2006 REVIEW OF ENVESTRA'S GAS DISTRIBUTION ACCESS ARRANGEMENT

GUIDANCE PAPER

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ABBREVIATIONS & GLOSSARY

Abbreviations

COAG	Council of Australian Governments
CODE	*National Third Party Access Code for Natural Gas Pipeline Systems*, being Schedule 2 to the *Gas Pipelines Access (South Australia) Act 1997*, as amended from time to time
ECCSA	Electricity Consumers Coalition of SA
ENA	Energy Networks Association
ENVESTRA	Envestra Limited, owner and operator of the South Australian gas distribution system
ESCV	Essential Services Commission of Victoria
FRC	full retail contestability
GAS ACT	*Gas Act 1997* (South Australia)
GAS PIPELINES ACCESS LAW	Schedules 1 and 2 to the *Gas Pipelines Access (South Australia) Act 1997* altogether
GJ	gigajoules (10^9 joules), being a unit of energy consumption
ICRC	Independent Competition and Regulatory Commission of the ACT
IPART	Independent Pricing and Regulatory Tribunal of New South Wales
MAPS	Moomba to Adelaide Pipeline System
MDQ	the maximum daily quantity of gas taken at a particular delivery point
MHQ	the maximum hourly quantity of gas taken at a particular delivery point
NPV	net present value
OEAM	Origin Energy Asset Management
PIPELINES ACT	*Gas Pipelines Access (South Australia) Act 1997*
QCA	Queensland Competition Authority
SAIPAR	South Australian Independent Pricing and Access Regulator; the relevant regulator under the Code in South Australia until succeeded by the Commission on 1 July 2003
SEA GAS	South East Australia Gas
TJ	terajoules (10^{12} joules), being a unit of energy consumption
UAG	unaccounted for gas, being gas that is 'lost' or unaccounted for in the network, predominantly due to leakage and metering tolerances
WACC	the weighted average cost of capital (debt and equity)

Glossary

ACCESS AGREEMENT	a contractual agreement negotiated between a network user (or prospective user) and the service provider setting out the terms and conditions upon which the user may be connected to, and provided with haulage services through, a pipeline
ACCESS ARRANGEMENT	an arrangement, that has been approved by the relevant regulator, for third-party access to a covered pipeline; except where quotations are extracted from the Code, "Access Arrangement" refers to the particular arrangement applying to the South Australian natural gas distribution system and "access arrangement" refers generically to the arrangements applying to covered pipelines
ACCESS ARRANGEMENT INFORMATION	information provided by a service provider to the relevant regulator to enable network users and prospective users to understand the derivation of the elements in an access arrangement and to form an opinion as to the compliance of the access arrangement with the provisions of the Code
ACCESS ARRANGEMENT PERIOD	the period from when an access arrangement or revisions to an access arrangement take effect until the next revisions commencement date
COVERED PIPELINE	the whole or a particular part of a pipeline or proposed pipeline which is subject to the provisions of the Code, including any extension to, or expansion of the capacity of, that pipeline which is to be treated as part of the covered pipeline in accordance with the extensions/expansions policy contained in the access arrangement
DISTRIBUTION	The transport of gas through smaller diameter, lower pressure pipelines to end users and consumers
NETWORK SERVICE	a service provided by means of a pipeline, including: (a) haulage services (such as firm haulage, interruptible haulage, spot haulage and backhaul); (b) the right to interconnect with the pipeline, and (c) services ancillary to the provision of such services, but does not include the production, sale or purchasing of natural gas
NETWORK USER	a person who has either a current access agreement or an entitlement to a service as a result of an arbitration
NEW FACILITY	any capital asset constructed, developed or acquired to enable the service provider to provide network services, including any extension to, or expansion of the capacity of, the associated pipeline
OFF-RAMPS	a mechanism contained in a reference tariff policy which triggers variations in reference tariffs in the manner specified in that policy on the occurrence of a pre-defined possible but unlikely exogenous event during a regulatory period
PIPELINE	a pipe, or system of pipes, for transporting natural gas, and any tanks, reservoirs, machinery or equipment directly attached to the pipe, or system of pipes; may refer to the whole or a particular part of a pipeline or proposed pipeline
REFERENCE SERVICE	a service which is specified in an access arrangement as likely to be sought by a significant part of the market and, in respect of which, a corresponding tariff ("reference tariff") is specified in the access arrangement
SERVICE PROVIDER	in relation to a pipeline or proposed pipeline, the person who is, or is to be, the owner or operator of that pipeline
TRANSMISSION	the transport of gas through larger diameter, higher pressure pipelines from a production area into a distribution network or directly to a large consumer

1 INTRODUCTION

1.1 Background

The natural gas distribution pipeline system in South Australia owned by Envestra Limited (Envestra) is currently subject to an Access Arrangement that allows third-party users and prospective users to obtain access to certain gas pipeline services.

Key features of the natural gas industry in South Australia are summarised in the following box.

Box: Natural Gas Industry in South Australia

The natural gas industry comprises four distinct sectors: (1) exploration and production, (2) transmission, (3) distribution and (4) retailing. These sectors take natural gas from the point of extraction to the point of consumption.

Exploration and production

South Australia's natural gas is predominantly sourced from the Cooper-Eromanga basin (which straddles north-east South Australia and southern Queensland) and, more recently, the Otway basin (which lies to the south of Victoria and south-east South Australia).

Transmission

Transmission pipelines transport large volumes of natural gas under high pressure from production fields to the city gate, or to large customers along the pipeline.

The Moomba to Adelaide Pipeline System (MAPS) is a 1,185 kilometre system of transmission pipelines which services Moomba, Adelaide and regional centres throughout South Australia. MAPS is made up of the main Moomba to Adelaide trunk line and laterals.

MAPS was the only transmission pipeline transporting gas to South Australia until the commissioning of the SEA Gas pipeline in January 2004. The SEA Gas pipeline – which is jointly owned by Origin Energy, SPI and International Power – links Victoria with South Australia.

Distribution

Distribution networks transport natural gas from gate stations and reticulate it into residential houses, offices, hospitals, factories and other businesses.

The South Australian natural gas distribution system comprises the Adelaide, Barossa Valley, Berri, Peterborough, Port Pirie, Mount Gambier, Murray Bridge and Whyalla pipelines. This distribution system is owned by Envestra and operated under a service contract by Origin Energy Asset Management. Origin Energy Asset Management is a wholly owned subsidiary of Origin Energy Ltd. Origin Energy Ltd has a 17½% shareholding in Envestra.

Retailing

Retailers sell natural gas to end user consumers, including residential households, offices, hospitals, factories and other businesses.

Holders of retail gas licences in South Australia currently are: Origin Energy, EnergyAustralia, TRU Energy and AGL South Australia.

The current Access Arrangement was formally approved by the South Australian Independent Pricing and Access Regulator (SAIPAR) on 17 April 2003, pursuant to the National Third Party Access Code for Natural Gas Pipeline Systems (the Code). On 1 July 2003, the Essential Services Commission of South Australia (the Commission) succeeded SAIPAR as the local regulator under the *Gas Pipelines Access (South Australia) Act 1997* for the South Australian gas distribution system.

Under the current Access Arrangement, Envestra is required to submit to the Commission for approval revisions it proposes to make to that Access Arrangement (Access Arrangement Revisions) on or before 1 October 2005.

1.2 Preliminary consultation process

For reasons set out in an **Information Paper** published in August 2004, the Commission decided to undertake a preliminary consultation process on selected matters *prior to* Envestra submitting its proposed Access Arrangement Revisions for approval.

The Commission commenced the preliminary consultation process with the publication of an **Issues Paper** in November 2004. Interested parties had until 11 March 2005 to make initial submissions on the matters either canvassed in the Issues Paper or otherwise considered appropriate.

The Commission received eight initial submissions in response to its Issues Paper. These submissions were made by:

- AGL South Australia Pty Ltd (AGL Retail);
- Envestra;
- Energy Networks Association (ENA);
- EnergyAustralia;
- Engineering Employers Association of South Australia (EEASA);
- TXU Retail;
- the SA Minister for Energy; and
- the Electricity Consumers Coalition of SA (ECCSA).

On 11 May 2005, the Commission published a **Discussion Paper**, which developed the Commission's preliminary views on certain matters in response to the views expressed in submissions received on the Issues Paper and in light of the Commission's own analysis of the requirements of the National Gas Code. Interested parties had until 10 June 2005 to make further submissions on the options canvassed in the Discussion Paper and the Commission's preliminary views on those options.

The Commission received three further submissions in response to its Discussion Paper, from (in order of receipt):

- Envestra;

- AGL Retail; and
- ECCSA.

All submissions are accessible on the Commission's website (www.escosa.sa.gov.au).

This Guidance Paper sets out the Commission's views in light of the further submissions received and in light of its own further analysis of the requirements of the Code.

1.3 Nature and status of the 'guidance' issued in this Paper

The views expressed in this Guidance Paper reflect the discretions available to the Commission as regulator when considering whether or not to approve proposed Access Arrangement Revisions.

The Code (section 2.46) states clearly that the Commission, as the relevant regulator, may approve proposed revisions only if it is satisfied the Access Arrangement as revised would contain the elements and satisfy the principles set out in sections 3.1 to 3.20 of the Code.[1] In this way, the Code distinguishes between:

- the ***elements*** to be contained in an access arrangement; and
- the ***principles*** to be satisfied by the arrangements applying to each element.

The Commission accepts that there is no scope for possible guidance regarding the elements to be included in Envestra's Access Arrangement, as section 2.46 also states that:

> *"…The Relevant Regulator must not refuse to approve proposed revisions to the Access Arrangement solely for the reason that the Access Arrangement as revised would not address a matter that sections 3.1 to 3.20 do not require an Access Arrangement to address. …"*

The Commission acknowledges that any guidance it offers at this stage must focus on the nature of the *principles* to be satisfied with regard to each of the requisite elements of an access arrangement. For some elements, the principles stated in the Code involve interpretation by the Commission. For others, the principles are not explicitly stated and require elaboration. Hence, the Commission's guidance to Envestra focuses on clarifying, where appropriate, the principles to be satisfied by the arrangements applying to each of the relevant elements.

The guidance advanced by the Commission in this Paper is mainly in relation to both:

- the types of access arrangement revisions, if any, that the Commission might assess to be *non-compliant* with the Code's requirements, and the reasons for such views; and
- the detailed criteria or processes to be used by the Commission to assess whether particular access arrangement revisions comply with the Code's requirements.

1 Section 2.47 also effectively requires the regulator to grandfather any pre-30 March 1995 exclusivity contractual rights.

The Commission recognises that no purpose is served by it expressing a third type of view, namely regarding the respective merits of alternative arrangements that are each compliant with the Code, unless the Code assigns the task of deciding such a matter to the regulator. In the few instances where this third type of view is warranted, the Commission is guided by the relevant provisions of the Code as well as by the general objectives of the Code which, as outlined in the introduction to the Code, are to establish a framework for third-party access to gas pipelines that:

> *"(a) facilitates the development and operation of a national market for natural gas; and*
>
> *(b) prevents abuse of monopoly power; and*
>
> *(c) promotes a competitive market for natural gas in which customers may choose suppliers, including producers, retailers and traders; and*
>
> *(d) provides rights of access to natural gas pipelines on conditions that are fair and reasonable for both Service Providers and Users; and*
>
> *(e) provides for resolution of disputes. …*
>
> *The aim of the Code is to provide sufficient prescription so as to reduce substantially the number of likely arbitrations, while at the same time incorporating enough flexibility for the parties to negotiate contracts within an appropriate framework. The Code has also been designed to provide a clear national access regime, with consistency between different jurisdictions."*[2]

Finally, the views expressed in this Guidance Paper do not represent the Commission's final views on any matter. Such final views must depend upon the circumstances and context of Envestra's proposed Access Arrangement Revisions. That is, the Commission will be considering all the arguments on their merits during its formal assessment of Envestra's proposed Access Arrangement Revisions. The views expressed by the Commission prior to this formal assessment stage are indicative only. While the Commission aims to provide as much certainty as possible on its proposed approach to various issues, it will have regard to any further information and views expressed during the formal consultation stage.

1.4 Outline of Guidance Paper

The structure of this Guidance Paper broadly corresponds with the sequence of elements required of an access arrangement described in sections 3.1 to 3.20 of the Code.

Chapter 2 deals with issues associated with the ***Services Policy*** element required under sections 3.1 and 3.2 of the Code.

Chapters 3 to 11 deal with the ***Reference Tariff*** and ***Reference Tariff Policy*** elements. In particular:

- Chapter 3 examines the *rate of return* component of the Code's cost of service methodology;

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2 Sections 10.4 and 10.5 of the Code note that the introduction to the Code (which contains this statement of the Code's objectives) does not form part of the Code but that in certain circumstances regard may be had to it in interpreting the Code. This also applies to the overview in italics at the beginning of each section of the Code.

- Chapter 4 examines other *capital-related cost* components of that methodology;
- Chapter 5 examines the *non-capital cost* component of that methodology;
- Chapter 6 examines issues associated with calculating the *total revenue* requirement given the results from each of the components of the Code's cost of service methodology;
- Chapter 7 examines possible *average price* issues;
- Chapter 8 examines possible *price structure* issues;
- Chapter 9 deals with possible issues associated with the *annual tariff variation method* required under the Code;
- Chapter 10 looks at matters arising from the *incentive mechanism* provisions of the Code; and
- Chapter 11 deals with possible *information disclosure* issues.

Chapter 12 deals with issues associated with the ***Terms and Conditions*** element of an access arrangement required under section 3.6 of the Code.

Chapter 13 deals with the related elements of ***Capacity Management Policy*** and ***Trading Policy*** as well as the ***Queuing Policy*** element of an access arrangement.

Chapter 14 deals with the method for determining whether or not a pipeline extension or capacity expansion is to be treated as part of the covered pipeline for all purposes under the Code; that is, the ***Extensions/Expansions Policy*** element.

Chapter 15 canvasses issues associated with the duration of the Access Arrangement, and especially the ***Revisions Submission Date*** and a ***Revisions Commencement Date*** elements as required under sections 3.17 to 3.20 of the Code.

Chapter 16 outlines the steps involved in the next, formal stages of the review.

2 SERVICES POLICY

The Code (section 3.1) requires an access arrangement to include a policy on the service or services to be offered by the operator of the covered pipeline (a Services Policy).

This chapter develops the Commission's final guidance on the approval framework in relation to the Services Policy element of an access arrangement.

2.1 Reference services

2.1.1 Requirements of the Code

A service is defined under the Code (section 10.8) to mean:

"(a) a service provided by means of a Covered Pipeline … including (without limitation):

(i) haulage services (such as firm haulage, interruptible haulage, spot haulage and backhaul); and

(ii) the right to interconnect with the Covered Pipeline, and

(b) services ancillary to the provision of such services,

but does not include the production, sale or purchasing of Natural Gas."

The Code (section 3.2(a)) requires the Services Policy element to comply with the principle that it is to include a description of one or more of the services that are likely to be sought by a significant part of the market or which, *in the regulator's opinion*, should be included in that policy.

2.1.2 Issues under consideration

By its nature, a Services Policy focuses on the obligations of a service provider to network users or prospective users. [The obligations on network users (rather than the service provider) are set out in the Terms and Conditions element of an access policy, which is discussed separately at chapter 12 below.]

The Code (section 3.2(a)(ii)) gives the Commission some discretion to require the Access Arrangement to include as a reference service any service which, *in the Commission's opinion*, should be included in the Services Policy. The forthcoming review provides the opportunity to reconsider appropriate categories of reference services, and redefine the specific services that should be included in each.

Envestra's current Access Arrangement provides for three ***haulage reference services***, and three ***ancillary reference services***. Bundled with each of the haulage reference services are:

- the odorisation of gas;
- the provision and maintenance of metering equipment; and

- meter reading on a quarterly basis for domestic and commercial delivery points and on a monthly basis for demand delivery points.

For all customers, the existing reference services are defined as the transportation of gas (including the provision of the service pipe and meter) and certain administrative functions associated with this service. As such, the approved reference services bundle together:

- firm haulage services;
- the right to interconnect with the covered pipeline; and
- standard metering services.

