

28 March 2007

# Outsourcing by regulated businesses Envestra

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## Executive Summary

### Assessing outsourcing contracts under the Gas Code

1. Under the Gas Code, regulators are required to have regard to the prudence and efficiency of costs incurred by the service provider. The relevant overarching test for operating expenditure is set out in section 8.37 which states that:
 

A Reference Tariff may provide for the recovery of all Non Capital Costs (or forecast Non Capital Costs, as relevant) except for any such costs that would not be 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.
2. The overarching test for capital expenditure is set out in section 8.16(a)(i) of the Gas Code, which states that the capital base may be increased by the actual value of the capital expenditure incurred (or forecast to be incurred) provided that:
 

that amount does not exceed the amount that would be invested by a prudent Service Provider acting efficiently, in accordance with accepted good industry practice, and to achieve the lowest sustainable cost of providing Services;...
3. For the purposes of this report, I have used the term ‘prudently incurred costs’ as a short hand for costs that would meet these criteria and would therefore be recoverable under sections 8.37 and 8.16(a)(i). The analysis in this report describes how I believe the economic content of these sections can be applied, it is not intended to provide legal advice.
4. A sufficient condition for costs to be ‘prudently incurred’ is that the service provider, acting reasonably, believed that no alternative course of action would result in lower expected costs of sustainably providing the service. In the context of outsourcing arrangements, costs will be prudently incurred if the business reasonably believed the outsourcing arrangement would, over the relevant time horizon, lower expected costs relative to providing the service in-house (or through an alternative contractor).
5. If it can be demonstrated that an alternative to the contract would have delivered lower costs, and this outcome should reasonably have been expected by the service provider, then some part of the contract costs may not have been ‘prudently incurred’. In these circumstances, there may be a case for not allowing recovery of that part of the contract price that is deemed to have been imprudently or inefficiently incurred.
6. Before any part of the contract costs are excluded, however, a thorough examination of the contractor’s economic costs, including a margin, will generally have to be undertaken. (In this report I refer to a ‘margin’ as a payment in excess of the direct expenses incurred by the contractor in fulfilling the contract.) Consideration will need to be given to the economies of scale, economies of scope and other synergies available to the contractor but not otherwise available to the service provider (or an alternative contractor). That is, the total contract price should be compared with what would

otherwise have been payable if the service provider had continued to provide the services in-house (or had engaged an alternative contractor).

## **ESC assessment framework**

7. In Consultation Paper No. 2 the Essential Services Commission ('ESC') signalled that it within the 2008-2012 Gas Access Arrangement Review ('GAAR') it would be undertaking a detailed examination of outsourcing contracts on a case by case basis with a view to:
  - ascertaining whether the provision of services was subject to full market testing through an open tender process;
  - determining how the costs incurred under the contract compare with the cost of similar arrangements elsewhere;
  - identifying the incentive arrangements within the contracts and establishing whether they provide incentives for cost reductions and for the reductions to ultimately be shared with customers; and
  - examining the level and nature of other fees and associated payments made between the parties.
8. The items listed above provide a useful summary of the facts that will be considered by the ESC. However, the discussion paper does not define the ultimate question that these facts would help answer. Similarly, the discussion paper does not provide a description of the framework within which these facts would be used - including the weight that would be given to each. For example, it is unclear what will occur if the ESC concludes that the provision of services was not subject to full market testing through an open tender process.
9. Similar outsourcing issues were considered by the ESC in the context of the 2006-2010 Electricity Distribution Pricing Review ('EDPR') and, in that process, the ESC developed a more detailed evaluation framework. While it is unclear at this stage whether the ESC intends to adopt the same framework in the 2008-2012 GAAR, the ESC's analysis in the 2006-2010 EDPR provides a useful starting point for consideration of the issues surrounding outsourcing arrangements.

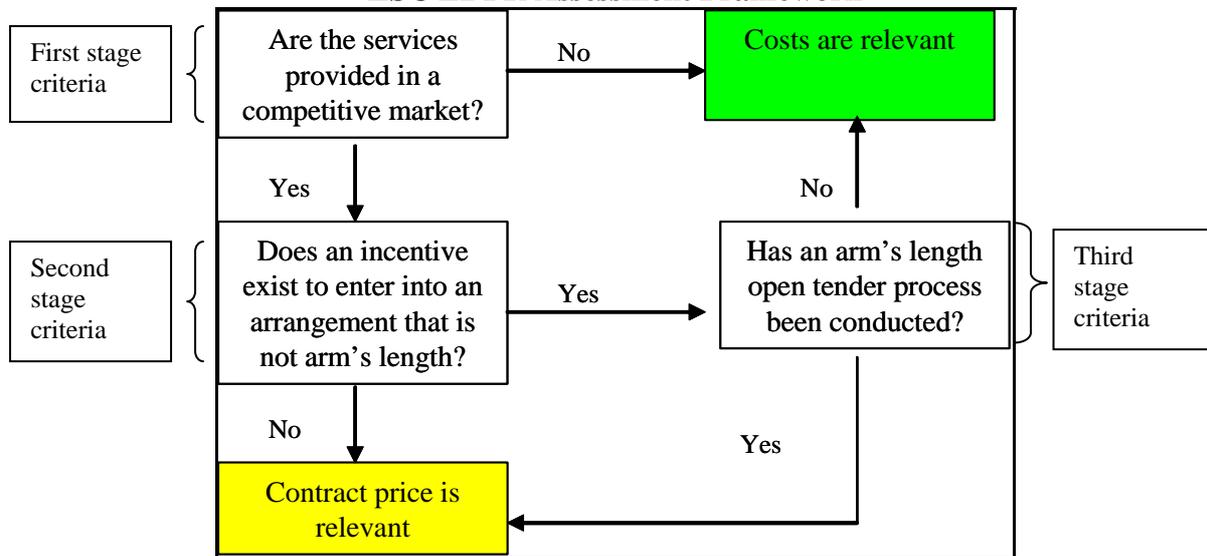
### ***ESC 2006-2010 EDPR evaluation framework***

10. Within the 2006-2010 EDPR the ESC adopted the following evaluation framework to assess the operating, maintenance and capital expenditure outsourcing contracts entered into by electricity distributors.<sup>1</sup> For explanatory purposes I have included the first stage, second stage and third stage criteria flags.

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<sup>1</sup> 23 November Victorian ESC open letter to stakeholders EDPR 2006-10 Final Decision: Notice of Errata.

**Figure 1.1:  
ESC EDPR Assessment Framework**



***What happens once ‘costs are relevant’***

11. While this framework provides some clarity in the manner by which contracts are assigned to either of the two coloured boxes, there is some uncertainty surrounding exactly what happens after a contract enters the ‘costs are relevant’ box. Specifically, it is unclear whether ‘costs are relevant’ means:

The contractor’s costs are relevant to determining whether the contract was prudently entered into

*Versus*

The service provider can only recover the contractor’s (direct) costs (even if the overall contract payments are higher than the contractor’s (direct) costs)

12. In my opinion, the interpretation on the left hand side is the only one that is consistent with the Gas Code. The ESC’s test would be flawed if the interpretation on the right hand side were applied.<sup>2</sup> This interpretation would mean that even if the overall contract price was better than any available alternative, the service provider would often not be able to recover the contract price.<sup>3</sup> The appropriate test, as noted above, is whether the contract was reasonably expected to reduce the expected costs relative to the next best alternative.
13. In my opinion, this stage of the framework should involve a detailed assessment of whether the contract would have been entered into by a prudent service provider acting efficiently, in accordance with accepted and good industry practice, and to achieve the

<sup>2</sup> Of course, if the contractor’s ‘cost’ is defined to be equal to the contractor’s price whenever a contract was prudently entered into then this approach would be equivalent to my proposed approach. As discussed below, a contractor’s margin in excess of expenses may well be categorised as a contractor’s ‘cost’.

<sup>3</sup> One semantic way to avoid this result is to define the contractor’s ‘costs’ as equal to the contractor’s price whenever the contract was prudently entered into (as discussed below). However, this is simply another way of proposing my test.

lowest sustainable cost of delivering the service. The contractor's costs, along with other evidence, will be an important factor in this assessment. However, the contractor's costs will be neither determinative of, nor synonymous with 'prudently incurred costs' as per section 8.37 and 8.16(a)(i).

14. The assessment process that could be employed at this stage would likely involve separately examining:
  - The structure of the contract entered into by the service provider. (For example, does it give an incentive for the contractor to lower costs and are these passed on to the service provider? Does it give the service provider control over expenditure?);
  - The magnitude of total costs incurred under the contract relative to what would otherwise have been incurred if the services were provided in-house or by an alternative contractor. Relevant factors and evidence to consider in this regard may include:
    - a comparison between the level of costs with outsourcing costs and level of pre-outsourcing costs;
    - benchmarking contract payments against other comparable contract payments;
    - benchmarking the service provider's total costs against the total cost of other similar service providers (this evidence will be most relevant where the contract accounts for a substantial proportion of the service provider's total costs); and
    - an examination of the size of any 'margin' paid under the contract relative to the margins being earned by comparable contractors.
  - The probabilistic nature of costs incurred by the contractor (eg, are there factors that might lead the contractor's costs today to be different to what was expected at the time the contract payment was agreed).
15. At this point it must be noted that prudently incurred outsourcing contracts **will** generally include a margin on the contractor's directly incurred costs. Payment of such margins are consistent with predictions of economic theory and with observed good industry practice. The existence of such margins reflect:
  - the contractor's ability to provide the service at a lower cost than the purchaser could obtain elsewhere (eg, a return to the 'know how' of the contractor);
  - the required return on and return of physical and intangible assets employed by the contractor in the provision of the service;
  - efficiencies on the part of the contractor over the life of the contract (eg, where the contract allows some part of these to be retained by the contractor);
  - the allowance required to meet the contractor's common costs; and
  - the allowance required to self insure against the asymmetric risks faced by the contractor.

16. The benchmark study of comparable infrastructure contract providers I have undertaken indicates that these companies earn positive Earnings Before Interest and Tax ('EBIT') margins. This is commercial evidence which demonstrates that outsourcing contracts negotiated in competitive markets have positive margins.

#### *Utility of the 'Competitive market' test*

17. In its current form the 'competitive market' test applies equally to contracts entered into on an arm's length basis and contracts entered into by related parties. Arm's length contracts entered into with monopolists should not be subject to greater scrutiny than other arm's length contracts. That is, service providers who happen, through no fault of their own, to face monopoly providers of inputs should not be further penalised by having payments to those suppliers under increased threat of non-recovery.
18. Given the overarching objective of this framework is to prevent transfer pricing between related parties, these concerns could be allayed by simply relying only on the arm's length and open tender criteria set out in the second and third stages of the framework and removing the 'competitive market' test.

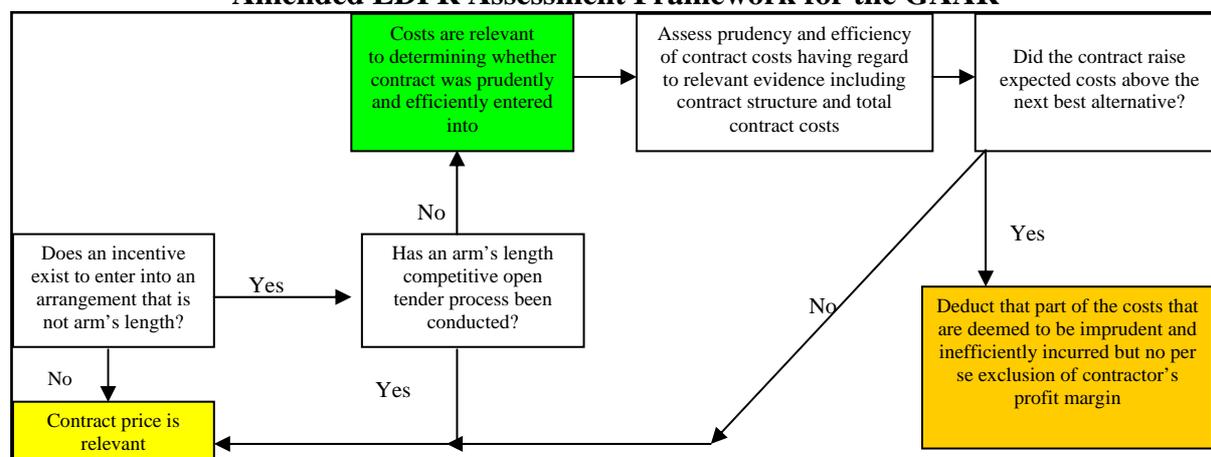
#### *Reliance on open tenders*

19. The reliance placed on open tenders in the third stage of the evaluation framework is appropriate. However, it must be simultaneously acknowledged that open tenders will not always be efficient or result in optimal terms and conditions. I note that the requirement for local councils to conduct compulsory competitive tendering has been abolished in Victoria, the EU and the United Kingdom. Closer to home, the Australian Energy Regulator ('AER') has recently been advised by its consultant that requiring competitive tendering of maintenance operations would not lower costs, in part, because of the small number of potential tenderers. The AER accepted this advice in the 2006 Draft Powerlink Decision and reached the conclusion that commercially negotiated supply arrangements were prudent. The lack of an open tender for services **does not** therefore suggest impropriety in the negotiation of contracts.

#### *Suggested amendments to the EDPR framework*

20. Based on the foregoing, the following amended framework has been developed which contains the amendments I consider should be made to the EDPR framework if it is to be applied in the context of the ESC's 2008-2012 GAAR.

**Figure 1.2:**  
**Amended EDPR Assessment Framework for the GAAR**



## Application of the framework to Envestra's Operating and Management Agreement

### *Structure of the contract*

21. Envestra's contract with Origin Energy Asset Management ('OEAM'), as it applies in Victoria, allows OEAM to recover:
  - all expenses it reasonably incurs in the provision of the service (including a return of capital but excluding a return on capital); plus
  - one third of the value of any annual real reductions in:
    - controllable costs per GJ; and
    - costs per connection of new customers; plus
  - a Network Management Fee ('NMF') equal to 3% of Envestra's network revenues.
22. In my opinion the structure of the Operating and Management Agreement ('OMA') is consistent with what one would expect under efficient contracting. Specifically, the use of incentive payments to promote cost reductions in a long term contract is sensible and is comparable to the use of incentive payments used by Australian regulators to promote cost reductions by service providers. The linking of the NMF to total Envestra revenues also appropriately aligns OEAM and Envestra's incentives in a number of areas (eg, in growth in gas demand and network growth and minimising interruption to services). Envestra also plays an important cost management role in the development of annual expenditure budgets and the monitoring of expenditure under those budgets.
23. The OMA is an 'evergreen' contract which means that it continues to operate until both parties agree to its dissolution or until one party fails to meet their obligations under the

contract. Given the high costs of renegotiation and the high probability of ‘hold up’<sup>4</sup> in such negotiations the use of an evergreen contract is a sensible way to structure the contract.

