**Attachment 6-9 Draft Decision Response: Operating Expenditure**

*This attachment sets out Envestra’s response to those aspects of the Draft Decision relating to operating expenditure, which Envestra does not accept.*

*Note:*

* *Unless noted otherwise, dollar amounts are in $2009/10, consistent with Envestra’s original submission.*
* *Confidential items are marked as “[c-i-c]”*
1. **Introduction**

In the Draft Decision, the AER has made significant reductions to Envestra’s proposed operating expenditure (opex). This has resulted in a real reduction in opex over the next regulatory period of 10% relative to the current period. The AER Draft Decision, if implemented, would result in 2015/16 opex being below 2001/02 levels, despite increases in customer numbers, network size and labour and materials costs over this 15 year period.

Envestra believes that the magnitude of this cut is unreasonable and would result in forecast opex that is inconsistent with rules 74 and 91 of the National Gas Rules (NGR). The AER decision would require substantial staff reductions if it were implemented and would, in Envestra’s submission, jeopardise future service standards, network safety and reliability. The key issues driving this cut in opex are in relation to the:

* *outsourcing arrangement;*
* *labour and material cost escalation;*
* *cost of gas purchased for unaccounted for gas (UAFG); and*
* *network marketing.*

These issues, aside from the decision by the AER in relation to Envestra’s outsourcing arrangement, are addressed in this attachment. Envestra’s outsourcing arrangement is discussed in Attachment 5-11 to the revised Access Arrangement Information (AAI).

In addition to the above, Envestra believes that the AER decisions should be amended in relation to a number of other issues (which are also addressed in this document), which include:

* *the level of UAFG;*
* *the required increase in insurance costs (Business Case S62);*
* *survey of domestic regulators (Business Case S03);*
* *additional field crews (Business Case S52).*
* *the AER’s proposed amendments to liability clauses of the Access Arrangement terms (Annexure G to the Access Arrangement) which, if implemented, would require Envestra to purchase business interruption insurance; and*
* *the decision by the AER not to update base year opex to take into account the actual opex contained in Envestra’s regulatory accounting statements for 2009/10.*

Envestra has also identified an error in the AER’s table of amendments in relation to meter change notifications.

In its Draft Decision, the AER has relied substantially on a report provided by Wilson Cook and Co called “Review of Expenditure of Queensland & South Australian Gas Distributors: Envestra Ltd (Queensland)” dated December 2010. This report is referred to in this attachment as the “WC Report”.

# Labour and Material Cost Escalators

## AER Draft Decision

The AER rejected Envestra’s forecast input cost escalators, which forecasts were prepared by BIS Shrapnel (“BIS”), for a number of reasons:

1. In relation to the index measure used to forecast labour price growth, Envestra proposed escalators based on the Average Weekly Ordinary Time Earnings (AWOTE) measure, whereas the AER considered that the Labour Price Index (LPI) is the better measure of changes in labour price;
2. The AER considered that BIS did not explicitly adjust the labour cost measure for the effect of productivity on each unit of output (i.e. for changes in labour productivity); and
3. The AER considered that there was a lack of detail and substantiation in the BIS report in relation to the proposed “network materials” escalator, and consequently concluded that there should be no real escalator for network materials.

## Envestra Response

Envestra does not agree with the AER’s decision to use the LPI rather than AWOTE. Envestra submits that AWOTE is the measure that complies with the requirements of the National Gas Law and the National Gas Rules.

The purpose of determining a cost escalator is to identify that escalator which results in cost benchmarks that provide a service provider with a reasonable opportunity to recover at least the efficient costs of providing reference services (National Gas Law, section 24(2)). The escalator selected must therefore be that which provides the best estimate arrived at on a reasonable basis of a service provider’s efficient costs.

The LPI does not satisfy the above criteria. This is primarily because the LPI does not incorporate changes in the skill composition of the workforce whereas the AWOTE measure does. Compositional changes, which are ongoing in labour markets, capture the effect of there being a higher proportion of higher skilled workers, which in turn is an important driver of changes in labour cost to a firm.

It is for this reason that the use of AWOTE is not a position advocated only by service providers. Both regulators and their consultants have also used AWOTE in past regulatory decisions. For example, in the 2008-2012 Gas Access Arrangement Review (GAAR), Pacific Economics Group, who were a consultant to the Essential Services Commission of Victoria (ESCV), stated:

“*There are two main options for Australia’s electric, gas and water (EGW) sector: the AWOTE recommended by BIS Shrapnel and Meyrick, and the Labour Price Index (LPI). As a conceptual matter, PEG agrees with Meyrick and BIS Shrapnel that the AWOTE is preferred to the LPI. The main reason is, as Meyrick has written, that the AWOTE is “more likely to accurately capture compositional changes in the workforce.*

*This means it will capture the effect of upskilling as employers rely less on unskilled labour and as capital is progressively substituted for labour[[1]](#footnote-1).*”

Likewise, in its 2006 review of Envestra’s South Australian Access Arrangement, the Essential Services Commission of South Australia (ESCOSA) accepted that Envestra’s forecast real wage escalation, which was based on AWOTE, was “compliant with the requirements of the Code”.[[2]](#footnote-2) The requirements of the Code relevant to considering this matter are consistent with the relevant requirements of the NGR.

In short Envestra notes that the use of AWOTE has been advocated or approved by ESCOSA, Pacific Economics Group, Economic Insights, Professor Borland, BIS Shrapnel, Meyrick and Associates and KPMG Econtech[[3]](#footnote-3). The reason for the strong expert support for AWOTE is that it provides a more accurate estimate of the forecast changes in labour costs (rather than price) of a business. The reasons for this are explained below.

Envestra’s submission is supported by expert reports by Professor Jeff Borland, “Labour Cost Escalation Report for Envestra Limited”, Economic Insights, “Review of AER Draft Decisions on Envestra Queensland’s and Envestra South Australia’s Input Price Escalators” (Economic Insights 2011a) and BIS Shrapnel, “Real Cost Escalation Forecasts to 2015/16 – Queensland and South Australia” (BIS Shrapnel 2011), which reports form part of, and should be reviewed in conjunction with, this AAI.

## The Relative Merits of AWOTE and LPI

Envestra refers to the report prepared by Professor Jeff Borland of Melbourne University, which accompanies this submission. Professor Borland is an expert on the operation of labour markets in Australia.

Professor Borland makes the following points in his report:

1. unlike the AWOTE, the LPI does not capture changes in the cost of labour to a firm stemming from increases in workforce productivity that are driven by changes in the skill composition of the workforce. For example, a higher share of skilled workers and a lower share of low skilled workers will increase AWOTE but not the LPI.[[4]](#footnote-4) Moreover, the LPI measure will only partially capture changes in the cost of labour driven by the increased productivity of individual workers;
2. the AWOTE measure will therefore include all the components of productivity improvements that drive real wage growth while the LPI will not. To use the LPI as an earnings measure and then adjust for changes to labour productivity is to double-adjust for productivity changes (as the full cost of achieving gains in labour productivity are not reflected in the cost of labour used). The methodology employed by Access Economics, and accepted by the AER (of adjusting the LPI for changes in labour productivity) results in a downwardly biased measure of labour costs as it effectively adjusts for labour productivity twice;
3. changes in the skill composition of the workforce are ongoing in the economy (that is, labour markets are not static);
4. the argument by Access Economics that LPI best reflects price growth over time is not correct. The fundamental drivers of wages growth are labour productivity changes and CPI. Over the period 1997/98 to 2009/10 the sum of CPI and labour productivity (4.45%) is best approximated by AWOTE (4.55%) and not LPI (3.6%), because LPI understates the true costs of labour;
5. any difference in volatility between AWOTE and LPI is not an issue for forecasting. As long as there are multiple data points (which there are) those points can be used to forecast the trend of wages growth over time.

Professor Borland concludes that:

“*The AWOTE series is, in my opinion, on both theoretical and practical grounds, the best series according to the test to be used as the basis for forecasts of future labour costs. First, in deriving a productivity adjusted measure of labour costs, it is necessary for the earnings measure used to incorporate effects of changes to labour productivity – both due to composition effects and increases in the productivity of individual workers; otherwise the measure of changes to labour costs will under-estimate true changes in labour costs. It is the AWOTE series that best reflects the effects of changes to average worker productivity on earnings. That AWOTE reflects labour market fundamentals has been confirmed by the benchmarking exercise I have undertaken which shows that – over the longer-term – the rate of change in AWOTE is closely related to the sum of the rates of change in the CPI and labour productivity. Second, for forecasting future earnings, and on the basis of the length of the time series of data available, I am not aware of practical problems with using AWOTE that would not also exist for other earnings series such as LPI.*”[[5]](#footnote-5)

In addition to the report of Professor Borland, Envestra refers to the expert report of Economic Insights 2011a, which report supports the conclusions of Professor Borland. Specifically Economic Insights states:

“*AWOTE is, thus, more likely to accurately capture compositional changes in the workforce. This means it will capture the effect of upskilling as employers rely less on unskilled labour and as capital is progressively substituted for labour. These are important means of achieving productivity growth over time. They are not picked up by the LPI which effectively assumes a completely static situation. Moreover, AWOTE will better reflect labour price pressures in a tight labour market as it picks up the effect of employers prematurely promoting individuals they want to retain and ‘reclassifying’ jobs as a means of paying staff more to prevent them from being poached by other organisations. The LPI will fail to capture these important characteristics of a tight labour market situation in a particular industry as it uses a fixed basket of job classifications that is not updated to reflect changing circumstances and the ongoing dynamics of labour markets.[[6]](#footnote-6)*”

and

“*The input price escalator used in regulation needs to reflect the actual costs incurred by GDBs. In tight labour markets this means changes in composition of the workforce in response to shortages, substitution towards capital and associated ‘upskilling’ and changes in response to technological change and productivity growth over time all need to be allowed for.*

*The correct measure thus needs to reflect changes in the actual composition of employment rather than an abstract measure of ‘underlying’ wage inflation which makes no allowance for compositional changes and their ongoing drivers. All else equal, the LPI will tend to understate the rate of labour cost increase GDBs face in achieving productivity* growth.”[[7]](#footnote-7)

“*Access Economics (2010, pp.86–7) justifies its preference for the LPI on the grounds that it is the Australian Bureau of Statistics’ preferred measure of labour prices and because it is less volatile than the AWOTE measure. However, the preferred index for abstract statistical purposes or for macroeconomic analysis is not automatically the correct index for regulatory purposes. As indicated above, given the central role of FCM[[8]](#footnote-8) in building blocks regulation, the correct index is the one that best reflects movements in actual labour prices faced by the GDB, not an abstract ‘underlying’ index that may not well reflect conditions on the ground…*

 *The other argument in favour of the LPI used by Access Economics (2010) regarding the relative volatility of the AWOTE versus LPI measures in the past provides no excuse for not using the theoretically correct index for regulatory purposes. In any case, the BIS Shrapnel (2010) forecasts for AWOTE generally show no more volatility than their forecasts for the LPI*.”[[9]](#footnote-9)