2.1.3 Views expressed in initial submissions

In its initial submission, Envestra expressed the view that the reference services nominated under its current Access Arrangement:

> *"…are already generally aligned with those in other jurisdictions, and that they meet the requirements of most users. As users have not requested Envestra to introduce other reference services, Envestra sees no need to specify additional reference services."*

Envestra did, however, foreshadow that, in relation to ancillary reference services, it intends to amend the disconnection and reconnection services so that they are aligned with those supplied by Envestra in Victoria.

Of the network users making initial submissions, only EnergyAustralia argued that services should be unbundled, without being more specific.

2.1.4 Approaches adopted by other regulators

The reference services in Envestra's access arrangements in other jurisdictions are similar to those in the current SA Access Arrangement.

By contrast, under AGL's access arrangement in New South Wales,[3] the Independent Pricing and Regulatory Tribunal of New South Wales (IPART) approved haulage reference services that offer a range of charging options, namely:

- a capacity reservation service (haulage service with charges based on capacity and overruns);
- a managed capacity service (haulage service with charges based on previous 12 months maximum withdrawal);
- a throughput service (haulage service with charges based on throughput);

[3] Independent Pricing and Regulatory Tribunal of New South Wales (IPART), *Revised Access Arrangement for AGL Gas Networks – Final Decision*, April 2005 (hereafter "IPART's 2005 review"]

- a multiple delivery point service (haulage service for large users (10TJ per annum plus) with multiple delivery points; and
- a tariff service (haulage service with charges based on throughput, with a fixed charge).

Such an offering of charging options does not, however, constitute the unbundling of haulage, connection and standard metering services. Such unbundling is not evident in any jurisdiction.

2.1.5 Commission's initial analysis and preliminary views

The Commission recognised that the Code lays down two tests to be met by reference services in section 3.2(a), namely:

- they need to be services that are likely to be sought by a significant part of the market; or
- they can be services that – while not necessarily being sought by a significant part of the market – should *in the regulator's opinion* be included in the Services Policy.

Whether any services qualify as 'likely to be sought by a significant part of the market' is revealed mainly in preferences expressed by network users. The Commission noted that Envestra is of the opinion that users generally have not sought services apart from those already nominated as reference services. Nothing in initial submissions made by network users in response to the Issues Paper contradicts this stand of Envestra's.

Without any substantive views from network users to the contrary, the Commission's preliminary view was that it also sees little purpose in it imposing its opinion as to additional references services as it could under section 3(2)(a)(ii) of the Code. Network users, who by their nature are substantial operators in the natural gas industry, are capable of articulating their preferences regarding the composition of reference services without intervention by a regulator. While one user did agree with a role for unbundling the current services, that user was not specific about which services would be involved. Such unbundling of reference services does not appear to be generally sought by network users.

The Commission's preliminary views were that:

- whether additional references services, or changes to the type of reference services, are warranted in the second Access Arrangement period is a matter for Envestra to propose after consultation with network users; and
- provided Envestra documents such consultations, the Commission is unlikely to nominate reference services in addition to those proposed by Envestra.

2.1.6 Views expressed in further submissions

In its further submission, Envestra indicated its general support of the Commission's preliminary views on this matter. Envestra indicated that it was currently in the process of consulting with network users, and those consultations to date had reinforced Envestra's position not to amend its reference services.

The Electricity Consumers Coalition of SA (ECCSA), however, called for an unbundling of reference services, consistent with Code provisions in relation to the requirement that users and potential users must be able to understand the derivation of tariffs in order to establish that they are fair, reasonable and efficient.

2.1.7 Commission's further analysis and final guidance

The extent of any unbundling of reference services is a matter for network users to progress with Envestra in the first instance. The Commission will be informed by Envestra of the nature and outcome of these consultations with network users at an appropriate time. It may be appropriate for the Commission to consider exercising its discretions in this area only if it turns out that such consultations give rise to a major difference of opinion between Envestra and network users.

In the meantime, the Commission has decided to maintain its preliminary views.

The Commission's final guidance is that:

- ***whether additional references services, or changes to the type of reference services, are warranted in the second Access Arrangement period is a matter for Envestra to propose after consultation with network users; and***
- ***provided Envestra documents such consultations, the Commission is unlikely to nominate reference services in addition to those proposed by Envestra.***

2.2 Description of standards of service

2.2.1 Requirements of the Code

The Code (section 3.2(a)) requires the Services Policy element of an access arrangement to comply with the principle that it is to include a "description" of the nominated reference services.

2.2.2 Issues under consideration

The current Access Arrangement effectively establishes minimum standards of service in relation to the various reference services as being those established by Envestra's Distribution Licence or any applicable law.

However, the service quality currently expected by network users for a particular reference service – or the levels of service quality that are consistent with the basis of pricing for the reference service – may be greater than any minimum levels of service quality prescribed in licences. An alternative could therefore involve more explicitly stating the standards of service applying to each reference service in Envestra's Services Policy.

2.2.3 Views expressed in initial submissions

In its initial submission, Envestra argued that the Services Policy cannot be rejected because it does not include a specification of service levels, on the grounds that:

> *"The proper place for any specification of service levels is the terms and conditions of the Access Arrangement and not the Services Policy. … In relation to terms and conditions, ESCOSA's discretion is limited to determining whether they are reasonable."*

Likewise, ENA argued that the Code does not include specific provisions on the standards of service of reference services.

On the other hand, the network users were generally supportive of moves to clarify service standards. EnergyAustralia indicated that it supported detailed specification of the levels of service required in respect of the reference services. Likewise, TXU argued that service standards (and terms and conditions) must be detailed and complete.

2.2.4 Approaches adopted by other regulators

While IPART and the Queensland Competition Authority (QCA) have refrained from broaching service standards in the access arrangements within their jurisdiction, the Essential Services Commission of Victoria (ESCV) and the Independent Competition and Regulatory Commission (ICRC) have sought to take a more active approach.

Notably, in its 2002 review of Victorian access arrangements,[4] ESCV highlighted the importance of ensuring that distributors and customers have unambiguous expectations of the service levels to be provided over the regulatory period. The need for such expectations reflects the interests of users in receiving reliable and safe gas services as well as providing a point of reference for assessing the distributors' proposed reference tariffs. As a result, ESCV required the distributors to include in their access arrangements both:

- an undertaking to continue to provide a level of overall supply reliability (as measured by outage events, customer interruptions, leakage surveys and reports) consistent with that provided over the previous three years; and

[4] Essential Services Commission of Victoria [ESCV], *Review of Gas Access Arrangements: Final Decision*, October 2002 [hereafter "ESCV's 2002 review"]

- two specific reliability-related incentive mechanisms, which were the arrangements applying to unaccounted for gas and the requirement to make payments to customers who receive service below guaranteed service levels.

By contrast, after proposing in its draft decision for the 2004 review of ActewAGL's access arrangement,[5] that ActewAGL was to achieve no worse than 'current' service standards, ICRC finally accepted that a revision to this effect would not be practical.

2.2.5 Commission's initial analysis and preliminary views

The Commission agreed with Envestra and ENA that the Services Policy is only required to contain a 'description' of the services that is sufficient to identify each service and to distinguish it from other services. It does not extend to defining the performance standards that must be met in providing the service.

The Commission also noted that the Productivity Commission, in its recent review of the Code, expressed the view that regulators do not appear to have powers under the Code to enforce particular service quality standards, and that service quality is more usually monitored under licence provisions.[6]

The specification of standards of service may be appropriate in conjunction with the Reference Tariff or Terms and Conditions elements of an access arrangement. For example, the Code (section 3.6) requires an access arrangement to include the terms and conditions on which the service provider supplies each reference service. Even then, the Commission acknowledges that section 3.6 does not explicitly state what the nature of the service standards should be or how they should be specified.

The Commission's preliminary view was that a description of services that sufficiently identifies each service and distinguishes it from other services is necessary if the proposed Services Policy element of an access arrangement is to satisfy the requirements of the Code.

2.2.6 Views expressed in further submissions

In its further submission, Envestra indicated its general agreement with the Commission's preliminary view on this matter. Envestra expressed its belief that it has identified all services required by the market, and that it is in the process of seeking feedback from retailers on this issue. Envestra undertook to provide a full description of its services as part of its proposed Access Arrangement Revisions.

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5 Independent Competition and Regulatory Commission [ICRC], *Final Decision – Review of access arrangement for ActewAGL natural gas system in ACT, Queanbeyan and Yarrowlumna*, October 2004 [hereafter "ICRC's 2004 review"]

6 Productivity Commission, *Review of the Gas Access Regime*, Report No. 31, Canberra, June 2004, p. 313.

ECCSA indicated it would support the Commission establishing a reliability-related incentive mechanism, especially with regard to unaccounted for gas and for service standards that fall below guaranteed service levels. ECCSA indicated that its member companies have been dissatisfied with poor service standards over the first Access Arrangements period, without being specific in this regard.

2.2.7 Commission's further analysis and final guidance

The Commission reaffirms that the matter of a reliability-based incentive mechanism is more appropriately dealt with in the incentive mechanism design context.

It is in this context, as well as in the context of the required Terms and Conditions element of an access arrangement (see chapter 12 of this Paper), where the further specification of levels and standards of services are appropriately considered.

Accordingly, the Commission has decided to maintain its preliminary view.

The Commission's final guidance is that:

- ***a description of services that sufficiently identifies each service and distinguishes it from other services is necessary if the proposed Services Policy element of an access arrangement is to satisfy the requirements of the Code.***

3 REFERENCE TARIFFS: RATE OF RETURN

This chapter and the following eight chapters develop the Commission's final guidance in relation to the Reference Tariff and Reference Tariff Policy elements of an access arrangement.

The Code (section 3.3) requires an access arrangement to include a ***Reference Tariff*** for each reference service. In addition, the Code (section 3.5) requires that an access arrangement must also include a policy describing the principles that are to be used to determine a Reference Tariff (a ***Reference Tariff Policy***).

The Code (sections 3.4 and 3.5) requires both the Reference Tariff and the Reference Tariff Policy elements of an access arrangement to comply with the Reference Tariff Principles described in section 8 of the Code.

Among the factors about which the Commission must be satisfied in determining whether to approve a Reference Tariff or a Reference Tariff Policy, the Code (section 8.2(a)) states that the revenue to be generated from the sales (or forecast sales) of all services over the access arrangement period (Total Revenue) should be established consistently with the principles and according to one of the methodologies contained in section 8.

The Code involves a form of price regulation known as the ***'building block' approach***. Of the building block methodologies available under the Code, Envestra's current Access Arrangement adopts a 'cost of service' approach to the calculation of Total Revenue *for haulage reference services*. The Code (section 8.4) states that the cost of service methodology must be calculated on the basis of:

> *"(a) a return (Rate of Return) on the value of the capital assets that form the Covered Pipeline or are otherwise used to provide Services (Capital Base);*
>
> *(b) depreciation of the Capital Base (Depreciation); and*
>
> *(c) the operating, maintenance and other non capital costs incurred in providing all Services (Non Capital Costs)."*

This chapter deals with the *rate of return* element of the cost of service methodology. Subsequent chapters deal separately with the *capital base* component, the other components of this methodology (*depreciation* and *non-capital costs*) and the resultant Total Revenue requirement.

3.1 Requirements of the Code

The Code (section 8.30) provides that, when calculating Total Revenue under the cost of service methodology, the rate of return used:

> *"…should provide a return which is commensurate with prevailing conditions in the market for funds and the risk involved in delivering the Reference Service (as reflected in the terms and conditions on which the Reference Service is offered and any other risk associated with delivering the Reference Service)."*

Furthermore, section 8.31 provides for the weighted-average cost of capital (***WACC***) to be determined on the basis of a well-accepted financial model, such as the Capital Asset Pricing Model (***CAPM***). Furthermore, that section states that the WACC:

> *"…should be calculated by reference to a financing structure that reflects standard industry structures for a going concern and best practice. However, other approaches may be adopted where the Relevant Regulator is satisfied that to do so would be consistent with the objectives contained in section 8.1."*

Consistent with section 8.5A, the WACC may be calculated:

- on a nominal basis;
- on a real-terms basis; or
- on any other basis in dealing with the effects of inflation,

provided that the basis used is specified in the access arrangement, *is approved by the regulator* and is applied consistently – i.e. the same basis is also used for the capital base, depreciation and all other costs and revenues – in determining the Total Revenue and Reference Tariffs.

3.2 Issues under consideration

The Australian Competition Tribunal (in its *GasNet* judgment[7]) has suggested there is no single correct method to calculate a WACC, and that there can be a range of plausible values used in applying the CAPM approach.

In these circumstances, it has been suggested that a regulator's discretion is limited to where the regulator can show that the parameters proposed by the service provider in applying CAPM lie outside the range of plausible estimates, with the method used to calculate the WACC and the parameters used in applying that method in the first instance being proposed by the service provider.

At issue is how the Commission should go about assessing whether the WACC parameters proposed by the service provider or the resultant WACC itself fall within a plausible range, being the range that different minds acting reasonably may estimate as the cost of capital.

Also, where the range of plausible values is wide and a single WACC value is required, at issue is where from within the range of values that value should be selected – is it the mid-point or some value at either the high end or the low end of the range?

3.3 Views expressed in initial submissions

On assessing whether the WACC or component parameter values provided by Envestra in its proposed Access Arrangement Revisions fall within a plausible range, initial submissions generally acknowledged that it is the Commission's function to carry out such

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7 Australian Competition Tribunal, *Application by GasNet Australia (Operations) Pty Ltd [2003] ACompT 6 (23 December 2003).*

an assessment considering academic and market evidence, together with previous regulatory practice.

In its initial submission, while agreeing that it would be beneficial for the Commission to publish the methodology and analytical framework it intends to use for this purpose, Envestra stressed the importance of recognising the potential for asymmetric risk, and the possible sources of such risk:

> *"Inadequate regulatory rates of return will produce sub-optimal investment outcomes whereby regulated businesses will only invest when there is no material downside risk, this being to the long-term detriment of consumers, business confidence and economic development."*

EnergyAustralia argued that the publication of ESCOSA's analytical framework will greatly assist the transparency of the process.

ECCSA also stressed the importance of the transparency of the derivation of the WACC and the various inputs used.

In addressing how Envestra and the Commission should go about accommodating inherent uncertainty when proposing/assessing the reasonableness of the WACC, Envestra foreshadowed the use of statistical techniques, such as Monte Carlo simulation, to accommodate and quantify particular uncertainties associated with the WACC.

ENA cautioned that, while the Commission providing initial views of cost of capital issues may serve a useful role in focusing attention on key matters:

> *"…the Commission should ensure that any decisions on proposed revisions are clearly based on an independent and substantive assessment of the consistency of proposed revisions against the relevant Code provisions, not the consistency of the service provider's revisions with any pre-announced Commission views."*

3.4 Approaches adopted by other regulators

Two reviews of access arrangements have been undertaken since the GasNet decision: IPART's 2005 review and ICRC's 2004 review.

Both IPART and the ICRC stressed that the WACC model must not only be one that is permitted by section 8.31 but it must determine returns that meet the requirements of section 8.30, namely that the return is commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service.

For example, IPART was not satisfied that the nominal and real interest rates (and the implied expected inflation), debt margin and equity beta proposed by AGL were commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference services.

3.5 Commission's initial analysis and preliminary views

The Commission agreed with Envestra and ENA that, under the Code, it is not within the Commission's discretion to impose its own view on Envestra regarding real or nominal approach or post-tax versus pre-tax, or the WACC model.

Furthermore, the Commission must exercise such judgments only in the context of the Reference Tariffs and Reference Tariff Policy being proposed by Envestra. Once Envestra proposes its WACC model, and the WACC value to be used in conjunction with its Reference Tariffs and its Reference Tariff Policy, the Commission is required to subject these proposals to close scrutiny. For that purpose, the Commission indicated it would be particularly mindful of the requirements of section 8.30 for the rate of return to be commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service.