24. The nature of the services provided under the OMA mean that attempting to repeatedly competitively source the services will result in material costs. These costs include the costs incurred by Envestra in satisfactorily defining a complicated set of services and negotiating terms with potential bidders. New bidders will themselves incur costs associated with preparing any bid and will be at an information disadvantage to the incumbent. They would also incur substantial ‘set up costs’ - all of which would need to be recovered in their bid price. These extra costs faced by competitors and information disadvantage would likely be exploited by the incumbent contractor through ‘hold up’. That is, the incumbent would not bid based on its own costs but rather based on what they believe competitors would bid. This would mean that Envestra, and ultimately customers, would not benefit from any advantages that are derived from experience in operating the network.
25. It is also true that if the incumbent did expect to lose the contract when renegotiated they would not have an incentive to properly maintain the assets. This is because any higher future costs as a result of underspending today would be ‘someone else’s’ problem’.
26. The hold-up problem is a term used in economics to describe situations such as this. A risk of ‘hold up’ exists in a situation where two parties (such as a supplier and a manufacturer) may be able to work most efficiently by cooperating, but refrain from doing so due to concerns that they may give the other party increased bargaining power, and thereby reduce their own profits. In this context, OEAM may be able to deliver cost savings but Envestra may be unwilling to outsource to OEAM for fear of ‘hold up’ when the contract is renegotiated.
27. The same issues explain why the OMA gives the parties certain rights to extend the OMA to new gas distribution networks acquired by Envestra (including the Victorian assets). Having entered into the OMA with OEAM in 1997, it is very likely to be efficient to extend the arrangement to Victoria - with Envestra (and ultimately consumers) reaping any synergies in through the pass through of OEAM cost savings.
28. It is worth noting that the contract between Envestra and OEAM is very similar in its nature to the license agreements that exist between regulators/government and regulated businesses. Envestra’s contract with OEAM is an evergreen contract with cost management provisions and strong in-built incentives for cost savings by OEAM. Contrast this with the arrangements between government/regulator and Envestra. Envestra’s license agreement gives it perpetual rights to operate the relevant assets provided it meets its obligation under that agreement. The Gas Code gives it

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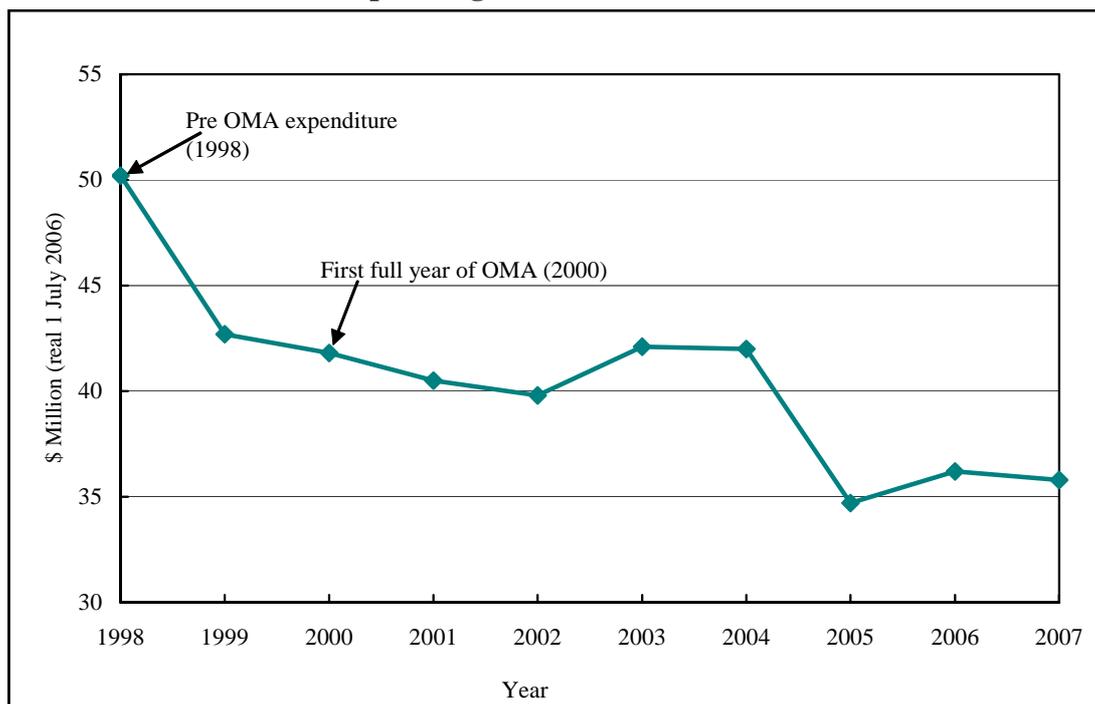
<sup>4</sup> The hold-up problem is a term used in economics to describe a situation where two parties (such as a supplier and a manufacturer) may be able to work most efficiently by cooperating, but refrain from doing so due to concerns that they may give the other party increased bargaining power, and thereby reduce their own profits.

confidence that it will be able to recover ‘prudently incurred’ costs. Finally, the ESC’s regulatory regime gives Envestra strong incentives to reduce costs.

### *Magnitude of costs incurred under the contract*

29. The ultimate question of interest is ‘did the OMA raise Envestra’s costs in Victoria above the level they would otherwise have been’?<sup>5</sup> While this counterfactual can never be known with certainty, a number of readily available facts, as described below, can be used to shed light on this question. These facts, individually and together, do not suggest that the OMA raised Envestra’s costs relative to the counterfactual.
30. The most obvious starting point is to compare operating costs on Envestra’s network before the OMA with operating costs since the OMA. Operating costs in the last full year before the OMA was put in place (1998) were 39% higher than in 2006. Pre-OMA costs were 20% higher than costs in the first full year after the OMA was put in place (2000). The history of operating costs under the OMA is described in the chart below.

**Figure 1.3**  
**Real Operating Costs Pre and Post OMA**



Source: Envestra data.

31. This chart makes it clear that OEAM has delivered efficiencies relative to those that were being generated in 1998. The above figure suggests that the OMA contributed to immediate cost reductions and has consistently delivered further cost reductions - not accounting for any growth in customers and associated growth in network assets being maintained. Of course, it may be that expenditure without the OMA would have fallen

<sup>5</sup> Or, more accurately, did Envestra expect that this would occur at the time the OMA was entered into.

even faster than described above. That is, it may be that in-house provision of services would have delivered more efficiencies than those delivered by OEAM. One way to account for this possibility is to ask whether Envestra's efficiency has improved as much as its peers.

32. In this regard I am informed that Meyrick and Associates has undertaken a total factor productivity ('TFP') study on behalf of Multinet, SP AusNet and Envestra. According to the results of this study, the growth in Envestra's TFP over the period in which OEAM has been responsible for providing operation and maintenance services to Envestra (1999-2006) has exceeded that of the other two distributors Multinet and SP AusNet (3.09% pa versus 2.94% pa and 2.32% pa respectively). I understand that, Meyrick and Associates have attributed Envestra's gains over this period to the significant reduction in operating expenditure with the partial productivity of operating expenditure growing at a rate of 7.3% pa over the period.
33. These facts lead to the conclusion that, if anything, the OMA has lowered costs relative to possible alternatives. This is true even though the OMA includes an explicit margin above OEAM's direct costs. I believe that it would, therefore, be reasonable to conclude that the total cost outcomes, including the margin, paid under the OMA is appropriate.
34. Nonetheless, I have undertaken a benchmark study of margins earned by comparable infrastructure contract service providers. The margin metric I have used within this study is the EBIT margin. With careful selection of comparables, including exclusion of high capital intensive firms, this margin metric is an accurate proxy for the relevant economic concept. I have also used a large sample of comparables across a number of years (giving around 100 observations) in order to ensure that the benchmarking captures the full range of 'good' and 'bad' years faced by contractors.
35. The results of this benchmark study indicate that the EBIT margin paid to OEAM by Envestra has averaged around 5.6% of OEAM's contract revenue over the last five years while the average EBIT margin for comparable firms over the same period was 5.7%. I have used statistical methods to determine that the true average (mean) margin for comparable contractors is between 4.1% and 7.2%. On the basis of this study, I conclude that the margin paid by Envestra under the OMA in Victoria is well within those observed for comparable outsourcing firms. In particular, the existence of this margin in no way suggests that Envestra imprudently incurs costs under the OMA.
36. I also note that the above benchmarking results are consistent with the conclusions reached by the ESC in the context of the Pacific National decision that an operating margin of between of 3% and 8% (after allowing for corporate expenses, insurance and other indirect expenses) was reasonable.<sup>6</sup>

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<sup>6</sup> ESC, Proposed Rail Access Arrangements, Draft Decision, April 2006, pg. 192.

***Impracticality of shifting profits through the NMF***

37. This report examines how to assess the prudence of a contract assuming that it has already been established the parties did not negotiate the terms on an arm's length basis. In this context, I do not need to, nor do I attempt to, make a conclusion on whether transactions have been arm's length. However, I can conclude that the *structure* of the OMA is **not** consistent with profit shifting.
38. The structure of the contract involves the direct pass through of OEAM's expenditures. As such, the only way in which profits could be shifted would be through the NMF.<sup>7</sup> Since the OMA is also an 'evergreen' contract any profit shifting through the NMF would be perpetual in nature and, therefore, involve a perpetual burden on Envestra. To embed perpetual profit shifting in the OMA, Envestra's Board would have needed to expect that regulators would never examine the reasonableness of the NMF under the Gas Code. This would have been a naïve expectation (as regulatory developments since then have made clear). The risk that any non-commercial element to the (perpetual) NMF would be 'discovered' and disallowed makes it a singularly unsuitable method for Envestra to attempt to shift profits.
39. Where there is uncertainty surrounding the length of time that profit shifting will be able to be passed onto end users then the parties are unlikely to be able to agree on a perpetual profit shifting arrangement. In such circumstances, any profit shifting would be much more likely to be implemented in a manner that could be unwound soon after it was 'discovered'.
40. [Confidential information removed]

***Conclusion***

41. Overall, I find no evidence that the costs incurred under the OMA would not be incurred by a prudent service provider, acting efficiently, in accordance with accepted and good industry practice. The structure of the contract further ensures that there is an ongoing incentive for OEAM to achieve the lowest sustainable cost of delivering the reference service. Envestra's involvement in OEAM's budget development and cost management powers under the contract provide important additional checks on OEAM's expenditures. The margin paid under the OMA is also consistent with good industry practice. These features of the contract have ensured that OEAM's incentives are aligned with the objectives of Envestra and it can reasonably be concluded that they have contributed towards achieving the objectives contained in section 8.37, 8.16(a)(i) and 8.46 of the Gas Code (prudence, efficiency, good industry practice, lowest sustainable cost and efficiency sharing with users).

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<sup>7</sup> High powered incentive mechanisms could be used to raise OEAM's profits but only if OEAM delivers cost reductions. This does not constitute 'profit shifting' but rather 'efficiency sharing'.



## 1. Introduction

1. I am an associate director of the United States-based firm of consulting economists, National Economic Research Associates Inc ('NERA') and have over 16 years professional experience working as an economist. In 1998 I was awarded a PH. D. in Economics from Monash University.
2. I am aware that the ESC is currently conducting a review of the gas access arrangements to apply on the Victorian gas distribution system over 2008-2012. Within the context of this review the ESC has signalled that it will undertake a detailed examination of outsourcing contracts. The focus on outsourcing contracts follows a similar review undertaken by the ESC in the 2006-2010 EDPR. Within this review the ESC developed an evaluation framework that was used to categorise contracts and to determine the relevancy of the price payable under the contract.
3. Against this background I have been asked by Envestra to:
  - develop criteria that can be used to assess a service provider's compliance with the criteria contained in section 8.37 and 8.16(a)(i) of the Gas Code;
  - critically evaluate the ESC's proposed approach in Consultation Paper 2 and examine the framework adopted in the EDPR;
  - consider the economic rationale underlying the inclusion of a margin (in excess of direct expenses) within outsourcing contracts;
  - assess the prudence and efficiency of the OMA entered into between OEAM and Envestra; and
  - undertake a benchmark study of the EBIT margin received by OEAM under the OMA.
4. The remainder of this report is structured as follows:
  - Section 2 sets out the assessment criteria I consider are necessary to employ when examining outsourcing contracts (and the contract price) given the prudence, efficiency, good industry practice and lowest sustainable cost objectives in sections 8.37 and 8.16(a)(i) of the Gas Code;
  - Section 3 examines the framework used by the ESC in the context of the EDPR and proposes a number of amendments to that framework; and
  - Section 4 applies the proposed framework in section 3 to Envestra's contract with OEAM.
5. I also have regard to the results of a margin benchmarking study I have undertaken which is set out in my companion report "Benchmarking contractor's profit margins".
6. I have been assisted in the preparation of this report by Shane Anderson and Katherine Lowe. Notwithstanding this assistance, the opinions in this report are my own.

## 2. Assessment criteria to apply when examining outsourcing contracts under the Gas Code

7. Sections 8.37 and 8.16(a)(i) of the Gas Code require the regulator to have regard to the prudence and efficiency of the operating and capital expenditure incurred by the service provider. Specifically section 8.37 states that:

A Reference Tariff may provide for the recovery of all Non Capital Costs (or forecast Non Capital Costs, as relevant) except for any such costs that would not be 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.

8. Section 8.16(a)(i) of the Gas Code further states that the capital base may be increased by the actual value of the capital expenditure incurred (or forecast to be incurred) provided that:

that amount does not exceed the amount that would be invested by a prudent Service Provider acting efficiently, in accordance with accepted good industry practice, and to achieve the lowest sustainable cost of providing Services; ...

9. In effect the criteria specified in sections 8.37 and 8.16(a)(i) requires consideration to be given to whether the service provider has acted in:

- a prudent and efficient manner;
- accordance with accepted and good industry practice; and
- a manner that is consistent with achieving the lowest sustainable cost of delivering the service.

10. For the purposes of this report I have used the term ‘prudently incurred costs’ as a short hand for costs that would meet these criteria and would therefore be recoverable under section 8.37 and 8.16(a)(i).

11. A sufficient condition for costs to be ‘prudently incurred’ is that the service provider, acting reasonably, believed that no alternative course of action would result in lower sustainable expected costs of providing the service. In the context of outsourcing arrangements, costs will be prudently incurred if, at the time the contract was entered into, the business reasonably believed the outsourcing arrangement would lower expected costs relative to providing the service in-house (or through an alternative contractor).

