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WA Gas Networks, Gas Access
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WA GAS NETWORKS - PROPOSED REVISED ACCESS ARRANGEMENT FOR THE MID-WEST AND SOUTH-WEST GAS DISTRIBUTION SYSTEMS

Alinta Pty Ltd (Alinta) appreciates the opportunity to comment on the proposed revised access arrangement for the Mid-West and the South-West Gas Distribution Systems, which were submitted by WA Gas Networks (WAGN) on 29 January 2010.

At this time, Alinta has commented only on certain issues arising from WAGN's proposed revisions to the Access Arrangement. The absence of a comment on any specific issue should not be taken to indicate that Alinta supports, or does not support, that particular aspect of WAGN's proposed revisions to the Access Arrangement.

If the Authority were to accept WAGN's proposed revisions to the Access Arrangement as submitted, Alinta estimates that:

- (real) tariff class B2 (small business) distribution costs would increase by almost 85 per cent between 2009/10 and 2013/14; and
- (real) tariff class B3 (residential) distribution costs would increase by almost 56 per cent between 2009/10 and 2013/14.

Overall, Alinta considers that WAGN's Submission and accompanying Access Arrangement Information do not contain the information that is reasonably necessary for users and prospective users to understand either:

- the background to the access arrangement or the access arrangement proposal; or
- the basis and derivation of the various elements of the access arrangement or the access arrangement proposal

as required by National Gas Rule (NGR) 42(1).



This may be because either the information has not been provided by WAGN, or because the public version of WAGN's Submission suppresses information that is claimed to be confidential. However, under the National Gas Rules it is not sufficient only for the information to be confidential for it to be suppressed. Rather NGR 43(2) imposes three necessary tests that must each be satisfied before information can be suppressed. Alinta believes the Authority should review the information that has been suppressed by WAGN by applying the tests set out in NGR 43(2), and confirm that the information that has been suppressed satisfies each of the three tests.

WAGN claims that its actual capital expenditure during the second Access Arrangement period and forecast operating and capital expenditure during the third Access Arrangement period comply with the National Gas Rules. However, this claim appears to be entirely based on its assertion that this is the case, rather than any persuasive evidence to that effect.

Further, WAGN's Submission suppresses much of the information relating to the application of the tests in NGR7 9(2) to actual and forecast capital expenditure, which means that users and prospective users cannot reasonably be expected to be able to understand the basis for WAGN's claim that all capital expenditure is conforming capital expenditure.

Given the significant increases in reference tariffs proposed by WAGN, Alinta believes a detailed investigation of WAGN's actual capital expenditure during the second Access Arrangement period and its forecast operating and capital expenditure during the third Access Arrangement period is necessary.

Alinta also considers that WAGN's proposed real pre-tax rate of return does not comply with the National Gas Rules.

Counter to WAGN's suggestion that it has determined Reference Tariffs to avoid price shocks, the Attachment demonstrates that the changes in Reference Tariffs proposed by WAGN will result in price shocks. Specifically, it is unclear why WAGN is proposing a material 'P₀' adjustment on 1 January 2011 with much smaller increases in tariffs after that date when the same revenue outcome could have been achieved through a glide-path approach, whereby the required revenue is achieved by adopting the same periodic percentage increase in Reference Tariffs.

Finally, the manner in which WAGN has accounted for the requirements imposed by the National Gas Access (WA) (Local Provisions) Regulations 2009 is unclear. As indicated in the Authority's issues Paper, these Regulations require that when exercising a discretion in approving or making an access arrangement for a distribution pipeline, the Authority must take into account the possible impact of the proposed reference tariffs, the method of determining the tariffs and the reference tariff variation mechanisms on:

1. users to whom gas is or might be delivered by means of a small delivery service provided for in the access arrangement; and
2. small use customers to whom gas is or might be delivered by those users.



Retail gas tariff prices able to be charged by Alinta are regulated by government, with gas tariff caps established by the *Energy Coordination (Gas Tariffs) Regulations 2000* (the Tariff Regulations). There is currently no mechanism in the Tariff Regulations that links gas tariff caps to costs, or that enables changes in costs that are outside of Alinta's control, such as distribution charges, to be passed through to customers.

Consequently, the potential financial impact on Alinta of the increases being proposed by WAGN to Reference Tariffs that apply to small use customers supplied under the Tariff Regulations is significant. Most small use (residential and business) tariff customers are supplied a B1 or a B2 Reference Service, although a significant proportion of business tariff customers are supplied a B1 Reference Service. Based on information contained in WAGN's Submission, Alinta estimates that the total additional costs that will be incurred by retailers in respect of gas supplied to B1, B2 and B3 customers in AA3 will be in the order of \$65 million to \$70 million. Almost all of these costs would be incurred by Alinta, and would ultimately be required to be passed through to customers.

Attachment A discusses the above issues in more detail. Further, Attachment A also outlines the estimated impact on small use residential gas customer if WAGN's proposed revisions to the Access Arrangement were accepted as submitted. This information is provided on a confidential basis.

Alinta's preliminary comments on WAGN's proposed template haulage contract are provided at Attachment B.

Should the Authority require further information on any of the above issues, or those discussed in the attachment, I can be contacted on 9486 3749.

Yours sincerely

Corey Dykstra
Manager Regulatory Affairs
Alinta Pty Ltd

Att.

WA GAS NETWORKS - PROPOSED REVISED ACCESS ARRANGEMENT FOR THE MID-WEST AND SOUTH-WEST GAS DISTRIBUTION SYSTEMS

Sufficiency of information

Alinta considers that WAGN's Submission does not contain the information that is reasonably necessary for users and prospective users to understand either:

- the background to the access arrangement or the access arrangement proposal; or
- the basis and derivation of the various elements of the access arrangement or the access arrangement proposal

as required by National Gas Rule 42(1).

This may be because either the information has not been provided by WAGN, or because the public version of WAGN's Submission suppresses information that is claimed to be confidential.

While National Gas Rule 43(2) provides for information to be suppressed, information may be suppressed only where it is:

1. confidential; **and**
2. its public disclosure could cause undue harm to the legitimate business interests of the service provider, a user or prospective user; **and**
3. it is not possible for the information to be aggregated or generalised so as to avoid disclosure of the elements that make it sensitive.

That is, it is not sufficient for the information to be confidential for it to be suppressed. Rather National Gas Rule 43(2) imposes three necessary tests that must each be satisfied before information can be suppressed.

The AER's Access arrangement guideline also notes that in considering a claim that information is confidential, the regulator will consider any hindrance in the ability of the regulatory to perform its functions in assessing the veracity of the information.

As an example, WAGN's Submission excludes information on the (internal) overhead component incorporated in its forecasts of capital expenditure for the third Access Arrangement period (AA3). Alinta considers that suppression of this information means that users and prospective users cannot reasonably be expected to be able to understand the basis and derivation of WAGN's forecast capital expenditure for AA3.

It is not apparent that public disclosure of the (internal) costs that WAGN forecasts will be incurred in scoping, designing and managing capital projects could be deemed to be either confidential or, even if the information were to be confidential, that public disclosure of the information could reasonably be expected to cause undue harm to WAGN's legitimate business interests.

Similarly, WAGN's Submission excludes all information on its forecast capital expenditure on 'Performance and IT' projects, despite these accounting for \$32.1 million, or almost 15 per cent, of its total forecast capital expenditure during AA3. Significantly, forecast expenditure for this asset class is 350 per cent higher than actual expenditure during the second Access Arrangement period (AA2).

Again, it is unclear that it could reasonably be expected that public disclosure of, at the very least, a detailed summary of the 'Performance and IT' projects WAGN is proposing to undertake during AA3, if not also the forecast expenditure on each, could reasonably be expected to cause undue harm to WAGN's legitimate business interests.

These are but two examples of multiple instances where information has been suppressed where it is not immediately apparent that suppression of the information could reasonably be justified by the application of the three tests in National Gas Rule 43(2). The absence of this information also reduces the likelihood of users and prospective users being able to offer insight into the veracity of the information provided by WAGN, which may impede the Authority performing its functions.

Alinta believes the Authority should review the information that has been suppressed in WAGN's Submission by applying the tests set out in National Gas Rule 43(2), in order to confirm whether the information that has been suppressed satisfies each of the three tests.

By way of comparison, the most recent submissions of Western Power and gas distribution businesses in Victoria proposing revisions to access arrangements were substantially more detailed and provided virtually all consultants' reports that assisted in the development of the respective proposed revised Access Arrangements.

Consumer Price Index

WAGN's Access Arrangement Information (AAI) indicates that where necessary, the rate of inflation has been measured by the Consumer Price Index (All Groups, Perth).

In the approved Access Arrangement for AA2, the Consumer Price Index (CPI) is defined as (refer Schedule 2: Glossary - Definitions and Interpretation, p.29):

...the Consumer Price Index (All Groups, Eight Capital Cities) published quarterly by the Australian Bureau of Statistics, or, if applicable, an alternative index determined under Part B, clause 9.

The ability to specify an alternative index under Part B, clause 9 arises only (refer p.48):

In the event that the Consumer Price Index (All Groups, Eight Capital Cities), ceases to be published quarterly by the Australian Bureau of Statistics or is published on a basis materially different (including due to a change in its nature, composition or reference base) to its basis at the Submission Date...

Standard regulatory practise, including in Western Australia, has been to define the CPI as the Consumer Price Index (All Groups, Eight Capital Cities). For example, the Amended Proposed Revisions to the Access Arrangement for the South West Network (SWIN) (owned and operated by Western Power) that were approved by the Authority in December 2009 defined the CPI as the Consumer Price Index (All Groups, Eight Capital Cities).

Similarly, the Authority's approved Costing Principles (April 2009) for Westnet Rail, which provides a framework for the calculation and determination of floor and ceiling costs required under the Railways (Access) Code 2000, indicate that in determining the CPI, the Australian Bureau of Statistics Weighted Average of Eight Capital Cities All Groups CPI index is to be used.

The AER's Access Arrangement Guideline (dated March 2009) also implies that the CPI should be defined as the Consumer Price Index (All Groups, Eight Capital Cities). For example, in Section 6.1.2 discussing specified pricing formulas, the AER requires that (p.76):

...the CPI values are defined as the Consumer Price Index (All Groups-weighted average of eight capital cities) published by the Australian Bureau of Statistics (ABS)

Annexure B of WAGN's proposed Access Arrangement for the Mid-West and South-West Gas Distribution System indicates that the Consumer Price Index (All Groups, Perth) has been used in the reference tariff variation mechanism instead of the Consumer Price Index (All Groups, Eight Capital Cities) as specified by the AER Guideline.

WAGN also indicates it has derived its estimate of forecast inflation, used in establishing the rate of return under NGR 87(1), as the geometric mean of the Reserve Bank of Australia's (RBA) inflation forecasts (forecast changes in the CPI) for the next ten years.

Given this inflation forecast is an Australia-wide forecast, Alinta considers WAGN's proposed revisions to the Access Arrangement for AA3 would be internally inconsistent if it were to adopt as the CPI the Consumer Price Index (All Groups, Perth) instead of the Consumer Price Index (All Groups, Eight Capital Cities).

To the extent that the use of Consumer Price Index (All Groups, Perth) instead of the Consumer Price Index (All Groups, Eight Capital Cities) creates an inconsistency, it appears that WAGN's proposed revised Access Arrangement may not comply with NGR 73(3), which requires that all financial information must be provided, and all calculations made, consistently on the same basis.

Neither WAGN's Submission nor its AAI explain why it has elected to adopt for the CPI in AA3 the Consumer Price Index (All Groups, Perth) rather than to continue the current (and standard) practise of using the Consumer Price Index (All Groups, Eight Capital Cities).

Alinta considers that in the absence of evidence to the contrary, regulatory precedent suggests that the objectives of the National Gas Rules (and internal consistency) will be best achieved by requiring WAGN to continue to apply as the CPI the Consumer Price Index (All Groups, Eight Capital Cities) for AA3.

Labour and Material Indices

WAGN's Submission indicates that its forecast capital and operating expenditure for AA3 have been adjusted for forecast increases in labour and material costs above the CPI, and that these forecast labour and material cost indices were prepared by NIEIR, an independent consultant. WAGN has elected not to make public NIEIR's report.

The absence, or suppression, of information on the manner in which WAGN has adjusted forecast capital and operating expenditure for AA3 to account for forecast movement in labour and material costs means that users and prospective users cannot reasonably be expected to be able to understand the basis and derivation of WAGN's forecast capital and operating expenditure.

Specifically, in the absence of specific information on forecast labour and material cost indices used by WAGN to adjust forecast capital and operating expenditure for AA3 (i.e. the NIEIR report relied on by WAGN), it is unclear whether these forecasts have been arrived at on a reasonable basis, and represent the best forecast or estimate possible in the circumstances, as required by NGR 74(2).

Forecast labour and material indices used to adjust capital and operating expenditure have not been deemed to be information that should be suppressed in respect of proposed revisions to Access Arrangements for the SWIN or for gas distribution systems in Victoria. In each case, the businesses' submissions and the regulators' decisions explicitly outlined the adjustments to forecast capital and operating expenditure that were proposed and permitted for forecast changes in input costs.