Finally in their updated report, BIS Shrapnel 2011 state:

“*BIS Shrapnel notes that in its recent draft decision for the Victorian Draft Determination, the Australian Energy Regulator (AER) stated that “consistent with previous AER determinations, the AER considers that the LPI is the measure that most reasonably reflects the labour costs that a Victorian DNSP is likely to incur”.*

*We disagree with this statement from the AER. Changes in labour costs for an enterprise (such as Envestra Limited) or an industry (such as the Electricity, Gas and Water Supply sector) are driven both by changes in the price of grades of specific labour and by changes in skill levels (for which employees are promoted to higher grades, at a higher cost to the enterprise).*

*The labour price index only measures changes in the price of labour, or wage rates, for specific occupations or job classification, which are then aggregated into a measure of the collective variations in wage rates made to the current occupants of the same set of specific jobs. That is, the labour price index is a measure of underlying wage inflation in the economy. The LPI, therefore, reflects pure price changes, but does not measure variations in quality of the quantity of work performed. The LPI also does not reliably measure the changes in total labour costs which the Victorian DNSP incur, because the LPI does not reflect changes in the skill levels of employees within an enterprise or industry. As skills are acquired, employees will be promoted to a higher grade or job classification, and with this promotion will move onto a higher base pay. So the change in the cost of labour over, say a year, includes increases in the base pay rates (which the LPI measures) and the higher average base pay level. The AWOTE captures both these elements, while the LPI only captures the first element. Basically, promoting employees to a higher occupation does not necessarily show up in the LPI, but the employer’s total wages bill (and average unit labour costs) is higher, as is AWOTE.*

*For this reason, BIS Shrapnel prefers using AWOTE as the measure that best reflects the increase in wage cost changes (or unit labour costs, net of productivity increases) for business and the public sector across the economy. Nonetheless, to enable comparisons with the Access Economics’ forecasts provided to the AER, we have included forecasts of the LPI for the EGW sector in Queensland and South Australia. This is based on the national EGW LPI forecasts as the LPI data is not available for the EGW sector by state.*”[[10]](#footnote-10)

The above demonstrates that the LPI measure clearly does not reflect the labour costs of the firm and does not allow the firm to recover its efficient costs. The impact of this on resource costs will not be captured by the LPI, demonstrating that this measure is not compliant with the National Gas Law or the NGR, particularly rule 74 that requires forecasts to reflect best estimates arrived at on a reasonable basis.

## Productivity Adjustment

The AER, on the basis of the recommendation of Access Economics, makes an annual labour productivity adjustment of 2% for South Australia. As Economics Insights notes on page 7 of their report this produces a negative real labour cost escalator.

Economic Insights points out that this productivity adjustment is a departure from the approach taken by the AER in the past, particularly in the Jemena gas access arrangement review and the Victorian Distribution Network Service Provider review.

The approach used by the AER to adjust for productivity is incorrect. In forecasting operating costs, Envestra has explicitly taken into account the potential for improving productivity. For example, implementation of the mains replacement program reduces UAFG costs and leak repairs, improving productivity. These productivity improvements are already built into Envestra’s forecast opex. More specifically Envestra has forecast leak repair savings of $5.5m by 2015/16 (Refer Business Case S60) and a reduction in the cost of UAFG from $12.79m in 2011/12 to $9.48m in 2015/16.

As noted above, where a productivity adjustment is combined with LPI this double adjusts downwards for productivity. By also factoring in productivity improvements built into opex forecasts, AER is in effect adjusting for productivity three times. The correct approach is to escalate costs using AWOTE and use productivity forecasts in the operating costs forecast proposed by Envestra.

Furthermore, there is no basis for assuming that the utilities sector will achieve 2% positive productivity growth. As Economic Insights has pointed out the ABS EGW labour PFP series has consistently declined at the annual rate of 3.6% since 1998. This sector is, clearly, the relevant sector to use for any forecast of productivity trends in Envestra’s workforce as this is the sector which comprises that forecast.

Access Economics gives various reasons for their view that there will be a major reversal in productivity trends. For the reasons set out in the BIS Shrapnel Report these reasons are not cogent. BIS Shrapnel states as follows:

“*Access Economics numerical forecasts of productivity growth, as presented to the AER, show that future productivity growth will be strong in the utilities sector at the Australian and state (Queensland and South Australia) level. This is in contrast to the observed productivity growth for the industry over the previous decade.*

*Over the six years from 2010/11 to 2015/16, Access Economics expects the average productivity growth in the national utilities industry to be 1.8% per* *annum.*

*For Queensland and South Australia, Access Economics predicts average productivity growth of 1.6% and 1.9%, respectively. This compares with an average productivity growth of -3.6%, -3.5% and -1.7% per annum for Australia, Queensland and South Australia, respectively over the previous decade…*

*Even discounting for the observed volatility in the EGW labour productivity growth, we view Access Economics’ forecasts of productivity growth as too optimistic.*

*According to Access Economics, the sanguine productivity outlook is based on easing of drought conditions on the east coast as well as an unwinding of factors which they believe weighed down the productivity performance of the utilities sector over the previous decade. Access Economics lists the negative factors for the industry as follows (p.48):*

* *The downswing in employment in the sector had arguably gone too far, requiring a degree of catch up (meaning that, in effect, relative productivity in the period 1997 to 2002 may have been unsustainably high). Spending on maintenance has lifted, and so too has spending on some new infrastructure (albeit with the latter still falling short of future requirements). That increased spending has added to employment without adding to output, hence weighing on measured productivity.*
* *A compositional switch in the sector away from water to electricity and gas has also worked to lower measured average productivity in the sector.*
* *Within the water sector, a series of droughts in a number of States also ate into measured productivity levels.*
* *Industry sources suggest that a reduction in outsourcing in recent years may also have raised employment without raising output.*
* *The reform momentum of earlier years faltered.*

*However, Access Economics (AE) provides little discussion or evidence to support the claims that most of the negative factors from the last decade will actually reverse over the next six years. With reference to the first point above, AE basically agrees with our assessment (and that of most of the utilities in their submissions to the AER over recent years) that spending on new infrastructure is still well short of future requirements, and that high levels of infrastructure spending will continue over the next few years. This suggests that these higher levels will continue to “add to employment without adding to output”…and hence continue to” weigh down on measured productivity”. It should also be noted that a significant portion of the recent and future infrastructure spending is related to network enhancement and maintenance for reliability, rather than for increasing capacity (ie future output).*

*With reference to the second point above, there is no evidence or discussion provided that a compositional switch back to water will occur over the next few years, let alone act to raise measured productivity in the overall sector. The output of the water sector may increase over the medium term compared to the drought-affected 2000s (given the construction of desalination plants around Australia), but given sharp rises in water prices and slower population growth, growth in water (and sewerage-related) demand and output is unlikely to be rapid, and significantly outpace the electricity and gas sub-sectors.*

*With reference to the fourth point above, no evidence or discussion has been provided to suggest there will be a reversal of the trend away from outsourcing (ie and therefore perform more work in-house).*

*Indeed, our discussions with several utilities suggest that the major reason for the increase in employment in the sector over the past decade was to have less reliance on outsourced services, particularly maintenance and regular system enhancement capital programs. Having invested heavily in hiring and training these increased numbers of employees, the utilities are unlikely to shed labour and increase outsourcing over the next few years.*

*With reference to the last AE point above, most of the easy reforms in terms of manning practices and enterprise bargained productivity enhancements occurred in the deregulation period of the 1990s – in effect, “all the low hanging fruit has been plucked”. There are few reforms left which will significantly lift productivity in the utilities sector, and so we are unlikely to see a pick up in “reform momentum” over the next few years.*

*Overall, there is not a compelling case to believe there will be higher labour productivity in the utilities sector over the next few years.*”[[11]](#footnote-11)

Envestra notes the requirement in section 24(2) of the National Gas Law that a service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in providing references services and complying with a regulatory obligation or requirement or making a regulatory payment. Given this, Envestra does not consider it is appropriate to lightly conclude that there will be a reversal of a 12 year trend in declining productivity performance where that assumption reduces a service provider’s recoverable costs and therefore creates a material risk of non compliance with section 24(2). Forecasts should not be made on the basis of such a reversal unless there is compelling empirical or other evidence to substantiate that the reversal is in fact occurring. To do so is in conflict with section 24(2) and also is not a best estimate arrived at on a reasonable basis.

Envestra therefore submits that the productivity adjustments proposed to be made by the AER are not compliant with the National Gas Law and Rules.

## Significant Shifts in AER Labour Escalation

The AER also engaged Access Economics to advise it on labour escalation rates in South Australia and Queensland as part of its electricity distribution reviews in those states. The AER accepted the advice of Access Economics in its report dated 16 September 2009[[12]](#footnote-12) for the purposes of making its Draft Decision and also accepted the revised advice dated 16 March 2010[[13]](#footnote-13) for the purposes of its Final Decision.

The AER, in both its Final Decision and Draft Decision, accepted the advice of Access Economics on labour cost escalation, which escalation was based on the LPI. Envestra has in the below figures compared Access Economics’ “utilities” and “construction” forecasts in its December 2010[[14]](#footnote-14), March 2010[[15]](#footnote-15) and September 2009[[16]](#footnote-16) reports. This shows that Access Economics has materially changed its views on labour escalation over the past year.

Envestra, reflecting its considerable concern over such significant shifts in the advice of Access Economics, engaged Professor Borland to also review the plausibility of any such changes. In reviewing this matter, Professor Borland commented that:

“*The main feature evident from comparison of the reports is that Access Economics have made substantial increases in their forecasts of average annual growth in productivity from 16 September 2009 and 16 March 2010 to 13 December 2010. For example, in the 13 December 2010 report it is forecast that average annual growth in productivity in the utilities sector in Queensland from 2011-12 to 2015-16 will be 0.88 percentage points higher than in the 16 March 2010 report.*

*I make several observations on the changes in forecasts of labour productivity growth in the reports from Access Economics. First, these must be regarded as substantial revisions. Where average growth in labour productivity in Australia is about 1.5% per annum, changes in forecasts of around 0.8% in Queensland and 0.5% in SA, are a large fraction of what are likely to be the actual rates of productivity growth. Second, the revisions to forecasts of productivity growth are larger in the utilities sector and construction sector than for all industries in both Queensland and SA*.”[[17]](#footnote-17)

Professor Borland went on to comment that:

“*In my opinion the substantial magnitude of the change in forecasts of productivity made by Access Economics would require a large change in underlying conditions or modelling assumptions to be justified. I have not been able to find any discussion of such changes to underlying conditions or modelling assumptions in the reports from Access Economics. In the absence of such large changes in underlying conditions or modelling assumptions it raises the possibility of non-robustness in the forecasting method.*”[[18]](#footnote-18)

Envestra is concerned by such significant shifts in the advice of Access Economics and the position of the AER, particularly given the lack of any substantiation for such shifts. Envestra also notes that the resultant average annual decline in real labour costs over the next regulatory period forecast in the most recent Access Economics advice appears contrary to generally accepted views on future labour costs in the economy.

