AUSTRALIAN COMPETITION TRIBUNAL

Application by Envestra Ltd (No 2) [2012] ACompT 3

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| Citation: | Application by Envestra Ltd (No 2) [2012] ACompT 3 |
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| Review from: | Australian Energy Regulator |
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| Parties: | **ENVESTRA LTD****(ABN 19 078 551 685)** |
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| File number: | ACT 7 of 2011 |
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| Tribunal: | **MANSFIELD J (PRESIDENT)****MR R DAVEY****PROFESSOR D ROUND** |
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| Date of decision: | 11 January 2012  |
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| Catchwords: | **APPLICATION UNDER S 245 NATIONAL GAS LAW** – review of full access arrangement decision of Australian Energy Regulator – whether building blocks of allowable revenue correctly determined regarding:(1) Debt risk premium – reliability of fair value curve – whether regulator tested fair value curve appropriately – whether all relevant material considered – where fair value curve estimate averaged with a single bond – whether averaging process erroneous(2) Market risk premium – variation from previously used value – whether arithmetic or geometric mean of historical excess returns is accurate – whether any reviewable error made out(3) Network management fee – whether a management fee paid under an outsourcing agreement is an efficient cost – where management fee was a percentage of revenue – where management fee was in addition to actual costs and a return on physical capital – where management fee facilitated lower total operating expenditure(4) Unaccounted for gas volumes – whether regulator erred in rejecting forecast UAG volumes – whether mains replacement plan would reduce rate of increase in UAG  |
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| Legislation: | *National Gas (South Australia) Law**National Gas (South Australia) Act 2008* (SA)*Gas Pipeline Access (South Australia) Act 1997* (SA)  |
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| Cases cited: | *Application by Envestra Limited* [2011] ACompT 13*Application by ElectraNet Pty Limited (No 3)* [2008] ACompT 3*Application by Energy Australia* [2009] ACompT 8 *Australian Competition and Consumer Commission v Australian Competition Tribunal* (2006) 152 FCR 33*Application by ActewAGL Distribution* [2010] ACompT 4*Ibrahim v Minister for Immigration and Citizenship* [2009] FCA 1328 *East Australian Pipeline Pty Ltd v Australian Competition and Consumer Commission* (2007) 233 CLR 229*House v The King* (1936) 55 CLR 499*Application by Energy Australia and Others* [2009] ACompT 8*Application by Jemena Gas Works (NSW) Ltd (No 5)* [2011] ACompT 10*Envestra Limited v Essential Services Commission of South Australia (No 2)* [2007] SADC 90  |
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| Date of hearing: | 21, 22, 23, 24 and 25 November 2011 |
|  |  |
| Place: | Adelaide (via video link with Melbourne and Brisbane) |
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| Category: | Catchwords |
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| Number of paragraphs: | 359 |
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| Counsel for Envestra Ltd: | P Bick QC and D Farrands |
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| Solicitor for Envestra Ltd: | Johnson Winter & Slattery |
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| Counsel for the Australian Energy Regulator: | S Lloyd SC, S Balafoutis and V Priskich  |
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| Solicitor for the Australian Energy Regulator: | Corrs Chambers Westgarth |

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| IN THE AUSTRALIAN COMPETITION TRIBuNAL |  |
|  | ACT 7 OF 2011 |

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| RE: | APPLICATION UNDER SECTION 245 OF THE NATIONAL GAS LAW FOR A REVIEW OF A FULL ACCESS ARRANGEMENT DECISION MADE BY THE AUSTRALIAN ENERGY REGULATOR PURSUANT TO RULE 64 OF THE NATIONAL GAS RULES |
| BY: | ENVESTRA LTD(ABN 19 078 551 685)Applicant |

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| tribunal: | mansfield j (president)mr r daveyprofessor d round |
| DATE OF ORDER: | 11 January 2012  |
| WHERE MADE: | ADELAIDE (VIA VIDEO LINK WITH MELBOURNE AND BRISBANE) |

THE TRIBUNAL ORDERS:

1. That the decision of the Australian Energy Regulator entitled *Decision Access Arrangement Envestra Ltd’s South Australian gas distribution network 1 July 2011 – 30 June 2016* and dated July 2011 and reflecting the reasons for decision in the *Final Decision Envestra Ltd Access arrangement proposal for the SA Gas network 1 July 2011 – 30 June 2016* be varied by:

(a) replacing the figure 3.81% for the debt risk premium therein for the purposes of calculating the cost of debt with the figure 4.67%, and

(b) including therein, in place of the determination that Envestra Limited is not entitled to recover any amount for network management fee (being the fee of 3% of revenue earned by Envestra Ltd from the said network payable by Envestra Limited to APA Group Limited from 2 July 2007 under the terms of the Operation and Management Agreement between them) a determination that Envestra Limited is entitled to recover the said network management fee.

2. That in relation to:

(a) the market risk premium for the purposes of calculating the cost of equity, and

(b) the unaccounted for gas allowance on the operating expenditure incurred by Envestra Limited

the said decision be affirmed.

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| IN australian competition tribunal |  |
|  | act 7 of 2011 |

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| RE: | APPLICATION UNDER SECTION 245 OF THE NATIONAL GAS LAW FOR A REVIEW OF A FULL ACCESS ARRANGEMENT DECISION MADE BY THE AUSTRALIAN ENERGY REGULATOR PURSUANT TO RULE 64 OF THE NATIONAL GAS RULES |
| BY: | ENVESTRA LTD(ABN 19 078 551 685)Applicant |

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| tribunal: | mansfield j (president)mr r daveyprofessor d round |
| DATE: | 11 JANUARY 2012 |
| PLACE: | ADELAIDE (VIA VIDEO LINK WITH MELBOURNE AND BRISBANE) |

**REASONS FOR DECISION**

# background

1. Envestra Limited (Envestra) owns approximately 21,000 kilometres of natural gas distribution networks, serving over one million consumers in South Australia, Victoria, Queensland, New South Wales and the Northern Territory. Envestra’s South Australian natural gas distribution network, to which this application for review relates, comprises 7,645 kilometres of pipeline delivering gas to approximately 396,000 customers in Adelaide, Mt Gambier, Whyalla, Port Pirie, the Barossa Valley, Murray Bridge and Berri.
2. On 8 July 2011, Envestra made an application under section 245 of the *National Gas (South Australia) Law* (NGL) for leave to apply to the Australian Competition Tribunal (Tribunal) for review (Application for Review) of an applicable access arrangement decision made by the Australian Energy Regulator (AER) entitled *Decision Access Arrangement Envestra Ltd’s South Australian gas distribution network 8 July 2011 – 30 June 2016* and dated July 2011 (Access Arrangement Decision), being a reviewable regulatory decision. That decision was in respect of its South Australian gas distribution network.
3. The reasons for the Access Arrangement Decision were set out in the access arrangement final decision entitled *Final decision Envestra Ltd Access arrangement proposal for the SA gas network 1 July 2011 – 30 June 2016* (Final Decision).
4. Envestra applied for leave to apply to the Tribunal for a review of the Final Decision to the extent the Final Decision is considered to be the reviewable regulatory decision. On 12 October 2011, in *Application by Envestra Limited* [2011] ACompT 13, the Tribunal granted Envestra leave to apply to the Tribunal for a review of the Access Arrangement Decision (read together with the reasons for the Access Arrangement Decision contained in the Final Decision) in respect of the following matters:
5. the decision by the AER, in determining the rate of return pursuant to Rule 87 of the National Gas Rules, to apply a value for the debt risk premium (DRP) of 3.81%;
6. the decision by the AER, in determining the rate of return pursuant to Rule 87 of the National Gas Rules, to apply a value for the market risk premium (MRP) of 6%;
7. the decision by the AER not to approve Envestra’s proposed network management fee (NMF) included in Envestra’s revised operating expenditure forecasts; and
8. the decision by the AER to reject Envestra’s proposed unaccounted for gas (UAG) volumes and to require a reduction in the UAG volumes forecast by Envestra.

# statutory scheme

1. Section 7 of the *National Gas (South Australia) Act 2008* (SA) (Act) applies the NGL, set out in the Schedule to the Act, as a law of South Australia.
2. Section 26 of the NGL gives the National Gas Rules (NGR) the force of law in South Australia.
3. Envestra is a “service provider” within the meaning of section 8 of the NGL, in that it owns, controls or operates a scheme pipeline. The NGL defines “scheme pipeline” to include a “covered pipeline”. Envestra’s SA gas distribution network is a “covered pipeline” within the meaning of the NGL.
4. The AER is responsible for the economic regulation of pipeline services provided by service providers, including Envestra, by means of or in connection with a scheme pipeline. In particular, under Part 9 of the NGR, the AER is responsible for determining the total revenue for Envestra for each regulatory year of an access arrangement period for the provision by Envestra of reference services in South Australia.
5. Under Rule 52 of the NGR, Envestra was required to submit and, on 1 October 2010, did submit an access arrangement revision proposal for the access arrangement period from 1 July 2011 to 30 June 2016 to the AER for consideration in accordance with the NGR (Envestra’s Access Arrangement Proposal).
6. Under Rule 59 of the NGR, the AER was required to make, and did make, an access arrangement draft decision in relation to Envestra’s Access Arrangement Proposal entitled *Draft Decision Envestra Ltd Access arrangement proposal for the SA gas network 1 July 2011 – 30 June 2016* dated February 2011 (Draft Decision).
7. Rule 60 of the NGR entitled Envestra to submit additions or other amendments to Envestra’s Access Arrangement Proposal to address the matters raised in the Draft Decision. The amendments which Envestra was permitted to make were limited to those amendments necessary to address matters raised by the AER in the Draft Decision, unless the AER approved further amendments: NGR r 60(2).
8. On 24 March 2011, Envestra submitted a revised access arrangement proposal to the AER (Envestra’s Revised Access Arrangement Proposal).
9. Pursuant to Rule 62 of the NGR, the AER was required to make an access arrangement final decision in relation to Envestra’s Revised Access Arrangement Proposal. Rule 62 of the NGR provides that an access arrangement final decision is a decision to approve, or refuse to approve an access arrangement proposal.
10. On 17 June 2011, the AER published the Final Decision. In the Final Decision, the AER refused to approve Envestra’s Revised Access Arrangement Proposal and indicated it would publish its own revised access arrangement and access arrangement information.
11. Pursuant to Rule 64(4) of the NGR the AER decided to approve the access arrangement (including the access arrangement information) drafted by it for Envestra’s SA gas distribution network. That decision is set out in the Access Arrangement Decision.
12. Under section 245 of the NGL, an affected or interested person or body, with the leave of the Tribunal, may apply to the Tribunal for a review of a reviewable regulatory decision.
13. An “affected or interested person or body” (as defined in section 244 of the NGL) includes a service provider to whom a reviewable regulatory decision applies. Envestra is the service provider to whom the reviewable regulatory decision, namely, the Access Arrangement Decision, applies and is therefore an “affected or interested person or body” within the meaning of section 244.
14. The NGL provides that a reviewable regulatory decision includes an applicable access arrangement decision, subject to the exception that a full access arrangement decision that does not approve a full access arrangement is not a reviewable regulatory decision: NGL s 244.
15. An applicable access arrangement decision includes a full access arrangement decision. A full access arrangement decision includes a decision of the AER under the NGR that:
16. approves or does not approve a full access arrangement proposal or revisions to an applicable access arrangement submitted to the AER under section 132 of the NGL or the NGR; or
17. makes a full access arrangement in place of a full access arrangement proposal which the AER does not approve in that decision.
18. The Access Arrangement Decision is a reviewable regulatory decision within the meaning of section 244 of the NGL because the Access Arrangement Decision is a full access arrangement decision in which the AER made a full access arrangement in place of a full access arrangement proposal which the AER did not approve in that decision.

# GROUNDS OF REVIEW

1. Subsection 246(1) of the NGL provides that applications for review under section 245(1) may only be made on the following grounds:
2. the original decision maker made an error of fact in the decision maker’s findings of facts, and that error of fact was material to the making of the decision;
3. the original decision maker made more than one error of fact in the decision maker’s findings of facts, and those errors of fact, in combination, were material to the making of the decision;
4. the exercise of the original decision maker’s discretion was incorrect, having regard to all the circumstances;
5. the original decision maker’s decision was unreasonable, having regard to all the circumstances.
6. Senior counsel for the AER made extensive submissions about the circumstances in which one or more of the grounds of review may be made out. The onus of making out a ground of review rests upon Envestra.
7. As the Tribunal has previously recognised, the Tribunal’s task is not simply to substitute for a decision of the AER a decision which the Tribunal may prefer to make on the material before the AER, that is, on the "review related material" as determined in accordance with s 261: see *Application by ElectraNet Pty Limited (No 3)* [2008] ACompT 3 (*ElectraNet (No 3)*) at [64] and [69]; *Application by Energy Australia* [2009] ACompT 8 (*Energy Australia*) at [70]. So much follows from the terms of s 246(2) as explained in *Australian Competition and Consumer Commission v Australian Competition Tribunal* (2006) 152 FCR 33 (*ACCC v ACT*) per French, Goldberg and Finkelstein JJ at [176], a decision concerning the grounds of review under s 39(2)(a) of the Gas Pipelines Access Law established under the *Gas Pipeline Access (South Australia) Act 1997* (SA). Those grounds of review are not materially different from those expressed in s 246(1) of the NGL.
8. The Tribunal in this matter remains mindful of its role as explained in *ACCC v ACT*. It is also mindful that Envestra is not permitted to raise any matter not raised before the AER: s 258 of the NGL.
9. The lengthy and helpful oral and written submissions of the AER on the scope of the available grounds of review, at least initially, were made on a general level. The Tribunal’s observations that follow in relation to those submissions must also be seen in that context. They are made to acknowledge these submissions and to add some comments of the Tribunal. However, they must not be taken as the Tribunal’s concluded views on matters concerning the scope or application of s 246(1) remote from the particular circumstances of this application. Each application for review must be considered on its own merits. Ultimately, it is for the Tribunal to identify any particular matter in respect of which Envestra has asserted reviewable error and the Tribunal must then be persuaded that the error is one which is reviewable in terms of s 246(1). That is the Tribunal’s task in this matter, is as it is in like matters where the grounds of review are so confined.
10. However, as indicated, before embarking on that task, the Tribunal makes the following comments on the AER’s more general submissions.

### Error of fact

1. It is clear that findings of fact may concern the existence of a present or historical fact, being an event or circumstance. There is also some support for the proposition that an opinion about the existence of a future fact or circumstance, as well as opinions formed by the AER based upon approaches to the assessment of facts or methodologies which it has chosen to apply may also constitute findings of fact: *ACCC v* ACT at [171]; *ElectraNet No* 3 at [67].
2. The inclusion of opinions about the existence of future facts within the meaning of “fact” is the subject of some controversy between the parties. In *Application by ActewAGL Distribution* [2010] ACompT 4 (*ActewAGL*) the Tribunal said that the inclusion of opinions in the meaning of “fact” was a radical meaning to be given to the word and that it was generally accepted “that an opinion is an inference which is drawn from facts”: *ActewAGL* at [33].
3. The nature of the AER’s task under the NGL and NGR necessarily involves an assessment as to likely future occurrences and states of affairs, formed on the basis of expert opinion and evidence of current and historic facts. The phrase “finding of fact” should not be given a meaning that would render its applicability to the AER’s functions minor and largely superficial. That is, “the term ‘findings of fact’ should be interpreted broadly enough to be meaningful in relation to the function of the” AER under review: *ACCC v ACT* at [171].
4. It is clear, however, that the term “findings of fact” does not include the making of choices between permitted methodologies. Nor will a finding of fact be in error because it was based on the use of one methodology rather than another. Further, the weight to be given to competing regulatory considerations is not a finding of fact: *ACCC v ACT* at [171].
5. Even if an expression of opinion could be a finding of fact under sections 246(1)(a) and (b), this ground of review is established only if the expression of opinion was erroneous, as revealed only by the "review related material".
6. In order to make out this ground for review, the applicant must not only establish an error of fact. It must also establish that the error (or the errors in combination) was (or were) ‘material’. This requirement was not present in *ACCC v ACT*. In this context, an error of fact is ‘material’ if the relevant decision of the AER depends, or is based, on the error: *Ibrahim v Minister for Immigration and Citizenship* [2009] FCA 1328 at [8].

### Incorrect exercise of discretion

1. In *ActewAGL* at [34], the Tribunal considered the meaning of a “discretionary decision”. It stated:

It is most commonly applied to decision making which involves essentially a weighing up of relevant facts. First the decision maker finds the facts. Then the decision maker undertakes a weighing up process which involves taking into account considerations that are found to be relevant, assessing the weight to be given to those considerations so assessed and determining what, as a result of that process, is the right result.

1. This ground for review is not available merely because the Tribunal would exercise the discretion in a different way. In *ElectraNet (No 3)*, the Tribunal stated at [72]:

the concept of incorrectness extends beyond “Wednesbury unreasonableness”, but on the other hand does not extend simply to where the Tribunal would have exercised the discretion in a different way.

