decision, the Tribunal considered whether the Code requires that these services be made available as separate reference services. It assessed whether such separate services would each be likely to be sought by a significant part of the market and whether, in its opinion, reference tariffs for these services should be included in the access arrangement, as required by section 3.3(b) of the Code and taking into account the factors in section 2.24 of the Code.

The Tribunal concluded that separate local network and trunk services are *not* likely to be sought by a significant part of the market, and that reference tariffs for these services should not be included in AGLGN's access arrangement. In reaching this conclusion, the Tribunal noted that:

- Based on its consideration of demand forecasts, the Tribunal had not factored in any new demand for the Hunter Economic Zone or Tomago peaking plant projects during the proposed access arrangement period.
- Prospective users and AGLGN may negotiate the provision of separate services outside of the access arrangement.

⁵⁹ EnergyAdvice submission, May 2004, s 5.4.

⁶⁰ Macquarie Generation submission, 6 October 2004.

- It is not persuaded that the interests of a few users in having access to separate local network and trunk services as reference services, relative to the legitimate business interests of AGLGN and the interests of other users and prospective users that access linked services, warrants the provision of separate services.

The Tribunal also noted that AGLGN had proposed to remove the partial use of local network service it offers in its current access arrangement as a non-reference service, due to a lack of interest in the service.⁶¹ However, it considered that the reinstatement of this service in the proposed access arrangement would not address the concerns expressed in submissions as it provides for a separate local network service only.

In response to the draft decision, a number of stakeholders reiterated their request for a separation or 'de-linking' of the trunk and local network services into separate reference services.⁶² They put forward the following additional arguments:

- A significant part of the market, estimated at 20 PJ per annum, is likely to seek separate services. This includes prospective users of the proposed HGP (who would only require a trunk service), and users of the Wilton to Wollongong network (who only require a local network service).
- Users should be able to obtain only those elements of a service that they wish to obtain, and it is practicable and reasonable for a trunk service to be provided as a standalone reference service, as provided under section 3.2 of the Code.
- The Tribunal has not had sufficient regard or applied an appropriate weighting in considering the factors in section 2.24 of the Code, and has given greater weight to the interests of the service provider relative to interests of users.
- AGLGN has no incentive to negotiate on separate services and this could hinder potential competition from the proposed HGP network.

In making its final decision, the Tribunal considered all stakeholder submissions and additional information it received from AGLGN and stakeholders,⁶³ and assessed stakeholders' request for a separation of the trunk and local network reference services against the requirements of section 3.3 of the Code. However, the Tribunal maintains its view that AGLGN should not be required to offer separate trunk and local network services as separate reference services in its access arrangement.

Specifically, it applied the two-limbed criteria for each additional service included as a reference service under section 3.3(b). It is not persuaded that a significant part of the market would be likely to seek this service, as required by the first limb of section 3.3(b). In particular, it notes that some of the users that are purported to make up the likely demand for such a service are already able to access a separate local network service as a reference service (such as users of the Wilton to Wollongong trunk) or have already negotiated with AGLGN a trunk-only service. In addition, based on its consideration of demand forecasts, the Tribunal maintains that there are reasonable doubts as to the timing of the proposed HGP, so the likely demand for such a service from potential users of this pipeline may not

⁶¹ As explained in AGLGN's public presentation on 19 February 2004.

⁶² Austral Bricks, CSR, EnergyAdvice, Hunter Gas Pipeline, Hydro Aluminium, Pilkington and Weston Aluminium submissions 28 February 2005, and various comments at 23 March public forum.

⁶³ AGLGN further information submitted 1 April 2005, and further correspondence from EnergyAdvice – 4 & 5 April 2005.

eventuate during the proposed access arrangement period. Furthermore, it notes that volume is only one possible measure of demand in a market.

The Tribunal also does not consider that reference tariffs for separate trunk and local services should be included in the access arrangement (i.e. as separate reference services), as required by the second limb of section 3.3(b) (except as already provided by the access arrangement⁶⁴). Its reasons are as follows:

- Separation of the services may have adverse implications for AGLGN and other users, due to increased costs of service arising from a requirement to enhance systems for gas accounting, metering and billing. In addition, the explicit inclusion of a trunk-only service is likely to require a revision to demand forecasts and reference tariffs, which will affect other users (who use the existing linked services).
- It is also possible that the inclusion of a trunk-only service will restrict retail competition, as larger users with diversified portfolios would have an opportunity to reduce their required capacity on a trunk-only service relative to new entrant smaller retailers.
- Finally, AGLGN advised that it already offers, and now proposes to formalise its intentions to offer a negotiated trunk-only service in its proposed access arrangement (see further discussion below of AGLGN's proposed amendments).

Having found that the provision of separate trunk and local network reference services does not meet the requirements of section 3.3(b) of the Code, the Tribunal also considered whether separate services should be offered as services generally in accordance with the requirements of section 3.2 of the Code.

The Tribunal notes that, in response to stakeholder comments, AGLGN proposed to clarify in its access arrangement its intentions to offer a trunk-only service as a negotiated service on 'comparable terms and conditions as the equivalent trunk reference service, subject to AGLGN's reasonable commercial and technical requirements'.⁶⁵

The Tribunal considers that it is practicable and reasonable, as required by section 3.2 of the Code, for AGLGN to provide a separate trunk-only service as a negotiated service in its access arrangement. Given the additional technical and commercial complexities associated with offering a trunk-only service, the Tribunal also considers that it is reasonable and practicable for AGLGN to offer the service subject to reasonable commercial and technical requirements. Further, the inclusion of a description of the service in the access arrangement provides AGLGN and users (and any arbitrator) with a basis for resolving any disputes arising from negotiation processes.

Therefore, the Tribunal considers that AGLGN should be required under section 3.2(a)(ii) of the Code to include a description of the trunk-only service in its access arrangement, as set out in 4.5 below.

⁶⁴ Users may access a separate local network service in the Wilton to Wollongong network section where users are served by the local network receipt point established at Port Kembla with the EGP.

⁶⁵ Further information submitted by AGLGN on 1 April 2005.

Meter data service for contract customers

As noted in 4.4.1 above, AGLGN proposed to retain a meter data service as a reference service that provides users with meter reading services for all delivery points. For non-tariff delivery points (or contract customers), this service also provides on-site data and communication equipment to facilitate access to daily metering data, where economically feasible, and in conjunction with a local network reference (transportation) service agreement.

The proposed access arrangement provides that more frequent access to metering data for contract customers is available at the user's expense (a user is either a self-contracting contract customer or a retailer supplying a contract customer).

Prior to the draft decision, EnergyAdvice requested a separate meter data service for contract customers (who obtain transportation services through a retailer) to provide these customers with direct access to daily load data. Its reasons included the following:

- To enable contract customers to bypass their retailer in accessing metering information, on the basis that these customers have an entitlement to load data and should not have to obtain permission from their retailer.
- Contract customers require real-time metering data for internal energy management, monitoring, reporting, account auditing and management of daily overruns.
- Contract customers may not wish to flag their intentions to the retailer by having to seek the retailer's permission (for example, they may be negotiating an alternative deal with a competing retailer).
- Some contract customers on negotiated contracts have in place arrangements to access meter data streams independent of retailers.⁶⁶

EnergyAdvice advised that contract customers have, in practice, been able to access metering data (through their retailer) within a few days and free of charge. It submitted that this should be the case as they have already paid for this service. It accepted that this might not require a separate service, and suggested that this may be resolved through a change in terms and conditions between relevant parties or by placing gas metering services on a contestable footing similar to electricity.⁶⁷

In making its draft decision, the Tribunal noted that AGLGN proposed to retain a meter data service as a reference service for users, which enabled contract customers to access daily meter data information through their retailers. It also noted that the terms and conditions in the proposed access arrangement provide that meter information is accessible by AGLGN, the user (being a retailer or self-contracting customer) and other persons (including a customer) as permitted by the user, at the user's cost or in accordance with the requirements of the Code.⁶⁸

Further, the Tribunal noted that there is no direct contractual relationship between AGLGN and the end customer located at the delivery point (unless that end customer is a self-contracting user). Instead, AGLGN and the user (normally a retailer) contract under agreements for transportation and other services, and a separate contractual relationship

⁶⁶ EnergyAdvice submission, May 2004, s 9 and comment at 15 September public forum.

⁶⁷ Correspondence on 21 June 2004.

⁶⁸ AGLGN, *Access Arrangement for NSW Network*, December 2003, p 26.

then exists between the user and end customer. Although it might be open for AGLGN to agree (under the terms of its access arrangement) to confer some benefit upon a third party (an end user), this is not expressly required or provided for by the Code.

In response to the draft decision, stakeholders reiterated the request for a separate meter data service for contract customers.⁶⁹ They put forward the following additional arguments:

- A significant part of the market, estimated at 30 PJ per annum, is likely to seek a separate meter data service.
- A user must be able to obtain only those elements that a user wishes – in this case a meter data service without a linked local network transportation service.
- It is not inconsistent with the Code definition of ‘service’ or ‘user’ for a contract customer to seek a meter data service separate from transportation services.
- The provision of such a service would not be inconsistent with the factors in section 2.24 of the Code, including that there would not be a negative impact on AGLGN and that it is in the interest of contract customers and the public interest.

In making its final decision, the Tribunal considered all stakeholder submissions, and the additional information it received from AGLGN and stakeholders.⁷⁰ It assessed stakeholders’ request for a separate meter data reference service for contract customers against the requirements of section 3.3 of the Code.

Specifically, the Tribunal applied the two-limbed criteria for each additional service included as a reference service under section 3.3(b). It is not persuaded that a significant part of the market would be likely to seek this service, as required by the first limb of section 3.3(b). In particular, it notes that a portion of the purported demand (self-contracting contract customers) is already able to access meter data services directly from AGLGN, and that volume is only one possible measure of demand in a market.

In addition, taking into account the factors in section 2.24 of the Code, the Tribunal is also not persuaded that a separate reference tariff for this service should be included in the access arrangement, as required by the second limb of section 3.3(b). Its reasons for this view are as follows:

- AGLGN already offers and proposes to offer a meter data service to users at a reference tariff that enables contract customers to access daily metering data through their retailer, and that the access arrangement also allows for more frequent access to meter data at the user’s own expense.
- Contract customers who cannot obtain what they require from their retailer have the option to seek another retailer who may be able to offer the specific service that they require, or to contract directly with AGLGN for transportation and meter data services.
- Finally, allowing contract customers to separately obtain transportation services and meter data services would have adverse implications for AGLGN and other users, including additional costs in setting up systems and metering equipment to manage separate service agreements with a larger number of users.

⁶⁹ EnergyAdvice submission 28 February 2005, and various comments at 23 March public forum.

⁷⁰ Further information submitted by AGLGN on 1 April 2005, and further correspondence from EnergyAdvice on 4 & 5 April 2005.

For these reasons, it considers that AGLGN should not be required to include a separate meter data service for contract customers as a reference service in its access arrangement as such a service does not meet the requirements of section 3.3(b) of the Code.

The Tribunal then considered whether AGLGN should include in its access arrangement such a separate meter data service for contract customers in accordance with the requirements of sections 3.2 of the Code (i.e. as a non-reference service). On the basis of the same reasons as noted above, it considers that it is neither practicable nor reasonable, as required by section 3.2 of the Code, for AGLGN to provide such a separate meter data service for contract customers. For these reasons it considers that AGLGN should not be required to include such a separate meter data service for contract customers in its access arrangement.

In response to a number of stakeholder comments that meter data services should be made contestable⁷¹, the Tribunal notes that it is not its role under the Code to facilitate a regime for contestable metering services. This matter is more appropriately addressed through the policy processes managed by the NSW Department of Energy, Utilities and Sustainability in conjunction with the Gas Market Company, which currently administers industry rules affecting the relationship between ‘meter data agents’ and other gas market participants.

4.5 Amendment required

Amendment 6 – Description of trunk-only service

AGLGN is required to amend section 2.9 of its proposed access arrangement to include as a non-reference service, the following description of a trunk-only service:

Where it is technically and commercially reasonable, AGLGN will offer a Trunk Service without the linked Local Network Service where:

- The gas is transported from a Receipt Point to a Delivery Point along the Wilton/Newcastle and or Wilton/Wollongong Pipelines;
- The Delivery Point has metering equipment approved for this purpose by AGLGN; and
- The gas transported does not utilise any component of the AGLGN Local Network prior to its delivery at its ultimate Delivery Point (i.e. at a customer site at which the gas is consumed).

Where AGLGN offers a Trunk Service without a linked Local Network Service, then the Standalone Trunk Service will be offered under comparable Terms and Conditions to the equivalent Trunk Reference Services, subject to AGLGN’s reasonable commercial and technical requirements.

⁷¹ EnergyAdvice and Metering Dynamics submissions, 28 February 2005.

5 REFERENCE TARIFF POLICY

The reference tariff policy describes the principles that underlie the calculation of the reference tariffs in an access arrangement. This policy may include information about the methodology used to determine reference tariffs, as well as mechanisms that govern how particular elements of an access arrangement that have an impact on reference tariffs will be applied.

AGLGN has applied a cost of service methodology to derive its total revenue over the proposed access arrangement period. Under this methodology, the total amount of revenue a service provider will require over the proposed access arrangement period is established by determining the costs it will incur over this period in providing its reference services.⁷² These costs are then allocated between the pipelines and other assets used to provide the reference services, and between the different customer classes (contract customers and tariff market customers) based on their forecast demand for each service. This allocation enables the reference tariff for each service to be calculated, based on the forecast cost of providing the service over the proposed access arrangement period.

The Tribunal's considerations in relation to this approach and AGLGN's application of it are discussed in Chapters 6 to 12, which focus on AGLGN's proposals for demand forecasts, the cost components that comprise the total revenue (the capital base, rate of return, and non-capital costs), the allocation of cost and the total revenue, and the variation of reference tariffs during the access arrangement period.

The Tribunal's consideration of two specific provisions within AGLGN's proposed reference tariff policy—the incentive mechanisms and capital redundancy mechanism—and the amendments it requires AGLGN to make to these provisions are discussed below.

5.1 Tribunal's findings

The Tribunal is satisfied that AGLGN's proposed incentive mechanisms meet the requirements of the Code.

The Tribunal is not satisfied that AGLGN's proposed capital redundancy mechanism meets the requirements of the Code. It requires AGLGN to amend its proposed capital redundancy mechanism as set out in 5.4 below.

The Tribunal notes that AGLGN has agreed to implement this amendment.

5.2 Incentive mechanisms

'Incentive mechanisms' refers to market-based incentives for the service provider to improve efficiency and to promote efficient growth of the gas market.

⁷² These costs include a return on its capital base, depreciation and its non-capital costs.

5.2.1 Code requirements

Section 8.2(d) of the Code provides that to approve a reference tariff or reference tariff policy, the regulator must be satisfied that, among other things, the reference tariff policy incorporates incentive mechanisms wherever the regulator considers it appropriate, and that these mechanisms are consistent with the principles set out in section 8 of the Code.

Section 8.44 of the Code provides that the incentive mechanisms should enable a service provider to retain all or part of any returns that exceed the level expected for a specified period, particularly where these increased returns are due to the service provider's efforts. The incentive mechanisms may operate within a single access arrangement period or over two or more access arrangement periods.

Section 8.45 of the Code provides that the incentive mechanisms may include (but are not limited to) the following:

- specifying that tariffs be based on forecast variables regardless of the realised values
- specifying a target revenue and specifying how revenue in excess of this target is to be shared between the service provider and users
- including a rebate mechanism for rebatable services⁷³ that does not provide a full rebate to users.

Section 8.46 of the Code provides that the incentive mechanisms should be designed to provide the service provider with an incentive to increase the volume of sales; minimise the overall costs of providing its services; develop new services in response to market needs; incur only prudent new facilities investment and non-capital costs; and ensure that users and prospective users gain from increased efficiency, innovation and volume of sales.

Section 8.4 of the Code provides that the methodology used to calculate total revenue may allow the service provider to retain some or all of the benefits arising from efficiency gains under an incentive mechanism. The amount of the benefit will be determined by the regulator in the range of 0 to 100 per cent of the total efficiency gains achieved.

5.2.2 AGLGN's proposal

AGLGN proposed⁷⁴ to incorporate incentive mechanisms that provide for:

- its reference tariffs to apply regardless of whether it realises the forecasts on which these tariffs were based (such as those for costs and demand)
- it to retain any benefits that arise if it achieves a lower UAG than the level assumed over the proposed access arrangement period.

⁷³ Referred to in Section 8.40 of the Code and defined in Section 10.8 of the Code.

⁷⁴ AGLGN, *Access Arrangement for NSW Network*, December 2003, s 4.2.3.

It explained in its access arrangement information⁷⁵ that its reference tariffs are designed to create incentives for:

- *efficiency*—if AGLGN is able to deliver services to the service standards at below the forecast cost (including UAG) then it retains the benefit of efficiency improvements
- *market growth*—if AGLGN can promote growth in the demand for services, then it will retain the benefits that arise from demand being stronger than forecast
- *better management of system capacity*—if contract customers can reduce or control peak system requirements or operate within their nominated MDQ and maximum meter flow rate, then they will benefit from reduced gas charges or increased annual consumption.

5.2.3 Tribunal's analysis and considerations

In making its draft decision, the Tribunal considered whether the proposed incentive mechanisms comply with the principles and requirements of section 8 of the Code. In doing so, it took into account stakeholder submissions.⁷⁶

In making its final decision, the Tribunal reconsidered this matter. Given that neither AGLGN nor any other stakeholder commented on the incentive mechanisms in their responses to the draft decision, it has not changed its finding—it remains satisfied that AGLGN's proposed incentive mechanisms meet the requirements of the Code. Its considerations are summarised below.

The Tribunal notes that the Code has been amended since its review of AGLGN's current access arrangement so that a service provider may retain some or all of the benefits that arise if its returns exceed the expected level of returns *for a period beyond the proposed access arrangement period*.⁷⁷ The amendments also clarify that the methodology used to calculate total revenue may incorporate an incentive mechanism, and that the service provider may retain between 0 per cent and 100 per cent of the total efficiency gains achieved, with this proportion to be determined by the regulator.

AGLGN's proposed incentive mechanisms are largely the same as those incorporated in its current reference tariff policy. They provide for AGLGN to retain 100 per cent of any benefits that arise over the proposed access arrangement period if it delivers services at costs below the level assumed in determining the reference tariffs and/or achieves demand that is higher than the level assumed in determining the reference tariffs (that is, unforecast gains). They also provide for users to retain 100 per cent of the efficiency gains that AGLGN is forecast to achieve over the access arrangement period. The only exceptions to these mechanisms would be variations to the reference tariffs that result from the implementation of an approved reference tariff variation method during the access arrangement period (see Chapter 12).

⁷⁵ AGLGN, *Access Arrangement Information for NSW Network*, December 2003, s 3.3.

⁷⁶ Origin Energy submission, 19 April 2004, p 3 and further correspondence on 21 June 2004.

⁷⁷ *National Third Party Access Code for Natural Gas Pipeline Systems: Third Amending Agreement*, commenced 22 November 2001.

Overall, the Tribunal considers that it is appropriate for the proposed incentive mechanisms to be incorporated into the reference tariff policy, and that they are consistent with the principles in section 8 of the Code:

- they will create incentives that rely on AGLGN's efforts, consistent with section 8.44 of the Code
- they are consistent with the specific example set out in section 8.45(a) of the Code
- they are designed to achieve the prescribed Code objectives in sections 8.1 and 8.46 of the Code, as they will:
 - provide AGLGN with an incentive to increase the volume of sales for all services, as AGLGN bears the risk of volumes being lower than assumed, consistent with sections 8.1(f) and 8.46(a)
 - provide AGLGN with an incentive to minimise the overall costs of providing services (including UAG), as AGLGN bears the risk of costs being higher than assumed, consistent with sections 8.1(f) and 8.46(b)
 - provide AGLGN with an incentive to develop services in response to market needs, since any revenue from non-reference services would be additional to the total revenue requirement, consistent with sections 8.1(f) and 8.46(c)
 - provide AGLGN with an incentive to undertake only prudent investment at efficient costs to ensure that low-cost/high-demand outcomes are achieved, consistent with sections 8.1(a) and 8.46(d)
 - ensure that users and prospective users gain from increased efficiency, innovation and volume of sales, consistent with sections 8.1(b) and 8.46(e).

For these reasons, the Tribunal is satisfied that AGLGN's proposed incentive mechanisms meet the requirements of the Code.

5.3 Capital redundancy mechanism

'Redundant capital' refers to assets that are no longer used or not fully used to provide services. The capital redundancy mechanism included in the proposed access arrangement will be used to identify redundant capital as part of the Tribunal's next review. Any redundant capital may be removed from the capital base at that review.

5.3.1 Code requirements

Sections 8.27 to 8.29 of the Code provide for inclusion in the reference tariff policy of a mechanism that allows for a reduction in the capital base:

- to reflect assets that no longer contribute in any way to service delivery
- to share the costs associated with a decline in the volume of sales between the service provider and users.

Before approving a reference tariff policy that includes such a mechanism, section 8.27 of the Code requires the regulator to take into account the uncertainty associated with the mechanism and the effect of that uncertainty on the service provider, users and prospective users. The Code also recognises that if the regulator approves a reference tariff policy that includes such a mechanism, it must recognise that there is potentially an impact on the allowed rate of return and economic life of assets due to the resulting risk (and cost) borne by the service provider of a fall in revenue (section 8.27 of the Code). Finally, section 8.29 of

the Code allows for other mechanisms that have the same effect on reference tariffs as described in sections 8.27 to 8.28 of the Code but which do not remove any amount from the capital base.

5.3.2 AGLGN's proposal

AGLGN proposed a reference tariff policy that includes a mechanism to be applied to identify redundant capital at the next review (a capital redundancy mechanism). Specifically, it includes the following provision:

4.2.1 Capital Redundancy Mechanism

With effect from the commencement of the subsequent Access Arrangement Period, the Relevant Regulator may reduce the Capital Base by an amount representing:

- (a) any assets that in the reasonable opinion of the Relevant Regulator have ceased to contribute to the delivery of Services;
- (b) any assets that have been transferred by AGLGN or in relation to which AGLGN has entered into a binding agreement for its transfer; or
- (c) any assets that in the reasonable opinion of the Relevant Regulator have decreased in value because of a decrease in its utilisation resulting from a decline in the volume of sales of this Service.

In assessing the reduction in the Capital Base due to a decreased utilisation of assets resulting from a decline in the volume of sales of a Service, the Relevant Regulator may take into account any reduction in the depreciated optimum replacement cost of the assets, the cost to AGLGN of the reduction in Total Revenue and any possible increase in Tariffs paid by Users resulting from the decline in utilisation of assets.

5.3.3 Tribunal's analysis and considerations

In making its draft decision, the Tribunal considered whether the proposed capital redundancy mechanism would fulfil the purpose of including such a mechanism as set out in section 8.27 of the Code. It also considered the uncertainty associated with the mechanism and its effect on AGLGN, users and prospective users.

In making its final decision, the Tribunal reconsidered these issues, and took into account AGLGN's response to the draft decision (no other submissions were received on this matter). The Tribunal has not changed its position since the draft decision. It is still not satisfied that AGLGN's capital redundancy mechanism meets the requirements of the Code, and requires that it be amended as set out in 5.4 below. Its considerations and reasons are summarised below. However, the Tribunal has modified the wording of paragraph 1(c) of the required amendment, to ensure there is no ambiguity about the circumstances in which it may identify redundant capital, and hence reduce the capital base.

The Tribunal accepts that the capital redundancy mechanism AGLGN has included in its proposed reference tariff policy (the proposed mechanism) should allow for the removal of an amount from the capital base to:

- ensure that assets that cease to contribute in any way to the delivery of services are not reflected in the capital base

- share costs associated with a decline in the volume of sales of services between the service provider and users.

In considering whether or not to approve the proposed mechanism, the Tribunal's considerations included the level of uncertainty that this mechanism would cause, and the effect of this uncertainty on AGLGN, users and prospective users. In relation to AGLGN, it recognises that the inclusion of the proposed mechanism may increase the risk for AGLGN in making its investments (compared to not including a mechanism). However, it does not consider that the proposed mechanism would create significant uncertainty for AGLGN. The fact that AGLGN proposed the inclusion of the mechanism would seem to support this view. In addition, the Tribunal notes that unlike the capital redundancy mechanism in the current access arrangement, the proposed mechanism contains no scope to remove from the capital base any amount associated with *forecast* redundancy. Therefore it is likely to result in less uncertainty for AGLGN than the current mechanism.

The Tribunal considered the inclusion of the proposed mechanism and its effect on the confidence of investors in recovering their investment as part of its analysis of AGLGN's proposed rate of return, as required by the Code. This issue is discussed in Chapter 8.

In relation to the uncertainty created for users and prospective users of the network, the proposed mechanism requires the Tribunal to determine whether in its reasonable opinion any assets have decreased in value due to a decrease in their utilisation. It also contains some discretion for the Tribunal to decide what factors to take into account in assessing whether and by how much the capital base should be reduced due to such a decrease in asset value.

After reconsidering the wording of AGLGN's proposed mechanism, the Tribunal considers that it does not provide sufficient certainty to enable the Tribunal to apply the mechanism and to reach a decision on whether and by how much to reduce the capital base for redundant capital. The proposed mechanism does not enable the Tribunal to determine when it should apply the mechanism, or the factors it should consider in applying the mechanism. In particular, the Tribunal is concerned about the wording of part (b) of the first paragraph and the second paragraph of the proposed mechanism.

Part (b) of the first paragraph provides for the removal from the capital base of 'any assets that have been transferred by AGLGN or in relation to which AGLGN has entered into a binding agreement for its transfer'. The Tribunal considers that the mechanism does not clearly indicate the meaning of the term 'transfer' in this context. AGLGN has advised that it intends this term to apply to assets that have been sold or disposed of, or in relation to which it has entered into a binding agreement for their sale or disposal. The Tribunal requires AGLGN to amend the mechanism to make this meaning clear. (This is addressed in paragraph 1(b) of the required amendment at 5.4 below.)

In relation to the final paragraph of AGLGN's proposed mechanism, the Tribunal has three main concerns. First, in providing for the regulator to take into account any possible increase in tariffs paid by users resulting from the decline in asset utilisation, the proposed mechanism:

- might be seen to restrict the Tribunal's consideration to instances of tariff increases, and may not capture all instances where an actual decrease in utilisation has occurred⁷⁸
- suggests that the Tribunal (when deciding by how much to reduce the capital base) should consider the effect of the decrease in utilisation – which by definition has already occurred – but does not specifically provide for the Tribunal to evaluate the impact its decision may have on the tariffs paid by users.⁷⁹

The Tribunal considers that this is inconsistent with section 2.24 of the Code, which requires it to take into account among other factors, the impact of its decision on users and prospective users. To resolve this issue, the Tribunal requires that the proposed mechanism be amended to remove uncertainty and clarify that the regulator may consider the impact of reducing the capital base on tariffs paid by users. (This is addressed in paragraph 2(d) of the required amendment.)

Second, the Tribunal considers the provision that the regulator may 'take into account any reduction in the depreciated optimum replacement cost of the assets' when assessing the reduction in the capital base is inconsistent with the requirements of section 8 of the Code. Section 8.9 of the Code does not permit a revaluation of the capital base, but rather provides for it to be 'rolled forward' at each review. The Tribunal considers that the change in value identified by applying the capital redundancy mechanism should be restricted to the change in value that results from a decrease in utilisation, and that all other assumptions relied on in setting the value of the initial capital base should be held constant. This is consistent with the approach it has taken in identifying redundant capital on the Wilton to Wollongong trunk line as part of this review, discussed in more detail in Chapter 7 of this report.

Specifically, the Tribunal considers that section 8 of the Code prevents it from revisiting the depreciated optimised replacement cost (DORC) value of an asset to identify redundant capital because:

- DORC implies a re-optimisation of the pipeline that would capture changes other than those resulting from a decline in sales, such as changes in unit rates as a result of technological change and scarcity of materials
- DORC valuation is by its nature subjective and is heavily affected by different assumptions made in the valuation process
- DORC is not a valid consideration in circumstances where the initial capital base was not originally valued at DORC, on the basis that redundant assets should be removed from the capital base via a method consistent with that used when they were put in.

⁷⁸ For example, an increase in tariffs resulting from a decline in utilisation may be reduced or eliminated by other tariff changes or the impact may be different for different classes of users.

⁷⁹ For example, where the decrease in volumes was forecast at the preceding review, tariffs would have already been affected by it.

To address this issue, the Tribunal requires that the proposed mechanism be amended to include as factors that the regulator may take into account, the value of the assets when they were first included in the capital base, the current value of the assets, and the proportion of the capital base that the redundant capital represents. (These factors are set out in paragraphs 2(a) and (b) of the required amendment.)

Third, the proposed mechanism does not explicitly provide for the Tribunal to take other factors into account in approving the reference tariff policy, exercising its discretion to remove an amount from the capital base, and determining what amount is appropriate to remove, as required by the Code.⁸⁰ The Tribunal considers that the mechanism should be amended to provide that the regulator may take into account the objectives and principles of the Code, and any other factors that in the regulator's reasonable opinion are relevant and are not inconsistent with the Code. (This is addressed in paragraphs 2(e) and (f) of the required amendment at 5.4 below.)

The Tribunal also considers that to provide additional certainty for AGLGN and other stakeholders about how the Tribunal will exercise its discretion, the mechanism should be amended to provide that the factors listed will be considered by the Tribunal in deciding whether to invoke the mechanism at all, and in determining what amount should be removed from the capital base. (This is addressed in the beginning of paragraph 2.)

5.4 Amendment required

Amendment 7 - Capital redundancy mechanism

The capital redundancy mechanism at Section 4.2.1 of the proposed access arrangement must be amended to read as follows:

4.2.1 Capital Redundancy Mechanism

1. The Relevant Regulator may reduce the Capital Base with effect from the commencement of the Access Arrangement Period (immediately following the conclusion of the current Access Arrangement Period) if it is of the reasonable opinion that any of the following have occurred in relation to assets comprising some or all of the Capital Base:
 - (a) the assets have ceased to contribute to the delivery of Services;
 - (b) the assets have been sold or disposed of by AGLGN or AGLGN has entered into a binding agreement for their sale or disposal; or
 - (c) the assets have decreased in value because of a decrease in their utilisation.
2. In determining whether to reduce the Capital Base under paragraph 1, and the amount (to be determined by the Relevant Regulator) by which the Capital Base should be reduced, the Relevant Regulator may take into account:
 - (a) the value of the assets when the assets were first included in the Capital Base, and their current value;
 - (b) the value that the assets to be removed from the Capital Base represent as a proportion of the total Capital Base;

⁸⁰ Sections 3.5 and 8.1 of the Code.

- (c) the cost to AGLGN of a reduction in Total Revenue resulting from a reduction of the Capital Base;
- (d) the impact of a reduction of the Capital Base on Tariffs paid by Users;
- (e) the objectives and principles of the Code; and
- (f) any other factors that in the reasonable opinion of the Relevant Regulator are relevant and not inconsistent with the Code.

6 DEMAND FORECASTS

As Chapter 5 discussed, under the cost of service approach, reference tariffs are based on the service provider's total allowed revenue and the forecast demand for each of its reference services for each year of the proposed access arrangement period. Because the costs of providing gas transportation services are largely fixed, the number of units over which those costs are recovered will affect the price of each service. A higher forecast demand will result in lower prices, while a lower forecast demand will result in higher prices.

The reference tariffs for each customer class (tariff market customers and contract customers⁸¹) are determined by taking the revenue allocated to each class (see Chapter 11) and dividing it by the forecast number of units to be sold.⁸² The service provider provides a forecast of the number of units to be sold over the period (based on forecasts of customer numbers, volume and capacity requirements) in the access arrangement information that supports its proposed access arrangement.

The forecast demand (and the underlying assumptions about how it will change over the access arrangement period) also has a critical impact on the service provider's projected capital and operating costs. For example, if a higher growth rate is assumed, operating and maintenance expenditure is likely to be higher, to enable the business to meet the greater demands on its network. Higher growth could also lead to greater capital expenditure, as assets might require replacement sooner or there might be a need to expand the capacity of the network to meet higher levels of demand.

6.1 Tribunal's findings

The Tribunal is not satisfied that AGLGN's proposed demand forecasts meet the requirements of the Code. It requires that, for the purpose of determining the reference tariffs, the demand forecasts be amended as set out in 6.5 below.

The Tribunal notes that AGLGN has agreed to implement these amendments.

6.2 Code requirements

Section 8.2(e) of the Code requires that before approving a reference tariff and reference tariff policy, the regulator must be satisfied that any forecasts required in setting the reference tariff represent best estimates arrived at on a reasonable basis.

The Code also requires the regulator, in determining to approve a reference tariff policy, to consider the objectives in section 8.1 and the factors in section 2.24 (discussed in Chapter 2 of this report).

⁸¹ Tariff market customers – tariff customers is defined in AGLGN's access arrangement (page 80) as a person who is reasonably expected to take delivery of less than 10TJ of gas per year. Contract customer or non-tariff customers are defined as customers described with reference to a non-tariff delivery point definition where the customer is reasonably expected to take delivery of a quantity of gas exceeding 10TJ per contract year (page 77 of AGLGN's revised access arrangement).

⁸² The actual revenue earned by AGLGN during the access arrangement period will depend on the actual number of units sold to each customer class.

6.3 AGLN's proposal

AGLGN proposed separate demand forecasts for the two main market sectors – contract markets and tariff markets (with the tariff market sub-divided into residential and business markets). Each of these forecasts, and the approach AGLGN used to estimate them is outlined below.

6.3.1 Proposed method for forecasting demand for tariff market

While the tariff market represents only 32 per cent of the total quantity of gas delivered, it generates 85 per cent of AGLGN's revenue. The forecast volume to be sold therefore has a large impact on AGLGN's reference tariffs.

To forecast this volume, AGLGN calculated a base level of volume sold for 2002/03, by adjusting the actual volume for that year for the effect of 'heating degree days' to arrive at a volume for existing customers under 'normal' weather patterns. For the residential market, it then adjusted this amount to take into account:

- underlying increases in growth and changes to patterns of consumption due to the increased use of water saving devices (including showerheads) and gas water heaters
- forecast changes in tariff market customer numbers due to new dwellings,⁸³ and existing dwellings converting to gas in reticulated areas and the one identified area that will be reticulated during the period of the access arrangement (project area).

For the business market, it adjusted the 2002/03 base level of volume for changes in customer numbers in the project area and for expected movement between the tariff and contract markets during the proposed access arrangement period.

6.3.2 Proposed method for forecasting demand for contract market

Contract market prices, which generate 15 per cent of AGLGN's revenue, are based largely on the Maximum Daily Quantity (MDQ) the customer takes in a given contract year rather than its annual throughput in that year. Therefore, forecast MDQ is the critical variable for contract prices. Annual Contract Quantities (ACQs) are significant to the extent that they impact on the MDQ, and are used in the allocation of costs between the tariff and contract markets.

To forecast MDQ and ACQ, AGLGN adjusted the actual number of sites at 30 June 2003 for known site additions and closures and movements to and from the tariff market to 1 January 2005, to obtain a customer list. It then divided customers into two groups – the 17 largest customers (major), who each use more than 800 TJ of gas a year; and the remaining 456 customers (non-major) who use more than 10 TJ but less than 800 TJ annually. It then established what it termed baseline MDQs and ACQs for each group for the proposed access arrangement period.

For each of the major contract customers, AGLGN determined an individual baseline forecast of MDQ and ACQ, based on its own assessment of historical consumption and demand, load factors, and customer surveys. It used this load information rather than contracted MDQ to make the baseline assessment. It then used the baseline MDQ and ACQ

⁸³ Divided into new houses and medium and high rise density developments.

to forecast the MDQ and ACQ for each year of the access arrangement period, adjusting for known increases and reductions in load.

For the non-major contract customers, AGLGN divided them into industry groups, and determined the growth rates for the proposed access arrangement period for each group from a line of 'best-fit' over the previous eight years, adjusting for known business closures.

6.3.3 Proposed demand forecasts

Based on the methods described above, AGLGN proposed to use the demand forecasts shown in Table 6.1 for the purpose of determining reference tariffs for the expected access arrangement period.

Table 6.1 AGLGN's proposed demand forecasts (December 2003)

		2005/06	2006/07	2007/08	2008/09	2009/10
Customer site numbers (as at 30 June)		986,956	1,018,489	1,049,886	1,081,102	1,112,210
Tariff market load (TJ)	Residential	22,640	23,460	24,287	25,122	25,965
	Business	10,953	10,969	10,986	11,000	11,014
Contract market load (TJ)	Total ACQ	65,097	66,340	66,287	66,439	66,695
	Total MDQ	279.5	280.3	281.0	281.8	282.6

Source: AGLGN, *Access Arrangement Information for NSW Network*, December 2003, Tables 4.1, 4.3 and 4.5.

After considering the recommendations of an independent review of its forecasts by a consultant commissioned by the Tribunal, AGLGN subsequently revised these demand forecasts to reflect some of the consultant's recommendations for improving its methodology and more recent data used in the forecast modelling. It also revised its forecast customer numbers over the expected term of the access arrangement. Its underlying methodology remained as described in 6.3.1 and 6.3.2 above, but it was finetuned.

After the Tribunal released its draft decision, AGLGN proposed further revisions to its residential tariff market demand forecast. These revisions are primarily related to the fitting and usage of AAA water appliances in homes. AGLGN expects that increasing the water efficiency of showerheads and tap fittings in new and existing homes will reduce hot water use over the access arrangement period, with a resulting decrease in the demand for gas with which to heat it. AGLGN's final revised demand forecasts for the tariff market are based on its views on the number of homes to be fitted, the proportion using gas, and the saving in hot water based on additional information that became available since it submitted its access arrangement in December 2003. These forecasts were finalised in consultation with the Tribunal's consultant.

AGLGN also revised its contract market load forecasts in accordance with the draft decision, which required that these forecasts be based on the actual level of contract market customers' contracted MDQ for 2002/03.

AGLGN's final revised demand forecasts are shown on Table 6.2.

Table 6.2 AGLGN's final revised demand forecasts (at 14 April 2005)

	2005/06	2006/07	2007/08	2008/09	2009/10
Customer site numbers as at 30 June:	998,495	1,035,158	1,072,166	1,109,475	1,147,155
Tariff Market demand (TJ):					
Residential	22,998	23,976	25,036	26,112	27,207
Business	11,109	11,159	11,166	11,213	11,262
Contract Market demand (TJ):					
Total ACQ	65,000	66,238	66,230	66,369	66,608
Total MDQ	296.1	296.8	297.7	298.4	299.1

Source: MMA, *Finalisation of AGLGN demand forecasts*, 8 April 2005, information provided by AGLGN, 14 April 2005.

6.4 Tribunal's analysis and considerations

The Tribunal engaged McLennan Magasanik Associates (MMA) to assess the methodology AGLGN used to determine the forecasts, and to make recommendations to assist the Tribunal to form its opinion as to whether these forecasts are 'best estimates arrived at on a reasonable basis', as required by the Code.

The Tribunal notes that MMA's assessment process involved a significant amount of discussion between it and AGLGN, which resulted in both parties accepting the other's position on a number of issues. MMA delivered three reports over the course of the review (a draft report in April 2004,⁸⁴ a final report in June 2004,⁸⁵ and a further report in April 2005⁸⁶). In response to MMA's review, AGLGN provided a number of revised forecasts. Its final revised forecasts for the residential tariff market were submitted for the Tribunal's consideration in mid April 2005.

The Tribunal re-assessed AGLGN's proposed demand forecasts against the requirements of section 8.2(e), and considered the revised forecasts provided since the draft decision. In doing so, it considered the objectives in section 8.1 and the factors in section 2.24 of the Code. In all cases, the Tribunal was guided by MMA, and accepts MMA's view that much of AGLGN's revised forecasts may be considered best estimates arrived at on a reasonable basis.

In relation to AGLGN's tariff market demand forecasts, the Tribunal considers that:

- the revised residential tariff market forecasts (submitted in April 2005) meet the requirements of the Code
- the revised business tariff market forecasts (submitted in June 2004) meet the requirements of the Code. (In making its draft decision, the Tribunal was satisfied that these met the requirements of the Code, and they have not changed since the release of that decision).

⁸⁴ MMA, *Review of demand forecasts for the AGL Gas Network (AGLGN), Draft report to IPART*, 5 April 2004.

⁸⁵ MMA, *Demand forecast for the AGL Gas Network, Final report to IPART*, 2 June 2004.

⁸⁶ MMA, *Finalisation of AGLGN demand forecasts*, 8 April 2005.

In relation to AGLGN's contract market forecasts, the Tribunal's views have not changed since its draft decision. It still considers that:

- AGLGN's proposal not to make an additional allowance for possible projects in the contract market meets the requirements of the Code
- AGLGN's proposed method for forecasting contract market MDQ does not satisfy the requirements of the Code, and to be considered best estimates arrived at on a reasonable basis should be based on actual contracted MDQ. The Tribunal notes that AGLGN's final revised demand forecasts (shown in Table 6.2) have been adjusted to so they are now based on contracted MDQ.

For the above reasons, the Tribunal is not satisfied that the demand forecasts contained in AGLGN's proposed access arrangement are best estimates arrived at on a reasonable basis. However, it is satisfied that AGLGN's final revised demand forecasts for both the tariff and contract markets do meet the requirements of the Code. The Tribunal therefore requires AGLGN to amend its proposed access arrangement and access arrangement information so that the demand forecasts used to determine total revenue and tariffs are equal to these final revised forecasts (see 6.5 below).

6.4.1 Tariff market forecasts for residential customers

In its further report, MMA expressed concern over AGLGN's assumptions on the effect that the NSW Government's BASIX⁸⁷ program will have on gas usage by hot water systems through the impact of AAA-rated showerheads and tap aerators/regulators and reduction in usage for centralised hot water units.⁸⁸ The Tribunal notes that there is no definitive study, precedent or historical trend that can be used to assess the likely impact of BASIX at this stage.

In its earlier reports, MMA queried the figure used by AGLGN as its starting point for average consumption per new residential customer connection, stating that the average weather normalised consumption over the past few years should be used, consistent with assumptions for other elements of the demand forecasts. It also considered that two groups of tariff market customers—those in the Blue Mountains and Central West project areas—should be forecast at a higher than average consumption.

In making its draft decision, the Tribunal gave close consideration to MMA's concerns and recommendations regarding the basis on which AGLGN's forecasts were made. It also considered a submission on this issue from Origin Energy.⁸⁹ (It noted that many of the issues that were raised in other stakeholders' submissions received in response to MMA's draft report were resolved by MMA in its final report.)

⁸⁷ BASIX, the Building Sustainability Index, is a policy of the NSW government that aims for more sustainable residential development throughout NSW. It commenced in some parts of NSW on 1 July 2004 and will apply to all of the state from 1 July 2005. In October 2004, the government announced further mandatory requirements regarding water and energy efficiency in NSW buildings that will become effective during the expected access arrangement period.

⁸⁸ This was noted in Origin Energy's submission of 6 May 2004.

⁸⁹ Origin Energy submission, 6 May 2004.

In making its final decision, the Tribunal reconsidered each of these matters. It also considered MMA's comments on AGLGN's revised forecasts and AGLGN's response; no further submissions were received. After discussions between MMA, AGLGN and the Tribunal, some consensus was reached between MMA and AGLGN. However, two areas of disagreement between the parties remained:

- the number of house sales to which retrofit to meet BASIX will apply from 2008
- the average savings in multi-unit dwellings after BASIX on house sales is applied.

Together, these two areas of disagreement affect less than one per cent of residential tariff market demand.

Having considered AGLGN's proposal and subsequent revisions, MMA's recommendations and stakeholder submissions, the Tribunal is of the opinion that AGLGN's final revised forecasts for residential tariff market demand are so close to those that would be produced by adjusting for MMA's views on the above areas of disagreement that it considers these forecasts to be best estimates arrived at on a reasonable basis. It is therefore requires AGLGN to amend its access arrangement and access arrangement information to reflect its final revised forecasts.

6.4.2 Tariff market forecasts for business customers

After discussions between MMA and AGLGN, AGLGN submitted revised tariff market forecasts for business customers in June 2004. The Tribunal accepted MMA's view that these forecasts were best estimates arrived at on a reasonable basis in accordance with section 8.2(e) of the Code. AGLGN has not further revised these estimates since this time, and the Tribunal has received no further information or comments on this issue. Therefore, the Tribunal requires AGLGN to amend its access arrangement and access arrangement information to reflect AGLGN's position on this issue (as provided in the June 2004 forecasts).

6.4.3 Additional demand from possible projects in the contract market

In its June 2004 report, MMA recommended that probability-weighted MDQ estimates for four potential projects⁹⁰ should be included in the contract market forecasts. The Tribunal considered this recommendation, but takes the view that the probability that each of the projects identified by MMA will commence during the expected access arrangement period is sufficiently low that including them would not result in the Code requirement being met.

In particular, it notes that since MMA's June 2004 report was written, two of these projects (Protech and Boulder High Specialty Steel) have ceased planning the proposed operations. From information provided by Macquarie Generation on its proposed Tomago peaking generation plant⁹¹, the Tribunal concludes that the timing of this project is still quite uncertain.

⁹⁰ Tomago Peaker Plant, Protech Steel, Boulder Hunter Specialty Steel and Hunter Economic Zone - MMA Demand forecast for the AGL Gas Network, final report to IPART, 2 June 2004, p 28 (s6.6.1).

⁹¹ Meeting 6 October 2004.

The Tribunal does not require AGLGN to amend its forecasts to include any additional probability-weighted load as it does not consider this would result in demand forecasts that meet the requirements of the Code.

6.4.4 Contract market estimates of MDQ

In its draft report, MMA was critical of AGLGN's approach to estimating forecast MDQ for major contract customers. As discussed in 6.3.2 above, AGLGN based this forecast on an assessment of each customer's historical consumption (including its actual daily withdrawal data), load factors and customer surveys. MMA recommended that instead, demand forecasts for these customers should be based on the actual level of their contracted MDQ for 2002/03, unless AGLGN could provide evidence that this contracted MDQ level will change. AGLGN did not alter its approach in producing its revised forecasts, nor did it provide any such evidence. In its June 2004 report, MMA stated that after speaking directly with some of the relevant contract customers, it maintained its recommendation.

The Tribunal received two submissions, commenting on the demand forecasts for major contract customers.⁹² Both submissions supported MMA's recommendation that AGLGN's forecasts were not best estimates arrived at on a reasonable basis.

In making its draft decision, the Tribunal considered AGLGN's approach, MMA's view and stakeholder submissions. It noted that contracted MDQ is a key component in deriving AGLGN's reference tariffs for contract customers, and therefore should be the basis for forecasts of demand for both major and non-major contract customers. However, for major contract customers, the Tribunal considered AGLGN's approach to be based on what appears to be a fairly arbitrary assessment of forecast MDQ. AGLGN had provided no evidence to identify a consistent relationship between the MDQ assumed in its demand forecasts and either the daily withdrawal data that it provided or contracted MDQ.

The Tribunal considered that AGLGN did not apply a sound methodology in preparing its demand forecasts for major contract customers. Rather, it seemed to have produced these forecasts based on its own views on what the MDQs should be and whether customers were making logical decisions in contracting MDQ. The Tribunal considered that this approach was not reasonable, as the basis on which MDQ is forecast was not clear, and this allowed AGLGN to estimate this key variable on an arbitrary basis. In contrast, it considered that a more transparent methodology would be clearly based on actual contracted MDQ (as this is a primary input to reference tariffs for the relevant customers). In addition, any adjustments to this level would be justifiable and verifiable (ideally, through evidence that major customers had changed their contracted MDQ, or had confirmed their intention to change their contracted MDQ).

In making its final decision, the Tribunal reconsidered this matter. It also considered AGLGN's revised forecasts, MMA's comments on those forecasts and AGLGN's response; no further submissions were received. Overall, the Tribunal is not satisfied that AGLGN's demand forecasts for major contract customers represent best estimates arrived at on a reasonable basis, as required by section 8.2(e) of the Code. It considers that as AGLGN has not provided evidence of changes to contracting by the major customers, these forecasts could be based on arbitrary assumptions by AGLGN rather than a sound methodology, which is not a reasonable basis. It therefore considers that in order to meet the Code

⁹² Orica submission, 6 May 2004 and EnergyAustralia submission, 20 April 2004.

requirements, the demand forecasts for major contract market customers must be based on these customers' contracted MDQ. The Tribunal considers that AGLGN's revised demand forecasts for contract market customers (submitted in April 2005) satisfy this requirement and therefore, requires AGLGN to amend its access arrangement and access arrangement information to use these forecasts.

As discussed above, demand forecasts affect the calculation of permitted revenue through their impact on forecasts for new facilities investment related to market expansion and system reinforcement, and for non capital costs. They also affect the allocation of costs to various market segments and reference services and the determination of reference tariffs for each reference service. The Tribunal recognises that as a result of making the required amendments to its demand forecasts, AGLGN has also amended its forecast new facilities investment and non-capital costs. See Chapters 7 and 9 for further information on AGLGN's revisions to these costs.

6.5 Amendment required

Amendment 8 - Demand forecasts

The proposed access arrangement must be amended so that the demand forecasts used to determine total revenue and reference tariffs are those set out in Table 6.3 below.

Table 6.3 Required forecasts of demand and customer numbers

	2005/06	2006/07	2007/08	2008/09	2009/10
Customer site numbers as at 30 June:	998,495	1,035,158	1,072,166	1,109,475	1,147,155
Tariff Market demand (TJ):					
Residential	22,998	23,976	25,036	26,112	27,207
Business	11,109	11,159	11,166	11,213	11,262
Contract Market demand (TJ):					
Total ACQ	65,000	66,238	66,230	66,369	66,608
Total MDQ	296.1	296.8	297.7	298.4	299.1

7 THE CAPITAL BASE

Under the cost of service approach, total revenue includes an amount for a return on the service provider's capital base. The Tribunal established AGLGN's initial capital base in July 2000.⁹³ It does not redetermine the capital base for each access arrangement period. Rather, under the cost of service approach, the capital base at the commencement of an access arrangement period is determined by adjusting (or 'rolling forward') the immediately preceding capital base as provided for in section 8.9 of the Code.

The Tribunal has considered whether AGLGN's proposed capital base meets the requirements of section 8.9 and other relevant Code requirements. Specifically, it considered AGLGN's application of the components of the capital base, including new facilities investment, capital contributions, depreciation, and redundant capital. These matters, and the amendments the Tribunal requires AGLGN to make to its proposed capital base, are discussed below. The rate of return on the capital base is discussed in Chapter 8.

AGLGN proposed that its revised access arrangement commence from 1 January 2005. Under the Code the revised access arrangement is not effective until after the Tribunal has issued its final decision. In this report the financial year 2004/05 has been treated as part of the current access arrangement. As a consequence, the expected access arrangement period is 5 years commencing 1 July 2005.

7.1 Tribunal's findings

The Tribunal is not satisfied that AGLGN's proposed capital base meets the requirements of the Code. It requires that AGLGN's proposed capital base comply with 7.7 below.

The Tribunal estimates that this will result in a capital base that is two per cent lower than that in AGLGN's revised proposal at 30 June 2010.

7.2 Method used to 'roll forward' the capital base

7.2.1 Code requirements

Sections 8.8 and 8.9 of the Code set out the principles for establishing the capital base at the commencement of the proposed access arrangement period. Section 8.9 requires that the capital base at the start of the proposed access arrangement, subject to inflation, is equal to:

- the capital base at the start of the immediately preceding access arrangement period
- plus new facilities investment (or the recoverable portion) during the immediately preceding access arrangement period
- less depreciation for the immediately preceding access arrangement period
- less any redundant capital identified prior to the commencement of the access arrangement period.

⁹³ IPART, *Final Decision - Access Arrangement for AGL Gas Networks Limited - Natural Gas System in NSW*, July 2000, p 20.