12. If it can be demonstrated that an alternative to the contract would have delivered lower costs, and this outcome should reasonably have been expected by the service provider, then some part of the contract costs may not have been ‘prudently incurred’. To make this case it must be demonstrated that, at the time the contract was entered into:

- i. an alternative to the contract (ie, maintaining the services in-house or engaging an alternative contractor) would have delivered lower costs and/or lower prospective costs; and
  - ii. the alternative identified in (i) would have been reasonably anticipated and should have been pursued by the service provider.
13. If there is sufficient evidence of the type set out in the two preceding points then it may be concluded that the service provider acted in a manner that is contrary to the criteria in section 8.37 and 8.16(a)(i). Depending on the strength of this evidence, there may be a case for excluding that part of the contract price that is deemed to have been imprudently or inefficiently incurred.
14. Relevant evidence that would have to be considered include an examination of the economies of scale, economies of scope and other efficiencies available to the contractor but not otherwise available to the service provider (or an alternative contractor). That is, the total contract price should be compared with what would otherwise have been payable if the service provider had continued to provide the services in-house (or had engaged an alternative contractor).
15. Although the foregoing has referred to the assessment of outsourcing contracts it is clear that precisely the same logic should be applied to a decision to provide services in-house. That is, if there is evidence that the service provider failed to enter into an outsourcing contract that would reasonably have been expected to deliver the lower quality adjusted cost then this is evidence that the in-house costs are not prudently and efficiently incurred.

### 3. ESC assessment framework

16. In Consultation Paper No. 2 the ESC signalled that it would be undertaking a detailed examination of outsourcing contracts on a case by case basis with a view to:
- ascertaining whether the provision of services was subject to full market testing through an open tender process;
  - determining how the costs incurred under the contract compare with the cost of similar arrangements elsewhere;
  - identifying the incentive arrangements within the contracts and establishing whether they provide incentives for cost reductions and for the reductions to ultimately be shared with customers; and
  - examining the level and nature of other fees and associated payments made between the parties.
17. The items listed above provide a useful summary of the facts that will be considered by the ESC. However, the discussion paper does not define the ultimate question that these facts would help answer. Similarly, the discussion paper does not provide a description of the framework within which these facts would be used - including the weight that would be given to each. For example, it is unclear what will occur if the ESC concludes that the provision of services was not subject to full market testing through an open tender process.
18. Similar issues surrounding outsourcing were considered by the ESC in the context of the 2006-2010 EDPR and, in that process, the ESC developed a more detailed evaluation framework. While it is unclear at this stage whether the ESC intends to adopt the same framework in the 2008-2012 GAAR, I think the ESC's analysis in the 2006-2010 EDPR provides a useful starting point for any further consideration of this issue.

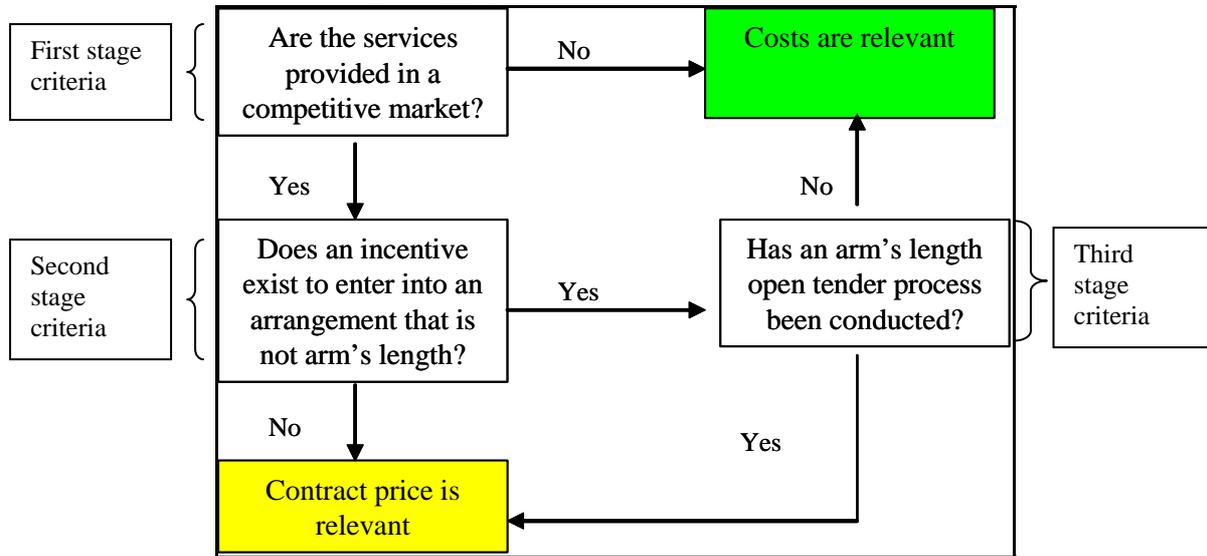
#### 3.1. ESC 2006-2010 EDPR evaluation framework

19. Within the 2006-2010 EDPR, the ESC adopted the evaluation framework described in the schematic below to assess the operating, maintenance and capital expenditure outsourcing contracts entered into by electricity distributors.<sup>8</sup> This framework recognised that regulators must pay special attention to contract payments to related parties where there may be an incentive to artificially inflate those payments. For explanatory purposes I have identified three distinct stages at which alternative criteria are applied in this framework.

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<sup>8</sup> 23 November Victorian ESC open letter to stakeholders EDPR 2006-10 Final Decision: Notice of Errata.

**Figure 3.1:  
ESC EDPR Assessment Framework**



20. In the first stage of this framework a distinction is drawn between those contracts that provide for the supply of services that are available in a competitive market and those that are not (first stage criteria). If the services cannot be characterised as being provided in a competitive market then the contract is assigned to the ‘costs are relevant’ box. If the services are found to be provided in a competitive market then a further examination of the nature of the relationship between the parties is undertaken in the second stage. If it is found that there was no incentive to enter into a non arm’s length contract (second stage criteria) then the contract is assigned to the ‘contract price is relevant’ box. A non arm’s length contract may also find its way to the ‘contract price is relevant’ box if an open tender process was conducted (third stage criteria), however, if no such tender was conducted the contract will be assigned to the ‘costs are relevant box’.
21. According to the EDPR Final Decision the contract price will be a good proxy for the competitive market price where the ‘Contract price is relevant’ criteria are met.<sup>9</sup> For contracts that do not meet these criteria the contract price is no longer relevant and the ESC’s assessment turns to the contractor’s costs. The term ‘cost’ in this context has been used by the ESC to refer to all of the building block components<sup>10</sup> but excludes any fees or transfer prices that “do not represent the cost of providing the distribution services”.<sup>11</sup>

<sup>9</sup> ESC, Electricity Distribution Price Review 2006-10, October 2005 Price Determination as amended in accordance with a decision of the Appeal Panel dated 17 February 2006 - Final Decision Volume 1 Statement of Purpose and Reasons, pg. 171.

<sup>10</sup> ESC, Electricity Distribution Price Review 2006-10, October 2005 Price Determination as amended in accordance with a decision of the Appeal Panel dated 17 February 2006 - Final Decision Volume 1 Statement of Purpose and Reasons, pg. 172.

<sup>11</sup> ESC, Electricity Distribution Price Review 2006-10, October 2005 Price Determination as amended in accordance with a decision of the Appeal Panel dated 17 February 2006 - Final Decision Volume 1 Statement of Purpose and Reasons, pg. 169.

22. In its current form there is ambiguity surrounding various aspects of the framework and the manner by which it would be applied if the ESC were to adopt this same framework in the 2008-2012 GAAR. Specifically, there is some uncertainty surrounding:
- what happens if the ‘costs are relevant’ box is reached;
  - the utility of including the ‘competitive market’ test; and
  - the reliance placed on open tenders.
23. These issues are explored further below.

### 3.2. What happens if the ‘costs are relevant’ box is reached

24. As noted above there is some uncertainty surrounding exactly what happens if a contract is assigned to the ‘costs are relevant’ box. Specifically, it is unclear whether ‘costs are relevant’ means:

The contractor’s costs are relevant to determining whether the contract was prudently entered into	<i>Versus</i>	The service provider can only recover the contractor’s (direct) costs (even if the overall contract payments are higher than the contractor’s (direct) costs)
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25. In my opinion the application of this framework would be flawed if the interpretation on the right hand side were applied<sup>12</sup> because it would imply that even if the overall contract price was better than any available alternative, the service provider would not always be able to recover the contract price.<sup>13</sup> Such an outcome would be inconsistent with sections 8.37 and 8.16(a)(i) of the Gas Code. The relevant test to apply at this point is, as noted in section 2, whether the contract was reasonably expected to reduce the expected costs relative to the next best alternative. While the contractor’s costs will be relevant to applying this test, the contractor’s costs are neither determinative of, nor synonymous with, prudently incurred costs as per section 8.37 and 8.16(a)(i).
26. In my opinion, this stage of the framework should involve a detailed assessment of whether the contract would have been entered into 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 service. The contractor’s costs, along with other evidence, will be an important factor in this assessment. However, the contractor’s costs will be neither determinative of, nor synonymous with ‘prudently incurred costs’ as per section 8.37 and 8.16(a)(i).

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<sup>12</sup> Of course, if the contractor’s ‘cost’ is defined to be equal to the contractor’s price whenever a contract was prudently entered into then this approach would be equivalent to my proposed approach. As discussed below, a contractor’s margin in excess of expenses may well be categorised as a contractor’s ‘cost’.

<sup>13</sup> One semantic way to avoid this nonsensical result is to define the contractor’s ‘costs’ as equal to the contractor’s price whenever the contract was prudently entered into (as discussed below). However, this is simply another way of proposing my test.

27. The assessment process that should be employed at this stage would likely involve separately examining:
- i. The structure of the contract entered into by the service provider (eg, does it give an incentive for the contractor to lower costs and are these passed on to the service provider?); and
  - ii. The magnitude of total costs incurred under the contract relative to what would otherwise have been incurred if the services were provided in-house or by an alternative contractor. Relevant evidence in this regard may include:
    - a comparison between the level of costs with outsourcing costs and level of pre-outsourcing costs;
    - benchmarking contract payments against other comparable contract payments;
    - benchmarking the service provider's total costs against the total cost of other similar service providers (this evidence will be most relevant where the contract accounts for a substantial proportion of the service provider's total costs); and
    - an examination of the size of any 'margin' paid under the contract relative to the margins being earned by comparable contractors.
  - iii. The probabilistic nature of costs incurred by the contractor (eg, are there factors that might lead the contractor's costs today to be different to what was expected at the time of the contract payment being agreed).
28. In carrying out this assessment regard must be had to the circumstances that existed at the time the contract was entered into and the reasonable expectations that may have then existed. The regulator must also have regard to how circumstances have developed since the contract was entered into and the extent to which the contract can adapt to these changes<sup>14</sup> and therefore still be viewed as having reduced expected costs relative to the next best alternative. If the results of this assessment lead one to conclude that the contract has *reduced* expected costs relative to the next best alternative then the contract price should be accepted.
29. It must be noted that prudently incurred outsourcing contracts **will** generally include a margin on the contractor's directly incurred costs. Payment of such margins are consistent with predictions of economic theory and with observed good industry practice. The existence of such margins reflect:
- the contractor's ability to provide the service at a lower cost than the purchaser could obtain elsewhere (eg, a return to the 'know how' of the contractor);

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<sup>14</sup> The ability of the contract to adapt will depend on whether the contract is a fixed price contract or a cost pass through contract. The cost pass through contract will, by its very nature, ensure that any changes in circumstances are immediately reflected in the price paid by the asset owner. The ability of the fixed price contract to adjust to changed circumstances will, however, depend on whether the contract incorporates periodic price reviews. Other contract features such as incentive fees and periodic benchmarking will also ensure that there is an ongoing commitment to reducing costs relative to the next best alternative.

- the required return on and return of physical and intangible assets employed by the contractor in the provision of the service;
  - efficiencies on the part of the contractor over the life of the contract (eg, where the contract allows some part of these to be retained by the contractor);
  - the allowance required to meet the contractor's common costs; and
  - the allowance required to self insure against the asymmetric risks faced by the contractor.
30. The benchmark study of comparable infrastructure contract service providers I have undertaken indicates that these companies earn positive EBIT margins. These results support the view that outsourcing contracts negotiated in competitive markets have positive margins.
31. The economic theory underlying the inclusion of a margin within outsourcing contracts and the commercial practice are explored in further detail below.

### 3.2.1. Margins as a return to differential efficiency

32. One of the most obvious and important reasons why efficient contracts will include a margin above the contractor's directly incurred expenses, is that the margin reflects a return to the differential efficiency of the contractor relative to alternatives. The existence of such margins in competitive markets can be illustrated by examining the extreme example of a perfectly competitive market.<sup>15</sup> In such a market, all but the most marginal (least efficient) suppliers earn economic profits in excess of their costs - with the highest margins being earned by firms that are differentially more efficient.
33. To understand why such margins exist even in perfectly competitive markets note that in such markets the interaction of supply and demand determines a single price which *all* suppliers receive.<sup>16</sup> However, some suppliers are able to produce that output using inputs more efficiently than others (eg, using less materials, labour, land or capital). The firms that are most efficient will earn higher economic profits than the most marginal firms. Moreover, the potential for differential profits creates the spur for all firms to reduce costs below those of their competitors.
34. The fact that not all firms in competitive markets have the same costs (and therefore earn different economic profits) is well understood in the economic literature. For example, Perloff's discussion of the dynamics of a perfect competitive market observed:

*“Where firms differ, only the low-cost firm supplies goods at relatively low prices. As the price rises, the other, higher-cost firm starts supplying, creating a stairlike market supply curve. The more suppliers there are with differing costs the more, steps there*

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<sup>15</sup> A perfectly competitive market is characterised by a large number of sellers and buyers, perfect information amongst those sellers and buyers, homogenous products and low costs of trading. For a discussion, see Perloff, *Microeconomics*, 3<sup>rd</sup> edition, Pearson Addison Wesley, 2004 (section 2.6 on page 41).

<sup>16</sup> This price is equal to the cost of producing the last unit (ie, the unit with the highest cost) necessary to engender supply that matches the requisite demand.