## Other Matters

Envestra notes that there is likely to be significant pressure on labour costs over the next regulatory period given the resources boom. For example, the development of the Coal Seam Methane industry will see that industry increasingly competing with inputs used by Envestra for gas distribution (main laying, operations, planning etc).[[19]](#footnote-19),[[20]](#footnote-20)

Further the reconstruction efforts in Queensland and Victoria following the early 2011 floods and Cyclone Yasi will put further pressure on labour costs, not anticipated at the time of preparation of the 2010 BIS Shrapnel forecasts and the Access Economics forecasts.

While these factors relate to events outside of South Australia, given their magnitude they would still be expected to impact on costs in South Australia.

## Forecast network materials price growth

In its access arrangement proposal Envestra proposed a “network materials” real input cost escalator based on movements in the international crude oil price.

The AER rejected these forecasts on the basis that “The AER considers that the BIS Shrapnel report provided insufficient detail on the methodology, approach to, and computation of the ...” [[21]](#footnote-21) proposed network materials escalator.

Network materials are predominantly made up of polyethylene piping and therefore the change in cost over time is closely related to its main raw input material, namely crude oil.

To forecast network materials (mainly polyethylene piping), Envestra has used the BIS derived escalator based on movements in the international crude oil price (in US$ per barrel) and the US$/A$ exchange rate.

Crude oil is a key ingredient in the manufacture of thermoplastic resins, which is the main material used in polyethylene pipe.

In its March 2011 report, BIS has provided detail on its methodology, approach and computation of the proposed network materials escalator.

Further analysis undertaken by BIS shows that:

*“through an application of an appropriate econometric model, we have demonstrated that oil prices are a key determinant of polyethylene prices. This relationship is statistically significant and is valid for both the US and Australian markets”[[22]](#footnote-22)*

In contrast the AER has used the CPI to forecast materials prices. As noted by Economic Insights the CPI is likely to be a poor proxy for materials prices facing a gas distribution business as the basket of goods making up the CPI bears little relation to inputs purchased by a gas distributor.[[23]](#footnote-23)

Given the above, Envestra submits that the BIS escalator is the best estimate on a reasonable basis of network materials prices.

On this basis Envestra has used the March 2011 BIS forecasts for network materials.

## Conclusion on Labour and Materials Cost Escalation

For the reasons described above, Envestra submits that the updated BIS real input cost escalation forecasts[[24]](#footnote-24) for general labour, contractor labour (capex only), EGW labour and network materials represent the best estimates arrived at on a reasonable basis for labour and materials escalation. The following updated AAI table 6.3 sets out the updated input cost escalators as determined by BIS Shrapnel in its March 2011 report (see Attachment 6-4C).

**Updated Table 6.3 Labour and Materials Escalators**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2010-11** | **2011-12** | **2012-13** | **2013-14** | **2014-15** | **2015-16** | **6 Year Average** |
| EGW Lab | -3.2% | 2.8% | 2.3% | 3.3% | 0.2% | 1.8% | 1.2% |
| General Lab | -11.4% | 1.0% | 3.1% | 2.0% | 0.1% | 1.7% | -0.6% |
| N/W Materials | 1.4% | 6.4% | 5.2% | 0.9% | -2.6% | -2.9% | n/a |
| General Materials | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | n/a |
| Construction (capex only) | 24.3% | 3.0% | -4.8% | 10.3% | 1.6% | 1.9% | 6.1% |

# Network Development

## Introduction

The AER approved an allowance of $21.84m for Network Development in South Australia. However, it disallowed $21.2m on the grounds that Envestra had not provided sufficient information to support the forecast of network development opex as required by r. 74(2)(a) of the NGR. Specifically insufficient information was provided to forecast uptake numbers or incentives to demonstrate that the forecasts were based on sound economic judgement.

The programs disallowed were:

* Incentive payments
* Website costs
* Development and deployment

In this submission, Envestra provides additional information to support its forecast for the projects disallowed by the AER.

Envestra maintains that the forecast provided in the 1 October submission remains prudent and consistent with that 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 and is consistent with r. 74(2).

## Incentive payments

### 3.2.1 AER Draft Decision

Envestra proposed to spend $16 million ($2009-10) to provide incentive programs to increase uptake of gat hot water systems, gas heaters and gas air conditioners in South Australia as summarised below:

|  |  |
| --- | --- |
|  | **Year** |
| **Activities** | **2011-12** | **2012-13** | **2013-14** | **2014-15** | **2015-16** | **Total** |
| **Incentive Payments** |  |  |  |  |  |  |
|  Hot Water Program | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 5.0 |
|  Central Heater Program | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 7.5 |
|  Gas Air Conditioning | 0.3 | 0.7 | 0.8 | 0.8 | 1.0 | 3.6 |

The program was forecast to result in an uptake number of 2000 additional hot water and heating systems per year and 1,400 new air conditioners over the five year period. Envestra submitted that the forecast for hot water and heating connections were based on the results of previous programs in 2005, 2006 and 2010.

The AER reviewed the uptake number forecast for this program and could not find sufficient evidence that the program would lead to an uptake of the forecast number of units per year. It was not evident to the AER how Envestra has extrapolated the results of previous programs to arrive at its submitted figure.

As such, the AER considered that contrary to r. 74(2) Envestra had not demonstrated that the estimate had been arrived at on a reasonable basis nor that it represented the best estimate.

Further, the AER does not consider that Envestra had adequately explained the level of incentive payment that is required to induce uptake. Such an assessment necessarily needs to demonstrate how the level of incentive payment is economically efficient and consistent with the lowest sustainable costs, as required under r .91 of the NGR.

**3.2.2 Envestra Response**

Rate of Uptake

Estimating the level of uptake is not an exact science. It requires judgement which Envestra applied taking into account past success in implementing incentive based programs.

In South Australia, the most recent campaign was undertaken in 2010. However as explained in Attachment 6.5, at the time of preparing the Access Arrangement Revision, this program had only been operating for 5 months (April to August). Notwithstanding the limited duration of the campaign, it had produced 2,203 new sales (1,421 central heater units and 882 hot water units). On the basis of this information, Envestra estimated that if the program ran for a full 12 month period, it would be feasible to achieve an additional 2000 hot water appliances and 2000 gas heaters.

The rationale for these assumptions, which were used in preparing the Network Development incentive forecast, was as follows:

* It was assumed that the hot water market would continue for a full 12 months. The 2010 program had achieved 882 units in 5 months (about 176 per month). It was further assumed that the expected monthly uptake rates for hot water systems would be lower in the summer months than those observed over the winter period. This assumption recognises that the failure rate for hot water systems is likely to be directionally higher in the cooler months when they work harder compared to the summer months. Taking these factors into account, Envestra assumed an average monthly uptake rate of 165 new appliances per month over a 12 month period. Assuming this up-take rate, total connections would be around 2000.
* The gas heating program had produced 1421 sales (about 285 per month) over the five month period. The 2010 scheme was terminated on 31 August. This forecast was increased further because the 2010 program was restricted to gas central heaters only. By expanding the heating incentive to include space heaters and gas log fires, it was considered likely that a target of 2000 new appliances could be obtained. Further evidence to support this conclusion is obtained by looking at the success of the program in 2006, the last time a heating incentive program was run which targeted space heaters as well as central heaters, when 2049 new gas heaters were connected.

On the basis of this analysis, Envestra forecast that a target of 2000 new hot water heaters and 2000 gas heaters was achievable. It was considered that if anything these uptake rates were likely to be conservative because when the 2010 campaign commenced, it was slow to take off. This reflected the fact that Envestra had not actively promoted natural gas since 2005/06. It took time to re-establish relationships with key stakeholders, publicise the new programs and to develop their confidence in the schemes being implemented. Since 2010, Envestra has been having ongoing discussions with key stakeholders and expects the up-take rates to be higher in the earlier part of 2011 relative to that achieved in 2010. Envestra also adjusted its program half way through the winter 2010 program to focus on plumbers. This change in strategy improved the effectiveness of the campaign. It is anticipated that total up-take roles in 2011 will be higher as a result of this change in strategy, which will be implemented over the entire campaign.

Since Envestra’s Revision was lodged on 1 October 2010, we have continued the hot water initiative and now have additional information to support the forecast up-take rates. This data is analysed in the attached report prepared by PricewaterhouseCoopers (PwC) (Attachment 6-14). The analysis confirms that a forecast of 2000 units over a full year period is achievable.

PwC state that:

*“Given that 2049 rebates were achieved in FY06, a 2000-unit forecast for central heater rebates is achievable p.26*

and in relation to hot water;

*. . . extrapolating out Envestra’s performance to date in FY11 and accounting for the opening of the scheme to plumbers . . . suggests 2000 units is an optimistic but achievable forecast p.29”*

Envestra’s incentive arrangements also included a program designed to achieve connection of 1,400 new gas heat pump air conditioners. Envestra has not implemented any gas air conditioning programs and is therefore unable to provide data from previous programs to support this forecast. However, it is noted that the heat pump air conditioning technology has been embraced by Australian customers with demand for heat pump air conditioning being very strong.

Envestra’s Network Development Plan included ABS data demonstrating that the penetration of reverse cycle air conditioning increased from 28% to 37% between March 2005 and March 2008 (Appendix 1, Average Residential Consumption in South Australia, p.9). Around 27,000 ducted split system air conditioners with a power rating of 13 to 15kW were sold in Australia over the last 12 months[[25]](#footnote-25). There were an additional 10,000 systems with a rating of 16-18kW sold. In South Australia, the corresponding figures are 3,200 for a 13-15 kW unit and 800 for the 16-18kW unit. It is this market where there is potential for the current Yanmar models being trialled by Envestra to compete.

Envestra proposed to ramp up installations of air conditioners from 200 to 500 per year over the period, to achieve 1,400 units over 5 years in South Australia. If this were achieved, it would represent a 7% penetration rate into the existing 13-18kw market. This is a challenging target, but considered to be achievable.

PwC also analysed up-take rates for solar PV between 2001 and 2009 and concluded that:

*“The forecast volumes of 1,400 gas air conditioning units in Envestra’s Network Development Plan appear to be in line with the experience of photovoltaic solar”* (p,40).

