Energy Consumers Coalition of South Australia

Australian Energy Regulator

SA Gas Distribution Revenue Reset

Envestra Application

A response

by

Energy Consumers Coalition of South Australia

November 2010

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The views expressed in this document do not necessarily reflect the views of the Consumer Advocacy Panel or the Australian Energy Market Commission.

The content and conclusions reached are the work of the ECCSA and its consultants.

A condition by the Consumer Advocacy Panel for making funding available to the MEU to provide this submission is a requirement imposed on it by the Ministerial Council on Energy.

This requirement is that this submission must be considered to be a draft until the MCE has the opportunity to review it for accuracies of fact. The MCE has completed its review and makes the following observations.

1. **"On page 94, reference is made to QIC but should be QTC".** The attachment is a separate submission already published on the AER website. However the authors have granted permission to delete the reference to Queensland Investment Corporation and insert Queensland Treasury Corporation.
2. **"Under the Gas Act 1997, the Technical Regulator is concerned about gas leakage and minimum pressures".** A footnote is added on page 32.
3. **"The SA Government never fully owned the gas distribution system".** A footnote is added on page 17

Having made these changes, this submission can be placed on the AER website

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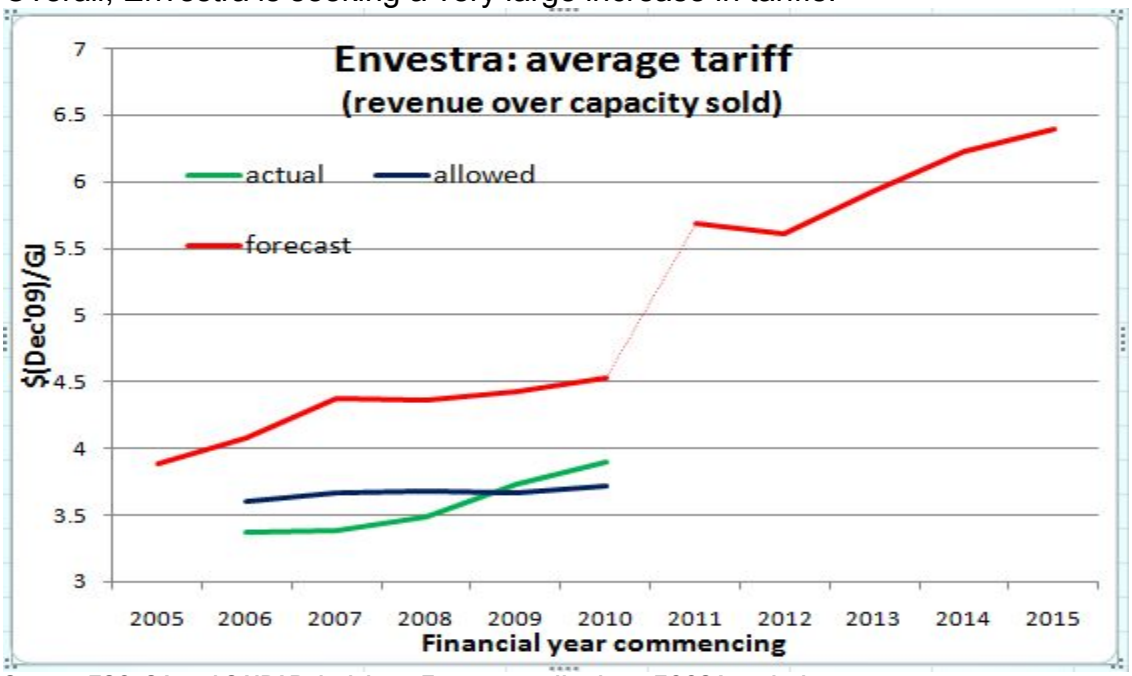
Executive Summary

The Energy Consumers Coalition of South Australia (ECCSA) welcomes the opportunity to provide its review of the Envestra SA gas distribution application for its revenue reset.

Overall, Envestra is seeking a very large increase in tariffs.



Source: ESCoSA and SAIPAR decisions, Envestra applications, ECCSA analysis

The causes of the increases are attributable to a very large capex claim and increasing costs for unaccounted for gas combined with an excessively high WACC, all measured against a declining amount of network capacity being sold.

This is the third regulatory review of Envestra and the AER should be able to assess Envestra's efficient costs levels: particularly as the previous regulator had already introduced incentive programs to drive efficiencies. Whilst opex has been self benchmarked and analysis shows the areas where Envestra has over claimed, the incentive program on capex provides a clear indication as to the capex levels appropriate for an efficient provider.

ECCSA analysis shows that Envestra has significantly over-claimed for mains replacement, yet a high level analysis indicates that there will not be a net benefit for consumers. To a lesser extent (but still significant) is that the capex for augmentation and network extension also does not provide for a net benefit. The Gas Rules require that new capex allowances must provide a net benefit.

Analysis of past regulatory reviews shows that the new Envestra application is consistent with its earlier applications, in that it is seeking more revenues based

on a massive claim for capital investment expenditure, substantially higher operational expenditures, and continued increases in unaccounted for gas. Yet, consumption is projected to decline over the new regulatory period.

Whilst all elements of the Envestra claim need attention to test their appropriateness and compliance with the Rules, the ECCSA considers that the AER must particularly pay attention to the following aspects of Envestra's claims:

- The 250% increase in capital expenditure based on a large mains replacement program that had featured prominently in each of he two previous regulatory reviews.
- The validity of any net economic benefit claims for network expansion and augmentation, in the absence of adequate information disclosures, including the availability of 'business case'.
- The validity of claims for each of the step changes in operational expenditure; ECCSA's assessment indicates that many of the claims cannot be justified.
- The perennial issue regarding UAFG which Envestra has been addressing since before its first regulatory review. It is clear that the Envestra solution might not provide a net benefit as the Rules require.
- The costs for sourcing gas to replace UAFG appear to be very high and not reflecting past costs, and certainly not the costs ECCSA members are seeing for their gas supplies
- Envestra advises that its service performance is very high, yet it declines to provide specific performance standards or to be measured against these.
- The 'persuasiveness' of Envestra's WACC claims.

The ECCSA is very much of the view that Envestra has provided an application which has excessive levels of "ambit" included in it.

1. Introduction

1.1 The ECCSA

The Energy Consumers Coalition of SA (ECCSA) is a forum representing large energy consumers in South Australia. The ECCSA is an affiliate of the Major Energy Users Inc (MEU), which comprises more than 20 major energy using companies in NSW, Victoria, SA, WA, NT, Tasmania and Queensland.

The ECCSA welcomes the opportunity to provide comments on the AER's review of the revenue reset for the South Australian gas distribution pipeline system.

Analysis of the gas usage by the members of ECCSA shows that in aggregate they consume a significant proportion of the gas used in SA. As such, they are highly dependent on the gas transmission and distribution networks to deliver efficiently the gas so essential to their operations. Many of the members are regionally based in SA and therefore heavily dependent on local suppliers of hardware and services. As a consequence, members have an obligation to represent the views of these local suppliers. With this in mind, the members require their views to not only represent the views of large energy users but also those of smaller power using facilities, and even of the residences used by their workforces.

The companies represented by the ECCSA (and their suppliers) have identified that they have an interest in the **cost** of the energy network services as these comprise a large cost element in their electricity and gas bills.

Although gas is an essential source of energy required by each member company in order to maintain operations, a failure in the supply of gas (or electricity) effectively will cause every business affected to cease production, and members' experiences are no different. Thus the **reliable supply** of gas (and electricity) is an essential element of each member's business operations.

With the introduction of highly sensitive equipment required to maintain operations at the highest level of productivity, the **quality** of energy supplies has become increasingly important with the focus on the performance of the distribution businesses because they control the quality of electricity and gas delivered. Variation of electricity voltage (especially voltage sags, momentary interruptions, and transients) and gas pressure by even small amounts now has the ability to shut down critical elements of many production processes. Thus member companies have become increasingly more dependent on the quality of electricity and gas services supplied.

Each of the businesses represented by ECCSA has invested considerable capital in establishing their operations and in order that they can recover the capital costs invested, long-term **sustainability** of energy supplies is required. If sustainable supplies of energy are not available into the future these investments will have little value.

Accordingly, ECCSA (and its affiliate MEU) are keen to address the issues that impact on the **cost, reliability, quality** and the long term **sustainability** of their gas and electricity supplies.

The members of ECCSA have identified that distribution plays a pivotal role in the gas market as it is the method whereby the needs of a vast number of consumers, each with their particular needs can access the essential service of gas supply in a way which is best suited to their needs. Consumers recognise that the cost of providing the distribution network is not a significant element of the total cost of delivered gas.

1.2 The scope of this review

ECCSA recognises that the AER is required to carry out its review in accordance with the recently changed National Gas Rules. These new Rules (being based on the AEMC developed electricity transmission Rules) need to be seen as being pro investment, as the AEMC stated that this was the focus of its Rule development approach. Equally, consumers have assessed the new gas Rules to be biased and unbalanced. The ECCSA notes that the AER is quite heavily constrained in its ability to exercise a holistic view of the final revenue and resultant tariffs that are determined as the outcome of this review.

It is noted that the determination of the regulatory asset base is quite closely proscribed. As for the inputs to the CAPM used to develop the WACC, whilst not fully predetermined by the recent AER WACC parameter determination (as is the case for electricity transmission), we consider the AER must take significant cognizance of its recent determination on WACC, which was released in May of 2009. In addition, the ECCSA notes that the degree to which the AER can determine any exclusion of future actual capital expenditure is limited, and the AER must allow the regulated businesses extensive freedom in determining the amount of depreciation to be included in the revenue.

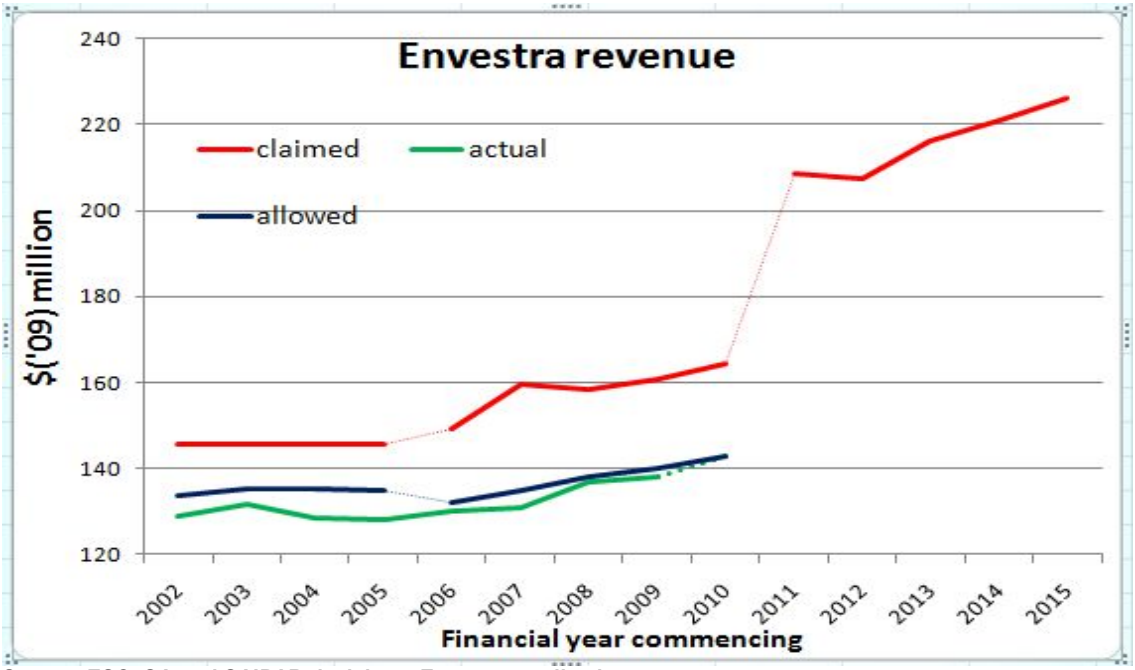
In principle, these Rule changes result in a reduced scope for the exercise of independent regulatory judgment by the AER and the determination of outcomes from the review is based more on a mechanical process.

There is, however, an element of the MCE changes to the Gas Rules which requires the AER to be more heavily involved in – this is the development of

the ultimate tariffs and their pricing structure which will result in the AER having more involvement than in previous distribution reset reviews. The previous decisions of jurisdictional regulators were not as exposed to this aspect as the AER now is. The ECCSA (and MEU) has had significant involvement in this aspect of the MCE's pricing methodologies in the Rules determination and views on this element will be presented later in this submission.

1.3 An overview of the Envestra application

The increased revenue sought by Envestra for the new regulatory period is significant, as the following chart shows:



Source: ESCoSA and SAIPAR decisions, Envestra applications

Historically, Envestra has sought more revenue than the previous regulators (SAIPAR and ESCoSA) allowed. Equally, it must be noted that the actual revenue recovered by Envestra has been less than that allowed by the regulators, especially in the case of the first regulatory period assessed by SAIPAR. However, it must be also noted that the regulatory allowances were much closer to the actual revenue than have been the Envestra claims.

To counter the small under-run in revenue, Envestra's costs tended to be much less than the revenue allowed (especially in the case of the second regulatory period assessed by ESCoSA) so that the less than expected revenue was more than offset by opex and capex under-runs.

It is quite clear that Envestra has taken to heart the fact that the new Rules have over-incentivised investment (as have every regulated network business operating under the National Electricity and Gas Rules in the current regulatory round). Across the board capex demands are significantly inflated from the current period, as is opex. Against this backdrop, it is significant that there is a forecast reduction in consumption projected, although lost gas (unaccounted for gas – UAFG) is expected to increase both in cost and volume. It is this forecast increase in UAFG that underpins a significant element of the forecast capex claim. The veracity of this claim would need to be closely assessed.

For this massive increase in claimed expenditure allowances, consumers will have to pay considerably more, but ironically, will receive basically the same service. The regulatory bargain is now so unbalanced that it has undergone a major shift in favour of the distribution business. What is totally missing from the applications is an assessment of value for money.

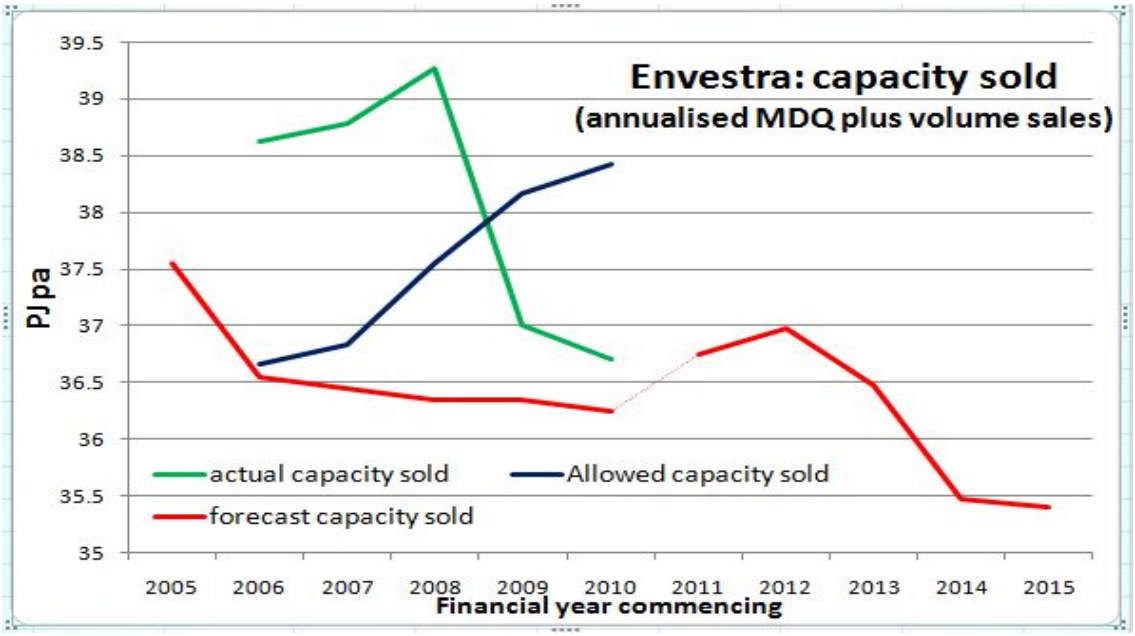
Envestra has requested a step increase in its average capex requirement of a massive 250% above its actual average capex in the current period. In his address to shareholders in October 2010, the Envestra Chairman noted

> "Our major concerns with the regulatory regime, arising from previous Access Arrangement decisions, is that the Regulator has taken a strong "consumer protection" stance in keeping gas transportation tariffs as low as possible, rather than ensuring adequate returns are available to shareholders to encourage distributors, like Envestra, to invest.
>
> Substantial future investment, as an example, will be required to ensure that our "old" gas mains are refurbished as quickly as practical, and to enable natural gas to be made available to some regional communities that have been lobbying for this for many years."

Envestra has certainly focused on the way the new Gas Rules over-incentivise investment by its decision to massively increase its capex allowance. However, the ECCSA reminds the AER that there is only investment where the regulated entity sees that it is likely to increase its profits. That such a large capex program is presented at this time indicates that Envestra sees that such a program will result in substantially increased profits, and the investment is not necessarily prudent or efficient.

This increase in capex, combined with a large increase in the weighted average cost of capital, results in a large increase in revenue being sought. At the same time Envestra is forecasting a reduction in the amount of gas transported on its network when measure in terms of paid for maximum daily quantities (MDQ) for demand (tariff D) customers and actual volumes for volume (tariff V) customers.

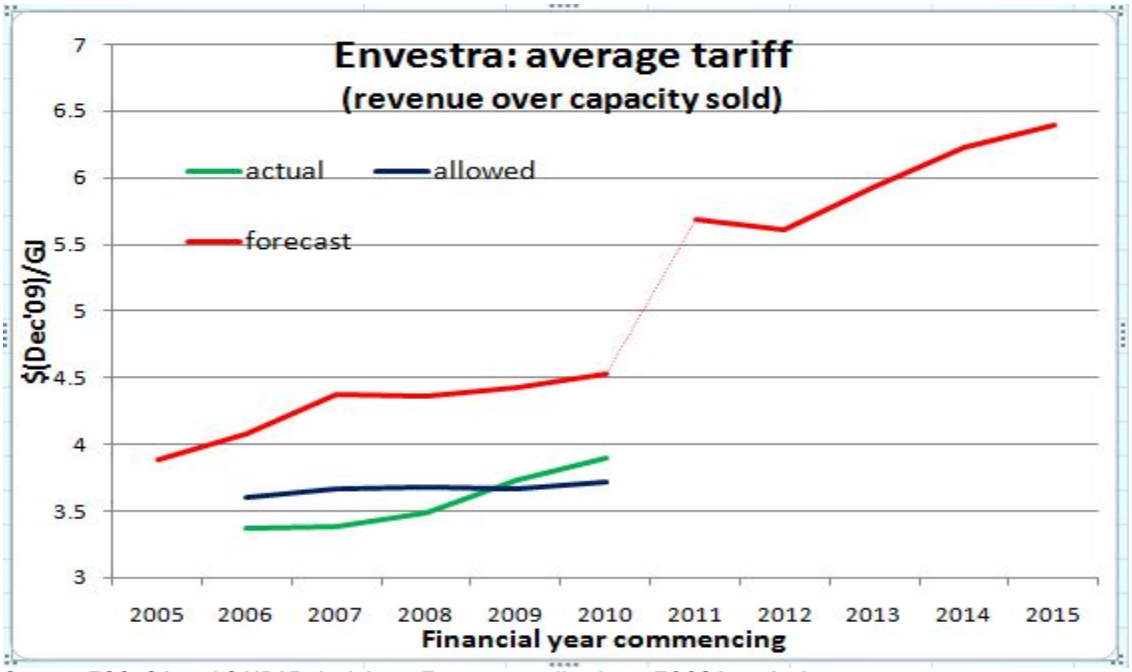
The following chart provides a view on the capacity of gas transport sold by Envestra. This reflects the annualized MDQ for tariff D customers plus the actual volume of gas carried for tariff V customers – combined, these provide the actual transport capacity paid to Envestra.



Source: ESCoSA and SAIPAR decisions, Envestra applications including NIEIR attachment

The drop off of capacity sold over 2008 reflects a reduction in MDQ for manufacturing customers of some 8.6%, although the actual reduction in consumption by manufacturing customers was a more modest 1.9%. Notwithstanding the reduction in demand, Envestra enjoyed higher sales of capacity for much of the second regulatory period than was allowed for.

Combining the two elements (increasing revenue with decreasing volumes), results in very large increases in the average tariffs. The following chart shows this pictorially.



Source: ESCoSA and SAIPAR decisions, Envestra applications, ECCSA analysis

What this chart shows is that, historically, Envestra has consistently sought higher average tariffs and just as consistently regulators (first SAIPAR and then ESCoSA) have decided that the average tariffs should be lower. That Envestra's actual average tariffs in the second regulatory period reasonably match the ESCoSA allowed average tariffs, indicates that Envestra forecasts for revenue and consumption would appear to be aggressive, and this is an aspect that the AER must consider in reviewing the current application.

At the same time, Envestra has remained a commercially viable entity despite the regulators reducing the average tariffs, indicating that the regulators "got it right" and the Envestra had sought unnecessarily high revenues. That this is the case is demonstrated by the Envestra Managing Director's comment at the October 2010 shareholder's meeting where he observed:

> "Our Company is in a sound financial position and there are ongoing opportunities to expand our interests and improve financial performance. Whilst the future is very much dependent on the forthcoming determinations by the AER, I have some confidence that the long-term interests of gas consumers will be balanced appropriately with the need to ensure shareholders are adequately rewarded for the significant investments that need to be made in the coming years."

The ECCSA is concerned that the improvement of the Envestra financial performance will be at the expense of consumers who will receive little or no improved benefit from such a large increase in Envestra's revenue.

Two of the key elements of Envestra's program to "…improve [its] financial performance…" are related to the replacement of gas mains and to increase the numbers of customers connected. In this regard, ECCSA observes:

1. Replacement of mains should only occur when the asset has been fully depreciated, the asset is "no longer used and useful", and that its replacement will deliver a net benefit to consumers. In this regard, the reduction in the costs of UAFG must more than pay for the increased cost of the mains replacement.

2. Whilst ECCSA supports the connection of new customers, the connection should only be carried out when the connection provides a net benefit to all customers. It is inappropriate that existing customers should fund new connections that increase costs to existing customers. If such new connections result in increased cost to existing customers, then the connection of new customers should be financed by government, such as occurs in Victoria where government makes up the shortfall between net cost recovery and actual cost of connection.

The ECCSA considers there is essentially an inconsistent proposition being propounded by Envestra. Either ESCoSA was badly incorrect in the setting of the revenues for Envestra in 2005, or Envestra is using the new Gas Rules to attempt to convince the AER that they are entitled to such large step increases now and high annual increases thereafter. The ECCSA, however, considers that the claims by Envestra are clearly ambit and need very rigorous pruning.

The main issue for the AER (other than the bottom up assessment of the Envestra application) is to develop a holistic view of whether the claims being made are valid and whether consumers will be able to pay for the hikes in revenue. It is not merely an issue of agreeing that energy distribution monopolies can just continue to increase their charges on the basis that consumers have no alternatives. Gas supply for those consumers using it is an essential service and it is simply insufficient to continually allow increases in the costs of essential services until parts of the community (including businesses that become uncompetitive as a result) can no longer afford to pay. At one end of the scale, economically disadvantaged consumers will either suffer or have to be directly assisted by government. At the other end of the scale, businesses will no longer be able to afford the charges and will either close or move inter-state or offshore. Either way, the costs will still remain and have to be carried by fewer consumers, further increasing unit prices.

Another major consideration that the AER must make, is whether the massive capital investment being proposed can be managed effectively in a

national environment where, due to decisions being made by regulators, there is likely to be significant pressure on the capital expenditure aspirations of the energy supply industry as a whole as they attempt to carryout the large volume of investment projects, against a background of limited resources of labour, plant and materials used in the energy supply industries, as well as the ongoing commodities boom..

In this regard the AER should assess not so much that there may be a need for the capex claimed by Envestra, but whether the implementation of all the capital projects is essential **to be implemented now** and whether it can be accepted that to carry out such an enhanced program when resources are likely to be scarce (and therefore more expensive) due to all other energy supply monopolies implementing large capital programs, that such commitments can be considered economically efficient.

Envestra provides reasons (many of them legitimate) for needing their large capex program but there is no attempt to demonstrate whether the implementation of these programs **in the time frames proposed** when economic conditions are so uncertain and when resources in the energy supply industries might be scarce, is efficient in economic terms. There is a need to balance the costs of improving the gas distribution network at a time when costs might be under pressure, with the deferral of the work to times when resources (and hence costs) are more available.

Envestra provides some information which indicates that the costs for the capex program are well above long term price indices, and this is used to justify the higher than expected capex program. This then raises a fundamental question – would a prudent investor build now, or would the prudent investor defer investing at a time when costs are higher than normal.