*are in the market supply curve. ... Differences in costs are one explanation for why some market supply curves are upward sloping.”<sup>17</sup>*

35. In a competitive market, higher economic profits of the more efficient firms may be temporary (if over time the highest cost (most marginal) producers costs fall relatively to theirs) or they may be permanent (if the profits derive from some factor that gives a permanent advantage, eg, the firm’s unique location or some special ‘know how’).<sup>18</sup> However, at any given time, one expects to observe economic profits being earned by all but the least efficient firms in an industry.
36. As a matter of definition, it is possible to classify economic profits from differential efficiency as ‘costs’. This can be done if one ascribes an economic value to whatever gives rise to the differential efficiency of the firms. For example, imagine Firm A and Firm B employ the same physical capital. Assume also that superior ‘know how’ allows Firm A to earn an additional \$1 million pa return on its capital relative to Firm B. Then one might define that \$1 million as being a return on the asset ‘know how’ employed in Firm A and not Firm B. So defined, the \$1 million ceases to be a differential profit but rather is a cost - being a return on an intangible asset (‘know how’) that is owned by Firm A but not by Firm B.
37. While the discussion in the previous paragraph is largely a matter of semantics it can have important implications for interpreting the term ‘costs are relevant’ in the ESC’s schematic. If a contractor is able to supply services more efficiently than the purchaser could supply them in-house,<sup>19</sup> then one should expect to observe a margin being earned by the contractor. This is simply evidence that the contractor has lower costs than the purchaser in supplying the service - precisely what one would expect to exist with efficient outsourcing. If the ESC’s approach was to only allow the contractor’s ‘costs’ to be recovered by the service provider then it would, at a minimum, be necessary to define a return on differential efficiency as a ‘cost’ rather than a ‘profit margin’. However, as already noted, this is a semantic issue rather than a matter of substance.
38. The exact size the contractor’s profit margin attributable to this differential efficiency will depend on the costs of alternative suppliers (including in-house provision and alternative contractors) and commercial negotiations between the parties.
39. Consider an example where the contractor’s cost of providing the service is \$50 and the purchaser’s cost of providing it in-house is \$100. In this case it is assumed that there are no other alternative contractors offering to supply the services below \$100. Clearly it is efficient (lowers overall costs) for the contract to be entered into and it will be prudent to do so from the purchaser’s perspective provided that it can negotiate a price less than \$100. The purchaser’s maximum willingness to pay for the contract will be \$100 and the contractor’s minimum willingness to accept will be \$50. Provided

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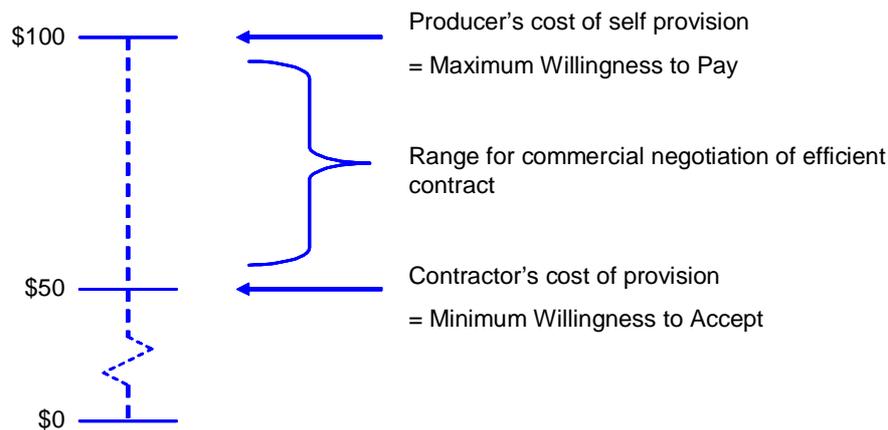
<sup>17</sup> Perloff, Microeconomics, 3<sup>rd</sup> edition, Pearson Addison Wesley, 2004, pg 247.

<sup>18</sup> Temporary economic profits are some-times described as ‘quasi-rents’ while permanent economic profits are sometimes described as ‘rents’.

<sup>19</sup> Or more efficiently than an alternative external party could supply them.

the contract price is set within these bounds the contract will deliver gains from trade to both parties (see Figure 3.2).

**Figure 3.2**  
**Graphical illustration of efficiently negotiated ‘above cost’ margin**



40. In this example, the price that is set between these two bounds will depend on the price quoted by alternative suppliers, the in-house cost and the relative skills of the parties in commercial negotiation. Economics cannot define a single price within the range that is efficient - all prices within the range are equally efficient since all prices result in lower overall costs relative to in-house provision. However, for the sake of argument if the commercially negotiated price was in the middle of the range (\$75) then we would observe a \$25 ‘above cost’ margin being earned by the contractor. The existence of such a margin would not be evidence that the contract was not prudently entered into. In fact, the existence of the margin in this example is a positive signal of the prudence of the contract in that it signals that the contractor had lower costs than the next best alternative.

**3.2.2. Other reasons why a margin will be included in an outsourcing contract**

41. A margin in excess of the contractor’s directly incurred expenses may also represent:
- a return on and of the physical and intangible assets employed in the provision of the service;
  - an allocation of the contractor’s common costs (eg, corporate overheads);
  - an incentive bonus payable to the contractor for the attainment of efficiency gains; and
  - an allowance for the asymmetric risks faced by the contractor (ie, cost overruns that can not be passed through under the contract).
42. Notably in the reasons listed above there is no reference made to the transfer of systemic risk (CAPM) from the asset owner to the contractor. In cases where there is a

transfer of systemic risks the margin expected by the contractor may be higher or lower depending on the direction of the risk transfer. However, it would be incorrect to presume that the whole of the contract margin relates to the transfer of systemic risk. Similarly, it is incorrect to assume that positive contract margins imply a transfer of systemic risk. This issue is addressed in more detail below.

43. As discussed previously each of the factors listed above could conceivably be defined as a 'cost' to the contractor. For example, the value of unanticipated efficiencies could be defined as a return on the contractor's intangible investment in achieving those efficiencies. Similarly, a reasonable return on physical assets used in the production of the service would, under the building block model, be categorised as a cost of providing the service. Thus, the size of the 'margin' observed in a contract will depend on the contract specific definition of costs and margins.
44. Unless otherwise stated, I use the term 'margin' to reflect payments in excess of expenses. In this context, a 'margin' may be justified as a return on (or of) a tangible/intangible assets. The existence of a margin above expenses is not an indicator that the contract has been imprudently entered into.
45. In order to make standardised comparisons of margins across businesses it is necessary to make use of uniform accounting data. A useful measure in this regard is the EBIT margin reported by comparable contractors. This margin includes compensation for all of the above factors (except the return of capital which is already deducted). As a matter of theory one could attempt to compare a more narrowly defined margin by attempting to directly account for each of the above factors in each comparable firm. However, a lack of information makes such an exercise very difficult.

### **3.2.3. 'Accepted and good industry practice' involves the payment of a margin**

46. An examination of industry practice indicates that the average EBIT margins earned by 18 companies providing comparable infrastructure related contract services in Australia was 5.7% over the period 2002-2006 (see my companion benchmarking report). This is commercial evidence that supports the economic rationale set out above and clearly indicates that outsourcing contracts negotiated in competitive markets have positive margins.

### **3.2.4. Conclusion**

47. Based on the foregoing any decision to treat margins on outsourced contracts as *per se* imprudent would be inconsistent with both economic theory and commercial evidence. Moreover, it would result in some components of the contract payment being deemed imprudent even if the overall contract price (including the margin) was lower than the costs that would have been incurred if the service was provided in-house or by another contractor.

### 3.3. 'Competitive market' test not required

48. The initial stage of the ESC's evaluation framework requires consideration to be given to whether the services supplied under the outsourcing contract are provided in a competitive market. Within this context the ESC discusses whether the bundling of a large group of services within a contract would make it difficult for all but a single provider to bid for that contract.

*"If services are bundled into an outsourcing contract in such a way that there is no market for the services encompassed by that contract, then:*

- *market testing will not be possible, since there is not a sufficient number of alternative providers against which to test the price being proposed; and*
- *for the same reason, there will be no 'market' price;*

*Where there is no market price, then the economic value of the services being provided can only be properly determined by reference to the costs of the service provider."*<sup>20</sup>

49. To the extent that the ESC is concerned that such a bundling strategy is used as part of 'profit shifting' strategy in a related party contract then this concern could be addressed simply by replacing the term 'open tender' with 'competitive open tender' in the third stage criteria and removing the 'competitive market' test in its entirety.
50. The inclusion of the 'competitive market' test also means that *arm's length* contracts with monopoly suppliers will be subject to an examination of the contractor's costs. It is not obvious that there is any utility to be gained from undertaking an examination of such contracts which are unaffected by related party considerations.
51. For example, consider a scenario where the service provider, through no fault of its own, faces a monopoly supplier of an essential service whose prices include an element of monopoly profit. If the service provider has no alternative but to pay the monopolist's price then it is prudent to do so. The actual costs of that monopoly supplier are not relevant to a consideration of whether payments to the monopolist were prudently incurred. The actual costs of a monopoly supplier can only be relevant to whether payments are prudently incurred if the service provider has the power to pay a price that is less than the monopoly price. By definition this can only be true if something about the service provider's procurement strategy confers monopoly power on the supplier (eg, through a strategy such as described in the above ESC quote). However, the only reason a service provider would do this is if it was attempting to take advantage of a related party connection to the supplier. If this is the case, then a contract of this type would be captured by the arm's length criteria applied in the second stage of the evaluation framework and would not require a separate assessment of the competitive nature of the market.

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<sup>20</sup> ESC, Electricity Distribution Price Review 2006-10, October 2005 Price Determination as amended in accordance with a decision of the Appeal Panel dated 17 February 2006 - Final Decision Volume 1 Statement of Purpose and Reasons, pg. 174.

52. An examination of all contracts that are not provided in a competitive market, irrespective of whether they are entered into on an arm's length basis the into test, would in my opinion involve a significant effort on the part of the regulator for little or no benefit in informing whether payments to those suppliers are prudent and efficient.
53. The inclusion of this test within the framework also acts as a deterrent to service providers seeking to outsource a large number of services to a single supplier even if the single supplier option is the more efficient option (eg, due to efficiency in supply and administration). Establishing a framework that makes the pursuit of these savings risky (in the sense that there is heightened uncertainty as to whether payments will be accepted as prudent) is undesirable and should be avoided by the regulator where possible.
54. It would appear that there is little utility to be gained from including the 'competitive market' step within the framework and the same objectives could be achieved by simply relying on the second and third stage criteria which assess the nature of the relationship between the parties and the process by which the contract was negotiated.

### 3.4. Open tenders are often inefficient

55. If an outsourcing contract is signed with a related party then it is conceivable that the prices paid in these contracts may be set above an efficient level in an attempt to 'profit shift' from the service provider to the related party.<sup>21</sup> The EDPR framework recognises this by according greater scrutiny to related party contracts.
56. In this regard, it is important to understand that the lack of an open tender for services **does not** suggest impropriety in the negotiation of contracts and in fact an open tender process may be an inefficient way of selecting contractors. There are a number of reasons why a competitive tender may lead to inefficient results, including: difficulties in pre-specifying service requirements; promotion of collusion amongst a small number of potential suppliers; and suppliers shading bids in anticipation of the 'winners curse'.<sup>22 23</sup>
57. Relevantly, recent EU policies that required the introduction of competitive tendering for municipal services have been widely regarded as ill-conceived and have been unwound. The requirement for local councils to conduct compulsive competitive tendering has also been abolished in Victoria and the United Kingdom. In removing

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<sup>21</sup> Given the requirements on directors under the Corporations Act to serve the interests of all shareholders, the directors of a service provider would be acting unlawfully if they pursued this strategy to the benefit of some shareholders (those with joint shareholding in the service provider and the outsourcing provider) at the expense of other shareholders (those without such joint shareholding).

<sup>22</sup> Winners curse is the term used to describe that the winner of a competitive tender is, by definition, the party with the most optimistic assessment of the cost of fulfilling the tender. Unless each tenderer believes they have superior information to the rest of the tenderer's they will not want to win the tender at their best estimate of cost (because winning the tender will be correlated with underestimating costs). Knowing this, all tenderers have an incentive to bid above what they truly think it will cost to fulfil the contract.

<sup>23</sup> See also Manelli, Alejandro M.; Vincent, Daniel R., *Optimal Procurement Mechanisms*, *Econometrica*, May 1995, v. 63, iss. 3, pp. 591-620 for a discussion of other conditions where competitive tendering is inefficient.

this requirement Department of the Environment, Transport and the Regions in the United Kingdom noted:

*“Under Compulsory Competitive Tendering service quality has often been neglected and efficiency gains have been uneven and uncertain, and it has proved inflexible in practice”.*<sup>24</sup>

58. Closer to home, the AER has recently been advised by its consultant, PB Associates, that requiring competitive tendering of maintenance operations would not lower costs, in part, because of the small number of potential tenderers. The AER accepted this advice in the 2006 Draft Powerlink Decision and concluded that commercially negotiated supply arrangements were prudent. In doing so it also had regard to an external benchmarking exercise.

*“The AER accepts that there are limited alternatives to outsourcing maintenance in Queensland, and in that context considers Powerlink’s arrangements with its external service providers are efficient. PB has reviewed the costs and arrangements and considered that Powerlink’s maintenance costs are efficient, reflecting the SLAs it has negotiated with Ergon Energy and Aeropower. It also noted that Powerlink benchmarks well against its peers in Australia and internationally in its overall opex costs. The AER accepts Powerlink’s network maintenance cost estimates, for the purpose of determining its opex requirement.”*<sup>25</sup>

59. In these conditions it is plausible that a requirement to go out to competitive tender would actually increase costs for no overall benefit. In my opinion the position adopted by the AER is an appropriate regulatory precedent.

### **3.5. Suggested amendments to the EDPR framework if it is to be applied in the 2008-2012 GAAR**

60. Based on the foregoing, I have developed the following diagram which sets out the amendments I consider should be made to the EDPR framework if it is to be applied in the context of the ESC’s 2008-2012 GAAR. The specific changes include:
- removing the ‘competitive market’ test;
  - incorporating the assessment process which should be undertaken if the ‘costs are relevant’ box is reached;
  - recognising that commercially negotiated related party transactions may be prudent under the Gas Code and therefore allowing for the possibility that the ‘contract price’ may be relevant in these cases; and

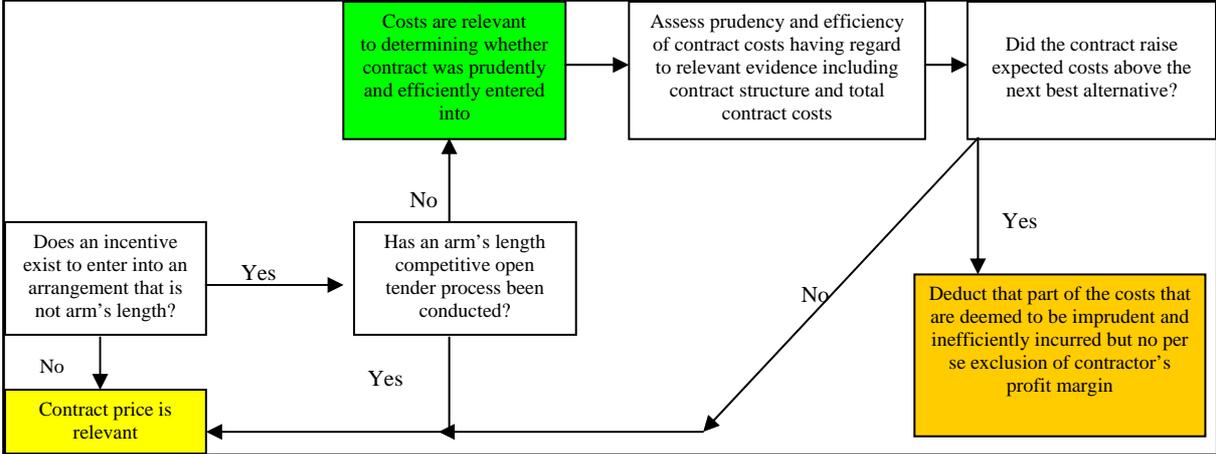
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<sup>24</sup> Department of the Environment, Transport and the Regions, Improving local services through best value: Consultation Paper, 1998, s1.5.