Level of Incentive

The table below summarises the costs and benefits of funding the Performance Based Incentive Programs for new homes and existing homes. Envestra’s original analysis, (Section 11 of the Network Development Plan) has been updated to reflect the AER Draft Decision and to include a revised estimate of incremental load for a gas air conditioner in line with Envestra’s latest view on gas use.

|  |  |  |  |
| --- | --- | --- | --- |
| **A - Already Connected Homes** | **Incremental Load (GJ/customer)** | **NPV @ 10%****(15 years)** | **Proposed Incentive ($)** |
| Electric to gas HW conversion | 12 | $1,205 | $500 |
| CHU added | 29 | $1,508 | $750 |
| Gas Fired A/C added | 47 | $2,344 | $2,000 |
|  |  |  |  |
| **B - New Homes** | **Incremental Load (GJ/customer)** | **NPV @ 10%****(15 years)** | **NPV @ 10%** |
| Gas HW only | 12 | $751 | $500 |
| CHU only | 29 | $1,864 | $750 |
| Gas Fired A/C only | 47 | $2,700 | $2,000 |

This analysis demonstrates that the level of incentive proposed is prudent. The net present value of the incremental revenue for each activity is positive, and exceeds the cost of the proposed incentives. To the extent that net present value of the incremental revenue exceeds the cost of incentive, the network is better off. Assuming everything else remains constant, a positive net present value to the network will translate directly in to lower tariffs for consumers at the time of the next Access Arrangement because the value of the additional volume of gas used is greater than the cost of the incentive. Thus the level of incentive proposed by Envestra is set at a rate that will increase economic welfare, and is in the long term interests of customers.

The only remaining question is whether the incentive payment is too high. That is could Envestra achieve the same result using a lower incentive payment? Envestra is incentivised through the regulatory regime to minimise the amount of incentive offered and to maximise the benefit from the available funds. The properties embodied in the regulatory framework, whereby the regulator provides a fixed allowance for incentive payments, and provides the opportunity for the business to increase the number of connections above those forecast, keeping the benefits of additional consumption until the next Access Arrangement Review, provides a powerful incentive for the business to ensure that the incentive is offered at an economically efficient level. Envestra undertakes post implementation reviews of marketing programs to maximise their effectiveness. In the past, this review has resulted in changes to the level of incentives provided to improve outcomes. This should provide comfort to the AER that Envestra will not offer excessive or economically inefficient incentive payments.

Nonetheless, assessing the level of incentive required is not an exact science, but rather a matter for judgement taking into account available facts. Envestra has set the level of incentives taking into consideration the experience gained through experimenting with incentive arrangements since 2004. It is known that:

1. An incentive of $500 for the conversion of electric to gas hot water systems and $750 for a central heater have been found to be effective in achieving the desired results in South Australia. Since 2004, Envestra has experimented with various levels of incentives varying from $80 to $500 for hot water and $300 to $750 for heating. The current recommendations of $500 for hot water and $750 for heating takes into account this experience.
2. Past experience has shown that the amount of rebate needs to be material. A rebate of $100 or $200 is insufficient to affect the consumer’s decision.

Based on the above, it is judged that an incentive of $500 for hot water is set at or on appropriate level to achieve the desired outcomes. The proposed rebate of $750 for gas heating has also been demonstrated to be necessary to achieve the required outcomes. PwC confirm that the incentive payments are prudent, economically efficient and consistent with good industry practice (Attachment 6-14, p.26).

The level of incentive of $2,000 per air conditioner has been set on the basis of the NPV analysis above. While there is no actual data available on the impact of the incentive rate or the uptake of gas air conditioners, the analysis demonstrates that an incentive payment of $2,000 would provide net benefits to customers installing the appliances. There would also be a commensurate benefit to all customers on the network equivalent to the difference between the cost of the incentive and the NPV, which would be reflected in lower tariffs. PwC confirm that the proposal incentive payment is prudent (p.38).

## Website and IT management

**3.3.1 AER Draft Decision**

Envestra proposed $0.6 million ($2009-10) in total over the access arrangement period to develop a website to provide a range of information, including: promotion of natural gas; informing customers on how to connect and arrange for appliance installation; facilitating new connections or upgrades and, collating market research information.

While in general, such programs may have some merit, the AER considers that Envestra has not submitted sufficient information to indicate if the website is to be in addition to Envestra’s current website, and if so, why the proposed features cannot be accommodated in its current website. Further, the AER is concerned that expenditure on website development for the purpose of market development could be double counting on other information technology related costs that are already included in Envestra’s base year costs. A case has not been set out as to how the proposed expenditures differ and are in addition to those in the base year, and that those in the base year would still be required. As such, the AER considers that the proposed expenditure for website and IT management is neither prudent nor efficient as required under r. 91 of the NGR.

**3.3.2 Envestra Response:**

Envestra’s Natural Gas Website ([www.natural-gas.com.au](http://www.natural-gas.com.au)) is a separate web-site to the corporate site. The natural gas web site has not been updated in any material way over the last 5 years, and there has been no material expenditure on the website in the current Access Arrangement Period. This confirms that the proposed expenditure is additional to base year (2010) expenditures.

The Natural Gas Website is currently out of date and urgently requires upgrading. Indeed for this reason, the 2010 Network Development program did not even refer to the Natural Gas Website web-site. It was simply not capable of meeting the web needs of the campaign.

Envestra has commenced scoping out the work required to develop an effective website with its website developer. On the basis of this work, Envestra plans to build a completely new site, with considerably more functionality than the existing web-site.

The new website will be more consumer friendly, integrated to a greater degree with the operational business (connection process), and be more dynamic in terms of reflecting current Network Development activities and campaigns eg promotions, current deals offered by appliance retailers etc). It will be a source of up-to-date information that will assist consumers making decisions about using natural gas.

An example of the type of website to be constructed is the existing Jemena website ([www.thenaturalchoice.com.au](http://www.thenaturalchoice.com.au)). However, Envestra plans to take its new website a step further to link directly to Envestra’s connection processes. The objective will be to make it as easy as possible for a customer to correct to the network, purchase a new appliance or upgrade their connection. The current website has not been designed to allow this functionality, and is unsuitable for the task. For this reason, it is intended to design the new website from scratch.

The IT related costs that have been proposed elsewhere in the Access Arrangement do not include any expenditure allowance for the upgrade of the natural gas website. The scope of the other IT projects has been fully defined in the business cases (SO1, SO8, SO9, S54, S21 and S63) submitted on 1 October. In summary these projects are as follows:

* S01 – This project is required to develop a knowledge management approach to more effectively document operational practices. It will not focus on the consumer interface as is the purpose of the Natural Gas website project.
* S08 – This project is required to manage Envestra’s regulations obligations under Retail Market Rules. In contrast, the Natural Gas website project is required to make it easier for customers to obtain information on natural gas and connect to the network.
* S09 - This project is required to support the periodic upgrade of Envestra IT Infrastructure (i.e. upgrades and renewals) and the standardised use of Virtualisation, Storage Area Network and Server Blade technologies over the Access Arrangement period. There is no link between this project and the Natural Gas Website project.
* S21 – The purpose of this project is to develop an IT Roadmap to provide for asset management optimisation, data integrity, establishment of a data mart, field data capture and work allocation optimisation. These are operational requirements that have no link between this project and the Natural Gas Website project.
* S54 - The purpose of this business case is to detail the funding requirements to relocate the Envestra’s data centre. There is no link between this project and the Natural Gas Website project.
* S63 – This project is required to manage Envestra’s existing head office IT infrastructure including IT infrastructure upgrades and renewals, IT security, fixed and mobile phone telephony and implementation of a wireless network infrastructure. Renewal of the Natural Gas Website project is not included in this project scope.

This demonstrates that there is no duplication between the scope of the proposal to build a new Natural Gas Website and other IT projects proposed by Envestra in its submission.

PwC note that E-commerce will become an increasingly important part of Australian business (p.41). The new website will assist Envestra to make this change. PwC agreed that there was no duplication of these costs with other opex and capex projects (p.45).

## Development and deployment

**3.4.1 AER Draft Decision**

Envestra proposed spending $4 million ($2009-10) over the access arrangement period to establish a role in facilitating the deployment of evolving new technologies in the South Australian market.92

The AER is generally supportive of efforts to develop the market for pipeline services where these can lead to increases in demand that in effect disperse the individual impact of tariffs to recover network costs. While accepting that such efforts can have lagged effects, the AER needs to be satisfied that the expenditures are efficient and prudent. The activities proposed within Envestra’s development and deployment project appear to go some way beyond market promotion activities and into activities of a more developmental nature. The AER noted that the forecasts are even more prospective than the other incentive programs proposed by Envestra. Origin in its submission to the AER, has questioned the reasonableness of Envestra’s proposed network development expenditure. It submitted that it was not aware of any new gas technologies in the medium term that could lead to an increase in gas consumption in homes likely to have below average consumption. It further considered that it was not apparent that Envestra as the gas distributor is best placed to develop the market for the relevant technologies.

The AER considered these concerns in the context of the NGR and NGL requirements and with regard to the business case advanced by Envestra. The AER considers that Envestra has not sufficiently demonstrated how the efficiency of this project has been assessed. Further, while the benefits have loosely been described in the context of mitigating falling average consumption in Queensland the AER cannot find evidence to suggest that a link has been advanced by Envestra as to the likely impact of these programs on its demand forecast.

The AER also considered that proposed activities in the development and deployment program appeared to overlap with these proposed under its “representation” project.

As such, the AER considers that there is insufficient evidence to support the proposed expenditure on development and deployment as efficient under the terms set out in r. 91 of the NGR.

**3.4.2 Envestra Response**

Envestra proposed in its October Revision that the development and deployment activity would cost approximately $4m. The initial focus of the program will be on gas air conditioning. As noted above, it was forecast that this program would provide 1400 new appliances over the Access Arrangement Period. If Envestra was successful in realising its target of 1,400 gas-fired air-conditioners installed over the period, there would be significant benefits to consumers. Due to the potential benefit associated with this technology, Envestra maintains that there should be an allowance in the operating forecasts to fund development and deployment activities. This is prudent to provide an opportunity for the business to develop and more effectively meet the needs of customers

Envestra notes that Origin submitted that it was not aware of any new gas technologies in the medium term that could increase gas consumption (p. 154 Final Decision).

However this statement overlooks that Origin is currently working with Yanmar, a reputable Japanese company that has been in operation for 100 years who manufacture gas heat pump air conditioners and distribute the appliances in Australia (Attachment 6-15). As Envestra understands it Origin has installed around 250 gas heat pump air conditioners across Australia, mainly in commercial premises.

Origin’s gas air conditioning strategy has not focussed on appliances suitable for residential customers. However, Envestra sees great potential for gas heat pumps in the residential market. Should the market develop, it would be expected that the cost of units will decline. Even if the cost remains at current levels, there is a niche market where the technology would be demanded ie high value homes, where the occupants want air conditioning with an improved environmental outcome relative to the alternative electric options or in areas where increased demand for electricity for air conditioning will place pressure on existing electricity networks. In order to realise these benefits, work is required to develop the technology and the market.

As noted in Attachment 6-5 of Envestra’s submission (Section 5), other participants in the market have insufficient incentives to devote the optimal level of resources to developing new technologies.