In the absence of information on the manner in which WAGN has adjusted forecast capital and operating expenditure for AA3 to account for forecast movement in labour and material costs, it also unclear how WAGN has (or has not) accounted for changes in the productivity of these inputs over time, and therefore whether the indices represent the best forecast or estimate possible, as required by NGR 74(2).

While forecast indices are likely to be time sensitive, the real capital and operating expenditure escalation factors determined by the ESC to be appropriate for gas distribution businesses in Victoria for the period to 30 December 2012 (i.e. covering more than half of the period to be covered by WAGN's third Access Arrangement period) are shown in Table A.1 below.

Table A.1 ESC Final Decision – Victorian gas distribution businesses, real capital and operating expenditure escalation factors 2008 – 2012

	Rate of change in real operating expenditure (%)	Rate of change in real operating expenditure (%)
Envestra (Victoria)	2.01	1.83
Envestra (Albury)	2.01	1.83
Multinet	1.98	-0.12
SP AusNet	2.02	1.64

Source: ESC 2008, Gas Access Arrangement Review 2008-2012, Final Decision – Public Version, 7 March 2008, Table 7.15, p.250 and Table 8.4, p331.

Similarly, the 'activity' escalators for the SWIN deemed by the Authority to meet the requirements of the Electricity Network Access Code 2004 are shown in Table A.2 below. Again, the 'activity' escalation factors cover a period that substantially overlaps with the period to be covered by WAGN's third Access Arrangement period.

Table A.2 Economic Regulation Authority Final Decision – Western Power, activity escalators for capital and operating activities determined at May 2009 (real annual rate of change, per cent)

	2009/10	2010/11	2011/12
Labour			
Utilities workers	3.53	-1.08	-0.60
Internal workers	4.87	2.38	2.22
Combined materials escalators			
Transmission operating	-0.21	-2.59	1.18
Transmission capital	0.23	-3.35	-0.03
Distribution operating	0.92	-4.37	-0.10
Distribution capital	-0.68	-2.54	1.24
Activity escalators			
Transmission operating	3.34	-0.02	0.84
Transmission capital	2.45	-2.30	-0.23
Distribution operating	3.33	-0.02	0.87
Distribution capital	2.19	-0.76	0.87

Source: ERA 2009, Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network, Table 22, p.150.

In the absence of information on the forecast increases in labour and material costs used by WAGN to adjust forecast capital and operating expenditure for AA3, Alinta considers that:

- the capital and operating expenditure escalation factors determined by the ESC for the four gas distribution businesses in Victoria; and

- the activity escalators determined by the Authority in December 2009 as part of its Final Decision on Western Power's proposed revisions to the Access Arrangement for the SWIN;
are relevant in considering whether or not WAGN's forecast capital and operating expenditure complies with NGR 74(2).

Capital expenditure

Summary

Table A.3 WAGN –Access Arrangement, Actual and forecast capital expenditure (\$M)

	1	2	3	4	5	Total	Average
AA2 Expenditure allowance (\$M, December 2004)	31.55	30.23	24.72	29.21	29.98	145.69	29.14
AA2 Expenditure allowance (\$M, December 2009)	36.50	34.98	28.60	33.80	34.69	168.56	33.71
AA2 Actual expenditure (\$M, December 2009)	28.32	33.65	35.30	35.68	44.18	177.13	35.43
AA3 Forecast expenditure (\$M, December 2009)	28.07	45.12	49.58	50.05	51.44	224.25	49.83

Source: AlintaGas Networks 2005, Access Arrangement Information for the Mid-West and South-West Gas Distribution Systems, Amended AAI draft dated 29 July, Table 4.12, p.47.

WAGN 2010, Access Arrangement Information for the WA Gas Networks Gas Distribution Systems, Table 3, p.4 and Table 12, p.12.

WAGN 2010, Proposed Revisions to the Access Arrangement for the WA Gas Networks Gas Distribution Systems, Table 41, p.59.

WAGN's Submission suggests that its actual capital expenditure during AA2 of \$177.1 million was \$5 million, or 2.3 per cent, higher than the benchmark allowance of \$172.1 million (refer Table 4, p.26 of WAGN's Submission).

However, as shown in Table A.3 above, if the Consumer Price Index (All Groups, Eight Capital Cities) was instead used to adjust the allowed capital expenditure for AA2, the benchmark allowance would actually be \$168.6 million. As a result, WAGN's actual capital expenditure during AA2 is actually \$8.6 million, or 5 per cent, higher than that allowed by the Authority.

WAGN's Submission and its AAI contain inconsistent and conflicting forecasts of capital expenditure for 2010/11 and 2013/14.

- For 2010/11, Table 11 (p.40) in the Submission states it is \$41.002 million, where as Table 34 (p.52) and Table 12 (p.12) of the AAI indicate it is \$45.115 million.
- For 2013/14, the respective tables indicate the forecast is \$51.438 million and \$50.048 million.

In the following sections, Alinta has assumed that WAGN's forecast capital expenditure for AA3 is that set out in its AAI, which itemises capital expenditure by the more detailed asset classes.

On this basis, WAGN's forecast capital expenditure during AA3 is \$224.3 million, which is around \$47 million, or 27 per cent, higher than actual expenditure in AA2. Taking into account that AA3 is for only 4 ½ years whereas AA2 was 5 years long, average annual forecast expenditure for the AA3 is approximately 40 per cent higher.

NGR77(2) states (in part) that if an access arrangement period follows immediately on the conclusion of a preceding access arrangement period, the opening capital base for the later access arrangement period is to be:

- the opening capital base as at the commencement of the earlier access arrangement period (adjusted for any difference between estimated and actual capital expenditure included in that opening capital base); plus
- conforming capital expenditure made, or to be made, during the earlier access arrangement period.

Further, NGR 78 states (in part) that the projected capital base for a particular period is the opening capital base plus forecast conforming capital expenditure for the period.

Is WAGN's actual and forecast capital expenditure 'conforming'?

In order for WAGN's **actual and forecast** capital expenditure to be added to its capital base, the capital expenditure must be 'conforming', meeting the tests set out in **both** NGR 79(1) and (2).

Essentially, NGR 79(1) requires that capital expenditure be 'efficient' - the capital expenditure is such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services.

In addition to satisfying NGR 79(1), the capital expenditure must also satisfy at least one of the tests in NGR 79(2) for the capital expenditure to be added to the capital base. This rule requires that:

1. the overall economic value of the expenditure is positive; **or**
2. the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure; **or**
3. the capital expenditure is necessary (for certain defined reasons); **or**
4. a combination of 3 and 4 above.

Evidence provided in WAGN's Submission and Access Arrangement Information

WAGN's Submission and AAI indicates that all actual and forecast capital expenditure during AA2 and AA3 is considered to be conforming capital expenditure and that this expenditure is to be added to the opening capital base at the commencement of the respective Access Arrangement period.

However, WAGN's claim that actual capital expenditure during AA2 and forecast capital expenditure during AA3 satisfies the requirements of NGR 79(1) appears to be entirely based on its assertion that this is the case, rather than any persuasive evidence to that effect.

Further, WAGN's Submission suppresses much of the information relating to the application of the tests in NGR7 9(2), which means that users and prospective users cannot reasonably be expected to be able to understand the basis for WAGN's claim that all capital expenditure is conforming capital expenditure.

Given the significant increases in reference tariffs proposed by WAGN, a detailed investigation of WAGN's actual capital expenditure during AA2 and its forecast capital expenditure during AA3 is necessary. This is for the reasons discussed in the following sections.

A priori evidence that not all actual and proposed capital expenditure is conforming

There is evidence from regulatory decisions in respect of recent proposed revised Access Arrangements in similarly regulated industries and other jurisdictions that support an *a priori* view that it is likely that not all of WAGN's proposed actual and forecast capital costs will be conforming. This evidence is as follows.

- The Authority did not allow Western Power to add \$249.40 million (equivalent to 11.1 per cent of actual capital expenditure during the first Access Arrangement period) to the opening capital base for the second Access Arrangement period.
- The Authority reduced by almost \$106.4 million (or 7.4 per cent) the capital expenditure that was allowed to be added by Western Power to the capital base during the second Access Arrangement period.

(The capital expenditure allowance of \$1,327.1 million approved by the Authority was almost \$400 million lower than the \$1,723.4 million originally proposed by Western Power, although this amount was later reduced to \$1,433.5 million after taking account of the economic slowdown following the Global Financial Crisis).

- In its Final Decision following the Gas Access Arrangement Review 2008-2012 for Victorian gas distribution businesses, the Essential Services Commission (ESC) in Victoria approved combined capital expenditure for the four distribution businesses that was almost 29 per cent lower than that originally sought.

The reduction in approved capital expenditure for each of the individual businesses ranged from around eight per cent up to 46 per cent.

Lack of independent review or benchmarking of actual and proposed capital expenditure

A detailed investigation of WAGN's actual capital expenditure during AA2 and its forecast capital expenditure for AA3 is warranted given WAGN appears not to have provided any independent evidence to corroborate its claims that its actual and forecast capital expenditure meets the requirements of National Gas Rules.

The apparent lack of independent external review of WAGN's forecast capital expenditure is in contrast with the regulated businesses referred to above (i.e. Western Power, and the four Victorian gas distribution businesses), which each engaged independent consultants to review and advise on whether actual and forecast capital expenditure met the requirements of, respectively, the Western Australian Electricity Networks Access Code 2004 and the (then) National Gas Code.

- Western Power engaged Sinclair Knight Merz (SKM) to assess its capital-works processes (design standards, planning policies, plant specifications and procurement processes), to benchmark the project-cost performance of Western Power against major capital projects in other industries, and to assess in detail ten capital projects.
- Envestra, the largest Victorian gas distribution business, engaged WorleyParsons to review current and forecast capital expenditure. WorleyParsons conducted a benchmarking study that examined Envestra's expenditure relative to other natural gas distribution businesses, and also undertook an audit of a random sample of projects, in order to confirm whether the justifications, economic analysis and approval processes provided a sound basis for concluding that expenditure was prudent.

WorleyParsons also examined Envestra's forecast capital expenditure, including analysing various categories of expenditure and underlying assumptions and parameters, and concluded that Envestra's capital expenditure was within a range of values that it considered was efficient for Envestra's Victorian network.

It is important to note that for both Western Power and the Victorian gas distribution businesses, despite the consultants' reports being used to support the businesses' claims that actual and forecast capital expenditure met regulatory requirements, in each case the respective regulator found this not to be so (making the adjustments referred to earlier). Significantly, although WorleyParsons concluded that Envestra's forecast capital expenditure was efficient, **the ESC reduced Envestra's forecast capital expenditure by more than \$323 million, or around 46 per cent.**

Changes in composition of actual capital expenditure

Alinta considers that determining whether WAGN's actual capital expenditure during AA2 complies with the National Gas Rules cannot be inferred simply from the existence of an incentive mechanism in the second Access Arrangement (as the Authority is permitted to do under NGR 71(1)). In any event, WAGN has not proposed an incentive mechanism for the third Access Arrangement period.

Although WAGN's actual capital expenditure during AA2 was only around five per cent higher than that allowed by the Authority, there have been significant movements in capital expenditure between asset classes, as shown in Table A.4 below.

Table A.4 WAGN –Second Access Arrangement, Allowed and actual capital expenditure (\$M)

	Allowed	Actual	Variance
High pressure mains	7.38	16.47	123.2%
Medium pressure mains	28.30	0.00	-100.0%
Medium/low pressure mains	11.03	52.05	372.0%
Low pressure mains	0.00	0.00	0.0%
<i>Subtotal mains</i>	<i>46.71</i>	<i>68.52</i>	<i>46.7%</i>
Regulators	0.46	2.68	479.5%
Secondary gate stations	0.06	1.61	2690.0%
Buildings and land	0.58	0.29	-50.7%
Meters and service pipes	102.16	97.34	-4.7%
Equipment and vehicles	2.13	0.00	-100.0%
Information technology	16.46	6.68	-59.4%
Full retail contestability	0.00	0.00	0.0%
Total	168.56	177.13	5.1%

Source: AlintaGas Networks 2005, Access Arrangement Information for the Mid-West and South-West Gas Distribution Systems, Amended AAI draft dated 29 July, Table 4.12, p.47.

WAGN 2010, Access Arrangement Information for the WA Gas Networks Gas Distribution Systems, Table 3, p.4 and Table 12, p.12.

Given the significant variation between the composition of capital expenditure allowed for AA2, and that actually incurred, Alinta considers it necessary that the Authority investigate in detail whether actual capital expenditure, especially for mains and regulators, satisfies the requirements of NGR 79(1) and (2).

Apparent unconstrained nature of forecast capital expenditure

WAGN's Submission indicates that the volume of forecast capital works for AA3 has been derived from its internal network planning process (other than for the 'User initiated' asset class), while forecast unit costs are based on historical actual costs that have been adjusted to reflect forecast real increases in labour and material costs, and increased legislative and regulatory requirements (where relevant).

The information in WAGN's Submission and its AAI suggests that its process for forecasting capital expenditure for AA3 **was not informed or constrained** by the requirements of the NGR 79(1), being that the capital expenditure would be incurred by a prudent service provider:

- acting efficiently; and
 - in accordance with accepted good industry practice;
- to achieve the lowest sustainable cost of delivering pipeline services.

Given there is no evidence that the requirements of NGR 79(1) informed WAGN's process in setting forecast capital expenditure, it appears unsafe to accept without a detailed investigation that forecast capital costs for AA3 meet the requirements of NGR 79(1).

