

Level of Overheads

March 2011

Envestra



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00	Original	11 March 2011	John Dyer
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02	Draft to Final	21 March 2011	John Dyer

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16 March 2011

Mr Ralph Mignone
Manager Engineering & Technical Regulation
Envestra
81 Flinders Street
Adelaide, South Australia 5000
Sent via email - Ralph.Mignone@envestra.com.au

Dear Ralph

Level of Overheads

As requested, PB has undertaken a review of the information relating to Envestra's approach to the recovery of overheads on forecast capital expenditure, and this letter sets out our findings and opinions in relation to the Australian Energy Regulator's (AER) recent decisions regarding this matter.

Background and scope

In October 2010 Envestra lodged its proposed Access Arrangements and supporting Access Arrangement Information (AAIs)¹ documents for the South Australian and Queensland gas distribution networks with the Australian Energy Regulator (AER) in accordance with Rule 52 of the National Gas Rules (NGR). The AER and its consultants Wilson Cook undertook a review of Envestra's proposals, and in February 2011 the AER issued its Draft Decisions² rejecting Envestra's access arrangement proposals. Amongst other matters, in its Draft Decisions the AER rejected Envestra's forecast of capital overhead recovery. Envestra has until 23 March 2011 to respond to the matters raised in the AER's Draft Decisions.

Envestra has determined that it will respond to the AER's Draft Decisions by providing further information and seeking to clarify and further support its capital overhead forecast. Envestra has engaged PB to conduct a review of the information relating to capital overhead costs and to form an opinion on the approach taken to justify overhead costs.

¹ Envestra. 1 October 2010, *South Australian Access Arrangement Information Public Version*.
Envestra. 1 October 2010, *Queensland Access Arrangement Information Public Version*.

² Australian Energy Regulator. February 2011, *Draft Decision, Envestra Ltd, Access arrangement proposal for the SA gas network, 1 July 2011 – 30 June 2016*.
Australian Energy Regulator. February 2011, *Draft Decision, Envestra Ltd, Access arrangement proposal for the Qld gas network, 1 July 2011 – 30 June 2016*.

Envestra's proposal

In its SA and Qld AAls, Envestra identified that overheads had been applied to forecast capital expenditure at a rate of 20% except for mains replacement and augmentation expenditure³ where a lower overhead rate of 10% was applied. 20% was adopted as this is closely aligned with the historical rate of overhead incurred on capital expenditure. 10% was applied to a portion of forecast capital expenditure as recognition that the expanded capital program⁴ in the forecast period would be unlikely to incur overheads at the same rate as historical capital expenditure.

In response to questions from the AER, Envestra has provided further detailed information to the AER on the nature and composition of overheads. This includes a detailed breakdown of capitalised overheads by year and capital expenditure category, along with a breakdown of the composition of actual capitalised overheads incurred for the 2009/10 year.

The AER's findings

In its Draft Decisions⁵ the AER considered that:

Envestra's approach to the recovery of overheads is too simplistic and may tend to overstate overhead costs over time. Overheads costs are not likely to increase in direct proportion to underlying capex. Instead overhead costs would only partly relate to the level of capex incurred by Envestra as these overhead costs would contain certain fixed costs that should not increase in direct proportion to capex over time.

The AER accepted the composition of Envestra's capital overheads and that the costs are those that would be incurred for the delivery of pipeline services⁶. Further, the AER accepted that Envestra's overhead costs are not double counted⁷.

The AER rejected the growth in capitalised overheads proposed by Envestra⁸ and agreed with the view of its technical consultants Wilson Cook, that a significant proportion of overheads would be of a fixed nature and expected to decline as a proportion of total capex over time. In rejecting the capitalised overheads proposed by Envestra, the AER considered that an appropriate alternative is to use overhead costs incurred in 2009–10 as a basis for costs in the forecast period.

We note that the capitalised overheads forecast by Envestra do decline as a proportion of total capex due to the 10% overhead rate applied to forecast mains replacement and augmentation expenditure. While this proportional reduction in capitalised overheads is not discussed in the AER's discussion of the growth

³ *Mains replacement and augmentation expenditure is approximately 50% of the total forecast capital expenditure over the 2012-2016 period.*

⁴ *Envestra's historical capital expenditure has been approximately \$40m per annum; the forecast for the 2012-2016 period is approximately \$100m per annum.*

⁵ Australian Energy Regulator. February 2011, *Draft Decision, Envestra Ltd, Access arrangement proposal for the SA gas network, 1 July 2011 – 30 June 2016. p. 41*
Australian Energy Regulator. February 2011, *Draft Decision, Envestra Ltd, Access arrangement proposal for the Qld gas network, 1 July 2011 – 30 June 2016. p. 34*

⁶ *ibid (SA) p. 42 (Qld) p. 35*

⁷ *ibid (SA) p. 43 (Qld) p. 36*

⁸ *ibid (SA) p. 43 (Qld) p.36*

of overhead costs, we assume that the AER considers that the reduction proposed by Envestra is less than the reduction in overhead that the AER would expect given the increasing size of the forecast capital program.