It is quite clear that the prudent investor would defer investing if costs are likely to fall in the future, and if the market it sought to benefit from would remain. As monopolies, energy transport businesses do not need to time their investments to meet an expected change in the market, as deferral will not deprive it of increased demand for its products nor of the entry of competitors. Regardless of whether the investment is to be made now or at some time in the future, the sales and revenue for such entities will be essentially the same.

Thus in the environment the energy transport businesses such as Envestra operate in, there is no market imperative to invest immediately, but there is a requirement under the NGL, that investments must be efficient. Careful analysis is required to ensure that investment is not being made when the imperative to do so is low, and where deferment would lead to lower (and therefore more efficient) costs.

As the National Gas Law objective requires the AER to ensure regulated businesses are permitted to allow only "…efficient investment in … natural gas services …" the AER must take into account whether deferral of some of the proposed investments is likely to result in a more economically efficient outcome. The second reading speech for the NGL makes it very clear that reference to efficiency in the objective must be considered in economic terms:

> "The national gas objective is an economic concept and should be interpreted as such.
>
> The long term interest of consumers of gas requires the economic welfare of consumers, over the long term, to be maximised. If gas markets and access to pipeline services are efficient in an economic sense, the long term economic interests of consumers in respect of **price**, quality, reliability, safety and security of natural gas services will be maximised. By the promotion of an economic efficiency objective in access to pipeline services, competition will be promoted in upstream and downstream markets[1]. (Emphasis added)

It is particularly pertinent to note that the National Gas Objective (NGO) is written in terms of the impact on consumers. What is just as important is the NGO makes specific reference to improving competition in upstream and downstream markets. Allowing large and possibly unnecessary increased tariffs for gas haulage will not increase competition in downstream markets as many of those businesses will become less competitive. Higher tariffs lead to less consumption and less consumption will cause higher future tariffs for those consumers still using the services.

1.4 An overview of incentive regulation applying to Envestra

The NGL and the associated rules are based on an incentive based regulatory regime. Already, jurisdictional regulators such as ESCV and ESCoSA have introduced incentive programs to drive opex to the most efficient level, as is required by the NGO and written into the Gas Rules.

In its 2005 decision ESCoSA built into its Final Decision that incentives on opex and UAFG should be explicitly included. The purpose behind this approach was to identify the level of efficient operating expense so that this level could be used from which analysis of step changes could be made so that opex continued to be efficient. For example, the ESCoSA observed that (page 201):

> "The Commission also notes that Envestra has been able to identify areas where further efficiency gains can be achieved, and is proposing to implement

[1] SA House of Assembly 9 April 2008, Hansard starting page 2884

> new IT systems and a mains replacement program over the second Access Arrangement Period which it states will achieve "productivity improvements increasing over the period to approximately $1.7m per year by year 5 of the period". The Commission has accepted that these are prudent projects and agrees that there should be productivity improvements arising from them."

What we are seeing is a new growth industry to convince the regulator that opex must be consistently increased at each regulatory review. Despite the fact that Envestra is forecasting less consumption of gas in the next regulatory period, it is still seeking large increases in opex.

In the Victorian EDPR of 2005 the regulator (ESCV) implemented a very structured approach to step changes and required each DB to cost in detail the impacts of the various step changes they had identified to warrant an increase in opex. The ESCV denied a number of the step changes claimed as it considered there was not step change warranted. The ESCV went further and challenged the amounts claimed for each sustainable step change.

ESCoSA took a less formalized approach but did attempt to follow a similar practice. The AER has attempted to follow a similar practice of incentivizing efficient opex through its EBSS programs but this has been less successful than the Victorian approach.

As Envestra has now been subject to incentive regulation for the first two regulatory periods (although there was no incentive payment as a result of Envestra performance in the first period set by SAIPAR), ESCoSA clearly established an incentive for capex and opex and as a result Envestra has claimed a benefit into the next period for the opex and capex under-runs.

The purpose of incentive regulation is to drive a regulated entity to achieve efficient levels of opex and capex and this, in turn, provides the regulator with a strong indication of what levels of opex and capex to allow in the following regulatory period.

As Envestra has now been subjected to a decade of incentive regulation, the AER should use the actual performance of Envestra in relation to both capex and opex during the current period as the basis for allowances in the next period.

1.5 The ECCSA'S General View

The ECCSA is supportive of the requirement for reliable, long term security and high quality for the supply of gas and is not opposed to network augmentations and additions, provided the investments are **efficient** and they are implemented by a **prudent** network business.

Against that background, it is instructive to refer to the Minister's Second Reading Speech on the National Gas Law. In that speech, the Minister observes that the NGO is an economic principle and reflect the National Electricity Objective. In the second reading speech in 2005 on the National Electricity Law the Minister notes:

> "…the national electricity market objective in the new National Electricity law is to promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity, and the safety, reliability and security of the national electricity system. The market objective is an economic concept and should be interpreted as such. For example, **investment in and use of electricity services will be efficient when services are supplied in the long run at least cost**, resources including infrastructure are used to deliver the greatest possible benefit and there is innovation and investment in response to changes in consumer needs and productive opportunities. **The long term interest of consumers of electricity requires the economic welfare of consumers, over the long term, to be maximized.** If the National Electricity Market is efficient in an economic sense the long term economic interests of consumers in respect of price, quality, reliability, safety and security of electricity services will be maximized" (emphasis added).

Applying the much more detailed explanation as to what the Objective is intended provided in the NEL second reading speech to the NGO, it is clear that to permit expenditure (or allow recovery of actual costs or of costs never incurred such as indexation adjustments) that is inefficient or unnecessary, or for costs previously charged to consumers as expenses of a business, such could not be described as supplying services at least cost or maximizing the welfare of consumers.

The ECCSA would expect the AER to have regard to the ability of Envestra to implement such a massive capital program in South Australia against the background of:

- Potential supply constraints in the industries supplying equipment and materials to the electricity transport industries in SA, NSW, Victoria, Tasmania and Queensland
- Potential constraints in the supply of skilled labour due to the large capital programs already approved in other regions by the AER and thereby limiting resources and arising also from the resources boom.

These constraints are being imposed by massive investments already allowed by the AER for the electricity industry coupled with the equally massive investments already in hand and shortly to be commenced in the gas supply industry with regard to exporting LNG from the east coast.

The overwhelming challenge for Envestra is to ensure that the investments (in capex) it proposes are **efficient** (i.e. "in the long run at least cost") and that they are being undertaken by a **prudent** network business.

Businesses in a competitive environment make judgments on investment based on such requirements as the potential to recover the planned return on the costs needed for the investment, ability to deliver a project on time and to budget, cost (including short term supply pressures), ability of customers to absorb cost increases, the ability to defer the investment and the risks associated with deferral. In the case of a regulated business, prima facie, it only has to convince the regulator it needs to expend the funds and effectively does not take responsibility for whether the investment will generate the required revenue, or even whether it over-runs on costs, as the Rules allow actual costs to be rolled into the RAB, regardless as to whether the costs are demonstrably prudent.

Unfortunately, gaining regulatory approvals for capital expenditure has been observed to be quite easily obtained, with greater emphasis given to the stated wants of the business rather than the imposition of strong development of capital controls.

In this regard, it is to be noted that one of the reasons given by regulated businesses for needing to invest more capital now, is that under previous government ownership and control, the businesses were faced with capital constraints due to the competing needs within the government budgets. Another construct that could be applied is that governments (just as do businesses in the competitive environment) applied very strict requirements on capital expenditure[2].

As can be seen from the regulatory decisions made since governments handed over the responsibility of providing the necessary discipline on monopolies to jurisdictional and national regulators, the obtaining of approval to incur capital expenditure (based on a requirement for consumers to pay) there has been an explosion of new capital works undertaken. This clearly demonstrates that regulators are failing consumers and not acting in concert with the NGL objective by not applying the same level of discipline on regulated electricity providers as was applied by governments themselves.

As the Rules clearly require that the gas distribution businesses must provide economically efficient investment, the AER should require them to demonstrate why there is a need to provide a large capital expenditure

[2] It is noted that the SA Government never fully owned the gas network and the duration of its shareholding was limited. At the times when the SA Government did not have a direct interest in the gas network it would have had a degree of control over the network through government regulations which would set safety standards and price limits.

program and to provide a risk analysis which balances the risks of deferral against the risks of excessive capital cost resulting from unnecessarily early investment at a higher cost.

In this regard, the AER should recognise that if they allow Envestra to invest capital at a time where there are high costs of implementation, the impact of such potentially unnecessary costs will be felt by consumers for the next half century. The ECCSA accepts that it is the Gas Rules that reduces the risks of inappropriate investment, as future regulators are not permitted to reopen costs previously incurred, which was the case before when regulators were allowed to optimise previous decisions. It was this ability to optimise in the future, that applied some pressure on the regulated businesses to only implement investment when it was absolutely necessary.

In the absence of this discipline, it is now a requirement on the AER to apply robust analysis and ensure that economically inefficient investment is not undertaken. There is only one opportunity to ensure investments approved are efficient. The AER can achieve this by limiting capex allowances, and by ensuring that only needed capex is permitted, and deferring capex that can be deferred with minimal impact on the reliability of the system.

1.6 Summary

It is essential that regulatory price reviews do not lose sight of the basic fact that if the regulator keeps on allowing increases in capex and opex, the prices the networks will charge for providing an essential service will take the cost of gas beyond the ability of competitive industry and many consumers (especially disadvantaged consumers) to pay.

There is already significant public outcry resulting from previous regulatory decisions about the burgeoning increases in utility prices such as electricity, gas and water and it is necessary that the regulator has to recognize that allowing regulated businesses to continue with their very large capex and opex increases must result in damage to end users and to cause a reduction in downstream competition.

When ESCoSA reduced the opex and capex allowances claimed by Envestra in the last review, Envestra expressed some disquiet at the reductions. Their performance in the current period has indicated that the regulator's assessments were more appropriate than the Envestra claims. However, with an expectation of reducing gas consumption couple to increases in opex and capex, the resultant tariffs claimed by Envestra increases dramatically, by nearly 70% in real terms by the end of the next period. Such an increase is unsustainable from the perspective of consumers. Allowing such a large increase for Envestra means the essential service that is gas supply in this day and age, will become unavailable to

many consumers and cause manufacturing to migrate off shore, resulting in the de-industrialization of the Australian economy.

Regulators need to recognise that as more and more, large gas users either move off shore or close down, this will result in those fewer consumers remaining having to carry an even greater share of the gas supply chain prices, driving prices up even higher.

In this regard, the ECCSA draws the attention to another element of the Minister's second reading speech for the NGR which has particular relevance when considering the declining gas usage forecast. He states:

> "The final principle [behind the revenue and pricing principles for gas regulation] ... guides decision makers to consider the efficiency of the usage of existing assets and balance this against the principle of over and under investment. ... Under utilisation during a previous access arrangement period might indicate that prices have been set too high. It may also be an indicator of over investment, which can also result in high prices. Either way it can have adverse consequences on consumers."

The AER needs to recognise this sentiment.

2. Capital Expenditure Allowance

In the second reading speech when delivering the new National Gas Law in April 2008 the Minister observed:

> "The final principle [of six that guide the development of the framework for the regulation of pipeline services]] requires that regard be had to the economic costs and risks of the potential for under and over utilisation of a service provider's network. This principle guides decision makers to consider the efficiency of the usage of existing assets and balance this against the principle of over and under investment. Utilisation is another important indicator of whether the network is operating efficiently. Under utilisation during a previous access arrangement period might indicate that prices have been set too high. It may also be an indicator of over investment, which can also result in high prices. Either way it can have adverse consequences on consumers. Conversely, over utilisation is an indicator of under investment which can result in poor service standards."

Envestra proposes a massive increase in capex for the next regulatory period, incorporating large increases in the scope of capex and large increases in the unit costs for the capex proposed.

The result of this capex program will be a large step increase in tariffs that will apply for decades to come as the assets involved have lives measured in many decades. The AER needs to keep in mind the adjuring of the Minister against over investment.

2.1 A review of capex in the current period

The development of the regulatory asset base which is used as the basis for setting a large part of the allowed revenue, requires, under the Gas Code, only prudent and efficient capex to be rolled into the base. Under the new Rules the capex that can be rolled into the asset base has less demanding requirements for demonstrating prudency and efficiency.

Thus, for this review, the AER is required to assess past capex for prudency and efficiency as under the Code requirements.

In the current period, Envestra has advised there were two significant elements of its capex program – mains replacement and increasing the number of connections (and thereby increasing gas consumption) to the network.

2.1.1 Mains replacement

In the development of its asset base in the first regulatory period, Envestra advised SAIPAR that the assets it provides in its networks have the following expected lives[3]

"Key assumptions used in generating the DORC valuation include:

- the replacement cost of mains and inlets has been assessed in the context of brownfield conditions;
- small diameter medium density polyethylene pipe has been adopted as the Modern
- Engineering Equivalent (MEE) for cast iron pipe, as well as for most high pressure applications;
- the following effective asset lives have been adopted for pipeline assets:

Asset	Adopted Useful Life
MAINS	
Polyetheylene	70
Unprotected steel	65
Protected steel	130
Cast iron	85
Transmission Mains	130
INLETS	
Polyethylene	70
Unprotected steel	65
Protected steel	125

Table 3: Useful Lives of Mains and Inlets

In its revised access arrangement information in 2003, Envestra advised that to generate the revised DORC value for the assets, the asset lives had been reduced to reflect a SAIPAR requirement that asset lives should be:

[3] Page 15, ***Revised* Access Arrangement Information** for the South Australian Distribution System, 21 July 1999

Asset	Adopted Useful Life
MAINS	
Polyetheylene	60
Unprotected steel	60
Protected steel	120
Cast iron	85
INLETS	
Polyethylene	60
Unprotected steel	60
Protected steel	120

Table 3: Useful Lives of Mains and Inlets

In its final decision on the Envestra application in 2005, ESCoSA confirmed that same asset lives were used by it in reaching its conclusions.

In its revised access arrangement information issued in July 1999, Envestra recognized that leakage of gas from its mains was a problem. Because of this it proposed its accelerated mains replacement program (AMRP) be allowed as acceptable capex. This was despite that fact that the cast iron mains still had not been fully depreciated as they had an expected life of 85 years but would effectively be replaced earlier than their fully depreciated life span.

Envestra noted (page 30):

> "Total New Facilities Investment from 1998/99 to 2003/04 is forecast to be $129.9 million. The increase in growth capital required for 1999/2000 reflects the completion of the Southern Loop transmission main which will provide additional capacity and added security of supply in the south of Adelaide. The higher levels of replacement capital up to 2001/02 represent costs associated with the AMRP."

On page 8 Envestra notes:

> "It is recognised, however, that there is a level below which the cost of reducing SUG outweighs the cost of Gas lost and leak repairs. Envestra has taken into account this cost-benefit relationship and other factors (such as safety) in determining a program to manage and reduce SUG in the Network.
>
> As set out in section 4.2.5 of this document, Envestra's forecast New Facilities Investment includes a program of mains replacement (including an accelerated mains replacement program (or AMRP) in addition to the normal program of replacement in certain parts of the Network) during the Access Arrangement

Period. This, together with an appropriate level of leak repairs (as provided for in the Non-Capital Costs forecast set out in section 4.2.4 of this Access Arrangement Information), forms the main part of Envestra's SUG management/reduction program."

As a result of this AMRP, Envestra forecast that it would reduce the amount of SUG used in 1998/99 by 21% to a level of 1.271 PJ by year 2003/04, and on this basis, it was assumed that SAIPAR would approve the capital expenditure for this program.

In its draft decision in April 2000, SAIPAR notes that (page 76):

"The [system use of gas[4]] level issue becomes an even more significant issue when placed in light of the accelerated mains replacement program, and the removal of cast iron and unprotected steel from the Envestra system.

Envestra Prospectus 1997 states on page 37 that:

> …The Networks largest single maintenance cost is the repair of leaks and the gas lost from those leaks…The majority of leaks occur in the older cast iron and steel parts of the system.
> …Envestra intends to undertake an accelerated mains replacement program, under which cast iron mains and unprotected steel inlets within the Networks will be replaced…is expected to result in a significant reduction in the level of System Gas and Operating costs…

Although it is noted that the planned time frame for the accelerated mains replacement program has changed since the Prospectus was published, there is little evidence to suggest that the above factors have had a significant influence in, or reconcile with, the SUG and Operation costs referred to in the Access Arrangement."

SAIPAR sought assurances and detailed explanation from Envestra to demonstrate that the AMRP meet the Code requirements for prudent investment through its reduction SUG/UAFG. Ultimately, SAIPR in its final decision (page 236) required Envestra:

"... to demonstrate how the AMRP will meet the tests outlined in section 8.16(b) of the Code and section 8.2.1 of the Extensions and Expansions Policy."

In its final decision relating to the Envestra 2005 review, ESCoSA made two key decisions in regard to mains replacement investment costs – firstly if accepted all of Envestra's actual capex to be rolled into the asset base

[4] SAIPAR uses the term "system use of gas" or SUG, whereas ESCoSA (and now Envestra) uses the term "unaccounted for gas" or UAFG

(despite SAIPAR's requirements for demonstration of prudency) and secondly, Envestra was permitted a significant amount of capex for the mains replacement program. ESCoSA commented (pages 108 -110) that:

> "The mains replacement program targets old mains that are a primary cause of gas leakages, and, hence, the replacement of these mains is typically justified against savings in leaks repairs (a Non Capital Cost) and UAFG.
>
> ... Therefore, taking all relevant information into account, the Commission's Final Decision is to not accept the Mains Renewal forecasts, requiring their revision to accommodate the variations set out in Table 9.2."

This history provides the views of past regulators in relation to the Envestra claims that gas leakage is an issue (due to the opex and UAFG costs involved) and that capex was provided on the basis that it results in a clear economic benefit to consumers by replacing the mains.

During the second regulatory period, Envestra advised that it had expended considerably more capital in mains replacement than ESCoSA had allowed for in its 2005 review. Despite this increased investment and the amounts invested in the first regulatory period, Envestra notes that it has seen increased amounts of UAFG being required.

On page 22 of its access arrangement information Envestra notes:

> "Since the last access arrangement review, physical deterioration of the network has accelerated relative to that previously forecast. More specifically the length of mains that needs to be replaced to maintain gas leakage levels at constant levels has increased. There is now an urgent need to invest to reverse the deterioration in the network quickly to ensure that the network remains safe, the quality of supply to customers is maintained, and the impact of gas leakage on global warming is reduced. This need has also been recognised by Technical Regulators throughout Australia, who are requiring Envestra to reduce gas losses.
>
> Envestra is proposing to arrest the increased physical deterioration of the network by accelerating the mains replacement program which has been in place since the establishment of the Company. The accelerated mains replacement program has been incorporated in updated asset management plans which have been endorsed by various State Technical Regulators. A large component of the expanded capital program proposed in this submission (around one-third) is required to implement the mains replacement plan."

This statement raises some intriguing questions and observations when considered in relation to the earlier SAIPAR and ESCoSA decisions:

- Cast iron mains are seen as having an expected life of 85 years yet they are being replaced significantly earlier than would be expected based on this life duration
- Has the asset base been adjusted to reflect the removal of the cast iron mains that were still not fully depreciated, or are consumers still paying for depreciation on the old mains as well as the replacement mains?
- Why has the investment in mains replacement over the past decade and more not achieved the outcome that Envestra predicted and on which the replacement programs (one with SAIPAR and one with ESCoSA) were considered to be prudent?
- The replacement of the mains was intended to reduce UAFG and opex, yet neither of these outcomes has occurred.
- What are the causes of the significant but recent increase in the need for mains replacement that has caused the massively increased claims for mains renewal in this review?

The ECCSA strongly considers that the AER must examine in depth the issue surrounding the past capex in relation to mains replacement and whether the actual capex has indeed been prudent and efficient.

2.1.2 Growth in connections is not prudent

Envestra used more capex to manage its growth compared to the allowance provided by ESCoSA. In all, Envestra used $107.93m[5] to connect a net increase in customer numbers of 28,286 in the four years between 2006 and 2010[6]. Allowing for the same increase between 2005 and 2006, this means that each additional customer cost ~$3,100 in connection costs.

In contrast, ESCoSA allowed some $99.55m for new connections and assumed that there would be net customer increase of 28,356 between 2006 and 2010. Allowing for the same number of additional customers between 2005 and 2006, the cost to connect each additional customer would be~$2,800, some 11% less than Envestra actually achieved.

However the net reduction of actual gas consumption over the same period for the period 2006 to 2010 was 2,177 TJ or 544 TJ pa. ESCoSA forecast that gas consumption over the same period would increase by 152 TJ pa for tariff V customers and MDQ would increase by ~360 TJ pa.

Thus the expectation of ESCoSA was that the cost of $2,800 per new customer was prudent as there would be a net increase in gas consumption, providing a benefit for all customers.

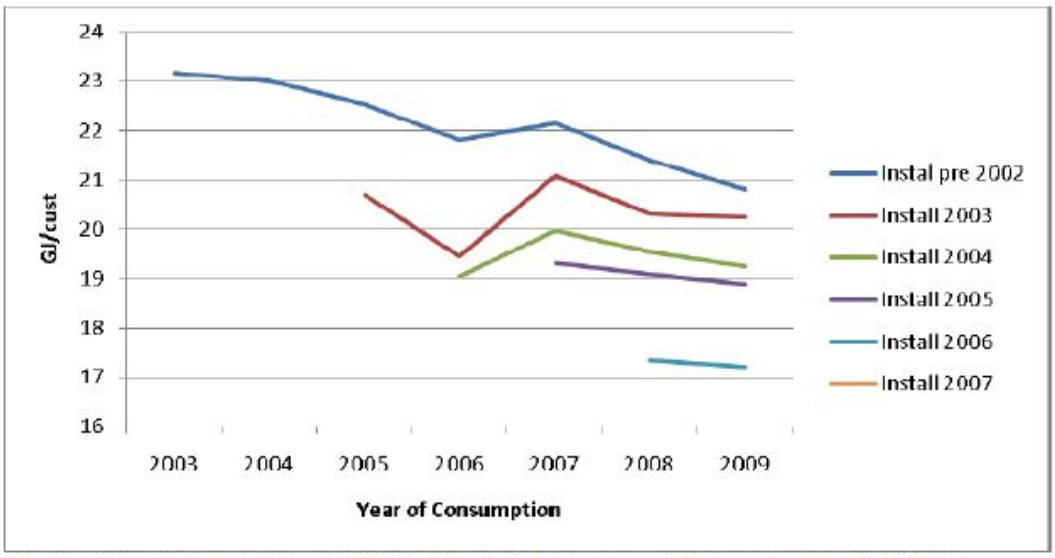
[5] See table 3.5 Envestra AAI
[6] Extracted from table 6.4 NIEIR report Natural gas forecasts for the Envestra South Australian distribution region to 2019-20, September 2010

AS the addition of new customers has coincided with a net reduction in gas consumption, the cost for adding new customers at any price is moot at best but certainly not at $3,100 per customer.

AS the regulatory review for the current period was carried out under the Gas Code, the AER is permitted to assess whether the capex used for new connections is prudent. Based on the fact that the cost per new customer was higher than allowed by ESCoSA and that these new costs were incurred against declining gas consumption, it is apparent that much of the new capex can be seen as being not prudent.

Envestra was aware that new dwellings were likely to use less gas than existing dwellings indicating that the cost of new connections might not be prudent. That this is the case can be seen from Graph 13.4 of their AAI.

Graph 13.4 Actual Average Consumption for Domestic Consumption by Year of Installation (2003 to 2009)



* State of the Climate* (March 2010) – Australian Bureau of Meteorology and CSIRO.

Even though Envestra was aware of this, they continued with their program of new (possibly imprudent) investments to connect new dwellings, with the full knowledge that the assumptions underlying the commercial case for the program were no longer sustainable.

In light of this, the AER needs to carefully examine whether the capex for the new connections during the current period was prudent.

2.2 The Envestra capex claim

2.2.1 Introductory remarks

The ECCSA has already commented on the constraints facing Envestra in implementing its capex proposals and has effectively suggested that the AER and its consultants review the projects proposed by Envestra carefully in the light of a range of identified factors, including the scope for regulatory gaming.

The ECCSA acknowledges that there is a reducing load factor in the gas network, driven predominantly by changed gas usage in the residential sector, a general warming and the loss of significant gas demand from manufacturing, which has been badly affected by the Global Financial Crisis.