Application of NGR 79(2) to actual and forecast capital expenditure

As noted earlier, in addition to satisfying NGR 79(1), for capital expenditure to be conforming it must also satisfy at least one of the tests in NGR 79(2). This rule requires that:

1. the overall economic value of the expenditure is positive; **or**
2. the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure; **or**
3. the capital expenditure is necessary (for certain defined reasons); **or**
4. a combination of 3 and 4 above.

WAGN's Submission claims that for the following reasons all of its actual and forecast capital expenditure satisfies NGR 79(2), is therefore conforming capital expenditure, and may be added to the capital base.

1. Actual and forecast 'Demand' and 'User initiated' capital expenditure meets NGR 79 (2)(b) – the present value of expected incremental revenue (from increases in gas haulage volumes and customer connections) generated as a result of the expenditure exceeds the present value of the (actual or forecast) capital expenditure.
2. Actual and forecast 'Asset Replacement' and 'Performance' capital expenditure meets one of the tests in NGR 79(c) - the capital expenditure is necessary:
 - (i) to maintain and improve the safety of services; or
 - (ii) to maintain the integrity of services; or
 - (iii) to comply with a regulatory obligation or requirement; or
 - (iv) to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity).
3. Actual and forecast information technology capital expenditure meets one of the tests in NGR 79(c).

WAGN's Submission suppresses much of the information relating to the application of the tests in NGR 79(2), which means that users and prospective users cannot reasonably be expected to be able to understand the basis for WAGN's claim that all capital expenditure is conforming capital expenditure. Again, it is unclear that this information would satisfy the requirements in NGR 43(2) for the information to be suppressed.

In any event, there are a number of matters that Alinta believes the Authority should examine in detail in determining whether WAGN's claim that all capital expenditure satisfies NGR 79(2), and is therefore conforming capital expenditure that can be added to the capital base, is supported by the available evidence.

Firstly, Alinta notes that NGR 79(2)(b) requires that the present value of the expected incremental revenue to be **generated as a result of the expenditure** exceeds the present value of the capital expenditure. That is, the incremental revenue used in determining whether or not the present value of the incremental revenue exceeds the present value of the (actual or forecast) capital expenditure must be incremental revenue that is generated **due to** the capital expenditure. It follows that incremental revenue that would have been generated even without the capital expenditure cannot be included in determining whether or not the actual or forecast capital expenditure satisfies the test in NGR 79(2).

This would appear to be an important distinction to make, given WAGN's claims that the present value of expected incremental revenue as a result of 'Demand' and 'User initiated' capital expenditure exceeds the present value of the (actual or forecast) capital expenditure. WAGN's Submission indicates that the incremental revenue it recognises in applying the test in NGR 79(2)(b) for 'Demand' and 'User initiated' capital expenditure is incremental revenue from both increases in gas haulage volumes and in customer connections.

In order to satisfy the requirements of NGR 79(2)(b), WAGN would need to demonstrate that the increase in gas haulage volumes and the increase in customer connections **would not have occurred but for the** (actual or forecast) 'Demand' and 'User initiated' **capital expenditure**.

Secondly, WAGN's Submission does not make it clear at what level the tests in NGR 79(2) have been applied – at individual project level or at the capital asset class level. The requirement in NGR 79(2)(b) for there to be a direct linkage between the incremental revenue and capital expenditure appear to require that the test be applied at an individual project level. Such an approach would also be consistent with the manner in which the New Facilities Investment Test (NFIT) in the Electricity Industry Networks Access Code 2004 is applied. It is worth noting that the NFIT was adopted from the test that featured in the National Gas Code.

In summary, WAGN's claims that its' actual and forecast capital expenditure meets the requirements of NGR 79:

- do not appear to be supported in any detail in the information contained in its Submission (public version) or its AAI;
- do not appear to be supported by independent analysis or review of its actual and/or forecast capital expenditure; and
- do not appear to be supported by benchmark comparison to other natural gas distribution businesses.

Further comments on the inputs used by WAGN to develop its **forecast** capital expenditure, and on the quantum of proposed **forecast** capital expenditure by asset class, are provided in the following sections.

Overheads

WAGN's Submission indicates that its forecast capital expenditure for AA3 include an overhead component, which covers costs incurred by it in scoping, designing and project management of each project. It also notes that these internal costs have been deducted from the operating expenditure required to manage the network, and that any changes to the capital overhead rate will therefore change the trade off between capital and operating expenditure.

However, this last comment appears to be inconsistent with the requirements of NGR 79(1) and NGR 91(1), as in either case forecast capital or forecast operating expenditure must be 'efficient'. If it was concluded that the efficient capital overhead rate was an amount lower than that included in forecast capital expenditure by WAGN, this of itself would not affect the level of operating expenditure that would be 'efficient'.

WAGN's Submission suggests that the amount of corporate overhead is efficient as it has been calculated using a bottom up approach on the extent of labour required to manage its capital expenditure program. However, this simply indicates that WAGN has included what it considers is a reasonable overhead based on actual (and/or forecast) costs, and does not demonstrate whether the forecast overhead is efficient or consistent with good industry practise as required by NGR 79(1).

The absence, or suppression, of information on the quantum of overhead costs included in WAGN's forecast capital costs for AA3 means that users and prospective users cannot reasonably be expected to be able to understand the basis and derivation of WAGN's forecast capital expenditure. In addition, it is unclear whether the quantum of overhead costs included in WAGN's forecast capital costs for AA3 is the best forecast or estimate possible, as required by NGR 74(2).

Alinta notes that information on capital overheads has not been deemed to be information that should be suppressed in Victoria. There, and based on information provided by the Victorian gas distribution businesses, the ESC in its Gas Access Arrangement Review 2008-2012 Draft Decision, proposed to approve capital overhead costs as follows.

- For gross direct capital expenditure up to \$40 million per annum, capital overhead rate of 15 per cent should apply.
- For capital expenditure in excess of \$40 million, a rate of 10per cent apply to the excess amount.

The ESC's Final Decision indicates this approach, with a number of minor amendments, was accepted by the gas distribution businesses. It also notes that capital overheads were not to apply to IT projects.

Whether these capital overhead margins might be relevant to WAGN's business would need to also be informed by evidence provided by WAGN as to its actual capital overhead during AA2.

User initiated capital expenditure

WAGN forecasts that 'User initiated' capital expenditure, which it notes includes the cost of connecting new customers and 'the cost of miscellaneous projects (net of user contribution)', will decrease by around 17 per cent in the third Access Arrangement period, which appears to be roughly in line with the decline in new connections of around almost 19 per cent.

However, WAGN's Submission does not provide any information on expected unit costs, which means that users and prospective users cannot reasonably be expected to be able to understand the basis and derivation of WAGN's forecast user initiated capital expenditure. In addition, it is unclear whether the quantum of forecast user initiated capital expenditure for AA3 is the best forecast or estimate possible, as required by NGR 74(2).

Renewals (Replacement) capital expenditure

Forecast 'Renewals (Replacement)' capital expenditure during AA3 is \$45.4 million, which represents an increase of more than 265 per cent, or almost \$33 million, from actual expenditure of \$12.4 during AA2.

WAGN's Submission indicates that the main category of assets that is being replaced is cast iron pipes in Fremantle, followed by meter replacement.

Cast iron replacement and non-standard mains program

For AA3, WAGN's Submission indicates that:

- it proposes that replacement of cast iron mains at a rate of six kilometres (km) per year, which appears to be roughly in line with replacement in recent years of around 5 km;
- It proposes to replace 20 km of unprotected steel mains with non-standard diameters that have started to corrode; and
- It has set aside a provision for the possible replacement of medium pressure protected steel mains subject to further inspection to confirm whether replacement is required.

The absence, or suppression, of information on WAGN's forecast capital expenditure for the cast iron replacement and non-standard mains program in AA3 means that users and prospective users cannot reasonably be expected to be able to understand the basis and derivation of forecast capital expenditure.

Specifically, it is unclear what proportion of the forecast capital cost of \$45.4 million is simply a provision for the possible replacement of medium pressure steel mains, which still need to be inspected to determine whether they need to be replaced. WAGN's Submission also provides no information on the basis on which the quantum of this provision has been established.

Alinta notes that it is possible to derive some estimates of the unit costs of WAGN's cast iron replacement and non-standard mains program.

- WAGN's Submission indicates that in AA2 it had proposed to replace 30 kilometres (km) of cast iron and unprotected steel mains per year. It notes that a total of 792 metres was replaced in 2006 at a cost of \$508,000, which equates to an average cost of \$641 per metre. The average cost per customer transferred to the new mains was \$3,708.
- It notes the program commenced in earnest in 2008, when \$5.5 million was spent on replacing a portion of cast iron mains in Fremantle and \$0.3 million on ad hoc mains replacement. WAGN's submission indicates that 24.5 km of mains were installed to replace cast iron mains, which equates to an average cost of \$224 per metre. The average cost per customer transferred to the new mains was \$6,807.

WAGN's Submission indicates that it seeks competitive tenders for major projects, including mains laying for network augmentation and mains replacement projects. Consequently, the reason for excluding detailed information on the length of cast iron and steel mains to be replaced each year, the forecast unit costs, and the annual provision for replacement of medium pressure protected steel mains (including the length of mains to be replaced and forecast unit costs), is unclear.

That is, it is not apparent that public disclosure of the expenditure WAGN forecasts it will incur in respect of its cast iron replacement and non-standard mains could be deemed to be either confidential or, even if the information were to be confidential, that public disclosure of the information could reasonably be expected to cause undue harm to WAGN's legitimate business interests.

The length of mains to be replaced annually, and the allowed unit cost (dollars per metre), for the gas distribution businesses in Victoria was subject to significant analysis and review as part of the ESC's Gas Access Arrangement Review 2008-2012. In its Final Decision, the ESC determined that the unit cost allowance should be in the range of \$134 to \$156 per metre (July 2006 dollars). Notably, the ESC determined that an average unit cost allowance of \$156 per metre was appropriate for Envestra, despite Envestra's Submission originally forecasting an average unit cost ranging from just under \$300 per metre in 2008 increasing to almost \$399 per metre in 2012.

Meter replacement

WAGN's Submission indicates that the Gas Standards (Gas Supply System Safety) Regulations 2000 (GSSR) requires that meters installed to measure domestic gas supplies be 'replaced' after 18 years in service, although there is scope for the Director of Energy Safety to vary this requirement. From the information contained in WAGN's Submission, it appears that 'replacement' meters may be either new meters or refurbished meters.

It is understood that the Director of Energy Safety has permitted WAGN to keep M6EW domestic meters, which were installed during the 1980s, in service for a period of 25 years given their demonstrated ability to meet the performance criteria set out in the GSSR for periods exceeding 18 years.

WAGN's Submission also notes that sampling of ME602 meters has shown that after 18 years of service these meters continue to meet legislated accuracy requirements. However, it appears that WAGN has not sought approval from the Director of Energy Safety to keep the ME602 domestic meters in service for a period longer than 18 years. The reason for not doing so is not apparent from the information contained in WAGN's submission.

It appears that during AA3, WAGN intends to replace both ME602 and M6EW with new meters at the end of their service lives (respectively 18 years and 25 years). In contrast, it appears in the past (and during AA2), WAGN refurbished and re-used domestic gas meters after they had reached the end of their service lives.

As noted above, 'Renewals (Replacement)' capital expenditure is for a range of projects, including cast iron pipe, non-standard mains and meter replacement. Further, WAGN's AAI indicates that 'Meters and service pipes' account for between 30 and 40 per cent of total annual forecast capital expenditure for the third Access Arrangement period, although it comments that these expenditures are primarily to facilitate the connection of new customers. Consequently, the precise cost of WAGN's proposed meter replacement program is not clear, and the relative cost of continuing to refurbish domestic gas meters for re-use versus a replacement program utilising new meters is also unclear.

Alinta notes that the ESC's Final Decision in respect of the Gas Access Arrangement Review 2008-2012 indicates that the allowed unit meter replacement cost (in July 2006 dollars) was between \$106 and \$125.

It is not apparent that public disclosure of the expenditure WAGN forecasts it will incur in respect of its meter replacement program could be deemed to be either confidential or, even if the information were to be confidential, that public disclosure of the information could reasonably be expected to cause undue harm to WAGN's legitimate business interests.

Buildings

Under the renewals heading, WAGN's Submission comments that its main operational centre is outdated and requires a major refurbishment. It is unclear, but it appears likely that the 'Renewal (Replacement)' asset class includes the expenditure identified in WAGN's AAI for 'Buildings'. The AAI forecast capital expenditure of \$9.5 million for 'Buildings' in AA3, with the bulk of that expenditure (\$6.7 million) expected to occur in 2011/12.

In contrast, during AA2, WAGN's building capital expenditure was just under \$0.3 million. Thus, the proposed 'Building' capital expenditure in AA3 represents an increase of more than \$9.1 million (or 3,000 per cent).

Again, no information is provided in either WAGN's Submission or in its AAI to support a conclusion that forecast capital expenditure for updating and refurbishing its main operational centre (presumably, WAGN's offices at 12-14 The Esplanade, which it shares with Alinta) is efficient, consistent with good industry practice or achieves the lowest sustainable cost of providing the services.