1. In *East Australian Pipeline Pty Ltd v Australian Competition and Consumer Commission* (2007) 233 CLR 229 at [79] Gummow and Hayne JJ, (Gleeson CJ, Heydon and Crennan JJ agreeing at [13]) compared this ground of review with that of unreasonableness, and their Honours said that the two separate grounds could be understood by the explanation in *House v The King* (1936) 55 CLR 499 at 505.
2. The Full Court of the Federal Court in *ACCC v ACT* at [174] stated that the discretion of the regulator may be incorrectly exercised in the following ways:
3. an exercise of discretion based upon a misconstruction or misapplication of the relevant principles or methodologies or factors required to be considered by the statutory scheme;
4. an exercise of discretion affected by a failure to have regard to a mandatory relevant factor as prescribed by the statutory scheme; and
5. an exercise of discretion affected by the regulator taking into account a factor extraneous to those relevant by reason of the statutory scheme.
6. In *ElectraNet (No 3)* at [66], the Tribunal applied this statement albeit in the context of the *National Electricity Law* and Rules.
7. The Full Federal Court in *ACCC v ACT* noted at [175] that each of these matters is a traditional ground of judicial review. Where such a ground is made out in the context of an administrative review (as opposed to judicial review), it is appropriate to describe the exercise of the discretion based upon such an error as ‘incorrect’.
8. The AER must also have regard to the matters required by the NGL and NGR to be included in an access arrangement: see, for example, NGR r 48. The AER must have regard to the service provider’s “access arrangement proposal”, being the terms and conditions about access to pipeline services proposed by the service provider.
9. The AER must have regard to its own reasons for refusing to approve the service provider’s proposal. Rule 64(2) must be read in conjunction with obligations on the AER imposed by the NGL, such as the obligation to exercise its economic regulatory functions in a manner that will or is likely to contribute to the achievement of the national gas objective (NGO) and the obligation to take into account the revenue and pricing principles when performing certain economic regulatory functions: NGL s 28.
10. The AER submitted to the Tribunal that the various obligations imposed upon service providers when making access arrangement proposals and/or when generating and providing access arrangement information do not fall upon the AER as binding constraints upon its power. Applying this reasoning, the requirements expressed in Rules 74, 87 and 91 of the NGRdo not bind the AER when it is proposing or making revisions to an access arrangement under rule 64(2).
11. Rule 64(2) of the NGR sets out the matters that the AER must have regard to in making its proposal for an access arrangement if it has refused an access arrangement proposal. These are:
12. the matters that the NGL and NGR require an access arrangement to include;
13. the service provider’s access arrangement proposal; and
14. the AER’s reasons for refusing to approve that proposal.
15. The AER need only have regard to the requirements of rules 74, 84 and 91 of the NGR, and others like them, to the extent that such consideration is necessary to have regard to the service provider’s access arrangement proposal and the AER’s reasons for refusing to approve it.
16. If the AER exercised its discretion on correct principles and if the particular exercise of the discretion was open to it within the framework of the legislation, the Tribunal is not empowered to set aside that decision simply because it thinks another decision would have been preferable: *ACCC v ACT* at [175].
17. A decision which is not determined by reference to the applicable criteria in the NGL or the NGR is likely to have involved an incorrect exercise of discretion: *Energy Australia*  at [68]. An incorrect exercise of discretion may occur where the exercise of the discretion is based upon a misconstruction or misapplication of relevant principles, methodologies or factors required to be considered by the NGL or NGR: *ElectraNet* *(No 3)* at [66]; see also *ACCC v ACT* at [174].
18. Further, a decision affected by failure to have regard to a mandatory relevant factor prescribed by the NGL or the NGR, or affected by the regulator taking into account factors which are extraneous to those relevant under the NGL or NGR, may well involve an incorrect exercise of discretion: *ElectraNet* *(No 3)* at [66]; see also *ACCC v ACT* at [174].
19. If the reasons for a decision contain a logical error or an unexplained discretionary choice made in reaching a conclusion, then the decision is likely to have involved an incorrect exercise of discretion, as well as also being unreasonable: *Energy Australia* at [67]. If factual error is made out and the exercise of discretion is based upon it, the exercise of discretion is incorrect *ElectraNet (No 3)* at [66]; see also *ACCC v ACT* at [175].

### Unreasonableness

1. The ground for review in subsection 246(1)(d) of the NGL requires that the decision under review is itself unreasonable. Guidance as to the ambit of this ground was provided by the Tribunal in *ElectraNet (No 3)*, where it said at [74]:

The unreasonableness must be of the AER’s decision itself, not of a step in its factual findings or its reasoning. It is important to recognise that it is the AER’s decision which must be unreasonable having regard to all the circumstances before that ground is enlivened.

1. The concept of unreasonableness goes beyond *Wednesbury* unreasonableness but is still limited. There must be logical error or irrationality in the decision. To make out this ground, the AER’s decision must not be justified by reference to its stated reasons. In *ACCC v ACT,* the Full Court stated at [178]:

The concept of ‘unreasonableness’ imports want of reason. That is to say the particular discretion exercised by the [regulator] is not justified by reference to its stated reasons. There may be an error in logic or some discontinuity or non sequitur in the reasoning. It may be that the decision has an element of arbitrariness about it because there is an absence of reason to explain the discretionary choices made by the [regulator] in arriving at its conclusion.

1. The Tribunal repeated and applied this statement in *ElectraNet (No 3)* at [65] and in *Energy Australia* at [66]-[67].
2. In *ActewAGL*, the Tribunal said that a decision will be unreasonable if it is arbitrary or capricious. It said at [35]:

It is, we think, neither possible nor necessary to give an exhaustive definition of what is an unreasonable decision. At one extreme a decision that is arbitrary or capricious will plainly be unreasonable. At the other extreme, it will not be sufficient merely to reach a different decision to the first instance decision maker; in many areas reasonable persons can perfectly reasonably come to opposite conclusions.

1. A decision which is not determined by reference to the applicable criteria in the NGL or the NGR is likely to be unreasonable in all the circumstances: *Energy Australia* at [68]. A failure to take into account a matter which is required to be considered or consideration of a matter which is irrelevant may also give rise to a decision which is unreasonable: *ActewAGL* at [35].
2. The unreasonableness ground in subsection 246(1)(d) and the incorrect exercise of discretion ground in subsection 246(1)(c) overlap to a certain extent: *Energy Australia* at [67] and [68]. For example, if the reasons for a decision contain logical error or an unexplained discretionary choice made in reaching a conclusion, then the decision may well be unreasonable: *Energy Australia* at [67]; see also *ACCC v ACT* at [178].

## If a Ground of Review is Established

1. If the Tribunal is satisfied that a ground of review is established, the first matter that the Tribunal may consider is whether to allow new information or material to be submitted: NGL s 261(3). The Tribunal may allow new information to be submitted if the new information would assist the Tribunal and was not unreasonably withheld from the AER when it was making its decision.
2. Once the Tribunal has had an opportunity to consider any new material and the parties’ submissions with respect to that material, the Tribunal must make a determination. Section 259(2) of the NGL provides the Tribunal with four options – it may:
3. affirm the AER’s decision;
4. set aside the AER’s decision;
5. vary the AER’s decision; or
6. remit the matter to the AER to reconsider the matter in accordance with any direction or recommendation the Tribunal considers appropriate.

# Debt Risk Premium

1. The first issue in this matter is the appropriate rate of return on debt to be used in determining Envestra’s allowable revenue. Rule 72(1)(g) of the NGR provides that one of the items of information that must be provided to the AER by the service provider is the proposed rate of return, the assumptions on which the rate of return is calculated and a demonstration of how it is calculated.
2. The rate of return on capital is to be commensurate with the prevailing conditions in the market for funds and the risks involved in providing reference services: NGR r 87(1). In determining the rate of return on capital it is to be assumed that the service provider meets benchmark levels of efficiency and uses a financial structure that meets benchmark standards as to gearing and other financial parameters for a going concern and reflects in other respects commercial best practice: NGR r 87(2)(a). Further, a well-accepted approach that incorporates the cost of equity and debt, such as the Weighted Average Cost of Capital (WACC) and a well-accepted financial model, such as the Capital Asset Pricing Model (CAPM), are to be used: NGR r 87(2)(b).
3. There was no disagreement between the parties as to the appropriate formula or model to be used in calculating the return on capital. Both Envestra and the AER accepted that the appropriate model for determining the return on capital was a nominal vanilla WACC, a weighted average of the pre-tax cost of debt and the post-tax cost of equity, calculated as follows:

where:

 is the value of debt as a proportion of the value of equity and debt;

 is the nominal risk-free rate;

 *DRP is* the debt risk premium;

 is the equity beta; and

 *MRP* is the market risk premium.

1. The DRP is the margin above the nominal risk free rate that a debt holder would require for it to invest in a benchmark efficient service provider. This is determined by subtracting the yield on ten year Commonwealth Government bonds (the nominal risk free rate) from the yield payable on a reference bond. It is accepted by both parties that the relevant reference bond is a BBB+ bond with a ten year maturity, issued by an Australian company.
2. Financial services provider Bloomberg publishes what is known as a fair value curve. A fair value curve plots estimates of bond yields against terms to maturity for a given credit rating. Relevantly, Bloomberg publishes a BBB fair value curve (taking into account BBB+, BBB and BBB- rated corporate bonds) for periods up to seven years (the Bloomberg curve). The Bloomberg curve is derived using proprietary methodology from a sample of Australian corporate bonds. As at 16 March 2011, the sample comprised 18 bonds with maturities of less than six years.
3. As the benchmark bond in this context is a ten year bond, the Bloomberg curve must be extrapolated from seven years to ten. This was done by incorporating the change in spread between Bloomberg’s AAA rated estimates from seven to ten years into the Bloomberg BBB fair value curve, averaged over the 20 trading days ending 22 June 2010. The result of this methodology, uncontroversial between the parties, is referred to by the Tribunal as the extrapolated Bloomberg value (EBV).
4. Envestra proposed placing sole reliance on the EBV. That is, Envestra submitted that the point estimate of the Bloomberg curve extrapolated to ten years should be the sole determinant of the DRP.
5. The AER did not agree, however, and stated that only a 50% weighing should be given to the EBV , with the other 50% weight being placed on the yield observed on a single BBB rated bond issued by APA Group with a 10 year term maturing in July 2020 (the APA bond).
6. In simple terms, Envestra submits that the DRP should be determined solely by reference to the EBV of 18 bonds with maturities up to six years, whereas the AER submits that it should be determined by reference to an average of a single 10-year bond selected by it and the EBV. The AER's averaging resulted in it adopting a value for the DRP of 3.81%. Envestra’s proposed sole reliance upon the EBV, resulted in a value for the DRP of 4.67%.

## Rejection of the sole use of the extrapolated Bloomberg value (EBV)

1. In its original access arrangement proposal, Envestra proposed that the DRP should be calculated by taking an average of the value arrived at from the extrapolated Bloomberg curve and a value arrived at from a similar curve published by the Commonwealth Bank of Australia (the CBASpectrum Curve). The CBA Spectrum Curve was last published on or about 8 September 2010. Envestra relied on an expert report by Synergies Economic Consulting Pty Ltd to support this proposal.
2. In the Draft Decision, the AER rejected this approach and instead based the estimate of the DRP on an average of the EBV and the APA bond. At the time of this decision, the AER was able to observe the yields for three long-dated bonds (of up to 11 years maturity), including the APA bond. The AER believed that this sample provided a basis for rejecting the use of the EBV alone and supported the use of an average of the EBV and the single APA bond.
3. In response to the Draft Decision, Envestra submitted its Revised Access Arrangement Proposal, in which it proposed an estimate of the DRP based solely on the EBV. In support of this proposal Envestra relied on an expert report prepared by Australia Ratings.
4. After publishing the Draft Decision, the AER was able to observe yields on four additional long-dated bonds, bringing the number of bonds additional to those contained in the extrapolated Bloomberg curve to seven bonds. The AER believed that these yields supported placing greater weight on the APA bond at the expense of the EBV and wrote to Envestra on 23 May 2011 proposing to estimate the DRP on the basis of placing a 70% weight on the APA bond and a 30% weight on the EBV estimate (the May 23 letter).
5. Envestra responded to the May 23 letter by reiterating its submissions in support of placing sole reliance on the EBV and urging the AER not to place any greater weight on the APA bond.
6. In responding to the AER’s May 23 letter, Envestra relied on an expert report prepared by Competition Economists Group (CEG). The report, authored by Dr T Hird, criticised the AER’s approach to determining the reliability of the Bloomberg curve. In particular, the report suggested that the AER’s analysis was flawed in that it excluded several long-dated bonds that were relevant to establishing the reliability of the EBV. The yields on these bonds, in CEG’s analysis, supported sole reliance on the EBV. The Final Decision rejected sole reliance on the EBV and instead estimated the DRP on the basis of a simple average of the EBV and the APA bond.
7. It was accepted by both Envestra and the AER, and is clearly correct, that it is appropriate for the AER to investigate the reliability and accuracy of any index that is advanced as the preferred method for determining the DRP. Indeed, such an investigation should be undertaken with respect to any method put forward as the basis for calculating a critical value in determining the WACC or any other component of regulated revenue.
8. The issue in this matter, then, is not whether the AER erred in not accepting sole reliance on the EBV, but whether it strayed into reviewable error in the process of the review it undertook or the conclusions it came to.

### The Bloomberg curve’s historic performance

1. In the Final Decision, the AER placed significant emphasis on the behaviour of the Bloomberg curve since the onset of the global financial crisis (GFC). The AER claimed that this behaviour was “somewhat counterintuitive” because the current yields implied by the Bloomberg curve were higher at the time of the Final Decision than during much of the GFC, suggesting an increased perception of risk. The AER viewed this as counterintuitive on the basis of “substantial evidence” that indicated that debt market conditions had improved significantly since the GFC.
2. In submissions before the Tribunal, Envestra responded by pointing out that this analysis assumes that risk was appropriately priced and estimated prior to and during the GFC. Further, as Dr Hird pointed out in CEG’s response to the May 23 letter, the world’s debt markets were significantly restricted following September 2008, leading to a paucity of information on corporate bond yields in the year or so following. Once trading information again became available towards the end of 2009 it was not surprising to see bond yields increase. Dr Hird argued that the Bloomberg fair value estimates have been relatively stable from that time until the date of his report.
3. It is also submitted for Envestra that the evidence before the AER illustrated that investors’ views about the appropriate level of compensation for exposure to risk have changed and the financial regulatory environment has also changed. In addition, Envestra submits that it is notorious that one of the causes of the GFC was a failure to correctly evaluate risk.
4. The AER submitted that its conclusion that the Bloomberg curve’s performance was counterintuitive was not material to its decision to reject sole reliance being placed on the EBV, as its decision was based primarily on the basis of a comparison of the Bloomberg curve with long dated bonds. In addition, the AER maintained that there was significant evidence that market risk was at its peak during the GFC and has subsided since.
5. It is clear from the Final Decision that the AER did not rely on its conclusion about counterintuitive behaviour in deciding to reject the sole use of the EBV. For this reason, it does not constitute a material error of fact and Envestra has not made out a ground of review on that respect. It does appear, however, as noted in [78] below, that the AER paid insufficient regard to the reasons behind the Bloomberg curve’s performance during the GFC. Little regard was had to the question of whether this performance was likely to provide an accurate assessment of the Bloomberg curve’s current reliability: see *Application by Jemena Gas Works (NSW) Ltd (No 5)* [2011] ACompT 10 (*Jemena No 5)* at [66].
6. If the Bloomberg curve were to display poor performance during market conditions that can be regarded as ‘normal’ or likely to be repeated, then there will be strong evidence for questioning its usefulness. The reasons for poor performance are crucial to an understanding of whether such performance should be taken as indicative of the Bloomberg curve’s general accuracy. The AER did not, in either the Final Decision or the Draft Decision undertake the analysis necessary to form a proper understanding of this question. It intuitively considered that, for the purposes of its Access Arrangement Decision, the Bloomberg curve was not a directly reliable source of information. It is necessary to consider carefully where the AER went from that step.
7. At this point, it is sufficient for the Tribunal to express the view that the performance of the Bloomberg curve during and after the GFC alone would not necessarily have warranted its rejection. The unusual circumstances and market conditions, in particular the restriction of the debt market, that prevailed during the GFC are unlikely to persist for extended periods and might not therefore be viewed as indicative of the likely market conditions that would prevail during the majority of the 10-year reference period. At most, the so-called “counterintuitive” performance would warrant further investigation of the reliability of the Bloomberg curve.

### Comparison of the Bloomberg curve with long-dated bonds

1. The AER placed great emphasis on the fact that, in determining the implied fair value yield at 10 years using Bloomberg data, an extrapolated curve was being used. That is, the information was not published by Bloomberg as part of the BBB fair value curve. The method of extrapolation was not, however, in contention between the parties.
2. The AER’s submissions suggest that, because the EBV is an extrapolation at the ten year point, greater scrutiny should be applied to its reliability. This is no doubt correct. Envestra agreed with the proposition that it is appropriate for the AER to investigate the reliability of any measure it is using to determine the DRP.
3. The AER’s analysis of the reliability of the Bloomberg curve in the Final Decision rested on a comparison of an estimated yield derived from the Bloomberg curve with a sample of long-dated bonds. In particular, the AER relied on the following figure which depicts an extrapolation from 31 May 2018 to 31 May 2021:

Figure : Australian corporate bonds with maturities greater than five years and credit ratings from BBB
to A- (Final Decision: Figure A.6)

1. What becomes immediately obvious on viewing the AER’s preferred depiction of the data is that a significant proportion of the plotted bonds lie beneath the Bloomberg curve and, in particular, below its extrapolated portion. At first blush this may suggest that the Bloomberg curve, at least the extrapolated portion, overstates true yields.
2. The problem with this view, however, is that it ignores the generally held proposition that yield curves slope upwards, a view accepted by both parties. For the Bloomberg curve to accurately reflect the yields displayed by the sample of long-dated bonds preferred by the AER it would be required to slope downward from the point at which extrapolation commences. The required change in direction becomes even more apparent when Envestra’s preferred figure is inspected, but ignoring the additional bond sample:

Figure : Bloomberg BBB Fair Value Curve extrapolated to 15 years and reported yields (CEG’s response to the May 23 letter.)