<sup>25</sup> AER, Draft Decision—Queensland transmission network revenue cap 2007–08 to 2011–12, December 2006, pg. 137.

- allowing for the deduction of imprudently and inefficiently incurred costs from forecast non-capital costs where components of a related party transaction are found to be inconsistent with sections 8.37 and 8.16(a)(i) of the Gas Code.

**Figure 3.3:**  
**Amended EDPR Assessment Framework for the GAAR**



#### 4. Application of the assessment framework to the Envestra and OEAM Operating and Management Agreement

61. Drawing on the framework set out in the preceding section I have examined the compliance of the OMA with the economic aspects of the criteria set out in sections 8.37, 8.16(a)(i) and 8.47 of the Gas Code. The remainder of this section sets out the results of this examination which considers both the magnitude of the costs incurred under the OMA and the structure of the contract.

##### 4.1. Magnitude of costs incurred under the OMA

62. I understand that Envestra will be separately presenting the ESC with a benchmark study of its overall costs, a comparison of its actual costs with the efficiency benchmarks set by the ESC in the 2003-2007 GAAR and the results of a TFP benchmark study. On the information I have been provided it would appear that the results of each of these studies support a conclusion that Envestra's total costs are not high relative to comparators.

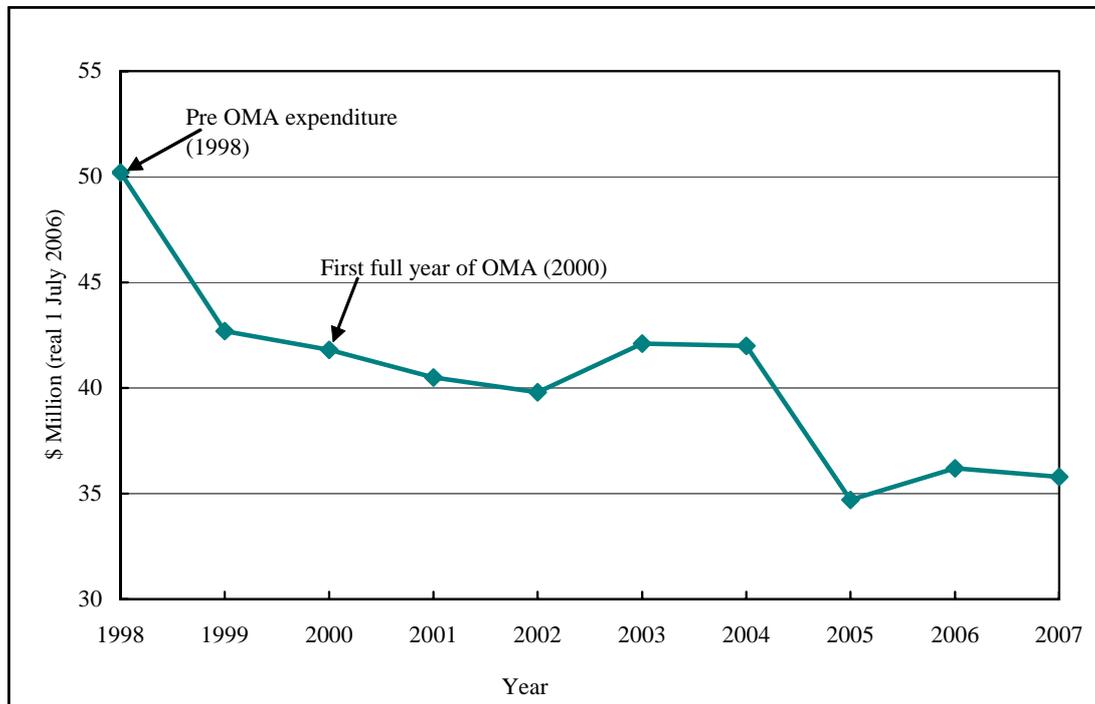
63. The ultimate question of interest is 'did the OMA raise Envestra's costs in Victoria above the level they would otherwise have been'?<sup>26</sup> While this counterfactual can never be known with certainty, a number of readily available facts, as described below, can be used to shed light on this question. These facts, individually and together, do not suggest that the OMA raised Envestra's costs relative to the counterfactual.

64. The most obvious starting point is to compare operating costs on Envestra's network before the OMA with operating costs since the OMA. Based on data supplied by Envestra, operating costs in the last full year before the OMA was put in place (1998) were 39% higher than in 2006. Pre OMA costs were 20% higher than costs in the first full year after the OMA was put in place (2000). The history of operating costs under the OMA is described in the chart below.

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<sup>26</sup> Or, more accurately, did Envestra expect that this would occur at the time the OMA was entered into.

**Figure 4.1**  
**Real Operating Costs Pre and Post OMA**



Source: Envestra data.

65. Based on this chart it is clear that OEAM have delivered efficiencies relative to practices giving rise to costs in 1998. The above figure suggests that the OMA contributed to immediate cost reductions and has consistently delivered further cost reductions - not accounting for any growth in network assets being maintained. Of course, it may be that expenditure without the OMA would have fallen even faster than described above. That is, it may be that in-house provision of services would have delivered more efficiencies than those delivered by OEAM. One way to account for this possibility is to ask whether Envestra's efficiency has improved as much as its peers.
66. In this regard I am informed that Meyrick and Associates has undertaken a TFP study on behalf of Multinet, SP AusNet and Envestra. According to the results of this study, the growth in Envestra's TFP over the period in which OEAM has been responsible for providing operation and maintenance services to Envestra (1999-2006) has exceeded that of the other two distributors Multinet and SP AusNet (3.09% pa versus 2.94% pa and 2.32% pa respectively). I understand that, Meyrick and Associates have attributed Envestra's gains over this period to the significant reduction in operating expenditure with the partial productivity of operating expenditure growing at a rate of 7.3% pa over the period.
67. Envestra has also provided me with data from its carryover model which indicates it has outperformed the operating and capital expenditure benchmarks set by the ESC in the 2003-2007 GAAR. Specifically, relative to the customer growth adjusted benchmarks set by the ESC, Envestra has spent \$14.7 million less on operating expenditure and \$34.8 million less on capital expenditure over the period. These

results indicate that the OMA has been consistent with Envestra achieving material efficiencies.

68. These facts lead one to the conclusion that, if anything, the OMA has lowered costs relative to alternatives. This is true even though the OMA includes an explicit margin above OEAM's direct costs. I believe that it would, therefore, be reasonable to conclude that the margin paid under the OMA is appropriate.

#### **4.1.1. Margins paid under the OMA**

69. Notwithstanding my conclusion that the payment of a margin under the OMA would be appropriate I have undertaken a benchmark study of margins earned by comparable infrastructure contract service providers to assess the reasonableness of the margin paid under the OSA.
70. The methodology employed in this study and the results of the study are set out in my companion report. The margin metric I have used within this study is the EBIT margin. With careful selection of comparables, including exclusion of high capital intensive firms, this margin metric is an accurate proxy for the relevant economic concept. I have also used a large sample of comparables across a number of years (giving around 100 observations) in order to ensure that the benchmarking captures the full range of 'good' and 'bad' years faced by contractors.
71. The results of this benchmark study indicate that the EBIT margin paid under the OMA has averaged around 5.6% (excluding incentive payments) of OEAM's contract revenue over the last five years while the average EBIT margin for comparable firms over the same period was 5.7%. I have used statistical methods to determine that the true average (mean) margin for comparable contractors is between 4.5% and 6.9% with a 95% confidence level. On the basis of this study, I conclude that the margin paid by Envestra under the OMA in Victoria is well within those observed for comparable outsourcing firms. In particular, the existence of this margin in no way suggests that Envestra imprudently incurs costs under the OMA.
72. I also note that these results are consistent with the conclusions reached by the ESC in the context of the Pacific National decision that an operating margin of between of 3% and 8% (after allowing for corporate expenses, insurance and other indirect expenses) was reasonable.<sup>27</sup>

#### **4.2. Structure of the OMA**

73. The structure of the OMA is another important aspect to consider when assessing the prudence of an outsourcing arrangement because, inter alia, it determines:
- the manner by which operating and capital expenditures are passed through to Envestra (and in turn users);

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<sup>27</sup> ESC, Proposed Rail Access Arrangements, Draft Decision, April 2006, pg. 192.

- the allocation of risks between Envestra and OEAM;
  - whether OEAM has an incentive to prudently incur costs and pursue other broader objectives; and
  - the extent to which users are able to share in any efficiency gains attained by OEAM.
74. Before examining these issues it is instructive to recall that under the OMA, OEAM is required to provide the following services to Envestra:
- manage the haulage of gas through the network;
  - operate and maintain the network;
  - plan, design and construct network extensions;
  - read meters and bill retailers;
  - assist Envestra with submissions to regulators; and
  - assist Envestra in promoting the use of natural gas.
75. In return for the provision of these services Envestra is required to pay OEAM:
- all costs and disbursements (including a return of capital but not a return on capital) reasonably incurred by OEAM in the performance of its obligations under the agreement;<sup>28</sup>
  - incentive bonuses for real reductions in controllable costs per GJ and connection costs per customer, where the incentive bonus is set equal to one third of the reduction in costs over the financial year after adjusting costs for inflation; and
  - a NMF equal to 3% of Envestra's network revenue.
76. The OMA remains in force provided that both parties continue to fulfil their obligations under the contract.
77. The following sections examine whether the structure specified within the OMA is conducive to the attainment of the prudence, efficiency, good industry practice and lowest sustainable cost objectives contained in section 8.37 and 8.16(a)(i) of the Gas Code and the cost and efficiency related incentive provisions contained in section 8.46 of the Gas Code.

#### **4.2.1. Cost pass through and cost management**

78. The OMA enables OEAM to pass through the direct operating and maintenance expenditure incurred by OEAM including an allowance for some corporate overheads and a return of capital subject to those costs being 'reasonably incurred'. In addition to the 'reasonably incurred' constraint, OEAM cannot, without the prior consent of

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<sup>28</sup> Under the contract Envestra is also required to pay the costs and expenses incurred by OEAM consequent upon employees being made redundant.

Envestra, incur operating or capital expenses that exceed the budget for these aspects by more than 2%.<sup>29</sup>

79. The budget process as defined within the OMA requires OEAM to assist in the development of budgets and Envestra to establish the financial objectives underpinning these budgets (ie, projections of required net cash flow). The budget process is overseen by Envestra and it may vary the budget. If a dispute arises between Envestra and OEAM in relation to the budget then an independent expert may be engaged to estimate the total capital and operating expenses to operate and manage the networks in accordance with legal and prudential standards. Envestra may revise the budget during the year if a pre-defined event occurs.
80. Both the reasonably incurred test and the 2% budget constraint impose some discipline on OEAM and in so doing limit Envestra's (and in turn users) exposure to cost blowouts. These are important cost management features which help ensure that the risk of cost blowouts under a cost pass through contract are effectively managed.
81. The inclusion of the reasonably incurred test and the 2% budget constraint do, however, expose OEAM to the asymmetric risk that some of the costs it incurs may be deemed to have been unreasonably incurred and excluded from the pass through payment. It is therefore reasonable for OEAM to expect some form of compensation for this asymmetric risk. While this 'reasonably incurred' test may not be commonly applied, the cost to OEAM when it is applied may be substantial (eg, if negligence by OEAM staff led to systemic damage to Envestra's Network). While this is not likely to occur often, the experience at Longford and elsewhere suggests that these types of events do happen. To the extent that OEAM is exposed to this type of risk it is appropriate that it receives compensation.
82. It is important to recognise that these probabilistic costs are not compensated elsewhere in Envestra's regulated building block revenue requirements. The inclusion of a separate allowance for this aspect (via the NMF) in the regulated building block model does not therefore amount to double counting.
83. The cost pass through nature of the contract means that the outsourcing arrangement is highly unlikely to have had any impact on Envestra's systemic risk relative to in-house provision. That is, the pass through arrangement causes the pattern of expenditures over time to be similar to the pattern that would have existed if Envestra incurred these costs in-house. Consequently, Envestra continues to be exposed to the same systemic risk that it would have been exposed to providing the services in-house. Appendix A provides a more detailed discussion of this issue. Appendix A also discusses, in a general sense, the implications of attempting to break down the regulated weighted average cost of capital into revenue and expenditure components. The conclusion is that if this was attempted, differences in outsourcing across companies would be swamped by differences in expenditures as a percentage of the regulated asset base

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<sup>29</sup> The exceptions to this are if the expenditure is necessary: to anticipate or to respond to an emergency; or as an incremental matter to ensure continuous operation of the network in accordance with a new or change in a legal and prudential standard not covered by the budget.

across companies. That is, it would mean that all regulated business should be given different cost of capitals based on different expenditure profiles.

#### **4.2.2. Incentive mechanisms**

84. As noted in the introduction to this section, the OMA pricing structure consists of two incentive mechanisms which encourage OEAM to pursue real reductions in controllable costs and connection costs, through the payment of an incentive bonus which is equal to one third of the reduction in costs over the financial year after adjusting costs for inflation. The specific incentive mechanisms encourage OEAM to pursue real reductions in:
- the average capital cost of connecting new customer sites to the network; and
  - controllable operating costs on a \$ per GJ basis which may be attained through growth in net revenue and cost reductions.
85. The incorporation of the capital and operating expenditure based incentive mechanisms within the pricing structure ensure that OEAM's incentives are aligned with Envestra's objectives and the objectives set out in sections 8.37, 8.16(a)(i) and 8.46(b) of the Code. That is, OEAM has the incentive to pursue productive efficiencies on an ongoing basis and attain the lowest sustainable cost of delivering the service. The cost pass through mechanism then ensures the permanent efficiency gains are passed through immediately to Envestra (via lower operating costs) and to users at the next regulatory reset. This outcome is consistent with the benefit sharing provisions contained in section 8.46 of the Gas Code.