Section 8.9 also specifies that the service provider's approach to inflation in adjusting the capital base must be appropriate given the general approach to inflation in the access arrangement. Section 8.5A of the Code permits the service provider to apply a number of methodologies for the treatment of inflation in the access arrangement, provided the approach is specified in the access arrangement, is applied consistently, and is approved by the regulator.

7.2.2 AGLGN's proposal

AGLGN proposed to treat its two covered distribution pipelines (NSW distribution system and Central West distribution system) as a single covered pipeline with a single aggregated capital base. It also proposed maintaining a separate capital base for each of its two transmission pipelines (the Wilton to Wollongong trunk line, and the Wilton to Newcastle trunk line).

AGLGN therefore proposed three capital bases for the period 1 July 1999 to 30 June 2004, and three capital bases for the period 1 July 2004 to 30 June 2010, using the following approach:

Regulatory capital base = initial capital base + new facilities investment – depreciation – redundant capital + asset revaluation⁹⁴ – asset disposals – capital contributions.

For each of the three pipelines, it has rolled forward the capital base from 1999 to 2004, and 'projected' the resulting capital base from 2005 to 2010. It then added these figures to provide its proposed consolidated capital base for the three pipelines.

AGLGN proposed to use actual depreciation and new facilities investment over the current access arrangement period, and forecast depreciation and new facilities investment over the proposed access arrangement. It also proposed to index the capital base over both access arrangement periods by the CPI inclusive of the effect of the GST (weighted average for the eight capital cities – average of four quarters to June).

In addition, AGLGN proposed to continue to maintain a regulatory asset register during the access arrangement period. It proposed that the information contained in the asset register will be used to assist the Tribunal to review the capital base at the commencement of each subsequent access arrangement period. The asset register will include information on:

- asset lives underlying the initial capital base
- asset components consistent with the initial capital base
- rolled forward capital base at 1 July 1999
- new facilities investment incurred after 1 July 1999
- existing and new assets by region.

⁹⁴ In AGLGN's proposal this refers to indexation of the capital base.

AGLGN has revised its capital expenditure figures since it submitted its proposed revisions in December 2003, but it has not revised the method it used to roll forward the capital base.⁹⁵ Nor has it provided a revised set of values for the rolled forward capital base that would result from these changes. The Tribunal has modelled the values for the rolled forward capital base using AGLGN's revised capital expenditure figures, and assumptions about the allocation of the changes in expenditure.

The Tribunal's modelling of AGLGN's revised proposed capital base to the expected start of the access arrangement is shown in Table 7.1 below. The Tribunal's modelling of the revised proposed capital base over the expected term of the proposed access arrangement is provided in Table 7.2. The Tribunal has followed AGLGN's methodology and rolled forward the capital base of each of its three pipelines separately, using assumptions about the allocation of the changes in capital expenditure. The Tribunal's modelling of AGLGN's revised proposed closing value for each capital base for each year is provided in Table 7.3.

Table 7.1 Tribunal's modelling of AGLGN's revised proposed consolidated capital base over the expected term of the current access arrangement (\$million, nominal)

	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05
Opening balance	1609.8	1669.0	1772.6	1814.7	1857.1	1896.7
Plus revaluation of assets	39.2	101.5	51.5	56.9	44.4	54.4
Plus new facilities investment	78.2	70.3	57.6	60.2	68.2	94.2
Less depreciation	-55.0	-59.5	-63.8	-67.9	-69.5	-73.0
Less capital contributions	0.0	-1.4	-0.5	-1.4	-1.2	-0.9
Less disposals	-3.1	-7.3	-2.7	-5.5	-2.3	-2.1
Closing balance	1669.0	1772.6	1814.7	1857.1	1896.7	1969.3

Source: AGLGN's revised capital expenditure information and the Tribunal's modelling.

Note: The figures above may not reconcile to AGLGN's proposal discussed in the other sections of this chapter because they are based on the Tribunal's assumptions regarding allocation and indexation.

Table 7.2 Tribunal's modelling of AGLGN's revised proposed consolidated capital base over the expected term of the proposed access arrangement (\$million, nominal)

	2005/06	2006/07	2007/08	2008/09	2009/10
Opening balance	1969.3	2089.2	2187.0	2279.4	2358.3
Plus revaluation of assets	57.0	60.1	62.8	65.2	67.5
Plus new facilities investment	135.0	117.2	116.1	103.1	106.5
Less depreciation	-69.0	-76.2	-83.2	-86.0	-87.9
Less capital contributions	-1.0	-1.0	-1.0	-1.0	-1.1
Less disposals	-2.2	-2.2	-2.3	-2.3	-2.4
Closing balance	2089.2	2187.0	2279.4	2358.3	2440.9

Source: AGLGN's revised capital expenditure information and the Tribunal's modelling.

Note: The figures above may not reconcile to AGLGN's proposal discussed in the other sections of this chapter because they are based on the Tribunal's assumptions regarding allocation and indexation.

⁹⁵ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005.

Table 7.3 Tribunal's modelling of AGLGN's proposed closing balance of the capital base for each pipeline from 2000 to 2010 (\$million, nominal)

Year	AGLGN aggregated distribution systems	Wilton-Wollongong Trunk	Wilton-Newcastle Trunk
1999/2000	1,546.9	9.6	112.5
2000/2001	1,645.3	10.0	117.2
2001/2002	1,686.0	10.1	118.5
2002/2003	1,726.7	10.3	120.1
2003/2004	1,765.0	10.3	121.4
2004/2005	1,834.6	10.6	124.1
2005/2006	1,949.6	11.8	127.7
2006/2007	2,046.2	11.9	129.0
2007/2008	2,136.5	12.0	130.9
2008/2009	2,213.2	12.1	133.1
2009/2010	2,294.5	12.2	134.2

Source: AGLGN's revised capital expenditure information and the Tribunal's modelling.

Note: The figures above may not reconcile to AGLGN's proposal discussed in the other sections of this chapter because they are based on the Tribunal's assumptions regarding allocation and indexation.

7.2.3 Tribunal's analysis and considerations

In making its draft decision the Tribunal reviewed AGLGN's proposed method for rolling forward its capital base. It considered this issue again in making its final decision and in doing so has considered AGLGN's response to the draft decision (no other stakeholders commented on this issue). The Tribunal has not changed its position on the matters discussed in the report on its draft decision. Specifically, it still considers that:

- rolling forward a single capital base for the two distribution systems (that is, treating them as a single aggregated covered pipeline) meets the Code requirements
- the error in the starting values for the distribution system and consolidated capital base must be corrected in order for the roll forward to meet the requirements of the Code
- the treatment of indexation in rolling forward the capital base meets the requirements of the Code
- the Regulatory Asset Register should be consistent with the rolled forward capital base in this final decision.

However, in relation to the Regulatory Asset Register, the Tribunal has reworded the required amendment to clarify that the relevant date for the amendment is 1 July 2005.

The Tribunal's considerations in relation to each of these matters is summarised below.

Single capital base for the two distribution systems

In its final decision on the current access arrangement (July 2000), the Tribunal determined an initial capital base for all four pipelines that comprise AGLGN's NSW network as a *whole*, and then allocated this base among the aggregated distribution pipelines and the two trunk pipelines, thereby establishing an initial capital base for each of these three pipelines.⁹⁶ It required AGLGN to roll forward the capital base for each of these three pipelines separately to the commencement of the current access arrangement period, and over the course of this period, to assist cost allocation and tariff setting.⁹⁷

The Tribunal has agreed to AGLGN's proposal to apply the access arrangement to the four pipelines that comprise its NSW network and therefore to treat them as a single covered pipeline for the purposes of the Code.⁹⁸ In providing this approval it required AGLGN to maintain separate capital bases for each of the Wilton to Newcastle and Wilton to Wollongong transmission pipelines and the distribution system, in addition to the aggregated capital base. This is consistent with what AGLGN has done in the proposed access arrangement. The Tribunal accepts AGLGN's application of section 8.9 of the Code to the two distribution systems in aggregate, as if they were a single covered pipeline.

The Tribunal considers that AGLGN's proposal to roll forward the capital bases for the aggregated distribution system and the two trunk pipelines separately recognises that the capital base at the start of the immediately preceding access arrangement period (that is, the current access arrangement period) is the starting point for rolling forward the capital base for each pipeline. It is therefore satisfied that this proposal is consistent with section 8.9 of the Code.

Starting values for rolling forward the capital base

The starting values used by AGLGN should be equal to the asset values at 1 July 1999 (the value of each capital base at the start of the immediately preceding access arrangement). The total value of the capital base at 1 July 1999 was \$1,609.8m with the assets allocated as follows:

- Wilton to Newcastle trunk line - \$111.7m
- Wilton to Wollongong trunk line - \$9.6m
- NSW distribution system (including the Central West distribution system) - \$1,488.5m.⁹⁹

In the information accompanying its proposed access arrangement, AGLGN provided a starting value for the NSW distribution system that is \$0.8m lower than the distribution system value of \$1,488.5m above (and hence, a starting value for the consolidated capital base that is also \$0.8m lower). AGLGN advised the Tribunal that this discrepancy was not intentional, and is due to a rounding error. It intends the values to be those at 1 July 1999 as settled at the last review.

⁹⁶ IPART, *Final Decision - Access Arrangement for AGL Gas Networks Limited Natural Gas System in NSW*, July 2000, amendment 6, p 20.

⁹⁷ IPART, *Final Decision - Access Arrangement for AGL Gas Networks Limited Natural Gas System in NSW*, July 2000, p 121.

⁹⁸ AGLGN's application under section 2.28A of the Code, November 2004, and the Tribunal's approval, November 2004, are available from the Tribunal's website (www.ipart.nsw.gov.au).

⁹⁹ IPART, *Final Decision - Access Arrangement for AGL Gas Networks Limited - Natural Gas System in NSW*, July 2000, p 121.

The Tribunal accepts AGLGN's explanation, but it cannot approve AGLGN's proposed roll forward for the distribution system because the figures contained in its proposal do not meet the requirements of section 8.9(a) of the Code. It therefore requires AGLGN to formally amend its proposed access arrangement and accompanying information to correct this error.¹⁰⁰

Indexation of the capital base

The Tribunal considers that AGLGN's proposal to index the capital base by the change in CPI inclusive of the effect of the GST is clearly specified and consistently applied. It also considers that AGLGN's proposal to use the average of four quarters method (four quarters ending in June for the weighted average of eight capital cities) to two decimal places is clearly specified and consistently applied throughout AGLGN's proposed revenue and supporting modelling.

The Tribunal is therefore satisfied that AGLGN's treatment of indexation in rolling forward the capital base meets the requirements of sections 8.9 and 8.5A of the Code.

Regulatory Asset Register

In its final decision on the current access arrangement (July 2000), the Tribunal required AGLGN to include a provision stating that it would set up an asset register to assist with rolling forward the capital base in future reviews. AGLGN has included this same provision in its proposed access arrangement, and has indicated that the depreciation and capital expenditure included in its proposed capital base are based on the information contained in the asset register.

The Tribunal considers that it is appropriate that AGLGN continue to maintain the asset register because the information it provides should increase the accuracy of the information used in regulatory calculations, and ensure that this information reconciles back to AGLGN's other record keeping systems where appropriate (such as taxation and accounting systems).

However, it notes that to maintain consistency between the register and the capital base, and to ensure that the correct regulatory values are used in allocations for pricing, AGLGN's asset register should be consistent with the regulatory capital base. In its response to the draft decision, AGLGN indicated that it will implement the proposed amendment but intends to replace forecast capital expenditure data with actual expenditure as it becomes available.¹⁰¹

The Tribunal notes AGLGN's response to its draft decision and accepts that this is appropriate over the course of the proposed access arrangement, as the maintenance of actual capital expenditure information, at the level of disaggregation proposed, should assist with the analysis of capital expenditure at the next access arrangement review. The Tribunal requires AGLGN to ensure that its asset register contains information on the rolled forward capital base at 1 July 2005 as set out in 7.7 below.

¹⁰⁰ The Tribunal's modelling of AGLGN's revised proposed capital base uses the starting asset values specified by the Tribunal.

¹⁰¹ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, p 30.

7.3 New facilities investment

New facilities investment refers to capital expenditure incurred by the service provider in constructing, developing or acquiring new facilities for the purpose of providing the services. When establishing the capital base at the start of the proposed access arrangement period, actual capital expenditure incurred over the current access arrangement period can be added if it meets the requirements of the Code. When forecasting the capital base to the end of the proposed access arrangement period, forecast capital expenditure can be added if it meets the requirements of the Code.

The Tribunal commissioned the Energy Consulting Group (ECG) to undertake a review of AGLGN's capital and non capital costs. ECG examined AGLGN's proposed actual and forecast capital expenditure (including revisions AGLGN made after the Tribunal released its draft decision) as part of that review, to assist the Tribunal in assessing whether these expenditures meet the requirements of the Code.

7.3.1 Code requirements

Sections 8.15 to 8.19 of the Code set out how the capital base is to be increased by actual capital expenditure. Sections 8.20 to 8.22 set out how the capital base is to be increased by forecast capital expenditure. For both actual capital expenditure and forecast capital expenditure (because of section 8.20), section 8.16(a) requires that:

- capital expenditure (referred to in the Code as new facilities investment) does 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 delivering services, and that
- at least one of the following is satisfied:
 - the anticipated incremental revenue generated exceeds the capital expenditure
 - the service provider and /or users satisfy the regulator that the capital expenditure has system-wide benefits that in the regulator's opinion, justify the approval of a higher reference tariff for all gas users
 - the capital expenditure is necessary to maintain the safety, integrity or contracted capacity of services.

Where capital expenditure satisfies the above conditions, the service provider's capital base can be increased by the relevant amount. If only part of the capital expenditure satisfies those conditions, only that part can be added to the capital base.

7.3.2 AGLGN's proposal: capital expenditure over the expected term of the current access arrangement

In its proposed access arrangement information (submitted in December 2003), AGLGN proposed adding \$430.3m (\$ nominal) of capital expenditure to its capital base over the expected term of the current access arrangement (the six years to 30 June 2005). Although AGLGN originally proposed that the 2004/05 financial year would fall in the proposed access arrangement, the Tribunal has treated that year as part of the current access arrangement period (to reflect the fact that the proposed access arrangement is expected to commence on 1 July 2005).

AGLGN noted in its access arrangement information that the capital expenditure it incurred for 1999/2000 to 2003/04 (\$337.4m nominal) is \$55.9m below the expenditure forecast for these years in the Tribunal's final decision on the current access arrangement (July 2000).¹⁰² It stated that the major reasons for this are:

- the deferral of the Sydney primary main project
- reduced levels of meter replacement following a meter life extension by the Department of Fair Trading
- the deferral of the medium and low pressure rehabilitation program
- reduced non-system asset expenditure, due largely to the deferral of the IT system replacement and upgrade projects, and its decision to lease most of its vehicle fleet.

It also noted that the impact of these factors was partly offset by increased market expansion capital expenditure as a result of Sydney's residential building boom.

AGLGN engaged Parsons Brinckerhoff (PB) to review its capital expenditure for compliance with the Code requirements, and submitted the findings of this review as supporting information for its revisions submission. PB's review concluded that 'the capital projects have been delivered in an efficient and cost effective manner'.¹⁰³

Since the draft decision, AGLGN has submitted revised market expansion capital expenditure for 2003/04 and 2004/05. Market expansion expenditure is a function of the forecast customer numbers multiplied by the unit cost. AGLGN's revisions to market expansion capital expenditure include an acceptance of the unit costs applied by the Tribunal in its draft decision with the exception of supervision costs, which AGLGN still considers should be higher than allowed in the draft decision. The revised market expansion expenditure is based on:¹⁰⁴

- a reduction in proposed capital expenditure to account for the reduction in unit costs allowed in the Tribunal's draft decision (so that for the same number of customers, the revised capital expenditure would be equal to the draft decision)
- additional expenditure to include costs associated with the higher number of new customers applied in the Tribunal's draft decision (raising costs above the draft decision amount)
- higher supervision costs than allowed in the Tribunal's draft decision (unit costs as proposed in December 2003).

AGLGN retained the higher supervision costs from its original proposal, submitting that ECG's recommendation was flawed as AGLGN's supervision costs for laying mains in established areas results from the method it uses to allocate supervision costs (based on the relativity associated with the base cost for each category of minor capital works). AGLGN submitted that the additional supervision costs would need to be allocated to another category of costs if they are disallowed in the market expansion category.

AGLGN's total capital expenditure over the expected term of the current access arrangement, as revised in February 2005, is \$434.2m (\$ nominal) (Table 7.4).

¹⁰² AGLGN, *Access Arrangement Information for NSW Network*, December 2003, p 22.

¹⁰³ Parsons Brinckerhoff, *Review of AGLGN's capital and operating expenditure*, December 2003, p 25.

¹⁰⁴ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, p 166.

Table 7.4 AGLGN's revised capital expenditure over the expected term of the current access arrangement (\$million, nominal)

	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	Total
Market expansion	56.0	55.0	46.3	48.1	50.0	50.3	305.8
Reinforcement/renewal/ replacement	17.2	13.4	5.6	9.5	17.6	31.2	94.5
Non system assets	5.3	2.2	5.8	2.7	5.2	12.7	33.9
Total	78.5	70.5	57.7	60.4	72.9	94.2	434.2

Source: AGLGN, *Access Arrangement Information for NSW Network*, December 2003, Tables 5.4 and 5.6, pp 20-22 and AGLGN *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, p 166.

Columns may not add due to rounding.

AGLGN's revised market expansions expenditure over the expected term of the current access arrangement represents a total increase of \$3.9m (\$ nominal) from AGLGN's original proposed expenditure, and an increase of \$5.5m (\$ nominal) from the amount allowed in the draft decision. As noted above, the key differences between the market expansion expenditure allowed in the draft decision and AGLGN's revised proposal are the impact of the higher customer numbers applied in the draft decision and the inclusion of higher supervision costs for minor capital works.

Prior to the release of the draft decision, AGLGN advised the Tribunal that it had inadvertently omitted \$24.9m (\$ nominal) of AGL Corporate¹⁰⁵ IT costs that should have been allocated to AGLGN.¹⁰⁶ In its report on the draft decision, the Tribunal noted that although ECG had reviewed these costs as part of its total cost review, it did not consider them for inclusion in the cost of service calculation because AGLGN had not proposed to include them at that stage.¹⁰⁷ AGLGN has now proposed to include this expenditure in its cost of service calculation.¹⁰⁸ However, although the expenditure represents the cost of capital equipment, AGLGN advised that because it was not directly incurred by AGLGN but charged to it by AGL Corporate, it cannot be considered as capital expenditure. Therefore, the Tribunal has considered this expenditure as part of its review of non-capital costs (see Chapter 9).

7.3.3 Tribunal's analysis and considerations: capital expenditure over the expected term of the current access arrangement

In its draft decision, the Tribunal found that \$421.5m of AGLGN's proposed \$430.3m capital expenditure over the expected term of the current access arrangement (\$ nominal) satisfies the requirements of the Code. It proposed to require AGLGN to reduce its capital expenditure so that it equals that amount (a reduction of approximately 2 per cent of proposed capital expenditure).¹⁰⁹

In making its final decision, the Tribunal reconsidered this proposed capital expenditure, and also considered AGLGN's revised market expansion expenditure for 2003/04 and 2004/05. In relation to the expenditure already considered in the draft decision, its findings

¹⁰⁵ AGL Corporate is a division of the Australian Gas Light Company.

¹⁰⁶ ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, p 48.

¹⁰⁷ IPART, *Revised Access Arrangement for AGL Gas Networks Draft Decision*, December 2004, p 51.

¹⁰⁸ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, p 24.

¹⁰⁹ IPART, *Revised Access Arrangement for AGL Gas Networks Draft Decision*, December 2004, p 53.

have not changed. However, as a result of the higher customer numbers required by the Tribunal, it accepts that an additional \$5.2m (\$ nominal) of market expansion expenditure also satisfies the requirements of the Code. Overall, therefore, the Tribunal accepts the recommendations of its consultant, ECG, that \$426.7m (\$ nominal) of AGLGN's revised capital expenditure may be included in the capital base.

The Tribunal's considerations in relation to each of these matters, and its finding on the total capital expenditure for the expected term of the current access arrangement that meets the requirements of the Code, are summarised below.

Capital expenditure proposed by AGLGN in December 2003

In making its final decision, the Tribunal reconsidered submissions received prior to its draft decision that commented on AGLGN's actual capital expenditure, particularly those that addressed AGLGN's decision to defer capital expenditure forecast to occur over the period.¹¹⁰ (None of the submissions it received in response to the draft decision commented on this issue.) It also reconsidered ECG's review of AGLGN's proposed actual and forecast capital expenditure. This review was conducted as part of ECG's total cost review and aimed to help the Tribunal assess whether these expenditures meet the requirements of section 8.16 of the Code—that is, whether they do 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.

ECG found that AGLGN's network is generally in good condition. It considered AGLGN's network planning process and capital expenditure process to be what would be expected from a prudent operator acting efficiently, consistent with good industry practice. It also considered that AGLGN had correctly followed its processes for incurring and prioritising capital expenditure, and had appropriately deferred capital expenditure that had been approved by the Tribunal. In addition, it considered the hurdle rate used by AGLGN to be commercially acceptable for the types of projects proposed, and in accordance with the requirements of section 8.16 of the Code.¹¹¹

ECG examined each of the components of AGLGN's capital expenditure—including expenditure on market expansion; system reinforcement, renewal and replacement; and non-system assets. Overall, it concluded AGLGN's \$430.3m (\$ nominal) capital expenditure for the period 1 July 1999 to 30 June 2005 exceeded 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 by \$8.8m (\$ nominal). Box 7.1 contains a more detailed discussion of ECG's findings on the components of AGLGN's capital expenditure.¹¹²

Having had regard to the Code requirements and the available information, the Tribunal maintains the views it expressed in the draft decision. It is not satisfied that AGLGN's capital expenditure for the expected term of the current access arrangement meets the requirements of section 8.16(a)(i) of the Code. Specifically, it considers that \$8.8m (\$ nominal), or 2 per cent of the capital expenditure proposed in the December 2003 access arrangement information, exceeds the amount that would be invested by a prudent service provider acting efficiently, in accordance with accepted good industry practice, and to

¹¹⁰ Energy Markets Reform Forum submission, 7 May 2004, p 6, EnergyAustralia submission, April 2004, p 2.

¹¹¹ ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, pp 25-27.

¹¹² As proposed in December 2003.

achieve the lowest sustainable cost of providing services. It therefore requires that only \$421.5m (\$ nominal) of this capital expenditure be included in the capital base.

Revised market expansion capital expenditure for 2003/04 and 2004/05

The Tribunal asked ECG to review the revised market expansion capital expenditure proposed by AGLGN for 2003/04 and 2004/05 and to provide its view on whether the additional market expansion capital expenditure meets the requirements of the Code, taking into account the information provided since the draft decision was released. With the exception of AGLGN's supervision costs, ECG recommended that AGLGN's revised market expansion capital expenditure be accepted as meeting the requirements of the Code. ECG's findings are discussed below.

ECG confirmed that AGLGN has used the customer numbers and the unit costs applied in the draft decision¹¹³ (with the exception of the higher supervision costs) to calculate its revised market expansion capital expenditure.¹¹⁴

ECG reconsidered its view that the supervision cost in established areas should not be more than double the cost for new areas. In doing so, it considered AGLGN's argument that additional supervision costs would need to be allocated to another category of costs if they are disallowed in the market expansion category due to the method used by AGLGN to allocate costs (based on the relativities associated with the base cost for each category of minor capital works). Although ECG accepts that the base cost of laying mains in established areas would be more than double that for new estates, it still does not agree that this should also apply to supervision costs.¹¹⁵ It does not consider the supervision costs included in AGLGN's revised expenditure satisfy the requirements of the Code and reaffirms its recommendation that they should not be included in the capital base.

After considering the information put forward by AGLGN and ECG,¹¹⁶ the Tribunal is not satisfied that all of AGLGN's revised market expansion expenditure is expenditure that would be incurred by a prudent service provider in accordance with the requirements in section 8.16 of the Code. In particular, it does not accept that the supervision costs included in the revised expenditure meets the Code requirements. However, it is satisfied that all other revised market expansion expenditure in 2003/04 and 2004/05 meets the requirements of the Code, as recommended by ECG. In making this decision, the Tribunal notes that, with the exception of supervision costs, AGLGN's revised market expansion expenditure over this period is based on the unit costs and customer numbers that it applied in its draft decision.

Based on these findings, the Tribunal is satisfied that an additional \$5.2m (\$ nominal) above the amount allowed in the draft decision would have been 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.

¹¹³ Although AGLGN revised its demand forecasts after the draft decision, it has not changed its forecast customer numbers since the draft decision (see Chapter 6).

¹¹⁴ ECG, *Review of AGLGN Response to the Draft Decision*, April 2005, p 8.

¹¹⁵ ECG *Review of AGLGN Response to the Draft Decision*, March 2005, p 7.

¹¹⁶ No other comments were received on this issue.

Total capital expenditure over the expected term of the current access arrangement that meets the requirements of the Code

Overall, the Tribunal is satisfied that \$426.7m (\$ nominal) of AGLGN's revised \$434.2m (\$ nominal) of capital expenditure over the expected term of the current access arrangement period meets the requirements of the Code. This represents a reduction of approximately 2 per cent of AGLGN's revised capital expenditure.

The Tribunal notes that the amount of capital expenditure that does not meet the Code requirements has reduced since its draft decision. This is because AGLGN's revised market expansion capital expenditure is based on an acceptance of most of the unit cost reductions recommended by ECG. In other words, many of the costs that were rejected in the draft decision do not form part of AGLGN's revised market expansion capital expenditure.

The Tribunal's findings on the total capital expenditure over the expected term of the current access arrangement are summarised in Table 7.5. The Tribunal requires AGLGN to include only the expenditure shown on this table as meeting the Code requirements in the capital base, as set out in 7.7 below.

Table 7.5 Capital expenditure from 1 July 1999 to 30 June 2005 that meets the requirements of the Code (\$million, nominal)

	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	Total
AGLGN total revised capital expenditure							
Market expansion	56.0	55.0	46.3	48.1	50.0	50.3	305.8
Reinforcement/Renewal/Replacement	17.2	13.4	5.6	9.5	17.6	31.2	94.5
Non system assets	5.3	2.2	5.8	2.7	5.2	12.7	33.9
Total	78.5	70.5	57.7	60.4	72.9	94.2	434.2
Capital expenditure that meets the Code requirements							
Market expansion	55.8	54.7	46.2	48.0	49.9	50.1	304.7
Reinforcement/Renewal/Replacement	17.1	13.4	5.6	9.5	15.6	31.6	92.8
Non system assets	5.3	2.2	5.8	2.7	5.2	8.0	29.2
Total	78.2	70.3	57.6	60.2	70.7	89.7	426.7
Capital expenditure that does not meet the Code requirements							
Market expansion	0.2	0.3	0.1	0.1	0.1	0.2	1.1
Reinforcement/Renewal/Replacement	0.1	0.0	0.0	0.0	2.0	-0.4	1.7
Non system assets	0.0	0.0	0.0	0.0	0.0	4.7	4.7
Total	0.3	0.3	0.1	0.1	2.1	4.5	7.5

Columns may not add due to rounding.

Box 7.1 ECG's analysis of AGLGN's capital expenditure¹¹⁷

ECG examined each of the components of AGLGN's actual capital expenditure over the current access arrangement period to 31 December 2004, including expenditure on market expansion; system reinforcement, renewal and replacement; and non-system assets. Its findings are outlined below (all cost figures are expressed in nominal dollars).

Market expansion

The number of customers connected during the current access arrangement was higher than forecast in the Tribunal's final decision on the current access arrangement. So while AGLGN spent less capital expenditure in total than was forecast in that decision, it spent an extra \$45.7m over the five year period (1999/2000 to 2003/04) to accommodate additional customer connections.¹¹⁸

In considering whether AGLGN's market expansion expenditure complied with the Code requirements, ECG studied unit costs of laying pipelines and services and installing meters. It considered that AGLGN's costs for laying services and installing meters for the period 1999/2000 until 2003/04 complied with section 8.16 of the Code.

However, its analysis of unit costs associated with laying pipelines showed that AGLGN's overhead costs for built-up areas were 2.7 times higher than those for new-build areas.¹¹⁹ ECG accepted that construction activity in built-up areas is more complex than in new estates, but did not believe that the cost of supervision (that is, overheads) should be more than twice that of the cost in new estates.

Overall, ECG recommended that market expansion capital expenditure should be reduced by \$1.6m over the period 1 July 1999 to 31 December 2004.¹²⁰

System reinforcement, renewal and replacement

Based on its review of AGLGN's \$78.9m expenditure for the period 1 July 1999 to 31 December 2004 on system reinforcement, renewal and replacement, ECG found that \$1.9m did not fulfil the requirements of the Code.¹²¹ This expenditure was for the Roberts Road and Glenmore Park secondary main project, where ECG considered that a prudent operator would have incurred this cost in 2005 rather than in 2004 (a timing difference only).¹²² In response to ECG's report AGLGN concurred with this finding.¹²³

ECG also considered the two major system reinforcement, renewal and replacement projects that AGLGN planned for the current access arrangement period but deferred – the primary extension to North Turramurra and the North Ryde/Willoughby project. ECG found that it was prudent for these projects to be deferred.

Non-system assets

AGLGN's submission included \$2.32m of FRC expenditure in its total non-system assets capital expenditure of \$27.6m for the period 1 July 1999 to 31 December 2004.¹²⁴ It subsequently advised the Tribunal that this amount should not have been included. ECG agreed, and recommended that non-system assets expenditure be reduced by this amount.

Note: ECG's report considered the five and a half year period for the current access arrangement (from 1 July 1999 to 31 December 2004). The six months capital expenditure to 30 June 2005 was considered as part of forecast capital expenditure, discussed in Box 7.2.

¹¹⁷ As proposed in December 2003.

¹¹⁸ AGLGN, *Access Arrangement Information for NSW Network*, December 2003, Table 5.4.

¹¹⁹ ECG *Review of AGLGN Gas Access Arrangement - Supplementary Report*, October 2004, p 2.

¹²⁰ AGLGN, *Access Arrangement Information for NSW Network*, December 2003, Tables 5.5 and 5.7, ECG *Review of AGLGN Gas Access Arrangement - Supplementary Report*, October 2004, Tables 1-3 and 1-5.

¹²¹ ECG *Review of AGLGN Gas Access Arrangement - Supplementary Report*, October 2004, Table 1-4.

¹²² ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, Tables 1-2, 1-5, 8-12 and p 43.

¹²³ AGLGN submission on ECG's review of AGLGN total cost, 6 October 2004.

¹²⁴ ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, p 84.

7.3.4 AGLGN's proposal: capital expenditure forecast for the expected term of the proposed access arrangement

In its proposed access arrangement information (December 2003), AGLGN forecast that it would incur capital expenditure of \$512.8m (2005 dollars) over the expected term of the proposed access arrangement (1 July 2005 to 30 June 2010). As an average annual value, this forecast expenditure is 33 per cent higher than AGLGN's proposed actual capital expenditure over the expected term of the current access arrangement¹²⁵ (in real terms). AGLGN proposed that all of this forecast capital expenditure be added to the capital base.

Since the Tribunal released its draft decision, AGLGN has revised its forecast market expansion capital expenditure for each year in the expected term of the proposed access arrangement. Market expansion expenditure is a function of the forecast customer numbers multiplied by the unit cost. AGLGN's revisions to market expansion capital expenditure include an acceptance of the unit costs applied by the Tribunal in its draft decision with the exception of supervision costs, which AGLGN still considers should be higher than allowed in the draft decision. The revised market expansion expenditure is based on:

- a reduction in proposed capital expenditure to account for the reduction in unit costs allowed in the Tribunal's draft decision (so that for the same number of customers the revised capital expenditure would be equal to the draft decision)
- additional expenditure to include costs associated with the higher number of new customers applied in the Tribunal's draft decision (raising costs above the draft decision amount)
- higher supervision costs than allowed in the Tribunal's draft decision (unit costs as proposed in December 2003).¹²⁶

AGLGN's total revised capital expenditure over the expected term of the proposed access arrangement is \$534.2m (2005 dollars) (Table 7.6). This represents an increase of \$21.4m (2005 dollars) from AGLGN's original proposed expenditure. As noted above, the key differences between the market expansion expenditure allowed in the draft decision and AGLGN's revised proposal are the impact of the higher customer numbers applied in the draft decision and the inclusion of higher supervision costs for minor capital works.

Table 7.6 AGLGN's revised forecast capital expenditure over the expected term of the proposed access arrangement (\$million, real 2005)

	2005/06	2006/07	2007/08	2008/09	2009/10	Total
Market expansion	55.0	54.0	53.0	53.3	53.7	269.0
Reinforcement/Renewal/Replacement	63.3	47.0	45.9	30.8	28.2	215.2
Non system assets	13.0	9.9	8.0	8.2	10.9	50.0
Total	131.3	110.9	106.9	92.3	92.8	534.2

Source: AGLGN, *Access Arrangement Information for NSW Network*, December 2003, Table 5.6, p 22 and AGLGN *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, p 166.

Note: AGLGN proposed the 2004/05 year would fall in the proposed access arrangement period.

¹²⁵ As submitted in the access arrangement information.

¹²⁶ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, p 166.

7.3.5 Tribunal's analysis and considerations: capital expenditure forecast for the expected term of the proposed access arrangement

As noted above, the Tribunal has treated 2004/05 as part of the current access arrangement, so the expected term of the proposed access arrangement is 1 July 2005 to 30 June 2010. In its draft decision, the Tribunal found that only \$459.1m of AGLGN's proposed forecast capital expenditure of \$512.8m (2005 dollars) satisfies the requirements of the Code. It therefore proposed to require AGLGN to reduce the forecast capital expenditure included in the capital base to this amount (a reduction of approximately 10 per cent of proposed capital expenditure).¹²⁷

In making its final decision, the Tribunal reconsidered this proposed forecast capital expenditure, and also considered the revised market expansions capital expenditure proposed by AGLGN. In relation to the original proposed expenditure, its findings have not changed since the draft decision. In relation to the revised capital expenditure for market expansion, it considers an additional \$29.3m (2005 dollars) of expenditure satisfies the requirements of the Code. This results in total capital expenditure that meets the Code requirements of \$488.4m, compared to AGLGN's revised proposed capital expenditure of \$534.2m (a total reduction of approximately 9 per cent).

The Tribunal's considerations in relation to each of these matters, and its finding on the total capital expenditure for the expected term of the proposed access arrangement that meets the requirements of the Code, are summarised below.

Forecast capital expenditure proposed by AGLGN in December 2003

As the proposed capital expenditure over the five years commencing 1 July 2005 involves forecast capital expenditure, the Code requires the regulator to ensure that the forecast represents best estimates arrived at on a reasonable basis (section 8.2(e)), and that the expenditure could be reasonably expected to pass the requirements in section 8.16(a) when it is forecast to occur.

In making its final decision, the Tribunal reconsidered submissions that commented on AGLGN's forecast capital expenditure.¹²⁸ (None of the submissions in response to the draft decision commented on this issue.) It also reconsidered the findings of ECG, which examined AGLGN's forecast capital expenditure as part of its total cost review.

ECG found that overall, AGLGN's Asset Management Plan, together with its regional Gas Network Management Plans, provide a reasonable overview of its assets, asset management philosophy, and the operational and maintenance needs of the assets over the next five years.¹²⁹ However, it noted that the forecast capital expenditure for the expected term of the proposed access arrangement period is significantly higher than the actual expenditure incurred during the current period.¹³⁰

¹²⁷ IPART, *Revised Access Arrangement for AGL Gas Networks Draft Decision*, December 2004, p 53.

¹²⁸ Energy Markets Reform Forum submission, 7 May 2004, pp 7-8, EnergyAustralia submission, April 2004, p 2.

¹²⁹ ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, p 22.

¹³⁰ Transcript of public consultation meeting into review of gas access arrangements – AGLGN, 15 September 2004; Sydney

ECG also examined each of the components of AGLGN's forecast capital expenditure—including expenditure on market expansion; system reinforcement, renewal and replacement; and non-system assets. Overall, it found that AGLGN's forecast capital expenditure exceeded the amount that would be invested by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering services by an amount of \$53.7 million (2005 dollars) for the period 1 July 2005 to 30 June 2010.¹³¹ Box 7.2 provides a more detailed discussion of ECG's findings on the components of AGLGN's forecast capital expenditure.¹³²

Having had regard to the Code requirements, ECG's findings, AGLGN's proposal (December 2003), other stakeholders' submissions and its own analysis, the Tribunal is not satisfied that all of AGLGN's forecast capital expenditure is reasonably expected to satisfy the requirements of section 8.16(a)(i) of the Code. Specifically, it still considers that \$459.1m (2005 dollars) of AGLGN's proposed expenditure represents capital expenditure 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.

Revised forecast market expansion capital expenditure

The Tribunal asked ECG to review the revised market expansion capital expenditure proposed by AGLGN and to consider whether additional expenditure would meet the requirements of the Code in light of the additional information provided since the draft decision. ECG recommended inclusion of the revised market expansion capital expenditure, with the exception of the higher supervision costs proposed by AGLGN.

ECG confirmed that AGLGN has used the draft decision customer numbers and unit costs (with the exception of supervision costs) to obtain its additional capital expenditure figures.¹³³ However, ECG still considers that supervision costs of laying mains in established areas should not be more than double those for new estates and reaffirms its recommendation that they should not be included in the capital base (see 7.3.3 for a more detailed discussion of ECG's analysis of supervision costs).¹³⁴

After considering the information put forward by AGLGN and ECG,¹³⁵ the Tribunal is not satisfied that all of the costs associated with the supervision of laying mains in established areas are costs that would be incurred by a prudent service provider in accordance with the requirements in section 8.16 of the Code. However, it is satisfied that the remaining revised forecast market expansion capital expenditure proposed by AGLGN does meet the requirements of the Code. In coming to this decision, the Tribunal noted that, with the exception of supervision costs, AGLGN's revised market expansion expenditure over this period is based on the unit costs and customer numbers that it applied in its draft decision.

In relation to AGLGN's revised market expansion capital expenditure, the Tribunal is satisfied that, based on the above findings, an additional \$29.3m (2005 dollars) over the amount it allowed in the draft decision is reasonably expected to meet the requirements of section 8.16(a) when it is forecast to occur, and therefore, meets the requirements of the Code for inclusion in the capital base.

¹³¹ ECG, *Review of AGLGN Gas Access Arrangement - Supplementary Report*, October 2004, Table 1-6.

¹³² As proposed in December 2003.

¹³³ ECG, *Review of AGLGN Response to the Draft Decision*, March 2005, p 3.

¹³⁴ ECG, *Review of AGLGN Response to the Draft Decision*, March 2005, p 7.

¹³⁵ No other stakeholders commented on this issue in response to the draft decision.

Box 7.2 ECG's analysis of AGLGN's forecast capital expenditure¹³⁶

ECG examined each of the components of AGLGN's forecast capital expenditure over the proposed access arrangement period (five and a half years from 1 January 2005), including expenditure on market expansion; system reinforcement, renewal and replacement; and non-system assets. Its findings are outlined below (all cost figures in this box are expressed in 2004/05 dollar terms).

Market expansion

ECG looked at unit costs over the current access arrangement period and compared them with the forecast unit costs over the proposed access arrangement period. As for actual costs in the current access arrangement period, it considered that overhead costs associated with laying mains for built-up areas should not be more than two times those for new estates. It recommended that costs for laying pipelines in built-up areas be reduced by \$1.4m over the proposed access arrangement period.¹³⁷

ECG also examined the cost of meters for market expansion. It agreed with AGLGN's proposed meter costs for medium/high density customers and for industrial and commercial customers. However, it found that AGLGN's proposed meter costs for 'small' customers (\$195 per unit) were too high.¹³⁸ It recommended that meter costs for small customers be reduced to \$180 per unit, which would result in a total reduction of \$8.6m for meter costs for market expansion over the proposed access arrangement period.¹³⁹

Overall, ECG recommended that AGLGN's forecast capital expenditure for market expansion be reduced by \$10m or 3.7 per cent.

System reinforcement, renewal and replacement

AGLGN's forecast spending of \$230.8m on reinforcement, renewal and replacement was comprised of \$38.1m (real 2005) for programmed rehabilitation; \$81.3m for services and mains (including the Sydney primary loop main project); \$51.6m for meters; \$46.9m for system reinforcement and \$12.9m for fixed plant.

In relation to its forecast spending on programmed rehabilitation, AGLGN contended that although only 5 per cent of its network is unrehabilitated, some of this is considerably worse than average in terms of reliability. AGLGN believes all NSW gas customers have the right to the same quality of supply. However, it did not provide any information to indicate higher levels of dissatisfaction with services in unrehabilitated areas.

In its report, ECG noted that:

Approximately 95% of the original ferrous networks have now been renewed. The highest priority areas have been completed and remaining areas are assessed on risk and economic criteria. Hence, with the exception of the 427km of the remaining ferrous networks, the medium and low pressure mains are in good condition.¹⁴⁰

To support this assessment, ECG noted that AGLGN's UAG figures (leaks per 1,000 customers and leaks per km of mains) were comparable or better than those of other Australian service providers. It considered that a prudent service provider would not undertake rehabilitation work on all of the unrehabilitated sections of network in the proposed access arrangement period; rather, it would do the work according to a clear asset management plan over a longer period, following a thorough collection of data. For this reason, ECG recommended that AGLGN's forecast capital expenditure for programmed rehabilitation be reduced by \$22.2m over the proposed access arrangement period.¹⁴¹

¹³⁶ As proposed in December 2003.

¹³⁷ ECG, *Review of AGLGN Gas Access Arrangement - Supplementary Report*, October 2004, Table 1-5.

¹³⁸ ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, p 59.

¹³⁹ ECG, *Review of AGLGN Gas Access Arrangement - Supplementary Report*, October 2004, Table 1-5.

¹⁴⁰ ECG, *Review of Gas Access Arrangements for IPART*, August 2004, p 18.

¹⁴¹ ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, Table 8-21.

Box 7.2 continued

In relation to AGLGN's forecast spending on services and mains, the largest expenditure was for the Sydney primary loop main. This project was deferred by AGLGN in the current access arrangement period. ECG found that it was prudent to implement this project in the proposed access arrangement period, and that AGLGN's proposed level of expenditure was prudent and efficient.

ECG also examined AGLGN's proposal to spend an average of \$1.9m per year on the relocation of network assets on government land.¹⁴² It recognised that there will be an increase in this activity over the proposed access arrangement period. However, based on its review of the information supplied to it by AGLGN, it considered that AGLGN's forecast is higher than the amount that would be invested by a prudent service provider acting efficiently in accordance with accepted good industry practice. ECG considered, based on its industry experience, that an appropriate increase in the relocation of network assets on government land would be two-and-a-half times historic levels (equating to spending of \$1.3m per annum). It therefore recommended that this category of expenditure be reduced on average by \$0.6m per annum.¹⁴³

In relation to meters, ECG recommended that AGLGN's forecast capital expenditure for the proposed access arrangement period be reduced by \$4.8m, due to reductions in both the residential and industrial and commercial regulator replacement programs. AGLGN has indicated that it accepts this recommendation.¹⁴⁴

Non-system assets

AGLGN provided detailed information on several major IT projects, which ECG concluded met the requirements of the Code. However, apart from these projects, ECG considered that there was insufficient information to justify the significant increase in forecast expenditure compared to the current period. For example, AGLGN did not present detailed business plans for the projects, and did not provide any clear indications of offsets in operating and maintenance expenditure.¹⁴⁵

As a result, ECG considered that the proposed expenditure exceeds the amount that would be invested by a prudent service provider acting efficiently and in accordance with accepted good industry practice. It recommended that the Tribunal allow a total of \$27.5m for the proposed access arrangement period, to cover the projects considered to meet Code requirements plus a contingency of around \$1.2m per year for system enhancements. This represents a \$7.0m reduction on AGLGN's proposal.¹⁴⁶

AGLGN also proposed a total spend of \$13.4m on motor vehicles over the proposed access arrangement period. It advised ECG that replacement of motor vehicles is generally based on a four-year and/or 100,000 km basis. However, ECG noted that many vehicles were retained longer than the forecast four years. Also, AGLGN could advise of no material change in work practice that could justify an increase from the efficient historical cost. Based on this, ECG believed that the amount proposed by AGLGN exceeded the amount that would be invested by a service provider acting efficiently. It recommended that the Tribunal allow expenditure equal to the historical level of \$1.95m per year, or \$11.0m over the proposed access arrangement period. This represents a \$2.4m reduction on AGLGN's proposal.¹⁴⁷

Note: ECG's report considered the five and a half year period for the proposed access arrangement (from 1 January 2005 to 30 June 2010).

¹⁴² ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, pp 75-76.

¹⁴³ ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, pp 75-76.

¹⁴⁴ AGLGN submission on ECG's review of AGLGN's total costs, 6 October 2004.

¹⁴⁵ ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, pp 81-82.

¹⁴⁶ ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, p 82.

¹⁴⁷ ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, p 83.

Total capital expenditure over the expected term of the proposed access arrangement that meets the requirements of the Code

Overall, the Tribunal is satisfied that \$488.4m (2005 dollars) of AGLGN's revised proposed capital expenditure of \$534.2m (2005 dollars) meets the requirements of the Code (this represents a reduction of approximately 9 per cent of AGLGN's forecast expenditure).

The Tribunal notes that the amount of capital expenditure that does not meet the Code requirements has reduced since its draft decision because AGLGN's revised market expansion capital expenditure is based on an acceptance of most of the unit cost reductions recommended by ECG. In other words, many of the costs that were rejected in the draft decision do not form part of AGLGN's revised market expansion capital expenditure.

The Tribunal's findings on the total capital expenditure over the expected term of the proposed access arrangement is summarised in Table 7.7. The Tribunal requires AGLGN to include only the expenditure shown on this table as meeting the requirements of the Code in the capital base, as set out in section 7.7 of this report.

Table 7.7 Capital expenditure from 1 July 2005 to 30 June 2010 that meets the requirements of the Code (\$million, real 2005)¹⁴⁸

	2005/06	2006/07	2007/08	2008/09	2009/10	Total
AGLGN total revised proposed capital expenditure						
Market expansion	55.0	54.0	53.0	53.3	53.7	269.0
Reinforcement/Renewal/Replacement	63.3	47.0	45.9	30.8	28.2	215.2
Non system assets	13.0	9.9	8.0	8.2	10.9	50.0
Total	131.3	110.9	106.9	92.3	92.8	534.2
Forecast capital expenditure that meets the Code requirements						
Market expansion	54.8	53.8	52.7	53.0	53.4	267.7
Reinforcement/Renewal/Replacement	59.9	40.2	37.4	23.2	17.1	177.8
Non system assets	8.0	8.0	8.0	9.2	9.7	42.9
Total	122.7	102.0	98.1	85.4	80.2	488.4
Forecast capital expenditure that does not meet the Code requirements						
Market expansion	0.2	0.2	0.3	0.3	0.3	1.3
Reinforcement/Renewal/Replacement	3.4	6.8	8.5	7.6	11.1	37.4
Non system assets	5.0	1.9	0.0	-1.0	1.2	7.1
Total	8.6	8.9	8.8	6.9	12.6	45.8

Columns may not add due to rounding.

7.4 Capital contributions

Capital contributions are contributions made by users of the network towards new facilities investment undertaken by the service provider. They are generally made as an upfront payment and/or as a charge that exceeds the reference tariff for the relevant reference

¹⁴⁸ The capital expenditure in Tables 7.14 to 7.71 has been converted to nominal dollars using the Tribunal's forecast inflation assumption of 2.8 per cent per annum.

service. A user might agree to make a capital contribution where a service provider is otherwise reluctant to undertake the investment at the prevailing reference tariffs.

7.4.1 Code requirements

The Code provides for the user to agree with the service provider on the amount of the capital contribution to be paid.

In rolling forward the capital base, sections 8.23 and 8.24 of the Code allow for new facilities to be partially funded by a user (through capital contributions), and for new facilities that have been partially funded by a user to be added to the capital base. In addition, because the value of capital contributions has an impact on the overall value of the capital base (and thus on the total revenue and reference tariffs for the proposed access arrangement), section 8.2(e) requires the regulator to ensure that any forecasts required in setting reference tariffs, including capital contributions, represent best estimates arrived at on a reasonable basis.

7.4.2 AGLGN's proposal

AGLGN proposed to exclude the value of capital contributions from the value of new facilities investment used in rolling forward the capital base. The actual and forecast annual values it proposed to exclude are listed in Table 7.8 below. All these capital contributions relate to the distribution pipelines, as there have been no capital contributions in respect of the transmission pipelines (trunk lines).

Table 7.8 AGLGN's proposed actual and forecast annual values for capital contributions (\$million, nominal)

Year	Value of capital contributions
1999/2000*	0.0
2000/2001*	1.4
2001/2002*	0.5
2002/2003*	1.4
2003/2004	0.9
2004/2005	0.9
2005/2006	0.9
2006/2007	0.9
2007/2008	0.9
2008/2009	0.9
2009/2010	0.9

Source: AGLGN, *Access Arrangement Information for NSW Network*, December 2003, pp 26-29.

Note: *Actual capital contribution.

AGLGN also proposed to continue to maintain a capital contributions database to record the amount of all capital contributions made during the access arrangement period. This database will include the following information:

- the amount of the contribution or additional charge (above the reference tariff)
- the date the contribution or additional charge was paid
- the contact details of the user who made the contribution
- a description of the new facility that the contribution relates to.

The proposed access arrangement states that the Tribunal will use the information in this database to assist it in determining the rolled forward capital base.

7.4.3 Tribunal's analysis and considerations

In making its draft decision, the Tribunal considered whether AGLGN's proposed treatment of capital contributions meets the requirements of the Code. In making its final decision, it reconsidered this issue. Given that neither AGLGN nor any other stakeholder commented on capital contributions in their responses to the draft decision, the Tribunal has not changed its position on the matters discussed in its report on its draft decision – it still considers that:

- the continued maintenance of a capital contributions database meets the requirements of the Code
- the exclusion of capital contributions made towards new facilities from the capital base meets the requirements of the Code
- the proposed annual values of capital contributions over the expected term of the current access arrangement and the expected term of the proposed access arrangement do not satisfy the requirements of the Code.

In relation to the final issue, the Tribunal remains satisfied that AGLGN has correctly recorded the level of capital contributions made by users up to and including 2002/03. However, it still requires AGLGN to update its capital base with the actual value of contributions for 2003/04 (not known at the time AGLGN submitted its proposed access arrangement) and requires AGLGN to amend its forecast level of contributions over the period 2004/05 to 2009/10.

The Tribunal's considerations in relation to each of the above matters are summarised below. Please note that the Tribunal has treated 2004/05 as part of the current access arrangement, and taken the expected commencement date of the proposed access arrangement to be 1 July 2005.

Continued maintenance of capital contributions database

The Tribunal considers that AGLGN's proposed record keeping arrangements in relation to capital contributions should provide certainty to users who wish to negotiate capital contributions directly with AGLGN and facilitate agreements between the parties. It is satisfied that AGLGN's proposal to retain the provision in the access arrangement stating that it will maintain a capital contribution database and specifying what records will be kept is consistent with section 8.23 of the Code and the objectives in section 8.1 of the Code.

Exclusion of capital contributions towards new facilities from the capital base

The Tribunal is satisfied that AGLGN's proposal to exclude the value of the capital contributions made by users (but not the new facilities investment it has made) from the capital base is consistent with sections 8.23 and 8.24 of the Code, and the objectives in section 8.1 of the Code.

Proposed annual values of capital contributions over the current and proposed access arrangement periods

ECG reviewed AGLGN's capital contributions database as part of its total cost review. It confirmed that actual annual values of capital contributions for the period 1999/2000 to 2002/03 (as contained in this database) equate to AGLGN's proposed annual values of capital contributions for this period. ECG recommended that the Tribunal accept AGLGN's proposed annual values for this period.