1. The additional bond sample comprises the three bonds labelled “SUNCORP”, the bond labelled “DBCT” at the far right of the figure, the two bonds labelled “VERO”, the two bonds labelled “BKQLD” and the bond labelled “AMP”. These bonds were not included in the AER’s preferred figure, being Figure 1 above.
2. Rather than casting doubt on the reliability of the extrapolation, the AER’s analysis, if accepted, would cast doubt on the overall reliability of the Bloomberg curve at all, as a reflection of Australian corporate bond yields. Perhaps a more plausible explanation for the apparent incongruity between the Bloomberg curve and the reported yields on the AER’s sample of long-dated bonds is that the sample of bonds used by the AER is not complete or representative. The AER’s view that the Bloomberg curve overstated relevant bond yields may have been one that was open to it had the only available evidence been the sample it selected. This was not, however, the case,.
3. As observed in [70] above in responding to the May 23 letter, Envestra commissioned an expert report from CEG which identified additional bonds that, in CEG's analysis, should be included in the comparison sample. The AER claimed that it did not have sufficient time to fully analyse CEG’s response to the May 23 letter before publication of the Final Decision.
4. If these additional bonds are included in the sample, the extrapolated Bloomberg curve over the entire 15-year period appears to be much more reliable. In particular, several of the new bonds lie substantially above the Bloomberg curve, at periods to maturity greater than 10 years.
5. The new sample of bonds arose, in large part, because Dr Hird, the CEG Report’s author, changed the methodology he used to determine the maturity date of callable bonds. Previously he had used the first call date as the appropriate date of maturity. For the later report, Dr Hird instead used the final call, or final maturity, date in circumstances in which the call option is unlikely to be exercised. The AER in submissions through counsel on the review accepted the correctness of this approach, but had several criticisms of the inclusion of these bonds in the sample, at least in their current form.
6. In *ActewAGL* at [39] the Tribunal said that when using a sample of bonds to check the reliability of a fair value curve, the sample should be as large as possible:. In *ActewAGL*, the Tribunal was considering the basis on which the AER attempted to decide which of three fair value curves was most representative. In that case, the Tribunal stated that a sample of five bonds was insufficient, particularly when these bonds only covered half of the relevant term to maturity: *ActewAGL* at [39]. In the present matter the AER used a sample of seven bonds to reach its conclusion in the Final Decision. These bonds were, however, bunched tightly across time. Little consideration was given to the relevance of shorter or longer dated bonds in testing the overall validity of the Bloomberg curve or the representativeness of the APA bond. While it may be accepted that bonds with a maturity of approximately ten years may be particularly relevant, they should not be considered to the exclusion of all others in deriving a representative estimate of the DRP.
7. The inclusion or otherwise of the additional bonds put forward by the CEG report may be of crucial importance in determining whether the Bloomberg curve provides a reliable estimate of ten year BBB+ corporate bond yields. It was not an appropriate response by the AER to publish the Final Decision without considering, and, if appropriate, taking into account the suggestions made by CEG.
8. A detailed analysis whether inclusion of the bonds proposed by CEG should have been undertaken. If, as the AER submits, there are anomalies with the yields used, suitable adjustments might be required to be made. Likewise, adjustments to remove the value of the call options might also be necessary.
9. In the Final Decision the AER said:

In the limited timeframe available to assess CEG’s proposal, the AER has been unable to adequately verify the reasonableness of CEG’s changed methodology. Regardless, the AER considers that the additional bonds noted by CEG are immaterial for this final decision.

1. The AER did not therefore investigate or methodically analyse the validity of CEG’s proposal. The AER’s analysis only extended to noting that bonds issued by financial institutions often have higher yields than those issued by infrastructure service providers and that several of the bonds in CEG’s proposed sample were subordinated debt.
2. As Envestra correctly submitted, the nature of the debt, that is subordinated or unsubordinated, and the industry of the issuer should be taken into account in the determination of the bond’s credit rating. Similarly, the industry of the issuer is not relevant within the current structure of the AER’s process. If the AER is to continue to use BBB+ rated corporate debt as its benchmark for determining the DRP, it is not reasonable for it to pick and choose which of the BBB+ bonds it deems to be appropriate without considering the significance of the other potentially relevant bonds. The analysis of all potentially relevant bonds as assessed by Bloomberg produces the EBV. If the AER were to decide that the EBV was an unreliable indicator for the purposes of deciding that DRP, it would be desirable in the longer term to develop an alternative coherent and consistent methodology, in consultation with the relevant regulated entities and other interested parties. Although the DRP must be determined at a particular point in time, the use of a consistent and acceptable methodology would ensure regulatory consistency, and in relation to particular matters would also facilitate efficient decision making and in turn reduce the number of reviews of the DRP decisions by the AER brought to the Tribunal. While such a task would be a complex and lengthy one, it is one the Tribunal commends to the AER.
3. However, given the time constraints upon its decision making, that was not an option available to the AER in this matter. It is necessary to determine whether the AER committed reviewable error in the manner of selection of the DRP on the material available to it, and upon which it was obliged to make its decision.
4. Focusing on the industry of the issuer and being selective in choosing which BBB+ rated corporate debt to use for determining the DRP is a novel technique by the AER. This would require a different approach from the AER and different submissions from service providers.
5. Rule 62(1) of the NGR requires the AER to consider all submissions made in response to the Draft Decision before making the Final Decision, as well as any other matters it thinks relevant. While, strictly, the May 23 letter did not form part of the Draft Decision, it was a significant course of action for the AER to propose a substantial variation to its approach from the Draft Decision without giving Envestra an opportunity to respond and, having received the response in a timely manner, in the circumstances explained by the AER, fail to give Envestra’s response thorough consideration.
6. The Tribunal appreciates the constraints of the timetable to be observed by the AER and the risk that a regulated entity may ‘game’ the timetable. But here, the timing issue was one of the AER’s own making. Indeed, this was an issue that could have been raised and addressed by the AER so that it did have sufficient time to fully analyse CEG’s response to the May 23 letter.
7. The AER appears to have reached a hybrid position. It properly decided to review the reliability of the EBV. However, in doing so, it selectively relied on the APA bond. For the reasons given, the Tribunal considers that that was not appropriate. There had been identified to the AER a range of other bonds, some of which lay below the EBV and some above the EBV. Had the AER considered them, its caution about the limited use of the EBV may have been resolved. The hybrid position emerges from the fact that the AER nevertheless decided to rely on the EBV as one of the two significant inputs into its weighting process. It must therefore have regarded the EBV as relevant and meaningful.
8. The AER, having rejected placing sole reliance on the EBV, decided to use the APA bond as a component of an averaging process. After first considering placing a 70% weight on the APA bond it decided to determine the DRP based on an average of the APA bond and the EBV, giving a 50% weight to each.
9. The choice of the APA bond and the weighting applied to it are attended by the same error as the decision to reject the sole use of the EBV, namely the failure to have sufficient regard to the expert report of CEG. As noted, this report was prepared in response to the AER’s proposal to place a 70% weight on the APA bond. No consideration appears to have been given to the question of whether the APA bond has been used by the market, broadly defined, as a reference for determining acceptable yields for bonds with similar credit ratings and terms to maturity. Indeed, no consideration has been given to the question of whether it is accepted practice in the market to estimate reference yields on the basis of a single bond. The lack of consideration of this issue runs counter to the emphasis placed on market use of, and reliance on, evaluative techniques in *ActewAGL* at [78] and reiterated in *Jemena (No 5)* at [64].
10. The manner in which the weightings in the averaging process were assigned was also in error. As was said in *ActewAGL* and *Jemena (No 5)*, the process of averaging needs to be given significant consideration and the allocation of weights should be done on a scientific basis. The Tribunal noted, in discussing the processing of averaging two fair value curves in *Jemena (No 5)* that:

An average is a blunt instrument unless careful thought is given to the individual components and whether each should be given the same consideration, or weight, in the calculation of the average. A simple unweighted average gives each component the same weight. This will not always be appropriate, especially where (as here) the two fair value curves differ considerably over the relevant periods to maturity.

1. This point is apposite in the current matter. There is a substantial difference between the DRP implied by the EBV and that implied by the APA bond. To take a simple average of these, without consideration of the methodology behind the Bloomberg curve, or the relevance of selecting just the APA bond from the whole sample of bonds (including longer and shorter dated bonds) is to use a very heavy “blunt instrument” when a more nuanced, rigorous and sophisticated method is required.
2. The sole basis for the assignment of weights in this matter was the AER’s opinion that the APA bond and the EBV (based as it is on the yields of 18 bonds) were each equally reliable as indicators of the benchmark DRP. No explicit consideration appears to have been given to the fact that the APA bond was being used as a quasi-proxy for the other bonds the AER deemed as appropriate comparators, nor is there any consideration given to the nature of the Bloomberg curve, which is derived from a sample of 18 bonds.
3. The placing of equal weight on the APA bond and the EBV estimate effectively assigns a 50% weight to one bond, the APA bond, and a 2.8% weight to each of the 18 bonds comprising the Bloomberg curve sample. The AER has not provided any analysis, or demonstrated any consideration, of whether this division of weights is correct.
4. The choice of weights in the averaging process is of vital importance. It should not be undertaken in an arbitrary manner. Any decision on weighting must have a sound and reasoned logic.
5. In the view of the Tribunal, the decision to reject the adoption of the EBV on the basis of the APA bond and the weighting chosen amounts to reviewable error on the part of the AER. The reviewable grounds invoked by Envestra are primarily under s 246(1)(c) and (d), although it also asserts material errors of fact so as to enliven s 246(1)(a) and (b). In the view of the Tribunal, the AER in the circumstances made a decision which was unreasonable by adopting a rate of return for the DRP based upon the simple averaging of the EBV and the APA bond. There may be reasons why some or all of the bonds referred to in Envestra’s response to the May 23 letter are inappropriate to be considered. However, the AER regarded those bonds as “immaterial” without sufficient grounds for doing so. Given the common understanding of both Envestra and the AER as to the nature of the bonds considered in the formulation of the Bloomberg curve (that is, before its extrapolation), there was no apparent reason to exclude those bonds because they were issued by financial institutions. That is not how the AER had proceeded in the past, when averaging the EBV and the extrapolated CBA Spectrum value. That step on the part of the AER, in the Tribunal’s view, rendered its reviewable decision unreasonable because the consequences of its error were obviously of significant magnitude. The significance of the different approach is addressed in the reasons for decision of the Tribunal giving leave to Envestra to apply to review the AER reviewable decision: *Application by Envestra Limited* [2010] ACompT 13. It is also an error capable of being expressed within the terms of s 246(1)(c), that is as an incorrect exercise of the AER’s discretion in selecting the rate of return for the DRP as it did without considering the increased bond sample proposed by Envestra, particularly as the AER by the 23 May letter invited comment on a variation of the weighting proposed in the Draft Decision.
6. Thus, Envestra has successfully made out a ground of review: NGL s 246(1)(c) and (d). Accordingly, the Tribunal must decide whether to vary the AER’s decision, affirm the AER’s decision or remit the matter back to the AER for further consideration: NGL s 259(2). Before doing so, there are a couple of other matters to be mentioned.

## Cross checking

1. The AER undertook “cross-checks” of its estimates with actual cost of debt data. It was submitted for Envestra that this was inappropriate.
2. The regulatory regime, in determining allowable revenue, is structured on the basis of attempting to simulate a benchmark efficient service provider. Recourse to the actual cost of debt, in seeking to defend the reasonableness of the decision, is inappropriate in this context. The reasonableness or otherwise of a component of allowable revenue must be determined on the basis of the factors set out in the NGR.

## Additional matter

1. Envestra sought to put before the Tribunal information as to the identity of the issuers of the 18 bonds that comprised the sample used to derive the Bloomberg curve.
2. There was some debate during the hearing before the Tribunal about whether the AER could, at Envestra’s request, put before the Tribunal the details of the 18 corporate bonds that made up the sample on which the Bloomberg curve was based. Because the AER submitted that the Tribunal could not receive the information, even if the AER sought to provide it, the AER did not seek to do so. Thus, it was not strictly necessary for this issue to be decided.
3. Section 261(1) of the NGL states that the Tribunal must not have regard to matter other than “review related matter”, other than as provided for by that section. “[R]eview related matter” is defined in section 261(7) and includes the submissions and material before the AER as well as the Draft Decision and Final Decision. The material defined as “review related matter” can reasonably be described as evidentiary material when before the Tribunal.
4. Envestra was seeking to have the identity of the bond issuers placed before the Tribunal by the AER, exercising its power under NGL s 258(1). The language and, in particular, context of that section suggest that it does not empower the AER to put before the Tribunal material that is not "review related matter". Section 258 deals with the matters that parties may and may not raise before the Tribunal. In this context, the word matter is used as a synonym for “issue”. The section speaks of “raising” matters before the Tribunal. Section 258 is intended to restrict the issues that the Tribunal may consider and that an applicant may raise. It also allows the AER to raise an issue, or matter, where it deems it appropriate. The section does not permit the consideration by the Tribunal of non-review-related matter.
5. Envestra, in the alternative, sought to persuade the Tribunal that the identity of the bond issuers *was* "review related matter". It sought to sustain this submission on the basis that, in several documents that clearly were "review related matter", the AER or the service providers had made reference to the number of bonds in the sample. The link between the acknowledgement of the number of bonds and saying that the identity of the issuers is within the review related matter is too tenuous. The submission should not be accepted. For these reasons the Tribunal declined to receive the list of the issuers of the bonds in the Bloomberg curve sample.

## Conclusion with respect to DRP

1. The Tribunal, of course, accepts that in the first instance it is for the AER to determine whether to rely upon the Bloomberg curve, or to accept the extrapolation of that curve in the manner done in the past. It is not obliged to do so, although given the past regulatory decisions it may be expected to do so unless there were sound reasons to depart from that practice. For the future, that is a matter for the AER.
2. In the longer term, as the Tribunal has said, it is open to the AER to adopt a different methodology. Consideration of the proper composition of the comparison sample of bonds, the methodology for deciding on the appropriate sample of bonds and the relevance of these bonds to its task should be undertaken by the AER in consultation with interested parties across the spectrum of entities in the industries it regulates, consumers of their services and other interested parties.
3. In this matter, for the reasons given, the AER was obliged to do the best it could on the information available. Having determined that the AER fell into reviewable error, the Tribunal may set aside or vary the Access Arrangement Decision, or it may remit the matter to the AER to make the decision again: s 259(2). If the Tribunal sets aside or varies the decision, it may perform all of the functions and exercise all of the powers of the AER: s 259(3). If the Tribunal considers remitting the matter, it must have regard to the nature and relative complexities of the Access Arrangement Decision, and the matter the subject of the review: s 259(4).
4. The Tribunal has decided to vary the Access Arrangement Decision by substituting for the DRP value determined by the AER a DRP value of 4.67% based upon the EBV.
5. The Tribunal has taken into account that the AER, in the course of considering any proposed access arrangement or its revision, is obliged to address a multitude of issues and ultimately, it is only those few selected by the regulated entity which may come before the Tribunal; the majority of the issues resolved by the AER are resolved to the satisfaction of the regulated entity. That is the case in this matter. The Tribunal is reluctant to remit the matter to the AER to make the decision again, even constrained by any directions or recommendations of the Tribunal. In this matter, as the Tribunal has noted, there will be no real opportunity for the AER to develop a coherent alternative methodology to determine the DRP in the time available, so the AER would be forced to make the best decision it could on the material available if the matter were remitted to it. The more substantial task of developing an alternative methodology would be time consuming and complex, and necessarily be one which to a degree at least would not be specific to the parties but affect other regulated entities.
6. The Tribunal has also taken into account that the AER regarded the EBV as having sufficient reliability to give it substantial weight. In making the decision about whether to discount it in some way, the material available to the AER gave it no clear path to follow.
7. Envestra provided to the AER strong evidence in support of the EBV, in particular by its response to the May 23 letter. The view of Dr Hird of CEG was that that material did not demonstrate any basis for the substitution of an alternative estimate for the EBV. As noted, the AER itself accepted the relevance of the EBV. Whilst the Tribunal accepts that the AER properly considered the reliability of the EBV, it has reached the view on the available material that there is no reason shown from the available material why the use of the EBV should not be adopted in this particular matter. There is no viable alternative methodology at present, other than making a decision on all the material. The observations of the Tribunal in *ActewAGL* at [74]-[78] suggest also that, on the existing material, it is appropriate to vary the decision in the manner indicated.