Envestra has sought to provide justification for the significant increase in capex proposals as being due to:

- Mains replacement
- New connections
- Augmentation

In the ECCSA's view, the AER has another important challenge in assessing the capex proposals. As a result of the biased and unbalanced[7] Gas Rules (based on the AEMC development of the chapter 6A Rules for electricity transmission which overtly over-incentivise investments), there is so much scope for network businesses to game the regulatory process, so much so that they could, metaphorically, "drive a truck" through the AER's approved capex program. Under the Rules:

- There is no ex post review allowed of capex to ensure prudency or efficiency
- Once set, the network business can use the capex allowance for any project and need not use it for any project used to justify the allowance in the first instance
- If a network business decides, it can defer any capex project used as the basis of its approved capex program, and keep the financial benefit
- The AER must include in the asset base all capex incurred without assessing whether the amounts should be included, even if the network business incurs an unnecessary over-run in costs (which is very likely in this current regulatory cycle of significant

[7] Biased and unbalanced in the view that investment has to be incentivised so that cost of errors and imprudent investments will be borne by consumers rather that the business making the decision.

infrastructural investments and as the Rules permit the network business to maintain a cost-plus culture).

The risks to consumers arising from the Rules are significant, as the AER's discretion is limited. The risks are not only that capex programs would be so inflated by the incentives provided by the Rules, but also the Regulatory Asset Base would be inflated by regulatory gaming. The risks that the expected explosion in capex and the RAB would extend beyond the forthcoming regulatory period are very real and very significant. Against this background, the AER and its consultants would need to rigorously examine ex-ante capex and projects with the view to limiting the scope for gaming to inflate the capex program and RAB over the next two regulatory periods.

As all firms know, it is relatively easy to justify capex from a bottom up assessment. What is more difficult is to ensure that the capex claimed is justifiable from a market perspective. Envestra provides data which shows that the market indicator of consumption is declining, yet still attempts to justify a massive injection of capital that is being claimed. In a competitive environment, the directors of a firm would require proponents of a capital expenditure program to demonstrate one or more of the following before allowing a capital expenditure program:

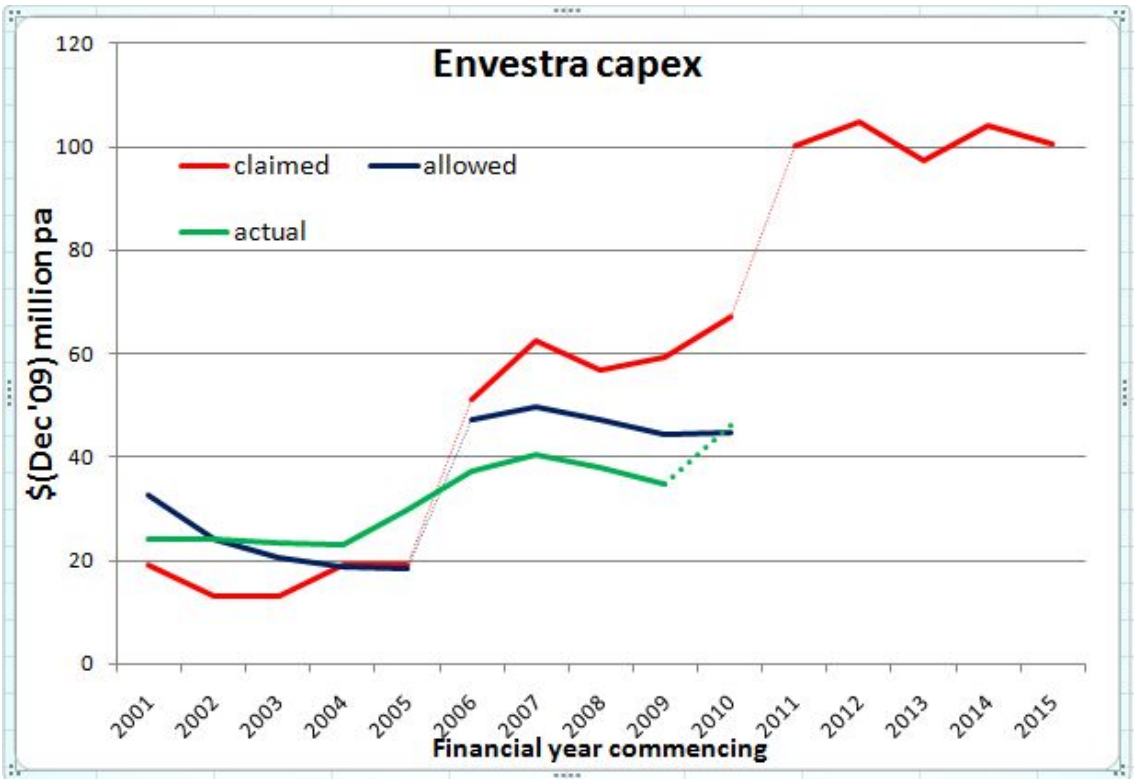
- There is an increase in demand in the market justifying the capital project so as to meet the expected increases of customer demand (in this case the market is not providing this support)
- The injection of the capital will increase market share (in this case Envestra is a monopoly and holds 100% of market share)
- The injection of capital will maintain the current level of market share (in this case there may be a need for some capital to maintain the reliability of the existing assets)
- The injection of capital will result in significant reductions in opex.

2.2.2 A comparative assessment

The Envestra application shows that the total forecast capital expenditure is some $507 million for the next regulatory period. Of this some:-

- 45% ($227m) of this is due to mains replacement,
- 31% ($157m) is to connect new customers
- 10% ($49m is for "other dist. System"
- 6% ($29m) is for augmentation
- 4% ($21m) is for meter replacement

The following chart shows the historic capex and the new claim for capex. The chart shows how the last recorded actual capex (for 07/08) would change if the increase in demand was the only criterion for setting capex.



Source: ESCoSA and SAIPAR decisions, Envestra applications

The Envestra capex program shows a massive 250% increase in capex for the third regulatory period. This hardly reflects the fact that consumption is forecast to decline. Over the past decade capex has been relatively consistent, being in the range of $30-40m pa with positive growth in both consumption and new connections.

45% of the large capex program is devoted to mains replacement, even though Envestra has had a program for mains replacement for the last decade and even earlier. This is discussed in more detail below.

Nearly 40% of the capex program is devoted to augmentations and new connections, whilst gas consumption is forecast to decline by 1% pa[8] suggesting (at a high level view) that such new connections and augmentations might not be prudent. This aspect is also discussed in more detail below.

The chart also shows that Envestra sought larger amounts of capex in the last review than it actually used and it has on average used less capex than it was allowed by SAIPAR and ESCoSA at each of the earlier reviews.

As Envestra capex was subject to an incentive program in the current period, the AER should assess that the actual capex used is a clear indication of what efficient capex for the Envestra network is. It is

[8] See NIEIR report table 6.3

equally clear that Envestra wants more than this but it has also decided that it does not want this capex incentive program to continue into the third regulatory period.

2.2.3 Prudency of capex

The Gas Rules require that capital expenditure must meet the following criteria.

79 New capital expenditure criteria

(1) Conforming capital expenditure is capital expenditure that conforms with the following criteria:
  (a) the capital expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services;
  (b) the capital expenditure must be justifiable on a ground stated in subrule (2).

(2) Capital expenditure is justifiable if:
  (a) the overall economic value of the expenditure is positive; or
  (b) the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure; or
  (c) the capital expenditure is necessary:
    (i) to maintain and improve the safety of services; or
    (ii) to maintain the integrity of services; or
    (iii) to comply with a regulatory obligation or requirement; or
    (iv) to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity); or
  (d) the capital expenditure is an aggregate amount divisible into 2 parts, one referable to incremental services and the other referable to a purpose referred to in paragraph (c), and the former is justifiable under paragraph (b) and the latter under paragraph (c).

This requirement in the Rules is supported in the Minister's second reading speech for the National Gas Law when he stated:

"Increasing investment in existing pipelines

The initial Rules will now include a 'positive economic value' test for investment in existing pipelines designed to capture net increases in producer and consumer surpluses in upstream and downstream gas markets, whilst also

capturing the system security and reliability benefits that were considered by regulators to constitute system wide benefits.

This test will ensure the assessment of pipeline investments unambiguously includes benefits that accrue to users and end users of gas when they are able to purchase additional quantities of gas, or to gas producers when they are able to sell additional quantities of gas. This should assist in promoting efficient investment in our existing pipeline network to meet our increasing demand for natural gas."

Both the intention of the Gas Law and the Gas Rules requires a net economic benefit from gas asset investment. The ECCSA considers that Envestra must be required to provide commercial substantiation of its capex program, especially in relation to the mains replacement and augmentation and growth capex. Significantly, the documentation made publicly available does not provide any commercial assessments as to the prudency of any of the capital projects proposed by Envestra – such assessments are required by the NGR. All that is provided is a bald statement by Envestra that the projects listed are prudent.

2.2.4 Mains replacement

Envestra advises in its AAI (page 100) that it has some 1600km of mains to replace and of these 1073 are to be replaced in the next period. It is this work that comprises some 40% of its claimed capex.

Unfortunately, the attachment provided by Envestra to describe its Main Replacement Plan (attachment 7.4) is not publicly available. However, in the attached asset management plan provided by APA (attachment 7.2) APA provides some useful information in section 6.4. Here, APA provides data that states that a total of 1,515.5 km of cast iron (CI) and unprotected steel (UPS) mains still remain in the Envestra network.

APA also provides advice that only 65 km/yr of mains has been replaced over the past six years. This seems in stark contrast to the ESCoSA expectation and allowance in the current period, that over 500 km of mains would be replaced (or 100km/y), and where Envestra states that it overspent the mains replacement allowance. It also seems to run counter to the advice that Envestra provided SAIPAR that it had initiated an accelerated mains replacement program (AMRP) prior to the first access review and would continue the program throughout the first period in order to reduce SUG/UAFG.

It is quite clear that APA could maintain the planned program for mains replacement that was initiated for the second period and achieve many of the benefits sought with a much lesser impact on future tariffs.

The issue and costs for mains renewal was a significant issue addressed by ESCoSA in its final decision. Envestra advised that the cost of mains renewal was some $85/m but this applied mainly to CBD mains replacement. ESCoSA implicitly considered that mains replacement outside the CBD would be some $65/m. ESCoSA allowed $37m for mains replacement which at the $85/m rate would provide for some 435 km of mains replacement in the CBD and possibly more if some of the mains were outside the CBD.

However, as ESCoSA notes on page 109 of its final decision, the CBD mains replacement program was not being proposed by Envestra for the second period. This means that the 500 km for the allowed mains replacement program was easily achievable. Yet APA advises that they did not achieve this goal.

In its final decision in December 2001, SAIPAR comments that it was seeking a cost benefit analysis to demonstrate that the mains replacement program met the Gas Code requirements (see page 236).

The purpose for the mains replacement program is threefold – to reduce UAFG, to reduce opex and to prevent fugitive gas from leaks for safety[9] and environmental reasons. It is surprising that after two regulatory reviews it is only now, for the third review that Envestra sees that these reasons are now so compelling that a massive capex program is imperative. Even in the current (second) period where ESCoSA allowed Envestra capex to replace 500 km of mains, Envestra failed to carry out even this larger program than Envestra sought to have included (and effectively was allowed) as part of the SAIPAR allowance.

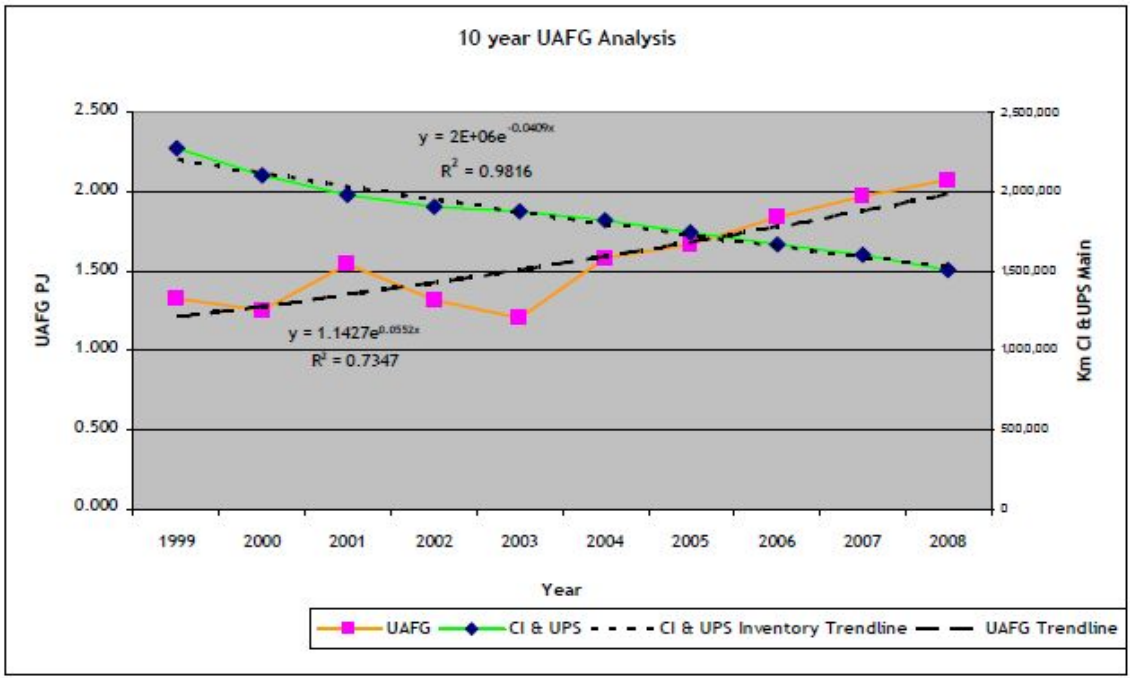
At each regulatory review, Envestra advised that the mains replacement program it sought (and was essentially allowed) would result in significant benefits in terms of opex and UAFG to demonstrate that the program was prudent in terms of the Gas code requirements. None of these benefits has emerged. UAFG has increased as has opex.

Envestra has declined to allow public scrutiny of its mains replacement plan (MRP) as this is considered to be confidential. Because of this ECCSA is not able to definitively assess the legitimacy of the assumptions. Even the detail of the amounts of UAFG over past years is considered confidential as this was deleted as C-in-C on page 99 of the AAI document.

Fortunately, APA did provide some indication of the UAFG in previous years in attachment 7.2. On page 60 it provides the following graph which shows

[9] In this regard the Technical Regulator considers there are two elements – leakage and maintenance of a minimum gas pressure at consumer gas meters.

UAFG over a decade. This shows that despite replacing some 50% of the CI and UPS mains, UAFG still increased by some 50% from UAFG recorded in 1999.



Envestra assesses that when the mains replacement plan is complete it forecasts UAFG will be some 500 TJ (AAI page 79). Yet in its revised AAI in July 1999, Envestra forecast that with its Accelerated Mains Replacement Program (which effectively SAIPAR and ESCoSA allowed) Envestra advised that its UAFG would be 1,271 TJ in 2003/04 (see table 1 of revised AAI).

In its AAI in 2005, Envestra commented that (page 27):

> "In the absence of mains replacement, the annual volume of UAFG will trend upwards as a result of deterioration in the condition of cast iron and unprotected steel mains.
>
> A certain critical length of cast iron and unprotected steel must be replaced annually in order to offset the effect of this deterioration. If this critical length is not replaced the annual volume of UAFG will rise. If a greater length is replaced, the annual volume of UAFG will fall.
>
> ... Prior to the First Access Arrangement Period, Envestra had been replacing up to 200km/year under its Accelerated Mains Replacement Program. This established a downward trend in UAFG volume. As a result, Envestra reduced the length of mains replaced to around 50km in 02/03. Subsequently, UAFG volumes began to rise. Envestra then increased the length of mains replaced to around 60 km/year in 04/05. Envestra anticipates that replacement of about

> 75km per year is required to maintain existing UAFG volumes. However, it would prudent to increase the length of mains replaced to 100 km/yr through the Second Access Arrangement Period, in the expectation that this will reduce rather than maintain UAFG volumes."

Envestra assesses in the AAI it would need to replace some 500 km of mains to cause UAFG to fall, and effectively ESCoSA provided allowance for this, and Envestra considers that by the end of the second period, most of this replacement will have occurred. Despite the continued investment in mains replacement at levels requested by Envestra, UAFG continues to rise.

At the same time as Envestra has been replacing mains it has been increasing the overall length of the mains to service more customers. Whilst it would be hoped that the new mains have been built with materials that would eliminate the potential for gas leaks, it appears that replacement of CI and UPS mains has not been the main contributor to reducing UAFG that Envestra has been promising.

APA advises that there remains some 1,515 km of CI and UPS mains in the Envestra network. Envestra advises that in the current mains replacement program, some 1,073 km are to be replaced in the current period for an amount of $226.5m. This equates to $211/m of mains. In the 2005 AAI Envestra advised that it would require $47m to replace notionally 500 km of mains or $94/m. In its final decision of the 2005 review, analysis by ESCoSA indicated that mains replacement costs were $65/m generally and $85/m in the CBD.

It is accepted that inflation has increased by some 15% since these figures were provided, but it seems that the new rate of $211/m is excessive by any comparison and at least double that applied five years ago.

To complete the entire mains replacement program would take by extrapolation some $320m in capital. This will cost consumers some $32m per year by 2018. Envestra forecasts that it will reduce UAFG to a quarter of current levels which Envestra advises will cost $14m in 2011/12. To provide a net benefit, the opex saving will have to be at least $18m pa, or to reduce operating and maintenance (O&M) cost of $33/m in 2011/12 by a massive 50% to $15m pa to show a benefit. However, on page 83 of the AAI, Envestra states that the opex saving from the replacement program will be $5m over the next regulatory period, or $1m pa. Based on this opex saving, it would appear that the mains replacement program does not show a net benefit for consumers

As the mains replacement program would be 65% complete by 2015/16, it would be expected that Envestra would be indicating similar impacts on its O&M and UAFG costs by this time. In fact, Envestra shows:

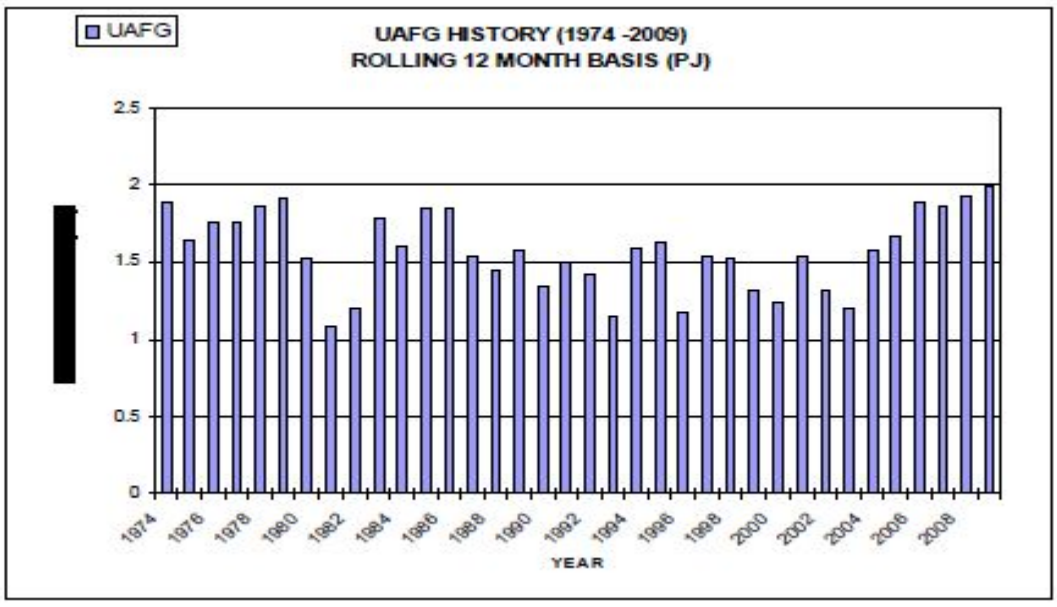
- a 6% increase in O&M costs by this year, implying there is not a significant O&M saving at all, which Envestra confirms by its implied $1m pa
- only a 25% reduction in UAFG costs.

ECCSA considers that based on its cost benefit analysis, the claims by Envestra do not meet the requirements of Gas Rule 79 or the intent of the Gas Law.

Whilst the business case detailed above uses only direct costs, the way Envestra proposes to address the unrecovered depreciation of the assets replaced needs to be considered. If Envestra proposes to recover the remaining depreciation for the assets disposed of, then this cost needs to be included in the cost benefit analysis.

Envestra also notes that there is some urgency in the mains replacement program for safety and environmental concerns. ECCSA acknowledges that both safety and fugitive emissions need to be considered.

ECCSA points out that in reality the safety concern is not significantly increased from current levels and so far this concern has not resulted in Envestra deciding that it needs urgent attention in the past (in fact Envestra, despite being given mains replacement capex by SAIPAR decided to scale back its accelerated mains replacement plan in 2002 (as APA advises that it did in attachment 7.2). Further, APA provides a chart (page 29) which shows that UAFG is much the same now as it was in the late 1970s.



This clearly indicates that the same amount of gas escaping now has been escaping from the Envestra network for many years, and this fact excludes

the impact of the network increasing significantly in size in the past 40 years. Whilst ECCSA agrees that continuing to allow fugitive gas is not best practice, it has been consistent practice for many years and is accepted as being part of the gas distribution transport business both in SA and elsewhere.

The ECCSA sees that the increasing cost of gas and the potential for a penalty on carbon being applied, does provide some incentive for reducing fugitive gas, the decision to massively increase the mains replacement plan to the extent envisaged, is not warranted.

ECCSA considers that a continuation of the current replacement rate of some 500 km of mains per regulatory period at current cost rates is more appropriate and can perhaps be more readily justified than the massive expansion planned, and as well, more readily implemented.

2.2.5 Network expansion

The Rules clearly require that investment in the network must show a net economic benefit. This applies to network expansions to connect new customers.

For the current period, ESCoSA assessed that $2,800/new customer connection (or $3,220/new customer in current dollar terms) provided a net economic benefit to all Envestra customers, on the basis that it would assist in the growth in consumption which ESCoSA considered would be some ~1% pa. Implicitly, ESCoSA assessed that the additional revenue provided by the new connections would offset the increased costs existing customers incurred by funding the new connections.

However, the Envestra application implies that the cost for the new connections will be some $157m to add 37,875 new connections – a cost per connection of $4,145/new customer but against a declining gas volume of about 1% pa.

Additionally, Envestra highlights that new connections are using less gas than existing dwellings (see chart in section 2.1.2) so the contribution being provided by the new dwellings will be significantly less than ESCoSA assumed when it considered that the new connections would provide a net benefit to existing customers.

Prima facie, it would appear that probably the cost of the new connections will not provide a net benefit to existing consumers because:

1. Envestra considers the cost for each new connection will be 30% more expensive than applied in the ESCoSA assessment and 16% more than Envestra actually spent in the current period
2. The actual consumption of each new connection will provide 25% less gas consumption than dwellings built before 2002, which comprise the bulk of the dwellings connected to Envestra's network.

Envestra provides no commercial assessment of the benefit of the new connections, but based on the ECCSA overview, it would appear that the expenditure proposed for new connections is too high compared to costs on which ESCoSA considered were appropriate, and the contribution from each new dwelling will be significantly lower than needed to warrant the investment.

2.2.6 Augmentation

Envestra proposes that it should be reimbursed for $29m to augment the network. Against an expectation of declining volume of gas being used, and accepting the current network actually does provide adequate service to the existing customers, it seems totally inappropriate to augment the network.

If this augmentation is deemed necessary to allow the new connections, then this allowance should be added to the cost of the new connections. If this is the case, the cost of the new connections increases from $4,145/new customer to $4,910/new customer and the assessment supporting the business case for the new connections needs to include this cost.

Unfortunately, the attachments providing the business case details are considered confidential so ECCSA can provide no better assessment than this high level view.

However, Envestra does state that the need for augmentations is driven by the increasing demand for instantaneous gas supply whish use less gas but increase short term gas delivery. The ECCSA is not convinced by this argument and draws attention to the observations it makes in sections 6 and 7 on gas demand, and the implied need to provide greater line pack in the network.

Equally, ECCSA is aware that there are restrictions (bottlenecks) in the Adelaide sub network that prevent large industrial users in the Northern Zone from being supplied by gas from SEAGAS in periods of high demand, such as in winter. In order to provide flexibility and reliability for supply for large users in the northern zone and to facilitate the function of the STTM, augmentation of the network to eliminate these constraints or adding a new gate station from the SEAGas pipeline to the Northern zone should be

examined. The ECCSA considers that a business case for such an augmentation could demonstrate a positive benefit for consumers.

2.2.7 Other capex

Envestra claims that it requires some $49m for other distribution capex. Again, in the absence of the businesses cases for the specific projects nominated, ECCSA is unable to provide a definitive assessment as to the amount or the projects themselves.

However, a high level assessment shows that Envestra is seeking a net amount of capex for activities other than mains replacement, growth and augmentation, of $94m.

In the current period, Envestra spent $197m on capital works. Excluding mains replacement ($48m) and growth projects ($108m) from total actual capex, leaves $41m needed for stay-in-business capex. This amount approximates the same amount of work in the amount of $94m of planned capex for the next period.

ESCoSA applied an incentive program for Envestra capex, and Envestra actually under-run the capex allowed by ESCoSA, indicating that that this residual capex of $41m is the amount of capex needed for stay-in-business, excluding mains replacement, augmentation and growth capex.