Regulatory approaches to overheads

Three approaches to the calculation of forecast capitalised overheads appear to have been accepted by economic regulators in Australia:

- Forecast capitalised overhead based on historic overhead proportion;
- Forecast capitalised overhead calculated as a stand-alone cost (generally utilising a ‘base-year’ adjusted for growth factors); and
- Forecast capitalised overhead based on historic overhead proportion applied to part of the capex program and applying an adjusted overhead proportion to the remainder (expanded portion) of the program.

The third of these approaches was used by Envestra in its proposals. The same approach was utilised by ESCV in its 2008 GAAR where the Commission considered⁹ that:

its proposed draft decision for SP AusNet that includes a base overhead rate of 15 per cent for direct (non IT) capital expenditure up to \$40 million and a 10 per cent rate thereafter is appropriate and reasonable.

Further Envestra analysis of overheads

Since the publication of the AER’s Draft Decisions, Envestra has carried out further analysis on the nature of overheads incurred. This has involved estimating the fixed and variable proportions of each overhead component based on history as shown in Table 1.

Table 1 Capital overhead components

Capital overheads			
Overhead component	Description	Fixed proportion	Variable proportion
Operations Management and Administration	Includes the cost of senior management involvement in the management of capital projects and the costs involved in providing associated administrative support.	70	30
Planning & System Design	Includes the costs in providing network analysis, design, mapping and costing support in relation to network extensions and modifications.	0	100
Procurement and Fleet	Includes the procurement costs and maintenance of vehicles involved in capital activities.	0	100

⁹ Essential Services Commission, March 2008, *Gas Access Arrangement Review 2008-2012*. p. 415

Capital overheads			
Overhead component	Description	Fixed proportion	Variable proportion
Technical Assurance	Includes the costs of providing: <ul style="list-style-type: none"> • Medium to high-level technical audits; • Training with respect to field operations; • Development, conduct and maintenance of competency-based skills system; • Risk assessments; and • Regulatory compliance assurance. 	50	50
Network Engineering	Includes the costs of providing design and engineering of transmission pressure pipelines and non-standard gas distribution assets such as major I&C meter stations, regulator sets, etc	70	30
Support	Includes the indirect costs in the business that support the capitalised overhead departments above (e.g. Finance, IT, HR, HSE and Insurance).	100	0

Assigning overheads into fixed and variable components assumes that some components of overhead do not vary with the size of the capital program delivered (fixed components) and other components do vary with the size of the capital program (variable components).

We have been asked to comment on the assignment of each of the components of overhead costs.

PB view of overhead cost components

PB has undertaken a number of studies of overheads and rates of overhead for Australian energy network businesses. One of the inherent difficulties in analysing overheads is the definition and allocation of overheads, as each business takes a different approach to overhead classification and allocation. For example, one business may capture the time of network planning engineers and allocate the time directly to projects as a direct cost, while another business will allocate the total network planning cost to overhead and then reallocate that cost to capital projects via an overhead allocation process. Some components of overhead, such as Insurance costs, are frequently allocated to capital via a capital overhead allocation process; others such as Procurement may be allocated to the cost of materials rather than via a capital overhead allocation process. These differences in allocation methodology and in overhead definition make the comparison of overheads at a component level problematic.

Given the difficulties in comparing overheads between companies we have reviewed the likely components of overhead in each of the categories defined by Envestra and have made observations on the nature of the overhead and the proportion of each component that might be fixed or variable.

Operations Management and Administration

Envestra has nominated a fixed proportion of 70% and a variable proportion of 30% to this overhead component. The activity includes the cost of senior management and administrative support.

We consider that the assignment of 30% of this expense category as variable is reasonable and could potentially understate the variable component. While the number of senior managers is unlikely to change as a result of an increasing capital program, we consider that there is likely to be some change in the way that the capex program is managed that will result in additional overhead. For example, organisations with small capex programs do not generally incorporate dedicated program management resources or capital project initiation coordinators. As the size of capital programs grows, the need for program managers and project initiation coordinators increases and, as these resources work across the entire capital program, their cost is generally allocated to overhead. The additional cost of program management and other activities could result in Operations Management and Administration costs increasing at more than 30% of the total activity cost.