**MARKET RISK PREMIUM**

1. Rule 87(1) of the NGR requires that the rate of return on capital is to be commensurate with prevailing conditions in the market for funds and the risk involved in providing reference services. Rule 74(2) provides that a forecast or estimate must be arrived at on a reasonable basis and must represent the best forecast or estimate possible in the circumstances.
2. The AER has determined that the CAPM is to be used to estimate the cost of equity for the purposes of determining the WACC referred to in Rule 87(2).
3. In the CAPM context the MRP is the expected return over the risk free rate that investors require to invest in a well-diversified portfolio of risky assets. The MRP is an input into the calculation of the cost of equity for the purposes of the WACC referred to in Rule 87(2).

## Envestra’s proposal and the AER’s decision

1. In Envestra’s access arrangement proposal, it proposed an MRP in the range of 6.5‑8%. In the Draft Decision, the AER did not accept this proposal and instead adopted a MRP of 6% for the purposes of determining the cost of equity. This estimate reflected the AER’s views that, while evidence about the MRP was imprecise, the best available evidence of pre- and post-GFC MRP estimates supported the rate of 6%.
2. In the Draft Decision, the AER concluded that a long term MRP of 6% was consistent with the latest long term historical estimates of excess returns. In its *May 2009 Review of electricity transmission and distribution WACC parameters* *Final Decision* (the 2009 WACC Review Final Decision) the AER concluded that an MRP of 6.5% was warranted in the circumstances of increased uncertainty associated with the GFC. In the Draft Decision, the AER formed the view that this uncertainty had diminished and no longer warranted an MRP in excess of its historical long term estimates. In addition, it concluded that it was unlikely that increased risk would be part of forward-looking expectations of returns over the next decade. In support of this, the AER relied on survey-based estimates that led it to the view that the GFC has not resulted in a change to the forward-looking MRP which is expected to prevail in the future.
3. The AER relied on comments made by the Organisation for Economic Co-operation and Development (OECD), the International Monetary Fund (IMF) and the Reserve Bank of Australia (RBA) in support of its proposition that there is a robust outlook for the Australian economy and that investor expectations of market returns now reflect pre-GFC expectations.
4. Estimates derived from dividend growth model (DGM) analysis were discounted by the AER on the basis that they appeared to be entirely dependent on the time at which estimates are prepared and on the assumptions used.
5. In its Revised Access Arrangement Proposal, Envestra maintained the range for MRP of 6.5-8%, applying a point estimate for the purposes of the WACC of 6.5%. In response to the reasoning of the AER in its Draft Decision, Envestra also submitted further expert evidence.
6. In the Final Decision, the AER rejected Envestra’s proposal and applied a MRP of 6%. The AER confirmed its Draft Decision and stated that available evidence for the value of the MRP was imprecise, but that it considered that its conclusion was supported by both pre-GFC and post-GFC evidence. The AER said that it considered historical excess return estimates for three time periods (1883-2010, 1937-2010 and 1958-2010) calculated on an arithmetic mean basis and on a geometric mean basis; on DGM-based estimates of the MRP which the AER considered to incorporate reasonable assumptions; on the implied volatility derived from options of ASX200 listed companies; and on pre-GFC market practitioner surveys regarding the commonly adopted value for the MRP, together with limited survey evidence from 2009 and 2010 and recent broker reports (including a recent report from AMP Capital Investors) regarding current market practice in relation to the value adopted for the MRP.
7. The AER also concluded that investors would factor into their expectations of equity market returns the robust outlook for Australia’s economic and financial markets, which outlook had been noted by the RBA, the IMF and the OECD. In the AER’s view, the short-term MRP will vary from the long run estimates of MRP at times but that in order to maintain regulatory consistency, a long-term MRP with a notional 10-year investment consistent with the term of the risk free rate ought to be considered.

## Grounds of review

1. Envestra submitted that the AER’s decision on the MRP was attended by several errors. In particular, it is submitted that the AER exercised its discretion incorrectly, reached an unreasonable decision having regard to all the circumstances and that its decision involved errors of fact that, either alone or in combination, were material to its decision.

### The finding that market conditions had returned to pre-GFC levels

1. According to submissions for Envestra, a critical basis for the AER’s MRP decision was the finding that the prevailing conditions in the market for funds had returned to pre-GFC levels and accordingly, the AER’s previous estimate of MRP of 6.5% was no longer appropriate. It was submitted by Envestra that in the 2009 WACC Review Final Decision and in all subsequent decisions prior to Envestra’s Draft and Final Decisions, including its most recent Victorian Electricity Distribution Determinations, the AER applied an MRP of 6.5%. Its final decision in the Victorian determinations was made in October 2010. In Envestra’s submission, there was no basis or evidence to support a change in the AER’s estimate of MRP since that time.
2. The AER submitted that it had not made such a finding. Rather, it had concluded that “market conditions had significantly improved and reflect reduced concern about the potential ongoing impact of the GFC”. The AER acknowledged, however, that it did find that implied volatility had returned to pre-GFC levels. It also acknowledged that debt spreads and dividend yields had not returned to pre-GFC levels, though it noted that they had substantially improved since the height of the GFC.
3. While not explicitly classed as such in its submissions, Envestra appears to proceed primarily on the basis that this alleged error is one of fact. To succeed on this ground for review Envestra must show not only that there was an error of fact, but that it was, either in isolation or in concert with other errors of fact, material to the decision made: NGL ss 246(1)(a) and (b). It is necessary also to consider whether Envestra has made out reviewable error in terms of s 246(1)(c) or (d).
4. In determining whether an error of fact was made, it is crucial to ascertain precisely what the conclusion of fact was. It appears clear from the text of the Final Decision that the AER did not conclude that appetite for risk had returned to pre-GFC levels. It did find substantial improvement in market conditions and reduced concern about the impact of the GFC in the market. When characterised in these terms, the AER’s findings are clearly open on the evidence before it. The conclusion that market conditions had improved from the height of the GFC, but not necessarily to pre-GFC levels, was supported by expert evidence from Strategic Finance Group: SFG Consulting, Valuer Adviser Associates and NERA Economic Consulting submitted in support of access arrangement proposals by regulated service providers. The issue is whether the retreat from the heights of the GFC-related market risk was sufficient to warrant a return to an MRP of 6%. This is clearly a matter of discretion, not one of fact; it might also be said to be an unreasonable conclusion affecting the reasonableness of the decision.
5. It was said in *ACCC v ACT* that a finding of fact is not an error “because it is based upon the use of one methodology rather than another”. Here the AER has based its findings about market conditions on many different methodologies. What is in issue is the weight that is to be applied to each of these. Clearly, if the choice of methodology cannot render a finding of fact an error, neither can the choice of weight to be assigned to different methodologies. The coherent choice of weighting is a matter of discretion.
6. Moreover, it is not immediately apparent that the AER’s decision to assign an MRP of 6% relied upon the finding that market conditions had subsided from the heights of the GFC. While it is accepted that the AER did take issue with much of the evidence submitted by Envestra and concluded that market conditions had improved, the AER also had regard to substantial evidence as to what constituted the best estimate of the MRP, including evidence of historical excess returns and DGM analyses. In these circumstances any error of fact (as asserted by Envestra) that the AER may have committed in its comparison of market conditions with those during the GFC cannot be classed as “material”. The AER decision on MRP was based upon a much broader consideration of data.
7. Turning to the question of whether the AER exercised its discretion incorrectly in these circumstances, consideration needs to be paid to how it is said that the discretion was exercised incorrectly. Envestra alleges that the AER exercised its discretion incorrectly because it failed to give adequate weight to the expert evidence. The AER submits that it considered the experts’ reports extensively and that, “[i]n truth, Envestra’s complaint is that the AER should have adopted the conclusions expressed in its consultants’ reports.” The AER's submission should be accepted. It is not sufficient that the Tribunal would reach a different view than the AER for it to conclude that the AER incorrectly applied its discretion: *ElectraNet (No 3)* at [72]. The bases for an incorrect exercise of discretion, as set out in *ACCC v ACT* at [74] have not been made out; it is the result that is complained of, not the process. The AER’s discretion was not applied incorrectly. Nor is the Tribunal persuaded that the decision of the AER in this regard involved the exercise of a discretion which was not, on the material, reasonably available to it.
8. The critical issue in this section of the review is whether the AER’s determination of the MRP at 6% was reasonably open to it on the evidence. As has already been mentioned, there was substantial evidence before the AER, both that submitted to it by service providers and that sourced by the AER itself. This evidence was not conclusive. It was incumbent upon the AER to exercise its judgment in deciding on an appropriate MRP.
9. As was noted in submissions, the MRP is a forward-looking estimate. There is no accepted scientific, mathematical or financial technique that can, uniquely, be deployed to ascertain an estimate of the MRP over the 10-year reference period. Indeed, there is no settled view among the experts as to what is the best methodology to employ in coming to such a conclusion. Further, there are substantial debates among the experts, as well as the parties, as to how particular methodologies should be employed and the nuances and assumptions that are necessary for their effectiveness. The choice of methodologies and assumptions has the potential to significantly alter the result, as was demonstrated, particularly, by reference to the DGM analyses.
10. In circumstances such as this it is incumbent upon Envestra, if it is to show a ground of review, to demonstrate why the choice of methodology made by the AER was not reasonable in all the circumstances. While it is true that Envestra pointed to a large body of expert evidence that supported its contention that 6.5% would have been a more appropriate choice for the MRP; there was also a large body of evidence that supported the AER’s chosen rate.
11. It is not sufficient for Envestra to persuade the Tribunal that 6.5% should be preferred. It must demonstrate the unreasonableness of the decision made by the AER. Unless this can be done, the Tribunal would be merely reaching a different conclusion as to the preferable result. The mere fact that the Tribunal may prefer a different rate does not entitle it to substitute its preferred MRP for that of the AER unless a ground of review has been made out. In all the circumstances of this matter, it was reasonably open to the AER to choose an MRP of 6%.
12. While it was reasonably open to the AER to determine an MRP of 6%, regulatory consistency may have led the AER to provide a more detailed explanation of the trigger that caused the AER to choose an MRP of 6% rather than the previously adopted 6.5%. However, for the reasons given, the Tribunal is not persuaded that the AER fell into reviewable error in any of the ways contended for by Envestra.

## Other alleged errors

1. In addition to the matters already mentioned, there were several issues agitated by the parties. While it is not necessary for the Tribunal to decide these issues for the purposes of this review, some comments should be made. That is because the Tribunal is not persuaded that these issues materially influenced the AER’s decision on the MRP. They are each matters adverted to in the Final Decision, but not in such a way as to indicate that any of the grounds of review under s 246(1) would be established in relation to them by the AER’s reference to them.

### Arithmetic and geometric means

1. There was considerable argument between the parties as to the appropriate method to apply in calculating average historical returns. Broadly speaking, it was submitted for Envestra that the arithmetic mean should be used, whereas the AER submitted that the arithmetic mean overstated average historic returns, while the geometric mean produced an underestimate.
2. Envestra submitted that geometric averages are not a correct basis on which to estimate the MRP, are not compatible with the CAPM and are inconsistent with standard valuation practice. According to Envestra no reliance should be placed on geometric averages and the proper basis is to estimate the MRP on the basis of the arithmetic mean. Historical data is used to estimate the MRP by taking some average of annual excess returns (the return on a broad stock market index minus the relevant risk‑free rate of interest) based on the assumption that the probability distribution of future annual excess returns is similar to that which has been observed historically. According to Envestra’s submissions, an arithmetic average of historical excess returns mathematically produces an estimate of the expected future excess return, whereas a geometric mean does not. Envestra submitted that, because the CAPM unambiguously requires an estimate of the expected return on the market, the arithmetic average is an appropriate estimate and the geometric average is not.
3. The AER took a different approach. It noted that the arithmetic mean of 10-year historical excess returns would likely be an unbiased estimator of a forward-looking 10-year return, the appropriate benchmark. It is the AER’s view, with which the Tribunal agrees, that the cumulative return across a period greater than one year will be less that the average of yearly returns because a negative return in later years will reduce the value of gains in previous years as well as the value of the initial portfolio. For example, imagine a portfolio that is worth 100 at the beginning of year one. Suppose that in year one the portfolio falls to 80, a -20% return, before returning to 100 in year two. The cumulative two year return is zero, whereas the average annual return is (-0.2+0.25)/2=2.5%.
4. According to the AER, historical excess returns are conventionally estimated as the arithmetic or geometric mean of 1 year returns. This convention was adopted in the historical excess return evidence available to the AER. Accordingly the AER submits that it interpreted this (one-year return) data based on the strengths and weaknesses of how closely this reflected the relevant benchmark (being a 10-year rate, expressed in annual terms).
5. Mathematically, if there is variability in the one-year historical excess returns, the arithmetic mean of one-year historical excess returns will overstate the arithmetic mean of ten year historical excess returns. This is because the process of averaging one-year returns does not take account of the cumulative effect of returns over a 10-year time horizon. Also mathematically, if there is variability in the one-year historical excess returns, the geometric mean of one-year historical excess returns will understate the arithmetic mean of ten year historical excess returns.
6. The AER concluded that the arithmetic average of the data considered is an overestimate of the relevant benchmark and the best estimate of historical excess returns over a 10-year period is likely to be somewhere between the geometric mean and the arithmetic mean of annual excess returns. The imprecise nature of historical excess returns estimates, as well as other indicators of the expected MRP, means, in the AER’s submission, that the exercise of a significant degree of judgment is required when interpreting the available evidence to derive the best estimate of the expected MRP.
7. It may be accepted that an arithmetic mean of historic annual returns is an unbiased estimate of expected future one-year returns. It is not, however, an unbiased estimate of expected future returns over longer time horizons. A geometric mean of historical annual returns does not provide an unbiased estimate of expected returns over longer time horizons, either. Envestra’s submission that, because the CAPM model uses expected returns, only the arithmetic mean may be used cannot be accepted once it is understood that the arithmetic mean of annual historic returns is *not* an unbiased estimate of expected ten-year returns.
8. Once it is accepted that the relevant benchmark is ten-year excess returns, considerable thought and effort should be given to deriving the best estimate of expected ten year returns. The material before the Tribunal in this matter does not allow it to decide this issue. Rather, it is a matter that the AER should consider in consultation with service providers and other interested parties.

### The use of general macroeconomic forecasts

1. The AER referred to statements which had been recently published by the RBA, the OECD and the IMF that all indicated a robust economic outlook for Australia.
2. Envestra submitted that the reports relied upon by the AER from the IMF, the OECD and the RBA related to economic and investment growth rather than market risk which drives the market risk premium. The link between economic growth and market volatility expectations was made by the AER rather than by the authors of the quotes. This approach, Envestra submits, is unique and neither the AER, nor other capital market practitioners, have used such a methodology previously.
3. While there is nothing inherently incorrect about the AER having regard to statements from eminent bodies regarding current and forecast economic conditions, the use to which these reports are put must be carefully considered. It is not appropriate for the AER to infer from generally positive economic forecasts conclusions as to the likely MRP. These reports are not intended to provide forecasts of equity returns. Further, the reports do not endeavour to address the extent of correlation between economic performance and equity risk. This correlation would need to be explicitly dealt with, either by the forecasting bodies, the AER or expert evidence, before these reports could be usefully or validly employed to assist in forecasting the MRP.

### The use of surveys of market participants

1. In the Draft Decision, the AER recorded its view that survey-based estimates should be considered when estimating the MRP. In the AER’s submission, surveys of market practitioners and academics reflect the forward-looking MRP applied in practice. This technique involves asking a number of experts, including academics and market practitioners what they think the MRP is or what MRP figure they use in their work, and then collating and averaging the answers to arrive at a consensus MRP.
2. Envestra heavily criticised use of these surveys. In support of these criticisms, Envestra relied principally on an expert report by NERA Consulting. NERA undertook a critique of the two post-GFC surveys relied upon by the AER.
3. NERA found that there were a very large number of non-respondents to both surveys. Of those that did respond, only a handful were Australian academics or analysts, 23 out of 1309 in one survey and 7 out of 2460 in the other. Further, NERA criticised the survey for not providing a sufficient real world context to give the survey results any real meaning.
4. Surveys must be treated with great caution when being used in this context. Consideration must be given at least to the types of questions asked, the wording of those questions, the sample of respondents, the number of respondents, the number of non-respondents and the timing of the survey. Problems in any of these can lead to the survey results being largely valueless or potentially inaccurate.
5. When presented with survey evidence that contains a high number of non-respondents as well as a small number of respondents in the desired categories of expertise, it is dangerous for the AER to place any determinative weight on the results.

***Broker’s WACC estimates***

1. The parties made written submissions on this topic, submitted on 9 January 2012.
2. Envestra attacked the use to which the AER used equity broker estimates of WACC. It contended that to do so was an unreliable methodology because the risk-free rates of those estimates related to a different point in time from that used in the Final Decision, as illustrated by that decision adopting a risk-free rate different from any of the broker estimates, and because the required return on equity does not include imputation credits (if imputation credits were included the required return on equity, and so the WACC, would be higher), and thirdly because it is not clear that the broker estimates of WACC were consistently based on the nominal vanilla WACC concept as used by the AER.
3. It is fair to note that, as to those matters, the AER largely recognised the possible reasons why broker estimates might be unreliable and sought to make adjustments in that light. More importantly, the Tribunal accepts the AER submission that it did not estimate the WACC or the DRP by reference to the broker reports. It used them as a “useful reasonableness check” that its WACC estimate did not produce results which did not broadly accord with a range of market opinions concerning firms that are a reliable proxy to the benchmark firm. Its use of the broker reports was thus an “output” test of the nominal vanilla WACC rather than an input into its calculation of the WACC. In using the broker estimates in that way, it was addressing a concern of Envestra in its initial Access Arrangement Proposal that it should not focus only on input parameters.
4. In that context, in particular having regard to the limited use to which the AER applied the broker estimates as an “output” check only, the Tribunal is not persuaded that the AER fell into reviewable error by its use of broker estimates of WACC.