This high level assessment implies that Envestra is seeking an increase in capex of over 130% (or $53m more) above the benchmark stay-in-business capex Envestra demonstrated that it actually needs.

2.2.8 Summary

The planned 250% massive increase in capex is unwarranted and unsubstantiated.

High level assessments indicate that many of the Envestra capex proposals do not meet the requirements for there to be a net commercial benefit, and do not reflect the outcomes of the capex incentive program implemented by ESCoSA.

The fact that gas consumption is falling in total terms, falling in respect of consumption per dwelling and consumption in newer dwellings, compared to expected increases in the past, indicates that much of the planned growth investments are likely to be sub-optimal and will not meet the net benefit criterion.

The ECCSA also considers that Envestra has been encouraged by the new gas rules which provide the basis for it seeking massive increases in capex,

following the same pattern of the observed increases in capex for electricity networks allowed in regulatory reviews since the new electricity rules were implemented.

Because of this the ECCSA suggests that the AER take a very firm line regarding Envestra having to justify the commerciality of its capex programs and implementing the benefit provided by the ESCoSA capex incentive program applying to Envestra.

2.3 Escalation of costs

As is now the norm with each regulatory review, the applicant provides reasons detailing why it should have its opex and capex costs increased because its future costs will be higher than they are now. It is assumed that its starting costs are legitimate and the expected increases in labour and materials from the base line used by the applicant justify higher allowances in the future.

Historically, regulators (jurisdictional regulators and the ACCC considered that the national general inflation provided adequate protection for increasing costs. As a result there was a tendency that the CPI –X adjustments had a positive value for X, indicating that during a regulatory period, the provider would be more efficient justifying a small decrease in real costs.

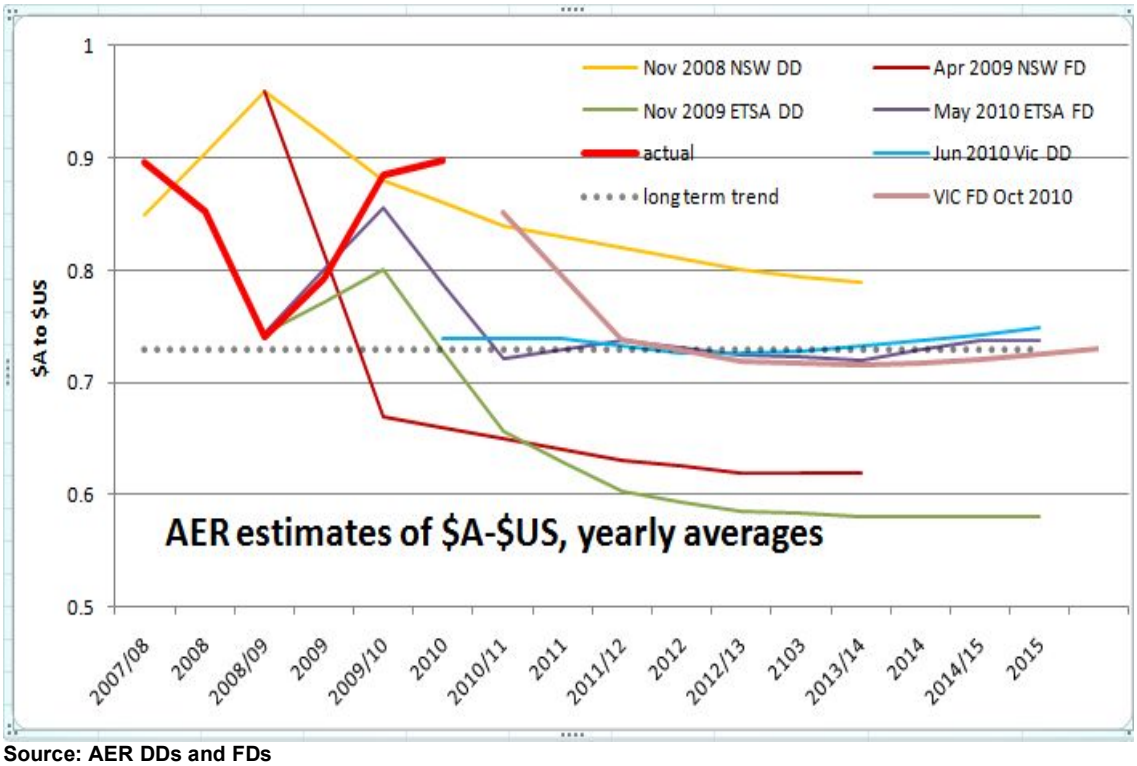
Under the new rules for gas and electricity the AER attempts to project future labour and material movements. These assessments have resulted in a view that labour and materials used by energy network businesses almost always increase faster than general inflation. To assist them the AER has employed “experts” to forecast future labour and materials costs.

The ECCSA and its affiliate, Major Energy Users, have consistently opposed the AER approach as it has resulted in some major errors when the forecasts are compared to actual outcomes, and almost invariably the forecasts are higher than actuals, resulting in a net benefit being provided to the network providers.

ECCSA affiliate EUCV raised in its response to the AER draft decision on the Victorian 2010 EDPR that the AER approach to using forecast indices to assess future movements of labour and materials costs was essentially flawed and provided an example of the forecasts AER has used in previous regulatory decisions demonstrating this volatility. The AER, however, took the EUCV comment to imply that the AER approach did not use the best data available. On page 240 of the appendices to the final decision on the Victorian EDPR, the AER commented:

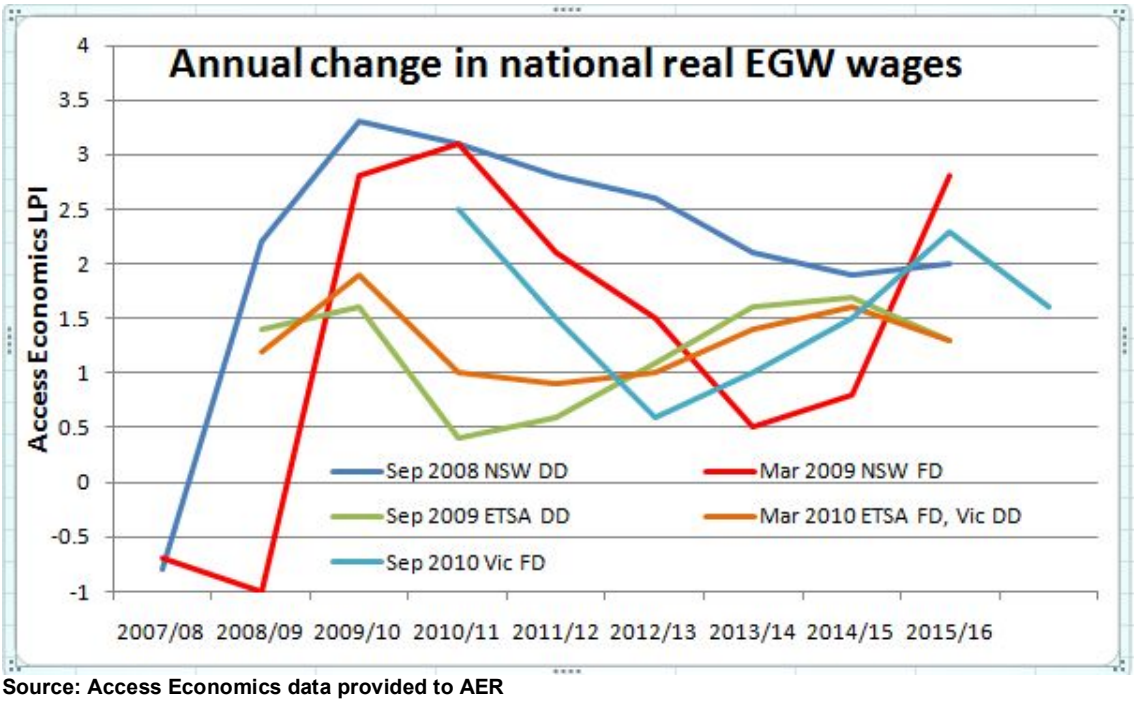
> "The AER notes the EUCV's concerns over the accuracy of the exchange rate forecasts adopted by the AER. The AER recognises the EUCV's concerns but notes that the exchange rate itself can be extremely volatile and change significantly over a short period of time. The AER considers, however, that KPMG Econtech's exchange rate forecasts, as published in its ANSIO report, are robust given that they are derived from a credible source of information that is based on the views of respected professional economic forecasters."

However, the EUCV comment was that the forecasts for the same period of time in the future vary significantly depending on when the forecasts were made. For instance, the forecast of the $US exchange rate made for the NSW EDPR in November 2008 indicated an exchange rate of $US0.81 would apply in 2012, yet four months later it was forecast to be $US0.63. A further 7 months later, for the ETSA DD, it was forecast to be $US0.59, but in May 2010 it was forecast to be $US0.73. This variability is shown pictorially in the following chart.



Source: AER DDs and FDs

A similar but expected phenomenon is observed with the variability of forecasts for the same period in the forecast labour rates, and this is shown in the next chart.



Source: Access Economics data provided to AER

The point that ECCSA (and EUCV) is making, is that despite the best efforts of the best consultants available, forecasts are never accurate and do vary depending on when the forecasts were made.

But in many ways the AER approach is worse than it need be because the AER determines the allowances based on its consultant's assessments, whereas the regulated businesses have their own consultants and the two consultants do not always agree. This means the regulated businesses have a potential grievance if their forecasts are replaced by AER forecasters, particularly if the businesses' forecasters indicate a higher escalator.

Until the AER commenced its regulatory role, it was expected by regulators that escalators would vary from time to time and would show extreme volatility. To address the fact that labour and material costs would vary over time, the regulatory approach allowed the impact of cost variability to be adjusted each year using the CPI as a surrogate for global movements in cost inputs. Allowing adjustment after the event, provided the regulated businesses with certainty that variations in input costs would be accommodated and reflect actualities rather than be based on assumptions.

As it stands, significant and unnecessary risks are being introduced into the regulatory approach. Regulated businesses are still allowed to adjust their tariffs based on the movement of the consumer price index with an additional but predetermined X factor being added. However, to assess what the X factor will be, the AER must assess what future inflation will be and then assess what the future movements in a range of inputs will be. Both of

these assessments entail inaccuracies and some "crystal ball gazing" to develop "real" price movements, which are invariably wrong.

In its response to the AER DD on Victorian 2010 EDPR, the EUCV suggested that a more accurate approach to accommodating movements in labour and materials could be implemented. The EUCV commented:

> "In attempting to be more accurate of future costs, the AER has introduced major errors that have the potential to swamp the improvement in accuracy [that the AER] approach should in theory bring. In accepting such volatility and inaccuracy as has been portrayed, the AER has not provided an outcome that is in the long term interests of consumers or of the network service providers.
>
> This highlights that the AER has attempted to increase its accuracy in future allowances without understanding that the very method it is using creates greater risk and less accuracy over the long term. What is even worse is that where there is inaccuracy, there is a tendency to be conservative in forecasts. This bias is to the benefit of the DBs at a cost to consumers.
>
> To a degree this false approach is driven by an AER decision to base all future revenue movements in accordance with the CPI. If the AER decided that future revenue adjustments were to be based on another inflator (such as a formula containing a number of variables – an approach used extensively in the construction industry) and declaring the outcome as the inflation adjustor for each year rather than using the CPI, then all of this inaccuracy could be eliminated.
>
> This approach would mean moving away from using CPI adjustors each year to an adjustor which the AER would administer which includes inflation adjustment for specifically defined cost elements. The AER would publish the "energy industry inflation adjustor" each year and the tariffs would be adjusted in line with this figure rather than using CPI as is the current practice.
>
> Whilst clause 6.2.6 of the Rules seems to imply that the escalator for standard control services must be based on the CPI (which is a defined term) the definition of CPI allows that the AER may implement "…such other index as is determined by the *AER* as a suitable benchmark for recording general movements in prices" in the event the CPI is no longer published or is substantially changed.
>
> The clear import of the definition is that the AER could address this aspect of attempting to forecast labour and materials cost inflation readily and accurately, without exposing consumers and DBs to risks of unforeseen changes in cost movements, and without the need to insert conservative forecasts."

The ECCSA sees that this proposal is feasible, accommodates the needs of the regulated businesses, results in much greater accuracy and avoids the demonstrable errors that the current AER approach results in.

2.4 Labour productivity

In its response to the AER draft decision on the Victorian EDPR, the EUCV pointed out that the AER had erred in its draft decision by not using the productivity adjusted labour index provided by its consultant Access Economics.

In its response to the draft decision the EUCV noted:

> In its response to the draft decision of the AER review of ETSA Utilities, the ECCSA commented that the AER must recognize that over time, there is a natural increase in productivity of labour that on a national average reflects the difference between inflation as measured by CPI and wages growth. That this must be true, cannot be gainsaid as historically wages have shown a premium to the CPI of between 1-2%. If this trend remained in place and there was no increase in productivity, then wages would have far outstripped inflation by many times. The AER seems to acknowledge this observation when it commented in page 133 in the appendices to the draft decision for the Victorian DBs:
>
> > "The AER considers that productivity adjustments can be an important factor in forecasting actual business costs and notes this approach is consistent with previous regulatory decisions.82 The AER further notes that Access Economics considers productivity factors as a key driver of wage differentials and has incorporated productivity into its modelling. The AER supports the application of Access Economics' productivity impacts in the modelling of its wage cost growth forecasts and does not consider it necessary to include further productivity adjustments. The AER considers Access Economics wage cost growth forecasts reflect a realistic expectation of labour costs."
>
> However in the table the AER used for EGM wage growth over the ETSA regulatory period, it used the following amounts (page 327)

Table K.15 Access Economics proposed Victorian EGW labour real cost escalators (per cent)

	2010	2011	2012	2013	2014	2015
EGW LPI	1.3	1.1	1.0	0.9	1.9	1.5

Source: Access Economics, *Forecast growth in labour costs: March 2010 report*, 16 March 2010, table 6.4, p. 60.

In contrast Access Economics provided the AER with two sets of tables – one with productivity and one without (see page 60 of the Access Economics report dated 16 March 2010) used by the AER for the Victorian draft decision

Calendar year changes in Victorian real Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Victoria	1.8	0.1	1.2	1.0	1.0	2.0	1.4	1.3	1.2	1.3
Utilities	3.1	1.3	1.1	1.0	0.9	1.9	1.5	1.4	1.3	1.3
Mining	2.4	0.2	1.5	1.6	1.5	2.5	1.9	1.8	1.6	1.6
Construction	3.9	1.7	1.3	0.8	0.8	2.4	1.8	1.2	1.1	1.6
Manufacturing	1.0	0.9	1.7	1.5	1.3	2.2	1.7	1.6	1.5	1.4

Calendar year changes in Victorian real productivity adjusted Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Victoria	2.4	-0.5	-0.4	0.3	-0.4	0.0	-0.2	-0.5	-0.8	-0.6
Utilities	2.7	0.9	0.0	0.1	-0.6	0.3	0.4	0.2	-0.3	-0.2
Mining	1.7	0.1	0.2	0.5	-0.1	0.8	0.6	0.3	-0.2	-0.1
Construction	3.7	1.7	0.0	0.1	-0.5	0.6	0.5	0.3	-0.3	0.0
Manufacturing	1.1	0.2	0.3	0.2	-0.5	0.4	0.3	0.1	-0.5	-0.4

What this shows is that the AER has used Access Economics data **without productivity adjustments** in its draft decision whereas it should have used the productivity adjusted rates if it was to be included for the expected increases in productivity.

As can be seen, the productivity adjusted rates show a significantly lower wage cost growth expectation than the rates without productivity adjustments, which is what would be expected.

In previous ESCV decisions (as with other regulators), the regulator inserted specific productivity gains into the opex and capex forecasts for labour inputs.

The AER needs to address the inconsistency between professing that productivity gains must be included and effectively excluding them by using expected wages growths without including the expectation of productivity improvements."

However in its final decision on the Victorian 2010 EDPR (page 249, 250), the AER noted:

> "In its draft decision, the AER used the unadjusted productivity LPIs provided by Access Economics. As noted above, the EUCV raised concerns with the use of the unadjusted productivity LPIs and considered that the adjusted LPIs should be used.
>
> The AER considers that the EUCV has raised issues that require further consideration and consultation with all interested stakeholders. The AER notes that it was not provided the EUCV's finalised submission until 7 September 2010, three weeks after the deadline for submissions of 19 August 2010, and considers sufficient time has not been available to undertake that consultation.
>
> For these reasons, the AER maintains that, consistent with the AER's draft decision, productivity unadjusted LPIs most reasonably reflect a realistic expectation of the labour input costs required to meet or manage the expected demand for standard control services over the forthcoming regulatory control period."

This decision of the AER is totally contradictory. It agrees wholeheartedly that the benefits of labour productivity should be integrated into the forecast labour escalator following the approaches used by earlier regulators. It then decides that because the EUCV submission was late[10], the issue raised needed more review.

The ECCSA does not agree with the AER that firstly the issue needs consultation (the AER stated unequivocally that labour indices should include productivity benefits) or secondly that labour indices without productivity should be used (as regulators have been consistently including productivity adjustments to future labour costs).

The ECCSA agrees with the AER assessment it provides in the Victorian 2010 EDPR regarding the use of the Access Economics approach and that if the AER persists in trying to forecast future labour costs, that the Access Economics LPI labour index is an appropriate toll for providing this adjustment providing that it is the real productivity adjusted index.

To assist the AER, the Access Economics forecast for real productivity adjusted South Australian EGW labour rates as assessed in September 2010 is as follows:

[10] It was in fact provided on the due date with a proviso that errors of fact as assessed by MCE SCO might have to be addressed – and the issue of labour escalators was based on the AER documents and therefore incontrovertible from a SCO viewpoint. The AER did have a subsequent consultation regarding debt risk premium well after the close of submissions. The AER's decision is very curious.

Calendar year changes in South Australian real productivity adjusted Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
South Australia	1.9	0.2	0.0	-0.3	0.4	1.1	-0.1	-0.2	0.3	-0.2
Utilities	2.1	2.0	0.2	-0.6	-0.1	0.8	-0.4	-0.5	-0.2	-0.6
Mining	1.2	2.6	1.0	0.1	0.4	1.4	0.2	-0.2	0.1	-0.2
Construction	0.6	1.3	1.0	0.6	0.8	1.1	-0.2	-0.3	-0.2	-0.6
Manufacturing	0.9	-1.0	-0.2	-0.3	0.2	1.0	-0.2	-0.3	0.0	-0.5
Administration services	1.6	1.6	-0.6	-1.1	-0.2	0.5	-0.7	-0.7	-0.4	-0.8

Source: ABS, Access Economics estimates, Access Economics labour cost model

This assessment of labour adjustment shows distinctly lower increases in future costs for EGW, general and construction labour than does the claim from Envestra.

The Envestra claim for escalators is as follows:

Table 6.3 Labour and Materials Escalators

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
EGW Lab	1.4%	1.6%	1.8%	2.2%	2.3%	1.9%
General Lab	1.0%	1.4%	2.5%	2.7%	2.6%	2.0%
N/W Materials	0.1%	2.5%	1.5%	-0.2%	-3.1%	-2.4%
General Materials	0%	0%	0%	0%	0%	0%
Construction (capex only)	1.1%	2.3%	3.2%	3.6%	2.4%	1.3%

The clear message is that Envestra has grossly overstated the escalators appropriate to their capex and opex claims.

2.5 Early retirement/replacement of assets

Envestra has proposed that its assets be depreciated over shorter periods than it sought and was allowed in the previous two reviews. The argument that Envestra provides for reducing asset lives is that these lesser asset lives are what has been used by other gas distribution businesses.

Table 8.11 Summary of lives used to calculate depreciation.

Asset Category	Original Useful Life	Revised Useful Life	Remaining Life
Mains	83	60	54.0
Inlets	83	60	50.3
Meters	29	15	13.9
Telemetry	50	20	14.8
IT Systems	5	5	0.9
Other Distribution Equipment	50	40	34.9
Other	10	10	3.4

Retirement of assets when they are still used and useful adds profits to the business at the expense of consumers. Even the replacement of used and useful assets when they are fully depreciated is an expense to consumers.

Early retirement and replacement of assets which are not fully depreciated adds unnecessary costs to consumers and provides the business with increased revenue.

The AER needs to be fully cognisant of and address the implications of, increasing depreciation rates and the potential for price shocks to consumers in the future.

The ECCSA noted that Envestra has determined to replace CI and UPS mains due to excessive leakage. This raises two aspects. The first is addressed above, that a business case must show that there is a net benefit to consumers by the action.

The second is that if the asset is replaced then the redundant asset should be “written off”. This means that there will be some unrecovered depreciation still on the Envestra books. The business case must include whatever approach Envestra proposes to recover the remaining depreciation. Envestra could, as do most businesses, write off the remaining life of the asset and exclude this cost from the regulatory calculation of costs, or it can include the write off as a cost within the regulatory calculation. If the write off is added to the regulatory calculation then this write off must be included in the business case supporting the decision to replace early, these assets.

2.6 The capex claim and timing

Envestra has provided a list of new capital projects, and a justification of each. What has not been done is a risk assessment of the likely downside if the work is delayed. Such an analysis requires a series of estimates of the risk for increasing periods of delay. Until such an assessment is made and the risks analysed, the AER cannot approve any of the capex programs. The AER needs to put itself in the role of the directors of the business to ensure that the capex has been assessed properly in terms of the market impact.

It has been stated that this is a role for the actual directors of the business. This is not so. Once the regulator has given approval for a capital project, the directors of the business know they are assured of receiving a guaranteed return on the investment. This takes away from the directors of the business any of the risk for authorizing the capital expenditure.

The ECCSA members very clearly understand the risks involved in authorizing capital projects – every member has this responsibility on a continuing basis. If the risk of achieving the forecast outcome is covered by a guaranteed return (bearing in mind that there is now no risk of future optimisation) the directors of the business have little risk in authorizing approval for a capital project. Thus the AER must accept that it has effectively the responsibility of ensuring that a capital project (both in terms of value and timing) is economically efficient. ECCSA has not been provided with access to the businesses cases as these are listed as confidential. If Envestra has not addressed the risks of delaying some of the capital projects, then the AER must require this work to be done.

The ECCSA strongly recommends that the AER seek from Envestra a detailed risk analysis for each capital project, including an assessment for delays in implementation. With this data, the AER can assess whether it is absolutely necessary to be carried out during the next period or could be deferred with little risk until a time when costs for its implementation might be lower due to a reduction in capex demands from other electricity network businesses or when competition increases.

2.8 Capex overall

Envestra has made a claim for a massive increase in its capex for the next period, increasing its current actual capex by some 250%. It has based this need for such a large amount of capex on three main aspects:-

1. Growth
2. Replacement of mains
3. Non-network and other

Based on the presumption that the current capex was adequate for the current period (and Envestra actually has underspent its capex allowance giving little credence to this presumption) then the only reasons for granting an increase in capex is that there have been step changes in the requirements for Envestra to meet. In this regard:-

- Forecast growth in consumption is less than in the current period, implying there is no step change
- Envestra underspent its capex allowance implying that the current rate of asset replacement is adequate for its needs
- A significant amount of the costs is for equity and debt raising costs. If the amount of increased funding required is less due to a less aggressive capex program, this reduction will result in a lower equity and debt raising costs
- Envestra has claimed increased capex (and opex) as a result of forecast increasing real labour and materials costs. There is an argument that as Envestra was able to accommodate the large increases in labour and materials costs seen in 2006 and 2007 and still under-run on the capex allowance, that there should be a discount applied (rather than an increase) to the capex budget.