Planning and System Design

Envestra has nominated a variable proportion of 100% to this overhead component.

Planning and design works are directly related to the size of the capital program but the costs tend to be allocated to capex via overhead, as these costs are generally incurred in advance of the establishment and approval of the individual capital projects. We consider that the variable proportion of this expense category is likely to be close to 100%. There may be some aspects of this cost that are not directly proportional to the size of the capital program (i.e. they are fixed) but these are likely to be incidental. For example, a single network augmentation plan is required and, while the effort required to prepare the plan will be proportional to the size of the capital program, only one plan is required.

Procurement and Fleet

Envestra has nominated a variable proportion of 100% to this overhead component.

We consider that procurement and fleet activities are strongly correlated with the size of the expenditure program and therefore the assignment made by Envestra is reasonable. For example, fleet size is directly proportional to the staff and project volumes and these, in turn, are proportional to the expenditure programs. Similarly, the volume (and consequent cost) of procurement activities is directly related to the volume of materials and contracts.

Technical Assurance

Envestra has nominated a fixed proportion of 50% and a variable proportion of 50% to this overhead component.

Technical assurance includes components that vary with the volume of work and components that are not likely to vary with the components of work. For example, the establishment of a competency-based skills system is only required once, and the cost will not increase with an increasing volume of work. However, the cost of auditing of the competencies will increase with the number of staff/contractors and the number of staff/contractors will increase with the volume of work. We consider that the assignment of 50% of this expense category as variable is likely to be a reasonable estimate of the variable component.

Network Engineering

Envestra has nominated a fixed proportion of 70% and a variable proportion of 30% to this overhead component.

Many engineering costs will not vary with the size of the expenditure program. For example, standard designs, once completed, are unlikely to require additional effort in order to be applied to a larger volume of activities (construction jobs). However, some costs, such as non-standards designs are likely to vary with the size of the program. While non-standard designs are generally avoided (due to the additional cost and effort required) there are times, particularly in renewal work where physical constraints may limit the use of standard designs, that on-off engineering designs are required. Moreover, in Envestra's case, where reticulation designs are involved, a considerable amount of field work and negotiation with other parties is required to adapt standard designs to actual field conditions.

While we have not reviewed Envestra's standard engineering or design practices to ascertain the extent that additional effort might be required to support an increased capital program, the assignment of 30% of this expense category as variable is likely to be a reasonable estimate of the variable component.

Support

Envestra has nominated a fixed proportion of 100% to this overhead component.

We consider that the fixed proportion of this expense category is likely to be close to 100%. There may be some aspects of this cost that are proportional to the size of the capital program i.e. variable. For example, within the HR component, recruitment costs may increase as additional staff are recruited and additional IT costs may be incurred for additional hardware/support required for additional staff.

Benchmarking

PB has carried out a benchmarking analysis of distribution businesses. Figure 1 and Figure 2 show the proportion of expenditure¹⁰ that is overhead on the y-axis and the size of annual expenditure programs on the x-axis. The data set is Australian electricity distribution businesses. Figure 1 and Figure 2 are identical except for the trend lines.

In the section above, we note the limitations of benchmarking overheads. Despite these limitations, our analysis shows a strong correlation between annual expenditure and overhead rates. i.e. where annual expenditures are high the average rate of overhead is generally low and conversely where annual expenditure is low, the average rate of overhead is generally high. While we would not use this analysis to determine an appropriate level of overhead expenditure, we do consider that the analysis can provide a useful check on the reasonableness of a proposed level of overhead.

One of the limitations of the comparison dataset is that electricity distribution businesses generally have a much larger annual expenditure program than gas distribution networks. Further, the Envestra

¹⁰ *The analysis was originally undertaken using headcount rather than expenditure. We have converted the data to expenditure using high-level assumptions of the annual volume of work attributable to headcount.*

Queensland network has particularly small annual expenditure compared with the other businesses in the dataset.