#### **4.2.3. Network Management Fee**

86. The NMF component of the OMA requires Envestra to pay OEAM 3% of its total revenue.
87. The use of a performance based margin, as opposed to a defined dollar value based margin, is a common feature of service based contracts wherein margins are expressed as a function of:
- the costs incurred by the service provider (ie, a cost plus mark up mechanism);
  - the profits generated by the asset owner; or
  - the revenue generated by the asset owner.
88. One advantage of the performance based margin is that it recognises that a number of the factors underpinning the NMF vary directly in line with changes in the level of services provided in any one year (ie, tax liabilities and working capital requirements). Since performance based margins are linked to the level of services provided in any one year they implicitly recognise the variability of the dollar value of the allowance required. This is in direct contrast to the defined dollar value margin which would remain the same irrespective of the actual operating and maintenance requirements of the pipeline.

89. The profit and revenue based performance measures also have advantages over the fixed fee and the cost based performance measures. They can be used to align the incentives of the contract service provider with the overall objective of the asset owner where the contract service provider has some ability to influence the attainment of these objectives. For example, a contract service provider that is subject to a revenue based margin will have an incentive to maximise the revenue of the asset owner (ie, pursue market growth and ensure interruptions are minimised) while a contract service provider that is subject to a profit based margin will have an incentive to both minimise operating costs and maximise revenue.
90. Based on the foregoing it may appear that the profit based margin results in the closest alignment of the service provider's and asset owner's objectives. It is, however, worth noting that the joint incentive of minimising costs and maximising revenue afforded by the profit based margin can be replicated through combining a revenue based margin *and* a cost based incentive mechanism. This is precisely the structure that OEAM and Envestra have adopted in the OMA. Specifically, OEAM and Envestra have adopted a revenue based margin with an incentive mechanism that encourages OEAM to pursue real reductions in controllable costs and network connection costs. Overall, this mechanism ensures that OEAM's incentives are aligned with the objectives of Envestra and the Gas Code more generally.

#### 4.2.4. 'Evergreen' nature of the contract

91. The contract between OEAM and Envestra is an evergreen contract and as such remains in place until either both parties agree to its dissolution or until one party fails to meet their obligations under the contract. In my opinion this is a sensible way to structure the contract given the high costs of renegotiation and the high probability of 'hold up' in such negotiations. The **hold-up problem** is a term used in economics to describe a situation where two parties (such as a supplier and a manufacturer) may be able to work most efficiently by cooperating, but refrain from doing so due to concerns that they may give the other party increased bargaining power, and thereby reduce their own profits.<sup>30</sup>
92. The risk of 'hold up' would clearly be present were Envestra to regularly renegotiate its contract with OEAM. The nature of the services provided under the OMA mean that attempting to repeatedly competitively source the services will result in material costs. These costs include costs incurred by Envestra in satisfactorily defining a complicated set of services and negotiating terms with potential bidders. New bidders will themselves incur costs associated with preparing any bid and will be at an information disadvantage to the incumbent. They would also incur substantial 'set up costs' - all of which would need to be recovered in their bid price. These extra costs faced by competitors and information disadvantage would likely be exploited by the incumbent contractor through 'hold up'. That is, the incumbent would not bid based on its own costs but rather based on what they believe competitors would bid. This

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<sup>30</sup> For example, see Williamson, Oliver. "Credible Commitments: Using Hostages to Support Exchange." *American Economic Review*, September 1983, 73(4), pp. 519-40.

would mean that Envestra, and ultimately customers, would not benefit from any advantages that are derived from experience in operating the network.

93. It is also true that if the incumbent did expect to lose the contract when renegotiated they would not have an incentive to properly maintain the assets. This is because any higher future costs as a result of underspending today would be 'someone else's' problem'.
94. The contract between Envestra and OEAM would appear to have been well designed as a solution to the risk of 'hold up'.<sup>31</sup> Firstly, the contract does not have regular renegotiations - thereby removing the risk of 'hold up' in those renegotiations. Secondly, the contract gives OEAM confidence that it will be able to recover 'reasonably incurred' costs. Finally, the contract has powerful incentive elements to ensure that OEAM has a long run incentive to reduce costs under the contract (which can not be achieved by renegotiation).
95. It is worth noting that the contract between Envestra and OEAM is very similar in its nature to the 'contract' between regulators/government and regulated businesses (including Envestra). Envestra's license agreement gives it perpetual rights to operating the relevant assets provided it meets its obligation under that agreement. The Gas Code gives it confidence that it will be able to recover 'prudently incurred' costs. Finally, the ESC's regulatory regime gives Envestra strong incentives to reduce costs (which can not be achieved through renegotiation under the license agreement). This is no surprise as they both derive from very similar principles and circumstances relevant to developing incentive compatible contracts.

#### 4.2.5. NMF is an impractical vehicle to shift profits

96. The OMA was originally negotiated in 1997 to apply to Envestra's South Australian and Queensland networks and then again in 1999 when Envestra acquired Stratus' networks. I understand that whether these negotiations took place at arm's length may be a matter of contention.
97. This report examines how to assess the prudence of a contract assuming that it has already been established the parties were not at arm's length. In this context, I do not need to, nor do I attempt to, make a conclusion on this matter. However, I can conclude that the *structure* of the contract negotiated is **not** consistent with profit shifting.
98. Since the contract involves the direct pass through of OEAM's expenditures, the only way in which profits could be shifted would be through the NMF.<sup>32</sup> The OMA is, however, an 'evergreen' contract and thus any profit shifting through the NMF would be perpetual in nature and, therefore, involve a perpetual burden on Envestra. That is,

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<sup>31</sup> For one discussion of contractual solutions to 'hold up' problems see Rogerson, William. "Contractual Solutions to the Hold-Up Problem." *Review of Economic Studies*, October 1992, 59(4), pp. 774-94.

<sup>32</sup> High powered incentive mechanisms could be used to raise OEAM's profits but only if OEAM delivers cost reductions. This does not constitute 'profit shifting' but rather 'efficiency sharing'.

Envestra will continue to have to pay the NMF so long as the OMA is in place. To be willing to accept profit shifting through an unreasonably high NMF, Envestra's Board would need to have an expectation that customers would perpetually finance that burden, ie, that regulators would never examine the reasonableness of the NMF under the Code. This would have been a naïve expectation (as regulatory developments since then have made clear). The risk that any non-commercial element to the (perpetual) NMF would be 'discovered' and disallowed makes it a singularly unsuitable method for Envestra to attempt to shift profits.

99. Envestra also needed to finance its purchase of Victorian assets and additions to all of its networks. This would have added to the substantial risks associated with any strategy aimed at (permanently) shifting profits to Origin Energy through the NMF. Unless Envestra could convince financiers that an unreasonably high NMF would never be discovered, financiers would be either unwilling to provide funds or pay a lower price for the company's debt/equity.
100. The simple point here is that, where there is uncertainty surrounding the length of time that profit shifting will be able to be sustained (ie, by passing it onto end users) then the parties are unlikely to be able to agree on a perpetual profit shifting arrangement. In such circumstances, the parties would be much more likely to agree on profit shifting that could be unwound soon after it was 'discovered'.
101. [Confidential information removed]
102. [Confidential information removed]
103. [Confidential information removed]
104. [Confidential information removed]

#### **4.2.6. Conclusion on contract structure**

105. Overall, the structure of the OMA is consistent with what one would expect under efficient contracting. Specifically, the use of incentive payments to promote cost reductions in a long term contract is sensible and is comparable to the use of incentive payments used by Australian regulators to promote cost reductions by service provider. The linking of the NMF to Envestra's revenues also appropriately aligns both OEAM's and Envestra's incentives to pursue market growth and to minimise service interruptions. The cost management features of the contract further ensure that Envestra's (and in turn users') exposure to cost blowouts are limited. Combined these features of the contract ensure that OEAM's incentives are aligned with the objectives of Envestra and the prudence, efficiency and lowest sustainable cost objectives contained in section 8.37 and 8.46 of the Gas Code.

#### **4.3. Conclusion**

106. Based on the foregoing information I have found no evidence that the costs incurred under the OMA are higher than those that would be incurred by a prudent service provider, acting efficiently, in accordance with accepted and good industry practice.

The structure of the contract ensures that there is an ongoing incentive for OEAM to achieve the lowest sustainable cost of delivering the reference service. The margin paid to OEAM is consistent with standard industry practice. If the ESC were to reach a different conclusion I believe that it would need to have regard to facts that have not been made available to myself and which are not covered in this report.

## Appendix A. Systemic risk transfer in outsourcing contracts

107. Under the CAPM, systemic risk is associated with a cash flow item (expenditure or revenue) if that cash flow item has a positive covariance with the return on a diversified portfolio of assets (generally proxied by the stock market). For example, expenditures will have positive systemic risk if those expenditures tend to be higher at times when the return on the stock market is high and *vice versa*.
108. Depending on the structure of the outsourcing agreement it is possible that there may be some transfer of systemic risk between the service provider and the contractor. This transfer could be in either direction. That is, it could increase or reduce the service provider's systemic risk.
109. In fact, it is quite likely that an outsourcing agreement will increase the systemic risks attached to the service provider's net cash flows. Consider a scenario where there was positive systemic risk associated with expenditures (whether they be provided in-house or outsourced). Now imagine that an outsourcing contract provides a fixed fee for the provision of those services (such as I understand is the nature of the United Energy/Alinta outsourcing contract). A fixed fee, by definition, has a zero covariance with the market. Thus, this type of contract will reduce the systemic risk associated with the service provider's expenditures.
110. This has the effect of *increasing* the systemic risks attached to the service provider's profits. That is net cash flows are equal to revenues *minus* expenditures. As a result, if expenditures are up when the stock market is up this has the effect, other things equal, of causing net cash flows to rise by less when the stock market is up. As a consequence, fixed fee outsourcing contracts will tend to increase the service provider's systemic risk (ie, transfer risk from the contractor to the service provider) provided one can assume that expenditures have positive covariance with the stock market.
111. This issue was more formally analysed in a recent NERA report for the ACCC in the context of regulation of the Roma to Brisbane pipeline (RBP).<sup>33</sup> In that report it was noted that:

*The present value of profits is correctly calculated as the difference between the present value of revenues (discounted using a rate reflecting the systemic risks of revenues ("W<sub>R</sub>")) less the present value of expenditures (discounted using a rate reflecting the systemic risks of expenditures (W<sub>E</sub>)):*

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<sup>33</sup> NERA 2006, *Critique of Responses to RBP ICB Draft Decision*.

$$PV \text{ profits} = \frac{R}{1+W_R} - \frac{E}{1+W_E}; \quad (1)$$

*This is the correct definition of the present value of net cash flow ('profits'). As previously attested by ourselves and Professor Grundy, revenues and expenditures must be discounted by the risk adjusted discount rate associated specific to the risk profile of each.*

...

*However, it is important to understand that if we assume identical revenues and different expenditure profiles (as we must under the NPV cost based DORC approach) then the discount rate on profits will not be the same under each scenario. To see why this is the case note that equation (1) can be expressed in terms of a single discount rate for profits ( $W_p$ ) as per the following equation.*

$$PV \text{ profits} = \frac{R-E}{1+W_p}; \quad (2)$$

*Because equation 2 must give the same answer as equation 1, it follows that the correct discount rate on profits must be expressed as function of all four variables in equation 1. Setting equation 1 and 2 equal and rearranging terms to solve for the discount rate on profits gives:*

$$W_p = \frac{R * (\frac{W_R}{1+W_R}) - E * (\frac{W_E}{1+W_E})}{\frac{R}{(1+W_R)} - \frac{E}{(1+W_E)}} \quad (3)$$

112. Equation 3 describes how the systemic risks attached to expenditures affect the systemic risks attached to profits (net cash flow) under a one period model where revenues are independent of expenditures. This is only an approximation to the regulatory environment (as revenues and expenditures are only independent within a regulatory period), however, it is a tractable way of formally describing the relevant relationships.
113. The Envestra outsourcing agreement is less likely to raise Envestra's systemic risk than the United Energy arrangement because it involves a pass through of expenditures rather than a fixed fee. It seems reasonable to assume that this pass through arrangement causes the pattern of expenditures over time to be similar to the pattern that would have existed if Envestra incurred these costs in-house. Thus, it is unlikely that the outsourcing arrangement has had any impact on Envestra's systemic risk relative to in-house provision and therefore the return on equity required by Envestra should not be altered.

114. Even if it could be argued that there was a transfer of systemic risks under an outsourcing contract, it would be inappropriate to focus on the impact on the service provider's systemic risk *relative to in-house* provision. The relevant comparison must take place between the service provider and the comparable companies used to establish the service provider's equity beta. In order to amend a service provider's equity beta to reflect its outsourcing arrangements one would need to argue that these arrangements made it substantially different from the sample of companies used to select the equity beta. That is, one would need to argue that the level and type of outsourcing by the service provider was substantially different to the level and type of outsourcing undertaken by the comparable companies used to benchmark the service provider's level of systemic risk.
115. In this regard I note the following important points:
- This issue is equally true of arm's length outsourcing agreements. That is, consideration of this issue could not reasonably be confined to outsourcing arrangements with related parties;
  - I am unaware of the ESC ever having considered the nature of outsourcing contracts as relevant to the selection of comparable companies when benchmarking systemic risk. It would be a major change in regulatory practice to attempt to do so;
  - Performing such analysis would need to establish facts that have never before been under consideration by the ESC. Specifically, how the systemic risks associated with profits are determined from the systemic risks associated with revenues and expenditures; and
  - Once established, these facts would illustrate that outsourcing is a relatively unimportant source of difference between firms. Casual observation of equation 3 illustrates that a more important determinant will be the relative values of revenues and expenditures.
116. The last point in the above list is worth further consideration. From equation 3 it can be seen that the discount rate on net cash flows is reducing in revenues holding other variables constant.<sup>34</sup> The intuitive reason for the above result is relatively simple. If expected revenues are \$100 and there are no future expenditures, a 5% fluctuation in revenues is equal to a 5% fluctuation in profits. However, if future expenditures are \$90 then future profits are only \$10 (100-90) and a 5% fluctuation in revenues results in a 50% fluctuation in expected profits. It is therefore unsurprising that the discount rate applied to profits increases as the gap between revenues and expenditures narrows.
117. It is also worth noting that the ACCC/AER has addressed this issue in a different context (namely, establishing the initial capital base for regulated gas pipeline using an NPV DORC methodology). Its conclusion is that the best estimate of the systemic

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<sup>34</sup> And assuming that the discount rate on revenues exceeds that on expenditures - as is commonly assumed.

risks attached to expenditures is zero.<sup>35</sup> In part this is based on review of the finance literature.<sup>36</sup> (I also advised the AER/ACCC on this issue.) Accepting this regulatory precedent would suggest that outsourcing would have little or no effect on systemic risk.