As the gas network owner will continue to transport gas to gas customers over many years, it has an incentive to undertake activities to develop new technologies. However, this work will only occur if there is an allowance in the regulatory benchmark for such activities as the benefits from the scheme will be realised across at least three Access Arrangement Periods, whereas the costs will be incurred in the first Access Arrangement Period. In anticipation that an allowance will be approved by the AER, Envestra is working with Origin/Yanmar to develop the opportunity further. It was on this basis that the gas heat pumps were identified as the initial focus of the development and deployment initiative proposed by Envestra in its 1 October Revision.

The main impediment to wide scale adoption of the technology is the cost of the unit. Yanmar has not developed the 14-18kW unit for the Japanese market as the energy rating is too small for the type of unit typically demanded in Japan. Yanmar has advised that it is interested in working with Envestra to promote demonstration models of the smaller rated units, and their distribution to the residential market. Preliminary meetings have recognised that this will only happen if Yanmar, Origin and Envestra are prepared to bring incentives to the market to facilitate the development of the technology. The purpose of the project proposed by Envestra in its 1 October submission was to provide funding to contribute to the development of the technology. If this was successful, it would result in benefits to Envestra and gas consumers. Gas consumption for each unit is estimated to be 47GJ per annum. Development of this technology would:

* Offset the trend for decline in average consumption;
* reduce capacity growth on the electricity transmission and distribution system anticipated to meet future load growth from increasing demand for air conditioning; and
* provide environmental benefits through lower greenhouse emissions, relative to electric heat pumps.

A further advantage of the program for Envestra is that it would provide a gas option for producing renewable energy through the heat pump technology. Currently gas is seen as a fossil fuel with lower greenhouse emissions than coal or oil. However, the focus of the energy sector is to maximise in a cost effective manner the use of renewable energy. If the gas industry is to prosper in the future, it needs to become more sustainable. This will require the development of the next generation of gas appliances where gas is used to facilitate or back up renewable energy. The heat pump technology is ideal in that respect, generating renewable energy from the air (extracting heat).

It may also be cheaper than some of the current technology options being developed (and subsidised by Governments) such as solar and wind energy.

While Envestra’s 1 October submission was based around gas heat pump air conditioning, the critical issue at stake here is the need to innovate to develop new gas appliances. As was pointed out in the submission, other opportunities are available to increase consumption of natural gas including:

* natural gas as a vehicular fuel,
* microgeneration and
* fuel cells.

All of these technologies are under-developed.

It is now well accepted that the five year regulatory process embodied in the NGR is likely to lead to under-investment in innovation when the benefits of that innovation /investment are likely to extendbeyond 5 years unless a specific incentive mechanism is provided in the regulatory decisions applicable to the business. For example NERA state that the regulatory framework is:

*“likely to create discincentive to undertake research and development because:*

* *the speculative nature of some research and development might not satisfy the capital expenditure tests of the regulator;*
* *many innovation projects are likely to have payback periods that extend across regulatory periods and the regulatory framework does not allow the firm to keep those benefits in order to justify the initial investments; and*
* *cost efficiency benefits are ultimately passed onto customers in the form of lower prices, and so distributors may be reluctant to invest in research and development if the benefit stream is not sufficient to justify the initial outlay.*

*In our opinion this highlights how the existing regulatory arrangements might result in less than optimal investment in research and development that leads to overall cost savings unless those savings are achieved within the same regulatory period”. (Attachment 6-16, p.7).*

On the basis of this evidence, Envestra considers that it is prudent to include an allowance in operating costs for development and deployment activities. We note that Envestra’s proposal of $4m over the period for development and deployment is around 0.45% of regulated revenue ($4m / $909m), consistent with the quantum of funding made available by OfGem for research and development (0.5%, Attachment 6-16, p.22). This provides further evidence that the level of funding proposed by Envestra for development and deployment is consistent with an amount that is prudent, and is therefore consistent with the NGR.

Finally, Envestra’s proposal included employment of a Manager and Senior Engineer to manage the development and deployment activity. The 1 October proposal (Appendix 4) noted that these resources would have “appropriate commercial and engineering experience” to “facilitate the deployment of evolving gas technologies” (p.4).

In contrast, the representation activity proposed establishing five new roles who were experts in:

* hot water
* heating
* cooking
* industry relations
* market analysis

Their purpose would be to develop relationships with key influencers and operate as functional experts in their respective areas to service the needs of domestic and commercial customers (Network Development Plan p.27) so as to increase uptake of gas appliances.

The skill sets of these two projects are different; one being around engineering research and development with the other involving development of relationships with key influencers to increase sales of gas appliances. Consequently, there is no overlap. PwC confirm that there is no duplication between the representation and development / deployment activities (p.45).

**3.4.3 Independent Review of Envestra’s 2010 Marketing and Proposed 2011-16 Plan**

Envestra engaged PwC Australia to advise on its 2010 marketing campaign and its proposed network development plan for the next Access Arrangement Period. A report prepared by PwC is provided in Attachment 6-14. PwC concluded that:

* Envestra’s marketing programs are consistent with the Natural Gas Law and Rules and have positively impacted gas connections and installation of gas appliances.
* The rebates for hot water and central heating of $500 and $750:
* are consistent with industry practice;
* provide positive economic benefits and are therefore prudent;
* are set at an effective level; and
* are likely to achieve the forecast uptake rates of 2000 hot water and central heating units.
* Implementation of Envestra’s network development plan will result in lower gas prices for all gas consumers (4.7%).
* The proposed development and deployment plan;
* does not involve any duplication of resources with the representation program;
* is based on prudent incentive of $2,000 per appliance; generating a positive value to customers;
* is likely to facilitate 1400 new air conditioner units, which is consistent with the up-take rate observed with photovoltaic solar.
* The website project:
* will be increasingly important in meeting future customer needs
* will involve development of a new website, the funding of which is not included elsewhere in Envestra’s submission.

PwC’s findings support Envestra’s contention that the Network Development Program:

* is consistent with Natural Gas Law objective of promoting efficient investment and operation of the network in line with the long term interests of customers;
* is consistent with Rule 91 in that the costs would be incurred by a prudent operator acting efficiently in accordance with good industry practice to reduce the cost of delivering pipeline services; and
* has been costed for the purpose of the Access Arrangement consistent with Rule 74 (representing the best estimate or forecast possible in the circumstances arrived on a reasonable basis).

# UAFG Gas Price

## AER Draft Decision

In its access arrangement proposal Envestra proposed a gas price for UAFG based on forecasts prepared by the Core Energy Group. The AER rejected these forecasts on the basis they included in the cost of gas contract premiums and retailer margins. The AER did not consider sufficient evidence had been provided to demonstrate that the amount of the premiums was consistent with market practice and otherwise justifiable.

The AER noted in the Draft Decision that in its public submission, the ECCSA stated that its members “are currently paying or have contracted for gas prices well below the price that Envestra has proposed”. However, it is noted that Envestra’s proposed prices were not made public in its submission, which renders the ECCSA’s statement unsubstantiated. Further the Envestra UAFG contract has unique characteristics which differentiates it from standard industrial customer contracts.

That aside, this section discusses the above two issues put forward by the AER for not accepting the UAFG prices submitted by Envestra.

## Envestra Response

The cost of UAFG is a material component of overall operating expenditure for the South Australian network. Because the UAFG level is peculiar to the characteristics of the network in question, and to facilitate transparency, this component of operating expenditure was separately identified in Envestra’s original AAI submission.

In that submission, Envestra advised it was:

*“in the process of tendering again for the supply of gas for the forecast period, but at the time of preparing its forecasts, that tendering process is not complete and no contract has been entered into. Consequently, Envestra cannot rely on a known/fixed price of gas for its UAFG opex and must rely on a best estimate of the forecast cost of gas. Envestra has relied upon expert advice from CORE Energy Group to provide a best estimate” [[26]](#footnote-26)*

The advice received from CORE Energy Group (CORE) was contained in Attachment 6-2 of that submission in their report “Eastern Australian Natural Gas Market - Market Overview and Price Outlook to 2016.”

## Envestra Tendering Process and Results

Since its October 2010 submission, Envestra has progressed its tendering process to the point where commercial terms and conditions have been agreed and firm prices have now been offered by the preferred supplier of UAFG for the South Australian network.

Attachment 6-11 to the revised AAI, “Unaccounted for Gas (UAFG) Prices - Tendering Process”. sets out the tendering process that Envestra has conducted and the results of that process. The results of that tender process reflect the most recent market evidence of UAFG pricing, and as such, comply with rule 74 of the NGR and should be used by the AER in its Final Decision. The UAFG prices are set out in the following table.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  **($, real 2010)** | **2011-12** | **2012-13** | **2013-14** | **2014-15** | **2015-16** |
| Cost of Gas $ / GJ | [c-i-c] | [c-i-c] | [c-i-c] | [c-i-c] | [c-i-c] |

## Margins

Notwithstanding the tender process discussed in the section above, Envestra re-engaged CORE to respond to the main issue raised by the AER in its Draft Decision, namely that estimates of UAFG price should not contain “contract premiums and retailer margins”. The CORE report, which is set out as attachment 6-10 to this AAI, explains why Envestra would be unable to secure UAFG through a wholesale agreement with a natural gas producer (as assumed by the AER), but must instead buy its gas from a retailer.

Theoretically, Envestra could purchase gas from a gas producer or an entity such as AGL or Origin Energy (who in such cases would be selling in a wholesale capacity at the outlet of a gas production plant) and then pay to have that gas transported through a transmission pipeline to the distribution network. However due to the small volumes of gas used by Envestra this proposition is merely theoretical. Envestra’s UAFG volumes are too small:

* for it to be an economic proposition for a gas producer to sell such a volume to Envestra;
* for it to be economic for Envestra to buy that volume ex-plant; and
* to transport it through a transmission pipeline given the difficulties of managing the overrun, imbalance and other charges which would relate to such a small volume.

Practically, and as noted in the CORE report, it is not possible for Envestra to purchase volumes of UAFG at the inlet to a transmission pipeline.

Envestra must therefore purchase its UAFG requirements at the inlet to the distribution system from a retailer. However, a retailer will not sell gas to Envestra, or anyone else, at a price which is only equal to the sum of the amount paid to acquire it from a producer plus transmission costs.[[27]](#footnote-27) Like any other retail price, the retailer would apply a margin to recover the full economic cost of service provision.

As noted in the Core report, for the year ended 30 June 2010, AGL made an average margin of 10.3% on its gas sales and Origin Energy a margin of 10.6% on its gas sales. These quoted margins are averages.

In a particular gas sales contract the size of the margin will reflect the characteristics of the contract. Envestra South Australian UAFG requirements have specific characteristics which suggest a higher margin (described as the “premiums” in Core’s September 2010 report) than average given that:

1. the contract volume is small (2.5 PJ per annum). While materially larger than the Queensland UAFG contract this is still a relatively small volume compared to those of large scale users;
2. there are multiple delivery points (e.g Angaston, Mount Gambier, Gepps Cross, Elizabeth etc.) which introduces complexity;
3. sale volumes are uncertain and potentially highly variable (as compared, for example, to a large industrial customer who is likely to have a relatively predictable demand for gas) and there is no take or pay requirement imposed on Envestra;
4. there is an element of complexity in administering a UAFG contract due to the need to determine and agree the actual volume of UAFG used by the network over a year.