# Network Management fee

## Background

1. In mid-1997, Envestra and Boral Ltd (Boral) entered into a series of transactions concerning the sale by Boral to Envestra of Boral's South Australian gas distribution network. At this stage Envestra was a wholly owned subsidiary of Boral. Boral also established another wholly owned subsidiary, Boral Energy Asset Management Pty Ltd (BEAM). On 21 August 1997, Envestra was floated on the stock exchange and $910 million was raised in the public offering. Boral purchased 19.97% of Envestra in the public offering.
2. On 30 June 1997, Boral agreed to sell its South Australian gas distribution assets to Envestra. At about that time, it appears that Boral transferred its relevant staff employed to manage that network to BEAM.
3. Also on 30 June 1997, Envestra and BEAM entered into an operation and management agreement (the 1997 OMA). This agreement provided that BEAM would operate Envestra’s assets and Envestra would pay BEAM’s costs plus a network management fee, calculated as a percentage of the revenue that Envestra earned from the network. Therefore, at the time the 1997 OMA was entered into, both parties to the agreement were wholly owned subsidiaries of Boral. Further, at the time that Envestra entered into the 1997 OMA with BEAM, Envestra did not undertake an open tender in selecting the operator of its network.
4. In 2000 Boral underwent a demerger and renaming so that Origin Energy Ltd (Origin) became the owner of Boral's shares in Envestra and Origin Energy Asset Management Ltd (OEAM) became the renamed operator under the 1997 OMA.
5. On 2 July 2007, APA Group Ltd (APA) purchased Origin’s 17% interest in Envestra and also purchased Origin’s 100% interest in OEAM.
6. On the same date the 1997 OMA was novated so that APA replaced OEAM as the operator. The novated agreement (the 2007 OMA) was in substantially the same terms as the 1997 OMA. The principal difference was that the 2007 OMA expired on 30 June 2027. When the APA Group took over from OEAM, those entities were not related, and prior to its appointment, the APA Group was not related to Envestra.
7. When it became operator, the APA Group took up a 17% stake in Envestra by acquiring Origin Energy’s interest in Envestra, which equity interest has now grown to 30.6%. When the APA Group took up that interest, the largest shareholder was CKI Group (CKI), holding 19.97% of Envestra. Two of the eight members of the Envestra board are CKI-appointed directors (of the remaining 6 directors, 4 are independent and 2 are APA- appointed directors).
8. For operating Envestra’s networks, the APA Group has agreed (under the 2007 OMA) to a fee structure as follows: it is reimbursed for reasonable costs, it receives incentive payments, and it receives an NMF of 3% of the revenue earned by Envestra from the networks each year. The fee structure is the same as under the 1997 OMA. Envestra submitted that the rationale for the payment provisions of the 2007 OMA is transparent and has been fully explained to the AER. Envestra further submitted that there are strict cost control mechanisms in the 2007 OMA. It is estimated that the NMF will total [redacted, confidential] over the access arrangement period (2011-16) for South Australia.
9. The APA Group was and continues to be a major listed gas infrastructure entity. It delivers more than half of Australia’s annual gas usage, has interests in more than 12,000 kilometres of natural gas pipeline infrastructure, over 2,800 kilometres of gas distribution networks, and owns various gas plants and facilities and interconnector systems, employing 1,100 people. As at 2010, the APA Group had more than twice as much turnover as Envestra, spent more than three times as much on capital expenditure than Envestra, and had twice the assets of Envestra, which does not operate any assets itself.
10. Envestra submitted that the 2007 OMA enables Envestra to access the substantial economies of scale, scope and know-how arising by virtue of these assets owned and operated by the APA Group.
11. APA's principal obligation under the 2007 OMA is to ‘operate and manage, or procure the operation and management of, the Networks in accordance with Legal and Prudential Standards’.
12. The obligation to pay APA’s costs and disbursements extends to the payment of any incidental costs. Clause 10.2 of the 2007 OMA relevantly states:

… the Company shall pay to the Operator… all costs and disbursements from time to time reasonably incurred or outlaid by the Operator (including incidental costs) in, or in respect of, its appointment under this Agreement, or the performance of any of its obligations under this Agreement or the exercise of any of its discretions under this Agreement, including:…

(b) all consultants’ and advisers’ fees;

(c) where Operator engages a Subcontractor, all amounts invoiced by that Subcontractor to the Operator in respect of that engagement;

(d) where Operator does not engage the Subcontractor, all amounts invoiced by the Operator to the Company, and which shall include:

(i) the fair rental. . . of the fixed and operating assets used by the Operator. . . to perform the services or functions covered (in whole or in part) by that invoice

(ii) the cost determined by the Operator to be its total costs (including the administrative and overhead expenses) of providing employees of the Company to perform. . . the services or functions covered (in whole or in part) by that invoice; and

(iii) the cost of materials and parts.

1. The payments made to APA comprised over 90% of Envestra’s operating costs, excluding unaccounted for gas.

## Regulatory Regime

1. The question of whether the NMF, or any operating expenditure, will be allowed in determining a service provider’s permitted revenue is governed by Rule 91 of the NGR, which provides that:

Operating expenditure must be 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 delivering pipeline services.

1. Rule 91 is a limited discretion rule. This means that if the AER is satisfied that Envestra’s proposal regarding an item of operating expenditure complies with the requirements of the NGL and the NGR and is consistent with any applicable criteria, the AER *must* approve the item: NGR r 40(2).
2. The AER submitted that rule 91 requires the AER to permit service providers a reasonable opportunity to recover what the AER considers “legitimate costs”. Legitimacy, according to the AER is informed by the NGO and, in particular, means costs that would be incurred in a “workably competitive market”. The requirement for replication of a workably competitive market outcome is said to be derived from the intent of the regulatory framework. This phrase appears to come from the Australian Energy Market Commission, *Rule Determination, National Electricity Amendment (the Economic Regulation of Transmission Services) Rule 2006 No. 18,* published on 16 November 2006. In this determination, the Australian Energy Market Commission, at page 93, describes the fundamental objective of regulation as being:

to reproduce, to the extent possible, the production and pricing outcomes that would occur in a workably competitive market in circumstances where the development of a competitive market is not economically feasible…

1. The AER’s contention that operating costs should be tested against the hypothetical of a workably competitive market was not challenged by Envestra.
2. In submissions for the AER it was suggested that Rule 91 only binds the AER in its decision to approve or not approve an item of operating expenditure in an access arrangement proposal. That is, it does not bind the AER in making its own proposal or in giving effect to its own proposal. It is the decision of the AER that gives effect to its own proposal that is the reviewable decision, although the Final Decision provides the reasons for doing so.
3. Rule 71(1) of the NGR provides that:

In determining whether capital or operating expenditure is efficient and complies with other criteria prescribed by these rules, the AER may, without embarking on a detailed investigation, infer compliance from the operation of an incentive mechanism or on any other basis the AER considers appropriate.

1. In the AER’s submission, this rule recognises the practical impossibility of the AER checking every single cost of every single service provider. It permits the AER to derive bases for inferring efficiency. Envestra submitted that in circumstances of a genuine competitive tender process it may be reasonable for the AER to infer efficiency. Envestra took issue, however, with the two-stage test that the AER implemented, purportedly in compliance with NGR r 71(1).

## Material before the AER and the AER’s decisions

1. On 1 October 2010, Envestra submitted to the AER a document titled “South Australian Access Arrangement Information” (Envestra SA Access Arrangement Information). Attachments to this document included affidavit material from current and former management of Envestra and of the APA Group, several expert reports and information about the payments made by Envestra to APA under the OMA.
2. In the Draft Decision published in February 2011, the AER did not approve Envestra's forecasts concerning the NMF. The AER required that Envestra's operating expenditure proposal be amended so that the NMF was removed.
3. The AER observed that, in the Envestra SA Access Arrangement Information, Envestra stated that the NMF included a component that recovers costs attributable to operating the network. The AER said that such costs might comprise a reasonable addition to actual costs but noted that it could not assess the expenditure because Envestra said it was impractical to break down the NMF into component parts.
4. In March 2011, Envestra submitted the Envestra SA Revised Access Arrangement Information. Envestra did not attempt to break down the NMF into component parts. It described the NMF (differently from its original description in the access arrangement information) as a payment to access the benefits of economies of scale, scope and human or intellectual capital. At the same time, Envestra submitted an expert report from Dr Hird of CEG critiquing the AER’s approach to, and treatment of, contractor’s margins and a report by Katherine Lowe of NERA Economic Consulting regarding the nature of the OMAs (the NERA Report).
5. The Final Decision did not approve the NMF. On 7 July 2011, the AER published the Access Arrangement Decision. The access arrangement approved by the AER for Envestra SA did not include the NMF.

## The AER’s reasoning

### Background to the Framework

1. The NGL and NGR permit a service provider to earn revenue for a regulatory period equivalent to the sum of the ‘building blocks’ set out in the NGR. Briefly stated, those building blocks comprise: a return on the expected capital base; depreciation on the expected capital base; corporate income tax; increments or decrements from the operation of any incentive mechanism; and a forecast of operating expenditure: NGR r 76. The concept of “profit” is not a separate item but, in the AER’s submission, is included principally within the notion of a return on capital.
2. The AER submitted that proposals for access arrangements prepared by service providers should be premised upon forecasts of operating expenditure that strive to achieve the lowest sustainable costs (albeit with scope for efficiencies to be retained for a period by the service provider under efficiency mechanisms).
3. The AER noted that in certain circumstances, a service provider may have an incentive to outsource services on non-arm’s length terms (that is, at an inefficient or artificially inflated price). The main examples of this include:
* where the outsourcing contract is with a related party; and/or
* where the outsourcing contract is not determined independently from the negotiations of some other contract or arrangement; and/or
* where some other side-payment or benefit is conferred on the service provider in exchange for accepting an artificially inflated price.
1. The AER developed a framework to assess such contracts in its decision concerning the Victorian Electricity Distribution Network Service Providers (Victorian Decision). The Victorian Decision considered the allowable revenue for those providers in circumstances where they each engaged in significant outsourcing to related party contractors. The AER did not allow margins proposed to be charged by contractors to five of the providers. There was no appeal from the Victorian Decision.
2. The AER explicitly applied the conceptual framework developed in the Victorian Decision to assess the consistency of Envestra’s NMF with the requirements in the NGR and NGL for operating expenditure.
3. Stage 1 of the AER’s framework is a mechanism for inferring or presuming that operating expenditure is efficient. In Stage 1, the AER asks two questions:
4. Did the service provider have an incentive to agree to non-arm’s length terms at the time the contract was negotiated (or at its most recent re-negotiation)?
5. If the answer to the first question is yes, was a competitive open tender process conducted in a competitive market?
6. If Question 1 is answered ‘no’ or Question 2 is answered ‘yes’, the contract passes the presumption threshold. In that event, the AER conducts a limited analysis of the contract under Stage 2A. Stage 2A of the Framework was not applied by the AER in the present case and therefore does not need to be considered by the Tribunal.
7. Where an incentive for the service provider to accept non-arm’s length terms exists, the means by which the contract price was determined becomes important. In the presence of such an incentive, it is reasonable, in the AER’s submission, not to presume that the contract reflects efficient costs or the costs incurred by a prudent operator unless that contract has been subjected to a competitive open tender in a competitive market.
8. If the contract was not the result of a competitive open tender process conducted in a competitive market, then the answer to question 2 is ‘no’, the contract has failed the presumption threshold and it is necessary to proceed to Stage 2B of the AER's framework.
9. Under Stage 2B the AER considers that it is appropriate to examine more closely the contract to determine whether the proposed expenditure to be incurred under the contract meets the requirements contained in rule 91 of the NGR and other requirements of the NGR and the NGL. Of course, a finding that the parties to a contract had an incentive to agree to an inefficient or artificially inflated price is not sufficient to conclude that the parties acted on that incentive. The existence of such incentives only triggers a closer assessment of the contract price.
10. As a starting point for an examination of payments made under such a contract, the AER views it as appropriate to adopt the contractor's actual direct costs and then examine whether there are legitimate economic reasons to justify a 'margin' above these direct costs. In deciding on this approach, it is necessary to examine which margins ought to be added. A margin is allowable, in the AER’s submission, to the extent that it reflects a contractor’s reasonable allocation of common costs.
11. The AER also regards a margin which allows a ‘return on capital’ and ‘return of capital’ as consistent with the regulatory regime and allowable. The regulatory regime provides a ‘return on capital’ building block allowance in place of a ‘profit margin’. In addition, a ‘return of capital’ building block allowance is provided which compensates, over time, for the original cost of the assets used by the service provider (which is equivalent to the capital investment by equity and debt holders).
12. In order to calculate such a margin, it is necessary for the service provider to advise the AER of the assets not belonging to the service provider but used by the contractor to provide services to the service provider. Further, to the extent that such assets are already included within the service provider’s regulatory asset base (RAB) then no further compensation for such assets is warranted as it would “double-count” the return on asset and return of asset compensation that is provided through the building blocks.
13. A margin which allows a return on the contractor’s ‘know-how’ is not, in the AER’s submission, allowable. There may be few capital assets associated with the provision of an outsourcing agreement. However, there is a degree of ‘human capital’ (or intangible assets) employed in the provision of these services. For example, the contractor’s employees may have expertise as a result of their experience or training costs incurred by the contractor over a number of years.
14. As stated above, a return on capital is consistent with the regulatory regime and allowed. The AER submitted, however, that ‘know-how’ is in a different category. The key difference is that the capital employed in the contractor's business was contributed by its shareholders and debt holders and therefore a return to each of them is allowable. However, the AER submitted that the costs incurred by a contractor that have led to the claimed ‘know-how’, for example training costs, would generally have been paid for by the service provider because they are part of the contractor’s direct costs. This results from the ‘base level’ of a service provider’s operating expenditure forecast generally being set by reference to its actual costs in previous years.
15. According to the AER’s submissions, allowing a return on ‘know-how’ would mean that customers are funding something which they have already funded in the past. Such expenditure could not be considered efficient. To the extent that the contractor’s ‘know-how’ will lead to future efficiencies, the AER submits that those efficiencies should be treated the same way as other efficiencies.

### Retention of efficiency gains

1. According to the AER, a frequent argument made by service providers is that outsourcing contracts are entered into to access economies of scale, scope and other efficiencies not otherwise available to the service provider on a standalone/in house basis. It is then argued by service providers that, if the contractor’s costs are above the allowable margins discussed above, such costs should be allowed because the entry into the contract reduces the service providers’ overall operating expenditure consistently with rule 91 of the NGR.
2. The AER submits that the result of such an argument, if accepted, is that the contractor would be able to retain the benefit of its efficiencies indefinitely. Such a result, in the AER’s submission is inconsistent with the NGO, as stated in s 23 of the NGL:

The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

1. The NGO requires not just the promotion of efficiency, but the promotion of efficiency in the long term interests of consumers. The AER submits that this requires that consumers share in efficiency benefits after a period of time from which they are realised and that the benefits should not be retained entirely by the service provider or contractor.
2. The AER submits that the NGO is of critical importance. The AER must exercise its power in a manner that at least is likely to contribute to the achievement of the NGO. Accordingly, when the AER is formulating and approving an access arrangement, it views itself as obliged to approve an access arrangement which will promote efficiency in the long-term interests of consumers. The AER submits that an access arrangement which allowed a contractor to retain the benefit of its efficiencies indefinitely would be contrary to the NGO. If efficiencies are realised but consumers do not benefit from these efficiencies in some way (for example, lower prices or better quality service), then consumers would receive no benefit from these efficiencies at all. Such an outcome could not be said to promote efficiency in the long term interests of consumers. The gains from the efficiencies must eventually be shared with consumers.
3. The AER noted that service providers, by outsourcing to contractors, had directly contributed to the workload of those contractors and consequently to the economies of scale and scope and know-how realised by those contractors. That is, but for the work received from the service provider, the contractor would be smaller and would likely experience lesser economies of scale and scope. Generally speaking, a prudent service provider would not give away ‘something for nothing’. Accordingly, the AER submitted that it is consistent with rule 91 (which refers to a prudent service provider) for the service provider and ultimately consumers to share in at least some of the efficiencies in the pricing arrangements struck between the parties.
4. The AER was, therefore, prepared to allow the benefit of efficiencies to be retained for a period of time (6 years for operating efficiencies) on the basis that the benefit of those efficiencies would eventually be passed on to consumers. It was of the view that the mechanism for allowing the efficiency to be retained is not through the operating expenditure forecast, but through the operation of the efficiency incentive mechanism. That is, compensation for the NMF to the extent it relates to the retention over a six-year period of the benefits of scale, scope or other efficiencies is provided through the operation of the incentive mechanism and the manner in which operating forecasts are periodically reset at each access arrangement.