118. However, unbundling systemic risk and allocating it to revenues and expenditures is an issue for more than simply outsourcing. If regulators believed that this could be done accurately enough to make adjustments based on differences in outsourcing agreements, they would also need to make adjustments for other factors such as the ratio of revenues to expenditures. In fact, given the ACCC/AER's position, this latter adjustment is likely to be an order of magnitude more important than whether or not services are outsourced or provided in-house.
119. I am not suggesting that regulators should attempt to unbundled systemic risk into revenue and expenditure risk. I am simply noting that if regulators do this in an attempt to adjust for differences in outsourcing arrangements they should first adjust for differences in the levels of expenditures versus revenues. This will be a complicated process and should not be embarked on lightly.

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<sup>35</sup> AER, Final Decision: Revised Access Arrangement by APT Petroleum Pipelines Ltd for the Roma to Brisbane Pipeline, December 2006, pg. 51

<sup>36</sup> See for instance Brealey, Cooper and Habib, Oxford Review of Economic Policy, p. 24 and Luehrman, Timothy, Investment Opportunities as Real Options: Getting Started on the Numbers, Harvard Business Review, July-August 1998.

## Appendix B. List of documents referred to

The list of documents I have had recourse to are set out below.

### **Information provided by Envestra**

Operating and Management Agreement (Stratus), 9 March 1999, Envestra Victoria Pty Ltd and Boral Energy Asset Management Ltd

Meyrick and Associates, The Total Factor Productivity Performance of Victoria's Gas Distribution Industry, pg. 31.

Envestra, 060117-Carryover Outcomes.xls

Envestra, Incentive Fee – OEAM.xls

### **Other Documents referred to**

AER, Draft Decision—Queensland transmission network revenue cap 2007–08 to 2011–12, December 2006

AER, Final Decision: Revised Access Arrangement by APT Petroleum Pipelines Ltd for the Roma to Brisbane Pipeline, December 2006.

Brealey, Cooper and Habib, Oxford Review of Economic Policy, p. 24 and Luehrman, Timothy, Investment Opportunities as Real Options: Getting Started on the Numbers, Harvard Business Review, July-August 1998.

Department of the Environment, Transport and the Regions, Improving local services through best value: Consultation Paper, 1998, s1.5.

ESC, Electricity Distribution Price Review 2006-10, October 2005 Price Determination as amended in accordance with a decision of the Appeal Panel dated 17 February 2006 - Final Decision Volume 1 Statement of Purpose and Reasons.

ESC, Gas Access Arrangement Review 2008-2012, Consultation Paper No. 1, 31 May 2006.

ESC, Gas Access Arrangement Review 2008-2012, Consultation Paper No. 2, October 2006.

ESC, Proposed Rail Access Arrangements, Draft Decision, April 2006.

ESC, Open letter to stakeholders EDPR 2006-10 Final Decision: Notice of Errata.

Manelli, Alejandro M.; Vincent, Daniel R., Optimal Procurement Mechanisms, *Econometrica*, May 1995, v. 63, iss. 3, pp. 591-620.

NERA 2006, *Critique of Responses to RBP ICB Draft Decision*.

Perloff, *Microeconomics*, 3<sup>rd</sup> edition, Pearson Addison Wesley, 2004, pg 247.

***Annual Reports Used in the Benchmarking Study***

Envestra Annual Reports 2002-2006

AGL Annual Reports, 2002-2006

Alinta Annual Reports, 2004-2006

Ausenco Ltd; Annual Reports, 2006

Bechtel Australia Pty Ltd, ASIC Filing Form 388, 2002-2006

Clough Ltd, Annual Reports, 2002-2006

Downer EDI Ltd, Annual Reports, 2002-2006

Fluor Australia Pty Ltd, ASIC Filing Form 388, 2002-2006

Hatch Associated Pty Ltd, ASIC Filing Form 388, 2002-2006

KBR Holdings Ltd, ASIC Filing Form 388, 2002-2006

Leighton Holdings Ltd, Annual Reports, 2002-2006

Lend Lease Corporation Ltd, Annual Reports, 2002-2006

Origin Energy Ltd, Annual Reports, 2002-2006

Sinclair Knight Merz Holdings Ltd, ASIC Filing Form 388, 2002-2006

Skilled Group, Annual Reports, 2002-2006

SMEC Holdings Ltd, ASIC Filing Form 388, 2002-2006

Spotless Group, Annual Reports, 2002-2006

Thomas & Coffey Ltd, Annual Reports, 2002-2006

Tenix Alliance Pty Ltd ASIC Filing Form 388, 2002-2006

Transfield Services Ltd, Annual Reports, 2002-2006

United Group Ltd, Annual Reports, 2005-2006

WorleyParsons Ltd, Annual Reports, 2004-2006

## Appendix C. Curriculum Vitae

Associate Director

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Website: www.nera.com



### Overview

Tom has 16 years professional experience as an economist initially at the Australian Commonwealth Treasury and more recently at NERA. Tom specialises in anti-trust analysis and issues of network economics in both the energy and telecommunications sectors. Tom has represented utilities, industry associations, regulators and governments in various forums.

### Qualifications

**1998**                      **MONASH UNIVERSITY**  
PH.D. in Economics  
1<sup>st</sup> Class Honours

### Prizes and Scholarships

APRA Priority Post Graduate Scholarship (Masters and Ph.D.)

Monash University Post Graduate Scholarship (Ph.D.)

Victorian Economic Society award for best honours year student (1991)

Commonwealth Treasury Cadetship (bursary to finance 1990 honours year)

## Project Experience

### ***Market Design and Competition Analysis***

- 2006**                    **Melbourne Water Industry, Australia**  
**Market Design – Bulk Water Sector**  
 Developing reform proposals to facilitate the introduction of tradeable bulk water rights to the Melbourne system – including the specification of operational market rules.
- 2006**                    **Australian Competition and Consumer Commission, Australia**  
**Merger Analysis – Electricity Industry**  
 Providing expert opinion as well as strategic guidance to the Australian Competition and Consumer Commission (ACCC) on the competitive implications of a merger.
- 2006**                    **Confidential, Australia**  
**Section 46 of the TPA - Telecommunications**  
 Providing expert opinion in relation to an action under Section 46 of the Trade Practices Act.
- 2006**                    **Australian Competition and Consumer Commission, Australia**  
**Merger Analysis - Transport Industry**  
 Providing expert opinion as well as strategic guidance to the Australian Competition and Consumer Commission (ACCC) on the competitive implications of proposed merger between Toll and Patrick.
- 2005**                    **Confidential, Australia**  
**Merger Analysis - Telecommunications Industry**  
 Providing expert opinion as well as strategic guidance to the merging firms on the competitive implications of that merger.
- 2005**                    **AirServices Australia (ASA), Australia**  
**Review of Pricing Conduct**  
 Providing expert opinion to ASA on pricing for its services at Australian Airports. Including an examination of allegations that pricing contravened National Competition Agreements.
- Ongoing since 2001** **TransGrid, Australia**  
**Market for transmission**  
 Analysis of the design of the National Electricity Market (NEM) and its implications for efficient investment in generation and transmission assets. This work has involved providing private advice to TrnasGrid as well as public policy documents such as drafting TransGrid's submission to the US energy regulator (FERC) on market design.

- 2005**                    **Confidential, Australia**  
**Competition Assessment of Pricing Strategy**  
 Advising a large corporate on the economic implications of the Trade Practices Act for its pricing conduct.
- 2005**                    **Australian Competition and Consumer Commission, Australia**  
**Competition Assessment of Electricity Generation Merger**  
 Advised the ACCC on the competition concerns (and potential remedies) associated with a specific proposed merger of electricity generation interests.
- 2004**                    **Australian Competition and Consumer Commission, Australia**  
**Competition Impact of Exclusive Rights to Content**  
 Provided a public report to the ACCC on the competition concerns (and potential remedies) associated with the use of exclusive rights to content by incumbent telecommunications infrastructure owners.
- 2004**                    **Australian Competition and Consumer Commission, Australia**  
**Empirical Evidence of Predatory Pricing in Telecommunications**  
 Provided the ACCC with an expert report that developed an imputation test framework and empirical model to test allegations of predatory pricing of broadband services.
- 2003/04**                **Singtel Optus, Australia**  
**Expert Report on Market Definition and Existence of Market Power in Mobile Termination**  
 Provided Optus with an expert report on the appropriate market definition to use in analysing competition between mobile network operators in providing terminating access.
- 2003/04**                **Singtel Optus, Australia**  
**Expert Economic Advice on Competition Complaint**  
 Providing Optus advice on a confidential competition complaint relating to the exercise of market power by one of Optus' competitors.
- 2001-03**                **QANTAS**  
**Advice on Competition Law and Predation Allegations**  
 Provided input into NERA's advise in relation to allegations of anticompetitive behaviour under section 46 of the Trade Practice Act.
- 2002**                    **National Competition Council (NCC), Australia**  
**Exploitation of Market Power by a Gas Pipeline**  
 Provided a report to the NCC in which we developed a number of tests for whether current transmission prices were evidence of the exploitation of market power by a gas transmission pipeline. Also provided a separate report that applied these tests. This analysis was

used to inform the NCCs decision on whether to recommend the pipeline in question be subject to regulation under the Australian Gas Code.

### ***Cost of Capital Issues***

- |             |   |
|-------------|---|
| <b>2006</b> | <p><b>ACTEW Corporation, Australia</b><br/> <b>Cost of Capital</b><br/>         Advising on the cost of capital for ACTEW’s water and waste water operations.</p>   |
| <b>2006</b> | <p><b>AER, Australia</b><br/> <b>Cost of Capital</b><br/>         Advising on the cost capital issues in relation to the RBP pipeline access arrangement.</p>   |
| <b>2006</b> | <p><b>Integral Energy, Australia</b><br/> <b>Cost of Capital</b><br/>         Advising on the cost of capital for Integral’s retail operations.</p>   |
| <b>2006</b> | <p><b>Telecom New Zealand, New Zealand</b><br/> <b>Cost of Capital</b><br/>         Advising on the cost capital issues in relation to TSO.</p>   |
| <b>2005</b> | <p><b>Energy Networks Association, Australia</b><br/> <b>Debt Margin</b><br/>         Advising on the relative merits of CBASpectrum and Bloomberg’s methodology for estimating the appropriate debt margin for long dated low rated corporate bonds.</p> |
| <b>2005</b> | <p><b>The Victorian ESC, Australia</b><br/> <b>Cost of Capital</b><br/>         Advice on the cost of capital for electricity distribution network assets.</p>  |
| <b>2005</b> | <p><b>The Australian Competition and Consumer Commission, Australia</b><br/> <b>Cost of Capital</b><br/>         Advice on asymmetric costs of errors in WACC estimation.</p>   |
| <b>2005</b> | <p><b>Prime Infrastructure, Australia</b><br/> <b>Weighted Average Cost of Capital</b><br/>         Provided a report for Prime Infrastructure critiquing the QCA’s draft cost of capital decision for Queensland electricity distribution.</p>           |

- 2004**                    **The Australian Competition and Consumer Commission, Australia**  
**Cost of Capital**  
 Provided a report advising on the correct discount rate to use when valuing future expenditure streams on gas pipelines.
- 2004**                    **ETSA Utilities, Australia**  
**Weighted Average Cost of Capital**  
 Provided a report for ETSA examining the use of historical proxy betas.
- 2004**                    **ActewAGL, Australia**  
**Weighted Average Cost of Capital**  
 Provided a report for ActewAGL estimating its weighted average cost of capital for regulated activities (gas distribution).
- 2004**                    **TransGrid , Australia**  
**Debt Margin**  
 Provided a report critiquing CBASpectrum’s methodology for estimating the appropriate debt margin for long dated low rated corporate bonds.
- 2004**                    **Prime Infrastructure, Australia**  
**Weighted Average Cost of Capital**  
 Provided a report for Prime Infrastructure the weighted average cost of capital for its regulated activities (coal shipping terminal).
- 2004**                    **ActewAGL, Australia**  
**Debt Margin**  
 Provided a report for ActewAGL advising on the appropriate calculation of debt margins for BBB+ ten year bonds.
- 2003**                    **Electricity Transmission Service Providers, Australia**  
**Expert Report on the Use of Historical Proxy Betas**  
 Critique of the ACCC’s statistical interpretation of historical proxy beta in its review of the *Statement of Principles for the Regulation of Transmission Revenues*.
- 2003**                    **Orion, New Zealand**  
**Cost of Capital**  
 Critique of Associate Professor Lally’s advice on the Cost of Capital for New Zealand Electricity Distribution .

- 2003**                    **TransGrid, Australia**  
**Expert Report on TransGrid's WACC**  
 Advising TransGrid on the appropriate weighted average cost of capital (WACC) for its regulated assets
- 2003**                    **EnergyAustralia, NSW, Australia**  
**Advice on Financial Capital Maintenance**  
 Advising EnergyAustralia on issues relating to its appropriate WACC and the modelling of cash flows to ensure the expected present value of future net revenues was equal to the value of the regulated asset base.
- 2002**                    **Rail Access Corporation, Australia**  
**Hurdle Rates of Return**  
 Advising rail access corporation on the appropriate hurdle rates of return that should be applied when assessing competing investments.
- 2002**                    **Integral Energy, Australia**  
**Return on Capital**  
 Advising Integral Energy on what risk adjusted regulatory return on capital is necessary to provide sufficient incentive to invest in new infrastructure assets.
- 2001**                    **TransGrid, Australia**  
**Advice on ACCC's Powerlink WACC decision**  
 A report critically appraising the ACCC's decision regarding Powerlink's weighted average cost of capital (WACC).
- 2001**                    **Optus, Australia**  
**Affidavit on Telstra's PSTN WACC**  
 Providing expert testimony to the Australian Competition Tribunal on Telstra's use of the CAPM model to determine an appropriate rate of return on PSTN assets.
- 2001**                    **Australian Competition and Consumer Commission, Australia**  
**International Comparison of WACC Parameters**  
 Preparation of a report on international and domestic WACC parameters and the potential impact of variations in declared WACCs on incentives to invest in various regulatory jurisdictions.
- General Regulatory Analysis**
- 2006**                    **GDSE, Macau, SAR PRC**  
**Efficient Electricity Tariff Reform**  
 Advise the Macau regulator (GDSE) on efficient tariff reform for the vertically integrated generation and network provider. This involved

estimating the LRMC on maximum demand and translating this into efficient tariff designs given relevant constraints (eg, metering constraints).