In addition Core was requested to update its analysis of the gas market to take account of changes in market conditions since its previous report. That analysis suggested a further tightening of available supplies in the gas market.

## Conclusion

Envestra submits that the outcome of Envestra’s market tender process for the supply of UAFG for its South Australian network reflect the most recent and relevant information in relation to UAFG price. Envestra therefore considers that these prices provide “best available estimates” of UAFG pricing, as required under rule 74 of the NGR and therefore should be used by the AER in its Final Decision. The resultant UAFG forecast is as follows:

(Commercial in Confidence)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **$m (real 09-10)** | **2011-12** | **2012-13** | **2013-14** | **2014-15** | **2015-16** | **Total** |
| Volume (TJ) | [c-i-c] | [c-i-c] | [c-i-c] | [c-i-c] | [c-i-c] | [c-i-c] |
| Price ($) | [c-i-c] | [c-i-c] | [c-i-c] | [c-i-c] | [c-i-c] | [c-i-c] |
| **Total UAFG opex ($m)** | **12.79** | **12.77** | **11.95** | **10.87** | **9.48** | **57.86** |

# Additional Field Crews (Business Case S48)

## AER Draft Decision

The AER states in it Draft Decision (p165) that:

*“The mains replacement program is expected to result in a significant and progressive drop in the number of leaks (60 percent drop by the end of the Access Arrangement period). This would see a proportionate drop off in the work required outside normal business hours, but Envestra has not allowed for this in its business case; nor has the cost of alternatives to providing stand down periods been identified. The proposed expenditure is not prudent and efficient.”*

## Envestra Response

The AER’s position has been guided by the view of Wilson Cook (WC) that the mains replacement program to remove cast iron mains from the network will reduce leaks, obviating the need for additional crews outside normal business hours.

However, while the mains replacement program will reduce and eventually eliminate leaks attributed to deteriorating cast iron and unprotected steel mains, those leaks are *not* major contributors to after hours work.

Envestra is required to maintain a 24/7 operation to effectively respond to meter leaks, third party damages, pipe failure and requests from emergency services. While the majority of after hours calls relate to leak repairs, these leaks are typically on the high pressure network, from either meter fittings or from third party damages. Contrary to the WC view, with the replacement of low pressure cast iron with high pressure polyethylene mains and associated regulators (etc), it is expected that after hours callouts will actually increase over time. This is because high pressure leaks are more quickly noticed by consumers and the public and require more immediate attention compared with low pressure leaks.

In relation to Envestra’s need to increase the number of experienced First Response and Field Repair personnel available for standby afterhours work, the AER needs to consider that:

1. Envestra is required by the Office of the Technical Regulator (OTR), emergency services and the general public to have emergency response and repair crews available 24 hours 7 days a week;
2. personnel who carryout emergency response and repair work must be trained, accredited and equipped to carryout repairs at any time; and
3. pipe failures and damages to above and below ground gas assets caused by third party contractors occur at all times of the day and night and these incidents require emergency response to either perform temporary or permanent repairs to maintain public safety, and with an increasing length of the network operating on high pressure, these incidents will actually increase in frequency.

WC further noted that the “Working Hours Code of Practice” is not law and therefore cannot be used to justify setting up a standby arrangement which ensures First Response and Repair Crews are well rested and able to complete an afterhours working shift safely. Envestra believes that WC has not considered the following in forming its view:

1. fatigue is a major safety risk when driving vehicles, operating equipment and working in a hazardous environment such as an uncontrollable escape of natural gas;
2. an approved Code of Practice for Working Hours (the Code) came into effect on 1 July 2010. The Code recognises the significant risk, particularly from fatigue, that excessive working hours poses to the health, safety and welfare of South Australian employees and their families;
3. Safe Work SA states that “an approved code of practice (COP) provides practical guidance to meeting legislative obligations. It should always be followed unless there is another solution which achieves the same or a better standard of health and safety in the workplace”.
4. The Code has been approved by the State government under Section 63 of the Occupational Health, Safety and Welfare Act 1986.

WC further commented that Envestra did not explore “other options” for standby arrangements. Envestra believes it has done this, for the following the reasons set out below.

Envestra Standby Methodology

Envestra’s methodology on standby shifts and personnel required has been based on:

1. direct labour personnel and/or contractors should work no more than 16 hours continuously in any 24-hour period;
2. irrespective of the times worked, operatives performing first response and field repair must maintain knowledge, skills, experience and be sufficient in number to be able to maintain an adequate level of response and mitigate risk to personnel engaged in this response activity the business, consumers and the public; and
3. weekend shifts be limited to 12 hours to reduce the possible impact of fatigue on personnel and contractors.

Standby Case Specifics

With respect to current practices and alternatives for standby shifts, it is important to note that Envestra must comply with its approved Leakage Management Plan (LMP). The LMP is a detailed plan setting out the procedure to be followed and KPIs to be achieved when classifying and repairing leaks. This procedure is based on Australian Standard 4645 “classification and response to gas leaks” to ensure leaks are handled in a prudent, efficient and safe manner.

The LMP targets a minimum 95% physical response to leaks within two hours of a public reported call. Class 1 leaks must be monitored until the leak can be reclassified, repaired or made safe. This requirement necessitates the First Response Operative to remain on site to monitor the leak and drives the need to ensure that more than two First Response Operatives are available for leak response during the recognised peak times, because at any time the Leak Response Operative may be required to standby a leak until the repair crew attends.

Current Practice First Response Standby During Weekdays

The physical geographic size of the Adelaide Network makes it necessary to maintain at least two First Response Operatives covering the network on weekdays between 4.00pm and 9.00pm with a backup operative on standby. Two Operatives are required on weekends between 8.00am and 8.00pm to meet the requirement to respond to at least 95% of calls within two hours. A single first response fitter is adequate for the hours outside of the peak times, on weekends, and on public holidays.

After normal hours on weekdays First Response is carried out using a First Response Operative available for an afternoon shift between 3.30pm to midnight and then on call between midnight and 7.30am. A second Operative works a shorter shift to cover peak time between 4.00pm and 9.00pm, a third Operative is on backup standby between 4.00pm and 9.00pm to cover contingencies such as increased calls or to back up one of the other operative if they are required to remain on the site of a Class 1 leak until a Field Repair Crew arrive.

The majority of after-hours public reported calls are meter related gas leaks which are expected to not only continue but increase as low pressure cast iron and unprotected pipe in the Network is replaced with high pressure polyethylene.

Current Practice: Field Repair Crew Standby During Weekdays

In response to the issue of fatigue and its impact on the safety of Field Crews, Envestra has already implemented changes to ensure an effective 24/7 response, however, this is not sustainable in the medium to long term given the small number of crews on rotation, the age and physical condition of workers. The current practice is for a field repair crew to have the day off before they commence an afternoon shift from 3.30pm to midnight, the crew then remains on standby from midnight to 7.30am, giving a maximum of 16 continuous hours.

Current Practice: Field Repair Crew Standby Weekends

During weekends and on public holidays two crews are required to be on call to cover leaks that occur due to third party work in the street or on private property. These leaks can either be quick to repair / make safe or complicated, lasting up to 16 hours and possibly preventing the crew from responding to any other leaks that may occur that day.

The current practice entails one crew being scheduled to work for 12 hours during the day. A second crew is on call for 24 hours, however a procedure is in place requiring that the second crew only be called prior to its allocated staring time if the event is a major leak/ incident or if the number of leaks exceeds the ability of the first crew to attend in a reasonable time. This practice is not good industry practice as it is possible for the second crew to be called out in the first 12 hours, thereby making it possible for that crew to exceed the 16-hour maximum, placing the second crew at risk of fatigue either on the job or while travelling.

Envestra’s proposed standby arrangements for both First Response and Field Repair crews recognises that the current arrangement is a short term fatigue management solution and is not sustainable in the long term and a more suitable standby model is required.

A significant issue effecting the current standby arrangement is the limited number of crews available to rotate through the 24-hour 7-day roster. The current system relies on all personnel being available and creates difficulty when personnel are on annual leave, long service leave and sick leave. Additionally, the age profile of current personnel is such that at least 14 of these field workers are aged in their late fifties and early sixties, resulting in an enhanced risk of worker fatigue and injury, as well as an increased overall safety risk in operations.

The additional crews proposed in the business case will allow fatigue to be managed, and shifts to be spread out, thereby helping to maintain a fit, healthy and satisfied workforce. This will in turn assist in retaining experienced personnel, maintain efficiency and assist in training and knowledge transfer to new personnel in the technical aspects through on the job training.

Envestra iterates that the current process, as reflected in the base year opex, is not sustainable in medium to long term. Rule 91 stipulates that operating expenditure must be such as to achieve “the lowest sustainable cost of delivering pipeline services”. Hence Envestra believes that its step change is consistent wit the National Gas Rules.

Furthermore, rule 91 stipulates that operating expenditure must be “in accordance with accepted good industry practice”. By disallowing the proposed expenditure, the AER is inferring that it believes that:

1. the procedures currently in place are accepted good industry practice; and
2. the approved Code of Practice for Working Hours does not constitute good industry practice.

Consequently Envestra believes that the AER has erred in its assessment.

Alternative Options

In response to WC’s view that the cost of alternatives had not been considered, Envestra contends that the Business Case S48 did explain the alternative of contractors to replace direct labour. The cost of contracting was considered by Envestra taking into account the current cost of contractors undertaking standby work in both First Response and Field Repair.

The alternative took account of the fact that contractors in this area in SA are currently having trouble retaining personnel for normal day activities, requiring APA to continually retrain contractor personnel to maintain the number of skilled gas workers on gas assets. In addition, contractors providing personnel for after hours work would subsequently lose productivity of their crews on the day following the standby, if required to work, and APA would still be obliged to prevent working in excess of 16 continuous hours because of significant fatigue/safety issues already discussed.

In contrast, the direct labour personnel carrying out standby duties are long term employees, many with over 20 year service. The main issue with APA personnel moving forward is the older age profile, loss of personnel due to retirement or long term injuries from wear and tear, and an insufficient number to maintain an adequate response in a timely and safe way.

The option of using contractors to perform after hours standby duties was considered. It was identified that the contractor would need to employ a minimum of 12 personnel and purchase similar trucks and equipment to APA’s existing Field Repair crews. Considering the skill gaps, training required, the remuneration a contractor would be required to offer personnel to increase their workforce and purchase vehicles and equipment for a long term contract, this option was determined to be more costly.

Additionally it would take time for contract crews to develop the skill, knowledge and experience required to safely respond to gas leaks. Their technical knowledge and experience would only be gained by rotating contract crews paired up with direct labour crews to acquire skills and develop the necessary experience. This leads to inefficiency and increases the cost of repairs, training and supervision.