It is not apparent that public disclosure of the costs WAGN forecasts it will incur in respect of updating and refurbishing its main operational centre (and/or other buildings) could be deemed to be either confidential or, even if the information were to be confidential, that public disclosure of the information could reasonably be expected to cause undue harm to WAGN's legitimate business interests.

It is also not clear which of the NGR 79(2)(c) tests WAGN's forecast building capital expenditure satisfies in order to be considered to be conforming capital expenditure.

Equipment and vehicles

WAGN's AAI indicates that it expects to incur capital expenditure of \$5.1 million on 'Equipment and vehicles' in the third Access Arrangement period, with the bulk of that expenditure (\$4.5 million) expected to occur in 2011/12. In contrast, during AA2, WAGN did not incur any equipment or vehicle capital expenditure.

It is unclear in which asset class this expenditure is included, but it may be included under the 'Renewals (Replacement)'. No information is provided in either WAGN's Submission or in its AAI to support a conclusion that forecast capital expenditure for equipment or vehicles is efficient, consistent with good industry practice or achieves the lowest sustainable cost of providing the services.

It is not apparent that public disclosure of the costs WAGN forecasts it will incur in respect of equipment and vehicles could be deemed to be either confidential or, even if the information were to be confidential, that public disclosure of the information could reasonably be expected to cause undue harm to WAGN's legitimate business interests.

Demand

WAGN's Submission indicates that capital expenditure included in this asset class ensures that there is adequate capacity to meet the new customer demand and to ensure there is no loss of supply due to lack of capacity. That this, this expenditure is essentially for reinforcement of the gas distribution system.

However, WAGN's Submission does not provide any information on the planned reinforcement of WAGN's gas distribution systems, an asset management plan, or expected unit costs, which means that users and prospective users cannot reasonably be expected to be able to understand the basis and derivation of WAGN's forecast demand capital expenditure. In addition, it is unclear whether the quantum of forecast demand capital expenditure for AA3 is the best forecast or estimate possible, as required by NGR 74(2).

Other (Performance, IT)

WAGN's Submission indicates that during AA2 it incurred total capital expenditure of \$7.1 million on 'Other (Performance and IT)' projects. However, it is forecasting 'Other (Performance and IT)' capital expenditure to increase to \$32.1 million over AA3, which represents an increase of 350 per cent.

The Submission also indicates that of the total forecast capital expenditure of \$32.1 million, \$14.2 million (44 per cent) is for unidentified IT projects, which leaves the remaining \$17.9 million for unidentified 'Performance' projects, which WAGN indicates are for enhancing the functionality of network related equipment (e.g. corrosion protection system, condition assessment of pipelines and overhauling emergency equipment).

Further, the Submission reveals that the bulk of the expenditure during AA3, \$12.9 million or almost 40 per cent, is currently being incurred by WAGN (i.e. it is forecast to be incurred in the six months to 30 June 2010) and that almost all of this (\$11.6 million, refers Tables 11 and 26) is for unidentified 'Performance' projects.

The absence or suppression of all information on 'Performance' and IT projects proposed for AA3 means that users and prospective users cannot reasonably be expected to be able to understand the basis and derivation of WAGN's forecast capital expenditure for this class of assets.

Again, it is not apparent that public disclosure of the projects and the costs WAGN forecasts it will incur in respect of 'Performance' and IT projects could be deemed to be either confidential or, even if the information were to be confidential, that public disclosure of the information could reasonably be expected to cause undue harm to WAGN's legitimate business interests.

Operating expenditure

Summary

WAGN's Submission indicates that its actual operating expenditure during AA2 was \$221.0 million. If, as intended, the Consumer Price Index (All Groups, Eight Capital Cities) was used to adjust the allowed operating expenditure for AA2, Alinta estimates that the benchmark allowance was be \$224.8 million. If this estimate is correct, WAGN's actual operating expenditure during AA2 was actually \$3.8 million, 1.7 per cent, **lower** than that allowed by the Authority.

Table A.5 WAGN –Access Arrangement, Actual and forecast operating expenditure by category

	1	2	3	4	5	Total	Average
AA2 Operating cost allowance (\$M, December 2004)	40.13	39.42	38.65	38.13	37.95	194.29	38.86
AA2 Operating cost allowance (\$M, December 2009)	46.43	45.61	44.72	44.12	43.91	224.79	44.96
AA2 Actual expenditure (\$M, December 2009)	42.89	43.92	43.95	42.29	47.97	221.01	44.20
AA3 Forecast expenditure (\$M, December 2009)	36.42	59.62	59.20	60.18	60.73	276.15	61.37

Source: ERA 2005, Final Decision on the Proposed Revisions to the Access Arrangement for the South-West and Mid-West Gas Distribution Systems, Table 10, p.83.

WAGN 2010, Access Arrangement Information for the WA Gas Networks Gas Distribution Systems, Table 4, p.5.

WAGN 2010, Proposed Revisions to the Access Arrangement for the WA Gas Networks Gas Distribution Systems, Table 41, p.59.

WAGN's forecast operating expenditure during AA3 is \$276.1 million, which is \$58.14 million, or more than 26 per cent, higher than actual expenditure in AA2. Taking into account that AA3 is only 4 ½ years whereas AA2 was 5 years long, the average annual forecast operating expenditure for AA3 is approximately 40 per cent higher (if expenditure is attributed on a pro-rata basis).

Is WAGN's actual and proposed operating expenditure 'efficient'?

NGR 91(1) requires that operating expenditure must be such as would be incurred by a prudent service provider:

- acting efficiently; **and**
- in accordance with accepted good industry practice;
to achieve the lowest sustainable cost of delivering pipeline services.

Alinta considers that determining whether WAGN's **actual** operating expenditure complies with NGR 91(1) cannot be inferred simply from the existence of an incentive mechanism in AA2 [as the Authority is permitted to do under NGR 71(1)]. This is consistent with the Authority's Draft Decision for AA2 that, while recognising that WAGN faced incentives to be efficient, did not accept that it would be appropriate to infer, simply from the existence of such incentives, that WAGN's (then) current operating and maintenance costs were efficient.

However, WAGN's Submission suggests it has not relied on actual operating expenditure during AA2 to inform its forecast operating expenditure for AA3. Instead, it used a 'ground up' approach to forecast operating expenditure for 2009, which was then used to forecast operating expenditure for AA3.

WAGN's AAI indicates that the annual forecast operating costs for AA3 will result in significant increases in the three identified key performance indicators, being:

- operating expenditure per kilometre of main;
- operating expenditure per gigajoule of gas delivered; and
- operating expenditure per customer connection.

WAGN's AAI claims that its forecast operating expenditure for AA3 represents the lowest sustainable cost of providing the Reference Services. Similar to its forecast capital expenditure, WAGN's claim that forecast operating expenditure during AA3 meets the requirements of NGR 91(1) appears to be entirely based on its assertion that this is the case, rather than any persuasive evidence to that effect.

Given the significant increases in reference tariffs proposed by WAGN, Alinta considers that a detailed investigation of WAGN's actual operating expenditure during AA2 and forecast operating expenditure during AA3 is necessary. This is for two reasons, which are discussed below.

Firstly, there is *a priori* evidence from recent Access Arrangements decisions in similarly regulated industries and other jurisdictions to conclude it likely that not all of WAGN's forecast operating costs will meet the requirements of NGR 91(1). This evidence is as follows.

- The Authority reduced WAGN's allowed operating expenditure during AA2 by almost \$9.3 million (December 2004 dollars), or 4.6 per cent, compared with that originally submitted.
- The Authority reduced Western Power's allowed operating expenditure during its AA2 by almost \$240 million, or just over 15 per cent, compared with that originally submitted by Western Power as complying with the requirements of the Electricity Industry Networks Access Code 2004.
- In its Gas Access Arrangement Review 2008-2012 Final Decision for Victorian gas distribution businesses, the ESC in Victoria approved combined operating expenditure for the four distribution businesses that was almost 17 per cent lower than that originally sought.

The reduction in approved operating expenditure for each of the individual businesses ranged from around eleven per cent up to 30 per cent.

Secondly, the need for a detailed investigation of WAGN's actual operating expenditure during AA2 and forecast operating expenditure for AA3 is further highlighted by the fact that WAGN has not provided any independent evidence to corroborate its claims that its (actual and) forecast operating expenditure meets the requirements of NGR 91(1).

This is in contrast with WAGN's submission proposing revisions to the Access Arrangement for AA2, for which it engaged PA Consulting to review its forecast operating costs to determine whether these satisfied Section 8.37 of the (then) Access Code.

WAGN's Submission indicates that it used a 'ground up' approach to forecast operating expenditure for 2009, and that it then adjusted forecast operating expenditure for AA3 to reflect:

- increased volume of work due to deteriorating assets, increased customer numbers and expansion of the network;
- escalation of labour and material costs above the expected rate of inflation; and
- increased regulatory, legislative, health and safety obligations.

The information in WAGN's Submission and in its AAI suggests that its process for establishing costs for 2009, which became the base for the forecast period, **was not constrained** by the requirements of the NGR 91(1), being that expenditure must be such as would be incurred by a prudent service provider:

- acting efficiently; and
- in accordance with accepted good industry practice;
to achieve the lowest sustainable cost of delivering pipeline services.

Given there is no evidence that the requirements of NGR 91(1) informed WAGN's process in setting operating costs for 2009, Alinta considers it would be unsafe to accept without a detailed investigation that WAGN's forecast operating costs for AA3 meet the requirements of NGR 91(1). Specifically, the claim made in WAGN's AAI that its forecast operating expenditure represents the lowest sustainable cost of providing the Reference Services appears without basis.

In this regard, there is some a priori evidence in WAGN's Submission that not all of its actual and forecast operating expenditure meets the requirements of NGR 91(1). For example, WAGN comments that (p.60):

Asset management costs show a reducing trend implying an improved efficiency in the period 2010 to 2014. This is partially due to the same labour force transferring more costs to capital as a result of higher capital workload in this period [emphasis added].

This statement appears to suggest that there has been (and may continue to be) excess (or under utilised) capacity in WAGN's labour force, which implies there is some inefficiency in its operating costs and that actual operating costs do not achieve the lowest sustainable cost of delivering pipeline services.

In summary, WAGN's claim that its' forecast operating expenditure complies with NGR 91(1) (i.e. that this is the amount of expenditure that would be incurred by a prudent service provider acting efficiently, and in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services):

- does not appear to be supported by information contained in its Submission or AAI;
- does not appear to be supported by independent analysis or review of its forecast operating expenditure; and
- does not appear to be supported by any benchmarking comparison to other natural gas distribution businesses.

Further comments on WAGN's **actual** operating costs for AA2, the inputs used by WAGN to develop its **forecast** operating expenditure, and on the quantum of proposed **forecast** operating expenditure by category, for AA3 are provided in the following sections.

Cost drivers

As noted above, WAGN's Submission indicates that it used a 'ground up' approach to forecast operating expenditure for 2009, and that it then adjusted forecast operating expenditure for AA3 to reflect:

- increased volume of work due to deteriorating assets, increased customer numbers and expansion of the network;
- escalation of labour and material costs above the expected rate of inflation; and
- increased regulatory, legislative, health and safety obligations.

WAGN notes that forecast operating expenditure in the other categories (i.e. 'Marketing', 'Unaccounted for gas', 'Information technology', 'Corporate' and 'Regulatory') were developed in a similar manner.

Changes in customer numbers and the escalation of (capital and) operating costs for real increases in labour and material costs were commented on earlier in Alinta's submission. However, WAGN's Submission and its AAI provide no information on the remaining cost drivers. For example, no details are provided on specific changes in regulatory, legislative, health or safety obligations that might be faced by WAGN. Similarly, WAGN has not provided any details on the proposed expansion of its gas distribution systems.

The absence or suppression of this information means that users and prospective users cannot reasonably be expected to be able to understand the basis and derivation of WAGN's forecast operating expenditure. It is also not apparent that public disclosure of this information could be deemed to be either confidential or, even if the information were to be confidential, that public disclosure of the information could reasonably be expected to cause undue harm to WAGN's legitimate business interests.

Operations costs

WAGN's Submission indicates that operations costs include the following.

- Asset management
- Direct maintenance
- Variable volume maintenance
- Ancillary maintenance projects
- Market Operations
- Support services

Table A.6 WAGN –Access Arrangement, Operations expenditure

	1	2	3	4	5	Total	Average
AA2 Operating cost allowance (\$M, December 2004)	22.53	21.70	20.82	20.31	20.09	105.44	21.09
AA2 Operating cost allowance (\$M, December 2009)	26.06	25.11	24.09	23.50	23.24	121.99	24.40
AA2 Actual expenditure (\$M, December 2009)	25.58	26.55	24.35	23.47	23.88	123.84	24.77
AA3 Forecast expenditure (\$M, December 2009)	20.68	27.43	28.20	28.37	27.83	132.52	29.45

Source: ERA 2005, Final Decision on the Proposed Revisions to the Access Arrangement for the South-West and Mid-West Gas Distribution Systems, Table 10, p.83.

WAGN 2010, Access Arrangement Information for the WA Gas Networks Gas Distribution Systems, Table 4, p.5.

WAGN 2010, Proposed Revisions to the Access Arrangement for the WA Gas Networks Gas Distribution Systems, Table 41, p.59.