## The AER’s analysis of the Network Management Fee

1. In the Draft Decision and the Final Decision, the AER considered whether to allow the NMF as part of Envestra's operating expenditure by reference to the framework explained above.
2. Question 1 of the presumption threshold is whether Envestra had an incentive to agree to non-arm’s length terms at the time the contract was negotiated (or at its most recent re-negotiation). The AER considered that, since the 2007 OMA was a novation of the original agreement entered into in 1997, assessing the terms of the 2007 OMA required consideration of the circumstances surrounding the entry by Envestra into the 1997 OMA.
3. The AER referred to the decision of the Essential Services Commission of South Australia (ESCOSA) whichreviewed the request for the inclusion of the NMF at the time of the last access arrangement review: ESCOSA, *Final Decision – Proposed Revisions to the access arrangement for the SA gas distribution system,* June 2006 (ESCOSA Decision). The ESCOSA Decision identified that, when the 1997 OMA was entered into, both Envestra and BEAM (the company that was ultimately replaced by APA) were wholly owned subsidiaries of Boral. An additional consideration for the AER was that the 1997 OMA was entered into at about the same time as a number of other transactions that might have created an opportunity to confer exchange benefits.
4. On 30 June 1997, Envestra and BEAM entered into the 1997 OMA. On the same day, Envestra purchased, among other things, Boral’s South Australian gas distribution network. Further, the operation of the 1997 OMA was conditional upon the completion of Envestra's purchase from Boral of the South Australian gas distribution network. The AER submitted that, in these circumstances, the sale price that Boral was willing to accept for its assets may have been dependent on the contract price that BEAM received from Envestra.
5. Accordingly, the AER considered that by reason of the combination of these matters, Envestra's controlling shareholder had a financial incentive and opportunity to inflate the price of the services provided under the 1997 OMA.
6. In 2007, the 1997 OMA was novated replacing OEAM with APA. The AER considered that Envestra's decision to enter into the 2007 OMA was fettered by the 1997 OMA. The 1997 OMA required Envestra to give its consent (which could not be unreasonably withheld) to any request to novate the 1997 OMA to another operator. The AER considered that, if APA was able to meet all other requirements, it was doubtful whether a dispute over the inclusion of the NMF was a reasonable basis for Envestra to withhold consent.
7. The AER also referred to the absence of any clause in the 1997 OMA or the 2007 OMA allowing Envestra to renegotiate the terms of the NMF or make it subject to periodic review. The result was that any distortion in the contract price that may have occurred at the commencement of the contract was preserved until the contract expires. The 1997 OMA had no expiry date. The 2007 OMA expires in 2027. Neither the 1997 OMA nor the 2007 OMA was entered into as a consequence of a competitive tender process.
8. The AER concluded that it could not presume that the NMF under the 2007 OMA reflected arms length and efficient terms. The AER found that the 2007 OMA had failed the presumption threshold.
9. The AER stated that an examination under Stage 2B does not mean that a margin is assumed to be inefficient, but rather that a more detailed examination must be carried out of the components of the margin, their rationale and therefore their consistency with rule 91 of the NGR, the NGO and the NGL. The AER noted that, under its framework, margins are permitted for a number of items including a return of and on physical assets owned by the contractor.
10. The AER examined the various payments made to APA. It noted that the payments included costs reasonably incurred by APA as well as the NMF. The AER accepted the costs reasonably incurred but took issue with the NMF.
11. The AER recorded that Envestra did not submit that the NMF reflected any of the allowable costs set out in the AER's framework. Envestra described the NMF as the consideration paid by Envestra to access the economies of scale, scope and know-how available to a larger corporate group. Envestra did not attempt to break down the NMF into components which the AER would recognise as legitimate. For example, ultimately Envestra did not identify any part of the NMF that comprised a return on APA's capital, nor did Envestra identify any part of the NMF that was attributable to an allocation of common costs.
12. The AER said that the characterisation by Envestra of the NMF meant that the NMF could only be recoverable through the efficiency incentive mechanism. The efficiency incentive mechanism operates for a limited period of time (a total of six years from when the efficiency first occurs) so that, consistently with the NGO, consumers share in efficiency benefits after a period of time.
13. The AER noted that it does not consider it reasonable for consumers to incur a cost (via the NMF) to access ‘know-how’ that they had already funded. For example, any training costs and other associated costs incurred by APA and its predecessors that have led to the claimed ‘know-how’ have, in the AER’s submission, been paid for by Envestra (and ultimately the customers) because the training costs are part of the contractor’s direct costs. Those direct costs have been picked up and compensated as operating expenditure through Envestra in previous years.
14. The AER considered the NERA Report which compared the NMF against margins earned by a sample of other contractors. The author of the NERA Report recognised that the study could not “be relied upon as demonstrating the prudence and efficiency of an outsourcing contract.” Rather, it was one piece of information to inform the AER.
15. The AER identified a number of empirical concerns that it had with the NERA Report. First, the NERA Report uses the EBIT margin which measures the funds available to a contractor to pay taxes and pay a return on physical and intangible assets. For reasons already expressed, the AER does not consider a return on intangible assets to be legitimate. A study which includes a return on intangibles does not, if the AER’s framework is followed, provide a useful benchmark. Second, the AER noted that there was extreme volatility in the range of margins observed in NERA’s sample, and that this could possibly be an indication that the margins included in the sample were in fact compensating for different things.
16. The AER also considered Envestra’s submission that, as an alternative to the AER’s framework, the AER should consider whether an outsourcing arrangement inclusive of margins achieves costs at or less than in-house alternatives and, if an outsourcing arrangement does achieve a lower cost, all costs associated with the arrangement including margins should be included in operating expenditure.
17. The AER’s principal objection to this submission is that, if a contract price equal to the cost of providing the services in-house was found to be acceptable, it would result in consumers never receiving the efficiency benefits from outsourcing. Further, if any contract price was acceptable so long as it was less than the costs of providing the services in-house (even if only slightly less), it may result in consumers only receiving a very small portion of the efficiency benefits from outsourcing. Such a result is, in the AER’s submission, inconsistent with the NGO which requires the promotion of efficiency in the long term interests of consumers.
18. The AER also noted a report by KPMG (KPMG Report) which contained a comparison of the OMA with the costs of managing the network if done by Envestra in-house. The KPMG Report compared expenditure under the 2007 OMA against expenditure which would be incurred if Envestra were to perform the services in-house. The AER considered that the theoretical in-house construct was based on broad and disparate benchmarks and was concerned that the inherent uncertainty of such a construct suggests that it is not a reasonable basis on which to estimate a cost, consistent with rule 74 of the NGR. The AER observed that it would be less problematic to compare the status quo against an alternative contractor, rather than a theoretical construct.
19. In the Final Decision, the AER stated that it will allow a service provider to “retain the benefits of access to know-how and other intangibles which might derive economies of scale and scope. However this is necessarily clawed back after a period of time.” The AER is of the view that this approach is consistent with the NGO’s requirement that the promotion of efficiency be done in the long-term interests of consumers. The AER treats the cost efficiencies derived from the outsourcing arrangement

like any other initiative (operational, technological or managerial) that achieves efficiency. Firms can retain the gains they achieve from such initiatives (thereby incentivising efficiency improvements), but after a period of time these gains are shared with consumers, consistent with the NGO.

## Envestra’s Submissions

1. Envestra submitted that the NMF satisfies the criteria in Rule 91 because it is a fee paid by Envestra to access the economies of scale, scope and other efficiencies of the APA Group and results in a cost lower than that which Envestra could achieve. These economies of scale, scope and other efficiencies are accessed through the 2007 OMA and are not otherwise available to Envestra.
2. Envestra submitted that, by accessing these economies of scale, scope and other efficiencies it achieves, after taking into account the NMF and Incentive Payments, lower costs of operating and maintaining its networks than would be achieved had it operated the networks itself. Therefore, Envestra submitted, the NMF and the Incentive Payments represent costs which would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.
3. Envestra further submitted that the AER did not produce any evidence that demonstrated, or even suggested, that the NMF and the Incentive Payments were not efficient costs or that demonstrated any error in the evidence submitted by Envestra.
4. The only evidence produced by the AER in respect of the NMF was the evidence of its independent consultant Wilson Cook, which concluded that the APA outsourcing arrangement provides Envestra with economies of scale that it would not be able to access on its own. Reports commissioned by Envestra concluded that the APA outsourcing arrangement results in costs lower than Envestra would incur if it operated the network itself.
5. Affidavits of Mr I Little, managing director of Envestra, and Mr P Cain, former company secretary and chief financial officer of Envestra, suggest that the commercial rationale for Envestra’s outsourcing structure is to enable it to achieve lower overall costs by accessing the economies of scale, scope and know-how of a significantly larger organisation.
6. In Envestra’s submission, the remuneration payable to APA under the 2007 OMA (and previously payable to OEAM under the 1997 OMA) was structured so as to provide incentives to the APA Group to reduce Envestra’s operating costs and promote increased network utilisation.
7. Under the 2007 OMA Envestra pays all costs and disbursements reasonably incurred or outlaid by APA in the performance of its obligations. The transparency of costs incurred under the 2007 OMA enables Envestra to determine whether costs have been reasonably incurred. If there is a dispute as to whether a cost has been reasonably incurred, clause 22 of the 2007 OMA enables Envestra to refer the dispute to independent expert dispute resolution.
8. Envestra submitted that the cost pass-through provisions under the 2007 OMA, and Envestra’s continual scrutiny of the costs it is charged, ensure that it automatically benefits from the economies of scale, scope and know-how available to the APA Group. That is, all cost efficiencies are immediately passed through to Envestra with the exception of the one-third cost reductions APA is permitted to retain via the Incentive Payments. This one-third cost reduction is retained for one year and then is also passed through to Envestra.
9. The NMF was set by reference to revenue so as to create an incentive for APA to promote network growth. Envestra submitted that the NMF represents payment to APA for three matters:
10. reimbursement of certain costs of APA under the agreement not recovered through the cost reimbursement provisions – for example costs of general management oversight of the agreement;
11. the margin payable to APA for operating the network;
12. an incentive to operate the network in a way which would increase Envestra’s revenue, for example by expanding the networks.
13. Envestra’s position is that all of the evidence put forward by it demonstrates that the 2007 OMA allows Envestra to achieve lower overall costs and achieve cost efficient outcomes, meaning that the 2007 OMA and the costs under it therefore meet the criteria in rule 91 of the NGR. Envestra submitted that the 2007 OMA also satisfies the NGO as it means that consumers pay lower costs than would otherwise be the case.
14. Envestra submitted that the evidence of its senior management shows that the outsourcing structure employed by Envestra since its inception was a fundamental element of its business strategy and was designed to ensure that Envestra acted as a low cost operator by accessing the economies of scale of a larger organisation.
15. The KPMG Report suggests that Envestra achieves lower costs through outsourcing to APA than if Envestra “insourced” the operation of its networks. The KPMG report estimates that in 2009 Envestra’s costs were $4.54 million lower than if Envestra had “insourced” its operations.
16. A report by Marksman Consulting Services concluded that Envestra South Australia’s cost performance is reasonable and consistent with industry averages.
17. The Economics Insights Report concluded that despite its operating environment conditions placing Envestra at a moderate disadvantage in comparisons of productivity levels, Envestra performs relatively well by almost matching the performance of the larger included like businesses.
18. The KPMG Report and the two benchmarking reports confirm that the commercial and economic logic for establishing Envestra’s outsourcing structure has been vindicated and that Envestra achieves lower overall costs than would have been achieved had Envestra operated as an in-house operator.
19. The NERA Report demonstrates that the margin payments Envestra makes to APA under the 2007 OMA to access the economies of scale and scope and know-how of the APA Group are consistent with those margins of comparable service providers. Envestra is therefore paying a price to access those efficiencies which is consistent with market prices and the price which would be paid by a prudent service provider acting efficiently to achieve the lowest sustainable cost of providing services.
20. Dr Hird of CEG set out the reasons why margins are commonplace in workably competitive markets and why such margins persist over the long term. The NERA Report demonstrates that margins are paid over the long term and for periods in excess of six years.
21. Envestra submitted that no material had been referred to by the AER that the 2007 OMA (or the 1997 OMA) reflects uncommercial terms, that Envestra agreed to a price which was not consistent with Rule 91 to obtain ancillary benefits, or that the existence of the 2007 OMA or the 1997 OMA denied consumers efficiencies which they would otherwise be able to access.

## Discussion

1. Several observations may be made at this point regarding outsourcing of operational management to APA, the operation of the OMA and the NMF. First, it is apparent, at least on the balance of probabilities, from that evidence provided by Envestra’s experts, and not contradicted by evidence from the AER, that it is cheaper for Envestra to pay APA to manage its networks, even taking into account the NMF. Second, it is apparent, at least on the balance of probabilities, that the costs incurred by APA in managing Envestra’s networks, including the NMF, are within industry standards and that APA is not earning an abnormally large margin on its operations. Third, it appears that APA may well not agree to manage Envestra’s networks without the payment of the NMF.
2. As with all components of a service provider’s operating expenditure, or indeed any component of claimed revenue, it is entirely appropriate for the AER to undertake a detailed analysis of whether the NMF is an efficient cost for the purposes of the NGL and NGR. The complaint by Envestra that its outsourcing agreement may have met the requirements for the first stage of the AER’s test, whether or not it is accepted, cannot form the basis of a ground of review.
3. It may be accepted that, as the AER submitted, it is impossible for the AER to undertake a detailed analysis of every component of a service provider’s proposed access arrangement. The NGR makes clear that the AER may adopt procedures designed to allow it to infer compliance with the NGR and NGL in such circumstances. Thus, there may be no complaint that the AER has designed a threshold test to decide which components of an access arrangement proposal it will devote time and effort to scrutinising.
4. The real issue in this proceeding is whether, having decided to investigate the NMF, the AER made a reviewable error in concluding that it was not an allowable cost.
5. The second stage of the test that the AER applied under its framework “directly permits margins to be recovered for a range of factors that are considered to be legitimate costs incurred by a contractor.” These include the contractor’s actual costs and a return on the physical assets of the contractor. The AER states, in the Final Decision, that “[c]ompensation can be provided (as part of the expenditure forecasts) for these matters in perpetuity, all else being equal.”
6. The AER submitted that the NMF, as a return on intangibles, is not a “legitimate” cost in this sense and is, therefore, not compensable. As the AER says in the Final Decision, “the framework does not explicitly allow compensation as a return of/on know-how or other intangibles.”
7. At the heart of the dispute, then, is whether the AER’s framework, and its application, is consistent with the NGL and NGR in the particular circumstances.
8. It is clear that the NMF is “operating expenditure” for the purposes of the NGR: NGR r 69. Rule 91 is the sole provision of the NGR governing the recoverability of operating expenditure. As already stated, it permits operating expenditure “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 delivering pipeline services”.
9. Even accepting that APA would not provide the management services without the NMF, that the management of the networks was done more efficiently by APA than could be done in house by Envestra and that the costs of operating the network were in line with industry standards, the AER submitted that the NMF was not an efficient cost for the purpose of rule 91 of the NGR.
10. The Tribunal does not accept that submission in the particular circumstances. The evidence before the AER and the Tribunal suggests that the NMF was a payment required to access the management services of APA. APA was able and willing to manage Envestra’s network at a lower cost than Envestra could itself. Such a cost is clearly one that would be incurred by a prudent service provider, acting efficiently. Leaving to one side circumstances in which a service provider was in some way trying to “game” the regulatory system (and there is no suggestion that that is the case here) it is not logical to suggest that a prudent service provider should or would choose a more expensive method of exploiting its capital base. If the AER’s approach were adopted, it may well lead to regulated service providers *not* outsourcing and, thus, increasing their operating expenditures. The AER, having disallowed the fee that provides access to outsourced management, would be hard-pressed to disallow the increased costs that would occur as a result.
11. Further, the balance of the evidence suggests that outsourcing is accepted industry practice and that the costs incurred by Envestra in the outsourcing agreement are consistent with industry standards. In those circumstances, it is inappropriate for the AER to maintain that the NMF is necessarily an inefficient cost and that it does not comply with rule 91. This implicit assumption on its part renders the decision to disallow the NMF unreasonable in all the circumstances.
12. Citing the NGO’s requirement of the promotion of efficiency in the long-term interest of consumers, the AER found that, while it may have been acceptable for Envestra to retain some of the benefits of the outsourcing arrangement initially, by now any benefits should be passed onto consumers in the form of lower prices. In the Tribunal’s view, there are two errors with this reasoning.
13. First, the NMF is not a one-off cost to improve the efficiency of the management of the network. It is a fee that must be paid every year in order to have access to the efficiencies offered by APA. If the NMF is required to be paid in one year in order to access the efficiencies provided by APA, unless circumstances change, the NMF will have to be paid in the following year, and the year after, in order to ensure APA continues to manage the network. APA may well refuse to operate the network if Envestra ceased paying the fee. In this sense, it is not appropriate to think of the NMF as a once-off efficiency improving mechanism.
14. Second, the benefits of the NMF are already passed through to consumers. Because the payment of the NMF allows the management of Envestra’s network to be done more efficiently, that is at a cost lower than if Envestra managed it in house, the total operating expenditure of Envestra is lower. It is this operating expenditure that forms the basis of Envestra’s regulatory allowance. The AER’s contention, in the Final Decision, that “achieving cost efficiencies (in Envestra’s case, by outsourcing) means that a firm’s costs will be lower relative to its regulatory allowance for the access arrangement period” may be accurate in some circumstances, but not in this case.
15. The cost efficiencies derived through the use of outsourcing are already reflected in Envestra’s operating costs. That is, because the NMF permits Envestra to operate its networks at lower cost than if done “inhouse”, its total operating costs will be lower. The AER will make its decision as to Envestra’s regulatory allowance on the basis of these lower costs. Therefore, it is not the case that Envestra’s costs will be lower than those used to calculate its regulatory allowance; the regulatory allowance will take into account the efficiency gains made by the use of the outsourcing agreement.
16. It was entirely appropriate for the AER to investigate and test the NMF. Indeed, it was its obligation to do so. The AER’s two stage test may well be an appropriate vehicle for this type of analysis. The error that the AER committed was in its assessment of the NMF as inefficient.