However, in relation to forecast capital contributions, ECG noted that AGLGN's proposed annual values for the period 2004/05 to 2009/10 are lower than historic levels. It considered that AGLGN should have used the average annual contribution for the period from 2000/01 to 2003/04 to derive its annual forecasts.¹⁴⁹ It calculated this average to be \$1.1 million (2005 dollars), and recommended that this value be substituted for AGLGN's proposed forecast value for each year of this period.

In response to ECG's report, AGLGN informed the Tribunal that its proposed forecast annual values of capital contributions were determined based on its current policies and were not an extrapolation of past levels. It also advised that the actual value of the capital contributions it received in 2003/04 was \$1.194m.¹⁵⁰

In light of this actual value for 2003/04, AGLGN conceded that ECG's forecasts for the annual value of capital contributions for the period 2004/05 to 2009/10 represent best estimates. However, it noted that it disagrees with ECG's method (particularly ECG's argument that the value of capital contributions over the current access arrangement period necessarily provides a good indication of future contributions).¹⁵¹

After taking these matters into account, the Tribunal is satisfied that AGLGN has correctly recorded the level of capital contributions made by users over the current access arrangement period (1999/00 to 2002/03). Therefore it does not require amendment to the proposed annual values of capital contributions for this period. As the actual value of capital contributions for 2003/04 is now known with certainty, it requires AGLGN to replace its forecast value for that year with the actual value.

In relation to forecast contributions, the Tribunal is not satisfied that AGLGN's proposed forecast annual values of capital contributions for the period 2004/05 to 2009/10 represent best estimates arrived at on a reasonable basis. It considers that the forecasts provided by ECG represent best estimates, and therefore requires AGLGN to amend these forecasts to reflect these calculations (updated for the 2003/04 actual contribution).

¹⁴⁹ ECG does not consider that it is realistic that zero contributions will be received and has excluded the 1999/00 figure from its calculations on the basis that it is an anomaly.

¹⁵⁰ Information provided by AGLGN, 6 October 2004 (this information was not known when the revisions were submitted in December 2003).

¹⁵¹ Information provided by AGLGN, 16 July 2004 and 13 October 2004.

7.5 Depreciation

Depreciation is the process by which the capital invested in the network business is returned to the investor. Each year of an asset's life, its value is written down to reflect its use in the business. The write-down is accounted for as a business expense in that year, and this cost is reflected in that year's tariffs. The written-down value is zero at the end of the asset's economic life.

Under the cost of service approach, depreciation is reflected in reference tariffs in two ways. First, the value of depreciation projected over the proposed access arrangement period is included in the total revenue calculation. Second, the value of depreciation for the preceding access arrangement period and projected over the expected term of the proposed access arrangement is removed from the capital base.

7.5.1 Code requirements

Section 8.32 of the Code defines the depreciation schedule as the set of schedules that is the basis on which the assets that form part of the covered pipeline are depreciated for the purposes of determining a reference tariff.

Section 8.33 of the Code requires that the depreciation schedule in an access arrangement be designed:

- to result in reference tariffs changing over time in a manner consistent with efficient growth of the market for the services
- so that each asset or group of assets that form part of the capital base is depreciated over the economic life of the asset or group of assets
- so that to the maximum extent reasonable, the depreciation schedule for each asset or group of assets that form part of the capital base is adjusted over the life of that asset or group of assets to reflect changes in the expected economic life of the assets
- so that each asset or group of assets is depreciated only once over its economic life.

In addition, the Code requires depreciation for the immediately preceding access arrangement to be removed from the capital base at the commencement of the access arrangement. The relevant depreciation for 'rolling forward' the capital base to the commencement of each access arrangement is defined as the amount calculated according to the depreciation schedule for that year for each asset or group of assets (section 8.9 and 10.8).

Section 8.4 of the Code also requires the methodology used to calculate the cost of service to be in accordance with generally accepted industry practice.

7.5.2 AGLN's proposal

AGLGN proposed to calculate annual depreciation (on the inflated capital base) by applying straight line depreciation to the opening regulatory value of each asset class for each financial year.

In calculating depreciation for the proposed access arrangement, AGLGN proposed to use the following economic lives for its four specified groups of assets:

- for trunk main, primary main and secondary network assets – 80 years
- for meters (domestic tariff, contract, and industrial and commercial tariff) – 20 years
- for all other system assets – 50 years
- for non-system assets – lives consistent with financial reporting.

For its three meter classes (domestic tariff, contract, and industrial and commercial tariff), AGLGN proposed to use longer economic lives (20 years) than were used in its current access arrangement (15 years). It proposed that these extensions to meter asset lives would take effect from 1 July 2002. It advised the Tribunal that these extensions were in response to changes in the legislation that covers the accuracy of gas meters in NSW. Historically, AGLGN had a regulatory requirement to replace meters no later than 15 years from the date of installation. However, a program has been introduced that has resulted in the extension of the lives of some meters by up to five years.¹⁵²

AGLGN used the method and asset lives described above (and its forecast capital expenditure) to calculate annual depreciation over the current access arrangement period, and to forecast annual depreciation over the proposed access arrangement period (Table 7.9). In rolling forward the asset base from 1 July 1999 to 1 January 2005, AGLGN proposed to deduct actual depreciation over that period. For projecting the capital base to 2010, AGLGN proposed to deduct forecast depreciation over that period.

Table 7.9 AGLGN's proposed depreciation figures (\$million, nominal)

	Wilton/ Newcastle	Wilton/ Wollongong	Distribution Network	Total
1999/2000*	1.9	0.1	55.3	57.3
2000/2001*	1.9	0.2	55.9	58.0
2001/2002*	2.0	0.2	58.7	60.9
2002/2003*	2.1	0.2	57.6	59.9
2003/2004	2.2	0.2	61.4	63.8
2004/2005	2.2	0.2	62.6	65.0
2005/2006	2.2	0.2	67.0	69.4
2006/2007	2.2	0.2	72.2	74.6
2007/2008	2.2	0.2	77.0	79.4
2008/2009	2.2	0.2	81.7	84.1
2009/2010	2.2	0.2	86.3	88.7

Source: AGLGN, *Access Arrangement Information for NSW Network*, December 2003, p 19.

Note: *Actual depreciation.

¹⁵² Information provided by AGLGN in response to request from IPART Secretariat, 10 June 2004.

7.5.3 Tribunal's analysis and considerations

In making its draft decision the Tribunal considered the proposed depreciation calculated by AGLGN for direct inclusion in the cost of service calculation over the expected term of the proposed access arrangement and for rolling forward the capital base. In making its final decision, the Tribunal reconsidered AGLGN's proposed depreciation, and took into account AGLGN's response to the draft decision (no other submissions were received on this matter). The Tribunal has not changed its position on the matters discussed in the report on its draft decision. Specifically, it still considers that:

- the straight line depreciation method used to derive the proposed depreciation meets the Code requirements
- the depreciation used to roll forward the asset base to the expected commencement date does not meet the Code requirements
- retrospective changes to the lives of three classes of meters do not meet the Code requirements.

In addition, since the draft decision was released, the Tribunal was informed that AGLGN's proposed depreciation forecast included depreciation of some land in the non-system asset class. In making its final decision it considered whether this meets the requirements of the Code. It concluded that it does not, and that the proposed value related to depreciation of land should be removed from the capital base calculation.

Its considerations and conclusions on each of these issues are summarised below.

Straight line depreciation method

AGLGN's proposed method of depreciation, straight line depreciation, takes an equal amount from the asset value in each year of the asset's economic life, so that the real written-down value describes a straight line over time, from the initial value of the investment to zero at the expiry of the asset life.

The Tribunal considers, as it did in its draft decision, that straight line depreciation of the inflated historical cost should ensure that each group of assets will be depreciated over its economic life, and that each group of assets will be depreciated only once over its economic life. Therefore, it is satisfied that AGLGN's use of straight line depreciation meets the requirements of sections 8.32 and 8.33 of the Code.

Depreciation used to roll forward the capital base

The Code requires the capital base to be rolled forward to the start of the proposed access arrangement period by deducting depreciation, which has been calculated according to the depreciation schedule (section 8.9(c)). Section 8.32 of the Code defines the depreciation schedule as the schedules that form the basis on which assets in the capital base are depreciated for the purpose of determining reference tariffs. Under the cost of service approach, reference tariffs are determined over each access arrangement using forecast depreciation as an input to total revenue. Other than annual adjustments for actual inflation, reference tariffs are based on these forecast figures and not on actual depreciation over the period.

The Tribunal is satisfied that AGLGN's proposal to deduct forecast depreciation for the expected term of the proposed access arrangement when projecting the capital base to the end of this period uses the amount of depreciation calculated by applying the approved depreciation schedules.

However, it is not satisfied that AGLGN's proposal to deduct *actual* depreciation incurred over the current access arrangement period when rolling forward the capital base to the expected start of the proposed access arrangement period meets the requirements of section 8.9(c) of the Code. The Code requires that depreciation is to be calculated according to the depreciation schedule for each year of the preceding access arrangement. This schedule applied forecast rather than actual depreciation. Therefore, the *forecast* depreciation for each year should be deducted when rolling forward the capital base. As proposed in its draft decision, the Tribunal requires AGLGN to amend its proposed access arrangement to deduct its depreciation forecast at the last review (adjusted for actual inflation over the period) when rolling forward the capital base to the start of the proposed access arrangement.

The Tribunal considered EMRF's submission that over the current access arrangement period, AGLGN has been provided with regulated revenues reflecting higher expenditure than it actually incurred, including depreciation allowances.¹⁵³ EMRF argued that this has resulted in a substantial windfall for AGLGN and should be taken into account in revenues to be determined over the proposed access arrangement. The Tribunal notes that the amendment described above addresses EMRF's concern. With this amendment, the amount of depreciation AGLGN recouped through reference tariffs over the current access arrangement will be removed from the capital base, and therefore will not be affected by AGLGN's underspend on capital expenditure over that period.

Retrospective changes to the lives of three classes of meters

Section 8.33(c) of the Code requires that the depreciation schedule for each asset or group of assets be adjusted to reflect changes in the expected economic life of assets, to the maximum extent that is reasonable. The Tribunal considers that the proposed change in the lives of AGLGN's three meter classes results from changes to regulatory requirements and should be implemented.

However, as noted above, it requires AGLGN to use the depreciation schedule from the last review to roll forward the capital base to the expected start of the proposed access arrangement, and this schedule was based on 15 year meter lives over the entire term of the current access arrangement. The Tribunal considers that because the change in asset lives at 2002 was not part of the forecast depreciation at the last review but is a retrospective change to the depreciation schedule, it does not meet the requirements of section 8.9 of the Code.

The Tribunal considers that asset lives should not be adjusted at the current review to have effect (retrospectively) from an earlier period. The Tribunal notes that the Allen Consulting Group (ACG) expressed a similar view in a paper it prepared for the Tribunal's recent electricity distribution network review. ACG suggested adjusting asset lives at the beginning of a regulatory period where it is apparent that the economic lives of the assets have changed. However, in relation to retrospective adjustments, it considered that there is no rationale to reopen depreciation that was used to determine regulated charges for the

¹⁵³ EMRF submission, 5 October 2004.

previous regulatory period, as to do so would provide regulated entities with gaming opportunities with little implication for economic efficiency.¹⁵⁴

The Tribunal considers that it is reasonable for AGLGN to make the proposed change to asset lives, but that the change should be effective at the commencement of the proposed access arrangement rather than retrospectively. Delaying the change to asset lives until the commencement of the proposed access arrangement would satisfy section 8.9 of the Code, while still allowing the depreciation schedule for the proposed access arrangement to be responsive to changes in the economic lives of the meters to the maximum extent that is reasonable. Therefore, as proposed in its draft decision, the Tribunal requires AGLGN to amend its proposed access arrangement so that the economic lives of contract, industrial and commercial tariff meters and domestic tariff meters are extended from 15 to 20 years with effect from the expected commencement of the proposed access arrangement.

Exclusion of land in depreciating non-system assets

In response to the Tribunal's draft decision, AGLGN notified the Tribunal that the calculation of depreciation in the December 2003 access arrangement included land in the non-system asset category¹⁵⁵. The Tribunal was unaware of this at the time of the draft decision. AGLGN advised that the capital base contains \$7m (\$ nominal) of land acquired before 1996, which was grouped together with relatively short lived assets and therefore, fully depreciated over the proposed regulatory period. AGLGN submits that this land should be removed from the depreciation calculation resulting in a decrease in the cost of service for AGLGN (all other things being equal).

The Australian Tax Office's *Guide to depreciating assets* notes that a depreciating asset is an asset with a fixed economic life that can reasonably be expected to decline in value over the time it is used. The guide specifically excludes land from the definition of depreciating asset.¹⁵⁶

The Tribunal considers that allowing AGLGN to recover depreciation of land in the cost of service for the proposed access arrangement (submitted in December 2003) does not meet the requirements of the Code, specifically sections 8.33(b) and 8.4, because land does not have a fixed economic life over which it can be depreciated and because to do so would not be in accordance with accepted industry practice. The Tribunal therefore requires AGLGN to remove the \$7m of land from the list of depreciating assets used to calculate the depreciation schedule, as submitted by AGLGN.

¹⁵⁴ The Allen Consulting Group, *Principles for determining regulatory depreciation allowances*, note to the Tribunal, September 2003.

¹⁵⁵ AGLGN Access Arrangement for NSW Network – Response to Draft Decision, February 2005, p 24-5.

¹⁵⁶ Australian Tax Office (ATO) *Guide to depreciating assets 2003-04* (NAT 1996-6.2004), June 2004, p 3

7.6 Redundant capital

7.6.1 Code requirements

Section 8.9 of the Code provides for redundant capital to be removed from the capital base. The relevant regulator identifies redundant capital by applying the capital redundancy mechanism in the current access arrangement (if it includes one). AGLGN's current access arrangement includes a capital redundancy mechanism that provides that:

With effect from the commencement of the subsequent Access Arrangement Period, the Relevant Regulator may reduce the Capital Base by an amount representing:

- a) any assets that in the reasonable opinion of the Relevant Regulator have ceased to contribute to the delivery of Services;
- b) any assets that in the reasonable opinion of the Relevant Regulator are *likely* to cease to contribute to the delivery of Services;
- c) any assets that have been transferred by AGLGN or in relation to which AGLGN has entered into a binding agreement for its transfer;
- d) any assets that in the reasonable opinion of the Relevant Regulator have decreased in value because of a decrease in its utilisation resulting from a decline *or likely* decline in the volume of sales of the Service; or
- e) any assets that in the reasonable opinion of the Relevant Regulator have decreased in value because of a *likely* decrease in its utilisation resulting from a decline or likely decline in the volume of sales of the Service.

In assessing the reduction in the Capital Base due to a decreased utilisation of assets resulting from a decline in the volume of sales of a Service, the Relevant Regulator may take into account the reduction in Total Revenue and any possible increase in Tariffs paid by Users resulting from the decline in utilisation of assets.

Section 8.28 of the Code provides for redundant assets that have been removed from the capital base to be treated as new facilities investment if they subsequently contribute or make an enhanced contribution to service delivery.

7.6.2 AGLGN's proposal

AGLGN proposed that its capital base be reduced only by the value of its disposals (asset sales and scrapplings) over the current access arrangement and proposed access arrangement periods. It has allocated all disposals to the distribution pipelines. AGLGN proposed no other adjustment for redundant capital.

7.6.3 Tribunal's analysis and considerations

In making its draft decision, the Tribunal considered the level of disposals proposed by AGLGN and applied the current capital redundancy mechanism to identify any redundant capital resulting from a decrease in utilisation of any part of the network. It also considered how to adjust the value of the capital base to account for redundant capital that is due to a decline in utilisation.

In making its final decision, the Tribunal reconsidered these issues, taking into account additional information provided by AGLGN and stakeholder comments in submissions in response to the draft decision. The Tribunal has not changed its view on these issues since its draft decision. It finds that:

- AGLGN's disposals meet the requirements of the Code
- there is redundant capital on the Wilton to Wollongong transmission pipeline that is due to a significant decline in utilisation and should be removed from the capital base
- the redundant capital on the Wilton to Wollongong pipeline equates to 20 per cent of the value of this pipeline at 1 July 2005.

The Tribunal's considerations and conclusions in relation to these issues are set out below.

Disposals

AGLGN's proposal to reduce the value of the capital base by the value of its disposals over the current and proposed access arrangement periods relates to parts (a), (b) and (c) of the current capital redundancy mechanism. (Parts (a) and (c) provide for the removal of assets that have ceased to contribute to the provision of services, and part (b) allows assets that are *likely* to cease to contribute to services to be removed from the capital base.)

ECG examined AGLGN's level of disposals over the current access arrangement period, and its forecast disposals for each year of the proposed access arrangement period, as part of its total cost review. These disposals comprise asset sales and asset scrappings, including mains, services, valves, regulator equipment and meters.¹⁵⁷ ECG recommended that the Tribunal should accept this level of disposals.

In making its final decision, the Tribunal considered AGLGN's process for removing unused customer connections from the capital base. AGLGN advised that once it has formed the view that a supply point is unlikely to recommence using gas, this supply point is disconnected from the network by removing the meter. In general, this occurs when a retailer advises AGLGN or when there has been no supply at that point for twelve months.¹⁵⁸ Depending on the age and condition of the meter, it is either scrapped (included in disposals) or re-used and the service pipe is accounted for in disposals. The Tribunal is satisfied that AGLGN's process for accounting for unused customer connections in disposals means that these assets are removed from the capital base when they have ceased to contribute to the provision of services.

Having considered ECG's analysis and the additional information provided by AGLGN, the Tribunal is satisfied that AGLGN's disposals are assets that have ceased (or are likely to cease) to contribute to the delivery of services and therefore should be removed from the capital base. This level of disposals is reflected in the capital base in section 7.7 of this report.

¹⁵⁷ ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, p 51.

¹⁵⁸ Information provided in response to request from IPART secretariat, 21 March 2005.

Redundant capital resulting from a decrease in utilisation

The Tribunal also considered whether it should reduce the capital base to account for any decrease in value resulting from a decrease (or likely decrease) in utilisation as a result of a decline (or likely decline) in sales volumes, as provided for in parts (d) and (e) of the capital redundancy mechanism. In doing so, it took into account information from a number of sources, including:

- ECG's review of asset utilisation as part of its total cost review, which found that diversified MDQ on the two trunk lines (Wilton to Wollongong and Wilton to Newcastle) was around 10 per cent lower than expected in the 2003/04 year due to some reductions in contract load on each pipeline¹⁵⁹
- submissions that commented that there was underutilisation on the Wilton to Newcastle trunk pipeline¹⁶⁰
- information from AGLGN regarding historical levels of MDQ and throughput on the two trunk pipelines¹⁶¹
- AGLGN's response to the draft decision and submissions from other stakeholders.

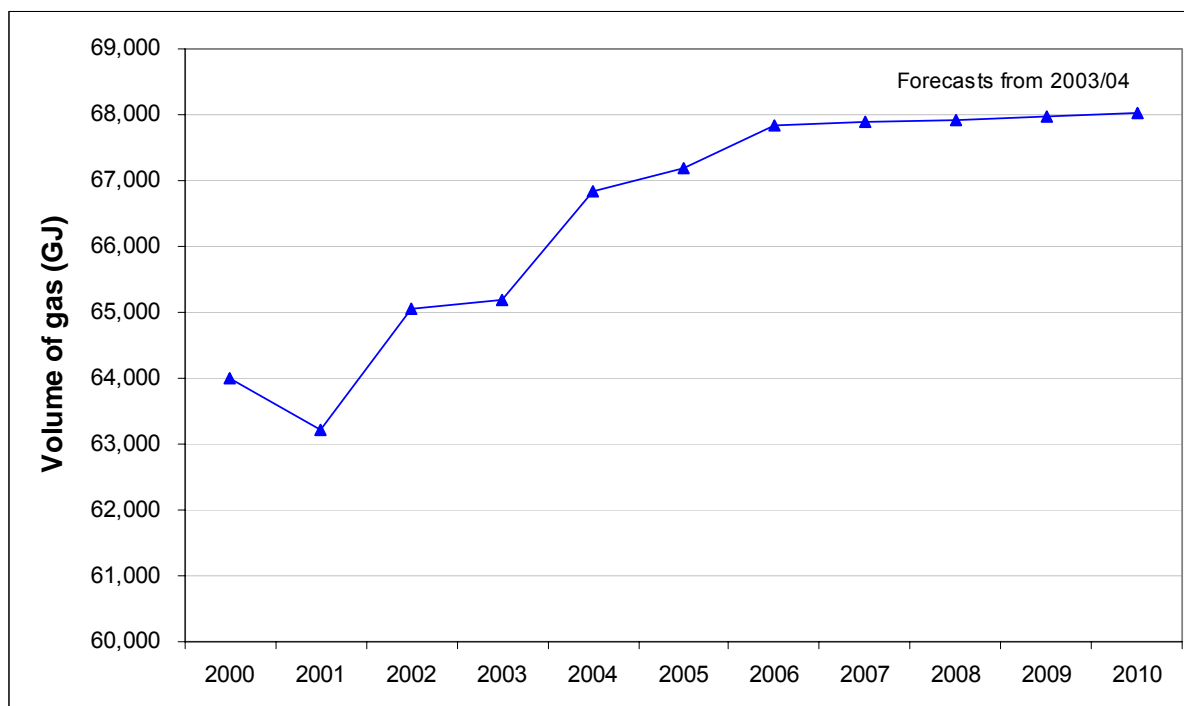
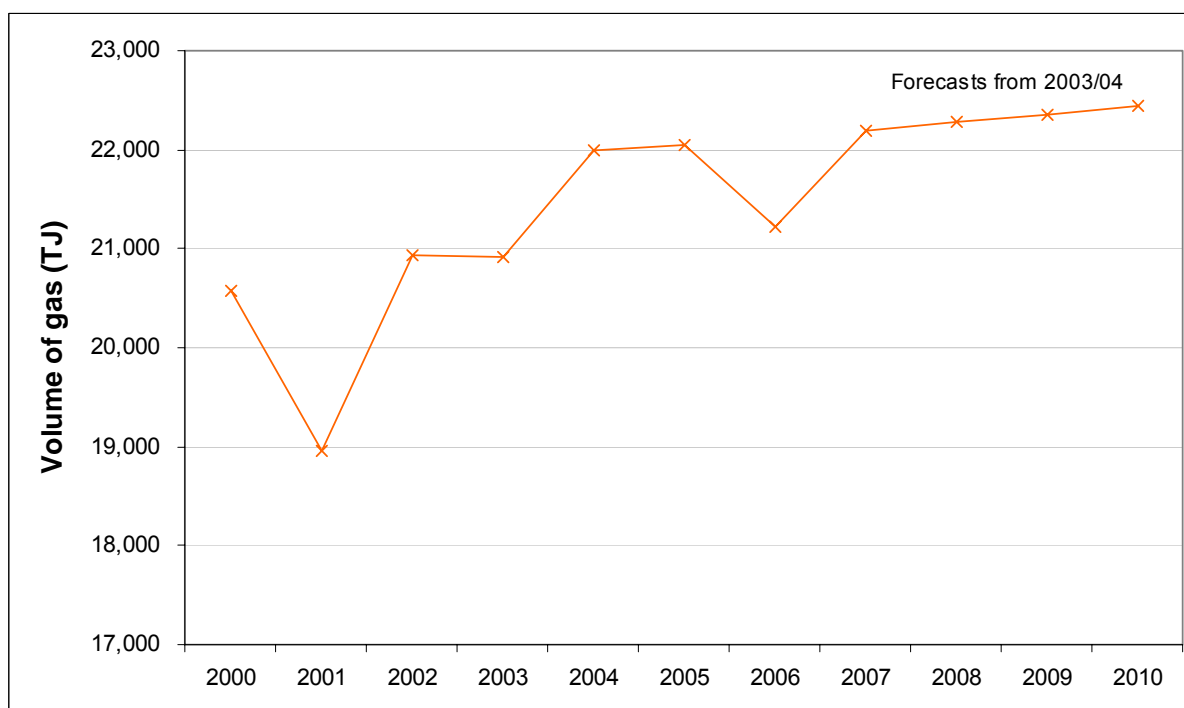
In relation to utilisation of the Wilton to Newcastle trunk line, the Tribunal examined contracted MDQ and throughput information provided by AGLGN between 2000 and 2004 to determine whether there has actually been a decline in sales over that period. This information suggests that there has been some fluctuation in sales volumes over the current access arrangement period. However, overall, neither contracted MDQ nor throughput has decreased over the current access arrangement period, and neither is forecast to fall over the expected term of the proposed access arrangement (Figures 7.1 and 7.2).¹⁶² Given this finding, the Tribunal is satisfied that no redundant capital can be identified for this pipeline under parts (d) or (e) of the current capital redundancy mechanism.

¹⁵⁹ ECG, *Review of AGLGN Gas Access Arrangement*, August 2004, pp 105-106.

¹⁶⁰ Orica submission 3 May 2004, section 3.4 and 6 October 2004, section 4, and EMRF submission May 2004, section 3.1.

¹⁶¹ Information provided by AGLGN in response to request from IPART secretariat, 20 October 2004.

¹⁶² Information provided by AGLGN in response to request from IPART secretariat, 20 October 2004.

Figure 7.1 Contracted MDQ on the Wilton to Newcastle trunk line**Figure 7.2 Throughput on the Wilton to Newcastle trunk line**

In relation to utilisation of the Wilton to Wollongong trunk, the information provided by AGLGN shows that both contracted MDQ and throughput on this pipeline dropped significantly between 2000 and 2001, and has continued to fall over the current access arrangement period, and both are forecast to be fairly stable over the expected term of the

proposed access arrangement (Figures 7.3 and 7.4). This decrease in sales volume is understood to be due to the commencement of operation of the Eastern Gas Pipeline (a transmission pipeline that runs from Victoria to Sydney), which bypasses AGLGN's Wollongong trunk.¹⁶³

Figure 7.3 Contracted MDQ on the Wilton to Wollongong trunk line

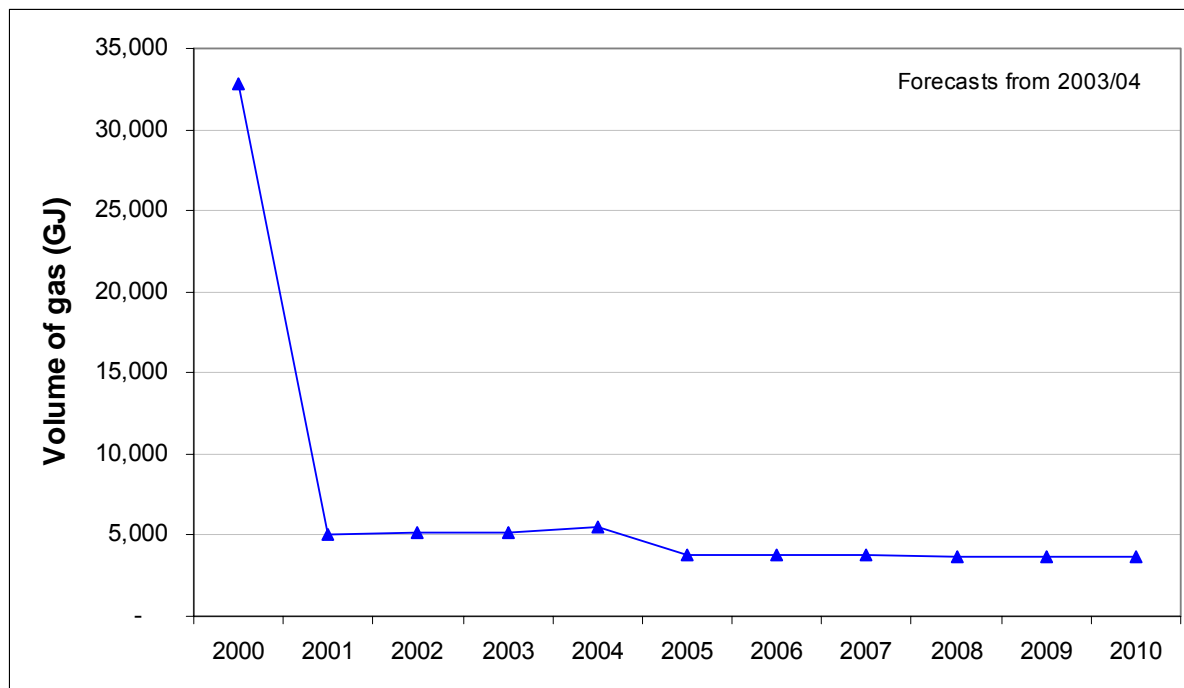
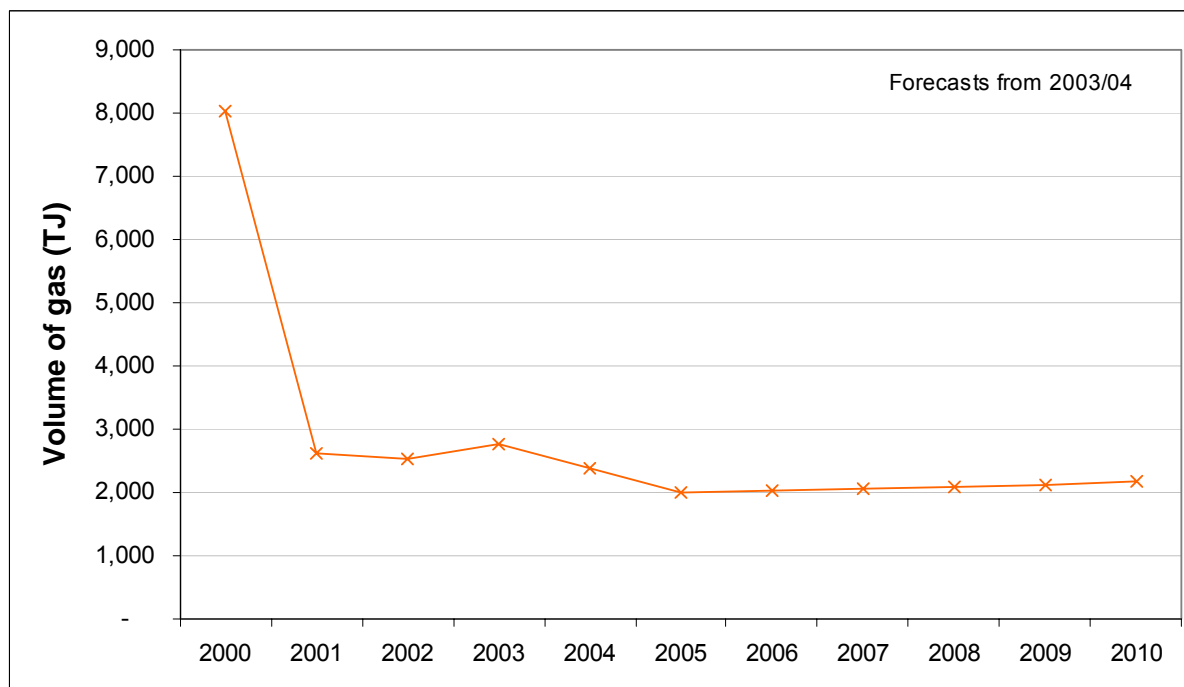


Figure 7.4 Throughput on the Wilton to Wollongong trunk line



¹⁶³ Information provided by AGLGN in response to request from IPART secretariat, 22 October 2004.

Having established a decline in utilisation of this trunk line, the Tribunal considered the principles in section 8.1 of the Code and the factors in section 2.24 of the Code in deciding whether it would be appropriate to reduce the capital base. It also considered AGLGN's response to the draft decision, including its submission that the capital base of the Wilton to Wollongong pipeline should not be reduced because:¹⁶⁴

- the Tribunal should recognise that the pipeline provides a security of supply service for customers of the Eastern Gas Pipeline (EGP)
- the Tribunal should recognise that the pipeline provides a gas balancing service free of charge to all customers of the network
- the current value of a hypothetical new pipeline is higher than the regulatory value.

The Tribunal noted that comments received from gas users supported the Tribunal's draft decision to reduce the value of the capital base as a result of the decline in utilisation.¹⁶⁵ However, the Energy Networks Association noted that the Tribunal is the only regulator it is aware of that has exercised its discretion to introduce a capital redundancy clause into the access arrangement of a gas distribution network and to propose to activate that clause.¹⁶⁶ EnergyAdvice commented that whether or not redundancy has been an issue in other jurisdictions is irrelevant, as the Tribunal's role is to apply the Code, which requires it to determine whether there is any redundant capital in the network.¹⁶⁷

In response to the arguments raised by AGLGN, Orica¹⁶⁸ disputed the security of supply and balancing arguments on the basis that reducing the regulatory value of the capital base would not affect the pipeline's ability to perform these functions. Orica also submitted that:

- every pipeline makes a contribution to the security of supply for the network because of its line pack provisions
- in terms of the balancing function, the pipeline is no different to other pipelines in the network and the function is already recognised in the access arrangement
- on the Moomba to Sydney Pipeline, the service provider (EAPL) is not paid additional tariffs to provide a balancing gas service but is paid only to transport the gas to Wilton.

To assist it in forming a view on AGLGN's arguments and the comments received in submissions, the Tribunal engaged MMA, as a technical expert, to provide a report addressing each of these issues.¹⁶⁹ In making its final decision, the Tribunal considered this report together with submissions received in response to its draft decision.

In relation to security of supply for the EGP, the Tribunal agrees with the argument put forward by MMA that to allow users of the Wilton to Wollongong pipeline to pay for a security of supply service provided to users of the EGP would be inappropriate, and would not be supported by the Code (in particular section 8). In addition, the Tribunal notes that section 8.28 of the Code allows re-inclusion of redundant assets if they subsequently make an

¹⁶⁴ AGLGN, *Access Arrangement for NSW Network – Response to the Draft Decision*, February 2005, pp 14-16 and Attachment 2.

¹⁶⁵ EMRF submission, February 2005, p 5, Orica submission, February 2005, p 2, EUAA submission, March 2005, p 3 and EUAA comments at roundtable discussion, 23 March 2005.

¹⁶⁶ ENA submission, February 2005, p 6.

¹⁶⁷ EnergyAdvice comments at roundtable discussion, 23 March 2005.

¹⁶⁸ Orica submission, February 2005, p 4 and comments at roundtable discussion, 23 March 2005.

¹⁶⁹ MMA, *Comments on AGLGN response to IPART Draft Decision on Capital Redundancy*, 1 April 2005.

enhanced contribution to services. This provision means that in the event that the EGP could no longer supply those customers, AGLGN would be able to re-include the redundant assets at their 'redundant capital value' increased annually on a compounded basis by the rate of return.

In relation to making allowance for the gas balancing role of the pipeline, the Tribunal notes that both MMA and AGLGN considered that the optimised diameter decided on in the Tribunal's draft decision would be sufficient to cover any additional volumes transported for this reason.¹⁷⁰ Therefore, the Tribunal proposes to make no additional allowance for the provision of this service or the volumes associated with it in determining whether there is redundant capital on the pipeline.

In response to AGLGN's argument that it would be inequitable to reduce the pipeline's regulatory value when its current value is higher than the regulatory value, the Tribunal considers that this argument is not supported by the Code. In calculating the value of a *hypothetical new pipeline*, AGLGN's consultant has expressly taken into account current engineering cost, current land valuations, cost of a stand alone project, and costs associated with running the pipe under and past new housing developments and roads.¹⁷¹ The Tribunal is of the view that neither section 8.9 of the Code nor the redundancy mechanism allows it to take such changes in circumstances into account in the value of the capital base once the initial capital base has been established.

After considering AGLGN's response to the draft decision, other submissions received in response to the draft decision, and the technical report provided by MMA, the Tribunal is satisfied that making an adjustment for redundant capital is consistent with the Code. It remains of the view that section 8 of the Code, in particular the objectives in section 8.1, generally support making capital redundant under the circumstances. An important factor leading to the Tribunal's decision was the magnitude of the decrease in sales volumes on the pipeline. It considers that such a significant decline in utilisation of the pipeline represents a clear situation of capital redundancy by application of the mechanism, and therefore necessitates some reduction in the regulatory value of the pipeline representing redundant capital.

Calculating the reduction in value

In determining the decrease in 'value' for the purpose of the capital redundancy mechanism, the Tribunal remains of the view that section 8 of the Code does not permit a revaluation of the capital base but simply rolls it forward at each review. It considers that both the capital redundancy mechanism and section 8.9 of the Code require that the change in value should be that resulting only from the decline in utilisation or in the volume of sales.

¹⁷⁰ Information provided by AGLGN to IPART Secretariat, 16 November 2004 and MMA *Comments on AGLGN response to IPART Draft Decision on Capital Redundancy*, 1 April 2005.

¹⁷¹ Coraldeen Pty Ltd *Replacement cost of gas pipeline from Wilton to Wollongong*, January 2005 (Attachment 2 to AGLGN *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005. These factors lead to higher unit costs for the pipeline than those factored into the ICB valuation (for example, the new housing developments imply more stringent pipe requirements than are currently in place, such as a thicker pipe wall to minimise third party interference).

Prior to making its draft decision, the Tribunal sought advice from MMA, as an independent technical expert, to assist it in determining what (if any) reduction in value had resulted from the identified decline in utilisation.¹⁷² MMA recommended the following three-step process be used to determine the reduction in value:

1. calculate the optimised diameter¹⁷³ of the pipeline based on the volume information provided by AGLGN
2. calculate the value for the optimised diameter using the unit rates that were applied to determine the initial capital base (expressed in \$ per mm of diameter per km of pipeline)
3. obtain a percentage reduction in value that can be applied to the opening value at this review by comparing the values under both the current and optimised diameters.

In reconsidering this approach to determining the reduction in value that has resulted from the decline in utilisation, the Tribunal took into account AGLGN's response to the draft decision and a submission from the Energy Users Association of Australia (EUAA), the only submission received on this issue.¹⁷⁴

AGLGN submitted that its (higher) valuation of the pipeline should be taken into account, and disputed the use of the unit rates used to determine the initial capital base on the basis that they were average cost across the network and do not represent the true costs of constructing a pipeline from Wilton to Wollongong.¹⁷⁵ However, the EUAA noted the distinction between reducing the value of a pipeline to account for a reduction in utilisation and revaluing the capital base. It considered that the Tribunal's approach of using the unit rates (costs) applied to determine the initial capital base was consistent with good regulatory practice and with the Code; the EUAA agreed with the Tribunal's view in the draft decision that the use of different unit rates would amount to a revaluation of the capital base.

After considering these views, the Tribunal remains satisfied that MMA's approach provides an appropriate method by which to value redundant capital on the pipeline for the purpose of the capital redundancy mechanism and the Code. This is because by applying the assumptions and unit rates that were used to value the initial capital base for the pipeline (which was established using a DORC valuation), the methodology calculates only the change in value resulting from the decline in utilisation or in the volume of sales, consistent with the capital redundancy mechanism. The Tribunal considers that this method satisfies the requirements of section 8.9 of the Code and the capital redundancy mechanism because it explicitly excludes consideration of the impact of other factors (such as changes in technology and the different engineering standards required of a hypothetical new pipeline) on the value of the pipeline.

The Tribunal applied MMA's method for determining the value of the redundant capital to the Wilton to Wollongong pipeline by first deciding on the optimised diameter of the pipeline that the decrease in volumes implies, and then calculating a percentage reduction in value to represent the smaller diameter pipe.

¹⁷² MMA report to IPART, *Assessment of the Wollongong Trunk Pipeline Depreciated Optimised Replacement Value*, November 2004.

¹⁷³ The optimised diameter represents the smallest diameter pipeline that could be used to deliver the required volume of gas (in terms of both maximum quantity required in any given day/hour and throughput over a year).

¹⁷⁴ EUAA submission, March 2005, p 3 and comments at roundtable discussion, 23 March 2005.

¹⁷⁵ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, p16.

In determining what the optimised diameter for the pipeline should be the Tribunal considered MMA's report and arguments put to it by AGLGN prior to the release of the draft decision. The Tribunal has not changed its position since the draft decision. It accepts AGLGN's view that the optimised diameter should be determined using volumes that include twenty years of tariff market growth as this is consistent with its view that the assumptions relied on in setting the initial capital base should be retained in order to restrict its consideration to the change in value that is due only to the reduction in utilisation that has occurred. The optimised diameter accepted by the Tribunal is 250mm for the trunk component (a reduction from the ICB diameter of 350mm), and 250mm for the primary main component, taking into account twenty years of growth in the tariff market at 2.19 per cent per annum.¹⁷⁶ Based on the unit costs applied in the ICB valuation (expressed in \$ per mm of diameter per km of pipeline), reducing the optimised diameter of the trunk from 350mm to 250mm results in a value that is 20 per cent lower than the equivalent value under the current diameter.

The Tribunal reviewed the impact of a 20 per cent reduction in the value of the capital base on both AGLGN and users that obtain services from the Wilton to Wollongong trunk line, as provided by the mechanism. The Tribunal noted that the removal of redundant capital would have a minor negative impact on the total revenue of AGLGN (approximately half of one per cent) and would result in a reduction in trunk tariffs for users of the pipeline, all else being equal.

For the reasons stated above, the Tribunal has identified redundant capital on the Wilton to Wollongong pipeline with a value that equates to 20 per cent of the value of the capital base of the pipeline at the commencement of the proposed access arrangement. The Tribunal requires this redundant capital to be removed from the value of the capital base for the Wilton to Wollongong trunk line at 1 July 2005, as set out in 7.7 below.

7.7 Amendments required

Amendment 9 - Regulatory asset register

AGLGN must ensure that its regulatory asset register includes information on the rolled forward capital base at 1 July 2005 consistent with the values set out in Amendment 10 of this final decision.

Amendment 10 - Rolled forward capital base

The proposed access arrangement must be amended so that the capital base used to determine total revenue and reference tariffs complies with the values set out in Tables 7.10 to 7.17 below:

¹⁷⁶ Information provided by AGLGN to IPART Secretariat, 16 November 2004 – AGLGN notes that the assumed tariff market growth is consistent with its view of the average growth forecast over the proposed access arrangement period.

Table 7.10 Roll Forward Of Regulatory Capital Base from 1999 to 2005 – Combined Total (\$million, nominal)

	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05
Opening Balance	1609.8	1669.0	1772.6	1814.7	1857.1	1899.2
Add Revaluation Of Assets	39.2	101.5	51.5	56.9	44.4	54.4
Add Capital Expenditure	78.2	70.3	57.6	60.2	70.7	89.7
Less Depreciation	-55.0	-59.5	-63.8	-67.9	-69.5	-72.5
Less Capital Contributions	0.0	-1.4	-0.5	-1.4	-1.2	-1.1
Less Disposals	-3.1	-7.3	-2.7	-5.5	-2.3	-2.1
Closing Balance	1669.0	1772.6	1814.7	1857.1	1899.2	1967.6

Columns may not add due to rounding.

Table 7.11 Roll Forward Of Capital Base – Wilton To Newcastle Transmission Pipeline from 1999 to 2005 (\$million, nominal)

	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05
Opening Balance	111.7	112.5	117.2	118.5	120.1	121.4
Add Revaluation Of Assets	2.7	6.7	3.4	3.7	2.8	3.4
Add Capital Expenditure	0.0	0.0	0.0	0.0	0.7	1.6
Less Depreciation	-1.9	-2.0	-2.1	-2.1	-2.2	-2.3
Less Capital Contributions	0.0	0.0	0.0	0.0	0.0	0.0
Less Disposals	0.0	0.0	0.0	0.0	0.0	0.0
Closing Balance	112.5	117.2	118.5	120.1	121.4	124.2

Columns may not add due to rounding.

Table 7.12 Roll Forward Of Capital Base – Wilton To Wollongong Transmission Pipeline from 1999 to 2005 (\$million, nominal)

	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05
Opening Balance	9.6	9.6	10.0	10.1	10.3	10.3
Add Revaluation Of Assets	0.2	0.6	0.3	0.3	0.2	0.3
Add Capital Expenditure	0.0	0.0	0.0	0.0	0.0	0.2
Less Depreciation	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Less Capital Contributions	0.0	0.0	0.0	0.0	0.0	0.0
Less Disposals	0.0	0.0	0.0	0.0	0.0	0.0
Closing Balance	9.6	10.0	10.1	10.3	10.3	10.6

Columns may not add due to rounding.

**Table 7.13 Roll Forward Of Capital Base – AGLGN Distribution System
from 1999 to 2005 (\$million, nominal)**

	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05
Opening Balance	1488.5	1546.9	1645.3	1686.0	1726.7	1767.5
Add Revaluation Of Assets	36.3	94.2	47.8	52.9	41.4	50.7
Add Capital Expenditure	78.2	70.3	57.6	60.2	70.0	87.9
Less Depreciation	-53.0	-57.3	-61.6	-65.5	-67.1	-70.0
Less Capital Contributions	0.0	-1.4	-0.5	-1.4	-1.2	-1.1
Less Disposals	-3.1	-7.3	-2.7	-5.5	-2.3	-2.1
Closing Balance	1546.9	1645.3	1686.0	1726.7	1767.5	1832.8

Columns may not add due to rounding.

**Table 7.14 Roll Forward Of Regulatory Capital Base from 2006 to 2010 –
Combined Total (\$million, nominal)**

	2005/06	2006/07	2007/08	2008/09	2009/10
Opening Balance	1967.6	2077.7	2168.1	2253.4	2326.9
Adjustment for Redundant Capital	-2.1	0.0	0.0	0.0	0.0
Add Revaluation Of Assets	56.8	59.6	62.2	64.4	66.4
Add Capital Expenditure	126.1	107.8	106.6	95.4	92.1
Less Depreciation	-67.4	-73.6	-80.0	-82.6	-84.6
Less Capital Contributions	-1.1	-1.2	-1.2	-1.2	-1.3
Less Disposals	-2.2	-2.2	-2.3	-2.3	-2.4
Closing Balance	2077.7	2168.1	2253.4	2326.9	2397.1

Columns may not add due to rounding.

**Table 7.15 Roll Forward Of Capital Base – Wilton To Newcastle Transmission Pipeline
from 2006 to 2010 (\$million, nominal)**

	2005/06	2006/07	2007/08	2008/09	2009/10
Opening Balance	124.2	127.7	128.9	130.8	132.8
Add Revaluation Of Assets	3.5	3.6	3.6	3.7	3.7
Add Capital Expenditure	2.4	0.1	0.8	0.9	0.1
Less Depreciation	-2.4	-2.5	-2.5	-2.6	-2.7
Less Capital Contributions	0.0	0.0	0.0	0.0	0.0
Less Disposals	0.0	0.0	0.0	0.0	0.0
Closing Balance	127.7	128.9	130.8	132.8	133.9

Columns may not add due to rounding.

Table 7.16 Roll Forward Of Capital Base – Wilton To Wollongong Transmission Pipeline from 2006 to 2010 (\$million, nominal)

	2005/06	2006/07	2007/08	2008/09	2009/10
Opening Balance	10.6	9.6	9.7	9.8	9.9
Adjustment for Redundant Capital	-2.1	0.0	0.0	0.0	0.0
Add Revaluation Of Assets	0.3	0.3	0.3	0.3	0.3
Add Capital Expenditure	1.0	0.0	0.0	0.0	0.0
Less Depreciation	-0.2	-0.2	-0.2	-0.2	-0.2
Less Capital Contributions	0.0	0.0	0.0	0.0	0.0
Less Disposals	0.0	0.0	0.0	0.0	0.0
Closing Balance	9.6	9.7	9.8	9.9	9.9

Columns may not add due to rounding.

Table 7.17 Roll Forward Of Capital Base – AGLGN Distribution System from 2006 to 2010 (\$million, nominal)

	2005/06	2006/07	2007/08	2008/09	2009/10
Opening Balance	1832.8	1940.3	2029.5	2112.8	2184.2
Add Revaluation Of Assets	53.0	55.8	58.3	60.4	62.4
Add Capital Expenditure	122.7	107.7	105.8	94.4	92.0
Less Depreciation	-64.8	-71.0	-77.3	-79.8	-81.7
Less Capital Contributions	-1.1	-1.2	-1.2	-1.2	-1.3
Less Disposals	-2.2	-2.2	-2.3	-2.3	-2.4
Closing Balance	1940.3	2029.5	2112.8	2184.2	2253.2

Columns may not add due to rounding.

8 RATE OF RETURN

Under the cost of service approach, the total revenue includes an allowance for a return on the capital base. This allowance recovers the opportunity cost of capital invested in the service provider by its owners. The rate of return used in calculating the allowance should reflect prevailing market conditions, and the risk involved in delivering the reference services.

8.1 Tribunal's findings

The Tribunal is not satisfied that AGLGN's proposed rate of return meets the Code requirements. It requires AGLGN to amend its proposed access arrangement as set out in 8.5 below.

8.2 Code requirements

Section 8.30 requires that the rate of return used in determining a reference tariff provide a return that is commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service.

Section 8.31 permits the rate of return to be established on the basis of a weighted average of the return applicable to each source of funds (equity, debt and any other relevant source of funds), or by using an alternative approach where the regulator is satisfied that to do so would be consistent with the objectives contained in section 8.1.

The Code also requires the regulator to take into account the objectives in section 8.1 and the factors in section 2.24 of the Code (discussed in Chapter 2 of this report.)

8.3 AGLGN's proposal

In its response to the Tribunal's draft decision, AGLGN proposed the use of Monte Carlo simulation¹⁷⁷ to estimate the rate of return, with the rate of return set at the 80th percentile of the probability distribution. AGLGN had not raised this methodology in its revisions submission of December 2003. To explain its proposal, AGLGN submitted a report prepared by Strategic Finance Group (SFG)¹⁷⁸. AGLGN does not now propose using a different model to estimate the cost of capital, but says that uncertainties associated with measuring the market risk premium, equity beta, gamma and the debt margin in applying the capital asset pricing model (CAPM) to estimate the cost of capital can be taken into consideration by using Monte Carlo simulation. The SFG report asserts that the results generated by the Monte Carlo simulation constitute a full probability distribution for the rate of return of an efficient benchmark firm, and that this probability distribution provides the regulator with a tool to measure the probability that a particular rate of return will be insufficient to meet the cost of funds of an efficient benchmark firm.

¹⁷⁷ In Monte Carlo simulation, multiple scenarios are created using randomly selected values taken from a data set and selected to fit a probability distribution. The scenarios give a range of possible solutions, some of which are more probable and some less probable. When repeated for many scenarios, the average solution will give an approximate answer.

¹⁷⁸ "A Framework for Quantifying Estimation Error in Regulatory WACC, draft report for AGL Gas Networks in relation to IPART 2004 Access Arrangement Review" Strategic Finance Group, 7 February 2005, included by AGLGN as an attachment to its response to the draft decision dated 7 February 2005.

AGLGN submitted that setting the rate of return at the 80th percentile of the probability distribution of the rate of return is appropriate because the risks of under-investment are more severe than the risks associated with over-investment. An 80th percentile provides AGLGN with a reasonable probability that the rate of return not be less than its true cost of capital compared to a 50th percentile, which entails a one in two chance that it will not be less than it. AGLGN has publicly stated

... we looked at a range between 75 and 80 per cent. That's one in four versus one in two to five, as what is arguable for a reasonable level of confidence that you are actually going to not underestimate the WACC and not create incentives or disincentives for the investment. It is really simple. We recognise the right level is 75 to 80 per cent, that seems about right to us. There is a degree of arbitrariness in it, but it seems reasonable.¹⁷⁹

In order to quantify estimation error and the probability of the true cost of capital, AGLGN proposed to:

- assign distributions to the relevant parameter ranges reflecting the varying degree of uncertainty
- use Monte Carlo simulation¹⁸⁰ to compute a distribution of pre-tax real rate of return estimates
- determine the true cost of capital at the 80th percentile of the distribution.

AGLGN proposed a pre-tax real rate of return of 7.9 per cent, derived from its proposed range of weighted average cost of capital (WACC) shown on Table 8.1.

Table 8.1 AGLGN's revised proposed WACC range

Parameter	Distribution characteristic	Value
Nominal risk free rate		5.31%
Inflation		2.53%
Real risk free rate		2.71%
Market risk premium	Normal; standard error of the mean 1.8%	6.0%
Debt margin	Uniform	1.64% - 1.79%
Debt to total assets		60%
Dividend imputation factor (gamma)	Uniform *	0.5 – 0.1
Tax rate #		30%
Equity beta	Uniform	0.9 - 1.1
WACC range (pre-tax real)		5.4% - 9.2%
Pre-tax real WACC (80th percentile)		7.9%
Pre-tax real WACC (mean)		7.3%

Source: AGLGN response to the draft decision on the revised *access arrangement for AGL Gas Networks*, 7 February 2005, Table 2.1 and text on p 4.