The Commission expressed its view that the plausible range of WACC values that would satisfy the requirements of section 8.30 is likely to be a reasonably narrow one, thereby reducing concerns about how a single value is to be decided from within a wide range. The main point of contention is likely to be how the various risks involved in delivering reference services are to be incorporated into the WACC calculation.

As appropriate, the Commission will seek to achieve consistency with its recent Electricity Distribution Price Determination[8] as well as interstate regulatory practice when assessing "prevailing conditions in the market for funds and the risk involved in delivering the reference service". The Commission considers this to be appropriate in view of section 2.24 of the Code which sets out the range of factors to be considered by a regulator when assessing a proposed access arrangement. In particular, section 2.24(g) empowers the Commission to take into account "any other matters that the Relevant Regulator considers are relevant".

In relation to the WACC, the Commission indicated that it expects to take into account the possibility that setting a gas WACC on a *basis* significantly different to that underlying the electricity WACC may lead to inefficient investment decisions because of the likelihood of unwarranted differential returns.

Finally, in assessing the proposed WACC, the Commission acknowledged that it (and Envestra) will have to depart from SAIPAR's practice of not publishing the parameters

8 Essential Services Commission of South Australia (ESCOSA) 2005, *2005-2010 Electricity Distribution Price Determination,* Part A – Statement of Reasons, April 2005. This report (along with the Part B price determination) can be accessed at the following link: http://www.escosa.sa.gov.au/webdata/resources/files/050405-EDPD_Part_A_StatementofReasons_Final.pdf. See also: ESCOSA 2005, *2005-2010 Electricity Distribution Price Determination: An application by ETSA Utilities for a Review Pursuant to Section 31 of the Essential Services Commission Act 2002*, Decision and Reasons for Decision, May 2005. This report can be accessed at the following link: http://www.escosa.sa.gov.au/webdata/resources/files/050602-R-EDPRReviewApplicationDecisionReasons.pdf.

underlying calculation of the WACC.[9] This is essential if issues associated with the 'plausible range' of estimates are to be fully considered.

The Commission's preliminary views were that:

- only after Envestra's Access Arrangements Revisions are submitted is it appropriate for the Commission to assess whether the single rate of return proposed by Envestra (1) is "commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service" or (2) is within the range of choices reasonably open to Envestra;
- the 'plausible range' of rate of return values is likely to be quite narrow, provided "prevailing conditions in the market for funds and the risk involved" are appropriately assessed;
- any subsequent decision by the Commission that the single rate of return proposed by Envestra (1) is not commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service or (2) falls outside the range of choices reasonably open to Envestra, must be clearly articulated, reasonable and supported with evidence; and
- where appropriate, the Commission will seek to assess whether the single rate of return proposed by Envestra is determined in a manner that is consistent with recent decisions in its Electricity Distribution Price Determination as well as those of interstate regulators.

3.6 Views expressed in further submissions

In its further submission, Envestra indicated its general agreement with the preliminary views expressed by the Commission, with the caveat that:

> *"Envestra does not believe that ESCOSA should value or target consistency in WACC parameters (such as asset beta) across jurisdictions or industries unless it believes that such parameters are appropriate for use in relation to Envestra's assets."*

ECCSA indicated its concern that, if Envestra is permitted to select from a range of choices, Envestra is likely to identify and use input values that lead to the highest return possible, creating a bias against consumers and thereby endangering upstream and downstream investments.

3.7 Commission's further analysis and final guidance

The Commission acknowledges the bias that could be inherent in a service provider's own choice of WACC parameters and values.

9 SAIPAR chose not to divulge its WACC input parameters on the grounds that the Code does not require such detail to be divulged in decision papers (SAIPAR's Final Decision, p. 84).

Such a bias is constrained, however, by the Code's requirement that the single rate of return proposed by Envestra must be commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service.

Also playing a role is the Commission's decision not to publish its own quantitative framework prior to receiving Envestra's proposed Access Arrangement Revisions. This should also place some discipline on Envestra's choice of WACC parameters and values. When the time comes, the Commission will be required to clearly articulate its views as the rates of return that would be commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service, with its analysis to be reasonable and supported with evidence.

Where it strives to achieve consistency with recent decisions in its Electricity Distribution Price Determination as well as those of interstate regulators, the Commission's focus will be on the use of consistent methodologies rather than achieving identical values.

Accordingly, the Commission has decided to maintain its preliminary views.

The Commission's final guidance is that:

- ***only after Envestra's Access Arrangements Revisions are submitted is it appropriate for the Commission to assess whether the single rate of return proposed by Envestra (1) is "commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service" or (2) is within the range of choices reasonably open to Envestra;***
- ***the 'plausible range' of rate of return values is likely to be quite narrow, provided "prevailing conditions in the market for funds and the risk involved" are appropriately assessed;***
- ***any subsequent decision by the Commission that the single rate of return proposed by Envestra (1) is not commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service or (2) falls outside the range of choices reasonably open to Envestra, must be clearly articulated, reasonable and supported with evidence; and***
- ***where appropriate, the Commission will seek to assess whether the single rate of return proposed by Envestra is determined in a manner that is consistent with recent decisions in its Electricity Distribution Price Determination as well as those of interstate regulators.***

4 REFERENCE TARIFFS: CAPITAL BASE ISSUES

This chapter develops the Commission's final guidance with regard to other *capital-related cost* components of the Code's cost of service methodology.

In this regard, it is useful to distinguish between:

- forecasts of new facilities investment during the second Access Arrangement Period;
- forecasts of annual depreciation expense during the second Access Arrangement Period;
- the capital base at the start of the second Access Arrangement Period (which involves the roll-forward of the initial capital base during the first Access Arrangement Period); and
- identifying redundant capital during the second Access Arrangement Period.

4.1 Assessing forecasts of new facilities investment during the second period

4.1.1 Requirements of the Code

New Facilities Investment is defined under the Code (section 8.15) as the additional capital costs incurred in constructing, developing or acquiring new facilities for the purpose of providing network services, where *New Facilities* are defined (section 10.8) as any extension to, or expansion of the capacity of, a covered pipeline which is to be treated as part of the covered pipeline.

The Code (section 8.16(b)) provides that New Facilities Investment that is *forecast* to occur within an access arrangement period may be used for the purposes of calculating the capital base within an access arrangement period provided that:

- the forecast New Facilities Investment is reasonably expected to pass the prudency and economic feasibility tests in section 8.16(a) when the New Facilities Investment is forecast to occur (section 8.20); and
- the forecasts of New Facilities Investment represent best estimates arrived at on a reasonable basis (that is, they also pass a ***reasonableness test*** *to be applied by the regulator* (section 8.2(e)).

The ***prudency test*** (in section 8.16(a)(i)) is met *if the regulator is satisfied* that planned New Facilities Investment involves the service provider acting efficiently, in accordance with accepted good industry practice, and to achieve the lowest sustainable cost of delivering services.[10]

[10] When applying the prudency test, the Code (section 8.17) requires the regulator to consider:
- whether a new facility exhibits economies of scope or scale;
- the increments in which capacity can be added; and
- whether the lowest sustainable cost of delivering services over a period of time might require a new facility with capacity to meet forecast sales over that time frame.

The ***economic feasibility test*** (in section 8.16(a)(ii)) is met if the anticipated increase in revenue from a new facility is above its cost, *unless the regulator is alternatively satisfied* that the new facility either:

- generates system-wide benefits that justify the approval of a higher reference tariff for all users; and
- is necessary to maintain the safety, integrity or contracted capacity of services.[11]

Finally, section 8.16(b) is qualified by sections 8.21 and 8.22 as follows:

- if the regulator does not agree that the New Facilities Investment meets the requirements of section 8.16(a), the regulator may consider whether those requirements are met when it considers the service provider's proposed access arrangement revisions; and
- when considering the service provider's proposed access arrangement revisions, either the Reference Tariff Policy should describe, or the regulator shall determine, how the capital base at the commencement of the next access arrangement period will be adjusted if the actual New Facilities Investment is different from the forecast New Facilities Investment, with this decision to be designed to best meet the objectives in section 8.1.

4.1.2 Issues under consideration

Total Revenue may be determined on the basis of investment that is forecast to occur in the forthcoming access arrangement period. This is conditional on the forecast investment being 'reasonably expected', when it occurs, to meet the section 8.16(a) prudency and economic feasibility tests. This can involve a detailed examination of the service provider's capital expenditure plans.

In addition, a service provider can specify in its Reference Tariff Policy how its capital base is to be adjusted if actual investment turns out to be different from forecast investment. Otherwise, the adjustment (if any) will be decided by the regulator when considering the next access arrangement following an *ex-post* assessment of actual capital investment against the prudency and economic feasibility tests. At issue is whether such an adjustment mechanism should be 'symmetric', adjusting the capital base when actual capital expenditure is both below and above forecast.

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[11] Sections 8.18 and 8.19 of the Code provide for the case where, at the discretion of the service provider, the service provider has undertaken New Facilities Investment that does not satisfy the requirements of section 8.16(a). If the service provider undertakes New Facilities Investment that does not satisfy the requirements of section 8.16(a):

- the capital base may be increased by that part of the New Facilities Investment which satisfies section 8.16(a) (the Recoverable Portion); and
- the Reference Tariff Policy may also provide that an amount in respect of the balance of the New Facilities Investment may subsequently be added to the capital base if at any time the type or volume of network services provided using the new facility change such that any part of the difference between the New Facilities Investment and the Recoverable Portion (the Speculative Investment Fund) satisfies the requirements of section 8.16(a).

4.1.3 Views expressed in initial submissions

In its initial submission, Envestra agreed that it would be beneficial for the Commission to publish its views on how it intended to go about assessing Envestra's forecasts of New Facilities Investment for the second Access Arrangement Period.

ECCSA argued that Envestra must be required to demonstrate that the planned capex is both prudent and efficient.

4.1.4 Approaches adopted by other regulators

When it comes to the assessment of forecast new facilities investment in the next regulatory period, different approaches are taken by Australian regulators.

One approach is that recently used by IPART in its 2005 review, where expert advisers are engaged to assess whether capex forecasts complied with the Code's prudency and economic feasibility tests. In effect, this is a 'zero-based budgeting' exercise, where the prudency and economic feasibility of all spending is considered.

An alternative approach is that adopted by ESCV in its 2002 review where, instead of conducting a detailed, firm-specific assessment of forecast capital expenditure, an inferential approach was adopted that relies on the proposition that the incentives provided by the regulatory framework will generally lead to efficient expenditure levels and, accordingly, the expenditure incurred in the preceding access arrangement period provides a base level that can be used as the foundation for establishing the estimate for the next period. The focus of the assessment process is then on any 'step change' in expenditure levels that may be required to reflect changes in the scope of distribution activities from one period to the next, and the overall underlying trend in expenditure. This approach avoids the information problems associated with attempting to establish a forecast using more information-intensive approaches.

A middle ground is offered by the ACCC's proposal to adopt what it calls an *ex-ante* framework.[12] Under that proposed framework, at the beginning of a regulatory period, the regulator approves:

- a cap on investment over the period of control ('ex-ante cap'), which covers most or all expected investments during the regulatory period and establishes a cap on the level of investment during the regulatory period to be included in the regulatory asset base at the end of that period;
- a mechanism for separate, project-specific prudency testing for very large and uncertain investments; and

[12] ACCC, *Statement of Principles for the Regulation of Electricity Transmission Revenues*, August 2004.

- an 'off-ramps' mechanism[13] if a possible but unlikely exogenous event that occurs during the regulatory period causes capital expenditure blow-outs during the regulatory period.

At the end of the period, the ACCC's proposal involves the regulator rolling into the regulated capital base the lower of the present value of the total actual investment in that period and the present value of the profile of annual expenditure specified by the *ex-ante* cap.

4.1.5 Commission's initial analysis and preliminary views

The Commission acknowledged that past experience has shown that load growth can be difficult to predict in terms of timing of new loads being connected. Even where predicted loads come to fruition, there can be substantial delays. Non-predicted loads can arise and partially neutralise the effect of any postponement of the predicted loads.

To avoid the information problems associated with attempting to establish a forecast using more information-intensive approaches, the Commission indicated that it proposed to adopt an approach similar to that used by ESCV where, instead of conducting a detailed, firm-specific assessment of forecast capital expenditure, the expenditure incurred in the preceding access arrangement period is used as a foundation for establishing the estimate for the next period. Such a trend would need to be based upon past spending levels adjusted ("normalised") for any known once-off events occurring during the first period.

Under such an approach, the focus of the assessment process is then on any step change in expenditure levels forecast by Envestra, from one period to the next, relative to the underlying trend in capital expenditure. In this process, no explicit distinction will be made between FRC and non-FRC capital expenditure.

The Commission indicated it preferred this variance-against-trends approach, over the ACCC's *ex-ante* approach, because of the uncertainty that the latter approach injected into reference pricing over the course of an access arrangement (by providing for the re-opening of pricing when large and uncertain investments occur), as well as requiring the regulator to undertake project-specific prudency testing of such investments. The Commission's preliminary view was that Envestra should take responsibility for its own investment decisions, and that regulatory intervention in individual investments decisions should be avoided wherever possible.

The Commission acknowledged that the only area where the incentive arrangements that apply to Envestra's expenditure might not fully apply was in

[13] A mechanism which triggers variations in reference tariffs in the manner specified on the occurrence of a pre-defined possible but unlikely exogenous event during a regulatory period.

relation to the cost of any capital works provided to Envestra via its contractual arrangements with Origin Energy Asset Management (OEAM).[14] As such arrangements have been entered into in the absence of a competitive tender process, an issue for the Commission was whether Envestra's actual or forecast new facilities investment is fairly stated.

The Commission's preliminary views were that:

- when it assesses forecasts of new facilities investment for the second period, and with the possible exception only of any new facilities investment provided to Envestra via its contractual arrangements with Origin Energy Asset Management (OEAM), it expects to use a variance-against-trends approach, with the onus being on Envestra to show why its forecasts of new facilities investment for the second period should depart from the continuation of a trend based upon (normalised) past spending levels; and
- Envestra will need to provide evidence or argument that any forecast new facilities investment to be provided by OEAM meets the Code's prudency test.

4.1.6 Views expressed in further submissions

In its further submission, Envestra indicated its in-principle support for a variance-against-trend approach. Envestra noted also that there were areas within its new facilities investment forecasts where forecast expenditure could be greater than past levels of expenditure.

By contrast, ECCSA expressed strong disagreement with the Commission's preference for a variance-against-trend approach, preferring instead the IPART approach of a rigorous firm-specific assessment of forecast capital expenditure:

> *"…The recent ESCV review of gas distribution was carried out following the IPART approach because it was considered that insufficient history of the gas distribution businesses had been gathered. …there was excessive capex cost padding allowed in the previous determination. … there is no option but to adopt the IPART approach of testing the prudency of past and future capex."*

Envestra's only disagreement with the Commission related to the distinction drawn regarding new facilities investment to be provided by OEAM, pointing out that it:

> *"…fails to see the relevance of Envestra's ongoing contract with OEAM in determining the efficient level of new facilities investment. This contract is merely a means of delivering elements of Envestra's services."*

On this matter, ECCSA supported the position taken by the Commission, arguing that:

> *"…all related party contractual arrangements between Envestra and OEAM must be assessed on prudency and efficiency criteria, and bench-marked against prevailing acceptable industry practice."*

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[14] Such ring-fencing related issues are discussed in more detail in section 5.2 below.

4.1.7 Commission's further analysis and final guidance

On the relevance of Envestra's ongoing contract with OEAM, the Commission maintains the view that the absence of market testing in some circumstances can give rise to forecast new facilities investment in excess of those that would be undertaken by a service provider acting efficiently. The Commission's approach is one of inviting Envestra to establish why any forecast new facilities investment to be provided by OEAM meets the Code's prudency test. Accordingly, the Commission sees no reason to revise its preliminary views on this matter.

On the role to be played by a variance-against-trends approach in assessing the prudency of forecasts of capital expenditures, the Commission acknowledges the point raised by ECCSA regarding the ESCV's approach during the 2002 review, where the variance-against-trends approach in fact played a lesser role with regard to assessing forecasts of capital expenditure than it did when forecasts of non-capital expenditure were being assessed.