## Summary

Envestra considers that the AER Draft Decision on Envestra’s proposal to employ additional standby crews is unreasonable on the basis that:

1. APA, under the Occupational Health & Safety Welfare Act 1986 part 3 section 19.1(a), has an obligation as far as is reasonably practicable to provide a safe working environment and safe systems of work;
2. Envestra as owner and APA as operator both have a duty of care to consumers, the public, emergency services, the OTR and employees to maintain a safe, reliable and efficient afterhours response to gas leaks in the network;
3. The mains replacement program does not alter, but in fact increases the need for Envestra to maintain and provide an ability to respond to reported escapes/incidents on a 24 hour seven days a week basis;
4. The number of crews required to perform an efficient, effective and safe standby 24 hours, seven days a week, is currently insufficient and although coping in the short term is not sustainable in the medium to long term.
5. To maintain an after hours response, consideration must be given to fatigue of personnel while either working on assets, standing by, or being available to work and travel.
6. The approved code of practice for working hours is relevant and should be followed unless there is another solution which achieves the same or better standard of health and safety. Codes of practice are approved under section 63A of the 1986 OH&S Act.
7. Envestra recognise that previous standby arrangements were not conducive to reducing fatigue levels in personnel and steps were taken in late 2010 to improve this risk by changing the working hours and introducing shifts. Prior to the changes in 2010, standby arrangements resulted in crews working up to and including 24 hours continuously.
8. The project cost estimates presented by Envestra are based on current costs of establishing and maintaining a sustainable after-hours standby based on risk assessments using the working hours code of practice.
9. Envestra has adopted a prudent, efficient standby proposal and transparent estimating methodology, as set out in Business Case S48.

Envestra therefore believes that the costs set out in Business Case S48 are prudent and efficient and compliant with rule 91.

# Level of UAFG

## AER Draft Decision

The AER’s Draft Decision on the level of UAFG is consistent with the view of its consultants, WC. This view was that the level of UAFG should be amended on the basis that:

1. the 9% rate of network deterioration used in Envestra’s calculation is not supported by the leak report charts in the Mains Replacement Plan;
2. irrespective of the above point, WC could not reconcile Envestra’s volumetric estimates of future UAFG, suggesting Envestra’s calculation was flawed. WC proposed a revised calculation methodology; and
3. the 9% rate of deterioration was unrealistic with WC proposing a “nominal” average of 4.7% representing an average between 0% and 9.4%.

The net effect of changes proposed by WC was that UAFG in 2011/12 will be 2130 TJ, falling to 1206 TJ in 2015/16, compared to Envestra’s submission of 2193 TJ to 1626 TJ [c-i-c] for the same period.

## Envestra Response

The analysis of UAFG is a complex issue. Envestra believes that there are two key issues relating to the analysis undertaken by WC, particularly that:

1. WC mistakenly took the view that a correlation should exist between the number of leaks (either found by Envestra or reported by the public) and UAFG levels; and
2. replacement of a leaking main results in an immediate reduction (i.e. no time lag) in the amount of UAFG payments that Envestra is required to make in respect of market settlements for gas. This led to WC commenting that “we are not able to reconcile Envestra’s volumetric estimates of UAFG with the proposed rate of replacement of mains.[[28]](#footnote-28)

These issues are dealt with in more detail below.

## Deterioration Rate

Underpinning the AER decision on UAFG is the WC view that the rate of deterioration of the network, as determined by Envestra, is incorrect. This view was based on a belief that the rate of deterioration of the network should correlate to the rate of leak reports:

*“This implies a rate of deterioration (and thus of increased leakage) of 9.48%.*

*However, the leak report charts in the Mains Replacement Plan were not considered by us to support the contention of an increasing* ***rate*** *of leakage as asserted by Envestra, although that may be the case or could become the case over time.”[[29]](#footnote-29)*

However, as discussed in section 4.4.4 of the Mains Replacement Plan, the vast majority of UAFG is associated with “micro” leaks from over 500,000 cast iron joints, most of which are not sufficiently large to be reported by the public or detected by the settings used for leakage survey. In addition, the slow dissipation through predominately clay soils results in stripping of odorant from the gas making it difficult for gas to collect in sufficient quantities to be detected by the public. Reported leaks are those that are sufficiently large and vent in areas where they will be noticed by the public or, which have not diffused to the extent that they can be picked up by leak detection equipment.

As there are various other mechanisms that also impact the sensitivity of leak reports (e.g. wind velocity, soil dampness), one should not expect a close correlation between increasing UAFG and increasing leak reports/repairs. Hence, there is no reason to expect, as WC did, that a direct correlation between the 9% deterioration rate and reported/repaired leaks exists.

Envestra’s 9% deterioration rate is based on analysis of actual historic data, where a 5% annual increase in UAFG has been observed over the last 10 years. Over the same time, approximately 4% annual mains replacement was undertaken, suggesting an underlying network deterioration of 9%.

While leaks reported have not increased to the same extent, they have increased, on average, by about 2.5% per year. Hence, even by WC’s own assertion (i.e. relying on an incorrect assumption), given the replacement rate of 4% per year, this would imply that the deterioration rate at a minimum would be 6.5%, and not zero.

Envestra considers that the network deterioration rate presented in the MRP is well founded, rigorous and not influenced by assumptions, having been based on long term (10-year) historic trends. On the other hand, WC has suggested a 4.7% escalation rate based on an average of:

(a) an upper bound of 9.4% (WC straight line derivation from Envestra data); and

(b) a lower bound of 0%.

The lower bound of 0% has no basis, engineering or otherwise, as suggested by the following reasoning:

*“We then re-calculated the reduction in UAFG, assuming a nil deterioration rate (rate of increase in leakage)”[[30]](#footnote-30)*

By assuming a lower bound of 0%, WC is inferring that old cast iron leaking mains do not deteriorate over time. This, in Envestra’s view, lacks logic and infers that:

(a) if Envestra did not replace any mains, the level of UAFG would remain static. This is contrary to all evidence presented. That evidence has led to the obligation imposed upon Envestra by the Office of the Technical Regulator and the Essential Services Commission of South Australia, requiring Envestra to replace mains in order to reduce the level of UAFG; and

(b) aged cast iron and unprotected steel mains have an indefinite asset life, which is clearly not the case.

Envestra therefore considers that the WC estimate, as used by the AER in its Draft Decision, is contrary to the requirements of rule 74 of the NGR for a forecast or estimate to:

* be supported by a statement of the basis of the forecast or estimate (rule 74(1)); and
* arrived at on a reasonable basis (rule 74(2)(a).

Envestra therefore submits that its rate of deterioration of 9% is appropriate and compliant with the rules.

## UAFG Impact Time Lag

As referred to in section 6.1 above, WC indicated that they “were not able to reconcile Envestra’s estimates of UAFG with the proposed rate of replacement of the mains”[[31]](#footnote-31). Envestra believes this reflects a lack of recognition by WC that there is a significant time lag between the physical activity of replacing a leaking main and the time at which Envestra recognises the commercial benefit of reduced UAFG.

WC assumed an instant benefit, which is true from an engineering perspective, but the full commercial benefit to Envestra is not realised until the flow-on effects of meter readings and market settlements result in a reduced bill for UAFG for Envestra. It is this commercial benefit that must be reflected in the Access Arrangement (and not the engineering benefit), since the level of UAFG in the Access Arrangement is used in determining the forecast for the cost of purchasing gas. As detailed in the graph below, the commercial benefit does not fully accrue to Envestra until 26 months after a leaking main has been replaced.

Envestra pays for UAFG gas in terms of a Moving Annual Total (MAT) UAFG position of the elapsed year, rather than on a forecast reducing actual basis. For example, if the UAFG level is 2 PJ in year one, then this is “deemed” to be the level in year 2 for commercial settlement. This means that the deemed position is always overstated for the year in which mains replacement activity is undertaken, as well as for the following year, taking a full 12 months before the deemed position is re-set to the correct level.

However, in addition to this, the Retail Market Rules (sections 229-245) stipulate that the UAFG daily position, as reported by the Australian Energy Market Operator (AEMO), can be revised for up to 425 Days after the deemed position is reset. Envestra therefore does not undertake what is known in the industry as a “UAFG wash-up” (to recover the difference between the final actual UAFG result and the deemed position) for a further 425 days (14 months). This means that Envestra does not accrue the commercial benefit for 26 months from the date on which the mains replacement activity was undertaken. This is depicted in the following diagram.



Impact lag of UAFG reduction before fully recognised in determining the deemed position - 12 months

Immediate reduction in actual monthly UAFG

Financing impact arising from delay in full settlement of actual UAFG position - 26 months (14 months after deemed position re-set)

In its cost forecast, Envestra has assumed a 12-month time lag in lieu of the 26-month time lag. This overstates the benefit to Envestra, and therefore represents an under-recovery of costs. However, given that Envestra has historically used this assumption and based its submission on this parameter, Envestra does not seek an amendment in this respect.

## Summary

The level of UAFG forecast by WC and adopted by the AER is based on an assumed methodology that is not consistent with the commercial settlement of UAFG, and which therefore does not result in an estimate that reflects the forecast cost of UAFG gas for the network. The AER decision on this matter therefore does not comply with rules 74 and 91 of the NGR. Envestra maintains that (in the original submission) it has forecast the level of UAFG on a sound basis and in a manner that is compliant with the rules.

# Insurance Premiums Real Increases

## AER Draft Decision

The AER rejected Envestra’s forecast increases in insurance costs (as provided by the Marsh report (Appendix A to Business Case S62)) because:

1. the AER considered that the Marsh report did not demonstrate a sufficient correlation between the general forecasting assumptions and the year by year forecast market cycle premiums for insurance;
2. the AER considered that the historical trends in property insurance prices did not support the forward looking forecast;
3. no supporting information was provided in relation to the market cycle premium forecasts for directors and officers insurance; and
4. in relation to public liability insurance, the AER believed there was insufficient detail to reconcile a forecast short term flat market with annual increases of 10%.

## Envestra Response

Envestra re-engaged its insurance broker, Marsh (Marsh Pty Ltd), to address the AER’s issues. In their report to Envestra (see Attachment 6-12), Marsh explain their forecasting methodology and where they believe Australia, and hence Envestra, currently lie in the insurance “market cycle”.

Additionally, they provide updated forecasts for real increases in insurance premiums as a result of the following major factors since their first report in August 2010, namely:

* the flooding in Queensland and Victoria;
* the fires in Gippsland and Perth;
* cyclones in Darwin, North Western Australia and Northern Queensland;
* the earthquake in Christchurch; and
* earthquakes, tsunami and nuclear crisis in Japan.

Details of the resultant forecasts are provided in the revised business case, Attachment Q62A.

# Business Interruption Insurance

Envestra’s original AAI proposal was predicated upon the terms and conditions under which it proposed to provide services to network users. In the Draft Decision, Amendments 13.29 and 13.30 require Envestra to amend clauses 27.6 and 27.7 of the General Terms and Conditions so that Network Users have the benefit of the consequential loss exclusion (clause 27.6) and the cap on liability (clause 27.7).