* Table 2.1 of AGLGN's response to the draft decision does not specify this, although a consultant's report appended to AGLGN's response does as does modelling provided by AGLGN to the Tribunal.

This parameter was not included in AGLGN's Table 2.1 but is used in deriving the pre-tax real WACC range.

¹⁷⁹ Comment by Chris Harvey representing AGLGN at the public forum held on 23 March 2005, from the transcript

¹⁸⁰ On all WACC parameters using 10,000 iterations.

AGLGN used the following formula to calculate its proposed nominal post-tax WACC range:¹⁸¹

$$WACC = \frac{R_e \times (1-t)}{[1-t \times (1-\gamma)]} \times \left(\frac{E}{D+E} \right) + R_d \times (1-t) \times \frac{D}{D+E}$$

where:

R_e is the cost of equity

R_d is the cost of debt

t is the statutory tax rate

γ is the value attributed to imputation tax credits

E is the amount of equity in the capital structure

D is the amount of debt in the capital structure

$E/(D+E)$ is the proportion of equity funding

$D/(E+D)$ is the proportion of debt funding

It calculated its proposed cost of equity (R_e) using the capital asset pricing model (CAPM):

$$R_e = R_f + \beta_e \times (R_m - R_f)$$

where:

R_f is the risk free rate

$R_m - R_f$ is the market risk premium

Beta (β_e) is a measure of the extent to which returns from the asset vary with returns for equities as a whole.

To convert its proposed nominal post-tax WACC range to a proposed pre-tax real WACC range, AGLGN used the forward transformation methodology (where the adjustment for tax is made before the adjustment for inflation):

$$WACC = \frac{\left(1 + \left\{ \frac{R_e}{[1-t \times (1-\gamma)]} \times \left(\frac{E}{D+E} \right) + R_d \times \frac{D}{D+E} \right\} \right)}{(1+i)} - 1$$

where the parameters are as set out above and

i is the inflation rate

¹⁸¹ The formula is commonly referred to as the Officer model and was first published in: Officer, R.R., *The cost of capital of a company under an imputation tax system*, Accounting and Finance 34, 1994. AGLGN has confirmed that this formula and the following three formulae have been used to derive its proposed rate of return.

The inflation rate is based on the difference between the nominal and real interest rates and is calculated using the Fisher equation¹⁸²:

$$1 + r_{\text{nominal}} = (1 + r_{\text{real}}) \times (1 + i)$$

8.4 Tribunal's analysis and considerations

The Tribunal considered whether the rate of return proposed by AGLGN meets the Code's requirements. Prevailing conditions in the market for funds were assessed with reference to returns and ratios observable in debt and equity markets and current market practice in the application of the CAPM. The Tribunal also considered AGLGN's approach to risk measurement.

The Tribunal is satisfied that in using the CAPM to generate a range for pre-tax real WACC, AGLGN has chosen a well accepted financial model permitted by section 8.31 of the Code. The Tribunal is also satisfied that the use of probability distributions to assess the degree of uncertainty in parameter estimation is permitted by the Code.

However, the Tribunal considers that the model must not only be one that is permitted by section 8.31 but it must determine returns that meet the requirements of section 8.30. The Tribunal is not satisfied that the model (as applied by AGLGN) generates returns commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service as required by section 8.30 of the Code. In particular, it is not satisfied that the proposed nominal and real interest rates (and implied expected inflation), debt margin, market risk premium, gamma and equity beta are commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service.

Further, the Tribunal is not satisfied that determining a rate of return by reference to the estimated 80th percentile in the probability distribution of rates of return meets the Code's requirements in sections 8.1 and 2.24.

The Tribunal's considerations and conclusions in relation to AGLGN's proposed WACC range and rate of return are discussed below.

8.4.1 Use of CAPM, a pre-tax real rate of return, the forward transformation method, Monte Carlo simulation and the 80th percentile

In its draft decision, the Tribunal was satisfied that in using CAPM and a rate of return expressed in pre-tax real terms calculated using the forward transformation method, AGLGN has chosen a well accepted financial model that meets the requirements of section 8.31 of the Code.

The Tribunal recognises that there is uncertainty involved in setting a rate of return that meets the requirements of 8.30 of the Code. In its draft decision, the Tribunal addressed this uncertainty by using ranges to describe uncertain parameter values and assessing where a Code-compliant rate of return would be situated within the resulting range for cost of capital. While the Tribunal did not assign probabilities to its rate of return estimates, it considered potential impacts on regulated businesses' financial position and potential impacts on customers.

¹⁸² "The theory of interest: as determined by impatience to spend income and opportunity to invest it", Irving Fisher, 1930, Macmillan Company, New York.

In making its final decision, the Tribunal reconsidered AGLGN's proposed use of CAPM and a rate of return expressed in pre-tax real terms calculated using the forward transformation method. It also considered AGLGN's additional proposal to use Monte Carlo simulation to estimate the rate of return, and then set the rate at the 80th percentile of the probability distribution. The Tribunal remains satisfied that the use of CAPM and an estimated (or simulated) rate of return expressed in pre-tax real terms calculated using the forward transformation method is permitted by the Code.

The Tribunal notes that Monte Carlo simulation:

- is not widely used in financial markets to set rates of return
- does not remove the uncertainty arising from individual parameter estimation, and
- while it assists in generating a range of returns, does not necessarily result in a rate of return that meets the requirements of the Code.

Nevertheless, the Tribunal's view is that use of a Monte Carlo simulation framework does allow for uncertainty through the use of probability distribution for individual parameters, and thus meets the requirements of the Code in producing a range of returns that may reflect prevailing market conditions for funds.

In practice, the aim of Monte Carlo simulation is to produce a wide range of possible outcomes for the rate of return. The Tribunal's view is that, in deciding where to determine the rate of return within this range, it must be guided by the factors in sections 2.24 and 8.1 of the Code. This assessment must be made on a case by case basis. It is therefore inconsistent in this process of assessment to determine the rate of return at the 80th percentile or any other point in the probability distribution.

8.4.2 Interest rates and inflation

The Tribunal notes that AGLGN used the nominal risk free rate and real risk free rate (the 20-day averages of 10-year Commonwealth Government Bonds and Treasury indexed bonds with a similar maturity) to derive expected inflation (using the Fisher equation). The Tribunal is not satisfied that the proposed values for these parameters are commensurate with prevailing market conditions as required by section 8.30, because they are based on a 20-day average to 14 January 2005, and market conditions have changed since that time. The Tribunal considers that an average of the yields on Commonwealth Government bonds with a 10-year maturity and the 2015 Treasury indexed bond for the 20 days to 13 April 2005¹⁸³ meets the requirements of section 8.30 of the Code.

The values that could be observed in the interest rate market for the 20 days to 13 April 2005, are shown in Table 8.2.

¹⁸³ This is an administrative 'cut-off date' applied by the Tribunal for assessing parameters immediately prior to the release of its final decision.

Table 8.2 Interest rates and implied expected inflation for the 20 days to 13 April 2005

	Value *
Nominal risk free rate	5.7%
Real risk free rate	2.8%
Implied expected inflation	2.8%

* Calculated as the 20-day average of the 10-year Commonwealth bond indicator rate index prepared by Lewis Securities Ltd and published daily in the Australian Financial Review and 20 day average of yields of the 2015 Treasury indexed bond, to 13 April 2005.

8.4.3 Market risk premium

In its draft decision, the Tribunal was satisfied that AGLGN's proposed market risk premium range of 5.5 to 6.5 per cent was commensurate with prevailing conditions in the market for funds, and met the requirements of section 8.30 of the Code.

The Tribunal notes that its draft decision reflected a uniformly distributed market risk premium with a mean of 6.0 per cent. In a uniform distribution, all points within the range are equally likely. In prior decisions (concerning AGLGN and other businesses it regulates) the Tribunal has not adopted a statistical probability based approach to determining CAPM parameters, and consequently has not addressed whether a distribution other than a uniform distribution would be a more appropriate one.

In its response to the draft decision, AGLGN proposed to adopt a normally distributed market risk premium with a mean of 6.0 per cent and a standard deviation of 1.8 per cent, truncated at the 5th percentile (3.04 per cent) and 95th percentile (8.95 per cent), as set out in SFG's report.¹⁸⁴ A normal distribution is proposed in keeping with the Central Limit Theorem, which says that data that are influenced by many small and unrelated random effects are approximately normally distributed. SFG has used 120 years of data to identify that the mean should be 6.5 per cent and the standard error of the mean 1.8 per cent. In proposing use of a mean of 6 per cent, SFG accepts that weight may be given to evidence other than historical equity returns, but maintains that the appropriate statistical measure of uncertainty remains the one measured using historical equity returns. However, the Tribunal has been unable to conclude that the data used by SFG to derive the mean of 6.5 per cent and the standard error of 1.8 per cent reflects market conditions, as it indicates that the mean should be higher and the standard error lower than those proposed by AGLGN.

In considering AGLGN's proposal, the Tribunal took into account the view expressed in EMRF's submission¹⁸⁵ that the appropriate market risk premium was 2.5 to 4.5 per cent. The Tribunal also took into account several academic studies,¹⁸⁶ recent independent expert

¹⁸⁴ Section 2.2.5 of "A Framework for Quantifying Estimation Error in Regulatory WACC, draft report for AGL Gas Networks in relation to IPART 2004 Access Arrangement Review" Strategic Finance Group, 7 February 2005, included by AGLGN as an attachment to its response to the draft decision dated 7 February 2005.

¹⁸⁵ EMRF submission, 25 February 2005, p 1.

¹⁸⁶ Officer, R. "Rates of return to shares, bond yields and inflation rates: An historical perspective", in *Share Markets and Portfolio Theory; Readings and Australian Evidence*, 2ed, University of Queensland Press, 1989 and updated to 2001 as set out in Essential Services Commission Review of Gas Access Arrangements Final Decision October 2002 ; Hathaway, N. *unpublished manuscript*. "Australian Equity Risk Premium" in

reports on ASX-listed companies prepared by market practitioners,¹⁸⁷ and AGSM's Risk Premium Estimates for Investors in Fully Paid Australian Listed Equity.¹⁸⁸

As set out in 8.4.1 of this decision, the Tribunal is of the view that the use of probability distributions to assess volatility in parameters is permitted by the Code. The Tribunal is not satisfied that the proposed normally distributed market risk premium with a mean of 6.0 per cent and a standard error of the mean of 1.8 per cent meets the requirements of 8.30 of the Code as the data used to support it is not robust and does not meet the requirements of section 8.30 of the Code. The Tribunal is satisfied that a market risk premium of 5.5 per cent to 6.5 per cent uniformly distributed meets the requirements of the Code

8.4.4 Debt margin

In its draft decision, the Tribunal agreed that AGLGN's proposal to use an average for the twenty days to a date close to the time of its decision of the yields on BBB+ and BBB rated Australian corporate bonds obtained from CBASpectrum, is permitted by the Code. However, it was not satisfied that AGLGN's proposed value range for the debt margin was commensurate with prevailing market conditions as required by section 8.30, because it was based on a 20-day average to 30 September 2003,¹⁸⁹ and market conditions had changed since that time. The Tribunal agreed that AGLGN's proposal to add a margin of 12.5 basis points to the debt margin met the Code's requirements.

In its response to the Tribunal's draft decision, AGLGN doubted the accuracy of the CBASpectrum service for determining debt spreads for long-term maturities on the basis that it underestimates yields for BBB and BBB+ bonds due to the statistical methodology used in CBASpectrum's modelling¹⁹⁰. AGLGN suggested that greater weight be given to yields on corporate bonds provided by Bloomberg, the eight years maturity medium term note issued by Snowy Hydro, and advice ActewAGL obtained from Westpac for a submission to the Independent Competition and Regulation Commission, and therefore that CBASpectrum yields should be adjusted upwards by 25 (BBB+) and 20 (BBB) basis points to account for the underestimation. AGLGN further proposed that an allowance be added to the debt margin of 25 to 35 basis points for inflation hedging of nominal bond transactions and the timing difference between the date of the final decision and the date of commencement of the regulatory period.

Valuation and the Cost of Capital Under an Imputation Tax System, Cost of Capital Seminar, Melbourne Business School, University of Melbourne, August 1996; Cited in: E. Dimson, P. Marsh and M. Staunton, *Triumph of the Optimist: 101 years of Global Investment Returns*, Princeton University Press, 2002.; and Gray, S. "Issues in Cost of Capital Estimation", UQ Business Schools, University of Queensland., 19 October 2001.

¹⁸⁷ Grant Samuel's January 2005 report on WMC Resources, Grant Samuel's May 2004 report on Casinos Austria International, Lonergan Edwards' May 2004 report on Tab, Grant Samuel's April 2004 report on Abelle, Deloitte's April 2004 report on Emperor Mines, Resource Equity Consultants' March 2004 report on mineral sands interests merger, Grant Samuel's March 2004 report on Novus Petroleum and PricewaterhouseCoopers' December 2003 report on Request Broadband.

¹⁸⁸ January 1974 to December 2003.

¹⁸⁹ In its proposed access arrangement information, AGLGN states that it has based its interest rate values on a 20-day average to 7/11/2003. It has since advised the Tribunal that the values are based on 20-day averages to 30/09/2003.

¹⁹⁰ The Tribunal understands the CBASpectrum model is a proprietary methodology that generates fair yield curves for different credit ratings and maturities derived from work by Nelson and Siegel, but with modifications designed specifically for the Australian corporate bond market. The work was originally proposed in Nelson, C.R. and A. Siegel "Parsimonious modelling of yield curves", *The Journal of Business*; 60 (4): 473-489; 1987.

Table 8.3 AGLN's revised proposed debt margin (basis points)

	BBB+	BBB
CBASpectrum ¹⁹¹	101	111
Methodology adjustment	25	20
Debt raising costs ¹⁹²	13	13
Hedging	25	35
Margin over risk free rate	164	179

The Tribunal is satisfied that the yields provided by CBASpectrum meet the requirements of the Code because the model it is based on is widely used in the market, it generates yields for fairly (efficiently) priced bonds¹⁹³, and there is no credible evidence that it produces consistent under-valuation of any class of bonds. The Tribunal does not agree that use of yields from Bloomberg meets the requirements of 8.30 of the Code, as Bloomberg infrequently reports yields on BBB and BBB+ rated Australian corporate bonds, that consequently yields must be interpolated, and that there is a substantial body of evidence on the term structure of credit spreads which indicates that yields cannot be interpolated¹⁹⁴.

The Tribunal's view is that using yield information from a thinly traded security such as Snowy Hydro to determine AGLN's debt margin does not meet the requirements of the Code. The Tribunal also considers that the Westpac advice to ActewAGL was inconsistent with market conditions prevailing at that time. Since the Tribunal lacks information about how the estimated yields are derived, relying on this information to determine a debt margin for AGLN would not meet the requirements of 8.30 of the Code.

Market evidence suggests that long-term investments other than project finance of more than five years may be difficult to obtain in the Australian market, implying that businesses realistically need to refinance debt from time to time. The Tribunal remains satisfied that AGLN's proposal to include an allowance of 12.5 basis points for debt raising costs is consistent with prevailing market conditions and therefore satisfies the Code.¹⁹⁵

The Tribunal is not satisfied that including a margin for hedging costs meets the requirements of 8.30 of the Code. As there is a limited market for inflation-indexed bonds issued by corporates in the Australian capital market, swaps are most likely to be used to hedge inflation, and re-financing at a regulatory re-set would involve a re-balancing of the hedging portfolio with no incremental costs. Further, the period between the final decision and the commencement of the regulatory period is short and any hedging transaction costs associated with this period are one-off and do not impact on the effective interest rate paid over the regulatory period. Including an allowance for these costs in the debt margin would compensate AGLN for hedging costs incurred over the whole regulatory period rather

¹⁹¹ Average of 20 days to 14 January 2005.

¹⁹² Rounded from 12.5 basis points.

¹⁹³ Rather than reproducing yield curves based on actual yields.

¹⁹⁴ An assumption that underlies most credible credit risk models is that while credit risk increases with term to maturity, the rate of the increase decreases with term to maturity. Thus, it is not possible to interpolate yields from different maturities. In addition, due to the stochastic nature of interest rates the yield curves for different credit rated debt do not exhibit a constant spread over time. It is therefore impossible to adequately interpolate yields for a given credit rating from the yields of debt with the adjoining ratings (ie, a BBB+ yield interpolated from BBB and A- rated debt).

¹⁹⁵ CBASpectrum yield data does not include transaction costs.

than for the period between the final decision and the commencement of the regulatory period, which would not be commensurate with prevailing market conditions.

Accordingly, the Tribunal has decided that a debt margin over the risk free rate that meets the requirements of 8.30 of the Code is in the range 1.13 to 1.22 per cent, as set out in Table 8.4.

Table 8.4 Tribunal's decision on debt margin (basis points)

	BBB+	BBB
CBASpectrum ¹⁹⁶	100	109
Debt raising costs	13	13
Margin over risk free rate	113	122

As set out in 8.4.1 of this decision, the Tribunal is of the view that the use of probability distributions to assess volatility in parameters is permitted by the Code. The Tribunal accepts that the use of a uniform distribution for the debt margin meets the requirements of the Code.

8.4.5 Gearing level

For its draft decision, the Tribunal compared AGLGN's proposed debt to total assets (or gearing level) of 60 per cent to the gearing levels of comparable companies listed on the ASX. The Tribunal remains satisfied that the proposed level meets the requirements of section 8.30 of the Code.

8.4.6 Dividend imputation factor (gamma)

In its draft decision, the Tribunal was satisfied that AGLGN's proposed dividend imputation utilisation rate of 0.5 to 0.3 met the requirements of section 8.30 of the Code. In reaching this view, the Tribunal took into account Origin Energy's submission,¹⁹⁷ which concluded that a higher, unspecified value should be used as changes under the *New Business Tax System (Miscellaneous) Act (No. 1) 2000 (Cth)* make them more valuable to Australian investors.

The Tribunal also took into account several academic studies,¹⁹⁸ and recent independent expert reports on ASX-listed companies prepared by market practitioners.

¹⁹⁶ Average of 20 days to 13 April 2005.

¹⁹⁷ Origin Energy submission, 19 April 2004, p 6.

¹⁹⁸ Cannavan, Finn & Gray (2004), 'The value of dividend imputation tax credits in Australia', *Journal of Financial Economics* (Netherlands), 73, No. 1, pp167-97, July; Twite & Wood, *The Pricing of Australian Imputation Tax Credits: Evidence from Individual Share Futures Contracts*, working paper, AGSM, 2002, p 22; Hathaway & Officer, *The Value of Imputation Tax Credits*, working paper, Melbourne Business School, 1999; Bruckner, Dews & White, *Capturing Value from Dividend Imputation*, McKinsey and Company, 1994; Brown & Clarke, *The ex dividend day behaviour of Australian share prices before and after dividend imputation*, *Australian Journal of Management* 18, 1, 1993; Walker & Partington, *The value of dividends: evidence from cum-dividend trading in the ex-dividend period*, *Accounting and Finance*, vol 39, 1999; and Chu, H., Partington G. *The market value of dividends: theory and evidence from a new method*, working paper, UTS, 2001.

In its response to the Tribunal's draft decision, AGLGN submitted that since its original revised access arrangement proposal, it has received advice from Strategic Finance Group (SFG)¹⁹⁹, and now believes that there is strong evidence for a gamma of zero. However, AGLGN proposed a reduction in gamma to a range of 0.5 to 0.1 because using zero would be a significant move away from regulatory practice over the past six years.

SFG's report considers nine studies, seven of which the Tribunal took into account in reaching its draft decision. The two new papers are Bellamy and Gray 2004²⁰⁰ and Chu, Loneragan, Partington and Stewart 2001.²⁰¹ The Tribunal has now taken into account the former; and noted SFG's conclusion that the latter makes similar conclusions to the Chu and Partington 2001 study. The Tribunal notes SFG's arguments about the weight that should be placed on each of the nine studies.

The Tribunal's view is that AGLGN's new proposal is inconsistent with and not supported by the conclusions of its consultant's report, which is that gamma has no value. After considering the new evidence provided by AGLGN along with other information about market practice²⁰², the Tribunal is not satisfied that there is sufficient evidence to alter the gamma range. The Tribunal has decided to confirm its draft decision that a value for gamma in the range 0.5 to 0.3 meets the Code's requirements.

As set out in 8.4.1 of this decision, the Tribunal is of the view that the use of probability distributions to assess volatility in parameters is permitted by the Code. The Tribunal accepts that the use of a uniform distribution for gamma meets the requirements of the Code.

8.4.7 Tax rate

The Tribunal remains satisfied that the use of the statutory tax rate of 30 per cent proposed by AGLGN meets the requirements of section 8.30 of the Code.

8.4.8 Equity beta

The Tribunal's draft decision was that an equity beta range of 0.8 to 1.0 met the requirements of section 8.30 of the Code.

In its response to the draft decision, AGLGN proposed use of a uniformly distributed equity beta in the range 0.9 to 1.1 supported by advice from Strategic Finance Group (SFG).²⁰³ AGLGN states that 1.0 is generally accepted in regulatory decisions but that a uniform distribution around this estimate is statistically appropriate to allow for uncertainty.

¹⁹⁹ "The value of imputation franking credits: gamma", Strategic Finance Group, October 2004, included by AGLGN as an attachment to its response to the draft decision dated 7 February 2005.

²⁰⁰ Bellamy, D. and S. Gray (2004), "Using Stock Price Changes to Estimate the Value of Dividend Franking Credits" Working Paper University of Queensland Business School.

²⁰¹ Chu, H., W. Loneragan, G. Partington, and R. Stewart (2001) "Dividend Values Implicit in Rights Prices." Working Paper, University of Technology Sydney.

²⁰² These independent expert valuation reports are listed in the footnote in 8.4.3 on market risk premium.

²⁰³ "The Equity Beta of an Energy Distribution Business, Final report prepared for AGL", by Strategic Finance Group, 10 February 2005, provided by AGLGN on 16 February 2005 to support its response to the draft decision dated 7 February 2005.

In reaching its draft decision, the Tribunal took into account the view submitted by the EMRF²⁰⁴ that AGLGN's proposed equity beta of 1.0 was too high, and the comprehensive study on the equity beta it submitted in support of this view, which concluded that the equity beta of a regulated business should be no higher than 0.3 to 0.7.²⁰⁵ The Tribunal now notes EMRF's submission in response to the draft decision²⁰⁶ that a range of 0.8 to 1.0 is too high, providing evidence that a Code-compliant equity beta applicable to AGLGN should be in the order of 0.6 to 0.8.

In making its draft decision, the Tribunal also undertook its own assessment of the equity betas of companies comparable to AGLGN that are traded on the Australian share market. The analysis has been updated for this final decision. As part of this assessment, it re-levered and de-levered (as described in Box 8.1) these equity betas to calculate an asset/equity beta reflecting the target capital structure of 60 per cent debt/40 per cent equity (Table 8.5). The Tribunal's analysis indicates that equity betas for these companies have historically been lower than unity.

Table 8.5 Tribunal's equity beta analysis

	Equity beta [°] December 2000	Equity beta [°] June 2002	Equity beta [°] December 2004	Tribunal's de-levered asset beta December 2004 [#]	Tribunal's equity beta December 2004 [*]
Australian Gas Light	0.69	0.36	0.03	0.02	0.05
Alinta	-	0.10	0.40	0.20	0.48
Envestra	0.31	0.59	0.41	0.12	0.30
Australian Pipeline Trust	-	0.44	0.44	0.23	0.58
GasNet Australia	-	-	0.18	0.06	0.15

[°] OLS beta, as reported in AGSM Risk Measurement Service.

[#] Based on December 2004 observed equity beta, debt beta = 0, cost of debt = 6.9%.

^{*} Re-levered from Tribunal's December 2004 asset beta using the Tribunal's gearing, debt beta = 0.

The Tribunal also examined the trends in equity betas for these companies and, as it did for the draft decision, notes that:

- the equity beta for Australian Gas Light (of which AGLGN is a subsidiary) has decreased over the last three years
- equity betas for comparable companies based on current market conditions are lower than the range (0.9 to 1.1) applied in the current access arrangement
- historically, equity betas have been volatile.

An assessment of the trend in Australian Gas Light's equity beta and the nature of Australian Gas Light's asset mix over the last few years, supports the conclusion that the equity beta for AGLGN has decreased over the current access arrangement.

²⁰⁴ EMRF submission, May 2004, p 11.

²⁰⁵ The study also provides a supportive analysis of return on assets (EBIT/Assets) derived from accounting data. However, this type of analysis does not take into account risk and does not reflect prevailing market conditions.

²⁰⁶ EMRF submission, 25 February 2005, p 1.

The equity beta is a forward-looking parameter. Therefore a backward-looking equity beta will not of itself reflect prevailing market conditions over the proposed access arrangement period. However, the backward-looking equity betas of comparable companies are a relevant consideration because they indicate trends and therefore assist in determining the equity beta of AGLGN over the proposed access arrangement period. The observed trend in historical equity betas does not provide a precise indication of the equity beta for the proposed access arrangement period.

In determining the equity beta that meets the requirements of section 8.30 the Tribunal took into account the objectives in section 8.1 and the factors in section 2.24 of the Code. An equity beta having the values indicated by current market observations may ensure the economically efficient operation of the covered pipeline over the access arrangement. However the Tribunal does not consider that it would meet AGLGN's legitimate business interests, because a reduction in the equity beta value from 0.9 – 1.1 (used in the current access arrangement) to 0.5 would substantially reduce AGLGN's cost of equity (assuming all other parameters are constant).

A sudden and substantial reduction in the cost of equity capital might make it difficult for AGLGN to attract capital for essential capital expenditure (assuming all other costs and revenues are determined at the start of the expected access arrangement). Furthermore, such a reduction could send an incorrect signal to new entrants in the market and thus limit competition. The Tribunal notes that regulators will continue to measure the value of equity beta in the light of emerging market evidence.

As set out in 8.4.1 of this decision, the Tribunal is of the view that the use of probability distributions to assess volatility in parameters is permitted by the Code. The Tribunal accepts that the use of a uniform distribution for equity beta meets the requirements of the Code.

For these reasons, the Tribunal is satisfied that an equity beta uniformly distributed around 0.9, the mid-point of the Tribunal's draft decision range of 0.8 to 1.0, meets the requirements of section 8.30 of the Code.

Box 8.1 Tribunal's analysis of equity betas of comparable companies

The methodology used to estimate an equity beta for a business that is not publicly traded from comparable Australian listed public companies involves removing the effect of the comparable business' gearing and tax regime by de-levering the equity beta to obtain the asset beta (using the Monkhouse formula), then re-levering the asset beta to reflect the gearing and tax rate applicable to the not publicly traded business (again using the Monkhouse formula).

The Monkhouse formula²⁰⁷ is one of several different re- and de-levering formulae available, but is the most commonly used formula. It is:

$$\beta_e = \beta_a + (\beta_a - \beta_d) \times \left[1 - \left(\frac{R_d}{1 + R_d} \right) \times (1 - \gamma) \times T_c \right] \times \frac{D}{E}$$

Where β_e is the equity beta, β_a is the asset beta, β_d is the debt beta, R_d is the cost of debt, γ is the value of imputation tax credits, T_c is the statutory tax rate, E and D are respectively the proportions of equity and debt in the capital structure.

The Tribunal notes that although AGLGN stated an asset beta of 0.4 in its submission, it has not used this as a starting point for calculating the equity beta and consequently has not applied the Monkhouse formula.

8.4.9 Pre-tax real rate of return range

As discussed above, the Tribunal is not satisfied that the interest rates, implied expected inflation rate, debt margin, market risk premium, gamma and equity beta used by AGLGN to calculate its proposed pre-tax real WACC range of 5.4 to 9.2 per cent meet the requirements of section 8.30 of the Code. Therefore it cannot be satisfied that the proposed pre-tax real WACC range meets the requirements of section 8.30 of the Code.

When the proposed values for the interest rates, implied expected inflation, debt margin, market risk premium and equity beta parameters are amended so that they meet the requirements of section 8.30 of the Code, the resulting range for the pre-tax real WACC is 5.9 to 7.3 per cent (Table 8.6).

²⁰⁷ First published in: Monkhouse, P. *Adapting the APV valuation methodology and the beta gearing formula to the dividend imputation tax system*, Accounting and Finance 37, 1, May 1997, pp 69 - 88.

Table 8.6 WACC range that meets the Code requirements

Parameter	Distribution characteristic	Value
Nominal risk free rate		5.7%
Inflation		2.8%
Real risk free rate		2.8%
Market risk premium	Uniform	5.5%-6.5%
Debt margin	Uniform	1.13%-1.22%
Debt to total assets		60%
Dividend imputation factor (gamma)	Uniform	0.5-0.3
Tax rate		30%
Asset beta	Uniform	0.3 – 0.4
Debt beta		0.0
Equity beta	Uniform	0.8 – 1.0
WACC range (pre-tax real)		5.9 – 7.3%

8.4.10 Rate of return that reflects capital redundancy and other asymmetric risks

AGLGN's December 2003 proposal recognised the presence of asymmetric risk in the determination of the rate of return and incorporated it by adopting a rate of return towards the upper end of the WACC range.²⁰⁸ AGLGN's examples of asymmetric risk were the risk of asset stranding or bypass, risks of changes to regulatory policy or practice, and the nature of regulation that exposes investors to risk that regulatory returns will not be met with little likelihood that they could be exceeded.

Section 8.27 permits a reference tariff policy to include a capital redundancy mechanism that ensures assets that cease to contribute to the delivery of services are not reflected in the capital base. Having regard to section 8.27, the Tribunal considers that any asset stranding resulting from such a mechanism is a diversifiable risk and so should not be included in a rate of return that is based on the CAPM—regardless of whether it is symmetric or asymmetric. This is because the CAPM rewards investors only for non-diversifiable (systematic) risk. While the rate of return range is not adjusted to account for diversifiable risk as directed by section 8.27, the Tribunal's considerations in determining a point within the range had regard to any uncertainty associated with the capital redundancy mechanism proposed for the draft decision, including the slightly re-worded mechanism set out in 5.5 of this report.

The Tribunal remains of the view that the other two risks noted by AGLGN as asymmetric are both diversifiable and by definition not systematic. In relation to regulatory risk, it considers that this risk arises from a particular regulatory contract between the regulator and a regulated business. The same is true for the nature of regulation as this will differ between different regulatory contracts. Consequently, investors can minimise these risks by holding a diversified portfolio.

²⁰⁸ AGLGN's access arrangement information, December 2003, p 32.

8.4.11 Pre-tax real rate of return

AGLGN originally proposed a pre-tax real rate of return of 7.85 per cent. In making its draft decision, the Tribunal was not satisfied that this rate of return meets the requirements of Code. AGLGN has now proposed a pre-tax real rate of return of 7.9 per cent. In making its final decision, the Tribunal has reconsidered this matter, taking into account AGLGN's revised proposal for calculating the WACC range and setting the rate of return. However, it has not changed its position – it still considers that AGLGN's proposed pre-tax real rate of return does not meet the requirements of the Code. Its considerations in reaching this view are summarised below.

As discussed in the sections above, the Tribunal is satisfied that in generating a range for its pre-tax real WACC, AGLGN has chosen a well accepted financial model permitted by section 8.31 of the Code. However the Tribunal is not satisfied that the nominal and real interest rates (and the implied expected inflation), debt margin, gamma, market risk premium and equity beta proposed by AGLGN meets the requirements of section 8.30 of the Code.

When the proposed values for the interest rates, implied expected inflation, debt margin, gamma, market risk premium and equity beta parameters are amended so that they meet the requirements of section 8.30 of the Code, the resulting range for the pre-tax real rate of return is 5.9 to 7.3 per cent (see Table 8.6). However, section 8.4(a), in specifying that there be *a* return on the value of the capital base, demands that there be a single rate of return, rather than a range.

AGLGN's proposed pre-tax real rate of return of 7.9 per cent is not within the range of 5.9 to 7.3 per cent, and consequently the Tribunal is satisfied that it does not meet the requirements of section 8.30 of the Code.

As it did in making its draft decision, in assessing the rate of return (within the range) that meets the Code requirements for the final decision, the Tribunal took into account the objectives in section 8.1, the factors in section 2.24, AGLGN's proposal and relevant submissions. The Tribunal was mindful that where the objectives in section 8.1 conflict, it may determine the manner in which they can best be reconciled or which of them should prevail. The factors in section 2.24 assisted the Tribunal in reconciling any conflict in the section 8.1 objectives and in assessing the rate of return and the proposed access arrangement.

AGLGN's legitimate business interests and investments in the pipeline (section 2.24(a)) and the interests of users and prospective users (section 2.24(f)) particularly informed the Tribunal's consideration. Accordingly it undertook further analysis to assess the impact of different rates of return on AGLGN's financial position and on users and prospective users. This analysis indicated the following:

- A rate of return within the Code-compliant range, particularly one that is towards the top of that range, provides the service provider with an appropriate stream of revenue (section 8.1(a)) and recognises its interests and investment in the pipeline (section 2.24(a))
- A rate of return towards or at the top of the Code-compliant range, while improving the forecast financial position of AGLGN compared to a rate of return towards the

middle or bottom end of the range, may have a significant impact on the interests of users and prospective users (section 2.24(f) through the reference tariffs they pay.

- A rate of return towards the middle or the bottom end of the Code-compliant range is consistent with the objective of section 8.1(b) of replicating the outcome of a competitive market (whilst also having regard to the public interest in having competition in markets (section 2.24(e)) in that it reflects those of companies comparable to AGLGN in comparable markets.
- A rate of return towards or at the top of the Code-compliant range improves the forecast financial position of AGLGN compared to a rate of return towards the middle or bottom end of the range (section 2.24(a)) and minimises concerns as to the safe and reliable operation of the pipeline (section 8.1(c)).

The Tribunal also considered several submissions:

- EMRF²⁰⁹ submitted that it supports the Tribunal's draft decision on reducing AGLGN's proposed rate of return but considers that the reduction should be even greater. It also notes that there is a need to benchmark the regulatory WACC against independent market data, suggesting that this could be done using the actual performance of businesses such as on an EBIT/assets ratio basis²¹⁰.
- EnergyAustralia's²¹¹ submission supported a rate of return of 7.0 per cent as this is in line with electricity distribution network services providers in NSW.
- Orica²¹² submitted that a rate of return of 6.9 per cent is a fair and reasonable return on the capital base for a regulated monopoly with a captive customer base having the ability to very accurately project sales forecasts.
- The Energy Users Association of Australia (EUAA) submitted "rates of return being set for energy network businesses in Australia are not only sufficient but overly generous to the regulated entities. This point applies equally to the AGLGN draft decision. IPART needs to keep firmly in mind that gas users will pay for this generosity in their gas distribution charges and that it will have a negative impact on the cost competitiveness of business gas users in NSW."²¹³

The Tribunal also considered the impact of alternative rates of return on users and prospective users, and assessed their financial impact on AGLGN and its implications for investment decisions. The financial impact on AGLGN can be seen in Table 8.7.

²⁰⁹ EMRF submission, 25 February 2005, pp 1 and 5.

²¹⁰ The Tribunal notes that the EBITDA/assets ratio is based on accounting data whereas the WACC is based on share and debt market data.

²¹¹ EnergyAustralia submission, 25 February 2005, p 1.

²¹² Orica submission, 28 February 2005, p 2.

²¹³ EUAA submission, 21 March 2005, p 3.

Table 8.7 Financial Indicators²¹⁴

	2004 7.9%	2004 7.00%	2010 7.9%	2010 7.00%
EBITDA interest cover	3.2	3.2	3.1	2.9
Funds flow net debt payback	9.2	9.2	8.9	9.8
Internal financing ratio	1.4	1.4	1.2	1.1
Funds flow adequacy	1.0.	1.0	1.1	1.1

The Tribunal's analysis indicates that a rate of return of 7.0 per cent would have no material effect on AGLGN's financial viability as against that proposed by AGLGN. However, it would better meet the interests of users and prospective users.

Having considered these matters the Tribunal remains satisfied that a rate of return of 7.0 per cent meets the Code requirements, including because it best reconciles the objectives in section 8.1 as articulated by the Tribunal.

Accordingly, the Tribunal requires AGLGN to amend its proposed access arrangement as set out in 8.5 below.

8.5 Amendment required

Amendment 11 - Pre-tax real rate of return

The proposed access arrangement must be amended so that the pre-tax real rate of return used in the methodology to determine total revenue and reference tariffs must be 7.0 per cent.

²¹⁴ AGLGN did not provide this financial analysis in its proposal. The Tribunal has used its own modelling of AGLGN's proposal updated for changes set out in its 7 February 2005 response to the draft decision; the only variable that differs is the rate of return.

9 NON-CAPITAL COSTS

The total revenue includes an amount for non-capital costs based on the service provider's forecast operating, maintenance and other non-capital expenditure over the proposed access arrangement period. This amount must include only those costs incurred by a prudent service provider acting efficiently in accordance with accepted and good industry practice.

9.1 Tribunal's findings

The Tribunal is not satisfied that AGLGN's proposed non-capital costs meet the requirements of the Code. In addition, the Tribunal is not satisfied that AGLGN's proposed return on working capital meets the requirements of the Code. It requires that, for the purpose of determining the total revenue, AGLGN amend its non-capital costs and net working capital as set out in 9.5 below.

9.2 Code requirements

Section 8.36 of the Code defines non-capital costs as the operating, maintenance and other costs incurred in the delivery of the reference service that may include, but are not limited to, costs incurred for generic market development activities aimed at increasing long-term demand for the delivery of the reference service.

Section 8.37 specifies that these non-capital costs may be recovered through reference tariffs, except for any that would not be incurred by a prudent service provider, acting efficiently, in accordance with accepted and good industry practice, to achieve the lowest sustainable cost of delivering the reference service.

9.3 AGLGN's proposal

AGLGN proposed that its revised access arrangement commence from 1 January 2005, and submitted proposed non-capital costs that reflected this. However, under the Code, the revised access arrangement is not effective until after the Tribunal has issued its final decision. Therefore, in its analysis and considerations, the Tribunal has expected that the access arrangement period will commence on 1 July 2005, and has treated the financial year 2004/05 as part of the current access arrangement. AGLGN's proposal as set out in this section has been adjusted to reflect this.

AGLGN proposed total non-capital costs of \$598.1m (2005 dollars) over the expected access arrangement period (the five years from 1 July 2005 to 30 June 2010). The proposed cost components that make up this total are shown in Table 9.1.

In addition, AGLGN proposed an allowance for a return on working capital. It allocated working capital entirely to the distribution system²¹⁵, and proposed the net working capital over the expected access arrangement period (the five years from 1 July 2005 to 30 June 2010) shown in Table 9.2.

²¹⁵ As noted above in 7.2.2, AGLGN proposed to treat its two covered distribution pipelines (NSW distribution system and Central West distribution system) as a single covered pipeline with a single aggregated capital base. AGLGN allocated working capital to this single covered pipeline.

Table 9.1 AGLGN's proposed non-capital costs - access arrangement information (\$million, real 2005)

	2005/06	2006/07	2007/08	2008/09	2009/10	Total
Operation & Maintenance	61.5	62.2	62.5	62.9	63.2	312.3
Administration & Overheads	19.0	19.2	19.3	19.3	19.4	96.2
Market Operations	4.3	4.3	4.3	4.3	4.3	21.5
Marketing	16.5	16.5	16.5	16.5	16.5	82.5
Controllable non-capital costs	101.3	102.2	102.6	103.0	103.4	512.5
Government Levies	3.9	3.9	3.9	3.9	3.9	19.5
Retail Contestability	3.9	3.9	3.9	3.9	3.9	19.5
UAG	9.1	9.3	9.3	9.4	9.5	46.6
Total non-capital costs	118.2	119.7	119.7	120.2	120.7	598.1

Source: AGLGN, *Access Arrangement Information for NSW Network*, December 2003, Table 6.4.

Table 9.2 AGLGN's proposed working capital, 2005/06 to 2009/10 (\$million, nominal)

	2005/06	2006/07	2007/08	2008/09	2009/10
Net working capital	48.6	51.6	54.5	57.7	61.7

Source: AGLGN, *Access Arrangement Information for NSW Network*, December 2003, Table 5.19.

In its response to the draft decision, AGLGN pointed out that the non-capital costs allowed by the Tribunal in the draft decision do not reflect the position on working capital that was agreed between it and ECG (the consultant commissioned by the Tribunal to undertake a review of AGLGN's total costs). It also proposed two revisions to the non-capital costs included in its original submission.²¹⁶ These were to:

- include IT expenditure incurred during the period 2000 to 2004 (which it had inadvertently omitted from the December 2003 submission)
- include additional costs due to changes in the demand forecasts for the network.

9.4 Tribunal's analysis and considerations

In making its draft decision, the Tribunal considered whether each component of AGLGN's proposed non-capital costs meet the requirements of the Code. As described in Chapter 7 of this report, it commissioned ECG to undertake a review of AGLGN's total costs. ECG examined AGLGN's proposed non-capital costs to assist the Tribunal to assess whether these expenditures 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 reference services. The Tribunal met with both ECG and AGLGN as part of the review process and undertook a detailed analysis of each of the categories of non-capital costs.

²¹⁶ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, pp 23-24.

In making its final decision, the Tribunal reconsidered the issues that it considered in the draft report. It has not changed its position on most of the categories of non-capital costs. Specifically, it considers that AGLGN's proposed:

- expenditure on operation and maintenance meets the requirements of the Code
- administration and overhead costs do not meet the requirements of the Code
- market operations costs may be recovered through reference tariffs, but that the level of these costs does not meet the requirements of the Code
- marketing expenditure meets the requirements of the Code
- expenditure on government levies (as revised in October 2004, in response to ECG's review) meets the requirements of the Code
- contestability costs meet the requirements of the Code
- UAG costs do not meet the requirements of the Code.

In response to AGLGN's comments and proposed adjustments to non-capital costs submitted in response to the draft decision, the Tribunal has reconsidered and decided to change the required amendment on working capital to reflect the position agreed between AGLGN and ECG. The Tribunal has also considered the additional demand driven costs proposed by AGLGN and ECG's review of those costs. In relation to these additional costs, the Tribunal considers that:

- AGLGN's proposed IT expenditure cannot be included in the cost of service calculation as it is non-capital expenditure that was incurred in the current access arrangement period (that is, it is not expenditure that is forecast to be incurred over the term of the proposed access arrangement)
- AGLGN's additional costs resulting from the changed demand forecasts meets the requirements of the Code for inclusion in the cost of service calculation.

The Tribunal's considerations in relation to each of these cost elements are discussed below. The amendments required are set out in 9.5 below.

9.4.1 Operation and maintenance expenditure

AGLGN's proposed total operation and maintenance expenditure is \$312.3m (2005 dollars). This total includes a real efficiency saving of 1.5 per cent per annum after taking into account growth. In comparison, the efficiency saving implied in the operation and maintenance cost component used to establish total revenue for the current access arrangement was 3 per cent.

The Tribunal considered stakeholders' concern about the level of AGLGN's proposed operation and maintenance costs, the relationship between these costs and AGLGN's proposed capital expenditure, and the proposed halving of the present efficiency factor.²¹⁷ ECG also took these submissions into account as part of its review.

²¹⁷ Orica submission, 3 May 2004, EnergyAustralia submission, 20 April 2004 and Energy Markets Reform Forum submission, 7 May 2004.

ECG considered the trends in productivity gains by the gas industry in recent years. It concluded that these gains had slowed dramatically, and that the 3 per cent per annum efficiency saving implied in the Tribunal's final decision on the current access arrangement could not be sustained.²¹⁸ It also considered AGLGN's forecast increase in customer numbers and the productivity gains that might be expected from proposed capital expenditure on renewing mains, increasing residential meter replacement, and upgrading IT systems. Based on its findings, ECG reported that AGLGN's proposed real efficiency saving of 1.5 per cent per annum after allowing for growth was reasonable.

Since the Tribunal released its draft decision, Orica reiterated its view that the efficiency saving should be higher and supported the views raised in submissions prior to the draft decision.²¹⁹ Having had regard to all of the submissions it received and to the findings of ECG's review, the Tribunal is satisfied that AGLGN's proposed operations and maintenance expenditure does 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 delivering reference services.

9.4.2 Administration and overheads

AGLGN's proposed expenditure on administration and overheads is \$96.2m (2005 dollars).

ECG considered this forecast expenditure as part of its total cost review, and found that it exceeds the level of expenditure it considered would meet the requirements of the Code. It considered that because the dramatic increase in insurance premiums experienced in recent years has now subsided, and there is more certainty in the regulatory environment, AGLGN should be able to achieve a real efficiency saving of 1.5 per cent per annum in its corporate overhead costs. This would result in a saving of \$3.0m (2005 dollars) over the five financial years 2005/06 to 2009/10.

In its final submission prior to the draft decision,²²⁰ AGLGN responded to these ECG findings. It accepted that its administration and overheads costs for the period 2005/06 to 2009/10 could be reduced by the amount recommended by ECG due to reductions in the forecast level of insurance premiums since it prepared its proposal.

Given ECG's findings and AGLGN's acceptance of these findings, the Tribunal is not satisfied that AGLGN's proposed administration and overheads expenditure of \$96.2m (2005 dollars) does 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, as required by section 8.37 of the Code. It requires AGLGN to amend its proposed access arrangement information so that this amount is reduced by \$3.0m.

²¹⁸ ECG, *Review of AGLGN gas access arrangement*, August 2004, p 97.

²¹⁹ Orica submission, February 2005, p 2 and comments at 23 March public forum

²²⁰ AGLGN final submission on ECG's review of AGLGN's total costs, 6 October 2004, Section 4.4.

9.4.3 Market operations

AGLGN's proposed expenditure on gas market operations is \$4.3m (2005 dollars) per year. Gas market operations include activities such as:

- managing load shedding
- monitoring gas quality
- gas balancing
- approving type B (industrial and commercial) appliances.

AGLGN submitted that the costs of the first two of these items were not included in the total revenue calculation for its current access arrangement as they were overlooked. It estimated the forecast level of these costs for the proposed access arrangement period on the basis that they represent 70 per cent of its control centre costs.

The Tribunal received only one submission that commented on the proposed market operations costs. Orica put the view that these costs should not be included in non-capital costs as market operations already form part of the scope of work for a network operator.²²¹ It also argued that the approval of Type B (industrial and commercial) appliances should be funded on a 'user pays' system. In its response to the draft decision, Orica restated its objection to allowing these costs to be included in non-capital costs.²²²

ECG assessed the proposed market operations costs as part of its review, and took Orica's comments into account. AGLGN provided ECG with a breakdown of these costs (on a confidential basis), but ECG found that this information was insufficient for it to be able to comment on the efficiencies of the various activities. However, based on its knowledge of accepted and good industry practice, it considered that allocating 70 per cent of control centre costs to market operations activities exceeded the amount that a prudent service provider (acting in accordance with the Code) would spend. In its view, allocating 50 per cent of control centre costs to these activities would be more appropriate (with the remaining 50 per cent to be allocated to routine operations). This would result in forecast market operations costs of \$3.5m (2005 dollars) per year, rather than AGLGN's proposed \$4.3m (2005 dollars).

In response to ECG's report, AGLGN submitted²²³ that it estimated the cost it currently incurs to provide market operations services by questioning the operating managers involved. It also suggested that an alternative way of assessing its proposed market operations costs would be to compare them with the costs actually incurred in Victoria, and that this comparison would result in a much higher value. It therefore maintained that 70 per cent was the most reliable estimate of the proportion of control centre costs required to provide market operations services.

Taking into account the views outlined above, the Tribunal is satisfied that AGLGN's proposed market operations costs are non-capital costs that may be recovered through reference tariffs in accordance with the Code requirements. However, it is not satisfied that AGLGN's proposed level of these costs does not exceed the amount that would be invested

²²¹ Orica submission, 6 October 2004.

²²² Orica submission, February 2005, p 3 and comments at 23 March public forum

²²³ AGLGN submission, 6 October 2004.

by a prudent service provider acting efficiently, in accordance with accepted good industry practice, and to achieve the lowest sustainable cost of delivering reference services. After taking these matters into account, it agrees with ECG and considers that \$3.5m (2005 dollars) per year is the prudent and efficient level for this cost that meets the requirements of the Code, and requires AGLGN to amend its proposed access arrangement information accordingly.

9.4.4 Marketing

AGLGN's proposed total expenditure on marketing is \$82.5m (2005 dollars). It submitted that the level of this proposed expenditure maintains its marketing costs at their forecast 2004 level of \$13.4m (2005 real) per year, plus an additional \$3.0m (2005 dollars) per year to promote gas water heating to existing gas customers who do not currently use gas for this purpose. It argued that this level of expenditure is justified because gas is a discretionary fuel in NSW and therefore users and retailers need incentives to connect to gas.

The Tribunal received several submissions on the proposed marketing costs. EMRF questioned whether AGLGN requires such large marketing costs to promote gas water heating to gas customers. It suggested that allowing AGLGN to recover such costs through its reference tariffs effectively cross subsidises its affiliate, AGL Energy Sales and Marketing. It concluded that AGLGN's marketing costs are excessive and should be subject to benchmarking against industry best practice.²²⁴

EnergyAustralia also submitted that AGLGN's proposed marketing costs were too high. It argued that accepting these costs was inconsistent with the Tribunal's position regarding marketing under the Electricity Code, and might reverse the objectives of the 2000 final decision, where AGLGN's marketing expenditure was substantially reduced on the basis that it was significantly higher than industry benchmarks. However, EnergyAustralia submitted that other marketing expenditure that is specifically targeted at the development and/or installation of new technologies that are beneficial from an environmental or energy efficiency perspective should be allowable.²²⁵

ECG examined AGLGN's business case for using marketing expenditure funds for encouraging existing gas users to switch to gas water heating. It found AGLGN's proposed assumptions to be reasonable and meet the Code requirements. The business case indicated that the extra revenue gained from the higher throughput of gas exceeded the initial outlay, and the internal rate of return generated was significantly higher than the 7.85 per cent per year pre-tax real rate of return proposed by AGLGN for the proposed access arrangement period. ECG concluded that the forecast expenditure was prudent and efficient in accordance with section 8.37 of the Code.

Having had regard to the Code, ECG's conclusions, AGLGN's submissions and other stakeholder submissions, the Tribunal is satisfied that this proposed expenditure does 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 delivering reference services and therefore meets the requirements of the Code.

²²⁴ Energy Markets Reform Forum submission, 7 May 2004.

²²⁵ EnergyAustralia submission, 20 April 2004.

9.4.5 Government levies

AGLGN's proposed expenditure on government levies is \$3.9m (2005 dollars) per year over the proposed access arrangement period, including \$1.7m (2005 dollars) per year for authorisation fees. However, in its submission in response to ECG's total cost review, AGLGN advised that authorisation fees should be \$1.0m (2005 dollars) per year, resulting in total proposed expenditure of \$3.2m (2005 dollars) per year to reflect historic actual fees paid.²²⁶

Having had regard to the Code requirements, ECG's conclusions, AGLGN's submission, other stakeholder submissions and its own analysis, the Tribunal is satisfied that AGLGN's revised proposed expenditure of \$3.2m (2005 dollars) on government levies does 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 delivering reference services. It therefore requires AGLGN to include this revised proposed expenditure in its access arrangement information.

9.4.6 Retail contestability

AGLGN's proposed expenditure on full retail contestability (FRC) is \$3.9m (2005 dollars) per year.

ECG analysed these costs as part of its total cost review and found that there were reasonable grounds to accept them as meeting the Code requirements.²²⁷ The Tribunal agrees with ECG's finding and is satisfied that the proposed FRC costs do 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 delivering reference services, and therefore meets the requirements of the Code.