The ESCV acknowledged that historical trends for capital expenditure may not provide a solid basis for forecasting future expenditure as some projects are lumpy, and aggregate expenditure is driven by factors like average network age, which can vary between periods. Hence, its assessment of capital expenditure forecasts was informed by the projected levels of growth and the extent to which the distribution network is to be extended to meet this growth.

The Commission therefore accepts that sole reliance on historical trends in capital expenditure requirements may be unreasonable, and that the forecasts will take into account a range of factors (including expected demand growth).

The Commission has therefore modified its proposed approach. However, rather than reverting to an IPART-like zero-based budgeting approach, the Commission prefers to invite Envestra to submit its forecasts for capital expenditure for the next Access Arrangement Period, together with any supporting information that it considers to be appropriate and the factors that it considers to be most relevant.

The Commission will then undertake the analysis that it considers to be appropriate and commensurate with the task, depending on Envestra's proposals. While past trends for capital expenditure cannot be completely determinative, an analysis of overall expenditure trends, or the trends in the different capital expenditure components, are still a useful source of information for evaluating the reasonableness of capital expenditure forecasts.

The Commission's final guidance is that:

- ***in submitting its forecasts of new facilities investment for the second period, Envestra should include in its supporting information an analysis of the year-to-year variations during the first period in each of the major capital expenditure components and the factors that it considers to be most relevant in explaining and justifying such variations;***
- ***when the Commission assesses Envestra's forecasts of new facilities investment for the second period, and with the possible exception only of any new facilities investment provided to Envestra via its contractual arrangements with Origin Energy Asset Management (OEAM), it expects to engage expert external assistance and use an assessment approach that is appropriate in view of recent and forecast trends in Envestra's new facilities investment; and***
- ***Envestra will need to provide evidence or argument that any forecast new facilities investment to be provided by OEAM meets the Code's prudency test.***

4.2 Assessing forecasts of depreciation for the second period

4.2.1 Requirements of the Code

The Code (sections 8.33 and 8.35) sets out broad principles for determining annual depreciation expenses under the cost of service methodology.

Section 8.33 requires the depreciation schedule to be designed so that:

- the reference tariff changes over time in a manner consistent with the growth of the market for the services provided by the pipeline;
- each asset or group of assets is depreciated over the economic life of that asset or group of assets;
- to the maximum extent reasonable, the depreciation schedule is adjusted over the life of an asset or group of assets to reflect changes in the expected economic life of that asset or group of assets; and
- an asset is depreciated only once (subject to any capital redundancy).

Section 8.35 provides that, in implementing the principles in section 8.33, regard must be had to the service provider's reasonable cash flow needs for non-capital costs and financing costs.

4.2.2 Issues under consideration

Envestra's use of a straight-line approach to depreciation based on the asset lives adopted in the DORC asset valuation during the first Access Arrangement seems non-controversial.

However, there may be circumstances where other approaches are also consistent with the Code.

4.2.3 Views expressed in initial submissions

In its initial submission, EnergyAustralia argued that such guidance was not necessary as:

> *"… Envestra's use of straight-line depreciation on the asset lives in the DORC asset valuation is non-controversial."*

Envestra indicated that it would be beneficial if the Commission were to publish in advance what alternatives to straight-line depreciation it believes may satisfy the requirements of the Code.

4.2.4 Approaches adopted by other regulators

The use of straight-line depreciation, by asset class, is commonly accepted by regulators in Australia.

In its 2002 review, ESCV expressed the view that distributors should have a degree of flexibility over the rate at which capital is returned, and in particular to take account of technological change, projected future demand and any other factors that may affect the (unregulated) market value of their assets in the future.

4.2.5 Commission's initial analysis and preliminary views

In the circumstances, the Commission proposed to wait and see what Envestra's proposed Access Arrangement Revisions were regarding depreciation and the associated asset life assumptions. There does not appear to be any demand for alternatives to the current straight-line depreciation approach.

The Commission's preliminary views were that:

- continuation of a straight-line basis for forecast depreciation is consistent with the requirements of the Code; and
- the use of up-to-date asset lives as a basis for depreciation is also important, with any changes in asset lives proposed by Envestra to be carefully considered during the Access Arrangement Review.

4.2.6 Views expressed in further submissions

All further submissions supported the continuation of the practice of using straight line depreciation.

Envestra acknowledged the importance of up-to-date asset lives as a basis for depreciation. It nevertheless flagged that it could see little basis for changing the lives of assets in the second Access Arrangement Period.

4.2.7 Commission’s further analysis and final guidance

Given the general support evident for its preliminary views, the Commission has decided to maintain these views.

The Commission’s final guidance is that:

- ***continuation of a straight-line basis for forecast depreciation is consistent with the requirements of the Code; and***
- ***the use of up-to-date asset lives as a basis for depreciation is also important, with any changes in asset lives proposed by Envestra to be carefully considered during the Access Arrangement Review.***

4.3 Capital base at the start of the second period

4.3.1 Requirements of the Code

The Code (section 8.9) requires the capital base at the commencement of each access arrangement period after the first (the commencing capital base)[15] to be determined as:

- the capital base at the start of the immediately preceding Access Arrangement Period; plus
- the New Facilities Investment in the immediately preceding Access Arrangement Period; less
- depreciation for the immediately preceding Access Arrangement Period; less
- Redundant Capital identified prior to the commencement of that Access Arrangement Period; plus
- an adjustment for inflation consistent with the approach to inflation adopted pursuant to section 8.5A.

[15] The term ‘initial capital base’ is reserved for the capital base at the commencement of the first access arrangement.

Initial Capital Base

Under the Code (section 8.15), the Initial Capital Base as determined by SAIPAR at the commencement of the first Access Arrangement Period is now locked in. There is no scope to reopen that value at future access arrangement reviews, with the exception of identified redundant assets.

New Facilities Investment

The Code (section 8.16(a)) provides that the capital base may be increased in the immediately preceding access arrangement period by the amount of the (actual or forecast) New Facilities Investment only if that amount meets, on an ex-post basis:

- the ***prudency test*** (in section 8.16(a)(i)), where *the regulator is satisfied* that planned New Facilities Investment involves the service provider acting efficiently, in accordance with accepted good industry practice, and to achieve the lowest sustainable cost of delivering services; and
- the ***economic feasibility test*** (in section 8.16(a)(ii)), where the anticipated increase in revenue from a new facility is above its cost, *unless the regulator is alternatively satisfied* that the new facility either:
  - generates system-wide benefits that justify the approval of a higher reference tariff for all users; and
  - is necessary to maintain the safety, integrity or contracted capacity of services.

For the purposes of calculating the commencing capital base, section 8.16(a) is qualified by section 8.22 which states that, when considering the service provider's proposed access arrangement revisions, either the Reference Tariff Policy should describe or the regulator shall determine how the capital base at the commencement of the next access arrangement period will be adjusted if the actual New Facilities Investment is different from the forecast New Facilities Investment, with this decision to be designed to best meet the objectives in section 8.1.

Depreciation

Depreciation for the first Access Arrangement Period was calculated on the basis of an initial capital base and a forecast of new facilities investment. The Code (section 8.9) provides that, for the cost of service methodology, the capital base at the beginning of an access arrangement period is determined taking into account "Depreciation for the immediately preceding Access Arrangement Period".

"Depreciation" in this provision is a defined term under the Code and means "… in any year and on any asset or group of assets, the amount calculated according to the depreciation schedule for that year and for that asset or group of assets." The depreciation schedule refers to the value of depreciation determined under section 8.32 of the Code and taken into account in determination of the reference tariff.

In the context of determining the value of the capital base for Envestra at the commencement of the second Access Arrangement Period, the value of depreciation to be subtracted from the value of the initial capital base is therefore the value of depreciation taken into account in determination of the reference tariff for the first Access Arrangement Period and determined on the basis of the value of the initial capital base and of forecast new facilities investment taken into account in determination of the reference tariff.

Redundant capital

The Code (sections 8.9 and 8.27) limits the removal of an amount of the capital base as redundant capital at the commencement of the second Access Arrangement Period to any redundant capital that was identified prior to the commencement of the first Period.

Adjustment for inflation

The Code (section 8.9) contemplates an adjustment of the value of the capital base for the effects of inflation, but does not address specifically the required nature of such an adjustment.

4.3.2 Issues under consideration

New facilities investment in the first period

The current Access Arrangement (section 3.3.3.2) includes the provision that:

> *"The Capital Base at the commencement of the next Access Arrangement Period will be adjusted to account for any difference between actual and forecast New Facilities Investment in accordance with section 8.22 of the Code."*

On the face of it, this section provides for any and all actual New Facilities Investment undertaken during the first Access Arrangement Period to be rolled into the regulated capital base at the commencement of the second Access Arrangement Period.

However, when it comes to calculating the regulated capital base at the commencement of the second Access Arrangement Period, the Code (section 8.22) only obliges the Commission to add to the Initial Capital Base that portion of investment in new facilities undertaken during the first Access Arrangement Period that was both:

- anticipated at the commencement of that period; and
- approved by SAIPAR.

The current Access Arrangement (particularly section 3.3.3.2) cannot oblige a regulator to roll into the regulated capital base at the commencement of the second Access Arrangement Period any actual New Facilities Investment undertaken during the first period that was neither anticipated at the commencement of that period nor approved by SAIPAR without consideration of whether such investment meets the section 8.16(a) prudency and economic feasibility tests. Capital expenditure associated with Envestra's FRC obligations is an example of capital expenditure neither anticipated at the commencement of that period nor approved by SAIPAR.

Prudency of FRC-related capital expenditure in the first period

At the time of the 2004 FRC price determination (undertaken by the Commission outside of the Access Arrangement), there were significant differences between Envestra and the Commission regarding the reasonableness of Envestra's forecasts of FRC capital expenditure. In the circumstances, the Commission decided to adjust Envestra's forecasts of FRC capital expenditure for the purpose of the 2004 FRC determination, but to do so on the basis that it would adjust the capital base for any actual capital cost incurred *above* the levels deemed prudent in the 2004 FRC determination *up to* the amounts set out in Envestra's FRC submission. Using the level determined to be prudent in the 2004 FRC determination *as a floor* ensures that no further regulatory risk was being introduced. Using the level proposed by Envestra *as a ceiling* provided Envestra with the incentive to ensure that capital costs incurred following completion of the price determination are as efficient as possible.

Asset disposals and capital contributions

Asset disposals and capital contributions are not explicitly indicated to be components of a calculation of a capital base value under section 8.9 of the Code. The effect of section 8.9 is that these factors may need to be taken into account in determination of the capital base as an element of the matters explicitly addressed by section 8.9 (new facilities investment, depreciation and capital redundancy).

A particular issue is whether asset disposals were material in the first Access Arrangement Period and, if so, whether the regulatory value of Envestra's assets should be adjusted to reflect the proceeds of disposals or the book value of those assets at the time of disposal.

Revaluation adjustment

The current Access Arrangement provides that, when calculating the capital base at the commencement of the second Access Arrangement Period, an adjustment will be made to the value of the capital base expressed in nominal terms during the first period to account for any difference between the actual percentage change in the CPI (or if not available, estimates of the CPI) and the forecast percentage change in the CPI of 2.5% used for the purposes of the capital base roll-forward during the first period.

As the existing reference tariffs were designed to deliver a real (rather than nominal) return on assets, an adjustment needs to be made to compensate investors for the change in the general price level (inflation) over the first access arrangement period. The main issue would appear to be how best to measure such actual CPI changes, particularly in view of the GST-related spike evident in 2001, and whether precluding the spike from flowing through into the regulatory asset base would cause a windfall loss to investors.

4.3.3 Views expressed in initial submissions

In its initial submission, Envestra argued that, under section 8.22 of the Code, the Commission must give effect to section 3.3.3.2 of the Access Arrangement. Envestra also expressed the view that all capital expenditure actually incurred during the first Access Arrangement Period is prudent and should be rolled into the capital base at the commencement of the second Access Arrangement Period:

> *"…because sufficient incentives exist (both under the regulatory regime and under normal commercial operating guidelines for a business) for a regulated business to undertake expenditure in an economically efficient and prudent manner."*

ENA argued that there is a substantial case for deeming the past capital expenditure of Envestra as meeting the requirements of section 8.16 of the Code:

"• *the addition of past actual capital expenditure to the asset base recognises the significant incentives operating under the existing efficiency carryover mechanism*
- *this approach is consistent with the regulatory practice of a significant number of Australian economic regulators applying the gas access regime*
- *ex post analysis of the efficiency of past capital investment programs is likely to be costly, and involve significant subjectivity in any retrospective assessments of prudent business decisions*
- *ex post assessment of capital expenditure decisions would create significant additional and asymmetric regulatory risk."*

By contrast, both ECCSA and EnergyAustralia expressed the view that unforecast or unanticipated capital expenditure should be subject to the usual tests of prudent investment.

4.3.4 Approaches adopted by other regulators

Recent regulatory decisions by IPART, ESCV and ICRC have typically accepted all past variations of actual capital expenditure from forecast levels as prudent. For example, in its 2002 review, ESCV has argued that:

> *"… the most effective means of ensuring that the distributors' capital expenditure meets the requirements of the Gas Code is to provide the distributors with the commercial incentives to achieve this outcome, which existed over the first regulatory period. Accordingly, the Commission concluded that it was appropriate for the distributors to include in their regulatory asset bases their actual capital expenditure."*

As to asset disposals, ESCV's approach is to adjust the regulatory value of the distributors' assets to reflect the proceeds of disposals, rather than some form of regulatory book value (if this exists) – that is, to interpret disposals as an alternative form of return of investment funds. In this way, the disposal of the business or parts of the business does not constitute redundant capital.

On capital contributions (and surcharges), IPART uses actual annual values when past capital contributions are taken into account, and requires forecasts which are based on best estimates arrived at on a reasonable basis, as assessed by the regulator's expert consultants.

On the revaluation adjustment, the other regulators that have considered the issue of the treatment of the GST-related spike in inflation (ESCV and IPART) have rejected an adjustment to measured inflation.

4.3.5 Commission's initial analysis and preliminary views

The Commission acknowledged that it is always difficult to predict the extent of some capital works for distribution networks. While some load growth can be predicted with confidence over the short to medium term (e.g., housing growth and the percentage of houses taking up gas), other loads are somewhat more unpredictable. Industrial (demand haulage) consumers can require loads or cease using gas in a manner that is also difficult to predict. This inability to forecast industrial loads needs to be taken into account when considering the extent that capital expenditure not forecast is to be rolled into the capital base.

Following generally accepted practices in other jurisdictions, the Commission's preliminary view was that – notwithstanding its powers to do otherwise – it should accept actual expenditure undertaken during the first period as efficient, on the basis of the various incentive arrangements applying to Envestra's expenditure.

On asset disposals, the Commission's preliminary view was that adjusting the capital base for the proceeds of disposals, rather than the regulatory book value, is consistent with the financial maintenance concept and the treatment under the Code of depreciation.

On capital contributions (and surcharges), the Commission indicated that actual annual values of past capital contributions are required for the roll-forward of the capital base to the commencement of the second period.

On the revaluation adjustment, the Commission argued that the purpose of indexing the capital base for actual inflation was to compensate investors as closely as possible for movements in inflation (purchasing power). The effect of this is to protect investors from inflation risk over the long-term.

Given this objective, the Commission considered it appropriate to adopt the measure of actual inflation that is relevant for changes to the purchasing power of money in the Australian market, which is commonly taken to be the All Groups Consumer Price Index – Average of the Eight State Capitals, as published by the Australian Bureau of Statistics.

As to the treatment of the GST-related spike in this CPI index, the Commission considered the main issue to be whether permitting the GST component of inflation to flow through would generate windfall gains. The Commission's view was that Envestra's capital base during the first Access Arrangement Period should be rolled forward on the basis of the 'headline' measure of inflation over the period, minus the estimated impact of the GST 'spike'.