As shown in Table A.6 above, WAGN's actual operations expenditure for AA2 was largely in line with that allowed by the Authority, and appears reasonable given the number of new customer connections during the period was around 6 per cent higher than forecast.

However, based information made available by WAGN, it appears that average annual operations expenditure will increase by around 19 per cent in the third Access Arrangement compared with actual annual average operations costs in AA2.

Marketing

Table A.7 WAGN –Access Arrangement, marketing expenditure

	1	2	3	4	5	Total	Average
AA2 Operating cost allowance (\$M, December 2004)	1.03	1.03	1.03	1.03	1.03	5.15	1.03
AA2 Operating cost allowance (\$M, December 2009)	1.19	1.19	1.19	1.19	1.19	5.96	1.19
AA2 Actual expenditure (\$M, December 2009)	0.33	0.37	0.35	0.24	0.21	1.50	0.30
AA3 Forecast expenditure (\$M, December 2009)	0.18	2.60	1.09	1.09	1.10	6.05	1.34

Source: ERA 2005, Final Decision on the Proposed Revisions to the Access Arrangement for the South-West and Mid-West Gas Distribution Systems, Table 10, p.83.
WAGN 2010, Access Arrangement Information for the WA Gas Networks Gas Distribution Systems, Table 4, p.5.
WAGN 2010, Proposed Revisions to the Access Arrangement for the WA Gas Networks Gas Distribution Systems, Table 41, p.59.

For AA2, the Authority allowed marketing expenditure of \$6.0 million (December 2009 dollars). This was a reduction on the amount originally proposed by WAGN (of approximately \$7.5 million in December 2009 dollars), with the amount allowed by the Authority based on WAGN's adjusted actual historical annual marketing expenditure. WAGN advised the Authority that its marketing activities included advertising and sponsorship to promote the efficient use of gas, the promotion of gas appliances, and advice to industry concerning benefits of gas usage and gas appliances.

However, WAGN's actual marketing expenditure during all of AA2 was just \$1.5 million, which is equivalent to the marketing expenditure it originally forecast it would incur in each year of AA2.

Despite average annual marketing expenditure of just \$0.3 million in AA2, WAGN is now forecasting marketing expenditure of \$2.6 million in 2010/11 falling to around \$1.1 million in the remaining years of the AA3, a total of \$6.0 million for AA3.

WAGN's Submission suggests that the marketing activities during AA3 will be largely of the same nature as those in AA2, being directed to:

- promotion of gas as an energy source to limit the rate of reduction in gas demand; and
- applied research and development to investigate alternative uses for gas.

The absence or suppression of information on WAGN's forecast marketing activities means that users and prospective users cannot reasonably be expected to form a view on whether forecast expenditure complies with NGR 91(1) and NGR 74. It is also unclear that information on the nature and forecast expenditure of WAGN's marketing activities during AA3 meets the tests set out in NGR 43(2) for the information to be suppressed.

Alinta considers WAGN's desire to limit the rate of reduction in gas demand is closely aligned with its own commercial interests. Therefore, it is reasonable that there should be an alignment between WAGN and certain of Alinta's marketing activities and expenditure to ensure that these are effective. It also implies that there may well be cost efficiencies in WAGN and Alinta coordinating activities intended to promote of gas as an energy source and funding of research into developing additional uses for gas.

Corporate

Table A.8 WAGN –Access Arrangement, corporate expenditure

	1	2	3	4	5	Total	Average
AA2 Operating cost allowance (\$M, December 2004)	5.03	5.03	5.03	5.03	5.03	25.15	5.03
AA2 Operating cost allowance (\$M, December 2009)	5.82	5.82	5.82	5.82	5.82	29.10	5.82
AA2 Actual expenditure (\$M, December 2009)	5.94	5.90	6.76	4.55	5.80	28.96	5.79
AA3 Forecast expenditure (\$M, December 2009)	3.98	7.97	7.97	7.97	7.97	35.85	7.97

Source: ERA 2005, Final Decision on the Proposed Revisions to the Access Arrangement for the South-West and Mid-West Gas Distribution Systems, Table 10, p.83.
WAGN 2010, Access Arrangement Information for the WA Gas Networks Gas Distribution Systems, Table 4, p.5.
WAGN 2010, Proposed Revisions to the Access Arrangement for the WA Gas Networks Gas Distribution Systems, Table 41, p.59.

As shown in Table A.8 above, WAGN's actual corporate expenditure for AA2 was in line with that allowed by the Authority. However, WAGN's average annual forecast corporate expenditure for AA3 are around 38 per cent higher than average annual actual expenditure during AA2.

WAGN's Submission notes that (p.71):

...corporate costs are consistent with other utilities and as required to sustain a complex distribution business.

However, no information is provided in WAGN's Submission or AAI to substantiate this claim. The absence or suppression of information on WAGN's forecast corporate costs means that users and prospective users cannot reasonably be expected to form a view on whether the forecast complies with NGR 91(1) and NGR 74.

Further, WAGN's AAI notes (p.20):

The forecast of corporate costs reflects the costs of corporate services sourced from an external provider, and an allocation of costs incurred by WAGN in managing debt and equity portfolios, and in meeting corporate governance requirements.

WAGN later indicate that, at least in part, the increase in forecast corporate operating expenditure is due to (p.25):

...higher corporate costs [being] allocated to WAGN as the group of companies to which WAGN belongs has been restructured.

This statement appears to indicate that, at least in part, the increase in forecast corporate expenditure reflects not a change or an increase in the quantity of corporate services that will be provided to WAGN, but rather a change in the way these costs have been allocated between companies that are members of the same group.

The ESC considered in detail outsourcing arrangements by the gas distribution businesses in Victoria, and the allocation of group costs to the distribution businesses. In its Final Decision, the ESC commented that it was necessary for it:

...to give consideration to whether the distributors, in entering into outsourcing arrangements, had other incentives than simply an incentive to contract on the basis of incurring an efficient level of expenditure so as to achieve the lowest sustainable cost, and to test whether the costs incurred under those outsourcing arrangements are in fact consistent with the requirements of...the Code.

Given the incentives facing WAGN (and its corporate group), Alinta considers it necessary to the Authority investigate in detail whether the arrangements under which WAGN obtains corporate services and its forecast corporate operating expenditure comply with NGR 91(1) and NGR 74(2).

Information technology

Table A.9 WAGN –Access Arrangement, information technology expenditure

	1	2	3	4	5	Total	Average
AA2 Operating cost allowance (\$M, December 2004)	6.54	6.54	6.54	6.54	6.54	32.71	6.54
AA2 Operating cost allowance (\$M, December 2009)	7.57	7.57	7.57	7.57	7.57	37.85	7.57
AA2 Actual expenditure (\$M, December 2009)	5.03	4.97	5.34	3.11	4.46	22.90	4.58
AA3 Forecast expenditure (\$M, December 2009)	2.79	5.96	6.17	5.84	6.21	26.96	5.99

Source: ERA 2005, Final Decision on the Proposed Revisions to the Access Arrangement for the South-West and Mid-West Gas Distribution Systems, Table 10, p.83.
WAGN 2010, Access Arrangement Information for the WA Gas Networks Gas Distribution Systems, Table 4, p.5.
WAGN 2010, Proposed Revisions to the Access Arrangement for the WA Gas Networks Gas Distribution Systems, Table 41, p.59.

As shown in Table A.9 above, WAGN's actual IT expenditure in AA2 was almost 40 per cent lower than that allowed by the Authority. However, WAGN's forecast average annual IT expenditure for AA3 is around 30 per cent higher than average annual actual expenditure during AA2.

WAGN's Submission comments that (p.66):

...drivers of WAGN's [information and communications technology] services requirements are its regulatory requirements to support gas market retail contestability, network integrity monitoring systems, and a call centre to interface with "Call Before You Dig" as well as leaks, connections and disconnections notifications.

There is no further information in WAGN's Submission to suggest that there is expected to be a significant change in any of these drivers, which would explain the significant increase in average annual IT costs. The absence or suppression of information on WAGN's forecast corporate costs means that users and prospective users cannot reasonably be expected to form a view on whether the forecast complies with NGR 91(1) and NGR 74.

WAGN's AAI notes that Information and Communications Technology (ICT) is sourced from an external service provider, and the forecast is based on the current cost of the service, taking into account licence costs for current software applications and new applications forecast to be developed during the Access Arrangement period.

It is not clear whether ICT services are sourced by WAGN from a provider within the same group of companies (as is the case for corporate services). Even so, given the significant increase in ICT costs, the absence of any information on the new applications, and the incentives facing WAGN (and its corporate group), Alinta considers it necessary to the Authority investigate in detail whether WAGN's forecast ICT operating expenditure for AA3 complies with NGR 91(1) and NGR 74(2).

Regulatory costs

Table A.10 WAGN –Access Arrangement, regulatory expenditure

	1	2	3	4	5	Total	Average
AA2 Operating cost allowance (\$M, December 2004)	0.7	0.7	0.7	0.7	0.7	3.7	0.7
AA2 Operating cost allowance (\$M, December 2009)	0.9	0.9	0.9	0.9	0.9	4.3	0.9
AA2 Actual expenditure (\$M, December 2009)	1.1	1.2	1.3	3.1	4.6	11.3	2.3
AA3 Forecast expenditure (\$M, December 2009)	3.9	5.4	5.4	6.2	6.6	27.5	6.1

Source: ERA 2005, Final Decision on the Proposed Revisions to the Access Arrangement for the South-West and Mid-West Gas Distribution Systems, Table 10, p.83.
WAGN 2010, Access Arrangement Information for the WA Gas Networks Gas Distribution Systems, Table 4, p.5.
WAGN 2010, Proposed Revisions to the Access Arrangement for the WA Gas Networks Gas Distribution Systems, Table 41, p.59.

As shown in Table A.10 above, WAGN's actual regulatory expenditure for AA2 was \$11.3 million, or more than 160 per cent, higher than that allowed by the Authority. It appears that the majority of this increase can be attributed to the Energy Safety Levy, which the Government introduced in 2006 to fund EnergySafety, which is now a division of the Department of Commerce. Alinta estimates that the total levy imposed on WAGN over the second Access Arrangement period was around \$4.6 million.

It is also relevant to note that the Access Arrangement approved by the Authority allowed WAGN to fully pass through in its reference tariffs any increases in actual regulatory costs above those forecast.

WAGN's forecast average annual regulatory expenditure for AA3 is again forecast to increase by around 160 per cent. Further, WAGN is again proposing that to the extent that regulatory (and UAFG) expenditure exceed annual specified levels, it be allowed to pass through any additional costs.

There is no information in WAGN's Submission to suggest that the regulatory obligations on WAGN in AA3 will increase or otherwise change compared with those in AA2. Consequently, it is unclear why WAGN's forecast regulatory expenditure for AA3 is so much higher than that actually incurred in AA2.

One possible reason that WAGN's forecast regulatory expenditure may be substantially higher is that WAGN is proposing to change the definition of 'Regulatory Costs'. For AA2, 'Regulatory Costs' were defined to mean costs connected to or associated with:

- the submission and approval of the revisions to the Access Arrangement; and
- WAGN's compliance with the Act, the Code, its Distribution Licences, the *Energy Coordination Act 1994*, the *Gas Standards Act 1972*, the *Energy Operators (Powers) Act 1979*, *Environmental Protection Act 1986* and all other applicable Laws;

For AA3, it proposes to define 'Regulatory Costs' to mean costs connected to or associated with (p.42):

1. a Regulatory Obligation or Requirement (as defined in section 6 of the National Gas Access Law);
2. the submission and approval of the revisions to this Access Arrangement; and
3. without limiting (a) above, WAGN's compliance with the National Gas Access (Western Australia) Legislation, its Distribution Licence, the Energy Coordination Act 1994 (WA), the Gas Standards Act 1972 (WA), the Energy Operators (Powers) Act 1979 (WA), the Environmental Protection Act 1986 (WA), and its compliance with all other applicable Laws and with the requirements of any government department, agency or authority operating in accordance with those Laws.

WAGN's Submission does not provide details of any additional regulatory obligations or requirements arising under the National Gas Access Law that did not previously exist. In any event, while a change in definition may result in some expenditure that is currently being incurred being reclassified, of itself this should not result in a net increase in WAGN's operating expenditure.

The absence or suppression of information on WAGN's forecast regulatory expenditure means that users and prospective users cannot reasonably be expected to form a view on whether the forecast complies with NGR 91(1) and NGR 74. This is critical, given WAGN is proposing that it be allowed to continue to pass through regulatory (and UAFG) expenditure above annual specified levels.

Unaccounted for gas

For AA2, the Authority rejected WAGN's proposal that UAFG be set at 2.7 per cent of gas received in 2005 and 2.8 percent for the remaining years, and instead determined that the best estimate of UAFG was 2.5 percent of gas received. The Authority reached this determination with reference to (pp.78-79):

- Table 5.1 of the NIEIR Report (March 2004) provided by WAGN to the Authority in confidence presents actual and predicted figures for total gas inflow and the total distribution losses (i.e. UAFG) for the years 1997 to 2012.
- AGN's gas licence data (Gas Distribution Licence 2, GDL2) for the 2001 to 2004 financial years.

Table A.11 below summarises the Authority's Final Decision on WAGN's proposed revisions to the (first) Access Arrangement.