9.4.7 UAG

AGLGN's proposed UAG costs are \$46.6m over the proposed access arrangement period, based on a UAG level of 2.2 per cent and a forecast gas price of between \$4.49 and \$4.53 per GJ.

ECG²²⁸ examined this proposal, and noted that AGLGN's proposed capital expenditure on system reinforcement, renewal and replacement (discussed in Chapter 7 of this report) should result in a high proportion of the remaining ferrous network being rehabilitated during the proposed access arrangement period, particularly the 2.5 per cent of the network identified by AGLGN as having considerably worse-than-average reliability. As this should result in a reduced level of gas leakage, ECG considered that, provided AGLGN prioritised its capital program so that these worse-than-average areas are rehabilitated first, the UAG level should fall to 2.1 per cent by halfway through the period. It therefore recommended that to meet the Code's requirements, UAG costs for 2004/05 to 2005/06 should be based on a UAG level of 2.2 per cent, and for 2006/07 to 2009/10 should be based on a UAG level of 2.1 per cent.

²²⁶ AGLGN submission to ECG report on AGLGN, 6 October 2004.

²²⁷ ECG, *Review of AGLGN gas access arrangement*, August 2004, p 101.

²²⁸ ECG, *Review of AGLGN gas access arrangement*, August 2004, p 102.

ECG also considered that AGLGN's forecast UAG price of around \$4.50/GJ is higher than would be paid by a prudent service provider, given the gradual increase in gas producer numbers in south-eastern Australia. It recommended that total UAG costs should be estimated based on a price of \$4.20/GJ (2005 dollars), to reflect the more competitive gas market environment. This recommendation was supported by Orica, which submitted that in its experience in the marketplace, AGLGN's forecast price is very high, and that ECG's recommended price is a more realistic forecast.²²⁹

In its submission in response to ECG's findings,²³⁰ AGLGN disagreed that its planned capital program should result in a fall in the level of UAG during the proposed access arrangement period. Rather, it claimed that if the Tribunal did not approve its proposed expenditure on pipeline rehabilitation in full, it would not even be able to achieve its proposed UAG target of 2.2 per cent. It also raised a new issue, arguing that as the UAG level is mostly driven by the tariff market, and as the tariff market is increasing as a proportion of the overall market, the UAG level should actually *increase*. Its calculations suggested that this level should increase to 2.4 per cent by 2010.

In relation to AGLGN's first point, the Tribunal recognises that leaks from pipes do contribute to UAG. However, given that only 5 per cent of AGLGN's network is not rehabilitated, it considers that the level of this contribution is not likely to be significant, and will be less significant than the contribution of metering errors. This point is illustrated by the fact that in Victoria, some 30 – 40 per cent of the distribution system comprises low pressure systems that have not been rehabilitated yet the UAG is, on average, still only 2.5 per cent. Based on AGLGN's argument, the Victorian system should have significantly more UAG. The Tribunal does not therefore accept AGLGN's argument.

In relation to AGLGN's second point, the Tribunal notes that historically, AGLGN's actual UAG has *decreased* as tariff market consumption has increased. It therefore does not accept this argument.

Having considered all the matters outlined above including ECG's findings, AGLGN's submissions, other stakeholders' submissions and its own analysis, the Tribunal is not satisfied that AGLGN's proposed UAG costs do not exceed the amount the 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 delivering reference services. It agrees with ECG's findings that, for UAG costs to meet the requirements of the Code they should be estimated based on a price of \$4.20/GJ (real 2005), a UAG level of 2.2 per cent for 2005/06 and a UAG level of 2.1 per cent for 2006/07 to 2009/10. Accordingly, the Tribunal requires AGLGN to amend its UAG costs so that they are no more than \$45.1m (2005 dollars) over the expected access arrangement period.

²²⁹ Orica submission to ECG report on AGLGN, 6 October 2004.

²³⁰ AGLGN submission to ECG report on AGLGN, 6 October 2004.

9.4.8 Cost of working capital

The Tribunal agrees that AGLGN should be allowed to recover the cost of maintaining an investment in working capital. AGLGN had estimated its proposed level of working capital using a payment cycle approach that deducted current liabilities (creditors) from current assets (debtors and unbilled gas and inventory). Subsequent discussions between AGLGN and ECG resulted in AGLGN agreeing to amend its assumptions to the following, which ECG considers are reasonable:

- tariff and contract debtors at 29 days of distribution revenue (tariff and contract markets)
- unbilled gas (accrued revenue) at 41 days of tariff market revenue
- inventories at no real change from the 2003/04 level
- operating cost creditors at 45 days of annual non-capital expenditure
- capital cost creditors at 27.7²³¹ days of annual capital expenditure.

The Tribunal agrees that AGLGN's amended assumptions for the working capital variables are reasonable. Its final decision on the rate of return to be applied to the capital base is set out in Chapter 8 of this report. The nominal pre-tax rate of return to be applied to the working capital is 9.7 per cent.²³²

Based on its conclusion that these assumptions are reasonable, the Tribunal requires AGLGN to make the amendment set out in 9.5 below.

9.4.9 IT utilisation fee

As noted in 7.3.2 above, prior to the release of the draft decision AGLGN advised the Tribunal that it had inadvertently omitted \$24.9m (nominal dollars) of AGL Corporate IT costs that should have been allocated to AGLGN. AGLGN has now proposed to include this expenditure in the cost of service calculation as a non-capital cost. Although the expenditure was capital by nature it was incurred by AGL Corporate Services Ltd not AGLGN, so AGLGN proposed that the cost be represented in the cost of service calculation by an IT utilisation fee payable to AGL Corporate Services.

The IT utilisation fee is designed to recoup, over the proposed access arrangement period, costs incurred during the current access arrangement period. The cost of service approach under the Code provides for total revenue (used as the basis for setting reference tariffs) to be calculated over the access arrangement period (in this case, the expected term is from 1 July 2005 to 30 June 2010). While past capital costs are used to roll forward the capital base, past non-capital costs are not included in the cost of service calculation. As AGLGN has proposed this expenditure as a non-capital cost that it incurred over the previous access arrangement period, the Tribunal considers that the inclusion of this fee in the cost of service calculation does not meet the requirements of the Code.

²³¹ Note that this was incorrectly advised as 10.5 days in the Tribunal's draft decision.

²³² Applying the Fisher equation to the pre-tax real rate of return of 7.0 per cent and the inflation rate of 2.5 per cent.

9.4.10 Additional expenditure to meet higher demand

As noted in Chapter 6, the forecast demand incorporated in AGLGN's December 2003 submission has been updated several times over the course of the Tribunal's review. In its response to the draft decision, AGLGN submitted additional new facilities investment and non-capital costs to cater to the increased demand forecasts applied in the access arrangement.

ECG reviewed AGLGN's additional demand-related non-capital costs in light of the most recent demand forecasts from AGLGN.²³³ ECG concluded that AGLGN's method for determining the additional non-capital costs required in response to changes in demand was reasonable, and that AGLGN had based its analysis on the non-capital costs approved in the draft decision.²³⁴

The Tribunal accepts ECG's view, and is therefore satisfied that AGLGN's method for determining the additional costs required meets the requirements of the Code. However, it requires these costs to be amended to ensure that they reflect its final decision on demand forecasts (see Chapter 6).

The additional costs required in the category of non-capital costs as a result of the Tribunal's final decision on demand forecasts are shown in Table 9.3 below.

Table 9.3 Additional non-capital costs resulting from higher network demand that meets the requirements of the Code (\$million, real 2005)

	2005/06	2006/07	2007/08	2008/09	2009/10	Total
Operation & Maintenance	0.2	0.4	0.6	0.7	1.0	3.0
Administration & Overheads	0.0	0.1	0.1	0.3	0.3	0.8
Market Operations	0.0	0.1	0.1	0.1	0.2	0.5
Marketing	0.1	0.4	0.5	0.7	0.8	2.5
Controllable non-capital costs	0.4	1.0	1.3	1.8	2.2	6.8

Columns may not add due to rounding.

²³³ ECG also reviewed the new facilities investment to meet the extra growth. This is dealt with in chapter 7 (Capital Base).

²³⁴ ECG, *Review of AGLGN Response to the Draft Decision*, April 2005.

9.5 Amendments required

Amendment 12 - Non-capital costs

The proposed access arrangement must be amended so that the non-capital costs used to determine total revenue and reference tariffs comply with the values in Table 9.4 below.

Table 9.4 AGLGN's allowed non-capital costs (\$million, real 2005)

	2005/06	2006/07	2007/08	2008/09	2009/10	Total
Operation & Maintenance	61.7	62.6	63.1	63.6	64.2	315.3
Administration & Overheads	18.4	18.7	18.8	19.0	19.1	94.0
Market Operations	3.5	3.6	3.6	3.6	3.7	18.0
Marketing	16.6	16.9	17.0	17.2	17.3	85.0
Controllable non-capital costs	100.3	101.8	102.5	103.4	104.2	512.3
Government Levies	3.2	3.2	3.2	3.2	3.2	16.0
Retail Contestability	3.9	3.9	3.9	3.9	3.9	19.5
UAG	9.1	8.9	9.0	9.0	9.1	45.1
Total non-capital costs	116.5	117.8	118.6	119.5	120.4	592.9

Columns may not add due to rounding.

Amendment 13 - Net working capital

The proposed access arrangement must be amended so that the working capital used to determine total revenue and reference tariffs is calculated using:

- tariff and contract debtors at 29 days of distribution revenue (tariff and contract markets)
- unbilled gas (accrued revenue) at 41 days of tariff market revenue
- inventories at no real change from the 2003/04 level
- operating cost creditors at 45 days of annual non-capital expenditure
- capital cost creditors at 27.7 days of annual capital expenditure.

The rate of return to be applied to the working capital must be 9.7 per cent (nominal pre-tax).

10 COST AND REVENUE ALLOCATION

Under the cost of service approach, the total amount of revenue a service provider will require over the proposed access arrangement period is established by determining the costs it will incur over this period in providing its reference services²³⁵ (see Chapters 6 to 9). These costs are then allocated between the pipelines and other assets it uses to provide the reference services, and between the different customer classes (contract market customers and tariff market customers²³⁶) based on their forecast demand for each service. This allocation enables the reference tariff for each service to be calculated, based on the forecast cost of providing the service over the proposed access arrangement period.

The Tribunal considered whether AGLGN's proposed allocation of the total revenue meets the requirements of the Code. It particularly considered two major methodological changes AGLGN proposed that affect the allocation of revenue. The first is moving to a fully distributed cost methodology to allocate local network capital costs between contract customers and tariff market customers. The second is merging three Sydney trunk zones into one for the purpose of allocating trunk costs between contract market customers. This change would have price implications for contract customers who use all or part of the section of the trunk involved. It would also improve the efficiency and administrative simplicity of the new gas swap reference service AGLGN proposed to introduce (see Chapter 4).

These matters, and the amendments the Tribunal requires AGLGN to make to its proposed allocation of the total revenue, are discussed below.

10.1 Tribunal's findings

The Tribunal is not satisfied that AGLGN's proposed allocation of the total revenue meets the requirements of the Code, and requires AGLGN to amend its proposed access arrangement as set out in 10.5 below.

The Tribunal notes that AGLGN has agreed to implement these amendments.

10.2 Code requirements

Section 8.38 of the Code indicates how the total revenue is to be allocated between services. It specifies that the allocation of revenue (or costs) between services must, to the maximum extent that is commercially and technically reasonable, be cost reflective in terms of the costs that are directly attributable to the reference service. Costs shared with other services must also be cost reflective, with the share attribution in accordance with a methodology that meets the objectives in section 8.1 and is otherwise fair and reasonable. Section 8.42 stipulates the same requirements for the allocation of revenue (and costs) between users. Sections 8.1 and 2.24 are also relevant to the allocation of revenue (and costs) between services and users.

²³⁵ These costs include a return on its capital base, and its non-capital costs.

²³⁶ Contract market and tariff market customers are distinguished by the quantity of gas they consume, as specified in 4.3 of this report.

Where a user is receiving a discount (which implies the service provider is receiving less revenue from that user than is assumed in the calculation of reference tariffs), section 8.43 of the Code allows the service provider to recover some or all of that shortfall in revenue from other users if the regulator considers the discount to be a 'prudent discount'. Essentially the discount will be prudent if the following two conditions are satisfied:

- the nature of the market in which the user or prospective user operates, or the price of alternative fuels available to it, is such that if the service was priced at the nearest reference tariff (or, if the service is not a reference service, at the equivalent tariff) that user would not use it
- a reference tariff (or equivalent tariff) calculated without regard to revenues received from that user or prospective user would be greater than the reference tariff (or equivalent tariff) if it was calculated having regard to those revenues, on the basis that it is served at a price less than the reference tariff (or equivalent tariff).

Section 8.43 of the Code requires that the recovery of the revenue shortfall resulting from prudent discounts is done under either section 8.38 or section 8.42 and that the regulator is satisfied that it is fair and reasonable.

10.3 AGLN's proposal

AGLGN proposed to make two major methodological changes that will affect the allocation of the total revenue:

- It proposed to adopt a fully distributed costing methodology to allocate local network capital costs between contract and tariff market customers. This change is expected to result in a reduction in the costs allocated to contract customers, although to varying degrees across geographic areas.
- It also proposed to merge the three existing Sydney trunk zones into one zone for the purpose of allocating trunk costs between contract customers. In most (but not all) cases, this change is expected to result in an average reduction in trunk charges to contract customers.

AGLGN also updated all the data on which customer allocators are based.

AGLGN's proposed approach for allocating revenue (or costs) between services and users, including allocating trunk costs between contract customers, is outlined below.

10.3.1 Allocation of revenue (or costs) between services

Under the current access arrangement, local network capital costs are allocated to contract customers using a standalone cost methodology. AGLGN proposed that, instead, local network capital costs be allocated using the fully distributed cost methodology. With this approach, these costs are first allocated to the asset groups used to provide particular services, and then allocated between the contract and tariff markets based on their use of these services.

Capital costs (including a return on capital and depreciation) are firstly allocated to pipelines and other assets based on the pipeline and asset information in AGLGN's regulatory asset register.²³⁷

- For contract customers:
 - The asset and depreciation return on trunk assets (plus an allowance for working capital) is allocated according to the physical attributes of the trunk located in each trunk zone.
 - Local network capital costs (plus an allowance for working capital) are allocated to regions, based on the proportion of local network assets distributed to each region in accordance with the capital base.
- For tariff market customers, local network capital costs are allocated based on the value of fully distributed local network assets for the tariff market, plus an allocation for working capital.
- For both customer classes, metering capital costs are allocated based on the value of fully distributed metering capital assets for each customer market, plus an allowance for working capital for relevant metering assets.

Operating costs are allocated to pipelines and other assets based on an activity-based cost (ABC) approach, using AGLGN's forecast 2004/05 ABC information.²³⁸

- For contract customers:
 - Trunk operating costs are allocated to the Wilton to Newcastle and Wilton to Wollongong trunk lines. Physical asset characteristics (length and diameter) and proportions of MDQ consumed are used to allocate costs to each trunk zone.
 - Local network operating costs are allocated on a regional basis, based on the proportion of operating-cost-related local network assets allocated to each region.
- For tariff market customers, local network operating costs (which comprise activity costs and allocated overheads) are allocated based on the value of fully distributed local network assets for the tariff market.

After revenues (costs) have been allocated to assets, they are further allocated to the contract and tariff markets based on usage of these assets.

Most operating costs are allocated between contract and tariff market customers based on AGLGN's forecast 2004/05 ABC information, with three relatively minor exceptions:

- Unaccounted for gas (UAG) costs are allocated on the basis of derived allocators for each region within each customer class, based on a percentage of each class' estimated volume. Under this approach, the bulk of UAG costs are allocated to tariff market customers, while contract customers are allocated 0.5 per cent of estimated throughput volume.²³⁹ All UAG is allocated to the local network system as the UAG allocated to the transmission system is considered to be insignificant.
- Marketing costs are allocated to each customer class according to which market the costs relate to. The vast majority of these costs relate to the residential sector within the

²³⁷ AGLGN was required to maintain this register under the current access arrangement.

²³⁸ AGLGN's forecast 2004/05 ABC information is based on its ABC information for 2002/03, escalated by CPI and efficiency factors.

²³⁹ For most areas, this results in between 82 per cent and 89 per cent of UAG being allocated to tariff customers. The exception is Newcastle, where 73 per cent of UAG is allocated to tariff customers.

tariff market, so most are allocated to tariff market customers, along with tariff business sales costs. Only 0.6 per cent of marketing costs are allocated to contract customers.

- Contestability costs are allocated to the local network and to tariff market customers.

Trunk capital costs are allocated between contract and tariff market customers based on diversified MDQ through the transmission pipelines. Metering capital costs are allocated based on the estimated value of fully distributed capital assets for each market. In most cases, local network capital costs are allocated based on diversified MDQ for each segment.²⁴⁰ For country Trunk Receiving Station (TRS) facilities, capital costs are allocated to contract and tariff market customers based on diversified MDQ through the country region.

All costs related to disposals are allocated to tariff market customers, as they relate principally to the local distribution network for which contract customers have minimal allocations, and virtually all meter disposals relate to the tariff market. In addition, AGLGN proposed to allocate the incremental costs and benefits of all future growth to tariff market customers.

10.3.2 Allocation of revenue (or costs) between users

Once revenues (or costs) have been allocated to assets and then customer classes (contract and tariff customers) for each asset, they are allocated between users in each customer class.

In the contract market, the proportion of revenues (or costs) allocated to an asset and then to the contract market is allocated to users based on their location and use of the asset. Local network costs are allocated according to the region (using postcodes as cost drivers) and the amount of MDQ requested. Postcodes are combined into five regions for Sydney and three regions each for Newcastle and Wollongong. The reference tariff for local network costs is capped to ensure equivalency of contract and tariff reference tariffs close to the threshold volume of 10 TJ per annum. The allocation of trunk costs between contract customers is explained below.

Revenues (or costs) that are allocated to assets and then the tariff market are then allocated between customers on the basis of usage of each asset class. Revenues (or costs) allocated to the tariff service are allocated to users according to a fixed rate and a rate based on usage. There is no regional differentiation in the tariff market.

Allocation of trunk costs between contract customers

Under the current access arrangement, the transmission system is divided into seven zones – the Wilton to Newcastle trunk line is divided into six zones, and the Wilton to Wollongong trunk line is one zone. Trunk costs are allocated to these zones, and customers are charged a cumulative price for each of the zones they use. This applies whether trunk services are taken as back haul or front haul from any receipt point to exit point. For the proposed access arrangement (as submitted in December 2003), AGLGN proposed to reduce the number of

²⁴⁰ The methodology for allocating local network capital costs for Wollongong is slightly different because of the presence of a major contract customer (in terms of MDQ) that uses only a small part of the network. Using the same methodology as other zones would result in a disproportionate allocation of costs to the contract market, therefore a different method – similar to that used to allocate revenues within the contract market to individual customer sites – has been adopted.

zones on the Wilton to Newcastle trunk line to four—by merging the three zones that currently span from Wilton to Horsley Park in Sydney into one zone.²⁴¹

Under AGLGN's proposal this new larger zone would be allocated the same portion of total trunk costs as the existing three zones it comprises, and all contract customers would face the same charge per MDQ for use of that new larger zone, regardless of whether they use the entire pipeline or a section of the pipeline in this zone. For example, with the proposed new zone, all customers delivering gas into the Sydney local network would face the same trunk capacity reservation charge per MDQ, regardless of whether their receipt point is at Wilton via the Moomba to Sydney Pipeline (MSP) or Horsley Park via the Eastern Gas Pipeline (EGP). Customers who use only a section of the new zone would pay more per MDQ than they would under the current three zone structure, while those who use the entire zone would pay less than they would under the current structure.

AGLGN stated that the proposed new Sydney trunk zone—and the single, uniform price for this zone—is designed to improve the functionality of its new gas swap service and thereby enhance the efficiency of sourcing gas from different receipt points on a daily basis.

10.4 Tribunal's analysis and considerations

Prior to making its draft decision, the Tribunal assessed whether AGLGN's proposed allocation of the total revenue meets the requirements of sections 8.38 and 8.42 of the Code. It also considered whether the proposed allocation methodology meets the objectives in section 8.1, and took into account the factors in section 2.24 of the Code. In making its final decision, it reconsidered each of these matters, taking into account the views expressed by AGLGN and other stakeholders in their responses to the draft decision.

The Tribunal has not changed its findings on most of the issues discussed in the report on its draft decision. Specifically, it considers that:

- the adoption of a fully distributed cost methodology is consistent with the requirements of the Code
- the allocation of all disposals and incremental benefits and costs of future growth to the tariff market customers does not meet the requirements of the Code
- the merger of three Sydney trunk zones into one uniformly priced zone does not meet the requirements of the Code
- AGLGN's proposed back haul rates meet the requirements of the Code.

However, it has changed its finding on the inclusion of conditions on user and receipt point swaps in the access arrangement, and no longer requires AGLGN to delete references to these conditions. The Tribunal's considerations in relation to each of these matters are summarised below.

²⁴¹ Under this proposal, the Wilton-Newcastle Trunk would be split into four price zones. Zones A and B would cover the Sydney region, and zones C and D cover the Central Coast and Newcastle regions. The Wilton-Wollongong Trunk is priced as a single zone E.

10.4.1 Adoption of a fully distributed cost methodology

Several stakeholders commented on AGLGN's proposed adoption of a fully distributed cost methodology for the purpose of allocating local network capital costs between assets.²⁴² In general, they were positive about the proposed approach and the reduction in contract customers' costs that would result from its adoption.

Having had regard to these comments, and to the requirements of the Code, the Tribunal considers that the adoption of a fully distributed cost methodology is consistent with the cost of service approach referred to in section 8 of the Code, and delivers a more cost reflective outcome by removing the cross-subsidy between the contract and tariff market segments under the existing arrangements. It is therefore satisfied that the allocation of local network capital costs to local network assets in accordance with this methodology is appropriate and consistent with the objectives in sections 8.1, 8.38, and 8.42 of the Code.

10.4.2 Allocation of all disposals and benefits and costs of future growth to tariff market customers

AGLGN's proposal to allocate all disposals and the incremental benefits and costs of future growth to tariff market customers may be administratively simple and, in the case of disposals, reflects the fact that most costs relate to the local distribution network. However, the Tribunal believes cost reflectivity is better served if such items are allocated between market segments based on the incidence within each market segment.

For this reason, it is not satisfied that AGLGN's proposed allocation is cost reflective to the maximum extent commercially and technically reasonable, in terms of the costs that are directly attributable to reference services, as required by sections 8.38 and 8.42 of the Code. It therefore requires AGLGN to make Amendments 15 and 16, as set out in 10.5 below. The Tribunal notes that AGLGN has agreed to implement both of these amendments.

10.4.3 Merger of three Sydney trunk zones into one zone

AGLGN argued that its proposed merger of the three Sydney trunk zones into one uniformly priced zone would enhance the efficiency of sourcing gas from alternative receipt points (mainly by improving the functioning of gas receipt point swaps), and would potentially increase wholesale trading activity and associated benefits to opportunistic traders and their customers. It claimed that offering its proposed gas swap service in conjunction with a uniformly priced Sydney zone would result in:

- A reduction in time required to request gas from different receipt points, which would enable spontaneous trade decisions. This is because with the proposed zone merger, it would no longer be necessary to change receipt points in the Gas Market Company's (GMC's) market systems – a process that currently takes five days.
- The elimination of the need to make contractual variations to standing data in GMC's market systems to accommodate short-term gas requests to organise temporary gas arrangements and return to standard arrangements – a process that can currently take up to 14 days.
- Improvements to the administrative flexibility of receipt point swaps because AGLGN would be neutral as to which receipt point is used, and swap arrangements would be

²⁴² EMRF submission, May 2004, pp 9-10, HUG submission, May 2004, pp 2-3.

the same for all users irrespective of their principal receipt point and whether or not they are the transferrer or the recipient.²⁴³ Short-term transactions could be dealt with using inventory accounting by overlaying gas swap transactions over standard reference service structures and market and operational procedures, given that each of the three receipt points are priced uniformly.

Several other stakeholders argued in their submissions that the proposed zone merger was not consistent with the Code in terms of its impact on cost reflectivity (sections 8.38 and 8.42) and on competition (section 8.1(b)). In relation to cost reflectivity, the main concern was that with the merger, a user would be required to pay for transportation across the entire length of the proposed Zone A, regardless of the length of pipe actually being used.²⁴⁴

In relation to competition, the main concern was that contract customers who use the EGP would be disadvantaged (relative to their current position), as they would no longer enjoy a tariff advantage over shippers on the MSP, and would be required to pay a disproportionate amount of AGLGN's revenue from within the new Sydney zone.²⁴⁵ Some stakeholders also commented that the merger would reduce the current level of competition between the EGP and the MSP, which they believe provides long-term benefits for gas competition in NSW.

In response to the Tribunal's draft decision not to approve the proposed zone merger, EnergyAdvice and EnergyAustralia indicated their support for this decision.²⁴⁶ However, Origin Energy and Orica disagreed with the decision. Origin Energy stated that the merger would assist in facilitating an effective gas swap market,²⁴⁷ as without the aggregation of delivery zones, AGLGN's proposed gas swap service would not be as efficient as it could be, which is likely to detract from the benefits of this service. Orica commented that the proposed zone merger would allow for a short term and short notice gas spot market, which is not possible without the merger.²⁴⁸ AGLGN also re-expressed its view that the proposed zone merger is a one-off opportunity to open up the wholesale gas market in NSW, which is likely to yield considerable long-term benefits.²⁴⁹

Having had regard to all the submissions it received, and the requirements of the Code, the Tribunal is still not satisfied that the proposed merger meets the requirements of the Code. It therefore requires AGLGN to make Amendment 14, as set out in 10.5 below. Its considerations and analysis in reaching this position are outlined below.

²⁴³ Under existing arrangements, it is easier for users to switch from Wilton to Horsley Park, than for users to switch to a receipt point upstream. In the latter case, the default position would be considered to be Wilton unless a swap is set up, imposing a more substantial burden on users predominantly using downstream receipt points as their principal receipt point.

²⁴⁴ Alinta (Duke Energy International) submission, April 2004, p 1, EnergyAustralia submission, April 2004, p 6.

²⁴⁵ Alinta (Duke Energy International) submission, April 2004, p 2, EnergyAustralia submission, April 2004, Table 2, EnergyAustralia submission, April 2004, p 7, EnergyAdvice submission, May 2004, p 4. EMRF submission, May 2004, p 10. EMRF submission, October 2004, p 3.

²⁴⁶ EnergyAdvice submission, February 2005, p 2, EnergyAustralia submission, February 2005, p 1.

²⁴⁷ Origin Energy submission, February 2005, p 2.

²⁴⁸ Orica submission, February 2005, p 3.

²⁴⁹ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, p 31.

Tribunal's analysis of cost reflectivity

The Tribunal considers that the allocation of trunk costs to contract customers who use the Wilton to Horsley Park section of the Wilton to Newcastle trunk line would be less cost reflective under AGLGN's proposed five trunk zone structure than it is under the existing seven trunk zone structure. This is because the level of cost reflectivity increases as the number of trunk zones increases (and the size of the geographic coverage of each zone decreases).

The Tribunal also considers that the level of cost reflectivity achieved with the proposed five zone structure is not the maximum that is commercially and technically reasonable, as required by the Code, given that AGLGN currently operates a seven zone structure and could technically and commercially continue to do so. Therefore, the Tribunal is not satisfied that the proposed zone merger meets the requirements of the Code.

Tribunal's analysis of competition issues

The Tribunal considered whether there would be benefits from enhanced competition associated with the proposed zone merger. In examining this issue, it was aware that requirements in sections 8.38 and 8.42 of the Code are essentially that tariffs should be as cost reflective as technically and commercially reasonable. It noted that there is no provision for waiving this requirement based on a weighing of the associated costs and benefits.

The Tribunal also considered the competition issues raised by stakeholders, including AGLGN, in terms of the factors in section 2.24 of the Code and the reference tariff principles in section 8.1. However, on balance, it found that there was no inconsistency between the seven zone pricing structure and the factors and principles in these sections of the Code. Therefore, the Tribunal finds that there is no basis for approving a pricing structure that does not satisfy the requirements of sections 8.38 and 8.42 of the Code.

The Tribunal analysed the impact of the proposed zone merger on the cost of delivered gas to customers, and compared these pricing outcomes with a charging structure that maintains the existing zones in accordance with the cost allocation model for the proposed access arrangement period. This analysis shows that contract customers who use less than all the current zones 1, 2, and 3 would receive a small relative price disadvantage under the zone merger, irrespective of which receipt point they use, although the bulk of customers in this group use Horsley Park as a receipt point. Customers who use all of the current zones 1, 2 and 3 would receive a price advantage under the proposed zone merger. These customers all use Wilton as a receipt point, and together comprise close to 80 per cent of all contract customers.

The significance of the proposed zone merger to competition in the market depends in part on the degree of disadvantage or advantage being experienced, its materiality to customers, and the net value of additional services available because of the zone merger. The Tribunal's analysis indicates that the degree of advantage for customers who use all of zones 1, 2, and 3 is in the order of 0.1 per cent of the cost of delivered gas. The degree of disadvantage for EGP customers and customers who use only zones 1 and/or 2 is between 0.2 and 1.6 per cent of the cost of delivered gas. Some customers informed the Tribunal that these levels of impact are not insignificant, and are capable of affecting customers' switching patterns

between retailers.²⁵⁰ Others indicated that the costs of the proposed merger would be outweighed by the overall benefits of a short-term gas supply market for all participants.²⁵¹

While demand for short-term trading capacity is in its infancy, it is expected to grow over the medium to longer term. Thus, support for the zone merger relates directly to the offering of a gas swap service and the relative enhancement to that service as a result of it being offered within a uniformly priced, single Sydney zone. Receipt point swaps themselves would simplify processes involved in sourcing gas under current standard arrangements and when short-term switches in receipt points are necessary.

It is possible to work within existing arrangements to shift short-term supply capacity to an alternative receipt point, and the terms and conditions of the current and proposed access arrangements do allow for switches to be made.²⁵² There are no administrative or other barriers to temporarily swapping receipt points under a seven-zone structure (although the commercial outcomes would be different). However, according to AGLGN, the process is cumbersome and seldom used.

Applying the objectives in section 8.1 of the Code, the Tribunal considers that the simplification of the network as a result of the proposed zone merger would act as an incentive for AGLGN to facilitate the development of the short-term market (section 8.1(f)). However, it does not consider that the benefits of such an outcome under section 8.1(f) outweigh the cost reflectivity considerations for market competition (section 8.1(b)); investment decisions up and downstream (section 8.1(d)); and efficiency in the level and structure of tariffs (section 8.1(e)).

The Tribunal recognises that there seems to be unanimous in-principle support for the facilitation of a short-term trading market, and for AGLGN's proposed gas swap service. It also considers that containing all network receipt points from Victoria, South Australia, and NSW within a single, uniformly priced zone would be the simplest way of facilitating short-term spot purchases of gas from these areas. However, it considers that the factors in section 2.24 of the Code, including that the economically efficient operation of the pipeline (section 2.24(d)), are better achieved where cost reflectivity is enhanced.

The Tribunal is also aware of the speculative element of any associated benefits of a short-term trading market, given the existence of long-term supply contracts for many customers and infrequent demand for more flexible supply arrangements. Therefore it is not satisfied that the strength of these benefits is sufficient to demonstrate that the proposed zone merger is consistent with the factors it is required to take into account under section 2.24 of the Code—including the public interest (section 2.24(e)), which includes an interest in maintaining competition between pipelines; and the interests of users and prospective users (section 2.24(f)), both of which would be affected by changes in the cost reflectivity of trunk prices.

²⁵⁰ Alinta/EnergyAustralia joint submission, October 2004, p 4, EnergyAustralia submission, October 2004, p ii, Country Energy submission, October 2004, p 1.

²⁵¹ Orica submission, October 2004, p 2, Origin Energy submission, October 2004, p 3, TXU submission, October 2004, p 1.

²⁵² For instance, it is possible to set up procedures such that users register to receive gas at a particular point but do not necessarily use it (stating zero nominations) electing positive nominations only when required. The exception would be when switching arrangements cannot occur in a timely enough manner to meet demand.

10.4.4 Prudent discounts and capped charges

AGLGN has proposed to charge two users a tariff below the reference tariff or equivalent reference tariff, and has requested that the Tribunal approve these as 'prudent discounts' under section 8.43 of the Code.²⁵³ Approval of this proposal would mean that AGLGN would recover the amount of the discount (referred to in this chapter as the revenue shortfall) from other users. The Tribunal notes that the revenue shortfall resulting from the discounts is very small in terms of AGLGN's total revenue. It also notes that AGLGN has retained the policy on prudent discounts that is in its current access arrangement.

AGLGN provided information to the Tribunal, on a confidential basis, supporting its proposal to recover the revenue shortfall resulting from its proposed prudent discounts from other users of the network. Having reviewed this information, the Tribunal considers that the alternative energy sources available to these users are such that the users would not use gas at the nearest reference tariff (as required by section 8.43(a) of the Code). In addition, AGLGN confirmed to the Tribunal's satisfaction that the revenue received by AGLGN from the two proposed decrement customers is above the marginal cost of providing the service²⁵⁴ and hence, the inclusion of revenue from these users lowers the costs for other users of the network (as required by section 8.43(b) of the Code).

Based on the above findings, the Tribunal accepts that the discounts proposed by AGLGN are prudent discounts and therefore, that the Code permits the Tribunal to allow the reallocation of revenue shortfalls to other users of the reference service. It also considers that the method of reallocation proposed by AGLGN (allocation to other contract customers) is in accordance with the Code, and is satisfied that it is fair and reasonable. In making this decision, the Tribunal notes that the reallocation of the revenue shortfall will have no noticeable impact on the reference tariffs for other contract customers.

AGLGN also proposed to offer 'capped' charges for contract market customers in order to maintain equivalence with the reference tariffs that apply to tariff market customers. This means that:

- A contract customer will not be required to pay higher tariffs than it would if it was a tariff market customer (for the same service and volume of gas)
- AGLGN will recover less revenue from these customers than if their charges were not capped (in other words, there is a revenue shortfall to AGLGN from this proposal).

AGLGN proposed to recover the revenue shortfall from other contract market customers on a regional basis.

The Tribunal considers that to prevent AGLGN from recovering this revenue shortfall from other customers in some way would be inconsistent with sections 8.38 and 8.42 of the Code, which essentially require reference tariffs to be as cost reflective as is commercially and technically reasonable. It would also be inconsistent with section 8.1(a), which requires the Tribunal to consider the objective of providing AGLGN with the opportunity to earn a stream of revenue that recovers the efficient cost of providing reference services (overall) over the expected life of the assets used. The main reasons for this are as follows:

²⁵³ AGLGN refers to customers who have a prudent discount as 'decrement customers'.

²⁵⁴ Information provided by AGLGN to IPART Secretariat in March and April 2005.

- The issue of capping arises only as a result of the different level of disaggregation of costs between the tariff and contract markets. The Tribunal considers that it would not be commercially and technically reasonable for AGLGN to ensure that the tariff market is cost reflective to the same level of disaggregation as the contract market.
- There is additional risk associated with having a large customer take gas as a tariff customer rather than as a contract customer. Therefore it is commercially and technically unreasonable to put AGLGN in a position where it loses revenue by adjusting its charges to reflect the differences in risk.

The Tribunal considered AGLGN's proposed method of recovering the revenue shortfall from contract customers against the requirements set out in sections 8.38 and 8.42 of the Code, and the principles in section 8.1. It noted that AGLGN's proposal was consistent with its broader cost allocation method and ensures that both the tariff and contract markets remain cost reflective overall. For the above reasons, it is satisfied that AGLGN's proposal to offer 'capped' charges for contract market customers and to recover the revenue shortfall from other contract market customers on a regional basis meets the requirements of sections 8.38 and 8.42 of the Code.

Based on the above conclusions, the Tribunal is satisfied that AGLGN's proposal to recover the revenue shortfalls from its proposed prudent discounts and capped charges meets the requirements of the Code. It is also satisfied that AGLGN's methods of reallocating these revenue shortfalls meet the requirements of the Code. It notes that there were no submissions from stakeholders other than AGLGN on these issues.

10.4.5 AGLGN's proposed back haul rates

The Tribunal received several submissions that argued that AGLGN should offer back haul trunk services at a different rate than it offers forward haul services, given the potential for new sources of supply into NSW from north of Newcastle during the proposed access arrangement period.²⁵⁵

AGLGN already offers its trunk service as forward or back haul from any trunk receipt point to any trunk exit point. Under the current and proposed access arrangements, charges for these services are determined by adding the charges for each zone used between a customer's receipt and exit points. The same charging structure would apply in the event of a new receipt point to the north of Newcastle, in which case customers would be charged for transport through the zones used to source gas, and not from zones no longer used south of Newcastle.

While there is some evidence of discounts for back haul rates in overseas jurisdictions, discounts would only be consistent with the Code if they represented cost reflective pricing within a given zone. The Tribunal considers that there is insufficient evidence to suggest that back haul discounts are cost reflective, and is satisfied that AGLGN's proposed back haul rates are consistent with the Code.

²⁵⁵ EnergyAdvice submission, May 2004, p 14, Macquarie Generation submission, October 2004, p 6.

10.4.6 Conditions on user swaps and receipt point swaps

In its draft decision, the Tribunal proposed to require AGLGN to delete all references to conditions on user swaps and receipt point swaps within the same trunk zone. This was to ensure consistency with the Tribunal's proposal to maintain the current seven zone structure of the Wilton to Newcastle trunk line based on the implication that there would be no trunk zones with multiple receipt points.

In response to the draft decision, AGLGN submitted that the conditions on receipt points within a single trunk zone should be retained to accommodate the possibility that additional receipt points might be established within a trunk zone with an existing receipt point during the access arrangement period. It also submitted that references to user swaps should be retained, as such swaps are only applicable to users of the same receipt point (that is, they are unaffected by the number of zones) and the required amendment would have had the effect of completely removing user swaps.²⁵⁶

Having considered AGLGN's submission, the Tribunal has reconsidered its draft finding on references to conditions on user swaps and receipt point swaps. It notes that it was not its intention to remove conditions on swaps that do not depend on its approval of the five zone structure. It accepts that although the conditions on receipt point swaps would not be operational under the current circumstances, their inclusion may provide an incentive for AGLGN to develop new services or facilities that would be of benefit to current and future users. It therefore considers that AGLGN should be able to include conditions on both receipt point swaps within a single trunk zone and user swaps in its access arrangement. Accordingly, it no longer requires AGLGN to amend its proposed access arrangement to remove references to these conditions.

10.5 Amendments required

Amendment 14 - Number of trunk zones

The proposed access arrangement must be amended so that the capital and non-capital trunk costs used to determine total revenue and reference tariffs are allocated to contract customers based on the existing seven trunk zones, and the trunk reservation capacity charge and trunk throughput charge is imposed in accordance with customers' use of each of these zones.

Amendment 15 - Allocation of disposals

The proposed access arrangement must be amended so that the disposals used in the methodology to determine total revenue and reference tariffs are allocated to both tariff market and contract customers in accordance with each customer class' proportion of peak day MDQ on medium pressure assets, however minor that allocation may be.

Amendment 16 - Allocation of benefits and costs of future growth

The proposed access arrangement must be amended so that the incremental benefits and costs of future growth in the contract market used in the methodology to determine total revenue and reference tariffs are allocated to contract customers and the incremental benefits and costs of future growth in the tariff market are allocated to tariff market customers.

²⁵⁶ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, p 32.

11 TOTAL REVENUE

Chapters 6 to 10 discuss AGLGN's proposed cost components for determining the total revenue for the purpose of calculating the reference tariffs, its proposed allocation of this revenue between services and users, and the amendments the Tribunal requires AGLGN to make to these proposals. This chapter provides an overview of these proposals, and discusses the impact of the Tribunal's required amendments on AGLGN's proposed total revenue figures and on AGLGN's financial ratios.

11.1 Tribunal's findings

The Tribunal requires that, for the purpose of calculating the reference tariffs, AGLGN's proposed total revenue figures be amended to incorporate Amendments 8 to 16, as set out in Chapters 6 to 10 of this report.

11.2 Code requirements

Section 8.4 of the Code permits the use of one of the following three methodologies for determining the total revenue:

- **Cost of service**, where total revenue is equal to the cost of providing all the services, including reference services (some of which may be forecast costs), where this cost is calculated on the basis of:
 - A rate of return on the capital base
 - Depreciation of the capital base
 - The operating, maintenance and other non-capital costs incurred in providing all services (the non-capital costs)
- **Internal rate of return (IRR)**, where total revenue provides an IRR for the covered pipeline on the basis of forecast sales and costs that is consistent with sections 8.30 and 8.31 of the Code, and where the value of the capital base at the start and end of the access arrangement period are calculated in accordance with part 8 of the Code.
- **Net Present Value (NPV)**, where total revenue provides a NPV for the covered pipeline equal to zero, and the NPV calculation is based on forecast costs using a discount rate that is consistent with sections 8.30 and 8.31 of the Code, and where the value of the capital base at the start and end of the access arrangement period are calculated in accordance with section 8 of the Code.

Whichever methodology is used, the Code requires that it be applied in accordance with generally accepted industry practice. The methodology may also allow the service provider to retain some or all of any efficiency gains under an incentive mechanism (see 5.2 above).

11.3 AGLGN's proposal

AGLGN proposed to use the cost of service methodology to determine total revenue, and applied this methodology by:

- estimating its cost of service over the proposed access arrangement period, based on a return on the capital base of 7.9 per cent, depreciation of the capital base, its forecast of efficient operating and other non-capital costs (allowing for growth), and a return on net working capital (see Chapters 6 to 9)

- allocating these costs between its assets, and between its contract customers and tariff market customers to establish how much revenue should be raised from each customer class (see Chapter 10)
- comparing the cost of service to the revenue to be raised.

AGLGN proposed an access arrangement period of five and a half years, commencing on 1 January 2005 (see Chapter 18). However, under the Code, the access arrangement is not effective, and therefore cannot commence, until after the Tribunal has issued its final decision. Therefore, the Tribunal has based its analysis of AGLGN's proposed costs and revenues on an expected access arrangement period of five years, commencing 1 July 2005.

Following the Tribunal's draft decision, AGLGN revised some of the cost elements in its original proposal. It submitted that its cost of service should include higher capital and non-capital costs as a result of the higher demand forecasts the Tribunal applied in the draft decision, and its revised proposal for a higher rate of return of 7.9 per cent.²⁵⁷ AGLGN also proposed an adjustment to the calculation of depreciation and changes to demand forecasts. AGLGN also adjusted its costs to reflect the Tribunal's draft decision where they agreed. Further information on these changes is provided in Chapters 6 to 9 of this report. AGLGN did not formally revise its access arrangement information or provide information on the revenue resulting from these changes. Instead, the Tribunal has modelled the effect of these changes on total costs. The Tribunal's modelling of AGLGN's revised proposed cost of service over the expected access arrangement period is shown in Table 11.1 below.

Table 11.1 Tribunal's modelling of AGLGN's revised proposed cost of service for the expected access arrangement period (\$million, real 2005)

	2005/06	2006/07	2007/08	2008/09	2009/10	NPV
Return on capital base	152.7	156.6	159.2	160.8	161.9	
Depreciation	65.4	70.2	74.5	74.8	74.4	
Return on working capital	3.7	4.0	4.2	4.5	4.7	
Non-capital costs	122.7	123.4	124.2	124.7	120.4	
Total costs	344.5	354.2	362.1	364.9	361.4	1,483.3

These figures use AGLGN's revised costs from its *Response to the Draft Decision* and Tribunal modelling. The NPV is calculated using a real rate of return of 7.9 per cent and a mid-term cash flow.

In its draft decision, the Tribunal released information on AGLGN's proposed total revenue, allocation of revenue between contract and tariff markets, and the expected changes in average prices. AGLGN has not updated the cost allocation model to reflect its revised proposal, so there are no figures for the revenue allocated to each market under AGLGN's revised proposal. As part of the process of final approval, the Tribunal has asked AGLGN to provide an independent audit of the AGLGN cost allocation model to ensure that it complies with the Tribunal's amendments. The Tribunal intends to review the results of this independent audit.

²⁵⁷ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, pp 2 and 23.

11.4 Tribunal's analysis and considerations

As set out in Chapters 6 to 10, the Tribunal requires AGLGN to make a number of amendments to its proposed demand forecasts, capital base, rate of return, non-capital costs, and allocation of the total revenue in order for it to approve the proposed access arrangement. The Tribunal's analysis of the impact of these amendments on AGLGN's proposed cost of service and revenue, average prices and financial position is set out below.

11.4.1 Impact on the cost of service and revenue

The combined effect of the Tribunal's amendments on AGLGN's cost of service is set out in Tables 11.2 and 11.3. The net present value of the revenue from the Tribunal's Final Decision is 7 per cent lower than the revenue modelled by the Tribunal using costs from AGLGN's revised proposal.

**Table 11.2 Cost of service based on the Tribunal's required amendments
(\$million, real 2005)**

	2005/06	2006/07	2007/08	2008/09	2009/10
Return on capital base	135.3	138.3	140.2	141.3	141.7
Depreciation	64.2	68.1	71.9	72.2	72.0
Return on working capital	3.5	3.3	3.5	3.7	3.9
Non-capital costs	116.5	117.8	118.6	119.5	120.4
Total costs	319.5	327.5	334.3	336.7	338.1

Columns may not add due to rounding.

**Table 11.3 Impact of Tribunal's required adjustments on AGLGN's total costs
(\$million, real 2005)**

	2005/06	2006/07	2007/08	2008/09	2009/10	NPV
Total costs for revenue calculation in AGLGN's revised proposal	344.5	354.2	362.1	364.9	361.4	1,513
Total costs for revenue calculation agreed by Tribunal as meeting the Code's requirements	319.5	327.5	334.3	336.7	338.1	1,402
Difference	-7%	-8%	-8%	-8%	-6%	-7%

The NPVs are calculated using the Tribunal's real pre tax rate of return of 7 per cent and assume a mid term cash flow (ie at 1 January). The NPV of AGLGN's revised proposal is different to that in Table 11.1 due to the use of the Tribunal's pre tax rate of return of 7 per cent instead of AGLGN's proposed pre tax rate of return of 7.9 per cent. Columns may not add due to rounding.

Using the same methodology AGLGN applied in making its proposal, the Tribunal has calculated the impact of its required amendments to AGLGN's costs. The total costs and revenues is set out in Table 11.4.

Table 11.4 Comparison of total costs and revenue under the Tribunal's final decision (\$million, real 2005)

	2005/06	2006/07	2007/08	2008/09	2009/10	NPV
Total costs	319.5	327.5	334.3	336.7	338.1	1,402.1
Total revenue	314.6	322.9	331.4	340.4	349.5	1,402.1

Columns may not add due to rounding.

11.4.2 Impact on average prices

It is not possible to determine the impact of the Tribunal's amendments on individual reference tariffs because AGLGN establishes (as it is entitled to do under the Code) the price path for contract and tariff market customers by allocating total revenue between different users and over the access arrangement period in accordance with the principles in section 8 of the Code. Following the final decision, the Tribunal will consider AGLGN's model for the allocation of revenue between markets in assessing whether to approve the final access arrangement. The Tribunal will assess whether the revenue is allocated according to the methodology proposed by AGLGN, the amendments required by the Tribunal in Chapter 10, and any other relevant parts of this final decision. The Tribunal has asked AGLGN to provide an independent audit of its cost allocation model to ensure that it complies with the Tribunal's amendments. The Tribunal will review the results of this independent audit.

11.4.3 Impact on AGLGN's financial position

The Tribunal has modelled the impact of its recommended changes on AGLGN, and considered a range of financial indicators in assessing the impact on AGLGN's financial position. Table 11.5 shows the likely impact on these indicators of the Tribunal's final decision, while Table 11.6 shows what these same financial indicators would have been under AGLGN's revised proposal.²⁵⁸ The Tribunal considers that none of the ratios indicate a significant deterioration in AGLGN's financial position as a result of the amendments it requires.

Table 11.5 Financial indicators resulting from the Tribunal's final decision

	2005/06	2006/07	2007/08	2008/09	2009/10
EBITDA interest cover	2.5	2.6	2.6	2.7	2.8
Funds flow net debt payback	12.0	11.6	11.1	10.7	10.3
Internal financing ratio	0.7	0.9	1.0	1.1	1.2
Funds flow adequacy	0.8	0.9	1.0	1.1	1.2

²⁵⁸ AGLGN did not provide this financial analysis in its proposal. The Tribunal has used its own modelling.

Table 11.6 Financial indicators resulting from AGLGN's revised proposal

	2005/06	2006/07	2007/08	2008/09	2009/10
EBITDA interest cover	2.8	2.8	2.9	3.0	3.1
Funds flow net debt payback	10.5	10.2	9.9	9.5	8.9
Internal financing ratio	0.7	0.9	1.0	1.2	1.2
Funds flow adequacy	0.8	0.9	1.0	1.1	1.1

The ability to service debt from annual cash flow, as measured by the *EBITDA interest cover* is slightly lower under the Tribunal's final decision than under AGLGN's revised proposal. The Tribunal considers that AGLGN's cash flow continues to support modelled interest expense over the access arrangement period.

The *funds flow/net debt* ratio, which measures AGLGN's ability to repay debt from its annual cash flows, forecasts a reduction in the cash flow available to pay off debt under the Tribunal's final decision as compared to the Tribunal's modelling of AGLGN's revised proposal. However, the impact on AGLGN's ability to repay debt is not substantial.

The *internal financing ratio* measures AGLGN's ability to finance investment from internal sources. The *funds flow adequacy* ratio measures AGLGN's ability to finance annual capital expenditure and dividends out of annual cash flow from operations. Both these ratios are the same or very similar under the Tribunal's final decision as they are under AGLGN's revised proposal.

12 VARIATION OF REFERENCE TARIFFS DURING THE ACCESS ARRANGEMENT PERIOD

Once an access arrangement has become effective, a service provider can vary its initial set of reference tariffs by applying one of the reference tariff variation methods it has specified in the reference tariff policy of its access arrangement. This chapter discusses the reference tariff variation methods that AGLGN proposes to specify in its reference tariff policy.

12.1 Tribunal's findings

The Tribunal is not satisfied that the reference tariff variation methods AGLGN proposes to specify in its reference tariff policy meet the requirements of the Code. It requires AGLGN to amend its proposed access arrangement as set out in 12.5 below.

The Tribunal notes that AGLGN has already agreed to implement six of the ten amendments in full, and parts of two of the amendments.

12.2 Code requirements

During the term of AGLGN's current access arrangement, the Code was amended to include specific provisions that relate to the way in which reference tariffs may vary within an access arrangement period.²⁵⁹

Section 2.49 of the Code provides that an access arrangement that has become effective may be changed only by using the access arrangement review processes outlined in section 2 of the Code, or by implementing an 'approved reference tariff variation method'. An approved reference tariff variation method means the variation methods specified in the reference tariff policy of the service provider's access arrangement.

Section 8.3 of the Code provides examples of variation methods that the service provider may specify in its reference tariff policy. These include a cost of service approach; a price path approach; a reference tariff formula approach; a trigger event adjustment approach; and any variation or combination of these approaches.

Section 8.3 also provides that the service provider has the discretion to select which reference tariff variation methods it will specify. However, this is subject to the regulator being satisfied that each of the selected methods is consistent with the objectives contained in section 8.1 of the Code (as discussed in 2.1.3 of this report.)

Once the regulator has approved the selected reference tariff variation methods, section 8.3A of the Code provides that the reference tariffs may vary within an access arrangement period only through the implementation of these methods in accordance with the notification and approval processes prescribed in sections 8.3B to 8.3H of the Code. These processes are set out in 12.4.4 below.

²⁵⁹ Section 8.3 was revised and sections 8.3A-8.3H were added under the *National Third Party Access Code for Natural Gas Pipeline Systems: Fourth Amending Agreement*, which commenced on 6 February 2003.