As investors usually consider returns in after-tax terms, and the GST was introduced as part of a package of measures which included a reduction in personal income taxation designed to more than offset the effect of the GST on the purchasing power of a given stream of pre-tax income, excluding the GST spike from impacting upon the capital base is unlikely to lead investors to think that the real value of the capital base has fallen. Accordingly, the Commission considered that excluding the GST-related spike in inflation when inflation-adjusting the capital base would not create a loss (or fail to preserve financial capital).[16]

The Commission's preliminary views were that:

- both regulatory and market incentives exist for efficient capital expenditure;
- it is appropriate for all actual spending on approved projects (including FRC projects) undertaken during the first Access Arrangement period to be rolled-in to the capital base at the commencement of the second period;
- adjusting the capital base for any proceeds of disposals, rather than the regulatory book value of the assets involved, has merit;
- actual annual values of past capital contributions are required for the roll-forward of the capital base to the commencement of the second period; and

[16] In the case of the Commission's *2005-2010 Electricity Distribution Price Determination*, the Commission decided not to adjust measured inflation to remove the effects of the GST induced spike in inflation, notwithstanding the merits of doing otherwise. This decision mainly reflects a legal impediment in the Electricity Pricing Order against making any adjustment to inflation. Such a legal impediment does not apply in the case of the Gas Pipelines Access Law.

- Envestra's capital base during the first Access Arrangement Period should be rolled forward on the basis of the 'headline' measure of inflation over the period, minus the estimated impact of the GST 'spike'.

4.3.6 Views expressed in further submissions

In its further submission, Envestra "strongly supported" the Commission's proposal to roll all actual spending on approved projects (including FRC projects) undertaken during the first Access Arrangement period into the capital base at the commencement of the second period.

By contrast, ECCSA "strongly disagreed" with the Commission's proposal, mainly on the grounds that the previous access arrangement approval:

> *"…was based on an inadequately rigorous and non-transparent review, with an excessively high rate of return, which would have incentivised inefficient investments and other costs padding."*

As to the use of actual annual values of past capital contributions, Envestra did not agree with the Commission's proposal, arguing that the GST spike in inflation should be included within CPI because:

> *"…to do otherwise would be inconsistent with the financial capital maintenance principle, and with Envestra's legitimate business interests under the Code; and there is considerable regulatory precedent for inclusion of the GST spike."*

4.3.7 Commission's further analysis and final guidance

The Commission accepts that its treatment of actual new facilities investment during the first Access Arrangement Period best awaits an analysis of the differences between its forecast and actual new facilities investment in each of the major capital expenditure components during that period, and the factors explaining such differences.

Unless this analysis justifies an alternative approach, it is a reasonable presumption that actual spending on approved projects (including FRC projects) undertaken during the first Access Arrangement period be rolled into the capital base at the commencement of the second period.

As to the other matters, the Commission maintains that there are compelling economic grounds for removing the impact of the GST spike within CPI. In doing so, it notes that the ACCC has taken a similar approach in its gas decisions and that other regulators which have not adjusted for the GST spike do not appear to have subjected the issue to detailed analysis. Further, the Commission is not persuaded that excluding the GST-related spike in inflation when inflation adjusting the capital base would fail to preserve financial capital.

Nevertheless, the Commission also notes that there may be legal issues in relation to the treatment of inflation within Envestra's approved Access Arrangement (under clause 3.3.3.2) which require consideration in relation to removing the GST spike from inflation. The Commission therefore reserves its position on the treatment of the GST spike at this time.

The Commission's final guidance is that:

- ***in submitting its estimates of the roll-forward of the capital base during the first period, Envestra should include in its supporting information an analysis of the differences between actual new facilities investment in each of the major capital expenditure components during that period and the forecasts approved by SAIPAR, and the factors that it considers to have been most significant in explaining and justifying such differences;***
- ***the Commission will seek expert assistance to assess the implications of any departures observed between Envestra's actual new facilities investment and forecasts levels approved by SAIPAR during the first period;***
- ***provided that such an analysis does not warrant an alternative approach, all actual spending on approved projects (including FRC projects) undertaken during the first Access Arrangement period will be rolled into the capital base at the commencement of the second period;***
- ***adjusting the capital base for any proceeds of disposals, rather than the regulatory book value of the assets involved, has merit; and***
- ***actual annual values of past capital contributions are required for the roll-forward of the capital base to the commencement of the second period.***

4.4 Identifying redundant capital during the second period

4.4.1 Requirements of the Code

The Code (sections 8.27 and 8.29) provides for a Reference Tariff Policy to include a mechanism that will, with effect from the commencement of the next Access Arrangement Period, remove ***Redundant Capital*** from the capital base.

Of particular note is the provision that:

> *"…Before approving a Reference Tariff which includes such a mechanism, the Relevant Regulator must take into account the uncertainty such a mechanism would cause and the effect that uncertainty would have on the Service Provider, Users and Prospective Users. If a Reference Tariff does include such a mechanism, the determination of the Rate of Return (under sections 8.30 and 8.31) and the economic life of the assets (under section 8.33) should take account of the resulting risk (and cost) to the Service Provider of a fall in the revenue received from sales of Services or part of the Covered Pipeline."*

4.4.2 Issues under consideration

The current Access Arrangement establishes a mechanism to deal with Redundant Capital.

As this mechanism does little more than repeat the relevant provisions of the Code, the Commission could judge the approved Access Arrangement as being insufficient for dealing with how Redundant Capital is to be identified and valued for incorporation into the capital base. In these circumstances, the Commission may therefore have a role to play in identifying what, if any, assets may become redundant during the first Access Arrangement Period and so prior to the second Access Arrangement Period.

4.4.3 Views expressed in initial submissions

In its initial submission, EnergyAustralia argued that there should be a registry detailing all assets and their utilisation rate so that potential stranded assets can be identified.

Envestra supported an approach where the regulator undertakes not to identify or remove redundant assets, on the grounds that there are likely to be substantial benefits to both customers and distributors from a policy of minimising the risk to distributors associated with recovering the regulatory value of their assets. In addition:

> *"… the value of any redundant assets in a distribution network is likely to be immaterial. In practice the administrative cost of identifying and valuing each such asset is likely to outweigh the benefits."*

4.4.4 Approaches adopted by other regulators

As noted by Envestra, ESCV in its 2002 review chose not to preserve the flexibility to write-down the regulatory value of distributors' assets at a future regulatory review. Each of the distributors adopted the ESCV's proposal that the regulator should not retain the flexibility to identify and remove amounts in relation to redundant capital at the next review.

By contrast, in its 2005 review, IPART continued to take on the role of identifying redundant assets. The factors taken into account were explicitly stated, and an independent technical adviser's assessment sought of any reduction in value of assets due to such factors as a decline in utilisation or in the volume of sales.

4.4.5 Commission's initial analysis and preliminary views

For the purpose of considering what, if any, assets may become redundant during the second Access Arrangement Period, the Commission's preliminary view was that the redundant capital mechanism contained in the approved Access Arrangement did little more than repeat the relevant provisions of the Code. In these circumstances, the Commission considered that the extent to which any assets may cease to contribute in any way to the delivery of network services during the forthcoming Access Arrangement Period was a matter to be explicitly considered in its review of Envestra's proposed Access Arrangement Revisions.

During the first Access Arrangement Period, some key loads have been lost (e.g., the oil refinery at Pt Stanvac), leaving some redundant capacity in the very high pressure network. While this spare capacity may eventually be taken up by generic growth in the domestic and commercial sectors, the issue of the treatment of any dedicated pipelines will need to be addressed. With the unpredictability of losses of industrial load and possible new load generation, it may be difficult to treat assets as redundant unless they were constructed to only serve a single consumer.

The Commission has considered whether the regulator should try to identify specific assets that it considers to have been 'stranded' when rolling-forward the regulatory asset base in the context of its recent *2005-2010 Electricity Distribution Price Determination*.[17]

Notwithstanding the powers conferred on a regulator by the Code to do otherwise, the Commission indicated its doubts as to whether reserving the power to 'strand' assets would deliver benefits commensurate with the cost. The main justification for threatening to 'strand' assets is that such a threat may provide additional incentive for the regulated entity only to undertake efficient investment. The main argument for providing such an incentive is that the regulated entity is likely to have more information than the regulator about the efficiency of a proposed investment. Therefore, placing more responsibility on the regulated entity as to the efficiency of the investment is likely to reduce the likelihood of inefficient investment.[18]

However, other tools exist for encouraging efficiency in investment, particularly the CPI-X price path and efficiency carryover mechanisms. Moreover, credible threats to strand assets are likely to impose tangible risks on investors, which may have a dampening effect on their preparedness to invest, particularly in the absence of a predetermined methodology for quantifying the level of stranded assets.

Another proposed justification for asset 'stranding' is that such an approach replicates a competitive market outcome. However, if owners of distribution networks are exposed to the threat of stranding, then compensation for the potential for assets to be declared to be 'stranded' by the regulator would need to be factored into prices. The Commission did not consider that the potential improvements in efficiency that may flow from threats to strand assets would exceed the additional compensation required to ensure that investment continues to be attracted in the presence of a stranding threat, particularly given that:

- the stranding threat would be a regulatory construction (rather than the outcome of a market process) which could involve a substantial subjective element; and

17 Regulatory 'stranding' in this context refers to the process by which the regulator would adjust the regulatory asset base to reflect a perceived decline in the economic value or use of the assets, without compensating owners for the reduction in asset value through an increased regulatory depreciation allowance.

18 On this point, it is noted that where there are choices of technology available to meet growing demand that either come in large increments or in modular form, then the uncertainty over future demand may affect the optimal technology choice.

- the price cap and carry-over mechanisms already provide Envestra with an incentive to reduce cost, which is considered a more targeted mechanism for ensuring cost-efficiency than the threat of asset stranding.

The Commission's preliminary view was that it should not seek to adjust Envestra's capital base to take account of redundant assets.

4.4.6 Views expressed in further submissions

While Envestra agreed with the Commission's preliminary view, ECCSA "strongly disagreed" on the grounds that not seeking to adjust Envestra's capital base to account for redundant capital would be an abrogation of the Commission's obligations under the Code. ECCSA urged that all assets made redundant during the first Access Arrangement Period be removed from the capital base, similar to the approach taken by IPART in its 2005 review.

4.4.7 Commission's further analysis and final guidance

A regulator's discretion under the Code is prospective, and relates to the appropriate basis for dealing with assets that may become redundant during the forthcoming Access Arrangement Period when it comes time to determine the capital base at the commencement of the following period.

With regard to the basis for dealing with assets that may become redundant during the second Access Arrangement Period, the Commission stands by its preliminary views on this matter which recognise the tradeoff between the removal of redundant assets and rate of return to be allowed. Not removing any redundant assets removes the grounds for otherwise compensating the service provider when the WACC is being set.

As to the treatment of redundant assets during the first period, SAIPAR approved certain arrangements. While there may be grounds to believe that the approved provisions were insufficient for the purpose, the Commission considers it best if it does not develop on an ex post basis a method for identifying what, if any, assets may become redundant during the first Access Arrangement Period and so prior to the second Access Arrangement Period. Developing such a method, because it was not anticipated, would give rise to regulatory risk.

The Commission's guidance on these matters, while consistent with its preliminary view, seeks to distinguish between its differing roles with regard to the first and second Access Arrangement Period.

The Commission's final guidance is that:

- ***with regard to assets that may have become redundant during the first period, the Commission will not seek to adjust Envestra's capital base at the commencement of the second period to take account of these redundant assets; and***
- ***with regard to assets that may become redundant during the second period, the Commission is likely to approve provisions in the Access Arrangement that do not involve adjusting Envestra's capital base at the commencement of the third period to take account of assets becoming redundant during the second period.***

5 REFERENCE TARIFFS: NON-CAPITAL COSTS

This chapter develops the Commission's final guidance with regard to the *non-capital cost* component of the cost of service methodology.

5.1 Requirements of the Code

The Code (sections 8.36 and 8.37) sets out the broad principles for determining non-capital costs.

Section 8.36 defines non-capital costs to be the operating, maintenance and other costs incurred in the delivery of reference services, and specifically states that such costs may include, but are not limited to, costs incurred for generic market development activities aimed at increasing long-term demand for the delivery of the reference service.

Only those operating, maintenance and other non-capital costs incurred (or forecast to be incurred) that pass the ***prudency test*** in section 8.37 to be applied by the regulator are to be included when determining the Total Revenue requirement. Such costs are to be no more than would be incurred by a prudent service provider, acting efficiently, in accordance with accepted and good industry practice so as to achieve the lowest sustainable cost of delivering the relevant services.

Pursuant to section 8.2(e) of the Code, any forecasts of non-capital costs must also represent best estimates arrived at on a reasonable basis (the ***reasonableness test*** to be applied by the regulator).

5.2 Issues under consideration

This section focuses on the assessment of non-capital costs to be incurred in the second Access Arrangement Period. All matters pertaining to non-capital costs in the first Access Arrangement Period are considered separately in that part of chapter 10 dealing with the incentive mechanism in operation during the first period.

5.2.1 Assessing prudency and reasonableness of forecasts of non-capital costs

In considering how it intends to go about assessing Envestra's forecasts of non-capital costs in the second Access Arrangement Period, the Commission could consider the use of benchmarking techniques. If so, the Commission would need to take into account the factors that may explain differences in non-capital costs between different gas distribution systems across Australia. Envestra has pointed out on other occasions that its South Australian network is physically smaller and has fewer customers than the Victorian and NSW networks. Gas consumption per customer is also significantly lower than in Victoria. These factors combine to produce higher costs per kilometre, customer and GJ relative to Victoria, as fixed costs are spread over a much smaller base. The high proportion of cast iron mains in the network also requires higher maintenance expenditure (e.g., leak repairs) relative to networks in other States.

5.2.2 Nature and extent of marketing costs

Under the Code (section 8.36), non-capital costs may include costs incurred for generic market development activities aimed at increasing long-term demand for the delivery of the reference service. In some circumstances, if a service provider undertakes a wide range of marketing activities, there may be grounds for considering whether the benefits of such activities fall evenly across all network users.

5.2.3 Ring-fencing related issues

A further issue relates to how the Commission might best form a robust view of non-capital costs, in view of the facts that:

- the operation of the distribution network has been subcontracted to Origin Energy Asset Management (OEAM);
- OEAM is an associate of OER, based upon common control;
- Envestra and Origin Energy Ltd are related parties, in view of Origin Energy Ltd's position as a minority shareholder in Envestra; and
- OEAM is neither a licensed gas entity nor is it directly subject to ring fencing requirements imposed by the Code or by licences.

OEAM is not an 'associate' of Envestra under section 7 of the Code, as the Code's definition of 'associate' is based on common control rather than significant influence.

OEAM is not regarded as a service provider under sections 1 and 2 of the Code, and hence the accounting separation provisions of the Code do not apply to it.

While OEAM and OER are legally separated, so that OEAM is not subject to either a distribution or a retail licence, such legal separation does not necessarily imply operational separation.

In the final report for its review of the gas access regime, the Productivity Commission was relatively sanguine about such issues, being influenced by the view expressed to it by Origin Energy that OEAM, as it has affiliated businesses in upstream and downstream markets, is already a ring fenced entity:

> *"Origin Energy Asset Management (OEAM) is a 'ring fenced' organisation, separated from the retailing of natural gas carried out by Origin Energy Limited. The National Third Party Access Code [the Gas Code], enacted on July 28, 1998 to facilitate deregulation, requires the separation of network distribution activities from the natural gas production or retailing activities of a related business. This separation of functions and staff prevents retailers from gaining access to customer information that would give them a competitive advantage over other retailers." (quoted in Productivity Commission review, p.466)*

Because the contracted arrangements between Envestra and OEAM have been entered into in the absence of a competitive tender process, an issue for the Commission may be whether Envestra's actual or forecast non-capital costs are fairly stated. On the face of it, there could be both a risk that Envestra's non-capital costs may not be competitive market costs, and an incentive for Envestra to maximise its reported costs. The Productivity Commission's view that the Gas Access Regime already provides adequate safeguards to ensure that asset operators and managers that undertake activities in upstream and downstream markets do not use their operation and management roles to behave anti-competitively may not hold in all respects.