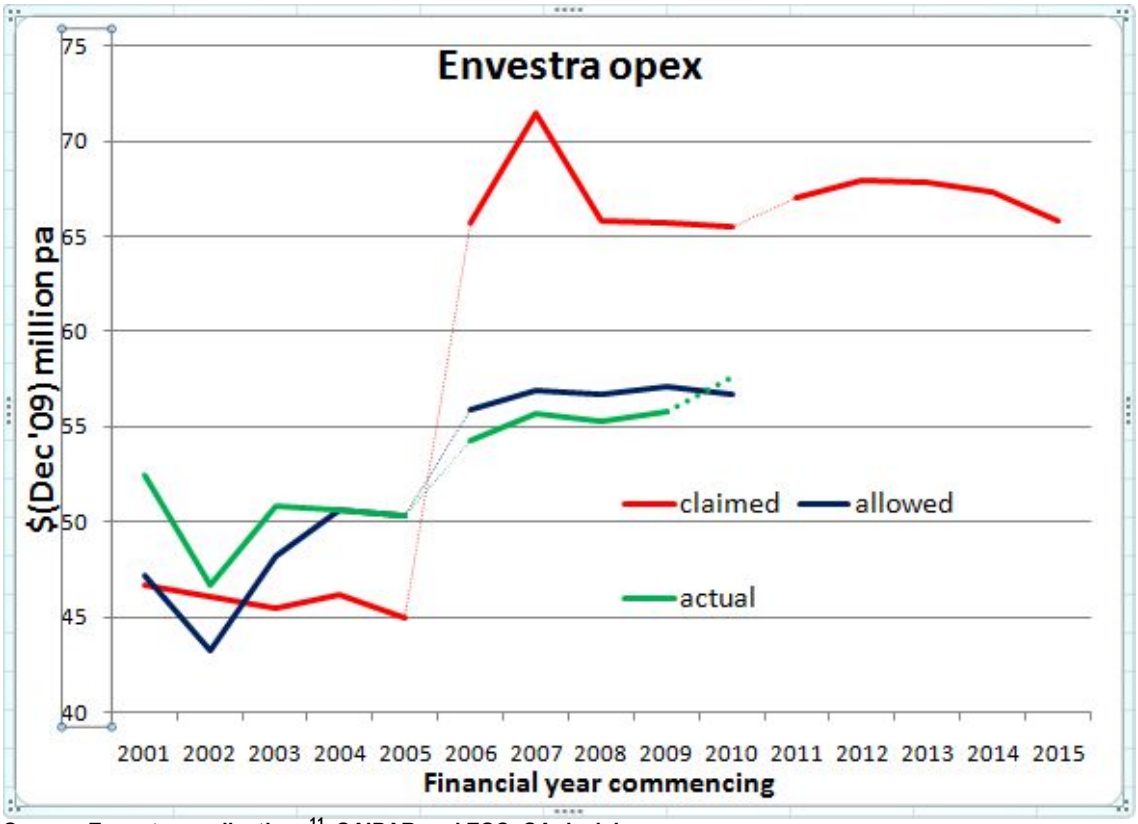
3. Forecast Operating Expenditure

The Gas Rules require opex to be prudent and efficient. Opex incentive programs, such as that applied by ESCoSA to Envestra in the current period, is intended to incentivise Envestra to deliver prudent and efficient opex.

3.1 Overview of past and future opex

Envestra has indicated that it is seeking a step increase in opex from the fourth year of the current period of some 20%. The reasons for this are a mix of increase UAFG costs, higher development and marketing costs and step change increases from the current regulatory period.

The trend of Envestra opex over the past two regulatory periods is shown in the following chart.



Source: Envestra applications[11], SAIPAR and ESCoSA decisions

This shows that clearly both SAIPAR and Envestra were probably incorrect in their assessments for opex for the first regulatory period, although some of the mismatch was attributable to a need for increased opex due to

[11] The 2006-2010 Envestra application excluded UAFG. For comparison purposes the Envestra application for opex includes the amounts for UAFG allowed by ESCoSA

management of FRC. Overall actual opex exceeded the allowances for a number of years.

This trend was not replicated in the second period where the main difference between the Envestra forecast and the amounts allowed by ESCoSA relate to the ESCoSA decision to refuse to allow a "Network Management Fee" (NMF) although ESCoSA also trimmed other allowances as well.

Because of the under-run on opex in the first period, ESCoSA recognised that an increase in allowed opex above that for the first period was necessary and allowed Envestra a large step increase in opex for the second period. It also included an incentive for Envestra to reduce its opex needs. As is shown, Envestra actually under-run it's allowed opex for every year of the second period except for the last year where Envestra forecasts a small over-run. In its application to ESCoSA, Envestra forecast an opex need which was clearly overstated.

One key element of the ESCoSA assessment of opex was that it disallowed the inclusion of the NMF. If the NMF had been allowed by ESCoSA then rather than achieving a $1m pa under-run on opex, Envestra would have enjoyed a $5m pa over-run benefit, with this "saving" being included in the incentive scheme.

It is apparent that Envestra spent significantly less on network development, marketing and FRC than ESCoSA allowed for these tasks but did expend more on O&M than was allowed. It is quite possible that the some of the FRC costs separately allowed for by ESCoSA are included in the O&M costs as for the forecast for the third period, Envestra has rolled these two costs together. Examining the actual opex compared to the ESCoSA allowances and combining them in logical groups shows that over the five years using tables 3.3 and 3.4 from Envestra's AAI:

- Envestra overspent the allowance when O&M, FRC, material changes and NMF are combined by $2.45m
- Envestra underspent the allowance for A&G by $3.26m
- Envestra underspent the allowance for development and marketing by $14.12m
- Envestra overspent the allowance for UAFG by $10.35m.

This shows that effectively:

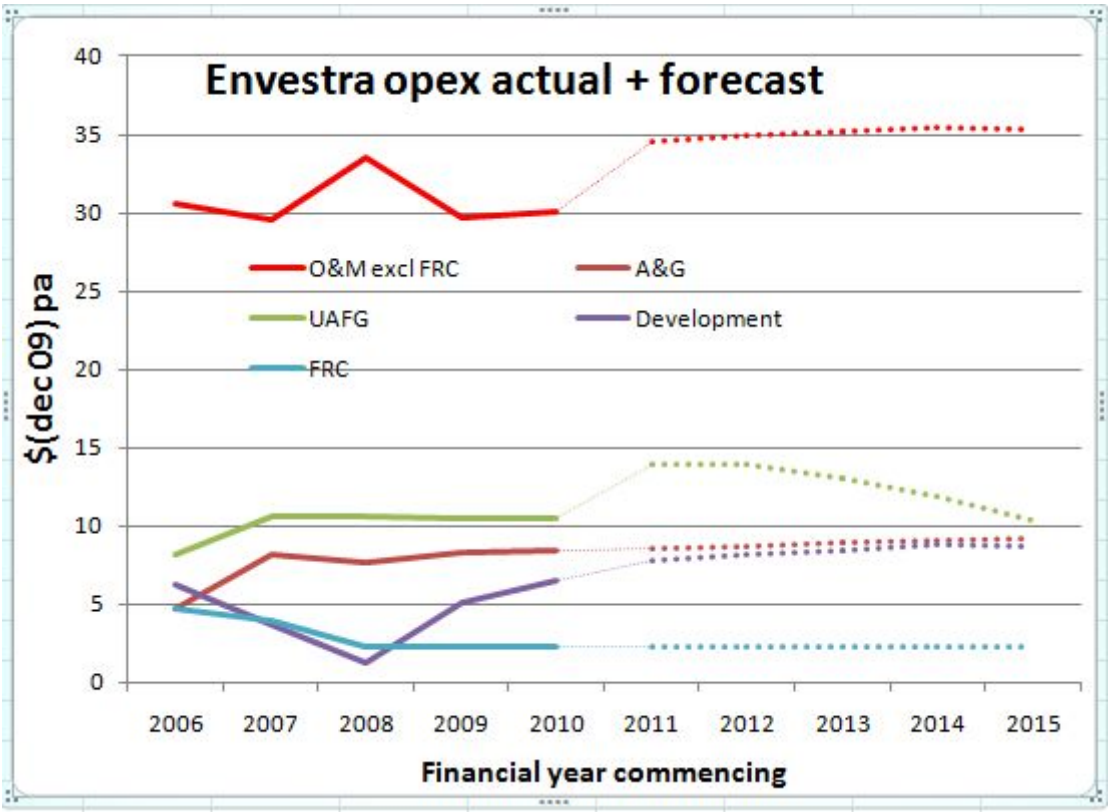
- The small overspend on O&M, FRC and changes was recovered by the small underspend on A&G, leaving a surplus of $0.8m
- The overspend on UAFG was recovered by the underspend on development and marketing leaving a surplus of $3.77m.

This analysis indicates that the ESCoSA allowance for the O&M portion of opex (including its disallowance of the NMF) was demonstrably correct.

Also of interest from this historical chart is that in 2005, Envestra sought opex of a similar magnitude as in this 2010 review. Intuitively, as the network is much the same size as it was in 2005, this indicates that again Envestra has over claimed on its opex.

3.2 The Envestra opex claim broken down

To assess the Envestra opex claim needs analysis of the main individual elements comprising the Envestra claim and to compare these to the actual costs incurred in the current period. The following chart does this with actuals shown in solid lines and forecast amounts in dotted lines.



Source: Envestra AAI

This chart shows opex broken down into five elements:

- O&M includes O&M, material changes, non base year costs, incremental growth but not the NMF excluded by ESCoSA or FRC
- Admin and General
- UAFG
- Network development and marketing

- FRC – the forecast FRC assumes a continuation of the FRC costs for the last three years of the current period

By addressing the Envestra forecasts in this way, identifies that Envestra is seeking:

- A 15% step increase in O&M
- A 33% increase on UAFG costs
- A 20% increase in network development and marketing
- A general trend increase in O&M, A&G and marketing elements over time, presumably to reflect increases in labour and materials

Each of these is addressed separately.

3.3 Step increase in O&M

ESCoSA implemented an incentive approach to opex in the second period so that Envestra would drive its opex to efficient levels.

Opex is assessed in accordance with Rule 91(1) Criteria governing operating expenditure which states:

> "Operating expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services."

A prudent service provider operating efficiently can be identified in two basic ways – either the opex is the actual opex incurred by the NSP when being incentivised such as was Envestra by ESCoSA (ie by internal benchmarking) and/or the opex that is incurred by similar NSPs operating efficiently (ie by external benchmarking).

As all Australian gas distribution businesses are essentially unique and have many differentiating features, it is very difficult to provide Australian based benchmarking for Envestra.

However, Envestra has been subject to self or internal benchmarking for some 10 years as a result of the programs established by SAIPAR and ESCoSA. It is therefore probable that Envestra's current opex is reasonably efficient and could be used as the starting point for setting efficient opex for the next period.

Following this approach, current opex then only needs to be adjusted for growth in the network and for newly imposed changes that are not already included in the current costs. If the fourth year opex is used as the

benchmark (as is AER practice), then new changes are those which would apply after the fourth year and are not included in the fourth year costs.

In its AAI, Envestra notes there are three reasons for adjusting the fourth year opex. These are:

1. The opex associated with a new capex program
2. Unique opex projects in the next period
3. Step changes.

ECCSA would agree in general with these three elements but with some provisos.

Opex associated with capex is a two way issue – new capex might result in more opex if the capex is associated with the net addition of assets. Equally, new capex might result in reducing opex as is the case where the business case for the capex is based on opex reduction such as the case where mains replacement would result in fewer call outs for repairing leaks.

Opex associated with a specific “one off” opex project might result in a short term increase in opex, but the outcome of the project has to deliver a benefit and if that benefit is reduced opex, then after the short term increase there must be a long term reduction. Unless the opex project is carried out in the last year of a period, it would be expected that opex would deliver a reduction in the following year. Balancing the inclusion of opex projects it is essential that the base year opex is adjusted for any “one off projects” in the base year.

3.3.1 Capex projects

Envestra provides summary details of six specific capex projects where it alleges the capex program will result in increased opex. The ECCSA is not able to specifically address each project as the AAI does not provide sufficient data on which to make an assessment.

However, ECCSA does observe that the business case for each of the projects needs to be reviewed to identify if this included increased opex as part of the project rationale. If the rationale does not indicate that added opex would result then there should not be an opex adjustment made.

Only capex projects that were implemented after the base year should be included as those that were completed before the base year already has the increased opex included in the base year.

Equally, capex completed after the base year which was predicated on an opex saving, should show that the opex saving has been included in the forecasts.

3.3.2 Opex projects

Envestra provides a listing of four opex projects that it sees are needed for the next period. The ECCSA sees that the AER assess whether the business cases for these provides a benefit and if this benefit is derived from opex savings. These subsequent opex savings need to be deducted from the base case year opex after the completion of the specific opex project.

3.3.3 Step changes

Envestra advises that it considers that there are four criteria that it considers underpin step changes. These are

1. Business environment changes caused by external factors such as mandated changes
2. Voluntary improvement of service levels
3. Savings and benefits to customers
4. Needed for safety and prudency

The ECCSA accepts that there might be step changes resulting from any of the four criteria, but it must be stressed that these changes are above those costs incurred in the base year. If the costs are included in the base year then they cannot be accepted as step changes that would increase the next period opex.

Envestra provides 10 projects that it considers are step changes. ECCSA makes the following comments about some of them.

Project 1 – Virginia Gate upgrade
ECCSA sees this is not a step change but a network augmentation. It is not needed for safety or prudency as such. If the business case for the augmentation (ie that the increased sale of gas because of the work will benefit all customers) then it would be an approved capex project.

Project 2 – STTM
As this project incurred costs after the base year it is a step change

Project 3 – notification of meter upgrades
Envestra should have always provided this information. To consider that it is being done only now is either wrong or extremely bad past practice. It is unlikely that Envestra does not advise its customers now that gas supplies are likely to be stopped for a short period. This is not a step change.

Project 4 – UAFG analytical support
It is incorrect to consider this project is a step change. Analysis of UAFG is an essential element of managing UAFG and as Envestra has had in place a mains replacement program for over a decade which has been driven by large amounts of UAFG, to consider this is a step change is incorrect

Project 5 – HDPE survey
At first blush, this project appears to be a step change, provided that the base year costs do not include for such a survey.

However, Envestra states that it intends to survey 1,800 km of HDPE each year. In attachment 7.2 page 59, APA advises there is only 3,851 km of poly mains. This would mean that even if all poly mains were HDPE, then such a survey would cover all poly mains over a two year period. There is no detail as to the costs of the program but it needs to be assessed as to whether all mains need to be checked every two years or if there is a lower cost for the checking necessary.

Project 6 – standby crews
As the legislation applies from 2010, the cost would appear to meet the requirements of a step change. However, more analysis is required to assess whether the addition of 12 employees is appropriate when considering work practices applying in the base year.

Project 7 – Road authority specification
This appears to be a legitimate step change.

Project 8 – knowledge management
Whilst ECCSA agrees that such knowledge management is good practice, Envestra should have been applying such practices throughout. It is not a step change as such necessitating a step change between the base year and the next period.

Project 9 – Increase in insurance costs
If increased insurance costs have been competitively demonstrated, then this is a step change.

Project 10 – compliance reporting
If the requirement does require additional costs, and as it is to be implemented after the base year costs, then it is a step change.

3.4 Incremental growth

The ECCSA agrees with Envestra that the incremental growth of the network (usage and throughput) is unlikely to increase opex. ECCSA also

agrees that there are costs which increase with the increased numbers of customers.

Attachment 6.3 was not available to ECCSA, so analysis of the costs is not possible. However, the cost per customer should only apply to the net increment of customers as this cost for current customers is included in the base year costs.

3.5 Escalators

ECCSA has provided its views on cost escalators in sections 2.3 and 2.4

3.6 UAFG

The issue of UAFG is one which Envestra has been addressing since before the first regulatory review by SAIPAR which commenced in 1999. In that review SAIPAR required Envestra to provide a business case for the proposed mains replacement program but it appears that this was not provided. In its draft decision in April 2000, on page 77, SAIPAR states:

> "When deciding what constitutes prudent expenditure in regard to the System Use Gas component of Non Capital Costs, all of the above factors must be weighed. Given the relatively high levels of Systems Use Gas as proposed by Envestra and the $ pr/GJ price, it is hard to accept, in light of the above discussion, that the information provided by Envestra has supported a SUG level (with the associated operational costs) of an 'efficient' or 'prudent' level.
>
> SUG volumes are forecast to decrease by 21% over the Access Arrangement period. Envestra submits that this is a significant reduction. The cost reduction due to the reduction in SUG volume is partially offset in the operating cost forecast by CPI escalation of the average cost of gas.
>
> It should be noted that while there has been a reduction in cast iron mains in the network through mains replacement over past years, there has not been a corresponding reduction in SUG. This implies that mains replacement over previous years has only kept pace with the impact of system deterioration on SUG volumes. This also leads to the conclusion that mains replacement needs to accelerate above the average replacement levels of recent years if a significant reduction in SUG is to be achieved.
>
> While leakage is commonly the major contributor to SUG, there are also other contributors, and therefore replacement of a proportion of the network does not necessarily result in a reduction in SUG of the same proportion.

> It should be noted that Envestra's view is that the SUG forecasts in the Access Arrangement are only achievable with the level of mains replacement assumed in the corresponding Accelerated Mains Replacement Program. It is the view of SAIPAR that SUG represents a significant pass-through cost to consumers, which at the level proposed by Envestra's forecasts, is too high."

The views of SAIPA made in 2000 are still valid (even more so in this third review of Envestra), and provide a context to the AER review of UAFG needs for the next period.

The ECCSA has made a number of observations regarding UAFG in section 2.2.4 above and does not seek to repeat what is in that section other than to observe that the business case for the capex required for mains replacement is predicated on opex savings in terms of reduced leak repair actions and a reduction of UAFG. Both leak repair costs and UAFG costs are elements of opex so the business case is dependent on opex savings.

In section 6.6.1 (project 6) Envestra advises that its mains replacement program will reduce leak repair costs by $5m in the period, implying a saving of ~$1m pa, although it is accepted that this figure might be higher in year 5 and lower in the earlier years. As a proportion of total opex, this $5m saving is 1.5% of the total opex of $336m for the 5 year period.

Envestra does not provide actual amounts needed for UAFG (for confidentiality reasons) but indicates the costs for providing UAFG during the year will fall from $13.91m in year 1 by 35% to $10.31m in year 5. The current cost for UAFG for 2010/11 is forecast to be $10.41m. Envestra does advise that by the end of the mains replacement program it expects UAFG to fall to 500 TJ pa from the current level of 2,100-2,200 TJ pa (see page 79 of the AAI). Although Envestra states that the mains replacement program will replace some 1,073 km of mains in this next period – period 3 – (with another 530 km in period 4), on a pro rata basis UAFG should fall by 2/3^{rds} as a result of the work in period 3 or an amount of ~1,000 TJ leaving UAFG at a rate of ~1,000 TJ at the end of period 3.

Envestra advises that the UAFG cost at the end of period 3 will be $10.31m or a cost of $10.31/GJ. This figure seems excessive and needs to be justified. For comparison, ACIL Tasman[12] is forecasting that gas delivered to Adelaide for gas fired generation will be ~$6/GJ. Projections by other forecasters (eg MMA) agree with this estimate.

ECCSA members are also large buyers of gas, and the prices they are currently paying and have contracted for into the future are certainly well

[12] ACIL Tasman Fuel resource, new entry and generation costs in the NEM Prepared for the Inter-Regional Planning Committee April 2009

below the implied prices for gas that Envestra has used to develop its UAFG allowance.

The AER should seek independent advice as to the expectations of gas prices during period 3.

Overall, it seems that by the investment of some $320m in mains replacement Envestra expects the cost of UAFG will not reduce but there will be a 1.5% reduction in opex for leak repair. On these opex savings, the investment in mains replacement does not appear to be warranted.

In addition, it appears that the costs Envestra is forecasting for UAFG is also significantly overstated, or that the amount of gas that will be saved by the end of period 3 resulting from the mains replacement program is significantly understated.

3.7 Network development and marketing

For a network development and marketing cost in the current period of $22.68m, Envestra achieved a net increase in new customers of ~35,000 and a reduction in gas capacity sold of ~2 PJ. Envestra had been granted a marketing allowance by ESCoSA of some $36.8m to achieve the forecasts of increased customers and increased capacity sold, but Envestra decided that such was not required.

Envestra proposes that it needs $41.91m in the next period to achieve a net increase in customers of ~37,000 and a further reduction in gas capacity being sold of ~1PJ.

Whilst it accepted that marketing might slow the rate of the loss of capacity sold and might increase the numbers of new connections, the claimed doubling of the marketing allowance has to demonstrate that it will provide a better outcome for customers than holding the current amount of marketing. Such justification is a requirement of the Rules

The AER should require Envestra to provide a business case that the increase in marketing is prudent and provides a net benefit. Failing that, the AER should only allow the current marketing allowance

3.8 Network Management Fee (NMF)

In the current period, ESCoSA determined that the NMF should be discounted from the opex allowance. Despite the exclusion of the NMF by ESCoSA in the opex allowance, the analysis in section 3.1 above shows that overall, compared to the ESCoSA allowance Envestra overspent its

allowance by $2.45m (or 1.5%) when O&M, FRC, material changes and NMF are combined.

From this analysis there are two conclusions that can be drawn.

1. ESCoSA was correct to discount the O&M allowance by the NMF
2. AER should use the starting point of the actual amount needed for this task as the starting point for the allowance for O&M plus FRC.

By using this approach, the AER will avoid the protracted debate as to whether Envestra should provide APA with an NMF or not. It is immaterial whether the allowance includes an NMF or not – what is apparent by ESCoSA imposing an opex incentive, is that Envestra has provided an outcome which can be assumed to be efficient.

If contracting with APA has resulted in APA being provided with management fee, then this is seen as being more efficient than Envestra carrying out the work itself as it would appear that the base year actual costs are efficient by virtue of the ESCoSA incentive on opex.

It is probable that the actual O&M allowance does include a management fee, so the AER would have to argue that the current actual O&M + FRC costs is not efficient (due to the probable inclusion of a management fee) and then reduce the base year O&M by the amount the AER considers to be included for the NMF. The ECCSA agrees that such might be a more accurate assessment of efficient costs for O&M + FRC, but it does create complexity and debate.

Following the ECCSA approach, the issue of whether an NMF should or should not be included, disappears.

3.9 Summary of the ECCSA view on Envestra opex

The ECCSA considers that the base year opex should be applied and opex only increased for actual step changes such as demonstrable increases in UAFG costs and real changes to the operating environment that affect Envestra.

The ECCSA has provided its views as to what step changes should be to increase the base opex level, and suggests that a close examination of the UAFG claims and costs is needed.

4. Service Performance Targets

Envestra advises that the service performance for its network is a high standard. It advises:

> "... the applicable service standards [it maintains] result in an inherent high level of reliability and high level of service. Envestra is aware that in some jurisdictions, notably in relation to electricity distribution, that sophisticated reporting systems have been implemented to record and report on detailed aspects of service delivery. Envestra is of the view that, given the current high levels of service, the introduction of more onerous reporting systems is not warranted."

Despite these high level assurances, Envestra does not provide (and seems to oppose) the application of set targets of performance combined with a bonus/penalty arrangement such as a STPIS used in other energy transport operations. A STPIS is intended to ensure that the regulatory bargain between service providers and consumers is maintained and improved.

The ECCSA considers that it is insufficient that there be no defined service performance standards explicitly set so that consumers can see what service performance is provided for the price set by the regulation of the monopoly service provider.

As with the electricity networks, Envestra and the AER should establish and maintain certain technical service standards for the funds provided. Further, certain set minimum consumer performance service must be maintained and enhanced where possible. Unless these are set and achieved, there is no certainty that the regulatory bargain has been achieved.

The ECCSA is aware that the NGR does not specifically stipulate service target performance scheme but does note that there is an implicit requirement to provide a service that balances the regulatory bargain. Envestra advises that it already provides certain service performance indicators and these should be made clear to all consumers so they can see what they get for the regulatory bargain they, essentially, have entered into. Whilst a STPIS cannot be established without Envestra proposing such a scheme, the AER can require Envestra to measure its service performance and to make such publicly available. Then, at each regulatory review, the annual performance as demonstrated by these measurements provided by Envestra can be used to advise, and perhaps influence, the decision processes at the next regulatory review.

5. Cost of capital and allowed revenue

The allowed revenue for a monopoly service provider is intended to recover at least the efficient costs for providing the service. In the second reading speech by the Minister introducing the national Gas Law in April 2008, he observed:

> "The first of these principles [of six that guide the development of the framework for the regulation of pipeline services] requires that a regulated service provider should be provided with a reasonable opportunity to recover at least the efficient costs the operator incurs in providing services, complying with a regulatory obligation or requirement or making a regulatory payment. At least efficient cost recovery is vital if service providers are to maintain their gas networks in order to meet community expectations of the service levels they receive, and to undertake further investment to serve Australia's growing population.
> ...
> The fourth principle ensures that risks are appropriately compensated by requiring that prices and charges for the provision of reference services allow for a return commensurate with the regulatory and commercial risks involved in providing the services to which that price or charge relates."

The first principle recognises that the allowed revenue must be adequate for the service provider to cover its efficient costs, including the costs associated with acquiring new capital necessary for providing the service. The fourth principle recognises that the weighted average cost of capital (WACC) must be such as to accommodate the risks involved in providing the service.

5.1 WACC overview

Section 24 of the National Gas Law states:

> (1) The revenue and pricing principles are the principles set out in subsections (2) to (7).
> (2) A service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in—
> (a) providing reference services; and
> (b) complying with a regulatory obligation or requirement or making a regulatory payment.
> (3) A service provider should be provided with effective incentives in order to promote economic efficiency with respect to reference services the service provider provides. The economic efficiency that should be promoted includes—
> (a) efficient investment in, or in connection with, a pipeline with which the service provider provides reference services; and

(b) the efficient provision of pipeline services; and
(c) the efficient use of the pipeline.

(4) Regard should be had to the capital base with respect to a pipeline adopted—
(a) in any previous—
(i) full access arrangement decision; or
(ii) decision of a relevant Regulator under section 2 of the Gas Code;
(b) in the Rules.