12.3 AGLGN's proposal

AGLGN proposed to specify the following reference tariff variation methods in its reference tariff policy:

- annual escalation for CPI effects
- pass-through of any variation between actual and allowed unaccounted for gas (UAG) cost arising from changes in gas receipts and competitive tender purchase prices
- pass-through of costs for tax, regulatory, insurance and unforeseen external events, where there is a material impact on costs.²⁶⁰

AGLGN also proposed that it would provide the Tribunal with 30-business-days notice of its intention to vary its reference tariffs in accordance with the above variation methods.

In its response to the draft decision, AGLGN proposed to add two further cost pass-through events to the pass-through mechanism—those relating to mines subsidence and guaranteed customer service standards.²⁶¹

12.4 Tribunal's analysis and considerations

In making its draft decision, the Tribunal assessed whether each of AGLGN's proposed reference tariff variation methods meets the requirement of section 8.3 of the Code, and is consistent with the objectives in section 8.1 of the Code. It also took into account the factors in section 2.24 of the Code and relevant stakeholder submissions.

Based on this assessment, it proposed to require AGLGN to make seven amendments relating to the scope of the proposed cost pass-through mechanism, the manner in which tariff variations would be implemented, and the notification and approval process.²⁶² In its response to the draft decision, AGLGN agreed to implement all of these amendments with one exception—the amendment relating to the length of the notice period.

In making its final decision, the Tribunal reconsidered the matters it assessed in the draft decision, taking into account AGLGN's and stakeholders' comments in response to that decision. It has not changed its findings in relation to these matters, except to respond to AGLGN's comments on the notification period and to clarify the administrative process for tariff variation applications.

The Tribunal also considered the two new matters raised in AGLGN's response to the draft decision. It agrees in principle to the proposed cost pass-through mechanism for a guaranteed customer service standards event, but requires some amendments to ensure this mechanism meets the Code requirements. However, it is not satisfied that any form of the proposed mines subsidence event meets the Code requirements.

The Tribunal's considerations in relation to each of the proposed variation methods and the proposed notification and approval process, including those aspects raised in AGLGN's response to the draft decision, are discussed below.

²⁶⁰ AGLGN, *Access Arrangement for NSW Network*, December 2003, Part 3E, cls 3.10 – 3.12.

²⁶¹ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, pp 21-22.

²⁶² IPART, *Revised Access Arrangement for AGL Gas Networks – Draft Decision*, December 2004, Chapter 12.

12.4.1 Annual escalation for CPI effects

The first of AGLGN's proposed reference tariff variation methods would enable it to vary the initial reference tariffs each year of the proposed access arrangement period, in line with any change in the CPI.

AGLGN proposed that in applying this method, reference tariffs will be adjusted 'by the rate of change in the average of the CPI for the four quarters to March in the relevant year divided by the average of the CPI for the four quarters to March in the immediately preceding year'.²⁶³

In its draft decision, the Tribunal was satisfied that this method meets the requirements of the Code. However, taking into account AGLGN's response to the proposed amendment to increase the notice period for tariff variations to 50 business days (see 12.4.4 below), the Tribunal now considers that the use of CPI data for the four quarters to December, instead of those to March as AGLGN proposed, would meet the Code requirements while overcoming timing issues associated with the availability of CPI data.

This approach will maintain a consistent notice period for CPI and other proposed reference tariff variations, and will also minimise costs associated with administering pass-through applications consistent with objectives in section 8.1 and factors in section 2.24 of the Code.

The Tribunal received no submissions on the original proposed variation method and considers that the use of CPI data to December would have an immaterial impact on AGLGN and users. It therefore requires AGLGN to amend its annual CPI escalation method so that reference tariffs will be adjusted by applying the CPI data for the four quarters to December. It notes AGLGN has indicated in-principle agreement to this amendment.²⁶⁴

12.4.2 Pass-through of variation between actual and allowed UAG costs

In any given year of the proposed access arrangement period, AGLGN's proposed reference tariffs include an allowance for UAG costs calculated as a multiple of the forecast gas receipts for that year, the forecast price for purchasing gas in a competitive tender, and the proposed UAG benchmark of 2.2 per cent per annum.

AGLGN's second proposed reference tariff variation method would enable it to vary the reference tariffs to reflect any difference between the actual and allowed gas receipts and tender purchase price for the previous year. In practice, this means that reference tariffs could be varied up or down, depending on the actual gas receipts and tender price. AGLGN does not propose to pass through any costs (or benefits) resulting from a difference between the proposed 2.2 per cent UAG benchmark and the actual UAG outcome.²⁶⁵

²⁶³ AGLGN, *Access Arrangement for NSW Network*, December 2003, Part 3E, s 3.11(a).

²⁶⁴ In correspondence on 22 February 2005.

²⁶⁵ This chapter does not discuss the appropriateness of the proposed UAG benchmark or the assumptions made by AGLGN as to the competitive tender price and gas receipts. These matters are discussed in Chapter 9 of this report, as part of the consideration of non-capital costs.

The Tribunal received several submissions on this proposed variation method:

- Origin Energy submitted that the proposed method does not provide AGLGN with adequate incentives to manage UAG, and recommended a modified method that is consistent with UAG management in other States.²⁶⁶
- The Gas Market Company (GMC) submitted that it is developing an enhanced methodology for gas reconciliation between users that potentially involves a new treatment of UAG for the proposed access arrangement. It suggested that the access arrangement include a trigger mechanism that would allow for the removal of UAG provisions and costs during the proposed access arrangement period.²⁶⁷
- In its review of total costs, ECG recommended that the existing pass-through mechanism be retained and that AGLGN be required to call for tenders for the supply of UAG each year.²⁶⁸

Having considered the proposed variation method and the above submissions, the Tribunal considers that the proposed variation method provides an incentive for AGLGN to achieve or improve upon the UAG benchmark, as AGLGN bears the risk of higher UAG costs and retains the benefits of lower UAG costs than allowed for in the reference tariffs. This symmetrical application is consistent with the incentive mechanisms discussed in Chapter 5 of this report, and the Tribunal is satisfied that the proposed variation method provides an incentive to AGLGN to reduce costs, as required by section 8.1(f) of the Code.

The Tribunal also considers that because AGLGN has identified UAG costs as a separate line item in its access arrangement information,²⁶⁹ made available its assumptions for gas receipts and tender price,²⁷⁰ and proposed to submit annually an externally audited report of UAG cost outcomes²⁷¹, any cost variation should be easily identified and assessed for incremental changes. It is therefore satisfied that this method is consistent with section 8.1(a) of the Code as it will prevent over-recovery of UAG costs, and is consistent with section 8.1(e) of the Code, as it will support efficient recovery of the incremental costs.

In its draft decision, the Tribunal noted that GMC and AGLGN were still discussing the possibility of adopting an amended gas reconciliation methodology that could affect the management of and responsibility for UAG. At the time, the Tribunal understood that a final position on the methodology had yet to be reached, consultation would need to be undertaken with stakeholders and it was unlikely that any change in the methodology would occur before the commencement of the proposed or expected access arrangement period.

In addition, the Tribunal noted that AGLGN had not included either an amended methodology or a trigger mechanism in its proposed access arrangement. However, as part of its consideration of AGLGN's proposed terms and conditions, the Tribunal proposed to require AGLGN to amend clause 12, Schedule 2A of its access arrangement so that the provisions relating to responsibility for gas and UAG cease to have effect in the event of a

²⁶⁶ Origin Energy submission, 19 April 2004, p 3.

²⁶⁷ Gas Market Company submission, 25 May 2004.

²⁶⁸ ECG, *Review of AGLGN Gas Access Arrangement for IPART*, 30 August 2004, p 103.

²⁶⁹ AGLGN, *Access Arrangement Information for NSW Network*, December 2003, Table 6.4, p 38.

²⁷⁰ ECG, *Review of AGLGN Gas Access Arrangement for IPART*, 30 August 2004, Table 10.6.

²⁷¹ AGLGN, *Access Arrangement for NSW Network*, December 2003, Section 9.3, p 71.

change in the treatment of UAG as a result of new Gas Retail Market Business Rules during the proposed access arrangement period.²⁷²

Given this, the Tribunal considered that a similar amendment should be made to the UAG provisions in the reference tariff policy for consistency, but suggested that AGLGN should propose an appropriate amendment either in the form of a proposed methodology, trigger mechanism or other revision, so that the Tribunal could invite stakeholder comment on any proposal.

In its response to the draft decision, AGLGN agreed to implement the Tribunal's amendment to clause 12, Schedule 2A, and proposed to amend its proposed reference tariff policy to allow for the removal of UAG provisions and an adjustment to reference tariffs should UAG be removed as a network cost during the access arrangement period.²⁷³

The Tribunal did not receive any stakeholder comments on AGLGN's proposed amendment, and notes that while GMC has developed new rules for gas reconciliation between users,²⁷⁴ this does not make the UAG provisions in AGLGN's access arrangement unnecessary.

Therefore, the Tribunal is satisfied that AGLGN's proposed amendment to the UAG provisions in the reference tariff policy is consistent with the section 8.1 objectives, as it allows for any cost reductions due to UAG costs being removed from the assumed cost of service to be passed through to users, therefore ensuring that AGLGN only recovers its efficient costs. This also takes into account the factors in section 2.24 of the Code including the legitimate interests of users and prospective users. Accordingly, it requires AGLGN to make this proposed amendment, as set out in 12.5 below.

12.4.3 Pass-through of costs resulting from tax, regulatory, insurance, unforeseen external, mines subsidence and guaranteed customer service standards events

AGLGN's third proposed variation method would enable it to pass through unforeseen costs that it incurs as a result of tax and other events, provided these costs are material. This proposed method expands on the pass-through mechanism in AGLGN's current access arrangement. It retains the pass-through mechanism for costs related to changes in authorisation fees and government taxes and charges as part of redefined 'change-in-tax' and 'regulatory' events, extends this mechanism to costs related to 'insurance', 'unforeseen external', 'mines subsidence' and 'guaranteed customer service standards' events, and introduces the concept of materiality.

The Tribunal received several submissions on this proposed variation method:

- Origin Energy submitted that tariff reductions should be made compulsory where there is a material *reduction* in the cost of providing reference services.²⁷⁵
- EnergyAustralia submitted that it is not clear that cost reductions will be passed through, and that the definitions of pass-through events are too broad and non-

²⁷² See Item 10 in Appendix 3.

²⁷³ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, section 5, Amendment 19.

²⁷⁴ Gas Market Company Members' Update, February 2005 - User-based gas reconciliation in the NSW and ACT gas retail market.

²⁷⁵ Origin Energy submission, 19 April 2004, ss 2.2-2.3, p 4.

specific, especially the definition of unforeseen external events. It also submitted that the Tribunal should be consistent when making decisions on pass-through mechanisms for the different regulated energy distribution networks it regulates.²⁷⁶

- Energy Markets Reform Forum (EMRF) and Orica submitted that the cost pass-through mechanism for 'mines subsidence events' should be rejected. EMRF claimed that legal costs likely to be incurred are already covered by approved revenues associated with corporate overhead costs, as are operating costs incurred in the normal course of operating a pipeline business, and this mechanism would appear to be a 'double-dipping device'. In addition, it was concerned that as the cost of damages is only 'probable' and has not been quantified, such a mechanism could become an open-ended 'cash cow'.²⁷⁷ Orica noted that mines subsidence only affects a very small section of the Wilton to Newcastle pipeline, and argued that any damage should be recouped from either the Mines Subsidence Board or third parties via legal action, or covered by insurance. If these options are not possible, then Orica contended that such costs should be assumed to form a prudent operator's planned maintenance costs.²⁷⁸

The Tribunal considered these submissions and assessed whether each of the proposed cost pass-through events, the materiality prerequisite, and the method for recovering pass-through amounts are consistent with the objectives in section 8.1 of the Code. In doing so, it took into account the factors in section 2.24 of the Code. Its considerations and conclusions are outlined below.

Change in tax event

AGLGN proposed that a 'change-in-tax' event would include a change in the calculation (including a change in the application or official interpretation), removal or introduction of a relevant tax. It defined 'Relevant Tax' as:

... any royalty (whether based on value, profit or otherwise), tax (other than a tax in the nature of an income tax or a capital gains tax), duty, excise, levy, fee, rate or charge imposed from time to time during the term of this Access Arrangement by any government or any governmental, semi-governmental or other body authorised by law to impose that Relevant Tax on or to:

- (a) the Network (or any of its components);
- (b) the operation of the Network; or
- (c) the provision of Services by AGLGN.²⁷⁹

AGLGN identified the possible repeal of mains tax by the NSW government as one potential tax event that could occur during the proposed access arrangement period.²⁸⁰ If this event were to occur, it would result in AGLGN incurring a lower level of costs and tariffs than it has allowed for in its submission. AGLGN has made a separate allowance for government levies (disaggregated into authorisation fees and mains tax) in its cost of service²⁸¹, but has not included estimates for other relevant taxes covered by its definition.

²⁷⁶ EnergyAustralia submission, 20 April 2004, s 7.

²⁷⁷ Energy Markets Reform Forum submission, 25 February 2005, p 6.

²⁷⁸ Orica submission, 28 February 2005, p 6 and comments made at the 23 March 2005 roundtable discussion.

²⁷⁹ AGLGN, *Access Arrangement for NSW Network*, December 2003, Sch 1, p 79.

²⁸⁰ AGLGN, *Access Arrangement Information for NSW Network*, December 2003, s 6.4.3.2, p 37.

²⁸¹ AGLGN, *Access Arrangement Information for NSW Network*, December 2003, Table 6.3, p 37.

The Tribunal considers that if ‘change-in-tax’ events are defined to include only events that are *outside* AGLGN’s control, the proposed variation method would allow AGLGN to recover its efficient costs, consistent with section 8.1(a) of the Code. It also considers that the inclusion of a materiality prerequisite in the method would go some way to ensuring that the pass-through amount is not outweighed by the administrative costs of assessing a pass-through event, consistent with sections 8.1(b) and 8.1(f) of the Code.

However, AGLGN’s definition of ‘Relevant Tax’ potentially includes a number of change-in-tax events that are *within* its control—for example, charges or fees it incurs because of late or deficient payment. The Tribunal considers that as allowing AGLGN to pass through such charges would undermine its incentives to reduce costs consistent with section 8.1(f) of the Code, the definition of ‘Relevant Tax’ should be amended to expressly exclude those taxes and charges. It therefore requires AGLGN to amend the definition of ‘Relevant Tax’ in its proposed access arrangement and to include a new definition of ‘Tax’ as follows:

‘Relevant Tax’ means any Tax other than:

- (a) any tax in the nature of an income tax or a capital gains tax;
- (b) penalties, charges, fees and interest on late payments, or deficiencies in payments, relating to any Tax;
- (c) stamp duty, or similar taxes and duties; and
- (d) any Tax that replaces or is the equivalent of or similar to any of the taxes referred to above.

‘Tax’ means any royalty (whether based on value, profit or otherwise), tax, duty, excise, levy, fee, rate or charge imposed from time to time during the term of this Access Arrangement by any government or any governmental, semi-governmental or other body authorised by law to impose that tax on or to:

- (a) the Network (or any of its components);
- (b) the operation of the Network; or
- (c) the provision of Services by AGLGN.

It notes that AGLGN has agreed to implement this amendment.²⁸²

The Tribunal accepts the view expressed by Origin Energy and EnergyAustralia that variations in uncontrollable costs should be applied symmetrically, so both cost increases and cost reductions resulting from an event would be passed through (subject to meeting the materiality prerequisite, discussed below). This would replicate the outcome of a competitive market (consistent with section 8.1(b) of the Code), and ensure there is no over-recovery of efficient costs (consistent with section 8.1(a) of the Code).

The Tribunal therefore requires that where it is not clear that variations in uncontrollable costs will be passed through symmetrically, AGLGN amend its access arrangement to clarify this. It notes that AGLGN has agreed to implement this amendment.²⁸³

²⁸² AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision, February 2005*, section 5, Amendment 18.

²⁸³ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision, February 2005*, section 5, Amendment 21.

Finally, the Tribunal is concerned that a 'change-in-tax' event is likely to involve significant administrative effort for both it and AGLGN to identify and assess the incremental costs of such events. This is especially so where the relevant taxes are based on profitability or cash flow, or where the impact of any economy-wide tax events may already be reflected in the CPI or be compensated for through the WACC. A materiality prerequisite will lessen the potential for reference tariff variations to occur where the administrative costs for the Tribunal and AGLGN exceed the actual pass-through variation amount, consistent with section 8.1(b) and section 8.1(f) of the Code.

Where pass-through costs are considered to be material, the Tribunal considers that only incremental costs of tax events should be allowed to be recovered, consistent with sections 8.1(a) and 8.1(f) of the Code. For this reason, it believes that when AGLGN applies to vary reference tariffs due to a 'change-in-tax event', it should be required to demonstrate the impact of any tax events on its business, and that the pass-through amounts reflect incremental and efficient costs. This issue is further discussed in 12.4.4 below.

Regulatory event

AGLGN proposed that a 'regulatory event' would include:

- a decision by an authority (including the Tribunal) or any amendment to applicable law that occurs after the commencement date of the access arrangement and has the effect of altering the minimum standards imposed on AGLGN
- a change in the manner in which AGLGN is required to undertake any activities related to reference services, and
- a change to or any new authorisation fee, licence fee or statutory charge.

AGLGN did not identify a specific regulatory event that it expects to occur during the proposed access arrangement period. It assumed no major changes to market rules or regulatory requirements, although it suggested that further development or standardisation of B2B systems may be required.²⁸⁴ AGLGN made a separate allowance for retail contestability costs and authorisation fees in its cost of service²⁸⁵, but did not include estimates for other regulatory costs.

The Tribunal considers that the proposed variation method for regulatory events that are outside AGLGN's control would allow AGLGN to recover its efficient costs, consistent with section 8.1(a) of the Code—and that the events included in AGLGN's proposed definition of a 'regulatory event' are generally outside AGLGN's control, so should not adversely affect its incentives to reduce costs (as required by section 8.1(f) of the Code).

However, it is concerned that the proposed definition of a 'regulatory event' is not sufficiently clear to prevent the occurrence of double counting or over-recovery of costs that would be inconsistent with section 8.1(a) of the Code. For instance 'authorisation fee, licence fee or statutory charge' could be interpreted as fitting within the proposed definition for 'relevant tax' as well as the proposed definition for 'regulatory event'. Similarly, a 'guaranteed customer service standard (GCSS) event', discussed below, could also meet the broader definition of a regulatory event. It therefore requires AGLGN to amend this definition to clarify that 'regulatory event' does not include either a change-in-tax event or a

²⁸⁴ AGLGN, *Access Arrangement Information for NSW Network*, December 2003, s 6.4.3.2, p 37.

²⁸⁵ AGLGN, *Access Arrangement Information for NSW Network*, December 2003, ss6.4.3.2-6.4.3.3, p 37.

GCSS event. In its response to the draft decision, AGLGN agreed to implement the amendment related to the exclusion of a change-in-tax event.²⁸⁶

In addition, the Tribunal considers that although AGLGN may not be able to control the occurrence of a 'regulatory event', in some cases it may be able to influence the financial impact of such events through mitigation of costs. For example, AGLGN may not be able to avoid a regulatory requirement, but it should be able to ensure that any costs it incurs in meeting that requirement (and subsequently passes through) are efficient, consistent with sections 8.1(a) and 8.1(f) of the Code. Further, as for 'change-in-tax events', the Tribunal considers that only incremental and efficient costs associated with 'regulatory events' should be able to be passed through. (This issue is further discussed in 12.4.4 below.)

Finally, as for a 'change-in-tax event', the Tribunal considers that symmetrical application and a materiality prerequisite will help to mitigate any cost or adverse efficiency impacts of the general pass-through mechanism, consistent with sections 8.1(a) and 8.1(f). Where it is not clear that costs associated with a 'regulatory event' will be passed through symmetrically, it requires AGLGN to amend its access arrangement to clarify this. In its response to the draft decision, AGLGN has agreed to implement this amendment.²⁸⁷

Insurance and unforeseen external events

AGLGN proposed that an 'insurance event' will be broadly defined to include when insurance becomes unavailable, more costly, or available on less favourable terms. It proposed that an 'unforeseen external event' will include any unforeseen external event beyond AGLGN's control, including natural disasters such as bushfires and acts of terrorism.

The Tribunal accepts EnergyAustralia's submission that these definitions are too broad. While noting that the pass-through of costs for insurance and unforeseen events would enable AGLGN to recover costs consistent with section 8.1(a) of the Code, it is concerned that such a pass-through would undermine the incentives for AGLGN to minimise such risks (for example, by taking action to mitigate risks and costs) and therefore have an effect that is inconsistent with section 8.1(f) of the Code.²⁸⁸

In addition, the Tribunal is concerned about the level of information that would be required and the complexity that would be involved in ensuring that costs claimed as part of an 'insurance event' or 'unforeseen external event' are incremental to the costs already allowed for in setting reference tariffs, and that these costs are efficient.

There is also uncertainty about what costs should appropriately be passed through for 'unforeseen external events', which is likely to increase the costs associated with assessing an application for cost pass-through resulting from such an event. For instance, the following questions might arise if there was loss or damage due to a terrorist act or bushfire:

- What are the incremental costs arising from the event?

²⁸⁶ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, section 5, Amendment 20.

²⁸⁷ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, section 5, Amendment 21.

²⁸⁸ The Tribunal considered a similar issue in its 2004 review of electricity DNSPs and indicated a risk of moral hazard if insurance and terrorism events were included in the scope of a general pass through mechanism, *NSW Electricity Distribution Pricing 2004/05 to 2008/09 – Final Report*, June 2004, p 129.

- Were AGLGN's assets insured against loss and damage due to the unforeseen event? If not, why not?
- Is it appropriate for users to bear some or all of the uninsured costs of an event?
- Should any subsequent liabilities arising from loss of service also be passed through?

The answers to these questions will typically depend on the individual circumstances of the events. Information asymmetry may lead to cost over-recovery that is inconsistent with section 8.1(a) of the Code, and to administrative costs that outweigh the cost pass-through amount, inconsistent with sections 8.1(b) and 8.1(f) of the Code.

For the reasons outlined above, the Tribunal is not satisfied that AGLGN's proposal to manage the costs associated with insurance and unforeseen external events through a pass-through mechanism is consistent with the objectives in section 8.1. Rather, the Tribunal considers that these costs should be addressed during the Tribunal's consideration of revisions to an access arrangement as discussed in 2.2 in this report. Therefore it requires AGLGN to exclude 'insurance event' and 'unforeseen external event' from the cost pass-through mechanism. In its response to the draft decision, AGLGN has agreed to implement this amendment.²⁸⁹

Mines subsidence event

In its response to the draft decision, AGLGN proposed to amend its proposed cost pass-through mechanism to allow for the pass through of costs associated with 'ameliorating the probable damage to the Wilton to Newcastle trunk pipeline caused by mines subsidence'.²⁹⁰ It proposed to add the following words:

A Mines Subsidence Event means any event that gives rise to expenditure incurred by the Service Provider to:

- lessen the likelihood of damage to the Network caused by actual or planned undergrounding mining activities
- repair damage to the Network caused by underground mining activities; and
- recover costs associated with mines subsidence from third parties associated with mining activities

where that expenditure cannot be recovered directly from third parties associated with mining activities.

AGLGN submitted that the prudent and efficient costs of such an event are difficult to forecast and are commercially sensitive due to ongoing legal proceedings to try to recover the costs of preventing (possible) damage to its pipeline. However, it claimed that it is currently incurring such costs and will continue to do so over the proposed access arrangement period. In its December 2003 submission, AGLGN included an estimate for the forecast capital cost of preventative works related to mines subsidence, however it now claims that this estimate understates the likely actual costs.²⁹¹

²⁸⁹ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, section 5, Amendment 22.

²⁹⁰ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, section 3.2.

²⁹¹ Clarified with AGLGN in confidential correspondence on 15 March 2005.

AGLGN later clarified that the costs it proposes to be covered by the pass-through mechanism relate to preventative works to ensure damage to the pipeline does not occur, as well as any actual repair works, where these cannot be recovered through a third party (that is, it is a fallback provision). It claimed that the preventative works are not an insurable cost. Further, it confirmed that the matter is subject to ongoing legal negotiations which affects more than one pipeline owner in the area.²⁹²

ECG noted in its report on total costs that mines subsidence is affecting the trunk pipeline at Appin, and that there are currently five sites where the mining has either affected the pipeline or will progressively affect the pipeline over the next three years. It noted that at two sites, physical mitigation work has been undertaken, with further work expected.²⁹³ ECG found that AGLGN's estimates of forecast capital expenditure (as contained in its December 2003 submission) for preventative works meet the requirements of the Code.²⁹⁴

The Tribunal considers that in circumstances of foreseen but uncertain costs, a cost pass-through mechanism may, in principle, be an appropriate means to manage the financial risks faced by a service provider, and to protect the interest of users.²⁹⁵ While it supports the notion of a cost pass-through mechanism for the efficient and incremental costs of a discrete uncontrollable event consistent with section 8.1(a) of the Code, it has significant concerns about the scope and effect of the proposed mines subsidence event. Specifically, it considers that:

- Allowing the pass through of costs associated with such an event would undermine AGLGN's incentives to minimise such risks (for example, by ensuring that it pursues the appropriate legal avenues available to it so as to minimise any impact on users). Thus, it would have an effect that is inconsistent with sections 8.1(f) and 2.24(f) of the Code.²⁹⁶ Similarly, it considers that some of the proposed costs are 'controllable' (such as the legal costs and repair costs), so allowing for their pass through would undermine AGLGN's incentives to minimise these costs.
- Satisfying itself that AGLGN had done what would be expected of a prudent network operator to recover the costs of such an event through alternative means (such as taking out insurance or seeking recovery of costs through legal means) would potentially be a complex task for the Tribunal, and would involve a high level of information. Thus, assessing an application for cost pass through would be similar to re-opening the access arrangement. Information asymmetry may lead to cost over-recovery that is inconsistent with section 8.1(a) of the Code, and to administrative costs that outweigh the cost pass-through amount, inconsistent with sections 8.1(b) and 8.1(f) of the Code.
- Finally, there would be uncertainty about what costs should appropriately be passed through for the event, which is likely to increase the costs associated with assessing an application for cost pass through. For instance, is it appropriate for users to bear some or all of the uninsured costs of such an event, and should any subsequent liabilities arising from loss of service also be passed through? Comments received from Orica

²⁹² Comments at the 23 March 2005 roundtable forum.

²⁹³ ECG, *Review of AGLGN Gas Access Arrangement for IPART*, August 2004, s 8.5.3.4.

²⁹⁴ Contained in a confidential version of ECG's August 2004 report to the Tribunal.

²⁹⁵ The Tribunal approved a specific cost pass-through mechanism for the NSW electricity DNSPs based on foreseen but uncertain costs.

²⁹⁶ The Tribunal considered this issue in its 2004 review of electricity DNSPs and indicated a risk of moral hazard if insurance and terrorism events were included in the scope of a general pass through mechanism, *NSW Electricity Distribution Pricing 2004/05 to 2008/09 - Final Report*, June 2004, p 129.

and EMRF support the Tribunal's view that AGLGN should not be able to pass these costs through to users on the basis that these should have been factored into costs of a prudent service provider, or should be recovered through insurance or third parties. The Tribunal notes that it has approved the December 2003 estimate that was submitted by AGLGN, and supported by ECG.

For all the above reasons, the Tribunal is not satisfied that AGLGN's proposal to manage the costs associated with a mines subsidence event through a pass-through mechanism is consistent with the objectives in section 8.1 and the factors in section 2.24 of the Code. Therefore, it requires that AGLGN exclude 'mines subsidence event' from the cost pass-through mechanism in its proposed access arrangement.

Guaranteed customer service standards event

In its response to the draft decision, AGLGN proposed to amend its cost pass-through mechanism to include the event that a guaranteed customer service standards (GCSS) regime is implemented during the proposed access arrangement period²⁹⁷ by adding the following words:

AGLGN may vary Reference Tariffs to recover:

- payments linked to Guaranteed Customer Service Standards as a result of IPART's recommendations to the Minister for Energy and Utilities to introduce payments linked to network reliability
- efficient costs associated with the administration of Guaranteed Customer Service Standards as a result of IPART's recommendations to the Minister for Energy and Utilities to introduce payments linked to network reliability.

In 2004, the Tribunal completed a review of the GCSS and operating statistics that NSW energy network and retailers are required to report on.²⁹⁸ As part of that process, it wrote to AGLGN requesting, in part, that the implementation costs associated with the recommendations of this review be factored into the access arrangement review. The Tribunal understands that AGLGN did not explicitly factor in any implementation costs in its total revenue requirement.

The Tribunal notes that the Minister for Energy and Utilities has yet to respond to its recommendations on GCSS. The Minister's Department is currently investigating the arrangements and implementation issues for the GCSS regime arising from the Tribunal's 2004 review before making recommendations to the Minister.²⁹⁹ Consequently there is some uncertainty about the extent of any changes, and the cost implications of those changes approved by the Minister.

²⁹⁷ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, section 3.3.

²⁹⁸ IPART, *Review of Guaranteed Customer Service Standards and Operating Statistics – Final Recommendations, Report to the Minister*, April 2004.

²⁹⁹ DEUS circulated a paper for stakeholder comment – DEUS, *Issues Paper – Arrangements for Guaranteed Customer Service Standards*, 20 November 2004 – seeking among other things, comments on implementation costs.

The Tribunal considers that if the Minister decides to approve changes or additions to the GCSS regime, any costs that AGLGN incurs to implement those changes (such as costs of setting up new administrative or IT systems) would be outside AGLGN's control. Therefore the inclusion of such an event in the pass-through mechanism would allow AGLGN to recover its efficient and incremental costs, consistent with section 8.1(a) of the Code, while not adversely affecting its incentives to reduce costs, as required by section 8.1(f) of the Code.

It also considers that allowing AGLGN to pass through the 'expected value' of any payments linked to failure to meet the minimum standards is consistent with the objectives in section 8.1 of the Code. The Tribunal considers it is not reasonable to expect AGLGN to achieve the minimum standards for all the customers serviced by its network all the time. By allowing only the expected value of payments to be passed through, AGLGN will have an incentive to do its best to meet or outperform the minimum standards, as payments beyond the expected value will represent lost revenue. The determination of the expected value of customer payments should be subject to an independent review of AGLGN's estimates compared with any historical data on its network performance. The Tribunal would consider the results of such a review in determining whether to approve or not approve a proposed variation.³⁰⁰

While the Tribunal supports the notion of a cost pass-through mechanism for the efficient and incremental costs of such a discrete uncontrollable event, it is concerned that AGLGN's proposed definition for this event does not explicitly acknowledge that the recoverable costs should only relate to incremental costs associated with implementation and expected payments. It also notes that this definition links costs to 'IPART's recommendations to the Minister for Energy and Utilities' and payments to 'network reliability', when in fact any costs that do arise would be due to a Ministerial decision on the matter and payments would likely relate to measures other than network reliability.³⁰¹ Finally, it does not specify that the cost of payments should be limited to the 'expected value' of these payments as discussed above. All of these matters should be clarified in the interests of AGLGN, users and the Tribunal's potential future assessment, taking into account the factors in section 2.24 of the Code.

For these reasons, the Tribunal approves, in principle, the proposal to include the event that a guaranteed customer service standards (GCSS) regime is implemented but requires AGLGN to make the amendments in 12.5 below.

Materiality prerequisite

As noted above, the Tribunal considers that the inclusion of a materiality prerequisite in this reference tariff variation method, to ensure that only material costs associated with pass-through events can be passed through, is consistent with the objectives in section 8.1 of the Code. This approach retains some incentive for AGLGN to reduce its administrative costs, consistent with section 8.1(f) of the Code, while still allowing AGLGN to pass through any costs that would have a significant impact on its financial position consistent with section 8.1(a) of the Code. AGLGN proposes that such a prerequisite be included, but it has not proposed a specific threshold to define materiality.

³⁰⁰ In future regulatory periods, implementation costs and the expected value of customer payments should be factored in as an ongoing controllable cost, rather than a pass through amount.

³⁰¹ The Tribunal recommended GCSS for gas reticulators in two performance areas - timely provision of connection services and notice of planned interruptions, with payments for failing to meet these standards.

The Tribunal considers that the variation method should provide certainty to the users of AGLGN's network, as well as to AGLGN itself, about how and when the cost pass-through mechanism will be applied. This takes into account the factors in section 2.24 of the Code including the legitimate business interests of the service provider (section 2.24(a)), and the interests of users and prospective users (section 2.24(f)). However, the absence of a specific threshold does not of itself indicate that the variation method is inconsistent with the objectives in section 8.1 of the Code.

Indeed, the setting of a threshold would itself involve a trade-off between the different objectives in section 8.1 of the Code, as too high a threshold may prevent AGLGN from recovering its efficient costs (inconsistent with section 8.1(a) of the Code), while too low a threshold may weaken the incentives for AGLGN to reduce costs (inconsistent with section 8.1(f) of the Code). There may also be several ways to define materiality (for instance, an absolute dollar amount or a percentage of revenue), and one way may be appropriate in some cases and not in others.

For these reasons, the Tribunal considers that materiality should be assessed on a case-by-case basis in accordance with the notification and approval processes prescribed in sections 8.3B to 8.3H of the Code (discussed in 12.4.4 below). This means that the Tribunal may decide to refuse an application for a variation to reference tariffs (related to a cost pass-through event) where it is not satisfied that the materiality prerequisite has been met.

Recovery of pass-through amounts

AGLGN did not specify in its proposed access arrangement how it would recover from users any pass-through amounts approved by the Tribunal. However, in its current access arrangement, AGLGN is required to allocate these costs on the same basis as it has allocated costs in developing the reference tariffs immediately prior to a proposed variation.³⁰²

Having regard to section 2.24 of the Code, the Tribunal considers that for clarity and for certainty for both users and AGLGN over the proposed access arrangement period, the reference tariff variation method should indicate how AGLGN may recover from users any pass-through amount approved by the Tribunal (for example, allocating these costs according to the same allocation methodology used in setting the reference tariffs). However, in the case that a pass-through amount would be more reasonably allocated according to some other method, there should be scope for AGLGN to propose an alternative method.

The Tribunal therefore requires AGLGN to amend its proposed access arrangement to specify a default basis for recovery from users of any pass-through amount approved by the Tribunal using a methodology consistent with the Code requirements. In its response to the draft decision, AGLGN has agreed to implement this amendment.³⁰³

³⁰² AGLGN, *Access Arrangement for NSW Network*, September 2000, s 3.11(e) & 3.12(d).

³⁰³ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, section 5, Amendment 23.

12.4.4 Notification and approval process

As noted above, the Code has been amended to impose new obligations on and provide entitlements to AGLGN and the Tribunal in relation to the process to be followed where a variation to reference tariffs is proposed during the access arrangement period. Table 12.1 summarises the new obligatory and discretionary notification and information requirements afforded by sections 8.3B to 8.3H of the Code.

Table 12.1 Code notification and information regime for tariff variations

	Obligations	Discretionary
AGLGN	<ul style="list-style-type: none"> • Provide notice to the Tribunal if a specified event occurs or it wishes to vary tariffs (s8.3B) • Notice must include (s8.3C): <ul style="list-style-type: none"> ○ effective date; and ○ explanation of how consistent with approved variation method 	<ul style="list-style-type: none"> • Specify minimum notice period and expiry of that period (in effect, review period) (s8.3D(b)(i))
Tribunal	<ul style="list-style-type: none"> • Make notice public (s8.3C) • Provide copy of notice and information to the Code Registrar (s8.3C) • Publish reasons for allowing, disallowing or specifying a variation (s8.3F) 	<ul style="list-style-type: none"> • Request more information from AGLGN to assist in assessment of variation (s8.3D(b)(ii)) • Disallow a variation on reasonable grounds that it is inconsistent with or not permitted under the approved method (s8.3E) • Specify a variation consistent with the approved method, if disallows a variation (s8.3E) • Initiate and specify a variation if AGLGN does not serve a required notice following a specified event (s8.3G) • Grant extensions to any time period that applies to AGLGN (s8.3H(a)) • Grant extensions to itself if it decides to vary tariffs in accordance with approved methods (s8.3H(b))

AGLGN proposed to include a brief new section in its access arrangement that sets out the process it will follow, should it propose to vary its reference tariffs during the proposed access arrangement period, which addresses some aspects of these new requirements.

The Tribunal received one submission that commented on this proposed process. EnergyAustralia expressed concern that the process does not include notifying *users* of tariff variations, so they can pass on these variations to end customers. It also noted that AGLGN's proposal does not require it to seek regulatory approval for the variation, and that the provisions under the Code that allow the Tribunal to disallow a variation are not reflected in the access arrangement. It proposed that AGLGN's access arrangement be redrafted based on the Victorian gas access arrangements.³⁰⁴

The Tribunal's considerations in relation to AGLGN's proposed minimum notice period, the number and incidence of variations allowed per year, and the clarity and administrative efficiency of the approval process are discussed below.

³⁰⁴ EnergyAustralia submission, 20 April 2004, s 7.

Minimum notice period

AGLGN proposed to provide the Tribunal with notice of 30 business days prior to the effective date of any proposed reference tariff variation. This would mean that the Tribunal would have less than 30 business days (approximately 6 weeks) to assess the proposed variation for consistency with the approved variation method, if it wanted to allow for users to be notified of any permitted changes before those changes become effective.

In its draft decision, the Tribunal was not satisfied that this was enough time, and therefore proposed to require AGLGN to amend its access arrangement to provide it with notice of 50 business days prior to the effective date of proposed reference tariff variations. In its response to the draft decision, AGLGN maintained that its original proposal for a 30-business-day notice period was appropriate on the basis that the data that it would use for annual CPI variations is not available until about 40 business days prior to the effective date of those variations.³⁰⁵

As noted in its draft decision, the Tribunal considers that CPI and UAG variations should be relatively straightforward to assess for consistency, but cost pass-through variations will involve more analysis (including the engagement of independent auditors) to verify the level and recovery of pass-through amounts and their impacts on reference tariffs. Therefore, it is not satisfied that, in relation to cost pass-through variations, a 30-business-day notice period would provide sufficient time for it to properly assess such potentially complex variation proposals and provide time for users to be notified of any permitted changes. However, it also acknowledges that there are practical concerns regarding a 50-business-day notice period where AGLGN's proposed CPI tariff variations assume the use of March quarter CPI data.

In considering whether 30 business days is a reasonable period within which to conduct an assessment, the Tribunal notes that it is not required to conduct public consultation on the proposed variations. It also notes that it may request further information from AGLGN, which has the effect of extending the review period by the number of days AGLGN takes to provide this information.

The Tribunal acknowledges that it is in the interests of a service provider to give effect to tariff variations quickly. It also acknowledges that users require sufficient time to inform their own end-customers (where users are retailers) and to incorporate changes into their own prices. Having had regard to these competing considerations in section 2.24 of the Code, the Tribunal is not satisfied that a 30-business-day notice period for variations meets the requirements of the Code. It considers that to be consistent with this section, the notice period would need to be long enough to allow the Tribunal sufficient time to assess the proposed variations and to provide users with 2 weeks (or 10 business days) notice of the permitted variations.

While it would be possible to allow for a separate 30-business-day notice period for CPI and UAG variations, this would create two layers in the notification and approval process. The Tribunal considers that this would be inefficient and administratively cumbersome, and inconsistent with the objectives in section 8.1 and the factors in section 2.24 of the Code. Therefore, to enable the alignment of the notification and approval process for all proposed variations, it requires that AGLGN amend its proposed access arrangement so that

³⁰⁵ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision, February 2005*, section 5, Amendment 24.

December quarter CPI data is to be used for CPI variations, as discussed in section 12.4.1 above. This will accommodate a 50-business-day notice period, and provide adequate time for AGLGN to incorporate the December quarter CPI data into its applications for 1 July effect, the Tribunal to assess the application, and users to be given 10 business days notification.

Number and incidence of variations per year

AGLGN's proposed access arrangement does not specify how many reference tariff variations it will seek per year, and when these variations will occur. However, the Tribunal understands that AGLGN intends that any variations due to CPI escalation and UAG outcomes will occur once a year for a 1 July effect, but variations due to pass-through events will not be limited in their number or incidence.³⁰⁶

The Tribunal acknowledges that due to the nature of 'change-in-tax', 'regulatory', and 'guaranteed customer services standards' pass-through events, it is unlikely that AGLGN would be able to forecast if and when it may seek tariff variations related to these events, or the date or dates on which such tariff variations would take effect.

Although the Tribunal considered that a materiality prerequisite (which would need to account for the costs to AGLGN of preparing an application for reference tariff variations), could provide an incentive for AGLGN to minimise the number of variations it seeks per year and to time these variations to coincide with any CPI or UAG variations that occur on 1 July, it considers that given the now increased scope for cost pass-through events, it would be consistent with section 8.1 and 2.24 of the Code for the access arrangement to expressly require this. The Tribunal would consider the possibility of variations taking effect on another date if the circumstances supported an exception, after taking into account the interests of AGLGN and users

Therefore, the Tribunal requires that AGLGN be required to amend its access arrangement so that it may only change its reference tariffs in any year of the access arrangement period with effect from 1 July, unless the Tribunal agrees otherwise.

Clarity and administrative efficiency in approval process

Although the Code does not require that an access arrangement should reproduce the notification and approval regime in the Code, having considered AGLGN's proposed access arrangement and EnergyAustralia's submission on this matter, the Tribunal is concerned that AGLGN's proposed access arrangement gives the inaccurate impression that tariff variations may only be initiated by AGLGN, and that approval of variations is automatic provided that notice is given to the Tribunal.

The Tribunal also considers that, even though section 8.3D(b)(ii) of the Code allows it to seek further information from AGLGN when it has reason to believe that this information may assist it in assessing whether the proposed tariff variations are consistent with the approved variation method, the assessment process would be more efficient if AGLGN's access arrangement specified more clearly the nature of the information that is required by, and would be useful to, the Tribunal in assessing variation applications.

³⁰⁶ Confirmed in correspondence from AGLGN dated 27 September 2004.

Similarly, section 8.3E of the Code only allows the Tribunal to disallow a variation if it considers, on reasonable grounds, that the proposed variation is inconsistent with, or not permitted under, the approved reference tariff variation method. Given this, the Tribunal considers that some specification of the criteria it may apply and what would constitute 'reasonable grounds' for it to disallow a variation would minimise any uncertainty about the effect of the approved variation method. The Tribunal also considers that it would be appropriate to rely on criteria allowing only 'incremental' and 'efficient' costs to be approved, consistent with section 8.1 objectives.

Therefore, to increase clarity and administrative efficiency, consistent with section 8.1(f) of the Code, and taking into account the factors in section 2.24 of the Code, the Tribunal requires AGLGN to amend its access arrangement to clearly indicate that:

- variations to reference tariffs may be initiated by the Tribunal if AGLGN does not provide notice of an event (in accordance with section 8.3G of the Code)
- variations are subject to the Tribunal's approval (deemed or otherwise) (as provided by sections 8.3D and 8.3E of the Code) and reasonable satisfaction that the variation is based on incremental and efficient costs
- the information to be provided to the Tribunal in a variation notice must (in accordance with section 8.3C of the Code) include:
 - the effective date of the variation
 - an explanation of how the proposed variation is consistent with the approved variation method
- the information to be provided to the Tribunal in a variation notice should include (to be consistent with the Code):
 - details of the financial impact on AGLGN and users with supporting documentary evidence, including a demonstration that costs are incremental and efficient
 - an explanation of how the variation is to be recovered through tariffs.

12.5 Amendments required

Amendment 17 – Annual escalation of reference tariffs for CPI effects

The Escalation of Reference Tariffs variation method must be amended so that the reference tariffs will be adjusted by the rate of change in the average of the CPI for the four quarters to December in the relevant year divided by the average of the CPI for the four quarters to December in the immediately preceding year.

Amendment 18 - Definitions of 'Tax' and 'Relevant Tax'

The definition of 'Relevant Tax' in the proposed access arrangement must be amended, and a new definition of 'Tax' must be inserted, as follows:

'Relevant Tax' means any Tax other than:

- (a) any tax in the nature of an income tax or a capital gains tax;
- (b) penalties, charges, fees and interest on late payments, or deficiencies in payments, relating to any Tax;
- (c) stamp duty, or similar taxes and duties; and

- (d) any Tax that replaces or is the equivalent of or similar to any of the taxes referred to above.

‘Tax’ means any royalty (whether based on value, profit or otherwise), tax, duty, excise, levy, fee, rate or charge imposed from time to time during the term of this Access Arrangement by any government or any governmental, semi-governmental or other body authorised by law to impose that tax on or to:

- (a) the Network (or any of its components);
- (b) the operation of the Network; or
- (c) the provision of Services by AGLGN.

Amendment 19 - Amended gas reconciliation methodology

The proposed access arrangement must be amended to allow for the removal of unaccounted-for-gas (UAG) provisions and an adjustment to reference tariffs should UAG be removed as a network cost during the access arrangement period.

Amendment 20 - Definition of ‘Regulatory Event’

The definition of a ‘Regulatory Event’ in the proposed access arrangement must be amended to exclude both a ‘Change-in-tax Event’ and the pass through of the cost of any Guaranteed Customer Service Standards as described in section 3.11(d) of the proposed access arrangement as set out in Amendment 23 below.

Amendment 21 - Symmetrical tariff variation methods

The proposed access arrangement must clarify that tariff variation methods operate symmetrically.

Amendment 22 - Exclusion of ‘Insurance Event’, ‘Unforeseen External Event’ and ‘Mines Subsidence Event’

‘Insurance Event’, ‘Unforeseen External Event’ and ‘Mines Subsidence Event’ must be excluded from the cost pass-through mechanism in the proposed access arrangement.

Amendment 23 - Guaranteed Customer Service Standards

Clause 3.11(d) (Guaranteed Customer Services Standards) of AGLGN’s proposed access arrangement shall be amended so as to read as follows:

AGLGN may vary Reference Tariffs to recover:

- (a) The expected value of payments that may be required to be made to Users by AGLGN as a result of the imposition of Guaranteed Customer Service Standards (GCSS) as a result of a decision of the Minister for Energy and Utilities to introduce new GCSS payments in addition to those that apply in respect of AGLGN at the commencement of the Access Arrangement Period.
- (b) Incremental and efficient costs associated with the administration of any such additional or changed Guaranteed Customer Service Standards described in paragraph (a) above.

Amendment 24 - Date of reference tariff variations

The proposed access arrangement must provide that AGLGN may only vary its reference tariffs for any year during the access arrangement period with effect from 1 July of that year (or any other date determined by the Tribunal).

Amendment 25 - Basis for allocating pass-through costs

The proposed access arrangement must specify a cost allocation basis for recovery of pass-through amounts (such as allocating costs according to the same allocation methodology used in setting reference tariffs).

Amendment 26 - Notification and approval process

The notification and approval process for tariff variations in the proposed access arrangement must provide that:

- (a) when AGLGN proposes to vary tariffs, it is required to provide the Tribunal with notice of 50 business days prior to the effective date of the variation;
- (b) in accordance with the Code, variations may be initiated by the Tribunal if AGLGN does not provide notice of an event;
- (c) variations are subject to the Tribunal's approval (deemed or otherwise), and reasonable satisfaction that the variation is based on incremental and efficient costs;
- (d) variation notices provided to the Tribunal must include:
 - (i) the effective date of the variation; and
 - (ii) an explanation of how the proposed variation is consistent with the approved variation method;
- (e) variation notices provided to the Tribunal should include:
 - (i) details of the financial impact on AGLGN and users with supporting documentary evidence including a demonstration that costs are incremental and efficient;
 - (ii) an explanation of how the variation is to be recovered through tariffs.

13 TERMS AND CONDITIONS

A service provider's access arrangement must include the terms and conditions on which it will supply each of its reference services.

13.1 Tribunal's finding

The Tribunal is not satisfied that the terms and conditions included in AGLGN's proposed access arrangement meet the requirements of the Code. It requires AGLGN to amend its proposed access arrangement as set out in 13.5 below.

The Tribunal notes that AGLGN has already agreed to make all but one of these required amendments.

13.2 Code requirements

Section 3.6 of the Code requires that the proposed access arrangement include the terms and conditions on which the service provider will supply each of its reference services. It also requires that these terms and conditions must, in the relevant regulator's opinion, be reasonable.

13.3 AGLGN's proposal

AGLGN's proposed terms and conditions for its seven proposed reference services are set out in a number of sections and schedules of its proposed access arrangement. Table 13.1 identifies where the terms and conditions are located in this access arrangement, characterises the nature of the terms and conditions, and indicates which reference services they apply to.³⁰⁷

Table 13.1 Summary of proposed terms and conditions

Where in access arrangement	Nature	Services applicable to
Schedule 2A	General	All reference services
Schedule 2B	General	All reference services except tariff reference services
Schedule 3	Gas balancing	All reference services
Schedule 4	Operational principles	All reference services
Schedule 5	Gas quality	All local network and trunk services
Section 2	Service-specific	Service-specific

³⁰⁷ A list of the applicable terms and conditions is contained in the 'General' section for each service in Section 2 of the AGLGN *Access Arrangement for NSW Network*, December 2003. Schedule 4 to the access arrangement indicates the policy in that schedule applies to 'all local and trunk services'.

13.4 Tribunal's analysis and considerations

In making its draft decision, the Tribunal considered a number of submissions that commented on AGLGN's proposed terms and conditions.³⁰⁸ It also engaged the Allen Consulting Group (ACG) to review most of these terms and conditions, to assist it in assessing their reasonableness. ACG prepared a draft report³⁰⁹ for the Tribunal, which it presented at a public forum on 15 September 2004. The Tribunal then received further submissions³¹⁰ in response to ACG's draft report, and undertook further discussions with AGLGN. ACG then prepared a final report,³¹¹ taking into account these submissions and information provided by AGLGN. The Tribunal provided AGLGN with a further opportunity to respond to some specific matters in this report, due to the number of revised recommendations it contained.³¹² It released ACG's final report and AGLGN's response at the same time as its draft decision.

ACG did not assess the three types of 'other charges' that AGLGN proposed to levy in addition to reference tariffs³¹³—overrun charges, gas balancing charges, and charges for ancillary services.³¹⁴ As these charges effectively form part of the terms and conditions on which AGLGN will supply its reference services, the Tribunal undertook its own assessment of them against the requirement that they be 'reasonable'.

The Tribunal then considered whether, in its opinion, each of AGLGN's proposed terms and conditions is reasonable. Overall, it considered 38 specific matters in relation to the proposed terms and conditions. Having had regard to the recommendations in ACG's final report, submission comments, its own assessment and other relevant factors, including those in section 2.24 of the Code³¹⁵ it was not satisfied that the proposed terms and conditions are reasonable. It proposed in its draft decision to require that AGLGN amend its proposed access arrangement in relation to 13 of the 38 matters considered.

In making its final decision, the Tribunal reconsidered all 38 matters. In doing so, it had regard to the recommendations in ACG's final report, submissions received prior to the draft decision ('initial submissions'), submissions in response to the draft decision,³¹⁶ its own assessment and other relevant factors including those in section 2.24 of the Code. These

³⁰⁸ Alinta EA Pty Ltd (21 June 2004), Duke Energy International (27 April 2004), EnergyAdvice Pty Ltd (May 2004), EnergyAustralia (20 April 2004), Energy Markets Reform Forum (May 2004), Gas Market Company (25 May 2004), Harrison Manufacturing (13 April 2004), Hunter Gas Users Group (4 May 2004), Lovell Springs Pty Ltd (undated), Orica (3 May 2004), Origin Energy (19 April 2004), TXU (16 April 2004).

³⁰⁹ The Allen Consulting Group, *Revisions to AGLGN's Access Arrangement, Assessment of Terms and Conditions - Draft Report to IPART*, August 2004 – released on 8 September 2004.

³¹⁰ AGLGN 10 September & 6 October 2004, Country Energy 6 October 2004, EnergyAdvice Pty Ltd 6 October 2004, EnergyAustralia 6 October 2004, Orica Australia Pty Ltd 6 October 2004, Origin Energy 6 October 2004, TXU 6 October 2004.