5.3 Views expressed in initial submissions

On the assessment of forecasts of non-capital costs, EnergyAustralia's position was that it supports the Commission providing early guidance, particularly if such guidance will encourage greater levels of disclosure of information and assumptions and a greater degree of transparency throughout the access arrangement approval process.

TXU supported the use of benchmarking as a tool for determining efficient non-capital costs.

ECCSA urged independent review of Envestra's forecasts of non-capital costs:

> *"Opex [non-capital costs] must be the amount that an efficient operator of the network would incur, and no more. This will require both examination of the costs actually incurred by Envestra since deregulation, and extensive benchmarking to ensure that the costs incurred are efficient. To do this will require Envestra divulging all of the information required by the gas access code, including that which may be held under operational contracts."*

On the extent to which Envestra's marketing costs should be allowed for the purpose of calculating Total Revenue, Envestra indicated that it would be beneficial if the Commission were to publish in advance what it defines as 'marketing costs'.

TXU took a firmer view, questioning the need for Envestra to have marketing costs included in its non-capital costs:

> *"Where the promotion of natural gas is a public policy initiative, funding for that purpose should be clearly identified for each discrete project, and its allocation explicit.*

ECCSA argued that marketing costs should be included only if:

> *"… the countervailing expected increase in volume is included in the forecast of gas usage to determine the various tariffs. No allowance for marketing should be included if there is no identifiable outcome which is included in the tariff development."*

On OEAM-related costs, ECCSA argued that it is insufficient for Envestra to just declare the contract costs it incurs.

> *"If Envestra has elected to contract these activities to another, then Envestra, being aware of its responsibilities under the gas access code should be expected to include in its contracts a requirement for its contractor to provide any and all information required by the regulator under the gas access code*

provisions. In particular, the regulator must be convinced that all related party contracts and arrangements are made and operated at arm's length. …

It is insufficient for them to be able to hide such information behind "related party contracts" such as they have with Origin Energy for the administration and operation of the Envestra assets. As the operator, Origin must disclose as much information as is required under the gas access code as if it was Envestra."

5.4 Approaches adopted by other regulators

A diversity of approaches to assessing the prudency of forecast non-capital costs have been adopted by regulators similar to that evident for assessing forecast New Facilities Investment (capital spending).

In its 2005 review, IPART's approach was to appoint expert consultants to undertake a zero-based budgeting assessment of AGL's actual and forecast costs (both capital spending and operating expenses).

By contrast, in its 2002 review, ESCV did not conduct a detailed, firm specific assessment of forecast non-capital costs, relying instead on the proposition that the incentives provided by the regulatory framework will generally lead to efficient expenditure levels. The focus of the assessment process was on any 'step change' in expenditure levels that may be required to reflect changes in the scope of distribution activities from one period to the next, and the overall underlying trend in expenditure.

As to assumptions about trend efficiencies in opex, IPART included a real efficiency saving of 1.5% per annum after taking into account growth in the operating and maintenance cost and corporate overhead cost components (compared with efficiency saving of 3% in the previous access arrangement, reflecting its advisers' assessment of a dramatic slowing in trend productivity gains by the gas industry in recent years). ESCV assumed that costs would reduce in real terms by 1% per annum, in light of the external estimates of productivity growth used by other regulators and the distributors' initial proposals.

As to the approach to marketing (non-capital) costs, IPART accepted its expert adviser's advice that AGL's proposed expenditure was consistent with the Code. ESCV adopted an assumption that marketing expenditure in the order of the existing levels of expenditure incurred by Envestra would continue throughout 2003-07. In adopting this assumption, ESCV foreshadowed arrangements whereby the impacts of marketing could be objectively assessed in the Victorian context for consideration in future reviews.

5.5 Commission's initial analysis and preliminary views

With two exceptions outlined below, the Commission indicated that it proposed to use the expenditure incurred in the preceding access arrangement period as the foundation for establishing the estimate for the next period. The focus of the assessment process would therefore be on any step change in expenditure levels forecast by Envestra, from one period to the next, relative to the underlying trend in non-capital costs.

The first exception related to marketing costs. The Commission indicated that it expected to undertake a 'zero-based budgeting' look at Envestra's forecast marketing costs. In doing so, different types of marketing spending needed to be distinguished, and the effectiveness and beneficiaries of such spending.

The second exception was non-capital costs incurred by purchasing services from OEAM. Once again, the Commission proposed undertaking a 'zero-based budgeting' look at Envestra's forecast asset management costs. As Envestra has provided disaggregated pricing for each of its access arrangements for South Australia, Victoria and Queensland, and OEAM as Envestra's principal contractor performs the operations of the contracted services provided across all of these jurisdictions, the Commission wished to be satisfied that there is a reasonable costing system being applied to ensure that there is a true separation of costs and that costs are not being double counted (i.e. the claimed aggregate costs across the three jurisdictions do not exceed Envestra's actual aggregate operational costs). In addition, the Commission flagged its intention to examine whether Envestra's forecast asset management costs are no more than an efficient service provider operating in accordance with good industry practice would pay.

The Commission's preliminary views were that:

- with the exceptions of (1) marketing costs and (2) outsourced asset management costs that have not been market tested, it expects to assess forecasts of non-capital costs for the second period using a variance-against-trends approach, with the onus being on Envestra to show why its forecasts of non-capital costs for the second period (other than for marketing and outsourced asset management) should depart from continuation of a trend based upon (normalised) past spending levels; and
- for Envestra's forecasts of its marketing and outsourced asset management costs, it expects to undertake a 'zero-based budgeting' examination of these components of non-capital costs.

5.6 Views expressed in further submissions

In its further submission, Envestra generally supported a variance-against-trend approach, noting that it expected there would be areas where expenditure would be higher than past levels of expenditure.

While Envestra raised no objections to the proposal for a zero-based budgeting assessment in relation to network marketing, it questioned the relevance of Envestra's outsourcing contract in determining the efficient level of non-capital costs.

ECCSA suggested that the two exceptions (relating to marketing costs and costs incurred by purchasing services from a related party, OEAM) for 'zero-based budgeting ' should be extended to all other non-capital costs, describing the variance-against-trend approach as being unaceptable:

> *"…In the circumstances of a less than rigorous determination by SAIPAR, users are particularly concerned that such an approach will perpetuate cost padding into the future, to the detriment of users. ECCSA strongly considers that the Commission should undertake, via consultants, a firm specific assessment of capex and non-capex assessments."*

5.7 Commission's further analysis and final guidance

The Commission acknowledges that the extent to which there were regulatory as well as market incentives for efficient non-capital expenditure during the first Access Arrangement Period depends upon the power of the incentive mechanism applying during that period. The Commission therefore proposes to inform its use of the variance-against-trend approach with an analysis of the powers of the incentive mechanism put in place by SAIPAR. For example, were it shown that there was an incentive to bring forward non-capital costs, the Commission would consider placing less weight on actual spending in later years of the first period than on spending in the earlier years.

Such an analysis will be informed by consideration of the extent and nature of any differences observed between forecast and actual non-capital costs during the first period Envestra will be asked for its assessment of the differences between its forecast and actual non-capital costs in each of the major components during the first period, and the factors that it considers to have been most significant in explaining and justifying such differences.

The Commission's final guidance is that:

- ***in submitting its forecasts of non-capital costs for the second period, Envestra should include in its supporting information an analysis of the differences between its forecast and actual non-capital costs in each of the major components during the first period, and the factors that it considers to have been most significant in explaining and justifying such differences;***
- ***the Commission, with expert assistance, will undertake an assessment of the 'power' of the regulatory as well as market incentives on Envestra for its actual non-capital costs during the first period to approach efficient levels;***
- ***provided that such an analysis does not warrant an alternative approach, and with the exceptions of (1) marketing costs and (2) outsourced asset management costs that have not been market tested, the Commission expects to assess forecasts of non-capital costs for the second period using a variance-against-trends approach, with the onus being on Envestra to show why its forecasts of non-capital costs for the second period (other than for marketing and outsourced asset management) should depart from continuation of a trend based upon (normalised) past spending levels; and***
- ***for Envestra's forecasts of marketing and outsourced asset management costs, the Commission expects to undertake a 'zero-based budgeting' examination of these components of non-capital costs.***

6 REFERENCE TARIFFS: TOTAL REVENUE

This chapter develops the Commission's final guidance in relation to that part of the Reference Tariff and Reference Tariff Policy elements that involves the determination of the *Total Revenue* requirement following application of the various components of the Code's cost of service methodology.

6.1 Requirements of the Code

The Code (section 8.6) recognises that the methods for calculating the Total Revenue requirement under the Code may provide a range of "feasible outcomes" and that, in narrowing this range, the regulator is permitted to have regard to various financial and performance indicators:

> *"In view of the manner in which the Rate of Return, Capital Base, Depreciation Schedule and Non Capital Costs may be determined (<u>in each case involving various discretions</u>), it is possible that a range of values may be attributed to the Total Revenue described in section 8.4. In order to determine an appropriate value within this range the Relevant Regulator may have regard to any financial and operational performance indicators it considers relevant <u>in order to determine the level of costs within the range of feasible outcomes</u> under section 8.4 <u>that is most consistent with</u> the objectives contained in section 8.1." (underlining added for emphasis)*

Section 8.1 of the Code states that a Reference Tariff and Reference Tariff Policy should be designed with a view to achieving the following objectives:

> *"(a) providing the Service Provider with the opportunity to earn a stream of revenue that recovers the efficient costs of delivering the Reference Service over the expected life of the assets used in delivering that Service;*
>
> *(b) replicating the outcome of a competitive market;*
>
> *(c) ensuring the safe and reliable operation of the Pipeline;*
>
> *(d) not distorting investment decisions in Pipeline transportation systems or in upstream and downstream industries;*
>
> *(e) efficiency in the level and structure of the Reference Tariff; and*
>
> *(f) providing an incentive to the Service Provider to reduce costs and to develop the market for Reference and other Services."*

Section 8.1 concludes by stating that:

> *"To the extent that any of these [section 8.1(a) and (b) criteria] objectives conflict in their application to a particular Reference Tariff determination, <u>the Relevant Regulator may determine the manner in which they can best be reconciled or which of them should prevail</u>." (underlining added for emphasis)*

6.2 Issues under consideration

The Commission expects that section 8.6 may come into play as part of its assessment of the Reference Tariff and Reference Tariff Policy elements of Envestra's proposed Access Arrangement Revisions. This gives rise to a number of issues.

6.2.1 Regulator's discretion

Recent judgments by the Supreme Court of Western Australia and the Australian Competition Tribunal have clarified the powers conferred on a regulator under the Code when approving the Reference Tariff and Reference Tariff Policy elements of an access arrangement.

In the August 2002 judgment by the Supreme Court of Western Australia regarding the Dampier–Bunbury pipeline (the Epic decision[19]), the Court held that a regulator should exercise this discretion by taking into account the factors set out in section 2.24(a)-(g), namely:

> *"(a) the Service Provider's legitimate business interests and investment in the Covered Pipeline;*
>
> *(b) firm and binding contractual obligations of the Service Provider or other persons (or both) already using the Covered Pipeline;*
>
> *(c) the operational and technical requirements necessary for the safe and reliable operation of the Covered Pipeline;*
>
> *(d) the economically efficient operation of the Covered Pipeline;*
>
> *(e) the public interest, including the public interest in having competition in markets (whether or not in Australia);*
>
> *(f) the interests of Users and Prospective Users;*
>
> *(g) any other matters that the Relevant Regulator considers are relevant."*

In its *GasNet* judgment, the Tribunal found the role of the regulator to be strictly limited when determining whether a proposed access arrangement complies with the section 8.1 criteria. The Tribunal stated that, *where there are no conflicts or tensions between the principles described in section 8*, the regulator cannot make a decision based on what it thinks is best. If a proposed access arrangement falls within a range of choice reasonably open and consistent with the section 8.1 criteria, it is beyond the power of the regulator not to approve the proposed access arrangement simply because the regulator prefers a different access arrangement which it believes would better achieve the regulator's understanding of the statutory objectives of the law.

6.2.2 Possible changes to section 8.1(a) criteria

Recent reviews of the Code have sought to clarify the powers conferred on a regulator under the Code when approving the Reference Tariff and Reference Tariff Policy elements of an access arrangement.

For example, the Productivity Commission review canvassed a range of measures aimed at both:

- reducing the likelihood of *regulatory error*; and

19 *Re Dr Ken Michael AM; ex parte Epic Energy (WA) Nominees Pty Ltd & Anor [2002] WASCA 231.*

- limiting the investment-distorting effects of *regulatory risk* and asymmetric truncation.

These included that the pricing principles being incorporated into Part IIIA of the Trade Practices Act should provide the basis for the pricing principles used in the Code, raising the possibility of changes to the section 8.1(a) criteria. These and other possible changes to the Code are under consideration as part of an inter-governmental process now being undertaken under the auspices of the Ministerial Council on Energy.

6.2.3 Interpretation of section 8.1(b) criteria

In the Epic decision, the Court observed that the objective of section 8.1(b) seems to necessitate the application of economic methods and theory, albeit to replicate the outcome of a ***workably competitive*** market, because the achievement of *perfect competition* is, in fact, not possible. In simple terms, 'workable competition' indicates a market in which no firm has a substantial or enduring market power. The Epic decision argued that expert evidence and written material tendered in evidence suggested that:

- a workably competitive market may well tolerate a degree of market power, even over a prolonged period; and
- with workable competition, market forces will increase efficiency beyond what could be achieved in a non-competitive market, although not necessarily achieving theoretically ideal efficiency.

Interestingly, the Productivity Commission review subsequently recommended that section 8.1(b) be deleted. The Productivity Commission concluded that 'replicating the outcome of a competitive market' is an unachievable objective for setting reference tariffs.

> *"This objective suggests that it is possible to determine the tariff that would be the outcome of a competitive market and then replicate it. … [A]lthough regulators can aim to estimate a competitive market's efficient prices, it is unlikely that the estimated prices will actually reflect efficient prices. This is partly a result of the high probability of regulatory error, but is also a result of the fact that competitive markets are dynamic in nature... If the competitive market outcome cannot be estimated then it follows it cannot be replicated." (Productivity Commission review, p. 260)*

Moreover, the Productivity Commission argued that seeking to apply the concept of workable competition does not provide a practical approach to this problem.

> *"In fact, the workable competition concept is arguably less well defined and harder to operationalise than other interpretations and might add to regulatory uncertainty." (Productivity Commission review, p.261)*

An issue facing the Commission is the interpretation which the Commission intends to place on section 8.1(b) in light of both the judicial guidance provided by the Epic decision and the views expressed by the Productivity Commission.

6.2.4 Choosing values within the plausible range

In addition, the Commission may need to give consideration to whether application of the section 8 criteria places some limits on values used even within the 'plausible range' of estimates.

The relevant provisions of the Code that may require a judgment by the Commission as to which approaches – from among those likely to be compliant with the Code – might be most effective in achieving the objectives of the Code, are:

- where any of the objectives nominated in section 8.1 conflict in their application to a particular Reference Tariff or Reference Tariff Policy – section 8.1 states that the manner in which they *can best be reconciled* or which of them should prevail is a matter for the regulator (not the service provider) to determine; and
- where various discretions (including those exercised by the service provider) involved in determining the rate of return, capital base, depreciation schedule or non-capital costs result in a range of values for allowable revenue – section 8.6 states that the level of costs within the range of feasible outcomes that is *most consistent* with the objectives contained in section 8.1 of the Code is a matter for the regulator (not the service provider) to determine.

A regulator's concern about information asymmetry might lead it to err in a way that disadvantages a service provider, by opting for an estimate or parameter value at the low end of the feasible range. Likewise, a service provider's own interests might see it err in a way that disadvantages network users or prospective users, by opting for an estimate or parameter value at the high end of the feasible range.