Table A.11 WAGN –Access Arrangement, unaccounted for gas

	1	2	3	4	5	Total	Average
Percentage allowance (of throughput)	2.5%	2.5%	2.5%	2.5%	2.5%		
AA2 Operating cost allowance (\$M, December 2004)	2.93	3.04	3.15	3.14	3.18	15.43	3.09
AA2 Operating cost allowance (\$M, December 2009)	3.39	3.52	3.64	3.63	3.67	17.85	3.57
AA2 Actual expenditure (\$M, December 2009)	3.63	3.66	4.50	6.48	7.69	25.96	5.19
AA3 Forecast expenditure (\$M, December 2009)	4.87	10.26	10.38	10.74	11.00	47.26	10.50

Source: ERA 2005, Final Decision on the Proposed Revisions to the Access Arrangement for the South-West and Mid-West Gas Distribution Systems, Table 10, p.83.

WAGN 2010, Proposed Revisions to the Access Arrangement for the WA Gas Networks Gas Distribution Systems, Table 38, p.57.

Alinta understands that the actual percentage of UAFG for 2009 substantially exceeded the percentage allowed for AA2 as reflecting the efficient level of UAFG. Consequently, the Authority may wish to investigate whether WAGN's actual UAFG costs in AA2 (\$26.0 million) complies with NGR 91(1).

The absence or suppression of information on the forecast volume of UAFG (i.e. UAFG as a percentage of total gas delivered) for AA3 means that users and prospective users cannot reasonably be expected to form a view on whether the forecast complies with NGR 91(1) and NGR 74(2).

Alinta notes that the NIEIR report, which was commissioned by WAGN, and to which the Authority referred in determining that the best estimate of UAFG for AA2 was 2.5 percent of gas received, covered the period to 2012. Given this overlap with the period covered by AA3, and to the extent that WAGN has proposed a percentage for UAFG that differs from 2.5 per cent, it is unclear whether WAGN has provided any basis for changing the percentage UAFG.

Rate of return

Summary

WAGN is proposing that a (real pre-tax) rate of return of 11.1 per cent be used in determining a return on its projected capital base and working capital for AA3. This represents an increase of almost 64 per cent from the rate of return applied in AA2, which was 6.78 per cent.

Does WAGN's proposed real pre-tax rate of return consistent meet the requirements of the Code?

NGR 87(1) requires that the rate of return on capital is to be commensurate with prevailing conditions in the market for funds and the risks involved in providing reference services. Further, NGR 87(2) states that, in determining a rate of return on capital:

- it will be assumed that the service provider:

- meets benchmark levels of efficiency; **and**
- uses a financing structure that meets benchmark standards as to gearing and other financial parameters for a going concern and reflects in other respects best practice; **and**
- a well accepted approach that incorporates the cost of equity and debt, such as the Weighted Average Cost of Capital, is to be used; and a well accepted financial model, such as the Capital Asset Pricing Model, is to be used.

Alinta considers there is *a priori* evidence to suggest that WAGN's proposed rate of return of 11.1 per cent may not comply with NGR 87(1) and (2).

Specifically, Alinta noted that the Authority's Final Decision in December 2009 on Western Power's proposed revisions to the Access Arrangement for the SWIN was that a (real pre-tax) rate of return should be 7.98 per cent for the three year period to 2011/12.

Alinta considers that the value of the (real pre-tax) rate of return determined by the Authority for the SWIN is relevant in considering whether or not WAGN's proposed rate of return of 11.1 per cent for AA3 complies with NGR 87(1) and (2) for the following reasons.

- It is likely that the prevailing conditions in the market for funds and the risks involved in providing gas distribution reference services are similar to the prevailing conditions in the market for funds and the risks involved in providing electricity (transmission and) distribution reference services.
- The period for the Access Arrangement for the SWIN (the three years to 30 June 2012) substantially overlaps with the third Access Arrangement period for the gas distribution systems operated by WAGN (the four and a half years to 30 June 2014).
- Market evidence to 30 October 2009 was used by the Authority to determine that the (real pre-tax) rate of return for the Access Arrangement for the SWIN should be 7.98 per cent. This is very close to the date of 13 November 2009 that was used by WAGN.

Whether WAGN's proposed rate of return of 11.1 per cent complies with NGR 87(1) and (2) requires consideration of the values that were adopted by WAGN for parameters used to calculate its proposed real pre-tax rate of return, and the methodology it used to calculate its proposed real pre-tax rate of return.

An overview of the values assumed by WAGN for parameters that are used to calculate its proposed real pre-tax rate of return is provided in Table A.12 below.

Table A.12 WAGN rate of return – input parameter values

Parameter	Notation	Value adopted by WAGN
Nominal risk free rate of return (%)	R_{fn}	5.59%
Expected inflation (%)	π_e	2.47%
Real risk free rate of return (%)	R_{fr}	3.04%
Market risk premium (%)	MRP	8.00%
Equity beta	β_e	0.80
Debt margin (%)	DM	4.50%
Debt issuance costs (%)		0.125%
Debt refinancing costs (%)		0.163%
Corporate tax rate (%)	t	30.00%
Franking credit value	γ	0.20
Debt to total assets ratio (%)	D/V	60.00%
Equity to total assets ratio (%)	E/V	40.00%

Further comments on the values and methodology adopted by WAGN in deriving the proposed (real pre-tax) rate of return of 11.1 per cent for AA3 are provided below.

Nominal risk free rate

WAGN indicates that it derived its estimate of the value of the nominal risk free rate (of 5.59 per cent) by averaging, over a period of 20 trading days to 13 November 2009, the yields on Commonwealth Government securities with terms to maturity of 10 years.

As noted by WAGN, this approach appears consistent with the approach adopted by:

- the Australian Energy Regulator (AER) in determining the regulated rate of return for regulated electricity transmission networks in the National Electricity Market (NEM);
- the Authority in determining the regulated rate of return for electricity transmission and distribution network operated by Western Power in Western Australia (i.e. the South West Interconnected System - SWIS).

Alinta notes that the value of the nominal risk free rate adopted by WAGN (of 5.59 per cent) appears to be largely consistent with the value adopted by the Authority in its Final Decision in December 2009 on Western Power's proposed revisions to the Access Arrangement for the SWIN (of 5.51 per cent).

Inflation

WAGN indicates that it has derived its estimate of forecast inflation (2.47 per cent) using the method proposed by the AER, whereby it is calculated as the geometric mean of the Reserve Bank of Australia's inflation forecasts (forecast changes in the Consumer Price Index) for the next ten years.

As noted by WAGN, this approach appears consistent with that adopted by the AER in determining the regulated rate of return for regulated electricity transmission networks in the NEM. It also appears to be consistent with the approach and value (of 2.47 per cent) adopted by the Authority in its Final Decision in December 2009 on Western Power's proposed revisions to the Access Arrangement for the SWIN.

Real risk free rate of return

It would appear that WAGN has effectively derived the real risk free rate by applying the Fisher equation using the above adopted values for the nominal risk free rate and forecast inflation. This is consistent with recent regulatory practise.

Market risk premium

WAGN indicates it has adopted a value for the market risk premium (MRP) of eight per cent.

The value adopted by WAGN for the MRP is substantially higher than:

- the value of 6.5 per cent adopted by the AER in determining the regulated rate of return for regulated electricity transmission networks in the NEM; and
- the range of 5 per cent to 7 per cent adopted by the Authority in its Final Decision in December 2009 on Western Power's proposed revisions to the Access Arrangement for the SWIN.

WAGN claims that in November 2009, the MRP was 12 percent, and indicates that in its view, the MRP is unlikely to rapidly return to its long run average value, referring to academic literature that suggests that asset markets are affected for three to five years after the events that precipitate the crises. WAGN engaged independent consultants, whom it claims advised that the MRP for the period 2011 to 2015 was likely to be in the range of 8 to 10 per cent, which informed its adoption of a value for the MRP.

WAGN has not publicly disclosed the report by its consultant, Value Advisor Associates, although its AAI indicates that the MRP has been estimated (p.29):

...from an assessment of the forward view of volatility implicit in the pricing of options on the ASX 200 index, and from a review of bond yields.

Nevertheless, the absence or suppression of detailed information on the methodology and data used by Value Advisor Associates to derive a range for the MRP of 8 to 10 percent means that users and prospective users cannot reasonably be expected to be able to understand the basis and derivation of WAGN's proposed MRP.

It is not apparent that the basis for WAGN's proposed MRP of 8 per cent (i.e. the advice from its consultants, Value Advisor Associates) would ordinarily be confidential or, even if the advice was to be confidential, that public disclosure of the information could reasonably be expected to cause undue harm to WAGN's legitimate business interests.

WAGN's decision to suppress information on the basis for its proposed MRP is at odds with standard regulatory practice, particularly where businesses and/or the regulator propose a departure from well accepted values, as is the case for WAGN's proposed MRP value. For example, based on advice from KPMG, Western Power proposed adopting a value for the MRP in the range of 6 per cent to 7 per cent, which differed from the value of 6 per cent that had historically been adopted by regulators in Australia. KPMG's report, which summarises the basis for its advice (i.e. why the MRP should be in the range of 6 per cent to 7 per cent), was made publicly available as an appendix to Western Power's proposed revisions to the Access Arrangement for the SWIN.

Similarly, the four gas distribution businesses in Victoria also made publicly available consultants' reports dealing with the values and methodology adopted in deriving their proposed rate of return where these departed from well accepted values.

In the absence of information providing support for WAGN's proposed MRP, Alinta considers that the MRP estimated by the Authority in December 2009 as part of its Final Decision on Western Power's proposed revisions to the Access Arrangement for the SWIN is relevant in considering whether or not WAGN's proposed rate of return complies with NGR 87(1) and (2). Specifically, the Authority concluded that (at paragraph 874, p.236):

(t)aking into account the above evidence of realised equity premia over recent decades, market practice and information presented in submissions on the current cost of equity, the Authority considers that there is no justification for departing from the range indicated in its Draft Decision in which a reasonable range of estimates for the market risk premium is 5.0 to 7.0 per cent.

Alinta considers that WAGN's adoption of a value for the MRP of 8 per cent is unlikely to comply with NGR 87(1) or (2).

Equity beta

WAGN indicates that in estimating the expected return on equity beta when using the (Sharp-Linter) Capital Asset Pricing Model (CAPM), it adopted a value for the equity beta of 0.8.

As noted by WAGN, this value for the equity beta is consistent with that:

- the value of 0.8 adopted by the AER in determining the regulated rate of return for regulated electricity transmission networks in the NEM; and
- the upper end of the range of 0.5 to 0.8 adopted by the Authority in determining the regulated rate of return for the SWIS.

Alinta also notes that the value for the (Sharp-Linter) CAPM equity beta estimated by WAGN's consultants (NERA) (of 0.52) is consistent with the bottom of the range adopted by the Authority for the value of the equity beta.

In determining a reasonable range for the equity beta to apply in consideration of Western Power's proposed rate of return, the Authority considered that (at paragraphs 887 and 888, pp.241-242)

...some account should be taken of:

- *the high level of statistical imprecision of the beta estimates, with upper bounds of confidence intervals for portfolio estimates of between 0.85 and 1.05 for beta values estimated over the most recent period by conventional consideration of monthly returns; and*
- *evidence of higher beta values for USA electricity and gas network businesses, with values up to about 1.0.*

Having regard to these matters, but relying primarily on the best estimates of beta values for comparable businesses, the Authority determined in its Draft Decision that a reasonable range for the equity beta at a gearing level of 60 per cent debt to assets is 0.50 to 0.80.

The Authority retained this position in its Final Decision.

Alinta considers that the value adopted by the Authority in December 2009 for the equity beta as part of its Final Decision on Western Power's proposed revisions to the Access Arrangement for the SWIN is relevant in considering whether or not WAGN's proposed rate of return complies with NGR 87(1) and (2). Specifically, the analysis relied on by the Authority in reaching this conclusion related to both electricity and gas network businesses.

It is also notable that WAGN does not rely exclusively on the (Sharp-Linter) CAPM to derive its proposed rate of return of 11.1 per cent for AA3. Instead it uses four alternative 'CAPM' approaches to establishing the cost of equity in informing its proposed rate of return of 11.1 per cent. This issue is commented on in more detail under the 'Methodology' heading below.

Debt margin

WAGN indicates that, based advice from its consultant Second Opinion Financial Advisory, it has adopted a value for the debt margin (DM) of 4.50 per cent. The estimated value of the DM (of 4.50 per cent) appears to be based on corporate bonds issued by businesses with credit ratings of BBB to BBB+, using data available at 13 November 2009.

Alinta notes that in the Authority's Final Decision on Western Power's Proposed Revisions to the Access Arrangement for the SWIN, it concluded that estimates of 4.08 per cent and 4.19 per cent provided a reasonable range of the DM for BBB+ rated bonds at 30 October 2009. Given the data used by the Authority in arriving at these values is less than two weeks older than the data purportedly used by Second Opinion Financial Advisory (i.e. 30 October 2009 compared with 13 November 2009), it is unclear why the estimate of the DM calculated by Second Opinion Financial Advisory should be between 31 and 42 basis points higher than that estimated by the Authority.

The difference between Second Opinion Financial Advisory's estimate of the DM and that of the Authority in the case of the SWIN (i.e. between 31 and 42 basis points, or between around 7 and 10 per cent) is in contrast with the difference between WAGN's estimate of the nominal risk free rate and that of the Authority (i.e. 8 basis points, or around 1.5 per cent).