³¹¹ The Allen Consulting Group, *Revisions to AGLGN's Access Arrangement, Assessment of Terms and Conditions – Final Report to IPART*, 28 October 2004 (ACG final report).

³¹² AGLGN, *Additional Comments on ACG's Report Final Recommendations*, 11 November 2004.

³¹³ However it did comment on the terms and conditions relating to overruns and gas balancing – see sections 4.8 and 5.5 (overrun charges) and section 4.25 (gas balancing charges) of the ACG final report.

³¹⁴ AGLGN, *Access Arrangement for NSW Network*, December 2003, Part 3F.

³¹⁵ Section 2.24 of the Code is discussed in Chapter 2 of this report.

³¹⁶ AGLGN (8 February 2005), EnergyAdvice (28 February 2005), Hunter Gas Pipeline (28 February 2005), Hydro Aluminium (28 February 2005), Orica (28 February 2005), Origin Energy (28 February 2005), various comments at the 23 March 2005 public forum, and further correspondence with EnergyAdvice and AGLGN during April 2005.

matters are listed in Appendix 3,³¹⁷ together with a summary of the Tribunal's findings on each.

The Tribunal has not changed its view on the majority of the matters, and is not satisfied that that all of AGLGN's proposed terms and conditions are reasonable. It requires that AGLGN amend its proposed access arrangement in relation to 13 of the 38 matters considered (some of these amendments have however changed since the draft decision). The Tribunal's considerations and conclusions on eight matters that still attracted considerable stakeholder comment in submissions in response to the draft decision, or which the Tribunal considers to warrant detailed explanation based on new information since the draft decision, are discussed below. A complete list of the amendments the Tribunal requires AGLGN to make to its proposed terms and conditions is also provided in 13.5 below.

13.4.1 Form of the proposed access arrangement

The Tribunal received initial submissions that commented on the overall form of the proposed access arrangement and the terms and conditions, suggesting that they are unclear, repetitive, and unnecessarily complex. In particular stakeholders submitted that the layout of the liabilities and indemnity provisions requires significant resources to understand.³¹⁸ ACG also expressed the view that the terms and conditions are unnecessarily duplicative, although it noted that the Tribunal's ability to address drafting deficiencies may be limited to those specific provisions where a finding is made that they are not reasonable.³¹⁹

AGLGN submitted that it is reasonable and clearer to draw the attention of users to key principles of a particular service as part of its proposed services policy, and then to refer users to the general terms and conditions as appropriate.

In making its final decision, the Tribunal reconsidered these matters and in particular comments in relation to layout of liability and indemnity provisions (see 13.4.5 below), reiterated by a stakeholder in response to the draft decision.³²⁰ The Tribunal's view remains unchanged, that it agrees with AGLGN, finding that the form and layout of the terms and conditions in AGLGN's proposed access arrangement is reasonable. However, consistent with its considerations for the draft decision, it has taken into account issues of form and clarity in assessing the reasonableness of individual terms and conditions.

The Tribunal notes that in a number of instances where ambiguities have been identified in specific terms and conditions, AGLGN has agreed to make amendments that seek to remove the ambiguity and thereby enhance the clarity of these terms and conditions.

³¹⁷ For convenience, they are listed in the same order as they are presented in ACG's final report.

³¹⁸ EnergyAustralia submissions, 20 April & 6 October 2004 and Origin Energy submissions, 19 April & 6 October 2004.

³¹⁹ Section 3.2 of the ACG final report.

³²⁰ EnergyAustralia submission 25 February 2005 refers to earlier submissions on 20 April and 6 October 2004.

13.4.2 Incomplete specification of terms and conditions

Several initial submissions contended that the access arrangement should specify in full all the terms and conditions under which reference services are provided.³²¹ They noted that AGLGN's service agreements³²² contain provisions for matters that are not included in the proposed access arrangement, or which expand upon the terms and conditions included in the proposed access arrangement.

ACG put a similar view, asserting that the intent of the Code³²³ is best achieved if the terms and conditions are sufficiently detailed in the access arrangement for a user to enter into a service agreement for reference services without further negotiation. It found that the proposed terms and conditions fail to address specific matters commonly included in agreements for gas distribution services. However, it noted that there are inconsistencies between jurisdictions on this issue.³²⁴

AGLGN contended that the Code does not require it to include detailed terms and conditions in the access arrangement. Among other things, it submitted that this would limit the ability of both it and users to negotiate alternative terms and conditions (as provided by the Code); would effectively 'lock-in' terms and conditions that may require amendment in a developing gas market during the access arrangement period; and would result in the regulator assuming responsibility for the management of commercial risk. It also drew the Tribunal's attention to a provision in the proposed access arrangement that requires both parties to act "in a commercially reasonable manner",³²⁵ and put the view that the 'propose/response' model for assessing access arrangements has led to varying levels of detail in terms and conditions across jurisdictions.

In its report on its draft decision, the Tribunal found that the Code does not require AGLGN to include in its proposed access arrangement the complete terms and conditions contained in AGLGN's proposed service agreements. Several submissions in response to the draft decision reiterated the request for more detailed terms and conditions in the access arrangement, in order to minimise (what users regard as often difficult) negotiation with AGLGN.³²⁶

In making its final decision, the Tribunal has not changed its finding on this matter. In particular, it considers that the Code does not provide for the Tribunal to require a complete codification of the rights and obligations of the service provider and user. Indeed, the Code specifically contemplates that parties may want to negotiate on the services set out in the access arrangement³²⁷ and that in those circumstances where mutual agreement cannot be reached, it provides for dispute resolution procedures (as discussed in section 13.4.3 below).

³²¹ Submissions from EnergyAustralia, 20 April 2004 & 6 October 2004, Origin Energy 19 April & 6 October 2004, TXU 6 October 2004, Country Energy 5 October 2004.

³²² AGLGN offers standard Reference Service Transportation Agreements (www.agl.com.au).

³²³ ACG's view of the intent of the Code is that reference services are 'benchmark' services.

³²⁴ Section 3.3 of the ACG final report.

³²⁵ Clause 6, Schedule 2A of the AGL Gas Networks *Access Arrangement for NSW Network*, December 2003.

³²⁶ EnergyAustralia submission 25 February 2005, and EnergyAustralia and TXU comments at the 23 March 2005 roundtable forum

³²⁷ Section 2.50 of the Code.

Notwithstanding this general view, the Tribunal has taken into account the relevant ‘completeness’ of individual terms and conditions as a relevant factor in assessing their reasonableness.

13.4.3 Dispute resolution

Initial submissions suggested that the proposed access arrangement should include provisions that set out dispute resolution procedures (or the mechanisms available to users and/or prospective users), and commented that the Code provisions for dispute resolution are difficult to implement.³²⁸ ACG also recommended that AGLGN should be required to include dispute resolution provisions in the access arrangement on similar grounds to those discussed in 13.4.2 above.³²⁹ It submitted that such provisions would provide a check on the requirement within the access arrangement that AGLGN must act “in a commercially reasonable manner”. AGLGN responded that dispute resolution mechanisms are already contained in the Code,³³⁰ and in its service agreements.³³¹

In its report on its draft decision, the Tribunal noted that the Code only provides for dispute resolution mechanisms for those users seeking access, not for users that have already entered into a service agreement with AGLGN.³³² However, consistent with the Code, users are free to negotiate the inclusion of dispute resolution provisions in their service agreement with AGLGN. It also considered that it is the parties themselves, rather than the Tribunal, who are in the best position to determine whether to include a dispute resolution mechanism and the form it should take. For these reasons, it did not require AGLGN to amend its proposed access arrangement to include a specific dispute resolution provision.

Submissions in response to the draft decision reiterated that users require the comfort of a default dispute resolution process should the parties be unable to negotiate a satisfactory arrangement at the time that the user seeks access,³³³ and that the access arrangement should include appropriate dispute resolution procedures in relation to negotiating an embedded network service.³³⁴

For the same reasons noted in the report on its draft decision, the Tribunal’s finding on this matter remains unchanged in its final decision. It also notes that the dispute resolution procedures set out in the Code are not exclusively for the benefit of users seeking reference services but also apply to users seeking non-reference services, including an embedded network interconnection service.³³⁵

³²⁸ EnergyAdvice submission, May 2004, Orica submission, 6 October 2004.

³²⁹ Sections 3.3, 4.5, 4.11, and 4.12 of the ACG final report, which considered the specific provisions for security and payment, new receipt points and receipt stations and the alteration of receipt points and receipt stations.

³³⁰ Section 6.27 of the Code.

³³¹ AGLGN’s standard service agreements are available from the AGL website (www.agl.com.au).

³³² Section 6 of the Code.

³³³ Origin Energy submission 28 February 2005.

³³⁴ Hunter Gas Pipeline presentation at the 23 March 2005 public forum.

³³⁵ Section 6 of the Code.

13.4.4 Security for payment

A range of initial submissions argued that the security for payment provisions in AGLGN's proposed access arrangement are too subjective and discretionary, are inconsistent with security for payment provisions in other access arrangements, and that the dispute resolution procedures are inadequate to ensure that AGLGN acts reasonably in setting the security for payment it requires users to provide.³³⁶

ACG recommended that in the absence of a dispute resolution mechanism in the proposed access arrangement, AGLGN should be required to amend its proposal to set out the circumstances in which AGLGN may require users to provide it with security for payment, and the manner in which it would determine the type and amount of any such security. It also recommended that the access arrangement should include provisions for the resolution of disputes under a service agreement (as discussed in 13.4.3 above).³³⁷

AGLGN submitted that it is opposed to additional terms and conditions that would limit its ability to assess and manage the risk of non-payment and user insolvency. It considered that its proposed provisions protect the interests of users and service provider, and noted that it is required to act 'reasonably' and that dispute resolution procedures exist under the Code.

In its report on its draft decision, the Tribunal noted that the proposed access arrangement requires only that AGLGN act reasonably in exercising its discretion to determine the type and amount of any security it may require a user to provide to it. As discussed in 13.4.3 above, it did not consider it appropriate to require AGLGN to include specific dispute resolution provisions in its access arrangement. However, it did consider that AGLGN's proposed security for payment provisions do not enable users to sufficiently understand the fundamental nature of their obligations.

Having considered the factors in section 2.24 of the Code, the Tribunal found that AGLGN should be required to provide more information in its access arrangement to enable users to sufficiently understand the basis on which it may exercise its discretion to require security from users. For this reason, it was not satisfied that the terms and conditions in AGLGN's access arrangement for security for payment are reasonable. It required AGLGN to amend its proposed access arrangement to specify objective and non-discriminatory criteria on which it may exercise its discretion to require security from users.³³⁸

In its response to the draft decision,³³⁹ AGLGN submitted that the Tribunal's proposed amendment creates undue commercial risk for AGLGN and proposed an alternative amendment, with the following effect:

- In addition to the user's credit rating and payment history, it would allow AGLGN to determine the amount of any security having regard to 'any additional factors which, in AGLGN's opinion, may have a material effect on the user's ability to perform any of its obligations under the service agreement or upon AGLGN's ability to recover any amounts payable or to be payable by the user.'

³³⁶ Submissions from EnergyAustralia 20 April & 6 October 2004, Origin Energy 19 April & 6 October 2004, TXU 16 April & 6 October 2004 and Orica 6 October 2004.

³³⁷ Section 4.5 of the ACG final report.

³³⁸ IPART, *Revised Access Arrangement for AGL Gas Networks – Draft Decision, December 2004*, Amendment 25.

³³⁹ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, Section 5, Amendment 25.

- It would impose an obligation on users to provide AGLGN with all information reasonably required to assess credit worthiness in a timely manner.

The Tribunal considers that AGLGN's alternative amendment is substantially the same as the Tribunal's amendment. Taking into account that there were no stakeholder comments on this amendment, it considers that it is reasonable for the security for payment provision to include an obligation on users to provide AGLGN with information to assess credit worthiness and for AGLGN to retain some discretion to take into account other factors when determining any security for payment. However, it considers that AGLGN should act 'reasonably' when determining any additional factors and therefore requires AGLGN to make a minor amendment to this effect. The Tribunal notes that AGLGN has agreed to make this minor amendment.³⁴⁰

The Tribunal considers that this requirement provides greater certainty for users while preserving AGLGN's discretion as to the type of security it may require in particular circumstances.

13.4.5 Liability and indemnities

The Tribunal received initial submissions asserting that the liability provisions in AGLGN's proposed access arrangement place an unreasonable burden on users in their interpretation; are ambiguous and should be consolidated into a single set of relevant terms and conditions to remove this ambiguity;³⁴¹ and should be limited to a monetary cap with liability for consequential losses excluded.³⁴²

ACG considered the proposed provisions relating to liability and indemnities from an economic perspective and, in most cases, recommended that they should be considered reasonable.³⁴³ ACG found there were two exceptions to this. The first was a liability provision relating to the gas swap service.³⁴⁴ ACG recommended that AGLGN be required to amend this provision to limit the circumstances in which users will be liable to and indemnify AGLGN for loss or damage arising out of a gas swap, and AGLGN agreed to do so.

The second was a provision³⁴⁵ that requires users to include in all their supply arrangements with their customers a provision limiting or excluding their liability to those customers, to the extent reasonably practicable, and in particular in relation to transportation of gas. ACG recommended that AGLGN should be required to delete this provision, on the basis that it is unreasonable for AGLGN to limit the ability of a user to contract with a customer where there are other mechanisms to limit liability to AGLGN.

AGLGN disagreed with ACG's view and submitted that, unlike users, it does not have a commercial relationship with end customers and therefore has no opportunity to establish liability provisions that are consistent with its risk allocation principles, and which protect its legitimate business interests.

³⁴⁰ In correspondence on 1 April 2005.

³⁴¹ EnergyAustralia submissions, 20 April & 6 October 2004.

³⁴² TXU submissions, 16 April & 6 October 2004.

³⁴³ Section 4.18 of the ACG final report.

³⁴⁴ Section 2.7, penultimate bullet point 'Gas Balancing', p 30 of the *AGLGN Access Arrangement for NSW Network*, December 2003

³⁴⁵ Clause 57, Sch 2A to the *AGLGN Access Arrangement for NSW Network*, December 2003.

In making its draft decision, the Tribunal assessed whether, in its opinion, the liability provisions contained in AGLGN's proposed access arrangement are reasonable. In doing so, it took into account AGLGN's and other stakeholders' submissions and ACG's recommendations. It agreed with ACG's finding that most of the proposed provisions covering liability and indemnities are reasonable. It also agreed with ACG's finding that the liability provision relating to the gas swap service³⁴⁴ is not reasonable and should be amended as ACG proposed. It noted that AGLGN had agreed to make this amendment, and formally required it to do so. The Tribunal considered, however, that since this provision relates to the gas swap service described in section 2.7 of the proposed access arrangement, for the same reasons given in 13.4.1 above, it should not require the amended provision to be moved to Schedule 2A of the access arrangement (as suggested by EnergyAustralia). It found it is reasonable for AGLGN to include this provision under the relevant service specific terms and conditions in Section 2 of the access arrangement.

The Tribunal also did not agree with ACG that AGLGN should be required to delete the provision³⁴⁵ requiring users to limit or exclude to the extent reasonably practicable, their liability to their customers in their supply arrangements with such customers. It was satisfied that this provision is sufficiently clear to enable users to understand their obligations and is reasonable.

In responding to the draft decision, EnergyAustralia asked the Tribunal to reconsider its position on liability and indemnity terms and conditions from a legal perspective, taking into account EnergyAustralia's earlier submissions, and provide the basis for its decision. It also re-iterated its previous comments that:

- users (particularly retailers) are 'squeezed' between the provisions of the access arrangement (as interpreted by AGLGN in the service agreements) and consumers' statutory rights
- AGLGN should be required to include in its access arrangement the complete liability and indemnity provisions that are contained in its service agreements
- the provisions in AGLGN's service agreements are inconsistent with those in the access arrangement.³⁴⁶

In making its final decision, the Tribunal re-considered EnergyAustralia's earlier submissions, including the above specific matters, ACG's review of these terms and conditions and any limitations on liability or relief available that may arise under legislation and at common law.

Relevant to the first point above, the Tribunal considers that, under the Code, it is not its function (nor does it have the power) to require a 'preferred' set of terms and conditions as to the allocation of risk (reflected in the liability and indemnity terms and conditions of an access arrangement and consequently in a service agreement) between a service provider and user, but to ensure that the ones proposed meet the Code requirement of being reasonable. It also noted ACG's comments that the general liability and indemnity terms and conditions of Schedules 2A and 2B to the access arrangement (applicable to all reference services) are largely symmetrical in their application to AGLGN and a user, with exceptions where the actions of one party may impose significant risk on the other.³⁴⁷

³⁴⁶ EnergyAustralia submission 25 February 2005 and comments at the 23 March 2005 roundtable forum.

³⁴⁷ Section 4.18 of the ACG final report.

Regarding the second point, as discussed in 13.4.2 above, the Tribunal considers that the Code does not require the access arrangement to include a complete specification of the liability and indemnity terms and conditions, including those in separate service agreements.

Finally, with regard to the third point, the Tribunal notes that, as set out in 13.4.3 above, users seeking access have recourse to dispute resolution procedures under the Code if they consider that the terms and conditions offered (in a service agreement) are inconsistent with those established in the access arrangement.

Based on the above reasons, and taking into account AGLGN's and other stakeholders' submissions and ACG's recommendations, the Tribunal maintains its finding that, with the exception of the above-mentioned amendment relating to the gas swap service, AGLGN's liability and indemnity terms and conditions meet the requirement of reasonableness under the Code.

13.4.6 Operational principles – load shedding

Initial submissions raised three issues related to AGLGN's proposed load shedding provisions: that these provisions do not recognise the cause of load shedding; that AGLGN's right to shed load should be limited to defined emergency situations; and that the load shedding priority for embedded networks is not appropriate.³⁴⁸

ACG considered the terms and conditions related to embedded networks to be outside the scope of the Tribunal's assessment, as section 3.6 of the Code relates only to terms and conditions for reference services. It also considered that, on the whole, the elements of the operational principles (which include load shedding and establishment of receipt points) are reasonable. However, ACG made two recommendations in relation to these provisions:

1. that they be amended to limit the circumstances under which AGLGN is not liable to a user and its end use customers to those where AGLGN has acted in good faith and in accordance with the principles of the access arrangement
2. that they be amended to include a provision that explicitly sets out how AGLGN may interrupt gas deliveries for reason of a shortfall of gas in the distribution system, and states the circumstances in which such an interruption may occur.³⁴⁹

AGLGN agreed to the first of these recommendations. However, it argued against including more explicit provisions covering the events that may lead to load shedding. It submitted that this would limit its ability to effectively respond to what it sees as primarily physical network issues. It also submitted that it is not a party to any upstream contracts between users and gas shippers and producers, and therefore cannot be expected to take this consideration into account in making decisions regarding load shedding.

In making its draft decision, the Tribunal agreed with ACG's finding that the terms and conditions relating to the load shedding principles, load shedding priorities, and establishment of receipt points are largely reasonable, and that the terms and conditions relating to embedded networks are outside of the scope of this review. It also agreed with ACG's finding that the limitation of liability provision³⁵⁰ is not reasonable. It noted that

³⁴⁸ Submissions from Duke Energy International 27 April 2004, Energy Markets Reform Forum May 2004, EnergyAdvice Pty Ltd May 2004 and EnergyAustralia 20 April & 6 October 2004, TXU 6 October 2004.

³⁴⁹ Section 4.26 of the ACG final report.

³⁵⁰ At Schedule 4, p 108 to the AGLGN *Access Arrangement for NSW Network*, December 2003.

AGLGN had agreed to amend this provision in line with ACG's recommendation, and formally required that it do so.

In relation to the load shedding triggers, the Tribunal did not consider that ACG's second recommendation to amend the load shedding policy specifically addressed stakeholders' concerns about the clarity of the triggers for load shedding. Having considered AGLGN's comments on this specific issue, the Tribunal was satisfied that AGLGN's proposed provisions are reasonable. It noted that the Ministerial Council for Energy (with the involvement of state bodies such as the NSW Department of Energy, Utilities and Sustainability) is developing a National Gas Emergency Response Protocol to facilitate communication and coordination of activities in the event of a gas supply disruption. A working group is considering, among other things, whether the protocol should recognise market participants' commercial rights.³⁵¹

In submissions in response to the draft decision, a number of stakeholders³⁵² contended that the load shedding priority for embedded networks (priority 2 in Schedule 4 to the access arrangement) is not appropriate. They reasoned that the priorities should not discriminate against users of embedded networks in favour of users that take services wholly from AGLGN's network, and requested that the Tribunal delete the relevant load shedding priority from the access arrangement.

In response to these submissions, AGLGN proposed the following amendments to the access arrangement³⁵³:

- to clarify (in Schedule 4 and Section 2.8 on Interconnection to Embedded Networks) that the load shedding priority only applies where an embedded network operator has not established arrangements for load shedding which are acceptable to AGLGN ('acceptable arrangements')
- to clarify the meaning of 'acceptable arrangements' as being an agreement between AGLGN and an embedded network operator
- to set out principles for 'acceptable arrangements' in the absence of a written agreement, including that:
 - load shedding on the embedded network is carried out in accordance with procedures established by the embedded network operator and which is consistent with principles in Schedule 4 of AGLGN's access arrangement
 - the operator complies with AGLGN's requirements regarding access to information relevant to gas supply reductions
 - AGLGN has given prior written acknowledgement that the above procedures and accessibility to information complies with AGLGN's requirements, and such acknowledgement will not be unreasonably withheld.

³⁵¹ The Ministerial Council on Energy Gas Emergency Protocol Working Group released the *National Gas Emergency Response Protocol Issues Paper* in October 2004. Subsequent to the release of the draft decision, on 22 December 2004, Ministers signed a Memorandum of Understanding in relation to natural gas supply shortages affecting jurisdictions with interconnected gas supply networks and the use of emergency powers. In February 2005, a paper was developed by the Ministerial Council on Energy as the basis for consultation on the final arrangements of a national gas emergency response protocol (www.mce.gov.au)

³⁵² EnergyAdvice, Hunter Gas Pipeline, Hydro Aluminium submissions 28 February 2005 and 23 March 2005 public forum comments.

³⁵³ In a meeting with the Tribunal's Secretariat on 1 April 2005.

In making its final decision, the Tribunal remains of the view AGLGN's proposed terms and conditions on the load shedding priority for embedded networks are outside of the scope of the Tribunal's assessment of reasonableness as required (and permitted) by the Code, because they relate to a (non-reference) negotiated service. Similarly, it notes that given users of an embedded network would be seeking a *negotiated* trunk only or local network only service, any applicable load shedding priority is also outside of the scope of the Tribunal's review. Notwithstanding this view, the Tribunal notes that AGLGN has agreed to amend its proposed load shedding priority terms and conditions relating to embedded networks and supports the clarification of these provisions.

13.4.7 Summer tranche, short-term and additional capacity

In its initial submission, EnergyAustralia commented that AGLGN's proposed additional capacity provisions are ambiguous about whether a separate agreement is required and a wider variety of terms should be included for short-term increases in capacity.³⁵⁴ Orica submitted that the circumstances under which short-term capacity is made available should be broadened.³⁵⁵

ACG considered AGLGN's proposed provisions on this matter to be largely reasonable. However, it made two recommendations in relation to these provisions:

1. that they be amended to remove ambiguities by requiring AGLGN to explicitly indicate that additional capacity for capacity reservation services is obtained under an existing service agreement
2. that they be amended to require AGLGN to allow users supplying customers above 30TJ per annum of gas to increase their MDQ (as short-term capacity) to cover the customer's 'additional operational requirements'.³⁵⁶

AGLGN agreed to the first of ACG's recommended amendments but argued against the second. It submitted that this second amendment would extend the availability of short-term capacity beyond its intended circumstances (ie, exceptional circumstances beyond a user or customer's control), and has the potential to undermine the MDQ charging and overrun elements of the access arrangement which would require review of MDQ forecasts and tariffs.

In making its draft decision, the Tribunal considered the different views put by AGLGN, ACG and other stakeholders. It agreed with ACG that AGLGN's proposed provisions for summer tranche, short-term and additional capacity are generally reasonable. The one exception was that it considered that there is some ambiguity about how additional capacity is defined in the proposed provisions, and that this is not reasonable. It noted that AGLGN had agreed to amend its provisions to address this ambiguity, and formally required it to do so. The Tribunal found the proposed provisions addressing constraints on short-term capacity were reasonable, and did not require AGLGN to amend these provisions.

In response to the draft decision, Orica reiterated its earlier submission that AGLGN should state the circumstances in which users are allowed to increase short-term capacity, and suggested that this more closely reflect AGLGN's expressed intended circumstances for this

³⁵⁴ EnergyAustralia submission 20 April 2004, s 5.3(a).

³⁵⁵ Orica submission 6 October 2004, s 4 of comments to the ACG assessment.

³⁵⁶ Section 5.8 of the ACG final report.

service.³⁵⁷ It suggested the replacement of specific examples in AGLGN's access arrangement with 'exceptional circumstances beyond a user's or customer's control'.

In making its final decision, the Tribunal reconsidered both the issues raised by ACG. In relation to the first issue, it has not changed its finding and therefore requires AGLGN to amend its access arrangement to address the ambiguity related to additional capacity as set out in 13.5 below. It notes that AGLGN has agreed to implement this amendment.³⁵⁸

In relation to the second issue raised by ACG, the Tribunal considered the various points of view, including those made in response to the draft decision. It considers that Orica's suggested words generally reflect AGLGN's intended purpose for the short-term capacity service. However, after consulting with AGLGN on the proposed amendment, it does not consider that it is necessary for AGLGN's exhaustive list of scenarios to be deleted and replaced by the suggested words, as the scenarios stated serve to illustrate examples of what may constitute such exceptional circumstances. In addition, it considers that a minor wording amendment requested by AGLGN – to indicate that the exceptional circumstances should relate only to 'physical' circumstances affecting the 'customer', rather than the user – reasonably reflects the intended purpose for the service. In particular, this wording excludes circumstances arising from contractual problems or inadequate demand forecasting. The Tribunal notes that AGLGN has agreed to make this amendment³⁵⁹ and formally requires it to do so, as set out in 13.5 below.

13.4.8 Charges for ancillary services

In making its draft decision, the Tribunal considered that the charges for ancillary services AGLGN proposed would be reasonable if they are well-specified and reflect the costs it is likely to incur in providing each individual service. While AGLGN had advised that it had set these charges to reflect the costs of providing each service,³⁶⁰ it was unable to substantiate to the Tribunal the cost reflectivity of these charges. The Tribunal was therefore not satisfied that they are reasonable, and required AGLGN to remove reference to charges for ancillary services in the proposed access arrangement until AGLGN could provide the Tribunal with evidence to substantiate the cost reflectivity of such charges.

In its response to the draft decision, AGLGN proposed the following GST-inclusive ancillary service charges (which apart from request for service, represents revisions to the level of charges contained in its original proposal):

- request for service - \$60 per hour
- special meter read - \$25
- residential disconnection fee - \$100
- business disconnection fee - \$300.

³⁵⁷ Orica submission 28 February 2005 and comments at the 23 March 2005 public forum.

³⁵⁸ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, Section 5, Amendment 36.

³⁵⁹ In correspondence on 1 April 2005.

³⁶⁰ For a request for service, these costs include time spent collating the information and writing the letter of offer to a retailer when it requests a new, additional or change to a service for a contract customer. For a special meter read, costs are based on the individual meter reads requested by a retailer. For reconnection and disconnection charges, costs include the time spent undertaking the service at the retailer's request.

Residential and business disconnection fees also cover the costs of reconnection.³⁶¹

In making its final decision, the Tribunal considered whether these charges are reasonable based on whether they are well specified, and whether they reflect the costs AGLGN is likely to incur in providing each individual service, having regard to the existing levels of charges. In doing so, it had regard to the information AGLGN provided in its response to the draft decision and supplementary information it provided to the Tribunal.

Taking into account that there were no other stakeholders comments on this issue, the Tribunal is satisfied that AGLGN's proposed charges for 'request for service', 'special meter read' and 'business disconnection fee' are reasonable as they improve the cost reflectivity of each charge, while considering the existing levels of charges. However, the Tribunal is not satisfied that the proposed 'residential disconnection fee' of \$100 reflects the costs of providing the service, which it estimates at \$75.

Therefore the Tribunal requires AGLGN to amend its ancillary charges in the access arrangement to reflect the proposed charges in its response to the draft decision and to amend the 'residential disconnection fee' to \$75 to reflect the costs incurred in providing this service (as set out in 13.5 below). This results in a reduction of \$25 from the current charge.

The Tribunal also considers that to ensure that such charges are 'well specified', AGLGN should include a description of each ancillary charge to enable users and prospective users to understand the nature of such charges. Therefore, it requires that AGLGN amend its access arrangement to include, as a minimum, the descriptions set out in 13.5 below.³⁶²

13.5 Amendments required

Amendment 27 - Security for payment

AGLGN is required to specify objective and non-discriminatory criteria related to clause 10, Schedule 2A of its proposed access arrangement as follows:

- That the amount of any security shall be determined by having regard to the user's credit rating, payment history and any additional factors which, in AGLGN's reasonable opinion, may have a material effect on the user's ability to perform any of its obligations under the service agreement or upon AGLGN's ability to recover any amounts payable or to be payable by the user.
- That the amount of security should be proportionate to the charges for the proposed service.
- That the form of security is to be either (a) a parent company guarantee or (b) a refundable deposit or bank guarantee or (c) such other form of security as agreed between the user and AGLGN.
- To include an obligation on users to provide AGLGN with all information reasonably required to assess credit worthiness in a timely manner.

³⁶¹ AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, Attachment 3.

³⁶² These indicative descriptions are based on information provided by AGLGN in correspondence to the Tribunal Secretariat on 27 October 2004 and AGLGN, *Access Arrangement for NSW Network – Response to Draft Decision*, February 2005, Attachment 3.

Amendment 28 - Responsibility for gas and UAG

AGLGN is required to amend clause 12, Schedule 2A of its proposed access arrangement such that the provisions relating to responsibility for gas and UAG cease to have effect in the event of a change in the treatment of UAG as a result of new Gas Retail Market Business Rules during the access arrangement period.

Amendment 29 - Overruns

AGLGN is required to amend the provisions in Schedule 2A of the proposed access arrangement relating to overruns to indicate that where a delivery point is served under two or more service agreements then an overrun is only deemed to occur where withdrawals at that delivery point exceed the total for all service agreements of MDQ in any day or MHQ in any hour.

Amendment 30 - New receipt points and receipt stations

AGLGN is required to amend clause 32, Schedule 2A of its proposed access arrangement to limit the ability of AGLGN to recover costs incurred by AGLGN in undertaking works required to enable a new receipt point to be established and integrated into the AGLGN network to those costs *reasonably* incurred.

Amendment 31 - Alteration of receipt points and receipt stations

AGLGN is required to amend:

- Clause 33, Schedule 2A of its proposed access arrangement to indicate that AGLGN may require users to make alterations to receipt stations for the purpose of upgrading measurement performance or accommodating changes to gas demand characteristics only to the extent that the alterations are in accordance with good industry practice and/or appropriate Australian and internationally recognised standards and codes.
- Clause 34, Schedule 2A of its proposed access arrangement to indicate that AGLGN's rights to recover costs are limited to recovery of costs *reasonably* incurred.

Amendment 32 - Suspension of supply

AGLGN is required to amend clause 49, Schedule 2A of its proposed access arrangement to limit the value of charges imposed on a user in connection with the cessation or suspension of supply to costs *reasonably incurred* by AGLGN in complying with the request of the user to stop or suspend delivery of gas.

Amendment 33 - Liabilities and indemnity (and gas swap service)

AGLGN is required to amend Section 2.7 of its proposed access arrangement so that the second sentence in the penultimate bullet point reads:

The user will be liable for and indemnify AGLGN against any costs, penalties, expenses or any other loss or damage suffered or incurred by AGLGN arising from inaccurate or misleading information supplied by the user to AGLGN in connection to a Gas Swap, or the users participating in the Gas Swap failing to time and coordinate Gas Swap notifications and gas balancing nominations (made in accordance with Schedule 3) to

ensure that their daily withdrawal requirements and completed Gas Swaps reflect their arrangements for delivery of gas to receipt points for each day.

Amendment 34 - Additional terms and conditions applicable to reference services except tariff services

AGLGN is required to amend its proposed access arrangement as follows:

- Clause 3, Schedule 2B must indicate the period over which a service may be continued.
- Clause 4, Schedule 2B must indicate that an application of a user for a service in the circumstances contemplated by clause 4 is not subject to the queuing policy of the access arrangement.
- To remove reference to Schedule 2B as part of the terms and conditions for the Meter Data Service and Gas Swap Service in Sections 2.6 and 2.7 of the proposed access arrangement.

Amendment 35 - Operational principles

AGLGN is required to amend Schedule 4 of the proposed access arrangement such that the liability of AGLGN for “any losses, liabilities or expenses incurred by the User and/or the Users’ customers arising from load shedding” is limited only in circumstances where AGLGN acts in good faith and in accordance with the principles of the access arrangement.

Amendment 36 - Delivery point, receipt point and nominated delivery points

AGLGN is required to amend Section 2 of its proposed access arrangement as follows:

- The terms and conditions for the Local Network Multiple Delivery Point Service and Trunk Multiple Delivery Point Service should be amended to include mechanisms used in AGLGN’s existing service agreements for the deletion of delivery points during the term of the agreement in circumstances of customer churn.
- The terms and conditions for the Trunk Capacity Reservation Service, Trunk Managed Capacity Reservation Service and Trunk Throughput Service should be amended to make it clear that a service agreement for these services may provide for gas to be delivered to only a single delivery point.

Amendment 37 - MDQ and MHQ

AGLGN is required to amend Section 2 of its proposed access arrangement as follows:

- Sections 2.1, 2.2, 2.3 and 2.5 should be amended to clearly state that AGLGN’s obligation to deliver gas extends to MDQ and MHQ plus any authorised overrun.
- Section 2.1 should be amended so as to explicitly indicate that the MDQ under a service agreement for Capacity Reservation Services includes capacity obtained as summer tranche, short-term or additional capacity.

Amendment 38 – Summer tranche, short-term and additional capacity

AGLGN is required to amend Section 2.1 of its proposed access arrangement so as to explicitly indicate that additional capacity for Capacity Reservation Services is obtained under an existing service agreement.

AGLGN is required to amend Section 2.1 of its proposed access arrangement to add to the words under the second dot point under the title *Short Term Capacity for User Supplying Customers above 30TJ per annum at a Delivery Point* 'and such other exceptional physical circumstances beyond the reasonable control of a Customer.'

Amendment 39 - Charges for ancillary services

AGLGN is required to amend Section 3.15 of its proposed access arrangement to amend its ancillary charges (GST inclusive, 2004/05 dollars) and to include, as a minimum, the descriptions of each ancillary service as set out below:

- Request for Service - \$60 per hour
- Special meter read - \$25
- Residential disconnection/reconnection - \$75.
- Business disconnection/reconnection - \$300

Request for Service — for time spent collating the information and writing the letter of offer to a retailer when the retailer requests a new/additional/change for a contract customer.

Special Meter Read — for reads requested by a retailer rather than ordinary reads (for instance when the meter reader makes a special visit to read a particular meter out of the usual meter reading route). This service must be scheduled with a minimum 5-day notice period.

Residential Disconnection Fee — this charge covers disconnection of meters with a capacity of less than or equal to 6m³/hr. The specific method of disconnection will be at the discretion of AGLGN to ensure the site is able to be left in a safe state. The fee also covers the cost of subsequent reconnection.

Business Disconnection Fee — this charge covers disconnection of meters with a capacity of greater than 6m³/hr. The specific method of disconnection will be at the discretion of AGLGN to ensure the site is able to be left in a safe state. The fee also covers the cost of subsequent reconnection.

14 CAPACITY MANAGEMENT POLICY

A capacity management policy is a statement in the access arrangement referring to how the capacity of a pipeline will be allocated to users. It has implications for other elements of the access arrangement, including the trading policy (discussed in Chapter 15).

14.1 Tribunal's findings

The Tribunal is satisfied that AGLGN's proposed capacity management policy meets the requirements of the Code.

14.2 Code requirements

Section 3.7 of the Code requires an access arrangement to include a capacity management policy that states that the covered pipeline is either a 'contract carriage pipeline' or a 'market carriage pipeline'.

A contract carriage pipeline means that the service provider normally requires users to enter into a contract that gives them the right to use up to a specified amount of a service (that is, they reserve transportation capacity). This reserved amount is known as contracted capacity. A market carriage pipeline involves more flexible arrangements; a service provider does not normally require users to enter into contracts, although users may need to submit daily nominations for capacity to assist with the operation of the pipeline.

14.3 AGLGN's proposal

AGLGN proposed to state that its covered pipeline is a contract carriage pipeline.³⁶³

14.4 Tribunal's analysis and considerations

In making its draft decision,³⁶⁴ the Tribunal assessed whether AGLGN's proposed capacity management policy meets the requirements of the Code, taking into account stakeholder submissions.³⁶⁵ In making its final decision, it reconsidered these matters. Given that neither AGLGN nor any other stakeholder commented on the capacity management policy in their responses to the draft decision, the Tribunal has not changed its position on the matters discussed in its report on its draft decision.

Specifically, the Tribunal notes that section 3.8 of the Code prevents it from accepting an access arrangement that proposes that a covered pipeline be a market carriage pipeline "unless the Relevant Minister³⁶⁶ . . . has given a notice to the Relevant Regulator permitting the Covered Pipeline to be a Market Carriage Pipeline". As no such notice has been given to

³⁶³ AGLGN, *Access Arrangement for NSW Network*, December 2003, s 8.

³⁶⁴ IPART, *Revised Access Arrangement for AGL Gas Networks – Draft Decision*, December 2004, Chapter 14.

³⁶⁵ TXU submission, 16 April 2004, s 1.

³⁶⁶ The Relevant Minister in this case is the NSW Minister for Energy & Utilities.

the Tribunal in relation to AGLGN's covered pipeline, it is satisfied that AGLGN's proposed capacity management policy meets the requirements of the Code.

15 TRADING POLICY

If a covered pipeline is operated as a contract carriage pipeline, then the service provider must have a trading policy that explains the rights of users to trade capacity. Under this policy, users of a pipeline must be able to transfer all or part of their contracted capacity, and may have to seek a service provider's permission to do so.

15.1 Tribunal's findings

The Tribunal is satisfied that AGLGN's proposed trading policy meets the requirements of the Code.

15.2 Code requirements

Section 3.9 of the Code requires that where the service provider's covered pipeline is a contract carriage pipeline (as AGLGN proposed), its access arrangement must include a trading policy that sets out a user's right to transfer its right to obtain a service to another person (including to trade its contracted capacity).

Section 3.10 of the Code requires that the trading policy must allow a user to:

- transfer or assign all or part of its contracted capacity without the service provider's consent, if the obligations and terms under the contract between the user and service provider remain unaltered by the transfer (a bare transfer)
- transfer its contracted capacity with the service provider's consent in any other case, and
- change the delivery point or receipt point from that specified in the contract for the relevant service with the service provider's consent.

In the case of a bare transfer, the trading policy may require that the transferee notify the service provider of the transfer and the nature of the contracted capacity prior to utilising the transferred capacity, but must not require other details to be provided.

In the case of other transfers or a change in delivery or receipt point, the trading policy may allow the service provider to withhold consent or give its consent subject to conditions, but only on reasonable commercial or technical grounds (such as those provided in section 3.11 of the Code). The trading policy may specify such conditions in advance, but it is not required to do so.

15.3 AGLGN's proposal

AGLGN proposed that its trading policy³⁶⁷ will give users the right to:

- make a 'bare transfer' of contracted capacity without consent (where the underlying contract terms and obligations *do not* change), as long as the transferee notifies AGLGN of the portion and nature of the contracted capacity to be transferred
- make a 'substituted transfer' of contracted capacity (where the underlying contract terms and obligations *do* change) with AGLGN's prior written consent, and

³⁶⁷ AGLGN, *Access Arrangement for NSW Network*, December 2003, s 5.

- change a receipt point under a trunk service and/or delivery point under a local network service with AGLGN's prior written consent.

In relation to requests to make substituted transfers and to change a delivery or receipt point, AGLGN proposed that it will only be able to withhold its consent on reasonable commercial and technical grounds, and make its consent subject to reasonable commercial and technical conditions. In line with its proposed services policy (see Chapter 4), it also proposed that a transfer of contracted capacity under a local network service will operate as a transfer of the same portion of the contracted capacity under the corresponding trunk service.

In addition, AGLGN proposed that it will respond to requests to make substituted transfers and to change a receipt or delivery point within 14 business days of receiving the request and information required, and will endeavour to respond within 2 business days in cases of hardship.

15.4 Tribunal's analysis and considerations

In making its draft decision,³⁶⁸ the Tribunal assessed whether AGLGN's proposed trading policy meets the requirements of section 3 of the Code. In doing so, it considered stakeholders' comments on the proposed trading policy, which related to two main issues – AGLGN's discretion in setting 'reasonable' grounds and conditions, and the access arrangement's role in facilitating active trading of unutilised contracted capacity.³⁶⁹ In considering the second issue, it also took into account the factors in section 2.24 of the Code, and the information disclosure provisions of section 5 of the Code (which place obligations on service providers and users to disclose market information relevant to obtaining access to services).³⁷⁰

In making its final decision, the Tribunal reconsidered these matters. Given that neither AGLGN nor any other stakeholder commented on the trading policy in their responses to the draft decision, it has not changed its position on the matters discussed in the report on its draft decision. It remains satisfied that the proposed trading policy meets the requirements of section 3 of the Code, as it allows for transfers of contracted capacity with and without the service provider's consent, and for changes to receipt and delivery points, in accordance with the Code provisions for withholding and giving consent.

³⁶⁸ IPART, *Revised Access Arrangement for AGL Gas Networks – Draft Decision*, December 2004, Chapter 15.

³⁶⁹ TXU submission, 16 April 2004, ss 1&5, EnergyAustralia submission, 20 April 2004, s 5.3(h).

³⁷⁰ Although these section 5 provisions do not require that these obligations be included in the access arrangement, they are relevant to the submission comments.

16 QUEUING POLICY

A queuing policy sets out the priority with which the service provider will provide prospective users with spare or developable capacity when this capacity is constrained. Although the Code recognises that the policy will have greater relevance to transmission pipelines than to distribution pipelines, it also gives the regulator the discretion to determine when such a policy will be required for the latter.

16.1 Tribunal's findings

The Tribunal is satisfied that AGLGN's proposed access arrangement should be required to include a queuing policy. It is also satisfied that AGLGN's proposed queuing policy meets the requirements of the Code.

16.2 Code requirements

Under section 3.12 of the Code, if a covered pipeline is a transmission pipeline, the access arrangement must include a queuing policy; for any other covered pipeline (including distribution pipelines), the regulator may require the access arrangement to include a queuing policy.³⁷¹ In doing so, the regulator must have regard to the nature of the pipeline, the services likely to be sought by prospective users, and any other matters it considers relevant.

The queuing policy defines the priority with which the service provider will provide prospective users with access to spare and developable capacity where the provision of a service to a prospective user may impede the ability of the service provider to provide a service sought, or which may be sought, by another prospective user (that is, when this capacity is constrained). This policy is the only aspect of an access arrangement that cannot be limited or amended through commercial negotiation.³⁷²

Where a queuing policy is required, section 3.13 of the Code requires that it be set out in sufficient detail to enable users and prospective users to understand in advance how the policy will operate. It also requires, to the extent reasonably possible, that the policy accommodate the legitimate business interests of the service provider, users and prospective users, and generate economically efficient outcomes. In addition, section 3.14 of the Code states that the regulator may require the queuing policy to deal with any other matter it thinks appropriate, taking into account the factors set out in section 2.24 of the Code.

16.3 AGLGN's proposal

AGLGN proposed to include a queuing policy that effectively prioritises prospective users on a 'first come, first served' (or 'first in, best dressed') basis. Under the policy,³⁷³ spare capacity will be offered progressively to prospective users in the order in which AGLGN receives their completed request forms. However, there will be two exceptions – requests for

³⁷¹ The Code has been amended since the last review, removing the requirement for a distribution pipeline owner's access arrangement to include a queuing policy. The amendment commenced 6 February 2003 pursuant to *National Third Party Access Code for Natural Gas Pipeline Systems: Fourth Amending Agreement*, cl 6.

³⁷² As provided for under sections 2.50 and 3.15 of the Code.

³⁷³ AGLGN, *Access Arrangement for NSW Network*, December 2003, s 6.

reference services will be given priority over those for negotiated services; and where there are two or more requests relating to the same tranche of capacity, the priority for all those requests will be determined by the date on which AGLGN receives the first request. AGLGN also proposed to advise prospective users of any changes in the queue, and to apply conditions to prospective users while they are in the queue and when capacity becomes available.

AGLGN's proposed access arrangement refers to the queuing policy several times in relation to specific services. It also includes a general statement that all requests for service are subject to the queuing policy.³⁷⁴

16.4 Tribunal's analysis and considerations

In making its draft decision,³⁷⁵ the Tribunal assessed whether AGLGN's proposed queuing policy meets the requirements of section 3 of the Code. In doing so, it considered stakeholder comments on the proposed queuing policy,³⁷⁶ and took into account the factors in section 2.24 of the Code. It also noted that while two of AGLGN's pipelines are *technically* transmission pipelines under the definitions in the Code, they are *deemed* to be distribution pipelines for the purposes of the Gas Pipelines Access Law.³⁷⁷ This meant that the Tribunal first needed to consider whether it should require AGLGN's access arrangement to include a queuing policy. If so, it then needed to consider whether the proposed queuing policy meets the Code requirements.

In making its final decision, the Tribunal reconsidered all of these matters. Neither AGLGN nor any other stakeholder commented on the queuing policy in their responses to the draft decision. Given this, the Tribunal has not changed its position on the matters discussed in the report on its draft decision. Specifically, it still considers that AGLGN should be required to include a queuing policy in its access arrangement, and that AGLGN's proposed queuing policy meets the Code requirements. Its considerations in relation to each of these matters are summarised below.

16.4.1 AGLGN's access arrangement includes a queuing policy

In considering whether AGLGN's access arrangement should include a queuing policy, the Tribunal is required to have regard to the nature of the pipeline, the services likely to be sought and any other matters it considers relevant.

AGLGN's access arrangement is based on a contract carriage pipeline system, with transportation reference services provided on a capacity or throughput basis. All transportation services are offered separately on each of the local network and trunk components and, apart from a few exceptions, there is a requirement to take a corresponding trunk and local network service. (For further detail on these aspects of the pipeline and its services, see Chapters 4 and 14.)

³⁷⁴ General requirement pp 2 & 113, and referenced in relation to capacity reservation, summer tranche and short term capacity services on pp 4-6 of AGLGN access arrangement, December 2003.

³⁷⁵ IPART, *Revised Access Arrangement for AGL Gas Networks – Draft Decision, December 2004*, Chapter 16.

³⁷⁶ TXU submission, 16 April 2004, section 3.

³⁷⁷ Clause 7(1) Schedule 2, *Gas Pipelines Access (NSW) Act 1998* deems AGLGN's transmission pipelines (defined as Wilton to Horsley, Wilton to Wollongong, Horsley Park to Plumpton, Plumpton to Killingworth and Killingworth to Walsh Point) to be distribution pipelines, irrespective of any provision of the Code.

AGLGN has informed the Tribunal that no queues have been formed and it is not expecting or planning for queues to be formed to manage future capacity requirements in the proposed access arrangement period. Only isolated sections of its local network have experienced some degree of constraint to date.³⁷⁸ Furthermore, these constraints only have an effect on capacity when growth in demand is considered, and do not impact on competition for existing customers. Even in circumstances of growth, AGLGN will consider viable network augmentation and 'non-firm' services before assuming it has insufficient capacity and forming a queue.³⁷⁹ Given this advice, there may be little benefit in requiring a queuing policy.

On the other hand, the Tribunal notes that none of the submissions it received called for the rejection of the proposed queuing policy. Indeed, some stakeholders expressed concern with the processes for managing capacity requests and potential constraints on the pipelines.

In addition, although AGLGN's pipelines are deemed to be distribution pipelines for regulatory purposes, the Tribunal considers that the technical distinction between its distribution and transmission pipelines should not be ignored. It may be argued that given the Code retains an automatic requirement for transmission pipelines to have a queuing policy, it would be consistent with the Code's intentions for the Tribunal to require a queuing policy for the component of AGLGN's pipeline that is technically a transmission pipeline. From a practical point of view, it would then be necessary for it also to require such a policy for the distribution component of the pipeline, as AGLGN offers trunk and local network services together.

Furthermore, the Tribunal considers that including a queuing policy in the access arrangement is not inconsistent with the Code objectives. While AGLGN does not anticipate an immediate need to apply a queuing policy, its inclusion will act as a safeguard in the event that circumstances change and its capacity becomes constrained. This takes into account the factors in section 2.24 of the Code, including consideration that this queuing policy protects the interests of users and prospective users, (consistent with section 2.24(f)), while not adversely affecting AGLGN's legitimate business interests (consistent with section 2.24(a)).

On balance, the Tribunal is satisfied that AGLGN's access arrangement should be required to include a queuing policy.

16.4.2 The queuing policy meets the Code requirements

AGLGN's proposed queuing policy is largely the same as the queuing policy included in its current access arrangement. There are only two notable differences – the proposed policy:

- specifies that a queue will be formed only when AGLGN receives a request from a user (and has insufficient capacity to meet that request)
- includes a new provision that allows AGLGN to offer capacity to a user ahead of other users in a queue where that user's request is for the same tranche of capacity already being provided to another user in respect of a delivery point (such as in instances of customer churn).

³⁷⁸ The Tribunal understands that capacity constraints on one part of the local network would generally not have a flow-on effect for other parts of the network. Constraints are more likely occur on the trunk.

³⁷⁹ Advised in correspondence on 23 June 2004.

There is also a difference in the way the proposed queuing policy will be applied. Unlike the policy in the current access arrangement,³⁸⁰ the proposed policy *will* apply to users who request services for delivery points expected to require less than 6m³/hr of gas (this includes common standard gas meters for residential and some small commercial delivery points). AGLGN has informed the Tribunal that it made this change to the application of the policy because in “staying true to a philosophy of equitably prioritising access to newly available capacity on a ‘first come, first served’ basis, [AGLGN] saw no real reason as to why small delivery points would be treated differently to larger delivery points”.³⁸¹

In considering the new provision related to requests for the same tranche of capacity and the change in the application of the queuing policy, the Tribunal had regard to the factors in section 2.24 of the Code, including section 2.24(f) (interests of users), section 2.24(d) (economically efficient outcomes), and section 2.24(e) (the public interest in having competition in markets). It notes that AGLGN’s proposal would remove inequities in the treatment of users and facilitate customer churn.

The Tribunal considers that the proposed queuing policy meets the specific requirements of section 3 of the Code because it is set out in sufficient detail to enable users and prospective users to understand in advance how the policy will operate and, to the extent reasonably possible, it will accommodate the legitimate business interests of the service provider and of users and prospective users, and generate economically efficient outcomes. These characteristics are also consistent with the factors under section 2.24 of the Code.

In addition, as discussed in the report on its draft decision, the Tribunal considers that there is no compelling evidence to suggest that AGLGN’s pipeline system will experience capacity constraints during the proposed access arrangement period. If AGLGN’s pipelines were to approach capacity in subsequent access arrangement periods, the suitability of the policy may need to be reconsidered. However, the Tribunal is satisfied that the proposed queuing policy meets the Code requirements.

³⁸⁰ As contained in AGLGN’s current access arrangement, s 1.10.2.

³⁸¹ In correspondence on 25 June 2004.

17 EXTENSIONS AND EXPANSIONS POLICY

Within an access arrangement, the extensions and expansions policy sets out the method that will be applied to determine whether any extension to or expansion of the network will form part of the covered pipeline. The purpose of this policy is to enable prospective users to determine whether or not a particular extension or expansion is likely to be covered, and thus whether their access to this part of the network would be regulated through the access arrangement, and whether they would have access to the arbitration provisions of the Code to resolve access disputes in relation to the extension or expansion.