- 2005/06**                    **Integral Energy, Australia**  
**Efficient Electricity Tariff Reform**  
 Advise Integral Energy on its LRMC of meeting growing network demand and on how this could be reflected in efficient tariff design (including design of critical peak pricing).
- 2005**                        **Telecom New Zealand, New Zealand**  
**Modelling of New Entrant Costs for TSO**  
 Provide expert reports on the correct methodology for calculating the cost of providing the TSO (universal service obligation) using new entrant costs.
- 2005**                        **Telecom New Zealand, New Zealand**  
**Operating Cost Benchmarks**  
 Advised Telecom on appropriate operating cost benchmarks for telecommunications services
- 2005**                        **TransGrid, Australia**  
**Capital Expenditure Indexation**  
 Advised TransGrid on the development of a price index to reflect movements in the unit costs of inputs into its capital expenditure program.
- 2005**                        **TransGrid, Australia**  
**Forecast of Capital Expenditure**  
 Advised TransGrid on appropriate adjustments to forecast capital expenditure to take account of material increases in demand for investment in future Australian electricity infrastructure.
- 2005**                        **TransGrid, Australia**  
**ACCC's Capital Expenditure Regime**  
 Advised TransGrid on the ACCC's proposed regulatory regime to apply to capital expenditure.
- 2005**                        **Actew, Australia**  
**Financing of New Infrastructure**  
 Advised Actew on options for financing new infrastructure.
- 2004**                        **Telecom New Zealand, New Zealand**  
**Avoided Retail Cost Study**  
 Developing an avoided cost study associated with Telecom's fixed line retail activities.

- 2004**                    **TransGrid, Australia**  
**Fair Sharing of Efficiency Gains**  
 Provided a report to TransGrid advising on whether the ACCC’s draft decision was consistent with the National Electricity Code’s requirement that there be a ‘fair sharing’ of efficiency gains.
- 2004**                    **Australian Competition and Consumer Commission, Australia**  
**Asset Valuation Report**  
 Provided an expert report to the ACCC on the calculation of depreciated optimised replacement cost (DORC) in the context of the EAPL’s appeal of the ACCC’s valuation of its Moomba to Sydney pipeline.
- 2004**                    **ESCOSA, Australia**  
**Incentive Regulation**  
 Provided ESCOSA with a report on the appropriate mechanism to provide ETSA Utilities with an incentive to achieve cost reductions in operating and capital expenditure.
- 2004**                    **Perisher Blue Ltd, Australia**  
**Review of Municipal Services**  
 Assisted PBL with its submission to IPART on the review of municipal services (roads, waste, water and sewerage) at the Perisher Blue Resort.
- 2004**                    **TransGrid, Australia**  
**ACCC Regulatory Review**  
 Assisted TransGrid in drafting its Application to the ACCC for regulated revenues and in its response to the ACCC’s draft decision.
- 2003**                    **Telecom New Zealand, New Zealand**  
**Expert Report on Efficient Recovery of CSO Costs**  
 Provided Telecom with a report stepping through all the information necessary to administer recovery of CSO costs in a manner consistent with “Ramsey efficient” pricing. The purpose of this was to inform the NZ Commerce Commission of the practical difficulties associated with pursuing such an outcome.
- 2003**                    **EnergyAustralia, NSW, Australia**  
**Advice on Financial Capital Maintenance**  
 Advising EnergyAustralia on issues relating to its appropriate WACC and the modelling of cash flows to ensure the expected present value of future net revenues was equal to the value of the regulated asset base.

- 2003**                    **Optus, Australia**  
**Critique of Telstra’s Access Undertaking for PSTN Services**  
 Advising Optus in relation to the reasonableness of Telstra’s cost modelling assumptions underlying its access undertaking for PSTN services.
- 2003**                    **Optus, Australia**  
**Indicative Pricing Principles**  
 Advising Optus in relation to appropriate pricing principles the ACCC should adopt when establishing indicative prices for access to PSTN services.
- 2003**                    **Optus, Australia**  
**Estimation and Recovery of Telstra’s Access Deficit**  
 Provided a report to the ACCC on behalf of Optus addressing the appropriate measurement of any ‘access deficit’ that may exist between the cost to Telstra of its access network and the revenues associated with that network. Also examined the most appropriate recovery methodology for any access deficit.
- 2003**                    **Rail Infrastructure Corporation, NSW, Australia**  
**Expert Report on Hurdle Rates of Return**  
 Advising RIC on the appropriate WACC each division should use as a hurdle rate of return when assessing competing capital projects.
- 2003**                    **Telecom New Zealand, New Zealand**  
**Expert at Commerce Commission Hearing**  
 Provided expert testimony to the NZ Commerce Commission on the appropriate calculation of a wholesale discount for regulated services.
- 2002**                    **Telecom New Zealand, New Zealand**  
**‘Intelligent’ Wholesale Benchmarking Report**  
 Carried out a benchmarking survey and provided a report to the New Zealand Commerce Commission on behalf of Telecom New Zealand. This report adjusted wholesale prices in the United States for differences in cost drivers (in terms of the cost of capital and labour) compared to New Zealand.
- 2002**                    **Telecom New Zealand, New Zealand**  
**Interconnection Pricing**  
 Advised Telecom New Zealand on the potential forms of price control the New Zealand Commerce Commission could adopt in regulating PSTN interconnection prices.

- 2002**                    **Telecom New Zealand, New Zealand**  
**‘Intelligent’ Interconnection Benchmarking Report**  
 Carried out a benchmarking survey and provided a report to the New Zealand Commerce Commission on behalf of Telecom New Zealand. This report adjusted interconnection prices in Europe, Australia and the United States for differences in cost drivers (in terms of switching and transmission economies of scale, transmission link lengths and the cost of capital and labour) compared to New Zealand.
- 2002**                    **SPI PowerNet, Australia**  
**Design of Efficiency Carryover Mechanism**  
 Advised SPI PowerNet on the appropriate design of an efficiency carryover mechanism intended to share efficiency gains between a regulated business and its customers.
- 2002**                    **SPI PowerNet, Australia**  
**ReOptimisation of Transmission Assets**  
 Advised SPI PowerNet on the appropriate approach to calculating the value of assets previously optimised out of its regulatory asset base and now being “un-optimised” due to greater utilisation levels of those assets.
- 2002**                    **SPI PowerNet, Australia**  
**Strategic Adviser on Revenue Reset Application**  
 Advised SPI PowerNet on a range of high level issues in relation to their regulated revenue reset application, including appropriate drafting and consistency of argument throughout the document. Presented aspects of SPI PowerNet’s application to the ACCC and in an ACCC sponsored regulatory public forum.
- 2002**                    **Telecom New Zealand, New Zealand**  
**Review of Interconnection Benchmarking Report**  
 Advised Telecom New Zealand on issues arising out of an Interconnection Benchmarking report commissioned by the Commerce Commission of New Zealand for the purpose of setting interim interconnection charges. This role included the submission of a report to the Commerce Commission and presentation of the findings of that report at a Commerce Commission hearing.
- 2002**                    **Australian Pipeline Trust, Australia**  
**Expert Advice on CPI Indexation**  
 Advised APT in relation to a dispute with customers on the appropriate CPI indexation adjustment of prices for the impact of the GST required under the Trade Practices Act.

- 2002**                    **EnergyAustralia, Australia**  
**Pricing Strategy Under a Price Cap**  
 Advised EnergyAustralia on the commercial implications for pricing strategies under a weighted average price cap.
- 2001**                    **IPART, Australia**  
**Minimum Standards in Regulation of Gas and Electricity Distribution**  
 Advised the NSW regulator on the appropriate role of minimum standards in regulatory regimes and how this could be practically implemented in NSW.
- 2001-03**                **Rail Infrastructure Corporation, New South Wales**  
**Preparation of access undertaking**  
 Advised on all economic aspects arising in the preparation of an access undertaking for the New South Wales rail network. Issues arising include: pricing principles under a 'negotiate and arbitrate' framework, asset valuation, efficient costs, capacity allocation and trading, and cost of capital.
- 2001**                    **Australian Competition and Consumer Commission, Australia**  
**Determination of Local Call Resale Prices**  
 The ACCC's expert regarding the determination of local call resale prices from Telstra's fixed line network. This involved the application, and manipulation, of the Australian incumbent's (Telstra's) regulatory accounting framework to determine appropriate wholesale prices.
- 2001**                    **All NSW electricity distribution businesses, Australia**  
**Form of Price Control**  
 Advice on the economic efficiency implications of various forms of price control that can be applied under the National Electricity Code.
- 2001**                    **Wesfarmers, Australia**  
**Expert Advice on Reasonable Cost Recovery**  
 Advising Wesfarmers in relation to a dispute with customers on reasonable recovery of costs of coal production.
- 2001**                    **Integral Energy, Australia**  
**Pricing Strategy Paper**  
 Advising on appropriate pricing strategy for Integral's electricity distribution business, including advice on an appropriate regulatory engagement strategy.

- 2001**                    **TransGrid, SPI PowerNet and GPU GasNet, Australia**  
**CPI Indexation Adjustment**  
 Advice on the appropriate CPI indexation adjustment for the impact of the GST required under the Trade Practices Act.
- 2001**                    **All NSW gas and electricity distribution businesses, Australia**  
**CPI Indexation Adjustment**  
 Advice on the appropriate CPI indexation adjustment for the impact of the GST required under the Trade Practices Act.
- 2000**                    **One.Tel, Australia**  
**ULL Pricing**  
 Advising OneTel in their arbitration with Telstra on pricing for access to the unbundled local loop.
- 2000**                    **Electricity Supply Association of Australia and Australian Gas Association,**  
**Adjusting the Regulatory Regime for the Impact of Tax Reform**  
 Advised the peak energy bodies on the implications of tax reform on their members under the Trade Practices Act.
- 2000**                    **Victorian Department of Treasury and Finance, Australia**  
**State Business Tax Reform**  
 Advised the Department of Treasury and Finance on State business tax reform including in relation to the relative economic costs associated with payroll, stamp duty and other transaction taxes.
- 1999**                    **Independent Pricing and Regulatory Tribunal of NSW**  
**Various energy regulation issues**  
 Advice on a range of issues in regulation of the NSW energy sector.
- 1990-99**                **Commonwealth Treasury, Australia**  
**Various economic policy issues**  
 Provided input in the formulation of a number of economic policies. These included: the year 2000 reforms of the Australian indirect and corporate tax regimes; reform of the social security system and labour market regulation; economic forecasting and monetary policy monitoring; reform to the regulation of the Australian financial system.

### ***Application of Regulatory Test for Network Augmentation***

- 2003**                    **TransGrid, NSW Australia**  
**Submission to the ACCC's Review of the Regulatory Test**  
 Advised TransGrid in response to the ACCC's Discussion Paper on the review of the regulatory test. Tom prepared a report which commented

both on the ACCC's proposal to amend the regulatory test to improve clarity and to ensure consistency with the provisions in the National Electricity Code, and also on the ACCC's proposed options for incorporating 'competition benefits' in the regulatory test.

**2003**

**Clayton Utz, TransGrid, NSW, Australia**

**Murraylink's Application for Regulated Status**

Tom advised TransGrid and Clayton Utz in responding to Murraylink's Application to the ACCC for regulated status, and, in particular, Murraylink's use of the regulatory test to derive a regulatory asset value.

Tom also advised TransGrid in responding to the ACCC's Preliminary View on Murraylink's Application, and helped draft a further report commenting on aspects of the ACCC's approach.

**2002**

**Clayton Utz, TransGrid, NSW, Australia**

**National Electricity Tribunal Hearing of Appeal against NEMMCO's Determination in relation to the SNI Interconnector**

Managed the preparation of expert economic testimony in relation to the appeal of NEMMCO's Determination that SNI passed the regulatory test. Role included assistance with the preparation of testimony, liaising with the modelling firm carrying out the re-application of the regulatory test, providing background briefings in relation to the regulatory test and NEMMCO's determination and all aspects of managing NERA's role in the litigation process.

**2001-03**

**TransGrid, NSW, Australia**

**Application of the regulatory test to network augmentation in the Western Area**

Advised TransGrid on the application of the regulatory for intra-regional network augmentation planned for the Western Area of NSW. The application highlighted issues in applying the regulatory test in a situation where an agreed reliability standard is not currently met.

***Commercial Asset Valuation***

**2002**

**Screenrights, Australia**

Advice on methodologies used to estimate the value of retransmitting copyright content contained in local free-to-air broadcast.

## **General Policy Analysis**

- 2003**                      **Betfair, UK**  
**The Impact of Internet Betting Exchanges on the Racing Industry**  
This project involved estimating bounds for the price elasticity of demand for wagering in Australia and using these to determine the likely impact of licensing internet betting exchanges to compete with existing TAB wagering operations. This project also involved modelling the impact on wagering tax rates required to achieve revenue neutrality under various price elasticity scenarios.
- 2002**                      **Marsh, Australia**  
**The Impact of Taxation on Levels of Property Insurance**  
This project involved estimating the number of uninsured households destroyed in the recent NSW bushfires that would otherwise have been insured if the only tax insurance premiums were subject to was GST. The methodology used was based on evidence from studies of the price responsiveness of demand for property insurance in the US and Australian evidence on the proportion of people without home or contents insurance.

## **Educational Services**

- 2006**                      **RMIT University, Australia**  
**Economics Unit for MBA**  
Developed the course materials for the economics unit in RMIT's MBA course.

## Speeches, Presentations and Testimony

2005 International Telecommunications Society regional Conference, Perth, Stepping over the Competitive Line.

2005 ACCC Regulatory Conference, Gold Coast, Exclusive Rights to Content and Competition in Telecommunications.

2005 sworn expert testimony to the South Australian District Court critiquing the ESCOSA cost of capital determination for ETSA Utilities.

2004, Office of the Water Regulator, Perth, Cost Benchmarking – Practical Pitfalls.

2004, ACCC Conference of Regulatory Principles for Electricity Transmission, Melbourne, Drawing a Line in the Sand on Cost of Capital Issues.

2004, Macquarie Bank, internal presentation on regulatory risk across jurisdictions and industries, Terrigal.

2003 ACCC Regulatory Conference, Gold Coast, Anticompetitive Pricing in Telecommunications.

2003 ACCC Conference on SPI PowerNet Regulatory Decision, presentation on the operation of the efficiency carryover.

2002 International Telecommunications Society regional Conference, Perth, TSLRIC Regulation and Leverage of Market Power.

# NERA

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