As the report by Second Opinion Financial Advisory has not been made publicly available by WAGN, users and prospective users cannot reasonably be expected to be able to understand the basis and derivation of WAGN's proposed DM. Specifically, WAGN's submission does not provide an indication of how the following methodological issues were dealt with by Second Opinion Financial Advisory.

- The number of trading days over which yields on corporate bonds were averaged to derive the estimate of the DM.
- Data limitations in the Bloomberg data due to a lack of liquidity in the Australian corporate bond market (discussed by the Authority at paragraphs 848 and 849, p.232 of its Final Decision).

It is not apparent that the basis for WAGN's proposed DM of 4.50 per cent (i.e. the advice from its consultants, Second Opinion Financial Advisory) would ordinarily be confidential or, even if the advice was to be confidential, that public disclosure of the information could reasonably be expected to cause undue harm to WAGN's legitimate business interests.

Debt issuance and refinancing costs

In addition to the nominal risk free rate and the debt premium, WAGN proposes to include in its estimate of the expected rate of return on debt an allowance for debt raising costs. Specifically, WAGN proposes to include:

- an allowance of 12.5 basis points (i.e. 0.125 per cent) for debt facility establishment costs; and
- an allowance of 16.3 basis points (i.e. 0.163 per cent) for recovery of 'refinancing costs'.

WAGN notes that the Authority has previously allowed the addition of 12.5 basis points in the cost of debt as an annualised allowance to recover service provider debt facility establishment costs.

WAGN supports its proposed inclusion of the further additional allowance of 16.3 basis points, claiming that (p.88):

Rating agencies now expect that businesses with significant debt portfolios, which require periodic refinancing, have the refinancing in place at least three months before existing facilities terminate. Businesses that cannot show that refinancing has been secured in advance of existing facility termination face the risk of unfavourable credit assessment and potentially higher borrowing costs. However, early refinancing, imposes its own pre-financing cost.

This statement raises several issues that are not addressed in WAGN's Submission. These are as follows.

1. It is unclear whether WAGN has provided evidence to the Authority to support its assertion with respect to the expectation of rating agencies (i.e. that refinancing arrangements are expected to be finalised at least three months before existing debt facilities terminate).
2. It is unclear whether WAGN has provided evidence to support a conclusion that the rating agencies' expectation (i.e. that refinancing arrangements be finalised at least three months before existing debt facilities terminate) did not previously exist, and therefore that (additional) refinancing costs are being incurred (or earlier).
3. It is unclear whether Second Opinion Financial Advisory's estimate of pre-financing costs reflects only the cost of commencing the refinancing process earlier (i.e. at least three months before existing debt facilities terminate) compared with previous expected practice.

That is, refinancing costs would be incurred in any event (to the extent that all or a portion of existing debt facilities terminate at a point in time). Consequently, the issue is whether there is **any change** in costs that would be incurred by a prudent service provider acting efficiently, and in accordance with accepted good industry practice.

4. It is unclear whether gearing (ratio of debt to total financing) of 60 per cent would be considered by ratings agencies as representing a 'significant' debt portfolio.
5. It is unclear that expecting refinancing arrangements for those portions of existing debt facilities that may terminate at any point to be finalised at least three months before those debt facilities terminate is not already consistent with a prudent service provider acting efficiently, and in accordance with accepted good industry practice.

Debt raising costs would generally include underwriting fees, legal fees, company credit rating fees and other costs incurred in raising debt finance, and it has been noted that:¹

*Regulatory precedent has varied from attempts at precise calculation of debt issuance costs, to adopting a benchmark allowance of 12.5 [basis points], **which is generally acknowledged as a conservatively generous allowance for these costs** [emphasis added].*

That is, debt raising costs appear to largely comprise of upfront costs that are incurred in securing the facility, and the allowance of 12.5 basis points implies these costs are ordinarily expected to be amortised over the **duration** of the facility. This also implies that the cost of refinancing those facilities will be able to be recovered over the term of the new debt facility through the allowed margin of 12.5 basis points - which independent advice has concluded is conservatively generous.

¹ Allen Consulting Group 2007, *Review of the Weighted Average Cost of Capital for the Purposes of Determining the Maximum Reserve Capacity Price*, November 2007 (Corrected September 2008), pp.31-32.

Leaving these issues aside, it is also not clear whether WAGN's proposal for an additional allowance for recovery of 'refinancing costs' incurred by businesses with 'significant' debt portfolios is consistent with finance theory. Specifically, it appears that accepting WAGN's proposal may result in the rate of return being applied in such a way as to take into account the specific risks of a business rather than, for example, accounting for such risks in projections of cash flows.

The Authority has previously commented on this matter noting that:²

...under generally accepted finance theory and commercial practice, non-systematic risks are not relevant to the calculation of a rate of return because it is assumed that they are diversifiable in a portfolio of investments. In this, it is not the diversification opportunities of the utility that are relevant, but those of investors. That is, since investors who could purchase the assets of the utility are capable of diversifying investment portfolios, the returns that these investors require and therefore the amount they are willing to pay for the regulated asset will depend only on the non-diversifiable risk of the asset

Therefore, to the extent that these additional 'refinancing costs' are incurred only by businesses with 'significant' debt portfolios, it appears this may be a diversifiable risk that should be excluded from the calculation of the rate of return.

Finally, in the discussion on WAGN's forecast of corporate operating expenditure, it was noted that WAGN's AAI indicated that (p.20):

The forecast of corporate costs reflects the costs of corporate services sourced from an external provider, and an allocation of costs incurred by WAGN in managing debt and equity portfolios, and in meeting corporate governance requirements.

This statement suggests that there is a risk that there may be some double counting of WAGN's financing and refinancing costs between the formulation of the WACC and forecast operating expenditure, which the Authority should investigate in detail in determining whether WAGN's proposal complies with the requirements of the National Gas Rules.

In summary, Alinta considers that WAGN's proposal for the expected rate of return on debt to include an additional allowance for recovery of 'refinancing costs' (of 16.3 basis points) is unlikely to comply with NGR 87(1) or (2).

Value of imputation credits

WAGN indicates it has adopted a value for the value of imputation credits (commonly referred to as 'gamma' or γ , where $\gamma = F \times \theta$) of 0.2, which is the mid point of the range given the adoption of values:

- of 0.70 for the pay out ratio, which is the fraction of imputation credits created that are distributed to shareholders (F); and

² Economic Regulation Authority 2005, *Determination of the preferred methodology for calculating the weighted average cost of capital for covered electricity networks*, August 2005 paragraph 32, p.6

- ranging between 0.00 and 0.57 for the ratio of the market value of the imputation credits distributed to their face value (θ)

WAGN notes that the AER adopted a value for γ of 0.57, which is the mid point of the range given the adoption of values of 1.0 for F and a range of between 0.57 and 0.74 for θ . In rejection a value for F of 1.0, WAGN refers to advice from its consultant NERA that shows that the fraction of imputation credits created that are distributed to shareholders averaged 0.68 during the period from 1996/97 to 2006/07.

The issues raised by WAGN (and its consultants, NERA) have been considered and responded to in detail in the Authority's Draft and Final Decision on Western Power's proposed revisions to the Access Arrangement for the SWIN, but (at paragraph 909, p.245):

...the Authority concluded that a reasonable range in the value of gamma is 0.57 to 0.81, based on a distribution rate of 1.0 in combination with a range of values of the utilisation rate of 0.57 to 0.81.

The Authority retained this position in its Final Decision, and Alinta considers the Authority's Final Decision on Western Power's proposed revisions to the Access Arrangement for the SWIN are relevant in considering whether or not WAGN's proposed rate of return complies with NGR 87(1) and (2).

Internal consistency in the value of input parameters

In adopting values for the equity beta and for γ , care needs to be taken to ensure no internal inconsistencies result. This was discussed in detail in the Authority's Final Decision on Western Power's proposed revisions to the Access Arrangement for the SWIN, and is also relevant in considering the values for the equity beta and for γ in determining a proposed rate of return for WAGN that complies with NGR 87(1) and (2).

Methodology

As noted earlier, WAGN's Submission and its AAI indicate that it uses four alternative asset pricing models to establishing a range for the cost of equity (and hence a range for the rate of return) in informing its proposed rate of return of 11.1 per cent for AA3. The pricing models used by WAGN are as follows:

1. Sharpe-Lintner CAPM;
2. Black (zero beta) CAPM;
3. Fama-French three-factor model; and
4. Fama-French (zero beta) three-factor model.

WAGN's approach to establishing the cost of equity in informing its proposed rate of return raises three issues. These are as follows:

1. In deriving a range for the cost of equity, is WAGN relying on more than one financial model?

2. If WAGN's approach in deriving an estimate for the rate of return based on a range for the cost of equity is informed by more than one financial model, is the approach consistent with the requirements of the National Gas Rules?
3. Finally, if WAGN's approach in deriving an estimate for the rate of return based on a range for the cost of equity is informed by more than one financial model, **and** the National Gas Rules permit more than one financial model to be used in deriving an estimate for the rate of return, are the models used by WAGN "...well accepted....", as required by NGR 87(2)(b).

These issues are discussed further below.

Does WAGN's approach rely on more than one financial model?

A 'financial model' may be defined as a:³

mathematical representation of key financial and operational relationships. Comprising of one or several sets of equations, it is used in analyzing how a business will react to different economic situations or events, and in estimating the outcome of financial decisions before committing any funds....

WAGN's Submission indicates that it (p.102):

...has concluded that intertemporal capital asset pricing is a well accepted financial model. However, it does not, currently lead to a single specific relationship which may be used to estimate expected rates of return on financial assets: there is, at present, no single model which explains the economic processes that generate asset prices."

It may well be reasonable to conclude, as WAGN appears to have done, that intertemporal capital asset pricing is a well accepted **financial theory**. However, given WAGN's observation that there is not currently a single specific relationship that may be used to estimate expected rates of return on financial assets, it appears incorrect to claim that intertemporal capital asset pricing represents a well accepted **financial model**.

WAGN's AAI, and the competing, rather than complementary, specifications of the Sharpe-Lintner CAPM, the Black (zero beta) CAPM, the Fama-French three-factor and Fama-French (zero beta) three-factor models, make it clear that these models cannot be considered to represent a single 'financial model'.

Consequently, the available information indicates that in deriving a range for the cost of equity, WAGN is relying on more than one financial model.

Do the National Gas Rules permit the use of more than one financial model?

NGR 87(2)(b) requires that in establishing the rate of return "...a well accepted financial model, such as the Capital Asset Pricing Model, is to be used [emphasis added].

³ <http://www.businessdictionary.com/definition/financial-model.html>

Alinta considers that the **only** interpretation of the wording of NGR 87(2)(b) is that a **single** financial model is required to be used in establishing the proposed rate of return. That is, WAGN's approach in adopting a value for the rate of return based on a range for the cost of equity that is informed by four financial models **does not** comply with the requirements of the National Gas Rules.

If the National Gas Rules had intended to allow the rate of return to be based on more than one financial model, this could have been easily accomplished and, arguably, would be apparent in the wording. For example, NGR 87(2) could have been drafted as follows:

(2) In determining a rate of return on capital:

....

(b) a well accepted approach that incorporates the cost of equity and debt, such as the Weighted Average Cost of Capital, is to be used; and a well accepted financial models, such as the Capital Asset Pricing Model, isare to be used.

A potential alternative interpretation is that the reference to 'Capital Asset Pricing Model' in NGR 87(2)(b) is not a reference to a single financial model, and that therefore the rule permits the use of financial models that are Capital Asset Pricing Models.

Fortunately, the question of how a generic reference to 'the Capital Asset Pricing Model' should be interpreted was considered in expert witness advice provided to the ESC in 2008.⁴ Specifically, the advice considered the following questions.

1. What was the commonly agreed meaning of the CAPM in the period 1997 to 2002, with reference to relevant finance texts if applicable?
2. Would a reference to the 'capital asset pricing model' be referring to a generic theory, or would it be a reference to a specific Capital Asset Pricing Model, known as the CAPM (and also known as the Sharpe CAPM)?

In response to the first question, the advice was that, for the following reasons, the commonly agreed meaning of the term 'CAPM' in the period 1997 to 2002 was the Sharpe CAPM.

- In finance textbooks spanning the period from 1993 to 2003, the term 'CAPM' is used as a generic term to refer to the Sharpe CAPM, or what was sometimes referred to as the Sharpe-Lintner CAPM. Other asset pricing models that are extensions of the Sharpe CAPM are referred to specifically (as the 'Black CAPM' or 'Merton CAPM').
- Australian surveys of business practitioners published in 1999 and 2005 indicate that a stable 72 to 73 percent of practitioners applied the Sharpe CAPM, which in these surveys is referred to as simply 'the CAPM'.