## Conclusion with respect to the NMF

1. Outsourcing management of its networks to APA allows Envestra to achieve lower operating costs than it could if it managed its network in house. There is no evidence that it would be possible for Envestra to outsource this management function for a lower cost or in the absence of the NMF.
2. Given the lowering of costs that results from the payment of the NMF, it should properly be classed, in the circumstances of this case, as an item of efficient operating expenditure, consistent with NGR r 91.
3. The Tribunal is persuaded that in respect of the NMF the AER fell into reviewable error. The finding that the NMF did not represent efficient operating expenditure on all the evidence may be categorised as a material error of fact, albeit a complex factual finding itself flowing from the two incorrect factual findings referred to in [261], [264] and [265] above. The conclusion of the AER may also be said to be unreasonable, so as to render its decision unreasonable, having regard to all the evidence and for the reasons already given.
4. Further, the AER’s conclusion that the NMF was an efficiency incentive and that Envestra should retain the benefits of it for only six years misunderstood the role of the NMF and the effect it had on the cost base used in the calculation of Envestra’s regulatory allowance. The AER has either made an error or errors of fact material to its decision, or the decision was unreasonable in all the circumstances: NGL ss 246(1)(a), (b) and (d).
5. Finally, the Tribunal considers it appropriate to indicate why it does not regard the decision in *Envestra Limited v Essential Services Commission of South Australia (No 2)* [2007] SADC 90 as significant to the NMF issue. In that case, Envestra complained unsuccessfully to the Administrative Appeals Division of the District Court of South Australia about the disallowance by the Essential Services Commission of South Australia of the 3% network management fee payable under the 1997 OMA. The Court at [195] noted that the Commission’s decision was driven by Envestra’s failure to “provide any evidence” that the NMF met the requirement of s 8.37 of the Gas Pipeline National Third Party Access Code requiring proof that the NMF:

… would have been incurred by a prudent Service Provider, acting efficiently, in accordance with accepted and good industry practice and to achieve the lowest sustainable cost of delivering the Reference Service.

1. The material before the Commission and the Court was restricted because BEAM had declined to provide detail of accounts and processes under the 1997 OMA. The Court therefore decided on “procedural grounds” that it could not form a view about whether s 8.37 was in fact satisfied because of the ongoing incomplete lack of relevant information: see at [214]-[218]. Clearly, the Court’s view was one based on the particular evidence or lack of it.

# unaccounted for gas

1. Envestra’s forecast operating expenditure under Rule 91(1) of the NGR includes the costs of Envestra recovering from its suppliers unaccounted for gas (UAG).
2. UAG is the difference between the amount of gas injected into the distribution network and the amount billed to customers. UAG arises due to metering error, heating value measurement, billing factors and leakage from pipes. Envestra purchases gas from a supplier to account for UAG. The AER has accepted Envestra’s forecast of prices of UAG but not the quantity of UAG forecast by Envestra.
3. In rejecting Envestra’s forecast quantity, the AER did not accept one component in the calculation of the quantity, namely Envestra’s forecast rate at which leakage from the distribution network is increasing (the network deterioration rate).
4. The network deterioration rate, for any given period, was determined by Envestra as follows:

NDR = GUAG + MRR

where NDR is the network deterioration rate

 GUAG is the rate of growth of unaccounted for gas over that period

 MRR is the rate of mains replacement over that period

The network deterioration rate as observed by Envestra from the data for the period 1999 to 2009 was 9%, being the sum of the GUAG of 5% and the MRR of 4%. This rate was used to forecast the quantity of UAG for the period 2011/12 to 2015/16, being the product of the level of UAG as at 2010/11 and the forecast network deterioration rate of 9%.

1. Both Envestra and the AER calculated UAG in the same manner except that each used a different network deterioration rate (9% v 4.74% - see below).

## The material before the AER and its decision

1. In its Access Arrangement Proposal, Envestra submitted that the network deterioration rate was 9%. This 9% represented a 5% increase in the rate of UAG plus a 4% rate of mains replacement. The analysis supporting these figures was set out in the “South Australian Networks – Mains Replacement Plan Version 1.0 July 2010” prepared by Envestra and the APA Group (MR Plan).
2. The MR Plan notes that analysis had concluded that 80% of UAG is associated with leakage from cast iron and unprotected steel mains. UAG trends in Adelaide were set out in the following graph in section 4.4.1 of the plan:

1. The vertical axis of this graph shows UAG (expressed in PJs – that is a volumetric measurement) and the horizontal axis the years 1999-2009.
2. Gas reticulation in Adelaide was converted from town gas to natural gas in 1969-1970. The dry nature of natural gas has resulted in leaks from cast iron mains joints whose seal was previously maintained by the moisture in town gas. It is estimated there are over 500,000 joints in the cast iron network that are vulnerable to leaking. As the majority of joints operate at low pressure (1.7-1.2 kPa), a small volume leak from a cast iron main joint may go unnoticed for many years.
3. The MR Plan also noted that leakage issues arise in respect of unprotected steel mains, although Envestra’s Access Arrangement Information noted that cast iron pipes are particularly susceptible to leakage. The MR Plan notes that the unprotected steel mains were laid in the 10 years following World War II without any external coating or cathodic protection.
4. The MR Plan concluded:

1. The annual increase in UAG appears to indicate that replacement rates are not keeping up with the rate of deterioration of these mains. The drought conditions experienced in Adelaide over the last 7 to 8 years is considered a contributing factor with the drying out of predominately clay soils causing soil movement resulting in cracks, breaks and stress on joints. The dry, cracked soil also presents an easier leak path to atmosphere.

2. There is strong “prima facie” case to suggest that the majority (80%) of UAG in SA is a result of leakage CI & UP mains. This assertion is made on the basis that:

* Comprehensive studies into alternative sources of UAG have failed to identify any credible alternative other than leaks from the network;
* Networks without CI & UPS mains have very low levels of UAG;
* Benchmarking against international UAG factors suggest that Adelaide’s UAG should only be 15% of the current figure, leaving 85% to be assigned to fugitive emissions;
* Actual measured average leak rates of 1600 GJ/km from abandoned CI mains are consistent with the 1100 GJ/km average derived from the 80% figure; and
* It is consistent with the drying nature of gas causing joint leaks. With approximately 500,000 joints within the CI network it is plausible that a minute leak from these joints could account for the suggested level of UAG. Minute leaks do not necessary accumulate in sufficient quantities to be noticed by the public or at levels or at locations that would be detected by leak surveys.

3. Based on UAG increasing at a rate of about 5% annually over the last 10 years and the inventory of CI & UPS main reducing by about 4% per year over this period the underlying deterioration of the CI & UPS network in Adelaide is considered to be 9%.

4. The underlying annual rate of deterioration in Mt Gambier is considered to be 6%.

5. The relatively high deterioration level in Adelaide suggests that the condition of the CI & UPS assets has reached the second point of inflection associated on the asset condition “bath tub” curve. This is the point where accelerated deterioration is experienced as the asset approaches the end of its life. The drought condition experience in Adelaide would have created additional stresses on CI mains as result of soil movement increasing the amount of leakage from the network.

1. In the Draft Decision, the AER did not accept Envestra’s forecast of the network deterioration rate. The AER adopted Wilson Cook’s recommendation of a lower deterioration rate for Envestra’s UAG forecast as set out in its report “Review of Expenditure of Queensland & South Australian Gas Distributors: Envestra Ltd (South Australia), December 2010”(Wilson Cook December Report).
2. The Wilson Cook December Report considered the UAG forecast levels proposed by Envestra. Wilson Cook stated it was not satisfied that the projected level of reduction in UAG was adequate. The leak report charts in the MR Plan showed a decrease in leak reports from planned survey reports since 2005. The MR Plan was based on an historic trend of UAG increasing by approximately 5% a year, while there had been a 4% reduction in the amount of deteriorating pipes, leading to an implied deterioration rate of 9.4% per annum (1.05 x ((100/96)-1)). Wilson Cook noted that this rate of deterioration over five years was equivalent to about a 50% increase in leakage rates over the period. Wilson Cook found it difficult to accept that such a rate of increase would be sustained over the period. It also found that, despite some prioritisation issues that Envestra might face, there ought to be some favourable impact on the average rate of leakage from the old pipes as the mains replacement program proceeds.
3. Wilson Cook calculated forecast levels of UAG on the basis of an implied deterioration rate of 9.4% per annum and also calculated forecast levels of UAG on the basis of a deterioration rate of 0% per annum – in other words, assumed the old pipes were still leaking but not at an increasing rate. Wilson Cook then took a midpoint between these two estimates to derive its estimate of the level of UAG in the next period.
4. On 2 May 2011, Wilson Cook provided an additional report (Wilson Cook May Report) in relation to capital and operating expenditure for Envestra's South Australian network. In that report, Wilson Cook considered the trend from 2005 until 2010 in UAG levels in absolute terms (TJ) and as a percentage of gas input. However, Wilson Cook noted that the calculations based on a percentage of input basis were affected by the reduction in gas throughput that occurred in the network during the same period. For that reason, Wilson Cook considered that a better analysis of UAG would be achieved by the direct assessment of gas volumes. Using that analysis, Wilson Cook found that UAG had experienced a small or probably nil rate of increase over the last three years.
5. Wilson Cook also considered that the replacement of old pipes could, if properly prioritised, reduce the average rate of increase in UAG on the remaining old pipes or possibly arrest it. Considering those factors in combination, Wilson Cook remained of the view that its use of the lower bound of zero was justified when the rate of deterioration in terms of the average UAG attributable to old pipes awaiting replacement was considered.
6. In the Final Decision, the AER considered that the estimated impact of the mains replacement program and the estimated pipe deterioration rate had not been arrived at on a reasonable basis. Applying rule 74 of the NGR, the AER decided that Envestra's volume estimate was not the best estimate possible in the circumstances.
7. The AER referred to the Wilson Cook May Report and stated that the AER considered the best estimate of UAG is achieved by directly assessing gas volumes rather than volumes as a percentage of gas input. The best estimate of UAG volumes can be derived by taking a bottom-up examination of matters directly influencing UAG levels – such as pipe condition and replacement efforts, as undertaken by Wilson Cook.
8. Wilson Cook's analysis derived a lower historic annual rate of increase in UAG volumes than claimed by Envestra. Further, the AER accepted Wilson Cook’s assessment that the replacement of old pipes could, if properly prioritised, reduce the rate of increase in UAG on the remaining old pipes or possibly arrest it.
9. On 23 June 2011, Envestra sent the AER a submission concerning the UAG issue. Envestra submitted that Wilson Cook erroneously used monthly gate station data instead of data which had been adjusted on the basis of subsequent meter readings and billing. Further, Envestra submitted that its analysis of the raw data shows an increase of 7% in UAG over the three-year period from August 2007 until July 2010.
10. On 25 June 2011, Wilson Cook sent an email to the AER responding to the points made by Envestra. Wilson Cook agreed that it used the raw data provided by Envestra. It could not say what effect that data had on its analysis. Wilson Cook did not agree that its trend analysis was incorrect. Wilson Cook said that a detailed explanation could be provided if required.
11. Wilson Cook noted that its rejection of the rate of 9.4% was largely made on the basis that the rate implied an increase in leakage of just under 50% over a five-year period, an increase which it considered unlikely (although it took this figure as the upper bound in its calculations). Further the assumption of a mid point in the range is the conventional method of determining the value when there is incomplete knowledge of the situation.
12. On 30 June 2011, there was a phone conference between the AER, Envestra and Wilson Cook. In the course of that conference, Envestra said that 36 months of the data was raw and required further adjustment but Envestra accepted that such adjustment would not have a material impact. Envestra said that it would not challenge this aspect of Wilson Cook’s analysis.
13. On 4 July 2011, Envestra sent the AER an email containing a note concerning UAG volumes. Envestra had determined, based on its linear trend analysis, that the rate of change in UAG over the past five years and three years was 6% and 6.5% respectively. Envestra submitted that those rates of change, when combined with the actual rate of mains replacement of 5%, showed deterioration rates of 11% and 11.5% respectively.
14. On 4 July 2011, Wilson Cook sent two emails to the AER. The first email noted that, after further examination, it still found no reason to change its advice to the AER on this matter. The second email was sent after reviewing Envestra's further note to the AER. Wilson Cook said that it did not miscalculate when placing a 0% lower bound as that bound was not solely determined by its assessment of the UAG trend. In making its assessment of that trend, Wilson Cook maintained that it did not overemphasise just two data points. It had been suggested by Envestra that Wilson Cook’s assessment may have been taken by simply drawing a trend line between two data points. This would have entailed ignoring the many other observations that occurred between these two points and thus a less than accurate estimation of the trend. Wilson Cook denied that it used this technique.
15. On 5 July 2011, Envestra wrote to the AER expressing its concern with how Wilson Cook had dealt with the UAG issue. On the same day, the AER replied noting that all of the material was passed onto Wilson Cook for review. Wilson Cook had advised that its reports and conclusions remain unaltered by the correspondence received from Envestra.
16. On 7 July 2011, the AER adopted Wilson Cook’s mid-point estimate and gave effect to its own access arrangement for Envestra with respect to South Australia.

## Envestra’s submissions

1. Envestra seeks a review of the AER’s UAG volume decision on the basis that the exercise of the AER’s discretion in making the UAG volume decision was incorrect and/or unreasonable having regard to all of the circumstances and/or alternatively the AER made an error or errors of fact in its findings of fact which alone or in combination were material to its decision.
2. By way of overview, Envestra submitted that the UAG volume decision was in error for four reasons.
3. First, the AER incorrectly or unreasonably rejected Envestra’s estimates of UAG volumes.
4. Second, the AER relied on what was in Envestra’s submission an incorrect assessment by Wilson Cook of Envestra’s UAG volumes in the Wilson Cook May Report, which reliance resulted in the AER’s rejection of Envestra’s proposed network deterioration rate of 9% (and consequently Envestra’s proposed UAG volumes).
5. Third, the AER failed to provide to Envestra the calculations underpinning the trend analysis undertaken by Wilson Cook which resulted in Envestra being unable to replicate the analysis. Consequently, in Envestra’s submission, the AER failed to afford Envestra procedural fairness in respect of the new analysis in the Wilson Cook May Report that it relied upon.
6. Fourth, Envestra submitted the AER’s UAG volume decision also involved a number of errors of fact which were material to the UAG volume decision.
7. Envestra submitted that the methodology used by Wilson Cook, specifically, the use of a lower bound for the rate of UAG increase of 0% was in error, and that the AER’s reliance on the use of that lower bound was in error. Envestra submitted that the figure of 0% was not supported by the data relating to UAG volumes in the distribution network. Further, this figure was contrary to the views of the independent regulators Essential Services Commission of South Australia and the Office of the Technical Regulator and no explanation was provided as to why the views of these bodies were incorrect. Envestra submitted that the figure is illogical as it assumes that old network pipes do not deteriorate, an assumption that has no basis and that no evidence or reasoning was provided for Wilson Cook’s statement that mains replacement properly prioritised could arrest the rates of increase of UAG (GUAG) below the rates forecast by Envestra.
8. Envestra submitted that, for these reasons, the reliance by the AER on the Wilson Cook analysis was unreasonable and/or an incorrect exercise of discretion.
9. Envestra further submitted that the decision was also affected by material errors of fact being that the data supported a conclusion of a zero GUAG, that old pipes do not deteriorate and that the GUAG could be arrested (below the rates forecast by Envestra) by proper prioritisation of the mains replacement program.
10. Envestra denied that Wilson Cook was correct in stating that there was a zero rate of increase in UAG levels, but says that, even if they were correct, the method by which Wilson Cook, and the AER in adopting Wilson Cook’s analysis, determined the lower bound for the purposes of estimating UAG was in error.
11. The forecast of UAG volumes by Wilson Cook was based on the mid point of the upper and lower bound forecasts of deterioration rates. The upper bound which was adopted by Wilson Cook was 9.48%. Wilson Cook arrived at this upper bound on the basis of (1.05 \* 100/96-1) which is a more precise expression of the formula *NDR = GUAG + MRR*. The rate of growth of UAG used by Wilson Cook in obtaining the upper bound was 5% and the rate of mains replacement was 4%. (This was consistent with Envestra’s methodology, but Wilson Cook’s calculation was arithmetically undertaken more precisely and resulted in a deterioration rate of 9.48% versus Envestra’s rounded rate of 9%). The lower bound used by Wilson Cook was 0%, that is, a deterioration rate of nil.
12. Wilson Cook concluded that there has been a “small to probably nil” growth rate in UAG in the previous three years. Applying this to the formula, *NDR = GUAG + MRR* results in:

NDR = 0% + 4% = 4%.