(5) A reference tariff should allow for a return commensurate with the regulatory and commercial risks involved in providing the reference service to which that tariff relates.

(6) Regard should be had to the economic costs and risks of the potential for under and over investment by a service provider in a pipeline with which the service provider provides pipeline services.

(7) Regard should be had to the economic costs and risks of the potential for under and over utilisation of a pipeline with which a service provider provides pipeline services.

Clause 87 (Rate of Return) of the Rules state that the rate of return on assets shall be:

(1) The rate of return on capital is to be commensurate with prevailing conditions in the market for funds and the risks involved in providing reference services.

(2) In determining a rate of return on capital:
(a) it will be assumed that the service provider:
(i) meets benchmark levels of efficiency; and
(ii) uses a financing structure that meets benchmark standards as to gearing and other financial parameters for a going concern and reflects in other respects best practice; and
(b) a well accepted approach that incorporates the cost of equity and debt, such as the Weighted Average Cost of Capital, is to be used; and a well accepted financial model, such as the Capital Asset Pricing Model, is to be used.

The AER advises in its guidelines that (in relation to rate of return):

"A service provider should refer to recent ACCC and AER regulatory decisions (including any merits review outcomes of these decisions) for guidance including any relevant comprehensive reviews of cost of capital issues periodically undertaken by the AER. The reason for this is that these regulatory decisions will contain the AER's most up-to-date analysis and current views on a relevant rate of return. This is particularly relevant for parameters such as interest rates, inflation and equity beta which are influenced by prevailing market conditions."

The clear requirement of the Law, Rules and AER approach is that the rate of return must be efficient and reflect the rate of return a prudent service provider would require in order to most efficiently provide the services.

What the Law, Rules and AER approach do not permit, is that the rate of return should be as high as the service provider can "get away with".

The AER, ACCC and all jurisdictional regulators have previously determined that the efficient rate of return for monopoly energy asset providers will be based on the Sharpe/Officer CAPM for setting WACC and the AER has developed a set of values for the parameters to be used in that form of the CAPM. These parameters are reviewed and reset every 5 years by the AER.

The clear import of the Law, Rules and AER approach is that the Sharpe/Officer CAPM with the AER values for the parameters provides an efficient rate of return. The reverse of this is that any other approach which would give a higher rate of return would not be assessed as efficient.

Also classed as efficient must be a service provider's actual weighted cost of capital if this is lower than the benchmark WACC calculated using the AER values.

In its AAI Envestra notes on page 127, that Rule 74 requires a forecast or estimate to be arrived at on a reasonable basis and be the best forecast or estimate possible.

Envestra then proceeds to argue that some elements of the AER rate of return assessments are acceptable (such as risk free rate) but that others are not (such as gearing).

What Envestra fails to see is that the AER is attempting to develop a rate of return for the notional well managed network service provider as the well managed NSP will provide the efficient benchmark.

For example, Envestra advises that the efficient benchmark for gearing is 55% debt, yet Envestra's own gearing is over 70%[13] debt (total borrowings as a proportion of total assets). Envestra advises that its credit rating is BBB[14] although the benchmark used for the notional efficient provider is BBB+. This clearly shows that actual approaches to financing by individual NSPs will vary, but this does not detract from the fact they might be efficient.

[13] See Envestra Annual Report 2010 page 44
[14] Ibid page 6

That the approach suggested by Envestra to setting the benchmark WACC suggests that the AER approach is flawed, it is pertinent to note that Envestra uses other means to reduce the WACC, as a prudent NSP would do.

In his address to shareholders at the 2010 Envestra chairman observed:

> ***"Highlights from 2009-10***
> ... The result was mainly impacted by warmer than normal winter weather in the south-eastern States and a decision to significantly increase our natural gas marketing program. ...On an underlying basis, Profit after Tax for the year was up $0.7 million, to $36.3 million.
> ...
> A critical measure of our success is the ratio of cashflow available, after financing costs and stay-in-business capex, to pay dividends to shareholders.
>
> In 2007-08 the ratio was 95% (although this was affected by a 30 June interest payment that was paid on the next business day, being 1 July); this increased to 137% in 2008-09 and grew to 147% in the current year. This margin provides confidence about our ability to maintain the current level of dividends, and hopefully, in time, increase them.
>
> Borrowing costs were $156.9 million, down $1.4 million on the previous period. The decrease largely reflects lower CPI indexation costs on the Company's Capital Indexed Bonds (which is non-cash), offset in part by higher margins paid on recently refinanced term-debt.
>
> ***Financing Strategy***
> During the year the Company raised $387 million of new bank debt to re-finance existing facilities and to support the capital expenditure program. Margins were above those that applied to the maturing facilities, and the new loan periods (known as tenor) for bank debt were generally shorter than those which were available in the past. These terms were a consequence of the global financial crisis that had a significant impact on capital markets throughout 2009-10. These additional costs are potentially recoverable via future regulatory resets, and in part, under our current Access Arrangements.
>
> With the limited tenor available from Australian banks, and in the face of a lack of debt capital raisings by corporate issuers, the Company turned to the US market, in early 2010, and raised US$150 million in 17-year bonds. The issue frees up existing bank lines to re-finance future maturing debt through to the 2011-12 financial year.
>
> Envestra's financing strategy for many years has been to maintain a long-duration debt portfolio, to have refinancing in place at least six months prior to

maturity, and to set a limit of 15% of the debt portfolio to mature in any one year. The average loan maturity for the Envestra group is now just over 10 years following the draw down of the US$150 million Private Placement Facility on 1 July, 2010.

Our debt management strategy has also resulted in the Company having a broad portfolio of bank lines and bonds, with maturities reasonably spread over the years through to 2034, generally with less than 15% of the debt portfolio maturing in any one year.

At 30 June 2010, the Company had undrawn bank facilities amounting to $222 million with terms extending from 2010 to 2012. These credit facilities, in conjunction with the cash being generated by the business, are sufficient to support our capital expenditure program and fund operating costs over the next couple of years.

The Company's exposure to interest rate risk is limited as over 90% of floating rate debt is hedged in line with the regulatory reset periods through to June 2011 for South Australia and Queensland, and December 2012, for Victoria."

The Envestra approach as outlined in the Chairman's address shows that an efficient NSP uses approaches that the AER does not incorporate when developing its WACC (which is assumed to be efficient as any improvement provides a benefit to shareholders) so it must be assumed that the AER approach is somewhat conservative as it does not use the approaches that an efficient NSP would use to minimise its WACC.

Further, it is important to note that despite Envestra seeking higher rates of return than those it currently receives from decisions by ESCoSA, ESCoV and QCA, it has improved its financial position in the past few years. This seems to imply that the approaches used by the jurisdictional regulators to set rates of return were adequate. The AER approach is much the same as those used by those regulators giving confidence that the AER approach does deliver efficient but conservative rate of return.

In the most recent gas distribution decisions, the following WACC parameters were used. The explicit or implicit Envestra proposals are provided for comparison purposes.

When Envestra's claims are totalled into a final WACC allowance, it has claimed a massive premium over the rate of return the AER provided to Jemena in NSW earlier in 2010.

Parameter	Mar 2008 Vic ESCV	Jun 2010 NSW AER	Envestra claim
MRP	600 bp	650 bp	735 bp
Gearing	60% debt	60% debt	55% debt
DRP	214.5 bp	293 bp	339 bp
Equity beta	0.7	0.8	1.05
Inflation	2.7% pa	2.6% pa	2.57%pa
gamma	0.5	0.65	0.2

Envestra provides support for its claim through use of alternative CAPM and other methods for calculating the cost of equity for a regulated entity providing a monopoly service. The alternative methods all provide a higher return on equity than that based on the AER parameters. Because of this Envestra concludes that its many assessments demonstrate that the AER approach is incorrect.

Whilst Envestra concludes that all the other methods are "well accepted approach" as required by the Rules, what Envestra fails to recognise is that the Law (which is above the Rules) requires the return to provide:

> "...a return commensurate with the regulatory and commercial risks involved in providing the reference service to which that tariff relates"

and

> "...a reasonable opportunity to recover at least the efficient costs the service provider incurs in providing reference services"

Envestra's comparative performance is shown in the following graphic provided by CommSec.

ASX Code: **ENV** **Envestra Limited**

Main View | Forecasts | Financials | Company Info | News | Dividends | Shareholders | Directors

Buy | Sell | Depth | Chart | Watchlist

Key Measures

VALUE	Company	All Ords	Sector
P/E ratio	19.18	14.61	14.91
P/B ratio	1.40	1.62	1.20
P/E Growth ratio	3.34	1.08	3.87
P/S ratio	1.84	2.08	1.84

INCOME	Company	All Ords	Sector
Dividend yield	10.5%	4.6%	7.9%
Franking	55.0%		
Tax adjusted dividend yield	7.1%	3.4%	4.4%
Dividend stability	96.3%	90.1%	96.1%

The graphic reflects the commentary made by the Envestra Chairman at the recent Envestra AGM. It compares Envestra to the market overall and to the Utilities sector. Essentially, Envestra displays a sound return to investors reflecting its "defensive" market characteristics.

If Envestra (and other regulated entities) can provide a return to shareholders which delivers a dividend above the average dividend for the overall market and its sector, then Envestra is demonstrating that the bases for its revenue stream are probably efficient but conservative. Certainly they do not show that Envestra must be provided with a higher return on its assets than it currently gets.

Envestra would seem to concur with such a view. In a report to the financial markets in September 2009 Envestra provided a view as to the impact of the then current AER WACC decisions on its expectation over the coming regulatory period. Envestra observed that at worst there might be a small reduction in return but highlighted that the AER approach on DRP continued, there was a distinct upside for Envestra:

Long Term Regulatory Outlook

- Key parameters from AER WACC decision for electricity transmission companies

WACC parameter	AER final decision	Current decisions	Impact
Risk free rate	10 year government bond	10 year government bond	Nil
Equity beta	0.8	0.8 – 1.1	-20 bp to -60 bp
Market risk premium	6.50%	6.00%	+ 20 bp
Credit rating	BBB+	BBB+	Nil
Gearing	60%	60%	Nil
Value of imputation credits	0.65	0.43 – 0.50	- 20 bp to -35 bp
TOTAL IMPACT			**Vic Nil, SA – 35bp, Qld – 60bp**

- Upside: AER "credit margin" uplift on WACC: if August 2009 margins prevail would add at least $15M p.a
- Downside: impact of lower WACC parameters - only a minor impact on haulage revenue (<2%)
- From 2011-12: expect to see revenue growth of 2-3% (customer growth / CPI tariff increases)

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Envestra

It is clear that Envestra recognises that the current AER settings are appropriate and will have minimal impact on Envestra but the AER approach to DRP provides the basis for a significant upside.

5.2 Specific elements of the WACC

Envestra claims it needs a higher WACC because many of the parameters the AER uses for setting the WACC for the notional gas distribution business need to be changed to increase the WACC.

ECCSA provides its views on a number of these parameters

5.2.1 Formula for equity returns

Envestra provides a number of different approaches and formulae for developing a value for the return on equity. But as the AER expressed in some detail in its decision on NSW (Jemena) gas distribution, the approaches suggested are not as frequently or widely used as the Sharpe CAPM. The Rules require the method to be a “well accepted” method and as the AER has previously determined, none of the methods (other than the Sharpe CAPM) proposed by Envestra are demonstrably “well accepted” and more widely used than the Sharpe CAPM.

The Law requires that the NSP should receive at least the efficient costs for providing the services, and the return on assets is the largest single element of the cost for the service. As Envestra is demonstrating that its financial performance is not only adequate (indicating it is receiving an efficient return) but improving, it appears that the returns it is getting from the current regulatory approaches are therefore efficient.

As the AER approach will continue the approaches used by the jurisdictional regulators, this “real world” evidence supports that the AER approach used for the Jemena network decision has equal applicability to the Envestra review.

In its response to the AER in relation to the Jemena NSW gas distribution review, ECCSA affiliate EMRF provided a view as to the appropriateness of the other methods for assessing rate of return proposed by Jemena. The ECCSA refers the AER to those comments and the AER decision in regard to rejecting those other methods.

The ECCSA recommends that the AER should reject the use of other methods of assessing the rate of return and continue with the use of the Sharpe CAPM.

5.2.2 MRP and equity beta

Envestra has suggested that the combined market risk premium and equity beta should be 772 bp compared to the value of 520 bp used for all energy network regulatory decisions since the WACC parameter decision in 2009. Envestra defends this higher value on the basis of a number of analyses.

Firstly they state that the rate for AER equity element should be higher than rate for the debt element. Observations of 10 year corporate BBB+ rated bonds show that this benchmark exceeded the AER equity rate for the first half of 2009 (Envestra AAI figure 9.1) and remains closer to the equity rate than prior to 2008 by some 200 bp. When making such comparisons It must be remembered that:

- There are no 10 year corporate bonds for BBB+ rated debt,
- The values are interpolated from a small pool of bonds of different ratings
- The values are extrapolated from bonds of much shorter term
- Few energy network providers source their debt from such bonds preferring lower cost sources of debt.

From this they contend this proves that the AER approach delivers too low a return on equity. What they don't highlight is that the trend between AER calculated equity and 10 year BBB+ bonds is trending wider, highlighting that debt is becoming easier to get than during the GFC period. It would be expected that if debt was not widely available, then the price of debt must rise. As debt becomes more accessible then its cost will fall. The AER is required to assess what the difference will be over the next five years, not what it is now.

Secondly they support the contention that other approaches to assessing the necessary return on equity shows a higher return and therefore the AER assessment is flawed. If these other methods are to be considered as appropriate, then the question arises as to why they are not used as widely as the Sharpe CAPM. The obvious reason is that they are considered to be less reliable.

Envestra is obviously attempting to convince the AER it should be granted a higher return on equity, However, what Envestra does not do is to highlight that already its dividend yield (see section 5.1 above) is higher than the market average even allowing for the use of the Sharpe CAPM approach used by the AER and other regulators. It is obvious the "real world" does not agree with the Envestra contention.

5.2.3 Gearing

Envestra considers that the notional energy network provider should be geared to 55% debt. This issue was first widely discussed at the ORG/ACCC "Great WACC debate of '98" and even as late as the AER WACC review, the level of gearing has been held at 60% as being appropriate for the notional efficient energy network provider.

A review of the financial statements of energy network providers shows that the AER level of 60% is conservative as on average most of the Australian

NSPs are geared at more than 60%. For Envestra to allege that the notional provider should be geared lower than the AER assumed level of 60% is inconsistent with Envestra's own gearing which is over 70%[15].

Envestra points out that gearing of a BBB+ rated entity would be as low as 55%, and lower rated entities would have a higher gearing.

This is not necessarily so. For example, during the 2009 AER WACC review, it was noted that Ergon is rated as AA+ with a gearing of nearly 70%, and ElectraNet (geared to over 90%) has a BBB+ rating.

Envestra's arguments do not stand up when the "real world" outcomes are observed.

5.2.4 DRP

ECCSA affiliate Major Energy Users recently provided a response to the AER in relation to the issue of debt risk premium and this is attached as appendix 1 to this submission. The ECCSA concurs with the MEU that the current approach to calculating DRP is flawed and does not meet the requirements of the Electricity Law or the Electricity Rules.

However, Envestra has proposed that a similar approach to assessing DRP to that used by the AER, so the MEU comments are applicable to the Envestra application, noting that the Gas Rules are not as specific with regard to DRP as the electricity rules.

However, an indication of Envestra's actual costs for debt can be obtained from its Annual Report for 2010. Here, Envestra advises that it paid some $152m for borrowings (Income Statement) and had some $1,940m in borrowings (Balance Sheet) implying a cost of debt of 783 bp. The average cost of 10 year CGS for 09/10 was 555 bp. This implies that currently Envestra's debt risk premium is 228 bp. As 2009/10 was a year still heavily impacted by the GFC, it could be assumed that this DRP is likely to be higher than in the future.

Envestra has provided clear data showing that an efficient DRP for a Baa2 (Moody's equivalent to S&P BBB) and BBB- (S&P)[16] rated is of the order of 220-230 bp.

In appendix 2, there is a press release from Envestra advising of its acquisition of a 17 year loan from the US at rates equivalent to 3 year

[15] Morningstar assesses Envestra gearing at 78%
[16] In the Managing Director's address to the shareholders at the recent Envestra AGM he advised that Moody's rates Envestra at BBB, but S&P has a lower rating for Envestra. The MD advises that Envestra is seeking to get its S&P rating increased to BBB. In a press release 22 March 2010, Envestra states the S&P rating is BBB-

Australian market loans. That Envestra raised funds overseas at such beneficial rates indicates two key outcomes:

1. That an efficient NSP does not pay the high premiums that would require such high DRP levels to secure its debt
2. That an efficient NSP has a portfolio of debt of varying durations and with varying types of providers

This provides a strong indication that the AER approach is flawed in that it seeks only to replicate 10 year Australian corporate bonds of BBB+ rating to develop its DRP. The AER approach is flawed in that:

- There are no 10 year BBB+ Australian corporate bonds to provide a benchmark
- Efficient debt is not secured in this way and is made up of a portfolio of providers and durations.
- The Gas Rules require that the rate of return to use a financing structure that meets benchmark standards as to gearing and other financial parameters for a going concern and reflects in other respects best practice. The Gas Rules do not state that that the DRP is to be the 10 year Australian corporate bond rate for BBB+ entities.

The AER needs to address this clear inconsistency between its practice and what is required. It is clear from Envestra presentations (such as that in September 2009), that Envestra itself concurs with the ECCSA view.

5.2.5 Gamma

The issue of dividend imputation continues to be vexed, with the AER being challenged regularly on its assessment of gamma for the notional Australian energy network.

Dividend imputation provides a benefit for shareholders as the outcome is that shareholders are not taxed twice. The benefits of imputation are only available to Australian tax payers. Envestra has assembled a number of experts to advise that the benefits of tax imputation are very small (20%) and the AER considers that the benefits are much larger (65%).

Consistently regulated businesses are seeking to reduce the allowance the AER provides in the post tax revenue for tax imputation, as this will increase the dividends to shareholders. At every revenue reset the businesses provide an array of experts to challenge the AER considered view. Envestra is no different.

ECCSA has no additional observations to make other than those it has already provided to the AER at recent revenue reviews, but ECCSA does consider that as the revenue approach is based purely on Australian

conditions for an Australian monopoly part for the services by Australian consumers with rates of return derived from Australian parameters, then there is a prima facie assumption that the notional Australian regulated energy network provider could be owned by Australians who receive the benefits accordingly[17]. On this basis the ECCSA would expect that gamma would be 100% and therefore the AER assumption of 65% is extremely conservative.

If Envestra is correct and gamma is really 20%, this then raises the question that if such a low benefit is derived from dividend imputation, why does the Australian Government persist with providing such a complex approach for so little benefit. Because it has been maintained, the ECCSA considers that gamma is significantly higher than 20% and probably closer to the AER estimate.

5.2.6 Conservatism in parameters

In its submission to the AER draft decision on the WACC parameters the Major Energy Users analysed the derivation of each of the set points derived by the AER for the parameters. Using the AER's own data and range of values it identified as the most likely for each of the parameters, the MEU observed that it:-

- "Agree[d] that the AER should take a 'holistic' approach in its WACC built-up and to also reflect the risk reduction approach applying to the electricity network industry, such as the pro-industry rules applying to proposals for capital expenditures (as part of the AEMC's concept of incentive regulation), non-optimisation of the regulatory asset base, automatic indexation of assets, etc.
- Note[d] that the AER has deliberately incorporated conservatism into its draft decision, but does not quantify its magnitude. Our analysis suggests that an additional premium of over 20% has been added to the market premium above the risk free rate, based on the use of factors including:
    - Reduced level of gearing
    - Inflated gamma used in the market risk premium
    - Excluding the "Tech Boom" in isolation of the many other exogenous impacts which act to increase the equity beta
    - Adopting lower credit rating, even though two thirds of network businesses are government-owned and have higher credit ratings than privately-owned businesses, as well as including gas network businesses, which have higher weather dependent risks.

[17] The ECCSA acknowledges that such an assumption is not based on actuality as, for example, a large shareholding of Envestra is held by Chinese company CKI.

- Treatment of tax imputation available, despite the extent of government ownership of the network businesses."

The ECCSA considers that the setting of the WACC parameters cannot be done in isolation and mechanistically developed. All of the elements bear some relation to the others used in the development of the final value for WACC. To isolate one or two elements and accept the others does not recognise the inter-dependence between the elements.

The MEU identified that generally the AER took a conservative view on each parameter and if it had used the mid point setting for each, would have provided an outcome which would have resulted in a lower overall WACC.

If the AER is of the view that there is "persuasive evidence" to change the WACC parameters based on the Envestra application, it should re-open other WACC parameters as these also might have varied as a result of these movements..

On balance the ECCSA does not consider that in such a short time since the WACC review was completed (only 16 months ago) there can be adequate additional information which would make a significant difference to the AER decision in May 2009.

5.2 Depreciation

In its application Envestra has sought to reduce the rates of depreciation for its assets from those used for the past decade by SAIPAR and then ESCoSA. This aspect is partly addressed in sections 2.1.1 and 2.5 above.

However, modelling carried out by ECCSA indicates that by increasing the rates depreciation for assets that are already partly depreciated, and for new assets, this will result in a commercial benefit for Envestra and will increase the amount of revenue that consumers are to provide to Envestra for the provision of the services. Overall in addition to consumers paying more, reducing asset useful life has a number of negative consequences for consumers such as the automatic replacement of assets because they no longer provide a return to the asset owner even though they are still used and useful.

The reason Envestra has sought these reductions in asset lives is because a regulator in another jurisdiction agreed to lesser economic lives. The ECCSA members all have plant and equipment that has been fully depreciated yet they are still used and useful and productive. Using fully depreciated assets in this way actually is beneficial as the return on assets employed increases.

The ECCSA suggests that the AER look more closely at this request from Envestra.

The other issue associated with depreciation that needs to be addressed is the way assets that are replaced are to be managed. When an asset is replaced after it is fully depreciated, there is no residual depreciation still being counted. If an asset is replaced because it is not performing there are two approaches that can be taken:

1. The remaining depreciation can be "written off" and treated as a loss
2. The remaining depreciation can be "written off" and collected as a single amount in the depreciation account.

In a financial sense there is no difference between the two approaches, but in a regulatory sense, there is. If the undepreciated amount is removed from the books as a loss, this is a cost to the business, but if the undepreciated amount is added to the depreciation account, then consumers pay a higher amount for depreciation or "recovery of capital" which is then added to the allowed regulatory revenue.

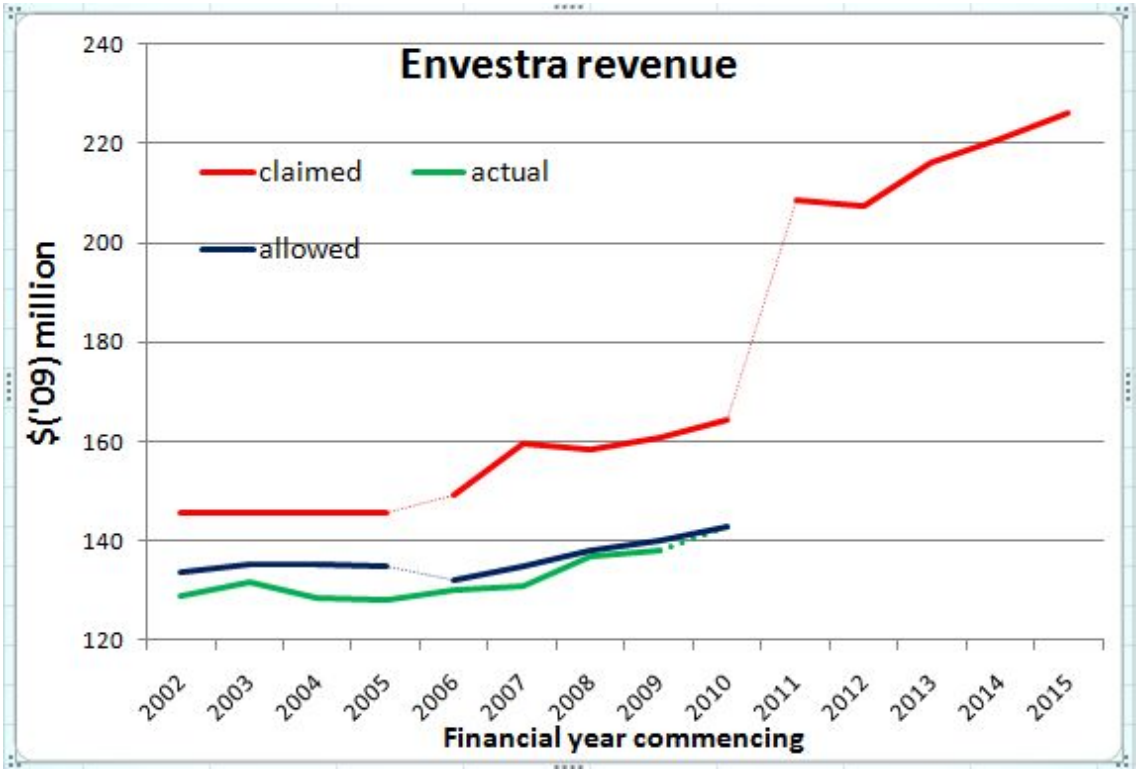
This has particular application in the case of Envestra's mains replacement program. Here an asset is being replaced well before its economic life is completed (eg cast iron mains have an asset life of 85 years) yet they are being replaced even though they still have many years of economic life remaining. The decision to build in cast iron was Envestra's and they undertook to ensure the asset would be useful for the planned asset life. This decision by Envestra has cost consumers considerably in the past in paying for the return on and return of the cost of these assets and the additional opex needed to provide leak repairs.