17.1 Tribunal's findings

The Tribunal is not satisfied that AGLGN's proposed extensions and expansions policy meets the requirements of the Code. It requires AGLGN to amend its proposed access arrangement as set out in 17.5 below.

The Tribunal notes that AGLGN has agreed to implement this amendment.

17.2 Code requirements

Section 3.16 of the Code requires the access arrangement for all covered pipelines to include a policy that sets out the method that will be applied to determine whether any extension to or expansion of the capacity of the covered pipeline will be treated as part of the covered pipeline. The policy must specify how any extension or expansion that is to be treated as part of the covered pipeline will affect reference tariffs. If the service provider has agreed to fund new facilities investment, the policy must also describe this investment, and outline the conditions under which this funding will occur.

17.3 AGLGN's proposal

AGLGN proposed to include an extensions and expansions policy that states that all pipeline extensions and expansions carried out by AGLGN in NSW will normally be treated as part of the covered pipeline, and will be automatically included within it.³⁸² This policy defines 'extensions' as any pipes laid in NSW in a distribution system owned and operated by AGLGN at any time during the access arrangement.

AGLGN also proposed that no extension or expansion will affect reference tariffs, but that it may impose a surcharge on users of that part of the network where this is allowed by the Code. It will make reference services available for the extension or expansion, at the reference tariffs. Where a capacity reservation service or a managed capacity service is sought, and there is no local network unit charge applicable to the delivery point, AGLGN will offer the services at tariffs calculated on a basis consistent with the method adopted for establishing reference tariffs.

³⁸² AGLGN, *Access Arrangement for NSW Network*, December 2003, section 7, p 68.

17.4 Tribunal's analysis and considerations

In making its draft decision, the Tribunal considered whether AGLGN's proposed extensions and expansions policy meets the Code requirements.³⁸³ In particular, it considered whether the proposed policy:

- sets out the method to be applied to determine whether any extension to or expansion of the network will be treated as part of the covered pipeline
- specifies how any extension or expansion that is to be treated as part of the covered pipeline will affect reference tariffs.

The Tribunal reconsidered each of these matters in making its final decision, but as neither AGLGN nor any other stakeholder commented on the extensions and expansions policy in their responses to the draft decision it has not changed its position on either. It still considers that AGLGN's proposal does not set out the method that will be applied to determine whether an extension or expansion will be treated as part of the covered pipeline, but does specify how any extension or expansion that is to be treated as such will affect reference tariffs. The Tribunal's considerations in relation to each of these matters are summarised below.

17.4.1 Method to be applied to determine whether an extension or expansion will be treated as part of the covered pipeline

Section 3.16(a) of the Code requires the access arrangement to include a policy that sets out the method that will be applied to determine whether any extension to or expansion of the capacity of the covered pipeline will be treated as part of the covered pipeline. To constitute a 'method', the Tribunal considers that the policy should include an indication of the process that will be followed, or the criteria that will be used to determine coverage.

AGLGN's proposed policy states that extensions and expansions will 'normally' form part of the covered pipeline. The Tribunal considers that the use of the word 'normally' without any indication of the circumstances that would be considered normal (or abnormal) creates a degree of uncertainty, which precludes this statement from being a method. It also considers that AGLGN's proposed policy gives AGLGN full discretion over the regulatory treatment of extensions and expansions, without indicating what criteria it would use in exercising this discretion. This is a further reason that the Tribunal does not consider that the policy sets out a method that will be applied to determine the regulatory treatment of extensions and expansions.

For these reasons, the Tribunal is not satisfied that AGLGN's proposed extensions and expansions policy sets out the method to be applied to determine whether an extension or expansion will be treated as part of the covered pipeline for all purposes under the Code. It requires AGLGN to amend its proposed policy so it is consistent with the example provided in section 3.16(a) of the Code. The effect of such an amendment would be a policy that states that an extension or expansion will be treated as part of the covered pipeline, unless AGLGN has obtained the Tribunal's consent to exclude it.

³⁸³ IPART, *Revised Access Arrangement for AGL Gas Networks Draft Decision*, December 2004, Chapter 17.

The Tribunal considers that such an amendment is broadly consistent with the intent of AGLGN's proposed policy, but overcomes the uncertainty inherent in it. It is satisfied that the amendment constitutes a method to be applied to determine coverage that provides an appropriate balance of the factors in section 2.24 of the Code.

17.4.2 Effect of extensions or expansions on reference tariffs

Section 3.16(b) of the Code requires a service provider's extensions and expansions policy to state how extensions and expansions that are to be treated as part of the covered pipeline will affect reference tariffs. The Code also provides examples of how a service provider could meet this requirement. AGLGN's proposed policy includes a statement that no extensions or expansions will affect reference tariffs, but a surcharge may be levied as permitted by the Code. As this statement is consistent with the example provided in section 3.16(b)(i) of the Code, the Tribunal is satisfied that it meets the requirements of section 3.16(b) of the Code.

AGLGN's proposed policy also states that where particular reference services are sought and there is no local network unit charge applicable to the delivery point, it will offer these services at tariffs calculated on a basis consistent with the method adopted for establishing reference tariffs. The Tribunal considers that this approach is appropriate, and should provide sufficient indication of reference tariffs for these reference services to meet the requirements of section 3.16(b).

In the event that AGLGN cannot recover the full cost of an extension or expansion through prevailing reference tariffs, AGLGN will be able to elect in writing to recover all or part of the additional amount via a surcharge levied on the relevant users of the extension or expansion. The Tribunal will have the ability to ensure that any proposed surcharge meets the requirements of the Code at the time AGLGN elects to introduce it. The proposed surcharge must be approved by the Tribunal under the same process of public consultation as a revision to the access arrangement (sections 8.25 and 8.26 of the Code).

For the reasons outlined above, the Tribunal is satisfied that AGLGN's proposed extensions and expansions policy adequately specifies how any extension or expansion that is to be treated as part of the covered pipeline will affect reference tariffs.

17.5 Amendment required

Amendment 40 - Method to be applied to determine whether an extension or expansion will be treated as part of the covered pipeline

The first paragraph of the extensions and expansions policy at Section 7 of the proposed access arrangement must be amended to read as follows:

- The following method shall be used to determine whether an extension or expansion of a Covered Pipeline should be taken to form part of the Covered Pipeline:
 - (a) Subject to this clause, an extension or expansion of a Covered Pipeline will be taken to form part of the Covered Pipeline (and will be treated for all purposes as part of the Covered Pipeline) from the date of completion of the extension or expansion.

- (b) AGLGN may apply to the Relevant Regulator in writing for a declaration by the Relevant Regulator that paragraph (a) will not apply to the extension or expansion referred to in the application.
 - (c) After considering an application and undertaking such consultation as the Relevant Regulator considers appropriate, the Relevant Regulator must advise AGLGN whether or not it makes the declaration.
 - (d) A declaration may be made on such reasonable conditions determined by the Relevant Regulator and will have the operation specified in the declaration.
- An extension includes any pipes laid in NSW in a distribution system owned and operated by AGLGN at any time during the Access Arrangement (where “distribution system” has the meaning given to it in the Gas Supply Act).

18 REVIEW DATE

Once AGLGN's access arrangement has been approved by the Tribunal and comes into effect, it will govern AGLGN's reference services, reference tariffs, terms and conditions (and other relevant aspects) of access to its network until the date on which the next revisions to this access arrangement commence.

To establish how long the access arrangement will be effective, AGLGN is required to specify in its proposed access arrangement a date by which it will submit these next revisions to the Tribunal, and a date on which it intends such revisions to commence. These dates indicate the expected length of the access arrangement period. However, the actual term could be shorter, as the Code allows AGLGN to submit revisions to its access arrangement at any time. In addition, the Code allows the Tribunal to require that a review trigger mechanism be included in the access arrangement, to address the risk that the forecasts on which the terms of the access arrangement period were based prove to be incorrect.

18.1 Tribunal's findings

The Tribunal approves AGLGN's proposed dates for the submission of revisions to the access arrangement and for the commencement of those revisions. It does not require AGLGN to include a review trigger mechanism in the access arrangement to address the risk of forecasts proving incorrect.

18.2 Code requirements

Section 3.17 of the Code states that a proposed access arrangement must specify a date on which the service provider will submit revisions to this access arrangement to the regulator for approval, and a date on which it intends those revisions to commence.

In deciding whether to approve these dates, the regulator must have regard to the objectives in section 8.1 of the Code. It may require the service provider to specify alternative dates to achieve a shorter or longer access arrangement period than the service provider proposed. It may also require the access arrangement to specify that certain conditions will trigger a review, if it considers that this is necessary after having had regard to the section 8.1 objectives.

The regulator may approve an access arrangement period of any length. However, if it approves a period of more than five years, it must consider whether a review trigger mechanism should be included in the access arrangement, to address the risk that the forecasts on which the terms of the access arrangement period were based prove to be incorrect.³⁸⁴ Therefore, where a service provider proposes an access arrangement period of five years or more, the regulator must make two decisions – whether to approve the proposed period; and if so, whether to require the inclusion of a review trigger mechanism to address the risk of incorrect forecasts. In making each of these decisions, it must have regard to the objectives of section 8.1³⁸⁵ and, to the extent necessary to resolve conflicts, section 2.24 of the Code.

³⁸⁴ Section 3.18 of the Code.

³⁸⁵ Section 3.19 of the Code.

18.3 AGLGN's proposal

The proposed access arrangement will commence on the date on which the Tribunal's approval takes effect—which is expected to be 1 July 2005. AGLGN proposed that it will submit revisions to this access arrangement on or before 30 June 2009, and that these revisions will commence on 1 July 2010 or the date on which they are approved by the Tribunal, whichever is later. This means that the access arrangement period is likely to be five years.

AGLGN also proposed that the revisions commencement date (and the Tribunal also understands other key 'events' during the access arrangement period, such as variations to reference tariffs due to CPI escalation and UAG outcomes) will continue to coincide with the beginning of the financial year. It did not include a review trigger mechanism.

In addition, AGLGN proposed that beyond the anticipated revisions commencement date of 1 July 2010, reference services and the tariffs, terms and conditions applicable to them will be those that apply at 30 June 2010. This means that after this date, reference tariffs will be constant in nominal terms until revisions to the access arrangement come into force.

18.4 Tribunal's analysis and considerations

Prior to making its draft decision to approve AGLGN's proposed dates for submitting revisions to the access arrangement and the commencement of these revisions the Tribunal had regard to the objectives in section 8.1 of the Code and, where relevant, to the factors in section 2.24 of the Code.³⁸⁶ In making its final decision, it reconsidered whether it is necessary to require AGLGN to:

- specify earlier or later dates, to shorten or lengthen the expected access arrangement period
- include a review trigger mechanism so that AGLGN will be required to submit revisions prior to the date included in the access arrangement if specified events occur during the access arrangement, and/or to address the risks associated with forecasts proving to be incorrect.

Given that neither AGLGN nor any other stakeholder commented on the review dates in their responses to the draft decision, the Tribunal has not changed its findings on these issues. Specifically, it still considers that AGLGN's proposed dates meet the requirements of the Code and therefore, that it is not necessary to require AGLGN to amend its proposal. The Tribunal also considered the clauses of the access arrangement that will apply if the revisions commence later than anticipated, and is satisfied that these clauses should be accepted. Its considerations in relation to each of these matters are summarised below.

The Tribunal separately considered the inclusion of mechanisms to address the risk of forecasts of uncontrollable costs proving incorrect—for example, mechanisms to vary reference tariffs during the access arrangement period. This issue is discussed in Chapter 12 of this report.

³⁸⁶ IPART, *Revised Access Arrangement for AGL Gas Networks Draft Decision*, December 2004, Chapter 18.

18.4.1 Length of the access arrangement period

AGLGN's proposed access arrangement specifies a revisions submission date and a revisions commencement date, as required by section 3.17 of the Code. Although AGLGN proposed an access arrangement period of five and a half years, the expected term of the proposed access arrangement is now five years.

In deciding whether to approve AGLGN's proposed dates, the Tribunal had regard to each of the objectives in section 8.1 of the Code. In doing so, it considered stakeholder submissions, including:

- the suggestion by users and prospective users that it take into account the potential for alternative sources of gas supply into the AGLGN network, for example, from coal seam methane developments in Sydney and the Hunter region³⁸⁷
- comments by potential downstream investors that they might require access on different terms and conditions and/or particular non-reference services over the access arrangement period in order for the investments to be viable.³⁸⁸

The Tribunal notes that deciding on the length of an access arrangement period involves a trade-off between many of the objectives in section 8.1 of the Code, where these may reflect competing interests. The Tribunal has therefore considered these objectives and also the factors in section 2.24 of the Code—particularly the interests of users and prospective users (2.24(f)) and AGLGN's legitimate business interests (2.24(a)). As part of this analysis it considered the view expressed by some stakeholders that a shorter term would be more appropriate.³⁸⁹

Based on these considerations, the Tribunal considers that it is not necessary to require AGLGN to specify earlier or later dates than those it proposed. In coming to this decision, it noted that:

- the fact that prospective users will have access to the arbitration provisions of the Code if they are unable to negotiate access to the network on acceptable terms and conditions should minimise the impact of the access arrangement period on investment decisions in upstream and downstream industries
- the additional services that prospective upstream and downstream investors may require will not be able to be included as reference services at the next review unless they are demanded by a significant part of the market
- the retention of an access arrangement based on financial years should benefit AGLGN, users and prospective users, as it is administratively simpler and more transparent
- a requirement for a shorter access arrangement period would lower AGLGN's incentives to reduce costs and develop the market for services, and would raise regulatory costs.

³⁸⁷ Hunter Gas Users Group submission, 4 May 2004, p 7, EnergyAdvice submission, 14 May 2004, p 13 and Macquarie Generation submission, 6 October 2004, p 6.

³⁸⁸ Macquarie Generation submission, 6 October 2004, p 3 and EnergyAdvice, comments at public forum, 15 September 2004, transcript of proceedings p 44.

³⁸⁹ Orica submission, 3 May 2004, p 7, Hunter Gas Users Group submission, 4 May 2004, p 7 and EnergyAdvice submission, 14 May 2004, p 13.

For the reasons outlined above, the Tribunal is satisfied that, having had regard to the objectives in section 8.1 of the Code, AGLGN's proposed revisions submission date (30 June 2009) and revisions commencement date (1 July 2010) should be approved as being consistent with the Code.

18.4.2 Mechanisms to trigger a review of the access arrangement

The Tribunal considered whether to require AGLGN to include in the access arrangement a mechanism that would trigger a review prior to the proposed revisions submission date. In doing so, it had regard to several submissions that supported the inclusion of trigger mechanisms to address significant industry developments and/or additional major loads, and to ensure that the access arrangement is relevant, flexible and appropriate for meeting market needs.³⁹⁰ It also considered the impact of including a review trigger mechanism on AGLGN, taking into account AGLGN's view that such a mechanism would have a significant adverse impact on its incentives.³⁹¹

The Tribunal considered whether to require AGLGN to include either of two types of review trigger mechanism that may address the risks of forecasts proving to be incorrect. With the first, a review would be triggered when demand or revenue exceeds a specified level. With the second, a review would be triggered if one or more specified other events occurred – such as a change in AGLGN's taxation or regulatory obligations, or the requirement for access to non-reference services.

In relation to a demand or revenue based trigger, the Tribunal considers that the risk of cost and demand forecasts proving to be incorrect over the access arrangement period is mitigated by the independent expert reviews of AGLGN's cost and demand forecasts, and by the fact that AGLGN's access arrangement is not expected to be longer than five years. It also notes that there are risks associated with determining an appropriate threshold for the trigger in terms of both the objectives in section 8.1 and the factors in section 2.24 of the Code. If the threshold was set too low, it could be costly for AGLGN (and users if translated into tariffs) and would adversely affect AGLGN's incentive to reduce costs and develop the market. If the threshold was set too high, it would add a layer of complexity for all stakeholders without adding any value. Taking these factors into account, the Tribunal does not consider that a demand or revenue based trigger mechanism should be included.

In relation to other events based triggers, the Tribunal accepts AGLGN's argument that triggering a review of the entire access arrangement would be a costly and uncertain way to address specific events under the circumstances.³⁹² In particular, it believes that:

- without a greater degree of clarity regarding the likely events it would cover, such a trigger mechanism may lead to significant uncertainty, and unless carefully specified it might trigger a review in response to insignificant events
- such a trigger mechanism would have an impact on AGLGN's incentives to reduce costs and develop the market for services

³⁹⁰ EnergyAdvice submission, 14 May 2004, p 13 and Hunter Gas Users Group submission, 4 May 2004, p 7 and Orica submission on demand review, 6 May 2004, p 2.

³⁹¹ AGLGN response to including a trigger mechanism, 8 June 2004.

³⁹² AGLGN response to including a trigger mechanism, 8 June 2004.

- prospective users have access to the arbitration provisions of the Code in the event they are unable to negotiate access to non-reference services on acceptable terms and conditions.

The Tribunal also notes that where AGLGN proposes that certain permitted changes in tax and regulatory events require a variation of reference tariffs that the Code provides a process for notification and review of such proposed variations within the access arrangement period. This is discussed further in Chapter 12 of this report.

For the reasons discussed above, the Tribunal does not require AGLGN to include a trigger mechanism in the access arrangement to address the risk of forecasts on which the terms of the access arrangement were based and approved proving incorrect.

18.4.3 Reference tariffs from 1 July 2010 onwards

AGLGN has set out the basis for determining reference tariffs if the access arrangement remains in force after the date at which it expects revisions to come into effect has passed.³⁹³ This provision will only have effect if revisions to the access arrangement do not commence on or before 30 June 2010. The provision has the same effect as the equivalent provision in AGLGN's current access arrangement.³⁹⁴

AGLGN proposes that tariffs will remain at their 30 June 2010 levels (in nominal terms) until revisions to the access arrangement become effective. Reference services and their associated terms and conditions will also be those applying at 30 June 2010.

The Tribunal notes that AGLGN has specified a revisions commencement date of the latter of 1 July 2010 or the date on which approval of the revisions to the access arrangement take effect. If the revisions to the access arrangement are delayed beyond 1 July 2010, there is potential for ambiguity in relation to what reference tariffs would apply after this date if the access arrangement remains in force (for example, whether the approved reference tariff variation methods would continue to apply). For this reason, the Tribunal considers it is appropriate for AGLGN to provide clarity regarding what reference tariffs, services and other terms and conditions will be available after the specified date.

AGLGN's proposal specifies that tariffs will remain constant in nominal terms at the rate applicable at 30 June 2010, that is, that the reference tariff variation methods will not be used to vary tariffs after this date. The Tribunal considers that this proposal clarifies what reference tariffs will be in force, is consistent with the current access arrangement, and will not disadvantage other stakeholders (consistent with the factors in 2.24(b), (e) and (f)). In addition, it notes that as this clause was proposed by AGLGN it should satisfactorily represent its interests in terms of 2.24(a) and the section 8.1 objectives. The Tribunal is therefore satisfied that the proposal meets the requirements of the Code and does not require any amendment to it.

³⁹³ AGLGN, *Access Arrangement for NSW Network*, December 2003, p 59.

³⁹⁴ AGLGN, *Access Arrangement for NSW Network*, September 2000, p 56.

APPENDIX 1 THE NSW GAS MARKET

The natural gas industry in NSW consists of:

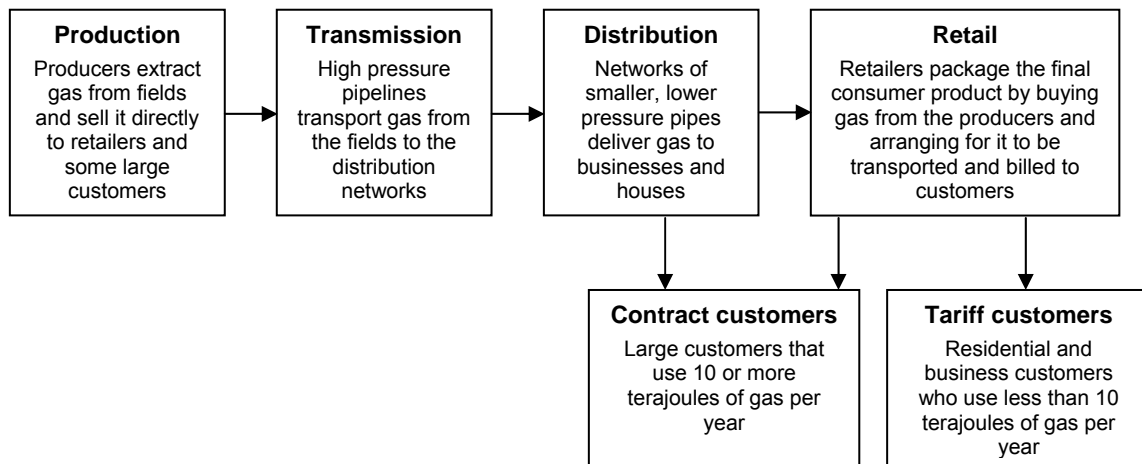
- *producers*, which extract gas from supply fields and sell it to gas users
- *transmission service providers*, which own and operate the long-distance, high-pressure transmission pipelines used to transport gas from the fields to the 'city gates'
- *distribution service providers*, which own and operate networks of distribution pipelines used to transport gas from the city gates to each customer's home or business
- *retailers*, which contract directly with gas producers, transmission and distribution service providers and arrange for gas to be delivered and billed to customers.

Most customers purchase gas from retailers, except for very large users who often buy directly from producers. Since full retail contestability was introduced in the NSW gas market in January 2002, all customers have been able to choose which gas retailer they use.

All retailers (and very large users who purchase directly from producers) must contract with the transmission and distribution service providers to transport the gas they buy from producers to their customers via these businesses' networks. The Tribunal regulates the prices and terms and conditions on which these service providers offer to contract for the use of (that is provide access to) their networks. These arrangements are known as access arrangements.

Figure A1.1 provides an overview of the natural gas supply chain in NSW, and how the various industry players interact with each other and with customers.

Figure A1.1 The natural gas supply chain



Note: Some major gas users also contract directly with transmission service providers and therefore do not require access to a distribution network.

A1.1 Where does the gas used in NSW come from?

Most of the gas used in NSW comes from other States. Currently, the primary source of natural gas for NSW is the Cooper Basin in South Australia. Gas from the Gippsland Basin in Victoria is also used to supply Cooma, Bombala, Nowra and Bomaderry, and provide an alternative source of supply for other areas of NSW.³⁹⁵

Over the next few years, natural gas from coal seam methane sites in Queensland and NSW (Camden) will be increasingly used. Sydney Gas Limited has also indicated that is proceeding with a program to tap into coal seam methane supplies in the Hunter Valley and Newcastle regions.³⁹⁶

A1.2 How is the gas delivered to customers?

Gas is delivered to customers through networks of transmission and distribution pipelines. The transmission service providers and distribution service providers that own and operate these pipelines contract with retailers and some large users for access to these pipelines.

There are currently two transmission pipelines that transport gas from the fields to the supply areas of NSW:

- the Moomba to Sydney Pipeline carries gas from the Cooper Basin to AGLGN's distribution network in Wilton on the outskirts of Sydney (it is also linked to gas supplies and distribution areas in Victoria)
- the Eastern Gas Pipeline transports gas from Longford in Victoria to Horsley Park in Sydney where it connects to the AGLGN distribution network.

Both transmission pipelines pass a number of regional centres in NSW and off-takes from the transmission lines transport gas to Canberra and the Southern Highlands, Central West and Riverina regions. The interconnect pipeline connects the Moomba to Sydney Pipeline at Wagga Wagga to the GasNet transmission system in Victoria.

There are five main distribution networks in NSW that connect the transmission pipelines with the premises of each gas customer. These networks are owned/operated by Country Energy Gas, Envestra, ActewAGL, Allgas, and AGLGN and deliver natural gas to customers in the following regions:

- Wagga Wagga and surrounding areas, and South West Slopes (Country Energy Gas)
- Albury and other towns near the Victorian border (Envestra)
- Queanbeyan and the Shoalhaven (ActewAGL)
- towns near the Queensland border (Allgas)
- major cities and a number of regional centres, including the Central West (AGLGN).³⁹⁷

³⁹⁵ Energy Networks Association, *Gas Facts* (www.ena.asn.au).

³⁹⁶ Sydney Gas Limited (www.sydneygas.com).

³⁹⁷ Energy Networks Association, *Gas Facts* (www.ena.asn.au).

AGLGN's network is the largest distribution system in NSW. The network delivers gas to the Sydney region and a number of regional areas across NSW including coastal centres from Newcastle and the Hunter Region to Wollongong and Shellharbour. It also extends to the Riverina, Blue Mountains and major centres in the Central Tablelands.³⁹⁸ Further information about the AGLGN network is contained in the Access Arrangement Information produced by AGLGN.³⁹⁹

A1.3 What is gas used for in NSW?

Around 900,000 customers are connected to gas in NSW, most of whom are residential customers. The Tribunal recently undertook a survey of residential customers, which found that most households connected to gas use it as an energy source for cooking (82 per cent), hot water (67 per cent), and heating (57 per cent).⁴⁰⁰ The survey also found that while most of these households use gas for at least two of these activities, less than a third use it for all three. Water heating was the single activity that used the most gas.

Although much smaller in number, industrial and commercial customers use most of the natural gas purchased in NSW. Gas is used in a number of industrial activities including:

- direct heating in minerals processing, brick, cement and glass manufacturing
- steam raising in the food, chemical and paper industries
- as a feedstock in the manufacture of fertilisers, explosives and acid
- converting to liquid hydrocarbons.

Natural gas is also used by commercial customers (including shops, restaurants, offices, hospitals and schools) for cooking, hot water, steam raising and heating. It is also increasingly being used as a transport fuel, particularly for urban buses and some trucks (such as garbage trucks).⁴⁰¹

³⁹⁸ AGL website (www.agl.com.au).

³⁹⁹ AGLGN, *Access Arrangement Information for NSW network*, December 2003.

⁴⁰⁰ IPART, *Residential energy use in Sydney, the Blue Mountains and Illawarra – Results from the 2003 household survey*, RP27, December 2004.

⁴⁰¹ Energy Networks Association, *Gas Facts* (www.ena.asn.au).

APPENDIX 2 LIST OF SUBMISSIONS RECEIVED AND PUBLIC FORUMS HELD DURING THE REVIEW PROCESS

Submissions

Initial submissions – due 29 April 2004

(Responding to AGLGN's proposed access arrangement)

Alinta
Duke Energy International
Energy Markets Reform Forum
EnergyAdvice (on behalf of 10 companies)
EnergyAustralia
Gas Market Company
Harrison Manufacturing
Hunter Gas Users Group
Lovells Springs Pty Ltd
Orica
Origin Energy
TXU
Confidential submission (1)

Submissions in response to McLennan Magasanik & Associates' draft report on review of demand forecasts – due 6 May 2004

AGL Gas Networks (2)
EnergyAdvice
Orica
Origin Energy

Further submissions prior to Draft Decision – due 6 October 2004

(Responding to ECG's review of total costs, ACG's draft report on review of terms and conditions, AGLGN's proposed trunk zone merger, and other issues)

AGL Gas Networks (5)
Alinta / EnergyAustralia - joint
Country Energy
EnergyAdvice
EnergyAustralia
Energy Markets Reform Forum
Macquarie Generation
Metal Manufactures Limited
Orica
Origin Energy
TXU

Submissions to Draft Decision and AGLGN's response – due 28 February 2005

Austral Bricks *
CSR Limited *
EnergyAdvice
EnergyAustralia
Energy Markets Reform Forum
Energy Networks Association
Energy Users Association of Australia
Harrison Manufacturing
Hunter Gas Pipeline
Hydro Aluminium
Metering Dynamics
Orica
Origin Energy
Pilkington *
Weston Aluminium

* Denotes submissions which contained some confidential material which was not made publicly available

Public forums

Public forums held during the review process

19 February 2004	AGLGN presentation of its proposed access arrangement
29 April 2004	MMA presentation of its draft report on review of demand forecasts
15 September 2004	ECG presentation of its report on review of total costs
	ACG presentation of its draft report on review of terms and conditions
	AGLGN's proposed zone merger introduced by Tribunal secretariat
11 February 2005	AGLGN presentation of its response to the draft decision
23 March 2005	Stakeholder presentations of submission comments and roundtable discussion of key issues

APPENDIX 3 TRIBUNAL'S ASSESSMENT OF AGLGN'S TERMS AND CONDITIONS

	Matter (references to AGLGN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLGN's proposed access arrangement
	General matters		
1.	Form of the proposed AA (s3.2 of ACG final report)	See 13.4.1 in this report.	None
2.	Incomplete specification of terms and conditions (s3.3 of ACG final report)	See 13.4.2 and 13.4.3 in this report.	None
3.	Non-reference services ss2.8-2.9 of the proposed access arrangement (s3.4 of the ACG final report)	The Tribunal considered submissions from EnergyAustralia and EnergyAdvice. The Tribunal agrees with ACG's view that the consideration of the reasonableness of terms and condition of non-reference services is outside of the scope of section 3.6 of the Code. The categorisation of services as reference and non-reference is addressed in Chapter 4.	None
4.	Relationship with Gas Retail Market Business Rules (GRMBR) (s3.5 of the ACG final report)	The Tribunal considered comments from ACG, GMC, EnergyAustralia and Orica. The Tribunal found that the interaction of the terms and conditions and the GRMBR to meet the Code requirement of reasonableness.	None
	General terms and conditions		
5.	Reference service agreement Clause 5-7, Sch 2A of the proposed access arrangement (s4.2 of the ACG final report)	No submissions were received on this item. The Tribunal is satisfied that AGLGN's proposed clauses 5-7, Schedule 2A on reference service agreement are reasonable.	None

Independent Pricing and Regulatory Tribunal

Matter (references to AGLGN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLGN's proposed access arrangement
	Related to Item 2 above, the Tribunal agrees with ACG's finding that, since AGLGN's proposed clause 7 modifies the service agreements (and not the access arrangement) it is reasonable.	
6. Right to access Clause 8, Sch 2A of the proposed access arrangement (s4.3 of the ACG final report)	No submissions were received on this item. The Tribunal is satisfied that AGLGN's proposed clause 8, Schedule 2A on right to access is reasonable.	None
7. Obligation to transport Clause 9, Sch 2A of the proposed access arrangement (s4.4 of the ACG final report)	No submissions were received on this item. The Tribunal is satisfied that AGLGN's proposed clause 9, Schedule 2A on obligation to transport is reasonable.	None
8. Security for payment Clause 10, Sch 2A of the proposed access arrangement (s4.5 of the ACG final report)	See 13.4.4 in this report.	AGLGN is required to specify objective and non-discriminatory criteria related to clause 10, Schedule 2A of its proposed access arrangement as follows: <ul style="list-style-type: none"> • That the amount of any security shall be determined by having regard to the user's credit rating, payment history, and any additional factors which, in AGLGN's reasonable opinion, may have a material effect on the user's ability to perform any of its obligations under the service agreement or upon AGLGN's ability to recover any amounts payable or to be payable by the user. • That the amount of the security should be proportionate to the charges for the proposed service.

Matter (references to AGLGN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLGN's proposed access arrangement
		<ul style="list-style-type: none"> That the form of security is to be either (a) a parent company guarantee or (b) a refundable deposit or bank guarantee or (c) such other form of security as agreed between the user and AGLGN. To include an obligation on users to provide AGLGN with all information reasonably required to assess credit worthiness in a timely manner. <p>The Tribunal notes that AGLGN has agreed to implement this amendment.</p>
9. Gas Pressure Clause 11, Sch 2A of the proposed access arrangement (s4.6 of the ACG final report)	No submissions were received on this item. The Tribunal is satisfied that AGLGN's proposed clause 11, Schedule 2A on gas pressure is reasonable.	None
10. Responsibility for gas and UAG Clause 12, Sch 2A of the proposed access arrangement (s4.7 of the ACG final report)	The Tribunal considered submissions from EnergyAustralia and GMC. The Tribunal agrees with ACG's view and is not satisfied that AGLGN's proposed clause 12, Schedule 2A is reasonable. The Tribunal requires AGLGN to amend this clause as set out and notes AGLGN's agreement to such amendment.	AGLGN is required to amend clause 12, Schedule 2A of its proposed access arrangement such that the provisions relating to responsibility for gas and UAG cease to have effect in the event of a change in the treatment of UAG as a result of new Gas Retail Market Business Rules during the access arrangement period. The Tribunal notes that AGLGN has agreed to implement this amendment.
11. Overruns Clauses 13-20, Sch 2A of the proposed access arrangement (s4.8 of the ACG final report)	The Tribunal considered submissions and comments from EnergyAustralia, Harrison Manufacturing and OneSteel. The Tribunal agrees with ACG's view and is not satisfied that AGLGN's proposed clause 20, Schedule	AGLGN is required to amend the provisions in Schedule 2A of the proposed access arrangement relating to overruns to indicate that where a delivery point is served under two or more service agreements then an overrun is only deemed to occur where withdrawals at that delivery point exceed the total for

	Matter (references to AGLGN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLGN's proposed access arrangement
		2A is reasonable. The Tribunal requires AGLGN to amend this clause and notes AGLGN's agreement to such amendment.	all service agreements of MDQ in any day or MHQ in any hour. The Tribunal notes that AGLGN has agreed to implement this amendment.
12.	Metering Clauses 21-26, Sch 2A of the proposed access arrangement (s4.9 of the ACG final report)	No submissions were received on this item. The Tribunal is satisfied that AGLGN's proposed Clauses 21-26, Schedule 2A on metering are reasonable.	None
13.	Allocation of gas at a shared delivery point Clause 27, Sch 2A of the proposed access arrangement (s4.10 of the ACG final report)	No submissions were received on this item. The Tribunal is satisfied that AGLGN's proposed clause 27, Schedule 2A on allocation of gas at a shared delivery point is reasonable.	None
14.	New receipt points and receipt stations Clauses 28-32, Sch 2A of the proposed access arrangement (s4.11 of the ACG final report)	The Tribunal considered submissions from TXU and Macquarie Generation on this item. The Tribunal agrees with ACG's finding that clause 32 of Schedule 2A is not reasonable and requires AGLGN to amend this clause. It notes AGLGN's agreement to such amendment. As discussed in 13.4.3 in this report, the Tribunal does not agree with ACG's view to include a dispute resolution mechanism in the access arrangement.	AGLGN is required to amend clause 32, Schedule 2A of its proposed access arrangement to limit the ability of AGLGN to recover costs incurred by AGLGN in undertaking works required to enable a new receipt point to be established and integrated into the AGLGN network to those costs <i>reasonably</i> incurred. The Tribunal notes that AGLGN has agreed to implement this amendment.
15.	Alteration of receipt points and receipt stations Clauses 33-34, Sch 2A of the proposed access arrangement (s4.12 of the ACG final report)	The Tribunal considered TXU's submission on this item. The Tribunal agrees with ACG's view and considers that clauses 33 & 34 of Schedule 2A are not reasonable. It requires AGLGN to amend these	AGLGN is required to amend: <ul style="list-style-type: none">Clause 33, Schedule 2A of its proposed access arrangement to indicate that AGLGN may require users to make alterations to receipt stations for the purpose of upgrading

Matter (references to AGLGN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLGN's proposed access arrangement
	<p>clauses and notes AGLGN's agreement to such amendment.</p> <p>As discussed in 13.4.3 above, the Tribunal does not agree with ACG's view to include a dispute resolution mechanism in the access arrangement.</p>	<p>measurement performance or accommodating changes to gas demand characteristics only to the extent that the alterations are in accordance with good industry practice and/or appropriate Australian and internationally recognised standards and codes</p> <ul style="list-style-type: none"> • Clause 34, Schedule 2A of its proposed access arrangement to indicate that AGLGN's rights to recover costs are limited to recovery of costs <i>reasonably</i> incurred. <p>The Tribunal notes that AGLGN has agreed to implement this amendment.</p>
<p>16. Delivery points and delivery stations Clauses 35-37, Sch 2A of the proposed access arrangement (s4.13 of the ACG final report)</p>	<p>No submissions were received on this item.</p> <p>The Tribunal is satisfied that AGLGN's proposed clauses 35-37, Schedule 2A on delivery points and delivery stations are reasonable.</p>	<p>None</p>
<p>17. Accounts and payments Clauses 38-39, Sch 2A of the proposed access arrangement (s4.14 of the ACG final report)</p>	<p>The Tribunal considered submissions from EnergyAustralia, Origin Energy and ACG.</p> <p>The Tribunal is satisfied that the provisions are sufficiently clear to enable users to understand their payment obligations and therefore that these are reasonable.</p>	<p>None</p>
<p>18. Force majeure Clauses 40-45, Sch 2A of the proposed access arrangement (s4.15 of the ACG final report)</p>	<p>The Tribunal considered a submission from TXU on this item.</p> <p>The Tribunal is satisfied that AGLGN's proposed clauses 40-45, Schedule 2A on force majeure are reasonable.</p>	<p>None</p>
<p>19. Suspension of supply</p>	<p>The Tribunal considered submission comments from</p>	<p>AGLGN is required to amend clause 49, Schedule 2A</p>

	Matter (references to AGLGN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLGN's proposed access arrangement
	Clauses 46-50, Sch 2A of the proposed access arrangement (s4.16 of the ACG final report)	TXU. The Tribunal agrees with ACG's finding that AGLGN's proposed clauses 46-50, Schedule 2A on suspension of supply are reasonable apart from those relating to recovery of costs. It requires AGLGN to make the amendment as proposed by ACG and notes AGLGN's agreement to the amendment.	of its proposed access arrangement to limit the value of charges imposed on a user in connection with the cessation or suspension of supply to costs <i>reasonably incurred</i> by AGLGN in complying with the request of the user to stop or suspend delivery of gas. The Tribunal notes that AGLGN has agreed to implement this amendment.
20.	Interruptions of supply Clauses 51-52, Sch 2A of the proposed access arrangement (s4.17 of the ACG final report)	No submissions were received on this item. The Tribunal is satisfied that AGLGN's proposed clauses 51-52, Schedule 2A on interruptions of supply are reasonable.	None
21.	Liability and indemnities Clauses 53-60, Sch 2A and other relevant clauses throughout the proposed access arrangement (s4.18 of the ACG final report)	See 13.4.5 in this report.	AGLGN is required to amend Section 2.7 of its proposed access arrangement so that the second sentence in the penultimate bullet point reads: "The user will be liable for and indemnify AGLGN against any costs, penalties, expenses or any other loss or damage suffered or incurred by AGLGN arising from inaccurate or misleading information supplied by the user to AGLGN in connection to a Gas Swap, or the users participating in the Gas Swap failing to time and coordinate Gas Swap notifications and gas balancing nominations (made in accordance with Schedule 3) to ensure that their daily withdrawal requirements and completed Gas Swaps reflect their arrangements for delivery of gas to receipt points for each day." The Tribunal notes that AGLGN has agreed to

	Matter (references to AGLGN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLGN's proposed access arrangement
			implement this amendment.
22.	Emergency contact information Clause 61, Sch 2A of the proposed access arrangement (s4.19 of the ACG final report)	No submissions were received on this item. The Tribunal is satisfied that AGLGN's proposed clause 61, Schedule 2A on emergency contact information is reasonable.	None
23.	Title to gas Clauses 62-63, Sch 2A of the proposed access arrangement (s4.20 of the ACG final report)	The Tribunal considered a submission from Origin Energy on this matter. The Tribunal is satisfied that AGLGN's proposed clauses 62-63, Schedule 2A on title to gas are reasonable.	None
24.	Gas quality Clauses 64-68, Sch 2A and Sch 5 of the proposed access arrangement (s4.21 of the ACG final report)	No submissions were received on this item. The Tribunal is satisfied that AGLGN's terms and conditions on gas quality are reasonable.	None
25.	Breach of agreement Clause 69, Sch 2A of the proposed access arrangement (s4.22 of the ACG final report)	No submissions were received on this item. The Tribunal is satisfied that AGLGN's proposed clause 69, Schedule 2A on breach of agreement is reasonable.	None
26.	Commencement and termination of agreement Clauses 70-71, Sch 2A of the proposed access arrangement (s4.23 of the ACG final report)	No submissions were received on this item. The Tribunal is satisfied that AGLGN's proposed clauses 70-71, Schedule 2A on commencement and termination of agreement are reasonable.	None

	Matter (references to AGLN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLN's proposed access arrangement
27.	Additional terms and conditions applicable to reference services except tariff services Schedule 2B and Sections 2.6 and 2.7 of the proposed access arrangement (s4.24 of the ACG report)	<p>The Tribunal considered EnergyAustralia's submission on this item.</p> <p>The Tribunal agrees with ACG's view and EnergyAustralia that clauses 3-4 of Schedule 2B are ambiguous and therefore not reasonable. It requires AGLN to amend clause 3 as proposed by ACG and clause 4 as proposed by AGLN. It notes AGLN's agreement to both such amendments.</p> <p>The Tribunal agrees with ACG's view that Sections 2.6-2.7 are ambiguous and therefore not reasonable. It requires AGLN to amend sections 2.6 and 2.7 as proposed by ACG and notes AGLN's agreement to such amendment.</p> <p>The Tribunal is satisfied that AGLN's proposed clauses 1-2 and clauses 5-7 to Schedule 2B are reasonable.</p>	<p>AGLN is required to amend its proposed access arrangement as follows:</p> <ul style="list-style-type: none"> • Clause 3, Schedule 2B must indicate the period over which a service may be continued. • Clause 4, Schedule 2B must indicate that an application of a user for a service in the circumstances contemplated by clause 4 is not subject to the queuing policy of the access arrangement. • To remove reference to Schedule 2B as part of the terms and conditions for the Meter Data Service and Gas Swap Service in Sections 2.6 and 2.7 of the proposed access arrangement. <p>The Tribunal notes that AGLN has agreed to implement this amendment.</p>
28.	Gas balancing Schedule 3 of the proposed access arrangement (s4.25 of the ACG report)	<p>The Tribunal considered submissions from TXU and EnergyAustralia related to this item.</p> <p>The Tribunal is satisfied that AGLN's proposed gas balancing terms and conditions, including the discretion of AGLN to approve alternative gas balancing arrangements, are reasonable. See Item 38 below for gas balancing charges.</p>	None
29.	Operational principles - load shedding and establishment of receipt points Sch 4 of the proposed access arrangement	See 13.4.6 in this report.	AGLN is required to amend Schedule 4 of the proposed access arrangement such that the liability of AGLN for "any losses, liabilities or expenses incurred by the User and/or the User's customers arising from load shedding" is limited only in circumstances where AGLN acts in good faith and

Matter (references to AGLGN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLGN's proposed access arrangement
(s4.26 of the ACG report)		in accordance with the principles of the access arrangement. The Tribunal notes that AGLGN has agreed to implement this amendment.
Service-specific terms and conditions		
30. Availability Section 2 of the proposed access arrangement – services policy – relevant clauses for each service (s5.2 of the ACG final report)	No submissions were received on this item. The Tribunal is satisfied that AGLGN's proposed clauses in Section 2 on availability are reasonable.	None
31. Delivery point/receipt point/nominated delivery points Section 2 of the proposed access arrangement – services policy – relevant clauses for each service. (s5.3 of the ACG final report)	No submissions were received on this item. In making its draft decision, the Tribunal agreed with ACG's view that the terms and conditions for multiple delivery point services should: <ul style="list-style-type: none"> allow for deletion of delivery points during the access arrangement period clarify that a service agreement for other transportation services relates only to single delivery points. In its response to the draft decision, AGLGN agreed to the second amendment, but proposed alternative wording for the first dot point to reflect current practices relating to customer churn. The Tribunal is satisfied that AGLGN's alternative amendment is consistent with the intent of the Tribunal's draft decision amendment, and requires that AGLGN amend its access arrangement as it	AGLGN is required to amend Section 2 of its proposed access arrangement as follows: <ul style="list-style-type: none"> The terms and conditions for the Local Network Multiple Delivery Point Service and Trunk Multiple Delivery Point Service should be amended to include mechanisms used in AGLGN's existing service agreements for the deletion of delivery points during the term of the agreement in circumstances of customer churn. The terms and conditions for the Trunk Capacity Reservation Service, Trunk Managed Capacity Reservation Service and Trunk Throughput Service should be amended to make it clear that a service agreement for these services may provide for gas to be delivered to only a single delivery point. The Tribunal notes that AGLGN has agreed to implement this amendment

Matter (references to AGLN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLN's proposed access arrangement
32. MDQ and MHQ Section 2 of the proposed access arrangement – services policy – relevant clauses for each service. (s5.4 of the ACG final report)	<p>proposed.</p> <p>The Tribunal considered EnergyAustralia's submission on this item.</p> <p>In making its draft decision, the Tribunal agreed with ACG's view that the terms and conditions in section 2 of the proposed access arrangement relating to MDQ and MHQ are not reasonable, and required AGLN to amend as proposed by ACG.</p> <p>In its response to the draft decision, AGLN has agreed to the amendment in principle, but proposed the intent of the amendment would be more clearly met with an alteration to the first dot point of the draft decision amendment.</p> <p>The Tribunal is satisfied that AGLN's alternative amendment is consistent with the Tribunal's draft decision amendment, and requires that AGLN amend its access arrangement as it proposed.</p>	<p>AGLN is required to amend Section 2 of its proposed access arrangement as follows:</p> <ul style="list-style-type: none"> Sections 2.1, 2.2, 2.3 and 2.5 should be amended to clearly state that AGLN's obligation to deliver gas extends to MDQ and MHQ plus any authorised overrun. Section 2.1 should be amended so as to explicitly indicate that the MDQ under a service agreement for Capacity Reservation Services includes capacity obtained as summer tranche, short-term or additional capacity. <p>The Tribunal notes that AGLN has agreed to implement this amendment</p>
33. Overruns Section 2 of the proposed access arrangement – services policy – relevant clauses for each service (s5.5 of the ACG final report).	<p>The Tribunal considered EnergyAustralia's submission on this matter. Also refer to item 11 above.</p> <p>The Tribunal is satisfied that AGLN's proposed terms and conditions on overruns are reasonable.</p>	None
34. Metering Section 2 of the proposed access arrangement – services policy – relevant clauses for each service. (s5.6 of the ACG final report)	<p>The Tribunal considered submissions from EnergyAustralia, Energy Advice, Hunter Gas Pipeline and TXU on this item.</p> <p>The Tribunal is satisfied that AGLN's proposed terms and conditions on metering are reasonable. It</p>	None

Matter (references to AGLGN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLGN's proposed access arrangement
35. Term Section 2 of the proposed access arrangement – services policy – relevant clauses for each service. (s5.7 of the ACG final report)	<p>notes that the issue of a separate customer meter data service and metering contestability are addressed in Chapter 4 in this report.</p> <p>The Tribunal considered submissions from EnergyAustralia, EnergyAdvice, Hydro Aluminium and TXU on this item.</p> <p>The Tribunal agrees with ACG's views, including that minimum term contracts are common industry practice for contract carriage pipelines, and is satisfied that AGLGN's proposed terms and conditions on term are reasonable.</p>	None
36. Summer tranche, short term and additional capacity Section 2 of the proposed access arrangement – services policy – relevant clauses for each service. (s5.8 of the ACG final report)	See 13.4.7 in this report.	<p>AGLGN is required to amend section 2.1 of its proposed access arrangement so as to explicitly indicate that additional capacity for Capacity Reservation Services is obtained under an existing service agreement.</p> <p>AGLGN is required to amend Section 2.1 of its proposed access arrangement to add to the words under the second dot point under the title <i>Short Term Capacity for User Supplying Customers above 30TJ per annum at a Delivery Point</i> 'and such other exceptional physical circumstances beyond the reasonable control of a Customer.'</p> <p>The Tribunal notes that AGLGN has agreed to implement this amendment.</p>
37. Gas swap service Section 2 of the proposed access arrangement – services policy – relevant clauses for each service.	<p>The Tribunal considered submissions from EnergyAustralia and Origin Energy on this item.</p> <p>While the Tribunal agrees with ACG's view that the general provisions relating to the gas swap service are</p>	Refer to item 21 above.

Matter (references to AGLGN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLGN's proposed access arrangement
(s5.9 of the ACG final report)	<p>reasonable, it is not satisfied as to the reasonableness of all of these proposed terms and conditions.</p> <p>The Tribunal agrees with ACG that section 2.7 (relating to gas swap service) is not reasonable for the reasons suggested by ACG in its final report. It therefore requires AGLGN to amend this section 2.7 as proposed by ACG and notes AGLGN's agreement to such amendment. (Refer to item 21 above.)</p>	
38. Other charges - overrun charges, gas balancing and ancillary services Part 3F of the proposed access arrangement	<p>The Tribunal considered submissions from Harrison Manufacturing, EnergyAustralia and OneSteel on overrun charges. No submissions were received on gas balancing or ancillary service charges. (ACG did not assess these aspects of the terms and conditions.)</p> <p>The Tribunal is satisfied that the proposed overrun and gas balancing charges in Part 3F are reasonable.</p> <p>See 13.4.8 in this report for ancillary services charges.</p>	<p>AGLGN is required to amend Section 3.15 of its proposed access arrangement to amend its ancillary charges (GST inclusive, 2004/05 dollars) and to include, as a minimum, the descriptions of each ancillary service as set out below:</p> <ul style="list-style-type: none"> • Request for Service - \$60 per hour • Special meter read - \$25 • Residential disconnection/reconnection - \$75 • Business disconnection/reconnection - \$300. <p>Request for service — for time spent collating the information and writing the letter of offer to a retailer when the retailer requests a new/additional/change for a contract customer.</p> <p>Special Meter Read — for reads requested by a retailer rather than ordinary reads (for instance when the meter reader makes a special visit to read a particular meter out of the usual meter reading route). This service must be scheduled with a minimum 5-day notice period.</p>

Matter (references to AGLGN proposed access arrangement & ACG final report)	Summary of Tribunal's assessment	Required amendments to AGLGN's proposed access arrangement
		<p>Residential Disconnection Fee — this charge covers disconnection of meters with a capacity of less than or equal to 6m³/hr. The specific method of disconnection will be at the discretion of AGLGN to ensure the site is able to be left in a safe state. The fee also covers the cost of subsequent reconnection.</p> <p>Business Disconnection Fee — this charge covers disconnection of meters with a capacity of greater than 6m³/hr. The specific method of disconnection will be at the discretion of AGLGN to ensure the site is able to be left in a safe state. The fee also covers the cost of subsequent reconnection.</p>

GLOSSARY LIST OF ABBREVIATIONS

ABC	Activity based costing
ACG	The Allen Consulting Group
ACQ	Annual Contract Quantity
AGLGN	AGL Gas Networks Limited
ASX	Australian Stock Exchange
B2B	Business-to-business
BASIX	Building Sustainability Index
Capex	Capital expenditure
CAPM	Capital Asset Pricing Model
Code	<i>National Third Party Access Code for Natural Gas Pipeline Systems</i>
CPI	Consumer Price Index
DNSP	Distribution Network Service Provider (electricity)
DORC	Depreciated optimised replacement cost
EBITDA	Earnings before interest, taxes, depreciation and amortisation
ECG	Energy Consulting Group
EGP	Eastern Gas Pipeline
EMRF	Energy Markets Reform Forum
FRC	Full retail contestability
GMC	Gas Market Company
GJ	Gigajoule
GRMBR	Gas Retail Market Business Rules
HGP	Hunter Gas Pipeline (proposed)
HUG	Hunter Gas Users Group
IPART	Independent Pricing and Regulatory Tribunal
MAPS	Moomba to Adelaide Pipeline System
MDQ	Maximum daily quantity
MHQ	Maximum hourly quantity
MMA	McLennan Magasanik Associates
MRP	Market risk premium
MSP	Moomba to Sydney Pipeline System
Opex	Operating expenditure
NPV	Net present value

PB	Parsons Brinckerhoff
PJ	Petajoule
TJ	Terajoule
Tribunal	Independent Pricing and Regulatory Tribunal
UAG	Unaccounted for Gas
WACC	Weighted average cost of capital
1999 Regulation	Gas Pipelines Access (NSW) (Savings and Transitional) Regulation 1999