1. Envestra submitted that the use of a 0% lower bound by Wilson Cook for the deterioration rate implied that Wilson Cook either determined that the rate of mains replacement was 0% or did not apply the formula which was used to determine the upper bound. Envestra submitted that, for these reasons, Wilson Cook’s approach is internally inconsistent in using different rates to determine the upper and lower bounds.
2. Envestra submitted that Wilson Cook incorrectly concluded that Envestra had analysed UAG as a percentage of throughput rather than by direct assessment of gas volumes. The analysis in the MRP, and all of Envestra’s subsequent analysis is based upon gas volumes. The vertical axis of each graph in section 4 of the MRP shows gas volumes (either in PJ or in TJ).
3. In making the Final Decision, the AER relied on Wilson Cook’s conclusion regarding Envestra’s analysis, concluding that “the best estimate of UAG is achieved by directly assessing gas volumes rather than volumes as a percentage of gas input, as done by Envestra.” This conclusion, in Envestra’s submission, was affected by a material error of fact – that is that Envestra’s analysis was done as a percentage of gas input.
4. The AER erred, in Envestra’s submission, in relying on the Wilson Cook May Report in that Wilson Cook incorrectly used raw monthly gate station data in undertaking its analysis of UAG volumes. The raw data used by Wilson Cook did not contain subsequent meter reading and billing adjustments that are made before UAG data is published by the Australian Energy Market Operator and used for commercial settlement purposes.
5. The raw data is therefore, in Envestra’s submission, not appropriate data to use to analyse UAG levels as it is not used by the Australian Energy Market Operator, Envestra or industry participants to determine UAG levels. Envestra submitted that the use of raw data does not result in forecasts or estimates arrived at on a reasonable basis and which represent the best forecast or estimate possible in the circumstances and consequently does not comply with Rule 74 of the NGR.
6. In its report of May 2011, Wilson Cook concluded that UAG had displayed “only a small or probably nil rate of increase over the last 3 years” on the basis of a direct assessment of gas volumes. This analysis by Wilson Cook was plotted in Figure 1 of the Wilson Cook May Report. The AER did not provide Envestra with the underlying data for Figure 1. However Envestra attempted to replicate Wilson Cook’s analysis (using the raw data which Envestra understands was used by Wilson Cook in its analysis) to achieve a “nil” growth rate.
7. As mentioned above, in attempting to replicate Wilson Cook’s analysis, Envestra found that a nil growth rate could only be achieved by a comparison of two data points, namely July 2010 and August 2007.
8. Envestra submitted that, if Wilson Cook did determine the “small or probably nil rate of increase” in UAG over the last three years by a comparison of these two data points in order to discern a trend for UAG volumes, then that methodology was not in accordance with accepted methodologies for determining linear trends of growth rates. Such a comparison of only two data points omitted 34 data points from the analysis, namely the data for the months between August 2007 and July 2010.
9. The AER relied on Wilson Cook’s analysis of UAG volumes, including the analysis undertaken by Wilson Cook, which analysis concluded there was a “small or probably nil rate of increase over the last 3 years”. Envestra submitted that the use of only two data points does not involve making a forecast or estimate on a reasonable basis and does not represent the best forecast or estimate possible in the circumstances and consequently does not comply with Rule 74 of the NGR. Further, Envestra submitted, the raw data supports a rate of UAG growth of 7%.
10. It is Envestra’s submission that the reliance by the AER on Wilson Cook’s analysis, which analysis used inappropriate raw data and an incorrect trend analysis, led to the AER making a material error of fact in that the AER wrongly concluded that the historic rate of increase in UAG levels was lower than that determined by Envestra.
11. Generally, Envestra submitted that it was an incorrect exercise of the AER’s discretion and/or unreasonable to reject the level of UAG increase as forecast by Envestra. Envestra’s estimate was based upon actual UAG volumes as determined by the Australian Energy Market Operator and its conclusions were consistent with those of the Essential Services Commission of South Australia and the Office of the Technical Regulator.
12. No evidence was put forward by the AER or Wilson Cook that the data relied upon by Envestra was in error. Envestra submitted that the AER and Wilson Cook incorrectly dismissed Envestra’s data analysis on the basis it was undertaken on a ‘percentage of input’ basis and otherwise did not critique Envestra’s analysis of the data. Further the upper bound estimate used by Wilson Cook was determined on the basis of Envestra’s analysis of the historic UAG data.
13. Envestra submitted also that the AER failed to afford Envestra procedural fairness in respect of Wilson Cook’s trend analysis in the Wilson Cook May Report. The AER did not provide Envestra with the calculations which underpinned Wilson Cook’s analysis. Consequently Envestra was unable to replicate that analysis in order to test its accuracy and robustness. Envestra submitted that a failure by the AER to afford procedural fairness is encompassed within or is an element of the ground for review which is set out in section 246(1) (c) or (d) of the NGL. Although Envestra sought to replicate Wilson Cook’s analysis of the trend rate, it was unable to address the specific details of the case made against it in the form of Wilson Cook’s analysis of UAG trends. Further the Wilson Cook May Report was only provided to Envestra on 7 June 2011 leaving it insufficient time to respond to that report prior to the release of the Final Decision on 17 June 2011.

## Discussion

1. The crucial issue in this matter is whether it was reasonable for the AER to accept Wilson Cook’s analysis that used a lower bound of GUAG of 0% and, in doing so, to reject Envestra’s submissions as to the proper amount of allowable UAG.
2. Two minor issues may be dealt with first. First, whether Wilson Cook concluded that Envestra’s analysis of UAG was done on the basis of a percentage of throughput rather than by a direct assessment of volumes. Secondly, whether the AER erred in accepting Wilson Cook’s analysis based on raw monthly gate station data.

### Volumetric and percentage analyses

1. In its Final Decision, the AER, adopting Wilson Cook’s advice, said that:

the best estimate of UAG is achieved by directly assessing gas volumes rather than volumes as a percentage of gas input, as done by Envestra – such analysis would be affected by changes in gas throughput (demand) which would influence these percentages and therefore they would not be a direct reflection of changes in UAG.

1. Envestra submitted that this statement is predicated on the AER’s belief that Envestra undertook its analysis on the basis of percentages of gas input, when in fact it did not. The AER submitted that it did not adopt such a belief, but rather acknowledged that Envestra had undertaken its analysis based on volume.
2. The AER submitted that an accurate reading of the quoted section conveys the meaning that the AER contends for. This approach was supported by reference to the Draft Decision, where the AER stated:

Wilson Cook considered it appropriate to analyse the issue in pure volume terms and not percentage terms. The AER notes that this is how UAG volumes were proposed by Envestra.

1. In the AER’s submission, this shows that the AER accepted the methodology used by Envestra. This submission should be accepted.
2. It is clear from the figures in the material that Envestra submitted to the AER that the analyses were undertaken on a volumetric basis. The Draft Decision clearly accepts this. While the language used in the Final Decision is not entirely unambiguous, read in the context of Envestra’s submission to the AER and the Draft Decision, it appears likely that the AER did continue to accept that Envestra’s analyses were undertaken on a volumetric basis. This view is strengthened by the absence of any mention in the Final Decision of a deviation from the earlier stated acceptance.

### Raw monthly gate station data

1. The Wilson Cook May Report used raw monthly gate station data in its analysis of UAG volumes. The raw data used by Wilson Cook does not contain subsequent meter reading and billing adjustments that are made before UAG data is published by the Australian Energy Market Operator and used for commercial settlement purposes. Envestra claimed that this results in forecasts or estimates that are not arrived at on a reasonable basis and which accordingly do not represent the best forecast or estimate possible in the circumstances and consequently does not comply with Rule 74 of the NGR.
2. The AER noted that in correspondence with it on 30 June 2011, following the Final Decision, but before the AER gave effect to the Final Decision, Envestra raised the issue of the use of raw monthly gate station data, but accepted that adjusting the data in the way Envestra proposed would not have a material impact. Further, Envestra said that it would not challenge this aspect of Wilson Cook’s analysis.
3. It may be accepted that, even if it were appropriate to use Envestra’s proposed data, the difference in predicted UAG volumes would not be material.
4. The AER sought to rely on s258 (2) of the NGL to prevent Envestra from pursuing this aspect of its claim. Section 258(2) provides that:

A party (other than the original decision maker) to a review under this

Division may not raise any matter that was not raised in submissions in

relation to the reviewable regulatory decision before that decision was made.

1. Envestra raised its concern with the use of the raw monthly gate station data on at least three separate occasions before the reviewable regulatory decision, being the decision to give effect to the Final Decision. It cannot be said that, because Envestra conceded that the impact of the proposed change in data would be minimal, that Envestra had not raised the matter. Further, the fact that Envestra may have said that it would not further challenge the use of the data, does not mean that the matter was not raised.

### Zero lower bound

1. Wilson Cook in its reports to the AER forecast UAG volumes on the basis of a network deterioration rate that was an average between Envestra’s submitted rate and zero. This was, in Envestra’s submission, a critical error. At the heart of Envestra’s submission was that it was not reasonable to assume a network deterioration rate of zero. Before the correctness of this proposition can be assessed an understanding of what the network deterioration rate is, and represents, must be obtained.
2. The network deterioration rate is the rate of increase in unaccounted for gas, were there to be no mains replacement program. This is, necessarily, a derived figure, as there is, at least in this case, a mains replacement program that replaces leaking and deteriorating pipes with new ones. There is no substantial controversy between the parties as to how the network deterioration rate should be calculated, and it is valuable to set it out:

NDR = (1+GUAG)\*(1/(1-MRR))-1

1. Here, MRR is the mains replacement rate and GUAG is the growth in unaccounted for gas escaping from *old* (i.e. non-replaced) pipelines. It is immediately apparent that if there is no mains replacement, the network deterioration rate is the same as the growth in unaccounted for gas.
2. In its submissions to the AER, and before the AER, Envestra agitated for an NDR of 9%. Wilson Cook advocated using an average of 9.4% and zero. It is worth observing what a network deterioration rate of zero implies. It is accepted by both parties that the mains replacement rate will be 4%. Thus, the only variable is the growth in unaccounted for gas of the remaining, non-replaced, pipes. If an NDR of zero is assumed, this implies growth in unaccounted for gas of -4% or, more generally –MRR.
3. Envestra submitted that it would be illogical to conclude that the growth in unaccounted for gas could be zero or negative because this would require the existing remaining pipes not to deteriorate at all. This submission is incorrect. What it requires is that the average amount of unaccounted for gas, per unit of pipeline, be the same or less, following the mains replacement program. This is entirely possible if the mains replacement plan were to replace especially leaky pipelines at a rate fast enough to offset the deterioration in the non-replaced pipes.
4. As Wilson Cook stated in its report, a well-targeted mains replacement plan that replaced the leakiest pipes first could well reduce the average volume of gas leaking from the remaining old pipes, even allowing for deterioration in these pipes.
5. Given that there is no logical reason for assuming a zero lower bound is impossible, the question becomes whether the estimate of UAG that Wilson Cook derived and the AER accepted was supported by the evidence available to Wilson Cook and the AER.

### UAG Estimate

1. It was submitted by Envestra that the selection of the lower bound, being zero, by Wilson Cook was arbitrary as it was not supported by any evidence. This is not the case. The analysis of gas volumes over the past three years, set out in the Wilson Cook May Report, does support a zero rate of increase in UAG. While this is not the same as a zero rate of deterioration, it lends weight to the choice of a lower bound of zero for the NDR.
2. It may fairly be said that a more reasoned explanation for the choice of a zero lower bound for NDR would be desirable. But it is not the case that it is unsupported by any evidence.
3. The MR Plan proposes the replacement of 1,072km of pipeline over the period 2011/12 to 2015/16, an average of approximately 250km per year. In the period between 2003 and 2009 this rate was less than 100km per year and often closer to 50km per year. The MR Plan plots the volume of UAG and the rate of mains replacement across time. It is immediately apparent that when, in 2003, the MR Plan was drastically reduced, the UAG volumes began to increase rapidly. In the period from 1999 to 2003 they had been roughly steady or falling.
4. It may reasonably be assumed that the rate of increase in UAG volumes is a result of the relatively low rate of mains replacement seen in the period from 2003 to 2009. When this rate is increased to 250km per year, a fourfold increase and the highest rate since at least 1999, one would expect the rate of UAG growth to fall substantially. It is, therefore, reasonable to assume that GUAG will be close to zero in the regulatory period, if the rate of mains replacement is as forecast and planned by Envestra.
5. It is worth noting that the substantial reduction in the mains replacement rate seen since 2003 appears to have been a commercially motivated decision. That is, it was decided to reduce the rate of mains replacement when it was noted by Envestra that UAG volumes were falling faster than anticipated in 2003.
6. The MR Plan’s predicted replacement of 250km per year of pipelines equates to replacing approximately 3.3% of the network each year. If this is taken as correct, Wilson Cook’s predicted NDR of 4.74%, being the average of zero and 9.48%, implies that the growth in unaccounted for gas volumes will be approximately 1.28%. This is not an unrealistic result when the decreases in UAG volumes seen in the period of high mains replacement rates prior to 2003 are observed.
7. The AER’s acceptance of the Wilson Cook analysis is reasonable and is supported by the facts.
8. The Tribunal noted above Envestra’s complaint that Wilson Cook and the AER had not provided to it the method used in obtaining its trend growth of UAG of approximately zero. It submitted that it was unable to replicate this result other than by using a very crude method using only two data points. The failure to provide in a timely manner or at all the methodology constituted, according to Envestra, a denial of procedural fairness. This submission should not be accepted.
9. The AER provided Envestra with the reasoning on which its decision was based. It set out that a zero lower bound was used. Envestra had the opportunity to challenge this aspect of the reasoning and did so. The failure to provide the methodology did not restrict Envestra’s ability to present its case and to advocate for the value of GUAG it viewed as correct.
10. Accordingly, the Tribunal is not persuaded that in respect of the UAG issue, the AER fell into reviewable error.

# conclusion

1. The AER’s decision to reject sole reliance on the EBV and to determine the DRP based on an average of the APA bond and the EBV amounts to reviewable error. For the reasons given above, the Tribunal proposes to vary the Access Arrangement Decision by substituting for the DRP rate there specified the rate of 4.67%.
2. The AER’s decision with respect to the MRP was supported by a large body of evidence. Envestra’s submissions and supporting evidence, in the Tribunal’s view, invited the Tribunal to substitute its preferred view of the evidence for that of the AER’s. Envestra has been unable to make out any of the available grounds for review and, for this reason, its challenge to the AER’s MRP decision should fail.
3. The AER refused to approve Envestra’s NMF proposal. It did so on the basis that it considered the NMF not to be an efficient cost. The evidence provided by Envestra to the AER that was before the Tribunal suggested that the payment of the NMF allowed Envestra to have access to a provider of operations and management services that allowed it to reduce its overall operating expenditure. Further, there was no evidence to suggest that the NMF was outside of normal industry practice. For the reasons given, in the circumstances, the AER conclusion that the NMF was not an efficient cost involved reviewable error.
4. The AER did not accept Envestra’s forecast of UAG. The principal ground of contention was the rate of deterioration of existing pipes. The AER adopted an analysis performed by Wilson Cook in deciding on the UAG volume it would allow. Wilson Cook did not accept the GUAG proposed by Envestra on the ground that it viewed the rate of deterioration used by Envestra as excessive. Wilson Cook and, by extension, the AER chose a value of GUAG that was the midpoint between the GUAG estimate obtained by using Envestra’s NDR and that obtained using an NDR of zero. Both the choice of lower bound and the overall value of GUAG obtained by this method were supported, or supportable, by the evidence before the AER and Wilson Cook. Envestra was unable to make out any ground of review.
5. The AER’s task in assessing an access arrangement proposal is burdensome, requiring lengthy consideration and detailed analysis of many complex issues. The information asymmetry between the regulated entity and the AER add to the burden, as do time constraints. The issues before the Tribunal in this matter suggest that while some issues (such as the NMF and UAG issues) are peculiar to a particular regulated entity, others (such as the DRP and MRP) will be common to a number of regulated entities across a number of industries. As noted above, one way to relieve the AER's burden would be for it to determine, at least at a general level, an alternative methodology to determine DRP and MRP by appropriate consultation with the regulated entities and other interested parties. The AER may then be able to address the DRP and MRP issues in relation to particular requested entities, by reference to the issues peculiar to a particular regulated entity in consultation with that entity. This in turn might, perhaps, reduce the incidence of regulated entities “cherry picking” those issues to bring before the Tribunal for review. Of course, an aspect of an issue such as the appropriate DRP may be time-specific to a particular regulated entity and hotly debated. But if those aspects common to all regulated entities have been determined in advance as suggested above, an aspect peculiar to a particular entity may be better resolved by dialogue between the entity and the regulator because more time would be available for that dialogue.

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| I certify that the preceding three hundred and fifty-nine (359) numbered paragraphs are a true copy of the Reasons for Decision herein of the Honourable Justice Mansfield (President), Mr R Davey and Professor D Round. |

Associate:

Dated: 11 January 2012