Because of Envestra's apparently incorrect decision to build in cast iron (that is now leaking) Envestra would appear to be requiring consumers to pay for the balance of the economic life of the cast iron asset as well as pay for its replacement in polythene.

5.3 Revenue allowed and the impact on consumers

The Envestra claims that its revenue is increasing at a very high rate.

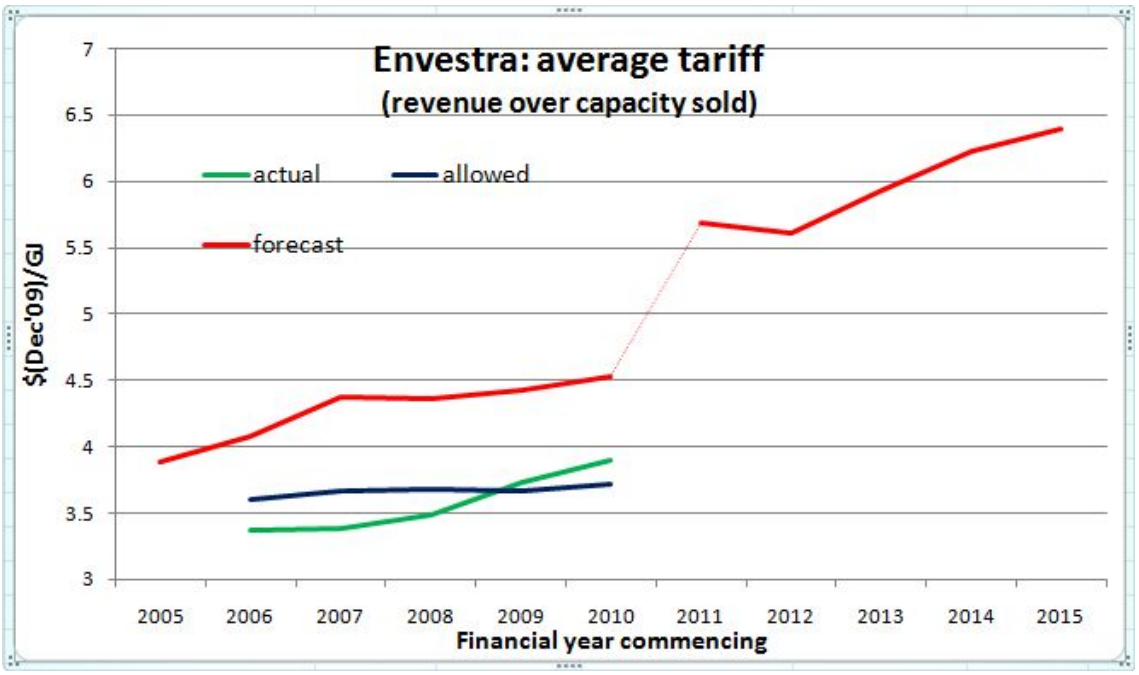
Whilst it is recognised that Envestra past revenue is slightly below the amounts expected by the regulators SAIPA and ESCoSA because of lower than allowed gas sales, Envestra made good this under-run by using less opex and capex than was allowed which allowed Envestra to maintain or even improve on its profitability.



Source: Envestra applications, SAIPAR and ESCoSA decisions

What is most remarkable about the large forecast step in revenue is that this is set against declining gas sales, and connecting residential consumers in the full knowledge that they will use less gas than those that are already connected; the commercial and industrial markets are also not showing significant increases in gas usage and so underpin the massive increase in revenue Envestra is seeking.

This large increase in revenue results in even larger increases in tariffs above those applying in the current period. For the purpose of this analysis ECCSA has assumed that Envestra services sold (in GJ terms) are the actual sales of gas sold to tariff V customers and the annualised MDQ bought by tariff d customers – this is effectively the amount of transport capacity sold by Envestra in GJ.



Source: Envestra applications, ESCoSA decisions, ECCSA calculations

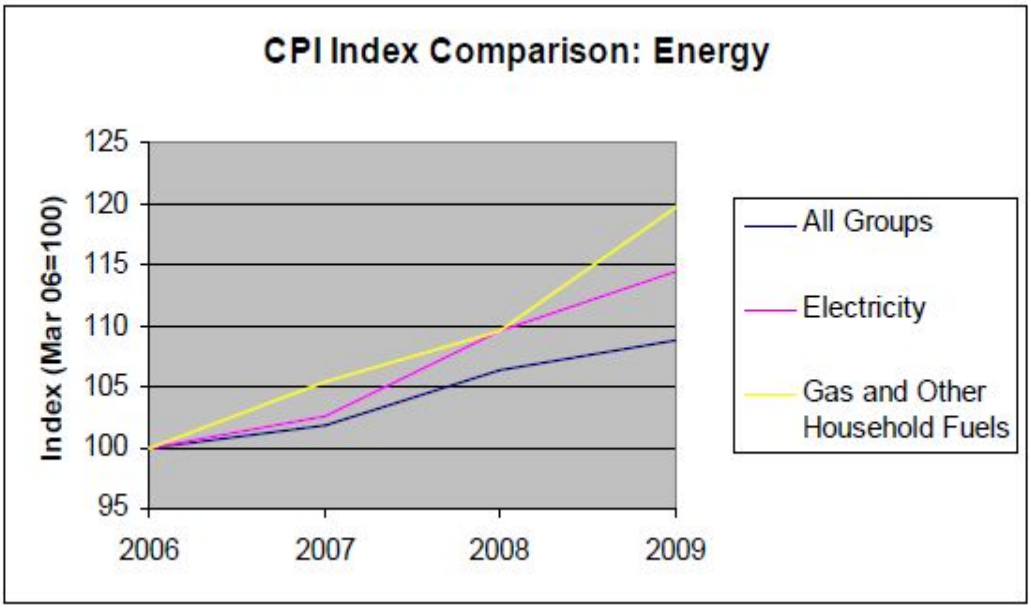
What the chart shows is that until 2009, the Envestra notional tariff was lower than the tariff assumed by ESCoSA, and only with the reduction of gas consumption as a result of the GFC and general reduction in the gas used by manufacturing has the notional tariff exceeded benchmark.

However, the forecast large increase in gas transport tariffs is likely to cause a further reduction in gas usage. The ECCSA is of the view that such tariff rises are not only excessive but also unnecessary. They will result in considerable hardship to many SA electricity consumers, especially those in the lower socio-economic groups.

SACoSS in its report "Cost of Living Biannual Update No. 1" issued in July 2009 notes:

> "Data analysis shows that while CPI for Adelaide has risen by a total of 8.8% since March 2006, CPI for electricity has risen by 14.4%, and for gas and other household fuels by just under 20%. This means that while rises in incomes have in some cases outstripped CPI as a whole, energy costs have risen well beyond both of these. Figure 10 compares the CPI All Groups index to those for 'Electricity' and 'Gas and Other Household Fuels'.

Figure 10: CPI – All Groups and component comparison



This fast rising cost of gas will be further fuelled by the Envestra claim for increase in gas transport tariffs.

The clear implication of this is that the massive increase in Envestra charges will fall most heavily on those households least able to absorb the increased costs. Distribution network charges comprise nearly 1/3rd of the total cost of delivered gas so an increase in network charges of the magnitude sought by Envestra will increase this financial pressure and burden to an even greater extent.

Equally, small and large businesses, already under financial stress due to the global economic downturn will be facing these large charge increases. One solution for these businesses is to close down, and the loss of revenue for the network will be to increase charges on fewer consumers, further increasing costs.

The AER has previously advised that it is required to assess an application from a regulated entity “on its merits” with due care for ensuring the business has sufficient funds to provide the service required. The AER also has a responsibility to ensure the long term viability of the regulated entity and allowing it to increase its charges by too great an amount has the potential to result in a business which is not commercially viable in the long term because its customers cannot afford its services.

Gas supply is an essential service and in a first world country for a regulator to allow the monopoly provider of an essential service to price its product at a level where it either causes financial hardship to a large element of the

service users or to ultimately cause users to cease using the service due to the cost being too high, is clearly not in the purview of a regulator.

The ECCSA has the view that the AER must balance the ability to pay for the service against the aspirations of a monopoly to maximise the cost of the service it provides.

5.3 Pass through events

Envestra has requested that the AER allow the following pass through events.

- Change in impost (eg tax)
- Retailer failure
- Compliance with new obligations
- Force majeure (eg aspects not covered by insurance)
- Costs of CPRS or like

Envestra has requested that the materiality threshold be set at $100,000 per event.

In general ECCSA recognises that each of these is probably a legitimate reason to request a pass though of costs.

As a principle, ECCSA accepts that certain aspects of providing a regulated service might, at times, result in a risk to the NSP that they could not foresee at the time of a regulatory review, and which they cannot recover within the existing allowances. Equally in a competitive industry, pass through events do not automatically result in increased revenue by raising prices, and in fact many such equivalent pass through events have to be absorbed by the business affected. A case in point is the imposition of the costs of CPRS and MRET legislation, where most Australian businesses will have to absorb the costs as many imported competing goods (such as from China, India and south east Asia) will not be subject to these imposts.

Envestra has provided detailed reasons why it's WACC (which includes its profits) should be increased – the predominant theme in these reasons is that the market as a whole has increased its costs to debt and equity and, implicitly, its return on assets employed.

The ECCSA considers that Envestra should be required to absorb the costs of all pass through events until the current capex and opex allowances are exceeded, and then for new pass through events to be considered on their merits, with the potential that the AER might allow the costs to be added to the allowed revenue. This approach has the benefit of imposing constraints on Envestra from seeking pass through events to be allowed into their

revenue rather than encouraging Envestra to seek for every avenue to increase revenue under this provision, and avoids the imposition of a materiality test or bright line approach until the available capex and opex is used. At this point a bright line approach is preferred to ensure the issue being addressed is material.

Envestra proposes that the materiality threshold should be $100,000 – this is just 0.005% of the sought revenue. This amount is absurd in terms of the impact on Envestra revenue and profitability. ECCSA would suggest that the materiality threshold should be no less than 1% of allowed revenue.

5.4 Tariff development

Envestra has sought to increase the residential tariff approach to three bands rather than the current two, and the structure of the other tariffs (C and D) will remain the same. The AER should ensure that the change to increase the number of bands does not increase the revenue Envestra will get.

The AER should also ensure that Envestra applies strict cost reflective approaches to developing the tariffs and their bands.

6. Demand and consumption forecasts

Envestra has used NIEIR forecasts as the basis for its expected growth in consumption of gas, and it must be accepted that actual consumption of gas has fallen over the past few years – certainly regulatory assessments of expected consumption have been demonstrably overstated.

What has not been addressed in detail, is whether much of the under-run in consumption has been the result of structural changes or of specific events such as the extended drought and associated warm period and the global financial crisis.

Envestra and NIEIR do provide some support for there being lesser gas demand in new dwellings, but the argument that gas consumption is being reduced due to global warming is less sustaining. Global warming is not a recent phenomenon – it has been in train (according to the experts) for many decades. Whilst global warming has increased during the 20th century, so has gas demand increased. This means that to attribute reduced gas consumption to general global warming does not correlate.

The ECCSA is aware that gas consumption increased in the winter of 2010 due to a return to the more traditional cooler winters compared to the warmer winters of the late 2000s. However this does not necessarily mean that this warmer period will continue and to assume that it will do so only will increase tariffs. Increasing tariffs will lead to less consumption.

The AER should carry out an independent assessment of the expected gas consumption in the Envestra network to assess whether the NIEIR forecasts are sustainable.

However, the AER should also require its consultant to assess what are apparently competing views included in the Envestra AAI. Envestra clearly states that it sees that gas consumption is falling and will continue to do so over the next regulatory period. Yet, in arguments to support its capex for augmentations, it points out that there is the potential for increasing demand due to new technology being used by consumers, that indicates increased gas demand and so the network need to be augmented.

For instance, on page 97 Envestra notes:

> "As discussed above, a particular issue with the network is that average domestic consumption is declining but peak hourly consumption is increasing, reflecting the increasing use of more efficient, but instantaneous, gas appliances."

This argument has more impact in electricity systems as electricity cannot be stored, but less so in gas systems where gas can be stored as line pack.

Envestra implies that it is the main provider of line pack yet the bulk of gas system line pack is in the transmission system. It is acknowledged that some storage in the Envestra network is required, but the ECCSA queries whether the Envestra observation is fully sustainable.

However, although there might be a move to install instantaneous gas water heating in new dwellings, it is unlikely that dwellings with existing hot water heating will change. This means that where new dwellings are being constructed, the mains might need to be larger to store gas, but this does not impact on large parts of the existing networks.

On page 199 Envestra notes

> "At the same time, there has been a significant increase in the installation of reverse cycle air conditioning (RCA). BIS Shrapnel data168 also shows that, while the proportion of dwellings with an air cooler remained relatively stagnant, the mix of coolers continues to shift towards RCA away from cooling only units. The significant growth in the installation of RCA has led to the observed decline in gas heating for both newly constructed and existing dwellings."

This seems to, in part, run counter to the view that short high gas demand will occur as the loss of long run gas demand such as space heating will reduce overall allowing the short term gas consuming equipment use the network capacity released because of the loss of the high volume long term gas usage.

The ECCSA has noticed that the GFC had a considerable impact on consumption, as has the high $A compared to the $US. However the AER has indicated in other decisions that it considers the $A will fall considerably in the next 12-18 months. This will have a significant but positive impact on manufacturing which NIEIR has expressed a view has caused most of the loss of tariff D consumption. Therefore the AER needs to assess that if it considers the $A will fall, there will be a compensating increase in gas consumption in the tariff D market and this increased demand needs to be incorporated into the gas consumption estimates.

Another feature of the Envestra application that needs close attention is whether the high Envestra tariffs are contributing towards a lower use of gas. Economic theory posits that increasing prices causes less consumption. It could be that Envestra's forecasts of lower gas consumption will be self fulfilling due to the large increases it is seeking in its tariffs.

6.1 Gaming the regulator using forecasts

As the AER sets a price cap for the gas distribution businesses (rather than a revenue cap as used for electricity transmission businesses) the setting of the demand forecasts becomes a critical element of the review. As the key

determinant for setting the price cap is gas consumption (TJ) there is potential for the distribution businesses to manipulate the forecasts in two basic ways.

The first and most obvious way of gaming consumption is by understating the expected increases in consumption entirely. Using this lower figure in the denominator of the calculation, overstates the amount of funds raised on a unit basis.

The second way of gaming using the forecast of consumption is by front end loading the forecast growth over the period. Whilst the average growth for the period may be the same, front end loading allows the businesses to recover cash earlier and therefore provides a greater net present value of the cash flow to the business. The effect of this earlier cash flow allows the business to earn a return on the funds over-recovered. As the AER has forecast a significant fall in the $A (causing a rise in manufacturing), this front loading effect is a distinct possibility.

Careful analysis of the forecasts is required to assess whether the DBs are using one or both of these techniques to secure an improved position to increase their revenues without having to physically do anything.

Envestra has indicated that it expects high volume short term gas consumption due to new types of water heaters. This implies that it expects demand growth despite falling consumption. Overstating demand growth and new customer numbers give support to increases in capex and opex. However, neither the expected fall in consumption growth in demand averages nor new customer numbers support the requested increases in capex.

Notwithstanding this the ECCSA has identified a trend amongst energy transport networks using a price cap approach, to overstate the growth in new connections and in demand (MW) as this adds justification to their claims for capex. Countering this, the networks tend to understate the growth in consumption (TJ) as this amount is used in the denominator of the price cap and tariff calculation. We would therefore counsel the AER and its consultants to closely examine past applications and forecasts to identify any trends in under- or over-forecasting which has led to acceptance of increased capex claims or to gaming tariffs by under estimating forecast usage.

Thus the ECCSA would strongly support the AER in securing independent assessments for forecast growth on which to base the price caps after it determines the appropriate revenue stream for Envestra and to implement a similar measure to minimise the impact of gaming of the forecasts of peak demand and consumption.

6.2 Utilisation of assets

In its application, Envestra points to increased short term consumption (indicating a need for augmentation of the network to accommodate this feature) but an overall fall in consumption. This means that the lower utilisation implies a need for augmentation to manage this need.

This apparent inconsistency warrants closer examination by the AER, as do other claims by Envestra as justification for the large increases in capex. The fact that Envestra is content to use an MDQ basis for demand consumers rather than the MHQ basis used in other jurisdictions and applies no limits on the high demand from tariff V consumers, indicates that Envestra does not consider this to be a major issue.

7. Pricing Methodology

In the recent decision underpinning the NGR pricing principles, the MCE has accepted the principle that distribution pricing is more a matter for users of the energy networks than for the DNSPs, although it is accepted that under a price cap pricing approach, the DBs are incentivised to increase demand and consumption as by doing so they will increase their revenue.

Because of this pricing was of interest to regulators but only to the extent of establishing a mechanism to manage the price movements overall. Under the new Rules, the regulator is required to ensure that the individual prices for each service are set as close to cost reflectivity as is reasonable. These changes now require the AER to ensure that the prices developed by DBs are based on sound economic principles.

7.1 A shared network: the underlying principles

As consumers are the prime providers of funds to support the distribution network, they accept that having a jointly shared facility is by the far the most cost effective approach to the provision of a natural monopoly service. Not only would it be absurd for each user to have a separate supply arrangement for its provision of power, it is economically inefficient from a national viewpoint for this to occur. Having established that a joint facility is the most appropriate approach for infrastructure provision, there is an unstated but real requirement that the costs each user is liable for must be equitably shared and that the prices they pay are representative of the use they make of the shared facility.

Consumers see distribution pricing (as distinct from revenue assessments) as an essential element of the AER regulatory reviews of DBs. Pricing is the allocation of the revenue streams into clearly identifiable elements so that consumers can readily see that the allocation of the permitted revenue is equitably allocated between all consumers representing the share of the cost of the provision of the transmission network. The outcome of this approach provides for all consumers to see that they each pay their equitable share of the jointly used assets. It also provides certainty that decisions made by each user (such as location, time of and frequency of use, and overall demand placed on the network) are adequately recognised by the user, and that no one user is effectively supporting less rational decisions by another user.

Inappropriate pricing of services leads to inefficient outcomes. A user that is convinced that it is paying too much for the service will take a number of actions to reduce its costs, perhaps leading to nationally inefficient outcomes. The user that is not paying its fair share for the service undervalues it and makes inappropriate use of the facility. Over allocation of distribution costs can lead to companies deciding to relocate overseas or

close down, causing remaining users to provide that contribution from the business ceasing its operations. Equally, under allocation of costs results in the proliferation of occasional users who do not recognise that impact of the decisions they are making.

Consumers have observed that DBs have an incentive to maximise prices in elements where they identify as the most likely to exceed the estimates for demand and consumption used in their development, and to minimise prices where elements are likely to be less than forecast. Gaming of the DB pricing is a fine art and can lead to very large rewards. Requiring prices to be cost reflective eliminates much of the potential to game pricing methodologies. It is imperative that the AER devotes considerable effort into minimising the incentive on DBs to game their pricing methodologies.

7.2 The Envestra approach

The package provided by Envestra for its application provides the principles and methodology behind the development of the tariffs it proposes. There are details about how tariffs might be varied and the side constraints that will apply.

The AER needs to ensure that the tariffs Envestra develops are as close as possible to cost reflectivity as possible, and that gaming of the tariffs is minimised.

Envestra provides a tariff schedule that is based on MDQ for tariff D users and on consumption for commercial and residential users. If the issue of short term high volume consumption was a real concern to Envestra it would apply an MHQ (maximum hourly quantity) basis for its demand tariff users and a similar approach for tariff V users in order to allocate the costs of augmentations needed to provide for the high demand gas usage. The fact that Envestra does not do so is indicative there is no real need for providing for gas demand demonstrating this outcome.

Appendix 1

Australian Energy Regulator

Discussion Paper

on

Measuring the Debt Risk Premium

A Response
by
The Major Energy Users Inc
October 2010

Assistance in preparing this submission by the Major Energy Users Inc (MEU) was provided by Headberry Partners P/L and Bob Lim & Co P/L

The content and conclusions reached in this submission are entirely the work of MEU and its consultants

1. Preamble

In its Consultation Paper on Measuring the Debt Risk Premium (DRP) in relation to the Victorian Electricity Distribution Price Review (EDPR), the AER is attempting to establish a better mechanism to calculate an appropriate return on the debt portion of the weighted average cost of capital (WACC), as the current approach is quite flawed due to the absence of supportive data.

Under the building block approach to setting regulatory revenues, the revenue includes an amount derived from the amount of capital provided (the Regulatory Asset Base) multiplied by the weighted average cost of capital (WACC). Previously the AER had relied on estimates from data service providers such as Bloomberg and CBA Spectrum to develop the DRP to be used in the weighted average cost of capital formula which was then applied to capital provided by the regulated network service providers.

In its draft decision for the Victorian EDPR the AER observed (page 505):

> "The DRP (or debt margin) is added to the nominal risk-free rate to calculate the return on debt, which is an input for calculating the WACC. The DRP is the margin above the nominal risk-free rate that a debt holder in a benchmark efficient DNSP is likely to demand as a result of issuing debt to fund the business operations. **It is intended to equate to a commercial cost of debt**. (Emphasis added)
>
> The underlying criteria used by the AER in its SORI[18] in relation to the credit rating level were:
>
> - the need for the rate of return to be forward looking that is commensurate with prevailing conditions in the market for funds and the risk involved in providing regulated distribution services
> - the need for the return on debt to reflect the current cost of borrowings for comparable debt
> - the need for the credit rating level to be based on an efficient DNSP
> - the need to achieve an outcome that is consistent with the NEO
> - the need for persuasive evidence before adopting a credit rating level that differs from the level that has previously been adopted for it"

The MEU agrees with the AER that in setting the debt risk premium (DRP), the outcome should "equate to a commercial cost of debt" reflecting the costs an efficient electricity network provider would incur.

[18] Statement of Regulatory Intent

It must be remembered that under the building block approach, the provision of debt is intended to be a "cost recovery element" (similar to opex) and not a source of profit – profit for the entity is recovered in the equity risk premium.

The allowance the AER should therefore include for DRP should reflect the actual costs an efficient provider would incur. This means that the AER should develop a methodology to reflect this need, ie the DRP should be that which an efficient benchmark provider would incur **in an efficient debt structure**.

2. Debt risk premium (DRP)

The debt risk premium is defined in the National Electricity Rules[19] (NER) as the premium required over the risk free rate (set as Commonwealth 10 year treasury bonds) to acquire debt and the AER, in its WACC decision in May 2009, determined that the debt benchmark would reflect a BBB+ credit rating.

The definition of DRP in the Rules is somewhat circular. The Rules define the risk free rate, and then define the DRP as the difference between the risk free rate and the:

> "...the observed annualised Australian benchmark corporate bond rate for corporate bonds which have a maturity equal to that used to derive the nominal risk free rate."

Effectively the NER considers the return on debt (k_d) is to be the:

> "...the observed annualised Australian benchmark corporate bond rate for corporate bonds which have a maturity equal to [10 year Commonwealth Bonds]."

2.1 DRP and the NEO

The National Electricity Objective requires the "efficient investment and efficient operation of" network services as these will provide, in the long term, the "least cost" to consumers[20]. It is not efficient to pay a regulated entity a higher return than is needed.

Efficiency implies, in relation to the DRP, that the AER must determine a mix of debt (a debt structure) that is efficient, and not be hidebound to assessing DRP based on using just one type of debt structure. As the NER does not define what corporate bonds are to be, then the AER must assess what the DRP should be in terms of the efficient mix of debt so that its measure of DRP is based on an efficient debt structure.

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[19] See appendix 1.1 which includes the relevant excerpts from the NER
[20] See appendix 1.2 – second reading speech for NEL

2.2 Efficient debt

The MEU considers that an efficient debt structure is a mix of bank borrowings and debt provided by the open market. However in May 2010, in its final decision on ETSA, the AER stated (clause 11.4.3.4) that

> "The AER notes that the DRP is set with regard to the Australian benchmark BBB+ corporate bond rate. The experience of two particular businesses' (SP AusNet and ETSA Utilities) recent capital raisings in isolation are not directly relevant but experience of individual businesses will be reflected in the fair value curve that is used to establish the benchmark DRP.
>
> The AER determines the benchmark DRP by averaging the yield on a 10–year BBB+ corporate bond over the averaging period of 18 business days between 29 March and 23 April 2010 (to match the period used for estimating the risk–free rate)."