The Australian Competition Tribunal has reviewed a decision made by the ACCC, in assessing the MAPS capital base, to use a valuation based on the lowest cost of pipe quoted by one of its consultants rather than accept the valuation submitted by the service provider (Epic Energy). The Tribunal found that, in this case, the ACCC had made an error:[20]

> *"In taking the approach it did, the ACCC exposed Epic to an asymmetric risk whereby the likelihood of underestimating the true actual line pipe cost was much greater than that of overestimating it. To take the lowest price from one source of supply, runs the risk of serious commercial understatement of the expected cost of line pipe."*

This decision suggests that a regulator may be justified in rejecting an estimate or a parameter value proposed by a service provider where it can be shown that, while falling within a feasible range, the estimate exposes network users or

[20] Australian Competition Tribunal, *Application by Epic Energy South Australia Pty Ltd (2003) ACompT 5*, para 94.

prospective users to an asymmetric risk whereby the likelihood of the proposed value overestimating the true value is greater than that of underestimating it.

6.3 Views expressed in initial submissions

On the Productivity Commission's recommended changes to section 8.1(a), ENA argued that the proposed pricing principles provide:

> *"…clear guidance … for regulatory decision-making into the future. As an example, both the proposed Part IIIA and gas access regime pricing principles provide specific direction that both commercial and regulatory risks should be considered in decisions on returns on capital."*

EnergyAustralia was more cautious, arguing that:

> *"The practical effect of the change could be that the service provider would seek a greater level of regulated return, given that recovery of efficient costs is the "least" result that the regulated prices should generate. In practice the risk is higher costs which will be passed through to consumers."*

The SA Minister for Energy argued that, until any Code changes are operational, the Commission should review Envestra's Access Arrangement on the basis of the current Code (version of 24 April 2003):

> *"It is likely that any changes to the Code will require transitional arrangements, which will apply to Access Arrangements that were accepted (or made) on any of the previous versions of the Code."*

On the interpretation of 'workable competition', ENA welcomed close consideration of the implications and outcomes of the Epic Energy case and, specifically, implications of the concept of workable competition for applying section 8.1(b) of the Code. It argued that:

> *"The features of workable competition which are of most relevance to the gas distribution industry in South Australia are that it:*
>
> - *is a dynamic process, not a description of static productive efficiency*
> - *can be consistent with prices being at times above efficient levels, where this is justified by past risks and investment*
> - *provides crucial guidance that the 'efficient costs' are not capable of certain calculation, and can at best be approximated*
> - *provides no justification for an approach which seeks to fix a ceiling on the revenue stream that might be earned by a service provider, even when read in concert with Section 8.1(a)*
>
> *The ENA believes that consideration of these features should be a critical part of the Commission's task in assessing proposed revisions to Envestra's Access Arrangement."*

EnergyAustralia emphasised the difficulty in suggesting a definition of 'workable competition' or the features thereof for the purposes of this review given (quoting the Epic decision):

> *"How best to determine the efficient level of costs or the outcome of a competitive market are matters of economic theory and practice which, on the evidence, are in the course of constant revision, development and refinement."*

On the role to be played by the Commission where section 8.1 criteria conflict or where various discretions result in a range of values for allowable revenue, both Envestra and

ENA argued in their submissions that establishing such circumstances may be necessary but not sufficient for a regulator to then seek variations to a service provider's proposals.

Envestra argued that the decision for the Commission is whether:

> *"…the Access Arrangement submitted by Envestra meets the competing objectives (as reconciled by ESCOSA). If it does, the Access Arrangement is to be approved. If it does not, that may provide a basis for ESCOSA to require modifications to the Access Arrangement."*

ENA perhaps put it more clearly when arguing that the GasNet judgment confirmed that:

"• *a regulatory authority has a duty to assess whether there are any tensions or conflicts between the service providers' Reference Tariff Principles*

• *an assumption that the principles of Section 8.1 will necessarily conflict is unfounded and an unreasonable starting point for a regulator, especially given that the Productivity Commission's recent inquiries have identified that there is a need to give greater priority to the medium-term interests of existing and potential users of infrastructure in adequate investment in infrastructure availability and support*

• *a decision by a regulator on whether the principles of Section 8.1 of the Code conflict should be reasonable, clearly articulated and supported with evidence*

• *if a regulator considers that a service provider has lodged revisions to an Access Arrangement which fall outside the range of choices reasonably open to them, it is obliged to provide detailed evidence to support its position."*

On choosing values within a feasible range, TXU expressed its support for parameters:

> *"…on the lower side of the plausible ranges on the basis that this is consistent with outcomes of a purer economic paradigm."*

By contrast, Envestra argued that choosing the midpoint of a plausible range may not necessarily contribute to the avoidance of asymmetric risk:

> *"There will always be an element of uncertainty in determining the mid-point of a range (as well as the high and low values of a range). …*
>
> *In essence, regulators should not attempt to prescribe a level of accuracy that does not exist and recognise that the main cause of asymmetry is regulatory error, which will have extremely serious consequences when it causes underinvestment. Under-compensating service providers is likely to be more costly for the community than over-compensation - under-compensation can lead to non-provision of services. In contrast, over-compensation reduces, but does not eliminate, use of those services."*

ENA prefaced its comments by acknowledging that recent rulings of the Australian Competition Tribunal have provided significant guidance to regulatory authorities on appropriately selecting point estimates from within reasonable ranges. ENA summarised the relevant key findings of these rulings as follows:

"• *there are no single 'correct' figures involved in determining the value of parameters used in determining tariff levels - different parties can come to different conclusions which are nonetheless consistent with the provisions of the Code*

• *regulatory authorities must provide a clear rationale for seeking to impose either the lowest or low single point estimates where there exist a credible range of potential values*

• *neither the pricing objectives of replicating the outcomes of competitive markets or allowing the recovery of 'efficient' costs under the National Gas Code (see Section 8.1 (a) and (b)) require a regulatory authority to select the lowest cost estimate in a credible range of potential values*

- *selecting the lowest or a low single point value from a credible range of potential values for a cost estimate subjects the service provider to asymmetric risk and a prudent service provider would not base future investment planning on accessing the lowest cost product in the lowest cost market*
- *a reasonable estimate for a value where a credible range of values exists may be arrived at by at least one of three methodologies - the use of an arithmetic mean, a modified arithmetic mean (with highest and lowest figures excluded) or a median value."*

According to ENA, selecting the mid-points of feasible ranges:

> *"… in practice would lead to circumstances where a service provider faced up to a 50 per cent risk of failing to recover its legitimate costs of business, including its cost of capital (assuming a normal distribution of regulatory or estimation errors).*
>
> *… it assumes a normal distribution of estimation errors for all parameters (including, by implication the final WACC estimate). In fact, the distribution pattern may be more complex, and may require a prudent service provider adopting explicit assumptions about distribution of estimation errors that …meet the relevant requirements of Sections 8.1-2, Sections 8.30-8.31, and Section 2.24.*
>
> *From these considerations the ENA contends that several guiding principles can be drawn:*
>
> - *first, that the regulator's initial task is to assess whether the values put forward by the service provider in a revised Access Arrangement fall within a plausible or feasible range*
> - *second, that where any value is found not to be within a plausible range, the regulator should estimate a plausible range and select a value in the upper bounds of parameter range, to ensure the service provider has a greater than 50 per cent chance of recovering the efficient costs of providing the reference services*
> - *third, that any selection of values in the mid-point or lower bound of a plausible range must be reasonably based taking into account all the circumstances and Section 2.24 of the Gas Code."*

6.4 Approaches adopted by other regulators

Two reviews of access arrangements have been undertaken since the GasNet decision: IPART's 2005 review and ICRC's 2004 review. Both reviews were particularly influenced by the requirement of section 8.4(a) (that there be a return on the value of the capital base), which the regulators concluded demands that there be a single rate of return, rather than a range.

For example, in assessing the rate of return (within the range) that meets the Code requirements, IPART proposed taking into account the objectives in section 8.1, the factors in section 2.24, AGL's proposal and relevant submissions. IPART was mindful that, where the objectives in section 8.1 conflict, it may determine the manner in which they can best be reconciled or which of them should prevail. IPART made plain that the factors in section 2.24 assisted it in reconciling any conflict in the section 8.1 objectives and in assessing the rate of return and the proposed access arrangement, with AGL's legitimate business interests and investments in the pipeline (section 2.24(a)) and the interests of users and prospective users (section 2.24(f)) particularly informed its consideration. Accordingly, IPART undertook analysis to assess the impact of different rates of return on AGL's financial position and on users and prospective users.

Likewise, in assessing the appropriate rate of return to apply to ActewAGL's natural gas distribution network, ICRC considered whether the WACC and its effect on the reference tariff principles produced a tension in the achievement of the objectives of the Code, for example the section 8.1 tariff design criteria, and took into account that ActewAGL's proposed total revenue calculation required a single rate of return value to be applied. In particular, ICRC assessed the derived WACC ranges against each of the section 8.1 criteria and each of the factors described in sections 2.24(a) to 2.24(g) of the Code, one by one, distinguishing between criteria and factors warranting adoption of a value at the lower end of the range from criteria and factors which may warrant adoption of a value at the higher end of the range.

6.5 Commission's initial analysis and preliminary views

The Commission stressed that legislative changes under discussion are not relevant to its assessment of Envestra's proposed Access Arrangement Revisions. Even if such amendments were to come into operation before the review of the Access Arrangement has been completed, the Commission would complete its work under the existing regime, rather than the new regime. In this sense, the current section 8.1 criteria stand.

Hence, until the Code is amended, the decisions of Australian Competition Tribunal and the WA Supreme Court regarding the interpretation of the current section 8.1 criteria carry greater weight for the Commission than the Productivity Commission's recommendations regarding changes to those criteria. Also, each of the section 8.1 criteria are equal in the sense that none holds precedence over any of the others.

As to the section 8.1(b) criterion, the Commission noted the Court's advocacy of the workable competition interpretation of section 8.1(b). The Commission took this to mean that an attempt to replicate the outcome of a competitive market must involve outcomes observable in industries where extensive rivalry exists.

Furthermore, the Commission acknowledged that its assessment should only be undertaken in the context of the Reference Tariffs and Reference Tariff Policy being proposed by Envestra. The possible tensions and conflicts referred to in section 8.1, for example, could not be prejudged.

Where Envestra's proposed Reference Tariffs and Reference Tariff Policy involve a range of values being attributed to the Total Revenue, the Commission indicated that it would be particularly mindful of:

- the GasNet judgment, which states:

  "...Where the Reference Tariff Principles produce tension, the Relevant Regulator has an overriding discretion to resolve the tensions in a way which best reflects the statutory objectives of the Law ";

- the requirement of section 8.4(a) that there be a *single* rate of return, rather than a range; and
- the provision in section 8.6 that, where various discretions (including those exercised by the service provider) involved in determining, among other things, the rate of return result in a range of values for allowable revenue – the level of costs within the range of feasible outcomes that is most consistent with the objectives

contained in section 8.1 of the Code is a matter for the regulator (not the service provider) to determine.

In doing so, the Commission would need to carefully consider:

- the tensions and conflicts between the various section 8.1 objectives; and
- the range of feasible outcomes or arrangements between alternative pricing methodologies that might be consistent with the stated principles.

The Commission's preliminary view was that it would assess any range of values attributed to the Total Revenue against each of the section 8.1 criteria and each of the factors described in sections 2.24(a) to 2.24(g) of the Code, *one by one*, distinguishing between criteria and factors warranting adoption of a value at the lower end of the range from criteria and factors which may warrant adoption of a value at the higher end of the range, with the outcome being clearly articulated, reasonable and supported with evidence.

Also, section 2.24(g) of the Code allows the Commission to take into account other matters which it considers relevant in approving a proposed access arrangement. In the light of this section, and wherever applicable in relation to all parts of the Reference Tariff and Reference Tariff Policy elements of the proposed Access Arrangement, the Commission indicated it would seek to achieve consistency with its recent Electricity Distribution Price Determination[21] as well as interstate regulatory practice.

The Commission's preliminary views were that:

- it must strictly apply the section 8.1 criteria as currently worded, without anticipating future changes;
- each of the section 8.1 criteria are equal in the sense that none holds precedence over any of the others;
- the section 8.1(b) criterion requires consistency with the types of competitive pricing outcomes observable in relevant or similar contemporary markets where extensive rivalry exists between producers of the same or similar products to the acknowledged long-term benefit of consumers of these products;
- only after Envestra's Access Arrangements Revisions are submitted is it appropriate for the Commission to assess whether there are any tensions or conflicts between Envestra's proposed Reference Tariff and Reference Tariff Policy in terms of the principles stated in section 8.1;
- any subsequent decision by the Commission that the principles of Section 8.1 of the Code conflict when assessing Envestra's proposed Reference Tariff and Reference Tariff Policy must be clearly articulated, reasonable and supported with evidence;
- in principle, it is appropriate for any range of values attributed to the Total Revenue to be assessed against each of the section 8.1 criteria and each of the factors described in sections 2.24(a) to 2.24(g) of the Code one by one, distinguishing

21 Essential Services Commission of South Australia, *2005-2010 Electricity Distribution Price Determination*, April 2005.

between criteria and factors warranting adoption of a value at the lower end of the range from criteria and factors which may warrant adoption of a value at the higher end of the range;

- it will need to arrive at its assessment of any single Total Revenue requirement proposed by Envestra based upon balancing the various values consistent with all the criteria and factors and in terms of its judgment as to how best these values can be reconciled in view of the objectives stated in the Code; and
- where appropriate, the Commission will seek to reconcile objectives and arrive at single values in a manner that achieves consistency with recent decisions in its Electricity Distribution Price Determination as well as those of interstate regulators.

6.6 Views expressed in further submissions

Further submissions were generally supportive of the Commission's proposed approaches, with three specific exceptions argued by Envestra.

First, Envestra argued that the Commission should take into account upcoming changes to the national regulatory regime:

> *"Envestra is particularly concerned that its legitimate business interests will be impacted by the inter-relationship between the access arrangement decision and the new national regulatory regime which will apply from 2007…"*

Secondly, Envestra opposed the Commission targeting single values that were the same as or consistent with other regulatory decisions unless the Commission could show that such values were appropriate for use in relation to Envestra's assets.

Thirdly, Envestra did not agree with the Commission's proposed emphasis upon workable competition comparisons, stating that it was not aware of a relevant similar contemporary market where extensive rivalry exists between producers of the same or similar products. At most, Envestra considered that the Commission should adopt this criterion as a check once it has satisfied other section 8.1 criteria.

6.7 Commission's further analysis and final guidance

The Commission stands by its view that it would be inappropriate to take possible (but uncertain) regulatory policy changes into account. It also notes that such policy changes, when they occur, are based on commitments by government to reduce regulatory risks.

On the role to be played by consistency with recent decisions in its Electricity Distribution Price Determination as well as those of interstate regulators, the Commission's intention has always been for consistency in methodology rather than in quantitative result.

On the role to be played by workable competition, the Commission accepts that, at best, the section 8.1(b) criterion is only capable of being used as a check once other section 8.1 criteria have been assessed.

Apart from clarifying that workable competition is only capable of being used as a check, the Commission has decided to maintain its other views.

The Commission's final guidance is that:

- ***the Commission will apply the section 8.1 criteria as currently worded, without anticipating future changes;***
- ***each of the section 8.1 criteria are equal in the sense that none holds precedence over any of the others;***
- ***the section 8.1(b) criterion can play a check once other section 8.1 criteria have been assessed, subject to suitable data being available from other highly concentrated markets where rivalrous conduct is nevertheless apparent to the acknowledged long-term benefit of consumers in those markets;***
- ***only after Envestra's Access Arrangements Revisions are submitted is it appropriate for the Commission to assess whether there are any tensions or conflicts between Envestra's proposed Reference Tariff and Reference Tariff Policy in terms of the principles stated in section 8.1;***
- ***any subsequent decision by the Commission that the principles of Section 8.1 of the Code conflict when assessing Envestra's proposed Reference Tariff and Reference Tariff Policy must be clearly articulated, reasonable and supported with evidence;***
- ***in principle, it is appropriate for any range of values attributed to the Total Revenue to be assessed against each of the section 8.1 criteria and each of the factors described in sections 2.24(a) to 2.24(g) of the Code one by one, distinguishing between criteria and factors warranting adoption of a value at the lower end of the range from criteria and factors which may warrant adoption of a value at the higher end of the range;***
- ***the Commission will need to arrive at its assessment of any single Total Revenue requirement proposed by Envestra based upon balancing the various values consistent with all the criteria and factors and in terms of its judgment as to how best these values can be reconciled in view of the objectives stated in the Code; and***
- ***where appropriate, the Commission will seek to reconcile objectives and arrive at single values in a manner that achieves consistency with the basis of recent decisions in its Electricity Distribution Price Determination as well as those of interstate regulators.***

7 REFERENCE TARIFFS: AVERAGE PRICES

Once a target is calculated for expected annual revenue by building up the cost base from its individual components, the expected Total Revenue target is then used to set regulated prices – termed reference tariffs – for individual reference services (services specified in an access arrangement with an associated reference tariff).