Envestra does not agree with these amendments, for the reasons detailed in Attachment 16-1 (see page 16, Draft Decision Response: Non-Tariff Components). However, if the amendments were made, it would be necessary for Envestra to carry business interruption insurance to cover itself against business interruption.

Envestra has sought the prudent and efficient cost of insuring for business interruption (see Business Case S62A). This additional cost (as set out in the table below), would arise directly from the AER’s decision if the Draft Decision was to remain unchanged in the Final Decision. The businesses interruption insurance is therefore a cost that would need to be included in the allowed opex for the forecast period.

|  |
| --- |
| **$k real 10/11** |
|  | **2011 -12** | **2012 -13** | **2013 -14** | **2014 -15** | **2015 -16** | **Total** |
| BI Insurance | [c-i-c] | [c-i-c] | [c-i-c] | [c-i-c] | [c-i-c] | [c-i-c] |

# Base Year Regulatory Account Actuals

Envestra selected 2009-10 as the base year for forecasting its opex as this represented the most recent year for which the AER would have full year information when conducting its review. However, in order to prepare its revisions by 1 October 2010, it was necessary for Envestra to rely on 9 months of actual information and 3 months (April to June 2010) of forecast information.

In its South Australian Access Arrangement proposals submitted to the AER on 1 October 2010, Envestra proposed that the AER should replace the operating expenditure forecasts once actual information for 2009-10 was available from the audited Regulatory Accounts (refer section 6.3 of the SA AAI). Envestra submitted its South Australian 2009-10 audited Regulatory Accounts to the AER on 29 October 2010.

An update of table 3.3 of the AAI is set out below. The actual operating expenditure for 2009/10 is 2.1% higher than that forecast by Envestra at the time of preparing its proposed revisions to its Access Arrangement. Envestra submits that this lower base year opex for 2009/10 of $56.97 million should be used by the AER in its Final Decision. The main driver of the increase relates to leak repairs, reflecting the wetter than expected conditions in the last quarter of the year.

**Updated Table 3.3 Opex for Second Access Arrangement Period**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **$m (2009-10)** | **2006-07****actual** | **2007-08****actual** | **2008-09****actual** | **2009-10****actual** | **2010-11****forecast** | **Total** |
| Operating & Maintenance | 30.63 | 29.54 | 33.56 | 35.48 | 35.92 | **165.13** |
| Administration & General | 4.69 | 8.11 | 7.68 | 6.15 | 6.12 | **32.75** |
| Network Development / Marketing | 6.17 | 3.68 | 1.21 | 4.42 | 7.20 | **22.67** |
| FRC Operating Costs | 4.69 | 3.86 | 2.27 | - | - | **10.82** |
| UAFG | 8.13 | 10.56 | 10.60 | 10.93 | 10.93 | **51.14** |
| **Total** | **54.32** | **55.74** | **55.32** | **56.97** | **60.16** | **282.51** |

**Note: From 2009-10, “FRC” costs are treated as “business as usual” and are included in “Operating & Maintenance” in the Regulatory Accounts.**

# Survey of Domestic Regulators (S03)

The AER has decided that contingency amounts should be removed from the forecast cost. The issue of contingency is dealt with in detail in Attachment 7-7 of this AAI (SA Capex – Response to Draft Decision). In short, Envestra submits that:

1. WC and the AER have misconstrued the meaning of contingency in respect to the way it has been applied by Envestra; and
2. it is appropriate to allow a level of contingency.

In accordance with Attachment 7-7 (and as set out in Appendix A to that attachment), the level of contingency has been reduced by 25%, from $78k to $20k. This results in the following cost for this project.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **($k opex)** | **2011-12** | **2012-13** | **2013-14** | **2014-15** | **2015-16** |
| Original submission Cost | 468 | - | - | - | - |
| Revised Cost | 449 | - | - | - | - |

# Calculation Error in the Draft Decision

In its Draft Decision, the AER adopted the WC recommendation in concluding that Envestra’s costs should be “amended to include only the direct and administration costs”[[32]](#footnote-32). WC recommended a reduction in cost, in line with their recommendation, of $60k per year (see table 6.7, page 62 of the WC report), reflecting the step change (from the base year) of direct and administration costs of $76k per year.

However, Table 8.13 (p168) of the Draft Decision shows a reduction of $90k per year. Envestra accepts the Draft Decision intent as set out in the WC report and page 164 of the Draft Decision, and has reflected the correct number in its revised AAI.

# Summary

Envestra’s original AAI contained the following forecast (as per Table 6.1) of opex.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Opex Summary****$m (real 09-10)** | **2011-12** | **2012-13** | **2013-14** | **2014-15** | **2015-16** | **Total** |
| Operating & Maintenance(includes FRC) | 32.84 | 33.40 | 34.01 | 34.49 | 34.92 | **169.66** |
| Admin & General | 8.49 | 8.67 | 8.88 | 9.07 | 9.23 | **44.35** |
| UAFG | 13.91 | 13.89 | 13.00 | 11.82 | 10.31 | **62.92** |
| Network Development | 7.82 | 8.14 | 8.46 | 8.79 | 8.70 | **41.91** |
| Non Base Year Costs | 3.72 | 3.43 | 2.87 | 2.37 | 1.68 | **14.08** |
| Incremental Growth | 0.20 | 0.37 | 0.54 | 0.73 | 0.92 | **2.76** |
| **Total $m**  | **66.98** | **67.90** | **67.76** | **67.28** | **65.76** | **335.69** |

Taking into account the Draft Decision and the issues discussed in this document, the following table sets out Envestra’s revised opex in this revised AAI.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Opex Summary****$m (real 09-10)** | **2011-12** | **2012-13** | **2013-14** | **2014-15** | **2015-16** | **Total** |
| Operating & Maintenance(includes FRC)  | 37.41  | 38.92 | 40.20 | 40.55 | 40.86 | **197.94** |
| Admin & General | 6.09 | 6.06 | 6.02 | 5.99 | 5.96 | **30.12** |
| UAFG | 12.79 | 12.77 | 11.95 | 10.87 | 9.48 | **57.86** |
| Network Development | 7.82 | 8.13 | 8.44 | 8.76 | 8.67 | **41.82** |
| Non Base Year Costs | 2.96 | 2.33 | 1.89 | 1.35 | 0.74 | **9.27** |
| Incremental Growth | 0.12 | 0.21 | 0.32 | 0.42 | 0.54 | **1.61** |
| **Total $m**  | **67.17** | **68.42**  | **68.82** | **67.96** | **66.25** | **338.62** |

Section 24(2) of the National Gas Law states that a service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in providing references services and complying with a regulatory obligation or requirement or making a regulatory payment.

Rule 91 requires operating expenditure to be such as would be incurred by a prudent service provider acting efficiently, in accordance with good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.

Rule 74(2) requires forecasts to be best estimates on a reasonable basis.

For the reasons set out above in this submission, Envestra submits that its revised operating expenditure forecasts meet these criteria.

1. Pacific Economics Group, “Opex Rate of Change and Productivity: Response to Meyrick and Associates Reports” page 24-25. [↑](#footnote-ref-1)
2. Draft Decision “Proposed Revisions to the Access Arrangement for the South Australian Gas Distribution System” Page 152. See also page 151 and Final Decision Page 151. [↑](#footnote-ref-2)
3. KPMG Econtech “Assessment of the AER’s Draft Decision on Labour Cost Escalation: Victoria” 13 July 2010. [↑](#footnote-ref-3)
4. As shown by the example of Professor Borland, if a business starts off with only low skill workers paid $100 and then after 1 year replaces half of these workers with high skill workers paid $200, its average labour cost will have increased to $150 per worker. LPI, which does not take account of changes in the composition of employment, will estimate the costs of the firm as $100/worker. This will clearly understate the cost of labour to the firm. [↑](#footnote-ref-4)
5. Paragraph 34. [↑](#footnote-ref-5)
6. Page 3. [↑](#footnote-ref-6)
7. Page 4 [↑](#footnote-ref-7)
8. Financial Capital Maintenance [↑](#footnote-ref-8)
9. Page 5. [↑](#footnote-ref-9)
10. BIS Shrapnel 2011 Section 5.1.1 [↑](#footnote-ref-10)
11. BIS Shrapnel 2011 Section 5.4.1. [↑](#footnote-ref-11)
12. Access Economics 2009, ‘Forecast Growth in Labour Costs’, Report Prepared for the AER, 16 September 2009. [↑](#footnote-ref-12)
13. Access Economics 2010, ‘Forecast Growth in Labour Costs: March 2010 Report’, Report Prepared for the AER, 16 March 2010. [↑](#footnote-ref-13)
14. Access Economics “Forecast growth in labour costs” – 13 December 2010, table 10.1, pages 67 and 68 [↑](#footnote-ref-14)
15. Access Economics “Forecast growth in labour costs” – 16 March 2010, table 6.5, page 69 [↑](#footnote-ref-15)
16. Access Economics “Forecast growth in labour costs” – 16 September 2009, table 9.4, page 66 [↑](#footnote-ref-16)
17. Paragraphs 30-31 [↑](#footnote-ref-17)
18. Paragraph 33. [↑](#footnote-ref-18)
19. At the recent **3rd Annual Coal Seam Methane World Australia** conference in Brisbane (1-3 March 2011), participants were told that Australia will need to invest $20b in coal seam methane to grow the market. This level of investment will swamp investment by gas distribution companies, and apply significant upward pressure on labour rates. [↑](#footnote-ref-19)
20. Economic Insights 2011a page 9. [↑](#footnote-ref-20)
21. AER DD SA [↑](#footnote-ref-21)
22. BIS Shrapnel, Real Cost Escalation Forecasts to 2015/16 – Queensland and South Australia [↑](#footnote-ref-22)
23. Page 10. [↑](#footnote-ref-23)
24. BIS Shrapnel Report (March 2011) [↑](#footnote-ref-24)
25. Origin Energy provided this data to Envestra. Major air conditioning equipment suppliers submit their sales figures to an independent bureau that collates the numbers on a confidential basis. They then issue a report to each subscriber showing sales for the total industry. This information is used to determine the market share of each supplier. Origin is a participant in this scheme. [↑](#footnote-ref-25)
26. SA AAI Attachment 6-2 [↑](#footnote-ref-26)
27. The only exception would be if a retailer was over-contracted in gas (and so was in take or pay difficulties – that is was committed to pay for gas whether or not it took the gas) and therefore was willing to sell at cost or at a loss to assist it manage take or pay risk. [↑](#footnote-ref-27)
28. P27, WC Report [↑](#footnote-ref-28)
29. P26, WC Report [↑](#footnote-ref-29)
30. P29, WC Report [↑](#footnote-ref-30)
31. P27, WC Report [↑](#footnote-ref-31)
32. P164, Draft Decision [↑](#footnote-ref-32)