What the AER is effectively stating is that actual observations of debt raised and debt structures used by exactly equivalent entities are not relevant, but might impact on the "fair value curve" used to calculate the DRP based on a range of other non-related entities seeking debt from the open market. Further the AER will only consider that debt acquired in the open market is applicable to setting DRP.

2.3 Debt is not just "bonds"

The NEO requires the development of the weighted average cost of capital (WACC) along with many other elements, to reflect an efficient rate of return. To achieve this, the NER Clause 6.5.2(b) considers that debt structure must equate that used by:

> "... investors in a commercial enterprise with a similar nature and degree of non-diversifiable risk as that faced by the *distribution* business of the provider"

Clause 6.5.4 (e)(2) goes even further in requiring the AER to set the return on debt (that is the risk free rate plus the DRP) which:

> ".... reflect[s] the current cost of borrowings for comparable debt"

This clearly requires the AER to not only just consider the way the open market might price debt but to include other forms of debt an efficient provider would use in addition to debt sourced from the open market.

An efficient provider would acquire its debt on a portfolio basis. A portfolio would include debt from a mix of sources – from a number of banks, from the open market (often referred to as bonds), and internal sources (such as

funds held against future liabilities including employee provisions, trade creditors, etc) – each type being addressed with a variety of term lengths and maturity dates. It would be inefficient (and unwise) for a business to have all debt maturing at the same time.

The AER approach of assuming that all debt will have a cost the same as that obtainable from the open market does not reflect efficient debt provision. From the observations of Credit Suisse noted in section 4 below, it would appear that the AER approach of basing the DRP on just the open market for debt, does not deliver the least cost to consumers, as would be expected from an efficient provider.

The ACCC in its final decision on ElectraNet revenue reset in 2003 confirms this view (page 25) when it stated:

> "The Commission understands that the interest margin associated with bank issued debt is generally lower than capital market interest margins. However, information on the debt margin associated with bank issued debt is generally not widely available. The Commission therefore considers that it is reasonable to use capital market data as the benchmark, which is biased in favour of the TNSP."

Under the National Electricity Code, the ACCC was permitted to include such explicit conservatism, but under the NER, the AER is required to apply a level for the WACC that is "economically efficient" and delivers "least cost" over the long term to consumers. This means that such explicit conservatism is not permitted.

3. Corporate bond rate

The NER does not define what corporate bonds are, but the AER has assumed that these are formal debt raisings issued on the open market by corporate entities, which are often issued under the title of "bonds".

A review of the definitions of "corporate" and "bonds" reveals that (Encarta dictionary[21]):

> "A Bond [finance] is a certificate issued by a government or company promising to pay back borrowed money at a fixed rate of interest on a specified date"

and

> "A Corporate Bond is a bond issued by a company rather than by a national or local government"

[21] Similar definitions are in Collins English Dictionary and Oxford Concise Dictionary

This definition of a corporate bond would reflect that any debt raised by a corporate entity if it entailed an agreement to pay back the borrowed money at a fixed rate of interest at a specified time would be a bond. It does not require these bonds to be tradeable, although the AER seems to have restricted itself to assessing the DRP based only on tradeable corporate bonds existing on the open market.

The NER does define that only Australian corporate bonds may be used in developing the DRP. This restricts the AER from following what is good debt practice – that an entity would have a portfolio of debt instruments, including debt provided by overseas entities. This restraint results in the AER having a much reduced or "thinner" market from which to develop its benchmark DRP. However such restraint does not prevent the AER from assessing DRP based on other debt instruments, providing that they are from an Australian source.

4. Previous AER and state regulatory determinations

In its submission to the AER in relation to the recent ETSA Utilities regulatory review, the MEU affiliate ECCSA observed that the DRP allowed by the AER in relation to its draft decision was excessive in light of the actual cost of debt ETSA was incurring. The ECCSA provided evidence of a Credit Suisse report[22] where CS observed, based on the AER assessment of DRP of [sic] 427 bp[23]:

> "ETSA locked in 5, 7 and 10 year debt at an average margin of ~295bps in July -09. On that basis ETSA will be making a ~130bps benefit than the regulated allowance reflecting its higher credit rating (A-) ... against the regulated allowance (BBB+, 10year)."

This observation provides commentary on a number of salient issues, viz

1. The AER calculation would have provided ETSA with an unearned benefit of 130 bp on the debt portion of the rate of return allowed. To put this into context, the AER would have allowed a WACC of nearly 80 bp higher than ETSA was incurring for its WACC, or nearly an additional $136m more in revenue over the 5 year regulatory period than ETSA would have actually incurred. Such a payment would not be efficient as it would not impact on the long term benefits to consumers.
2. The observation supported the ECCSA contention that an efficient provider would have a portfolio of debt instruments of varying durations

[22] Credit Suisse, Company Update1 December 2009, "Draft ETSA decision positive for SKI", Page 3. SKI is the ASX code for Spark Infrastructure, part owner with CKI of ETSA, Powercor and Citipower
[23] In fact the CS report is in error as the AER had set a value of 429 bp

3. That a privately owned electricity network provider (as distinct from the government owned electricity network providers[24]) have a higher credit rating than BBB+ assumed by the AER in its WACC review.

4.1 Historical allowances for DRP

Prior to 2008, regulatory decisions by the national and state regulators had set a DRP in the range 90 to 150 basis points, with a median between 120-130 bp with a lowest value of 90 bp used in the TG final decision in 2005[25]. Since the beginning of 2008, DRPs have been calculated by the AER to be as high as 429 bp (ETSA DD 2010) and yet as recently as in the AER Final Decision on the WACC review in May 2009, the implied DRP is 160-180 bp.

Whilst the ACCC and state regulators also used CBASpectrum and Bloomberg data to develop the DRP, at that time the Australian bond market was more liquid and development of a DRP was more straight forward, although regulators did note that they had to manipulate the data in order to generate 10 year BBB+ bond data. However there has been significant consistency in the generated values for the DRP over the decade from the first setting of DRP (at the "Great WACC Debate of '98" conducted by the ACCC and Victorian ORG) until 2008.

While it is accepted that the global financial crisis did have the impact of increasing the cost of debt, it must also be accepted that this impact will be relatively short lived, before the market reverts to more historical trends. To set the DRP for a 5 year period (or longer) based on effectively single point data[26], obviates the reality that over the period of the five year reset, the DRP will trend to its longer term values – this trend is already being seen in the falling values of DRP calculated by the AER.

Yet despite the observed downward trend, in the ETSA Utilities Final Decision in May 2010, the AER determined a DRP of 298bp yet one month later, in its draft decision for the Victorian EDPR, the AER set the DRP at 325 bp. This highlights that the data used by the AER is demonstrating extreme volatility and this can be attributable to the AER decision to use effectively single point data market to generate a DRP for the next five years.

That such a variation could occur in just on a month for the DPR to apply for the following 5 years is absurd and shows that the methodology is quite

[24] As the MEU pointed out to the AER it is response to the Issues Paper to the WACC review in 2008, the government owned electricity network providers have credit ratings of AA and AA+

[25] When it was the regulator, the ACCC used to assess financial indicators to identify if the WACC (amongst other elements) was set at an appropriate level

[26] The AER advised that for the ETSA Final Decision, it had used an averaging period of just 18 days, which in terms of the 5 year period the reset is to apply is just 1% of the time – effectively single point data

flawed. A well designed approach would demonstrate greater consistency in its outcomes.

5. Inaccuracies introduced by the AER approach

In addition to the fact that efficient acquisition of debt comes from a portfolio approach (types of debt, and varying maturities and durations), the AER approach fails in two other aspects

5.1 Scope of debt instruments

The single major cause of the inaccuracy of calculating the DRP is that the bulk of debt used in Australia by electricity network providers (and indeed most other businesses) is bank debt and not debt issued on the open market.

A review of the debt structure of the private electricity network businesses shows that bank debt is the major source of debt, with overseas bonds adding to it. The government owned electricity network businesses use bank debt and government bonds sourced from government owned investment vehicles such as Queensland Treasury Corporation. Few, if any, electricity network businesses have sourced any of their debt from the open market. This clearly implies that an efficient electricity network provider uses other sources of debt.

For the AER to set the DRP purely on the assumption that all debt will be sourced from bonds issued on the open market does not reflect what an efficient network provider would do, and introduces significant but unnecessary inaccuracies and conservatism.

5.2 Assessing the "corporate bond" market

Clause 6.5.2(e) requires the AER to use:

> "...observed annualised Australian benchmark corporate bond rate for corporate bonds which have a maturity equal to that used to derive the nominal risk free rate and a credit rating from a recognised credit rating agency."

The AER has admitted that it cannot comply with this clause as there is no "observed" bonds that meet these criteria either in relation to quantity, duration or rating. To achieve the outcome the AER has to **calculate** a bond yield (as distinct from observing a number of appropriate bonds) which complies with the requirement. This means the rule is unworkable and should therefore be changed.

The AER identifies in its decisions that there is a thinly traded market in Australia for debt issued on the open market. For example in its final decision on ETSA and again its draft decision on the Victorian EDPR, the AER has identified that the forecasts for BBB+ rated entities is so thin as to be non-existent, and it has to use other debt issued against other credit ratings, and then interpolate the values to reach BBB+ credit rating. Even then, the market is still thin, and the AER has used bonds raised businesses dissimilar to electricity network businesses with a different degree of non-diversifiable risk such as:

- Coles Myer (a consumer retailing business)
- Snowy Hydro (an electricity generator/retailer)
- GPT (a listed property trust)
- Wesfarmers (a coal miner, consumer products retailer)
- Santos (a gas producer)
- BBI (a diversified infrastructure owner of ports, gas transport, ship loading, etc)

Of these, none had sought bonds over more than a 6 year period.

What is salient is that no electricity network providers are listed as raising debt in this way, yet despite the NER requiring the WACC to be based on:

> "...a commercial enterprise with a similar nature and degree of non-diversifiable risk as that faced by the *distribution* business of the provider"

None of the entities used to provide the benchmark bond meet this very basic requirement. If there is no enterprise of a similar nature and risk to an electricity network provider, then the AER must find another approach to setting the DRP.

The trade in, and debt raisings from, corporate bonds in Australia has been greatly overshadowed by more traditional fund raisings by Australian businesses such as bank debt and equity raisings. This has caused the thin market in the "corporate bond" financial instruments.

This means that the AER has to find alternative ways of developing an efficient DRP for use in its WACC development.

5.3 Duration of the "open market" debt provision

None of the data from the open market has a debt maturity of more than 6 years (although the AER has found one – APT which issued 10 year bonds but at a different credit rating – yet the NER requires the AER to

set a debt duration matching the risk free rate duration of 10 year Commonwealth bonds.

To meet this requirement the AER has extrapolated the shorter period debt to match the 10 year debt duration required. This introduces unnecessary risk.

Because of this introduced risk of extrapolation, the NER provides guidance to minimise risk where actual data is not available. For instance, when developing the risk free rate, the NER states that interpolation must be used. For example NER 6.5.2(d) requires that if there is no actual data available when setting the risk free rate:

> "...the *AER* must ... determine the nominal risk free rate for the *regulatory control period* by interpolating on a straight line basis from the two Commonwealth Government bonds closest to the 10 year term and which also straddle the 10 year expiry date."

This implies that interpolation is acceptable, but extrapolation is seen as less acceptable due to the risks implicit in its application.

5.4 Volatility of outcomes

Because of the approach used by the AER, this has resulted in a significant amount of volatility and this volatility must have a negative impact on both consumers and the network owners.

The regulatory environment should provide participants with a high level of certainty and consistency over time. If it does not, then there is a negative impact on investment, leading to greater risks for consumers. As noted in section 4.4 above, up until 2008, regulators have been setting the DRP in the range of 90 bp to 150 bp, with a median value well below 150 bp. The global financial crisis has caused the DRP to rise as lending was constrained, but in recent times, borrowing has become much easier. Equally the global financial crisis has resulted in very low (even negative) DRP values in most first world countries, as interest rates have been slashed in an endeavour to encourage investment.

Because of a very illiquid market and thin trading in Australia for bonds, the volatility of DRP calculated from tradeable corporate bonds has shown excessive volatility, especially in the wake of the global financial crisis.

The AER must develop an approach which reduces the volatility in forecasts of future movements. One of the main aspects of the AER approach is that it uses a short averaging period of time to set the forward estimates of the various variables used by it. To all intents, this

means that the data is based on almost a single point in time. This introduces significant inaccuracy. For example the AER performance in forecasting the forward exchange rate has been demonstrably wrong and, with the benefit of hindsight, show gross errors were made in the forecasts[27]. Errors such as these add significantly to the risk participants have to manage.

The AER, in attempting to be "accurate" in its forecasts, has introduced major concerns for all. The problem with using data from effectively a single point in time is that it eliminates all of the moderating effects that comes from the "smoothing" effects of time.

In developing the market risk premium (MRP) the AER has assessed MRP over the long term – many decades in fact. If the AER attempted to use a forward looking MRP based on such a short averaging duration that it is effectively a single point in time, then the MRP would swing violently from large positives to large negatives over very short periods, making a mockery of the WACC developed using these swings. The AER has recognised that investor sentiment is fickle and causes large short term movements in MRP. To overcome this variability, the AER has sensibly used time to smooth the MRP, so that the value used does not vary significantly decade on decade.

The same issues (such as investor sentiment in valuing corporate bonds) affect the DRP and cause significant short term movements such as occurred during the global financial crisis. The same logic used to smooth the MRP should apply to the setting of the DRP

6. Summary

The AER approach to setting DRP does not comply with the NER or the NEO. It does not reflect efficient DRP levels as it excludes the (lower cost) source of debt most commonly used by electricity network businesses. As the approach used by the AER is acknowledged as being conservative (and therefore a higher cost than needed) it does not deliver the least cost to consumers. Therefore the AER must develop a methodology for setting DRP which reflects the major sources of debt used by an efficient notional network provider.

[27] See appendix 2 exhibiting the errors in the forecasts of the $US/$A exchange rate errors used in assessing future materials costs. The purpose of this example, is not to deride the AER ability to forecast, but to highlight that in attempting to be more accurate and accommodate future changes, the outcome is exactly the opposite – that greater error is introduced by attempting to be more accurate. Because of this the MEU considers that greater certainty and consistency is achieved by using longer term averages, rather than attempting to extrapolate from observations set in a short time frame.

In all the recent AER assessments of DRP consistency and certainty over the long term have been ignored. Regulation should lead to consistent and certain outcomes and not provide wild fluctuations in values. In this regard large fluctuations increase risk and increased risk increases costs. Implicitly, fluctuations increase costs to consumers, thereby not delivering the least cost as is expected by economic efficiency.

The risk free rate is set on a 10 year term and the DRP is intended to mirror the term of the risk free rate. However achievement of this is not possible because there is:

- No extrinsic market data that provides a clear value for DRP that can be derived from using "observable" Australian 10 year corporate bonds. This means that there is a need to extrapolate from shorter term bonds. The NER implies that where data is not explicitly provided it should only be interpolated and not extrapolated.
- Almost no market for corporate bonds for businesses of similar "...nature and degree of non-diversifiable risk ..." to electricity network businesses.
- No strong and liquid market for any corporate bonds in Australia. If there is insufficient liquidity in a market, this introduces risk and risk increases costs to consumers.

This makes the requirement in the Rules unworkable as the wording of the Rules (especially clause 6.5.4(e) as interpreted by the AER contradicts the achievement of the NEO.

7. Conclusions

The AER has up to now has based its approach to setting DRP on the assumption that the DRP is the difference between the yield of Commonwealth treasury 10 year bonds and the yield of BBB+ Australian corporate bonds of 10 year duration. To obtain the yield of corporate bonds it has used published data from CBASpectrum and Bloomberg and extrapolated the data for duration and interpolated the data to get the correct credit rating.

In fact this approach does not comply with the Objective and the Rules as it:

- Does not incorporate the DRP that applies to the bulk of the debt (bank debt) acquired by electricity network businesses
- Has only a small population of bonds to work with reducing the diversifying benefit of a large population, thereby increasing risk (and therefore cost)
- Does not comply with the requirement of comprised of businesses with similarity to electricity network businesses, because:
    - Those bonds that are listed, few reflect the similar nature and risk to electricity network businesses,

- Those very few bonds that might be applicable are mostly not as long as 10 years causing the need to extrapolate, increasing risk
- Those even fewer bonds that might be applicable in terms of similarity and duration do not have the same credit rating as is stipulated, creating the need to interpolate from those of a different credit rating.

Despite the AER misgivings about using actual experience of the electricity network businesses, it appears to the MEU that by not doing so, the AER is not recognising the requirement of the Objective to reflect economic efficiency in setting the WACC. Economic efficiency requires that the allowance the AER is to include for DRP should reflect the actual costs an efficient provider would incur.

This means that the AER should develop a methodology to reflect this need, ie the DRP should be that which an efficient benchmark provider would incur for its debt structure and not rely data which is inappropriate, insufficient and not reflective of actuality.

To the structural difficulties identified by attempting to follow the rules, are added the fact that electricity network owners do not source the bulk of their debt from the open market, but obtain it from lower cost sources. Persisting with the current approach means that consumers will be required to pay for an inefficient and not “least cost” outcome. This is contrary to the NEO which requires efficient costs only to be charged to consumers and that the outcome should be the least cost.

Overall, the Rules are inconsistent with the NEO and, further, the AER has identified that the Rules cannot be explicitly complied with. This means that the AER should seek a rule change to make their task one which will deliver a DRP which reflects the actuality of the cost of debt as it applies to the regulated networks.

Arising from this, the MEU would recommend a number of specific aspects the AER should consider in seeking a rule change:

1. The fact that all the electricity network owners raise debt from banks and very little from public raisings in the open markets
2. The fact that some of the privately owned electricity network owners have raised debt on the overseas bond markets (and swapped this back into $A)
3. The fact that the large proportion of all electricity networks are government owned and would have a lower cost of debt than would be calculated from corporate bond markets

Whilst the AER has focused its review on the need for an outcome for the Victorian EDPR, there is the long term issue of trying to use a small and illiquid

bond market to generate an accurate DRP which needs to be addressed. It is simply inadequate for the AER to try and reach a reasonable reflective and efficient DRP from the Australian tradeable corporate bond market.

8. Specific questions for stakeholders

1. Given the paucity of available data, the fact that CBASpectrum recently ceased publication of its fair yield curve, the characteristics of the recently issued APT bond and the Tribunal's recent decision on the DRP issue, the AER intends to examine the yields from the recently issued APT bond and those derived from Bloomberg in terms of their appropriateness in estimating the DRP for the Victorian DNSPs' distribution determinations. Please provide comments on the AER's intended process.

The MEU considers that the AER needs to develop a new approach to setting DRP based on what an efficient network provider would do, rather than relying on data that is inappropriate, insufficient and not reflective of what an efficient provider would do.

The MEU considers an efficient provider would source the bulk of its debt from bank loans as this is the most economically efficient approach to sourcing debt.

2. Given the uncertainty in determining whether yields from Bloomberg or from the APT bond are more appropriate in setting the DRP, the AER intends to take an average of the two. Please provide comments on the AER's intended methodology.

The MEU notes that Bloomberg data is of the wrong duration and of the wrong credit rating, and needs manipulation to attempt to make it fit the need.

Using the APT bonds is not appropriate, as the credit rating level is incorrect, and much of APT revenue is from non-regulated sources, whereas the electricity networks are all regulated.. This means that APT is not a business of similar "...nature and degree of non-diversifiable risk ..." to electricity network businesses.

To take an average of these two sources to generate a DRP is not appropriate.

A more appropriate outcome is to use an approach which reflects economic efficiency, such as sourcing debt from banks, as the electricity network providers do for most of their debt.

3. Do stakeholders agree with the AER's conclusions regarding information from other sources?

The MEU does not agree with the AER conclusions. The MEU considers that the AER approach does not deliver an economically efficient setting for DRP as an efficient network provider would source the bulk of its debt from bank loans. Additionally an efficient provider would source some debt from internal sources and might obtain some debt as Australian and overseas bonds, although (because of the paucity of similar corporate bonds) this is not a preferred option by most electricity network businesses.

As most of the networks are government owned, much of the debt used by electricity networks is effectively sourced from bank debt and government bonds. The DRP on these government bonds is readily calculable for both duration and credit rating.

4. Are there other sources of relevant information the AER has not considered above?

The MEU considers that the AER should source information of DRP from banks which are the prime lenders to electricity network businesses, and from the financial statements of electricity network providers.

Financial statements from the businesses will provide quite accurate indications of what the cost of debt is to businesses with a similar nature and non-diversifiable risk. If the AER uses the outcomes from analysing the financial statements of all the electricity network businesses, it will have a much greater population of data to work with than just the proposed two sources (Bloomberg and APT).

The approach of using data from multiple network sources has some similarities with the Total Factor Productivity (TFP) approach currently under review by the AEMC.

5. Do stakeholders consider it necessary to use an alternative method for estimating the DRP during days in averaging periods where APT data are not available?

The MEU considers that the approach of using a short period in time to set DRP creates the potential for excessive volatility. Just as the AER considers that a long term average for MRP is a more appropriate approach than having the MRP assessed over short periods, the MEU considers the same long term averaging for setting DRP provides a lower risk outcome for all, with consistency and certainty being key drivers for setting appropriate and cost reflective values.

If the MEU approach is used, then an answer to question 5 is not needed.

6. Do stakeholders consider there is justification for making adjustments to the APT bond data to generate information during days where bond data are not independently available?

See answer to question 5.

Appendix 2

4 February 2010

Envestra to issue US$150M, 17-year bonds

Envestra Limited today announced that it has reached agreement with "blue chip" US bond investors for a US$150 million, 17-year debt facility. The US private placement ("USPP") bonds represent close to 10% of Envestra's total debt portfolio.

This is a significant commitment by these new investors and is believed to be the longest term-debt package put in place by an Australian listed company since the global financial crisis commenced in mid-2007.

The USPP recognises the strength of the Envestra business, including the long-term nature of the assets and the stable cash flows it generates.

The loan can be drawn-down at anytime through to 1 July 2010 and matures in July 2027. The funds are to be used to refinance existing shorter term bank facilities.

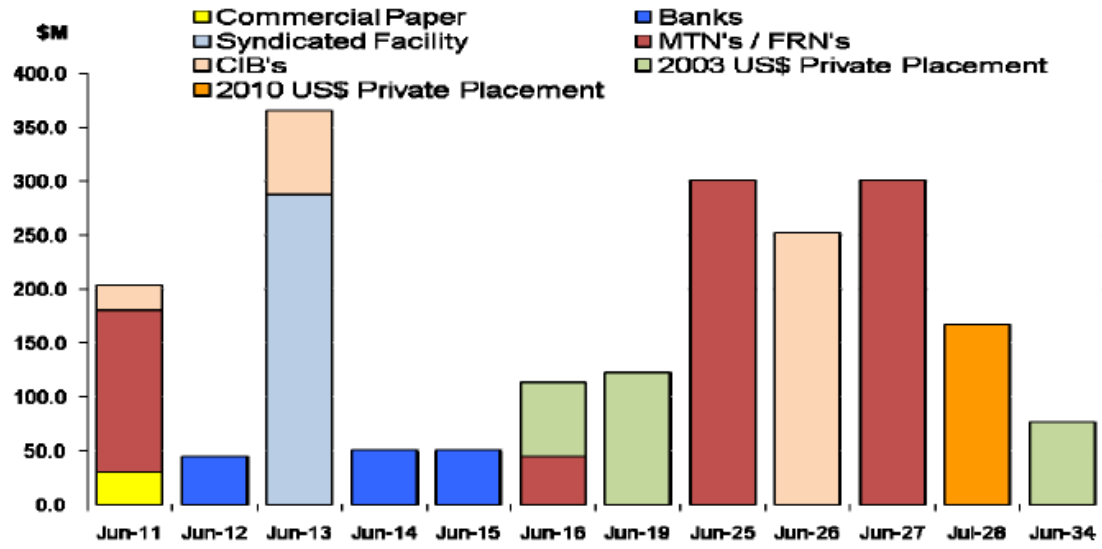
Pricing of the facility compares favourably to that recently available for 3-year bank funding in the Australian market.

The US dollar debt will be swapped to Australian currency so that no foreign currency risk arises during the term of the bonds.

Following draw-down of the new facility, the average duration of the Company's debt will increase to 10 years, one of the longest in Australia. The expected debt maturity profile for the Envestra Group, as at 1 July 2010, is set out overleaf.

Envestra's next term debt refinancing occurs in May 2011, when $180 million of bonds mature. Unused bank facilities, including those freed-up from the current US private placement, will be used to meet this re-financing obligation.

Envestra has no need to seek further debt facilities until November 2011.



For further information:
Greg Meredith: Group Manager Treasury and Planning
Des Petherick: Company Secretary
Telephone: 08 8227 1500