⁴ The Origins of the CAPM and its Application in Commercial Practice and Economic Regulation, Statement of Michael Lubomyr Lawriwsky, 16 May 2008, available at www.esc.vic.gov.au/public/Energy/Regulation+and+Compliance/Decisions+and+Determinations/Gas+access+arrangements+review+2008-12/Consultant+reports.htm

- Independent experts' reports prepared in the course of takeover bids are required to apply business valuation methods approved by [the Australian Securities and Investment Commission] in its Practice Note 43. In the period 1997 to 2002 (and at the current time), the most popular valuation method was that known as 'market multiples'. However, in a sizeable minority of reports the main valuation method was the Discounted Cash Flow method, and in almost all of these cases the Sharpe CAPM was applied to estimate the cost of equity capital.
- Financial analysts in investment banks are constantly required to update their valuations of businesses. In the period 1997 to 2002 (and at the current time) valuations in the utility and infrastructure sectors have invariably applied the Discounted Cash Flow methodology. These estimates are almost invariably based on the Sharpe CAPM, even though it is rarely referred to in those terms, and is instead called simply 'the CAPM'

In response to the second question, the advice was that, for the following reasons, a reference to the capital asset pricing model, without any other specification or qualification, would be read by an experienced practitioner to be a reference to the Sharpe CAPM, rather than to any other version or extension of the Sharpe CAPM, such as the Black (1972) or Merton (1973) models.

- Throughout the financial economics literature and among business practitioners the Sharpe CAPM is known as the 'standard CAPM' or simply 'the CAPM' and values of input parameters to the model are commercially available, making it easy to apply.
- Extensions to the Sharpe CAPM were undertaken by Black (1972) and Merton (1973), but would require different inputs such as the 'theta' coefficient to implement them. These inputs have not been made commercially available, and as a result these alternative CAPM models have not been widely applied in practice.
- Finance textbooks generally refer to the Sharpe CAPM as simply 'the CAPM', as do financial analysts at investment banks, regulators examining cost of capital issues (e.g. the United Kingdom Competition Commission), and independent experts in the course of valuations undertaken during takeover bids.
- Researchers testing the application of different methodologies for estimating the cost of equity employ the term 'CAPM' as a reference to the Sharpe CAPM without actually specifying that it is the Sharpe CAPM.

Consequently, the available evidence suggests that NGR 87(2)(b) does not permit the use of more than one financial model in establishing the rate of return, and therefore WAGN's approach to establishing the cost of equity used to inform its proposed rate of return does not comply with the National Gas Rules.

Are the models used by WAGN well accepted?

Even if it were assumed that NGR 87(2)(b) permitted the use of more than one financial model in determining the rate of return, each of the financial models would need to be "well accepted". Given the explicit reference to the Sharpe-Linter CAPM in NGR 87(2)(b), a decision to apply that model in establishing the rate of return would not require a party to demonstrate that it is well accepted.

In considering how a generic reference to the CAPM should be interpreted, the question of the level of acceptance of alternative specifications of financial models was also considered in the advice provided to the ESC in 2008.⁵

- It was noted that there was an absence of evidence to indicate that the Black CAPM has been broadly applied in Australia by financial analysts and business practitioners in valuation or capital budgeting.
- It commented that financial analysts and business practitioners in Australia had not applied the Merton CAPM in valuation and capital budgeting, and that a practical reason for this was that values of the 'theta factor' and resulting 'adjusted beta factor' were not commercially available.
- It noted that the Fama-French Three Factor Model has achieved a degree of support in academic circles, although there has also been scepticism due to concerns about 'data mining'. That is, the reporting of results of strong correlations between variables, without the benefit of a priori theory justifying the inclusion of those variables.

The advice went on to state that, while the Fama-French model has been applied in portfolio asset allocation in the funds management industry, there was no evidence of widespread application of the model by financial analysts and business practitioners at the individual firm level.

The evidence contained in this advice supports a conclusion that the Black CAPM and the Fama-French Three Factor models are not applied widely by financial analysts and business practitioners, and consequently cannot be considered to be well accepted.

In contrast, and as noted earlier, the advice indicated that the Sharpe-Lintner CAPM, generally simply referred to as the Sharpe CAPM or just the CAPM, is applied widely by financial analysts and business practitioners, and therefore can be considered well accepted.

- Australian surveys of business practitioners published in 1999 and 2005 indicate that a stable 72 to 73 percent of practitioners applied the Sharpe CAPM.
- Independent experts' reports prepared in the course of takeover bids are required to apply business valuation methods approved by [the Australian Securities and Investment Commission] in its Practice Note 43. In the period 1997 to 2002 (and at the current time), the most popular valuation method was that known as 'market multiples'. However, in a sizeable minority of reports the main valuation method was the Discounted Cash Flow method, and in almost all of these cases, the Sharpe CAPM was applied to estimate the cost of equity capital.
- Financial analysts in investment banks are constantly required to update their valuations of businesses. In the period 1997 to 2002 (and at the current time) valuations in the utility and infrastructure sectors have invariably applied the Discounted Cash Flow methodology. These estimates are almost invariably based on the Sharpe CAPM.

⁵ The Origins of the CAPM and its Application in Commercial Practice and Economic Regulation, Statement of Michael Lubomyr Lawriwsky, 16 May 2008, available at www.esc.vic.gov.au/public/Energy/Regulation+and+Compliance/Decisions+and+Determinations/Gas+access+arrangements+review+2008-12/Consultant+reports.htm

The available evidence suggests that three of the financial models applied by WAGN in establishing a range for the cost of equity, used in informing its proposed rate of return, are not well accepted. In this case, WAGN's approach to establishing the cost of equity in informing its proposed rate of return does not comply with the requirements of NGR 87(2)(b).

Commercial judgement

In large part, WAGN's reason for using multiple financial models to establishing the cost of equity used to inform its proposed rate of return appears to rest on its claim that no single financial model explains the processes which generate asset prices and that (p.104):

In the setting of regulated access prices, Australian regulators have not been inclined to make "commercial judgements" in establishing rates of return. Nor have they accepted the "commercial judgements" of the service providers which they regulate.

However, the Authority's recent access arrangement decisions, including in relation to Western Power's proposed revisions to the Access Arrangement for the SWIN, have seen it determine a reasonable range for the values of input parameters into the (Sharpe-Lintner) CAPM and the WACC that then determine a reasonable range within which the rate of return should lie. Alinta considers that this approach establishes reasonable boundaries for the rate of return, within which service providers are able to make commercial judgements.

WAGN's approach to setting reference tariffs

WAGN has determined the stand alone and avoidable costs associated with provision of distribution services to each of the five Tariff Classes (A1, A2, B1, B2 and B3) in order to determine whether Reference Tariffs satisfy the requirements of NGR 94.

The absence or suppression of detailed information on the basis on which WAGN has determined the stand alone and avoidable costs associated with provision of distribution services to each of the five Tariff Classes means that users and prospective users cannot reasonably be expected to form a view on whether these estimates comply with NGR 74.

WAGN's Submission also claims that NGR 94(5) contains an error, and its AAI notes that it has instead interpreted NGR 94(5) (p.43):

...as requiring that, should usage Charges have to be increased, the Charges for those Reference Services for which the demands are least elastic should be increased by the largest amount."

Alinta does not consider that NGR 94(5) contains an error. Specifically, the reference in NGR 94(5) that if, 'as a result of the operation of subrule (4), the service provider may not recover the expected revenue' clearly follows from subrule (3), where 'expected revenue' is used in relation to the expected revenue for each Tariff Class. When taken in this context, NGR 94(5) requires that if the expected revenue for a Tariff Class does not lie between stand alone cost and the avoidable cost, **then within that Tariff Class**, tariffs are to be adjusted so as to minimise distortion of the efficient patterns of consumption.

It is not apparent that NGR 94(5) (or NGR 76 and NGR 93) operates to restrict the ability of the service provider to adjust tariffs within each Tariff Class to ensure that expected total revenue across all Tariff Classes is equivalent to the relevant Total Revenue requirement.

Rather, it appears that the National Gas Rules provide significant discretion in the manner in which a service provider may recover the total revenue target from the discrete Tariff Classes. This is in contrast to the arrangements that appeared to have existed previously, with WAGN noting that it had previously allocated the Total Revenue requirement to Tariff Classes on the basis of gas volumes transported through the system in respect of each Tariff Class.

WAGN's proposed reference tariffs

Based on WAGN's proposed reference tariffs for AA3 and the average consumption in each Tariff Class, Alinta estimates that the average annualised distribution cost, annualised increases and compound average annual increase (allowing for the fact that the current distribution reference tariffs have applied since 1 January 2009) are as shown in the following tables.

Table A.13 Estimated actual and proposed distribution charges

	1/01/2010	1/01/2011	1/07/2011	1/07/2012	1/07/2013	Total increase
A1	135,233.60	141,956.53	149,130.81	156,510.89	135,233.60	17.6%
A2	60,177.31	78,244.41	82,156.63	86,354.73	90,642.38	50.6%
B1	7,239.79	8,464.22	8,891.54	9,335.43	9,796.05	35.3%
B2	6,920.34	9,837.61	10,329.49	10,849.39	11,397.32	64.7%
B3	185.09	235.88	245.32	262.46	280.84	51.7%

Source: WAGN 2010, Proposed Revisions to the Access Arrangement for the WA Gas Networks Gas Distribution Systems, Tables 1, 3 and 83.

Estimates for A1 are based on distance of 8km from transmission pipeline and a maximum contracted capacity 20 per cent higher than the average hourly consumption.

Table A.14 Estimated actual and proposed distribution charges – Percentage change

	1/01/2010	1/01/2011	1/07/2011	1/07/2012	1/07/2013	4-year compound increase
A1	Na	1.6%	5.0%	5.1%	4.9%	4.1%
A2	Na	0.0%	5.0%	5.0%	5.0%	10.8%
B1	Na	30.0%	5.0%	5.1%	5.0%	7.9%
B2	Na	16.9%	5.0%	5.0%	4.9%	13.3%
B3	Na	42.2%	5.0%	5.0%	5.1%	11.0%

Source: WAGN 2010, Proposed Revisions to the Access Arrangement for the WA Gas Networks Gas Distribution Systems, Tables 1, 3 and 83.

As shown in the above tables, WAGN's Submission is for significant increases in the (annualised) cost of distribution services. Counter to WAGN's suggestion that it has determined Reference Tariffs to avoid price shocks, Alinta considers that it is clear from Table X that the Reference Tariffs proposed by WAGN result in price shocks.

As shown in Table A.14, the same uplift in Reference Tariffs could instead be achieved through a glide-path approach, whereby the required Total Revenue requirement is achieved by adopting the same percentage increase in Reference Tariffs. Alinta notes this would require slightly higher increases to those highlighted above in order to ensure the present value of the Total Revenue requirement remained the same, but avoids the price shock created by the material 'P₀' adjustment in 1 January 2011 proposed by WAGN.

WAGN's basis for the significant restructuring of the A2 Reference Tariff is also unclear. Specifically, for the other Tariff Classes, the standing charge is between around 20 and 50 per cent of the stand alone charge determined by WAGN (refers Tables 82 and 83, pp135-136). However, in the case of the proposed A2 Tariff Class standing charge, the standing charge is more than twice as high as the stand alone charge determined by WAGN.

Finally, the manner in which WAGN has accounted for the requirements imposed by the National Gas Access (WA) (Local Provisions) Regulations 2009 is unclear. As indicated in the Authority's issues Paper, these Regulations require that when exercising a discretion in approving or making an access arrangement for a distribution pipeline, the Authority must take into account the possible impact of the proposed reference tariffs, the method of determining the tariffs and the reference tariff variation mechanisms on:

1. users to whom gas is or might be delivered by means of a small delivery service provided for in the access arrangement; and
2. small use customers to whom gas is or might be delivered by those users.

As noted by WAGN, gas tariff prices able to be charged by Alinta are regulated by government, with gas tariff caps established by the *Energy Coordination (Gas Tariffs) Regulations 2000* (the Tariff Regulations). The Tariff Regulations currently provide only for a single annual increase in the gas tariff that is linked to movements in the CPI. There is no mechanism in the Tariff Regulations that links gas tariff caps to costs, or that enables changes in costs that are outside of Alinta's control, such as distribution charges, to be passed through to customers.

Given distribution network costs are entirely outside of Alinta's control, Alinta has proposed to government that the Tariff Regulations be amended to include a mechanism that allows the gas tariff caps to be adjusted automatically for any changes in distribution charges that may be approved by the Authority or imposed by WAGN.⁶ However, at this time, the government has not indicated whether it intends to amend the Tariff Regulations as proposed by Alinta.

Consequently, the potential financial impact on Alinta of the increases being proposed by WAGN to Reference Tariffs that apply to small use customers supplied under the Tariff Regulations is significant. Most small use (residential and business) tariff customers are supplied a B1 or a B2 Reference Service, although a significant proportion of business tariff customers are supplied a B1 Reference Service. Based on information contained in WAGN's Submission, Alinta estimates that the total additional costs that will be incurred in respect of gas supplied to B1, B2 and B3 customers over AA3 will be in the order of \$65 million to \$70 million.

Ultimately, these additional costs need to be reflected in the regulated tariff caps in order to maintain the commercial viability of industry participants and to support ongoing investment in the Western Australian energy industry.

Alinta Pty Ltd
19 April 2010

⁶ The Authority does not regulate distribution prices in the Kalgoorlie-Boulder or the Albany supply areas as these areas are not covered by an access arrangement. However, it is understood that WAGN determines distribution prices for these areas using the same methodology as that used to determine prices for the Mid-West/South-West supply area. WAGN's distribution tariffs for the Kalgoorlie-Boulder and Albany Areas increased by around 12.5 per cent on 1 January 2010.