**Total Overhead
(% of Capex)**

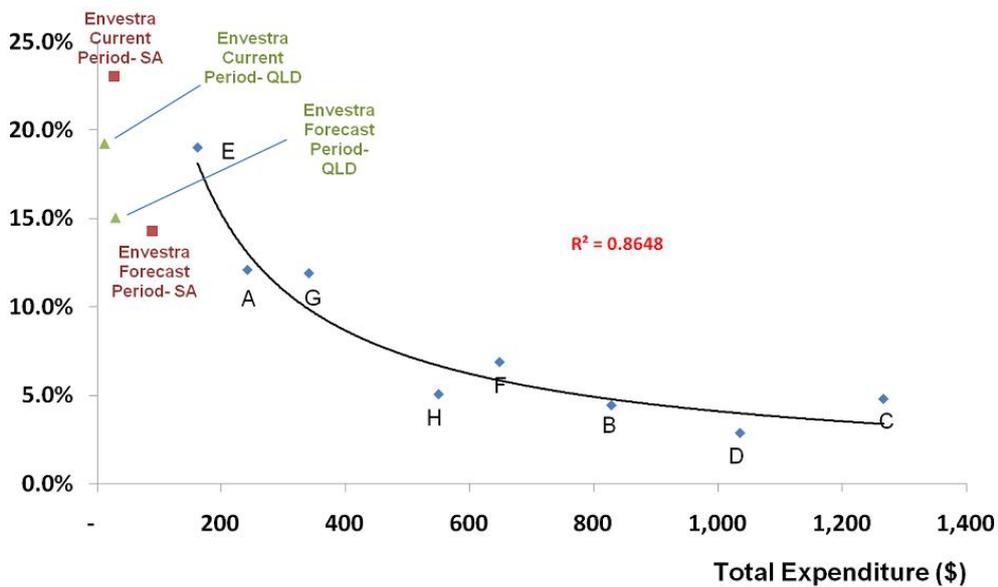


Figure 1 Overhead benchmarking (exponential trend-line)

**Total Overhead
(% of Capex)**

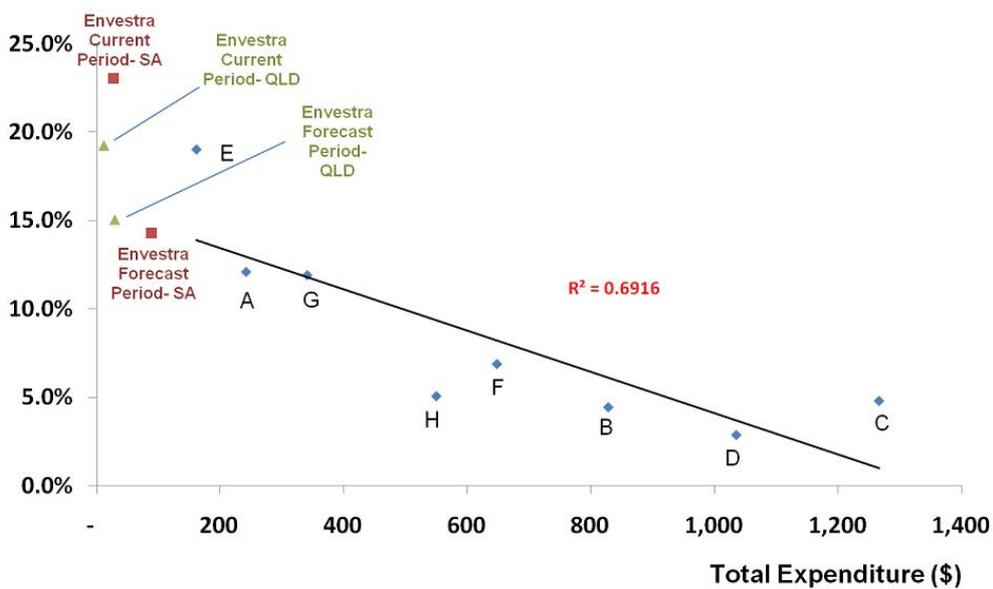


Figure 2 Overhead benchmarking (linear trend-line)

While both the current and forecast expenditures for each of the Envestra networks is small compared to the other companies represented, there are attributes that are consistent. Firstly, for both SA and Queensland the forecast period percentage overhead is lower than current period percentage overhead, consistent with an increasing annual expenditure program. Secondly, the forecast period overheads are of a level (around 15%) that would be predicted given the size of the forecast annual capital expenditure programs.

Conclusion

PB has considered the regulatory approach to overheads, the way in which Envestra has calculated overhead and has undertaken a high-level benchmark of current and forecast overheads. We conclude that the approach taken by Envestra is a reasonable approach to forecast overheads for the 2011/12 to 2015/16 period, and consider that the outcome (an average overhead rate of approximately 15% of forecast expenditure) is a reasonable estimate of overheads likely to be incurred in the delivery of the expanded capital program.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'John Dyer'.

John Dyer
Technical Executive
Parsons Brinckerhoff Australia Pty Limited