This chapter develops the Commission's final guidance in relation to assessing associated forecasts of

- revenue from non-reference services;
- other non-tariff sources of revenue; and
- unit sales growth over the second Access Arrangement Period.

7.1 Revenue from non-reference services

7.1.1 Requirements of the Code

The Code (section 8.4) defines Total Revenue to be the revenue to be generated from the sales (or forecast sales) of all services provided by means of the covered pipeline – whether or not those services are reference services. To forecast the portion of Total Revenue expected to be received from reference tariffs, a forecast of revenue from non-reference services over the five years of the forthcoming Access Arrangement Period is therefore required.

7.1.2 Issues under consideration

Under the current Access Arrangement, Envestra only calculated Total Revenue for haulage reference services, i.e. revenue comprising a return on the network assets attributable to the provision of haulage reference services, depreciation on those assets, plus non-capital costs. No Total Revenue requirement was identified for other services, be they ancillary reference services or negotiated (i.e. non-reference) services. While revenue from ancillary reference services may not be material, it is by no means certain that this is the case for negotiated (i.e. non-reference) services.

To comply with the Code, at issue is how best to separately calculate the Total Revenue requirement associated with non-reference services.

7.1.3 Views expressed in initial submissions

Only TXU commented on the pricing of non-reference services, suggesting that a common charging mechanism should be established for negotiated services:

> *"… either as a protocol or a formula, to ensure that Envestra cannot use price differentials to create a barrier to entry."*

7.1.4 Approaches adopted by other regulators

In its 2002 review, ESCV assumed that the prices of non-reference services reflect the marginal cost of such services, with all overheads and margins recovered via reference prices.

By contrast, both IPART's and ICRC's recent reviews focused directly on the Total Revenue requirement associated with reference tariffs. No allowance was made for the revenue requirement of non-reference services.

7.1.5 Commission's initial analysis and preliminary views

At issue is what approach the Commission should endorse when it comes to allowing for the revenue to be recovered from non-reference services provided by means of the covered pipeline.

Given the provisions of the Code, the Commission indicated that it saw little option but for Envestra's Access Arrangement Revisions to propose how the Total Revenue requirement is to be determined for all services (i.e. ancillary reference services and non-reference services as well as haulage reference services). Not allowing for the revenue requirement of non-reference services open up the possibility that the overhead and fixed capital costs could be over-recovered if all fixed costs are attributed to reference services.

Alternatively, assuming that the prices of non-reference services reflect the marginal cost of such services, with all overheads and fixed capital costs being recovered via reference prices, could encourage certain users to prefer negotiated services over reference services, and see a disproportionate share of the costs of service provision being borne by users with little option but to pay reference tariffs.

Experience with non-reference services over the first Access Arrangement Period should provide a basis for a reasonable attempt to apportion the recovery of overheads and fixed capital costs between reference and non-reference services.

The Commission's preliminary views were that:

- any proposed Access Arrangement Revisions that fail to somehow allow for the revenue requirement of ancillary reference services and non-reference services as well as haulage reference services is not likely to satisfy the requirements of the Code; and
- assuming revenues from non-reference services cover both the marginal cost of such services and a reasonable share of all overheads and fixed capital costs would seem to be a reasonable starting point.

7.1.6 Views expressed in further submissions

Both Envestra and ECCSA were generally supportive of the Commission's proposed approach.

7.1.7 Commission's further analysis and final guidance

As no objections have been raised, the Commission has decided to maintain its preliminary views.

The Commission's final guidance is that:

- ***any proposed Access Arrangement Revisions that fail to somehow allow for the revenue requirement of ancillary reference services and non-reference services as well as haulage reference services is not likely to satisfy the requirements of the Code; and***
- ***assuming revenues from non-reference services cover both the marginal cost of such services and a reasonable share of all overheads and fixed capital costs would seem to be a reasonable starting point.***

7.2 Treatment of residual value of FRC ex-gratia payment

7.2.1 2004 FRC determination

A forecast of revenue from non-reference services over the five years of the forthcoming Access Arrangement Period is required to forecast the Total Revenue expected to be received from reference tariffs.

While the approved Access Arrangement (section 3.3.6.6) made provision for the adjustment of reference tariffs on account of full retail competition (FRC) costs, in the event the Commission used powers also gained on 1 July 2003 under the *Gas Act 1997* (Gas Act) to make a price determination under the *Essential Services Commission Act 2002* regulating the prices which Envestra can charge gas retailers for the services it provides to them in accordance with the retail market rules applying to gas entities under FRC.

The Commission used its powers under the Gas Act to establish the costs that would be prudently incurred by a gas distributor undertaking the responsibilities that Envestra has under the retail market rules, taking into consideration industry circumstances. The Commission determined the total revenue that Envestra should recover in respect of its FRC services using the same approach to calculating required revenue as used in the current Access Arrangement.

Following advice that the Government had entered into a deed with Envestra in which the Government committed to pay $54.6 million in respect of Envestra's prudent FRC costs excluding telemetry, the Commission determined that such funding would be sufficient to offset all of Envestra's prudent FRC costs, excluding telemetry, until 1 July 2006 and would leave a residual amount thereafter to be dealt with under the revised Access Arrangement.

As a result, and excluding telemetry, the Commission set prices of zero in respect of these prudent FRC costs for the two years up until the commencement of Envestra's revised Access Arrangement on 1 July 2006.

7.2.2 Issues under consideration

While the Government has opted to prepay a contribution towards meeting Envestra's FRC costs (with an up-front lump-sum payment), the Commission and Envestra both need to incorporate such Government payments into their Access Arrangement Review work in the form of an annualised series of payments. In the first instance, this requires a value for the balance of the ex-gratia payment as at 1 July 2006, to be factored into reference tariffs set as part of the revised Access Arrangement ("the 1/07/06 residual value").

7.2.3 Views expressed in initial submissions

The SA Minister for Energy indicated that the Commission:

> *"… should ensure that the remaining unused portion of the ex-gratia payment made to Envestra by the Government is appropriately allocated to customers to continue to reduce the impact of the introduction of full retail competition, as it was intended. How this is dealt with is a matter for ESCOSA rather than through any further Ministerial directions or notices."*

In its initial submission, Envestra argued that no guidance from the Commission is necessary in relation to that part of the ex-gratia payment that relates to the third, fourth and fifth year following the implementation of FRC:

> *"Envestra will be developing its non-capital forecasts on a prudent basis, as if no ex-gratia payment existed, and then account for the ex-gratia payment on a transparent basis. Envestra believes it is in the best position to determine how it should structure its non-capital cost forecast. Under the Access Code, it is for Envestra to develop its non-capital cost forecasts."*

7.2.4 Commission's initial analysis and preliminary views

To conform with incentive regulation requirements, the Commission had previously indicated to Envestra its intention to calculate the 1/07/06 residual value by:

- first subtracting the annual revenue requirement for each of the years prior to 1 July 2006 from the initial ex-gratia payment – in so doing, the Commission will not be removing any incentives provided to Envestra under the 2004 FRC determination; and
- also adjusting the 1/07/06 residual value on account of any differences between the actual interest rate earned by Envestra on unspent balances up to 1 July 2006 and the benchmark interest rate projected at the time of the 2004 FRC determination – to ensure that any windfall from Envestra

investing the Government's ex-gratia payment differently than advised at the time that ex-gratia payment was made being to the benefit of gas consumers rather than Envestra's shareholders.

Once the 1/07/06 residual value of the ex-gratia payment is determined, the Commission indicated that allocating this amount across each of the first three years in the second Access Arrangement Period in proportion to the annual revenue requirement for those years as published as part of the 2004 FRC determination would be consistent with that determination and the Government's intention to reduce the impact of the introduction of full retail competition.

The Commission's preliminary views were that:

- the balance of the ex-gratia payment as at 1 July 2006 should be determined in accordance with the Commission's earlier advice in conjunction with the 2004 FRC determination; and
- this balance should then be allocated to consumers across each of the first three years in the second Access Arrangement Period in proportion to the annual FRC revenue requirement for those years as published as part of the 2004 FRC determination.

7.2.5 Views expressed in further submissions

In its further submission, Envestra agreed that there is a need to determine how the balance of the ex-gratia payment will be allocated to customers across each of the first three years of the second Access Arrangement period, and indicated that it was developing a proposal for consideration by the Commission.

7.2.6 Commission's further analysis and final guidance

The Commission will consider Envestra's alternative proposal for determining the balance of the ex-gratia payment as at 1 July 2006 when it is received.

As no objections have been raised regarding how this balance should then be allocated to consumers across each of the following three years, the Commission has decided to maintain its preliminary view in this regard.

The Commission's final guidance is that:

- ***the balance of the ex-gratia payment as at 1 July 2006 will be determined by the Commission, subject to its consideration of Envestra's alternative to the method proposed by the Commission in conjunction with the 2004 FRC determination; and***
- ***this balance should then be allocated to consumers across each of the first three years in the second Access Arrangement Period in proportion to the annual FRC revenue requirement for those years as published as part of the 2004 FRC determination.***

7.3 Forecasts of unit sales

7.3.1 Requirements of the Code

A forecast of sales over the five years of the forthcoming access arrangement period is required to forecast the revenue expected to be received under reference tariffs.

Pursuant to section 8.2(e) of the Code, forecasts of demand growth must represent best estimates arrived at on a reasonable basis (the ***reasonableness test***).

7.3.2 Issues under consideration

The Commission is faced with the task of assessing whether Envestra's forecasts of increases in sales during the second period pass the section 8.2(e) reasonableness test.

7.3.3 Views expressed in initial submissions

EnergyAustralia supported the Commission providing early guidance as to the assessment of forecasts.

In its submission, Envestra advised the Commission that:

> *"…the gas demand forecast which SAIPAR required to be increased in the final decision was not achieved and that in fact actual gas demand has been significantly below that determined by SAIPAR. This regulatory error has resulted in a correspondingly significant loss of revenue for Envestra."*

7.3.4 Approaches adopted by other regulators

In its 2004 review, IPART has engaged an independent expert to assess AGL's sales forecasting methodology and forecasts.

In its 2002 review, ESCV's approach was limited to requiring the distributors to prepare and submit their own sales forecasts together with independent verification that the forecasts are 'the best estimates derived on a reasonable basis'.

7.3.5 Commission's initial analysis and preliminary views

The Commission noted that sales growth forecasting errors can have offsetting effects. Overly high forecasts will overstate the non-capital cost component of the Total Revenue requirement but understate the average price needed to generate this revenue requirement.

It is difficult to predict some of the risks that the gas industry faces. Currently, the penetration rate of gas into new houses appears to be falling slightly. With competition from reverse cycle air conditioning, there is a reasonable possibility of a substantial dropping off of both new house connections and loads from existing domestic connections. This effect could occur within an access arrangement period. The Commission has been advised that a similar event happened in the early 1990s when the microwave market penetration jumped from 20% to 60% over a two to three year period and affected the gas cooker load significantly. There are also upside possibilities such as acceptance of fuel cells or natural gas for vehicles for domestic use. These, however, are unlikely to have any major effect in the upcoming access arrangement period. In addition there can be possible increases in (or major losses of) industrial loads.

Also, the Commission noted that consideration may need to be given to the type of growth that the industry is experiencing. It appears that, while peak hour loads may still be growing, overall annual load is falling.

As part of its separate work on Origin Energy's Gas Standing Contract, the Commission engaged consultants to prepare forecasts of the incumbent retailer's sales and demand for the three-year period commencing 1 July 2005.[22] These forecasts underpinned the Commission's final determination (in June 2005) relating to Origin Energy's Gas Standing Contract. While these forecasts only covered Origin Energy's share of the market, they (and the underlying market growth forecasts) should provide the basis of the Commission's assessments of Envestra's own forecasts of market sales and demand for the second Access Arrangement period (commencing 1 July 2006).

In preparing its forecasts, the Commission encouraged Envestra to take account of the Commission's forecasts of Origin Energy's sales and demand, allowing for differences in the forecasting periods involved.

When assessing whether Envestra's forecasts represent 'best estimates arrived at on a reasonable basis' (in accordance with section 8.2(e) of the Code), the Commission therefore indicated that it expected to give considerable weight to the extent of consistency between retail and distribution forecasts.

The Commission's preliminary views were that:

- when preparing its forecasts of sales (and peak load), Envestra should take into account the forecasts of retail gas sales and demand to be published by the Commission before July 2005; and
- when assessing such forecasts proposed for the second Access Arrangement period, it will take into account the forecasts separately endorsed by the Commission at the retail level, with a view to ensuring consistency between retail and distribution forecasts.

[22] Essential Service Commission of South Australia 2005, *'Gas Standing Contract Price Path',* Final Inquiry Report and Final Price Determination, June 2005. This report can be accessed at the following link: http://www.escosa.sa.gov.au/webdata/resources/files/050628-GasStandingContractPricePathFinalInqReport.pdf.

7.3.6 Views expressed in further submissions

In its further submission, Envestra indicated it would take the Commission's retail forecasts into account in developing its demand forecasts for the second Access Arrangement Period. However, it argued that, in evaluating Envestra's forecasts, the Commission would need to:

> *"…make its assessment according to the criteria in the Code, including the need for forecasts to represent best estimates arrived at on a reasonable basis."*

By contrast, ECCSA disagreed with the Commission's preliminary view on demand forecasts, urging it to engage independent consultants to undertake the relevant forecasts.

7.3.7 Commission's further analysis and final guidance

It was always the intention of the Commission to subject Envestra's forecasts of sales (and peak load) to appropriate scrutiny, including with the assistance of an expert consultant. What the Commission described in its preliminary view on this matter was merely an example of the Code's propose – approve/not approve approach.

Equally, the Commission acknowledges the importance of taking into account differences between the two forecasting exercises, including differences in the forecasting periods involved so that any subsequent developments can be taken into account. There may also be limits on what is reasonably available to Envestra regarding the Origin Energy forecasts, given the confidential nature of aspects of these forecasts. In these circumstances, the Commission itself will need to play a greater role in ensuring consistency between retail and distribution forecasts.

The Commission's final guidance is that:

- ***when assessing such forecasts proposed for the second Access Arrangement period, the Commission will take into account the retail forecasts that it endorsed as part of its Origin Energy Gas Standing Contract decision, with a view to ensuring appropriate consistency between retail and distribution forecasts.***

8 REFERENCE TARIFFS: PRICE STRUCTURE ISSUES

This chapter develops the Commission's final guidance in relation to translating the average tariff requirement into tariffs for individual reference services (reference tariffs). This involves determining the portion of revenue that a reference tariff should be designed to recover from sales of the reference service, and the portion of revenue that should be recovered from each user of that reference service.

A reference tariff is a benchmark price at which a prospective user is entitled to gain access to reference services. The Code explicitly preserves the right of service providers and users to enter into negotiated contractual arrangements. Similarly, tariffs can be negotiated if the service required by the user is different to the reference service.

8.1 Requirements of the Code

The Code (section 8.2(b)) provides that, in determining whether to approve a Reference Tariff and Reference Tariff Policy, the regulator must be satisfied that the portion of Total Revenue that a reference tariff is designed to recover (which may be based upon forecasts) is calculated consistently with the principles contained in section 8.

The italicised overview to section 8 summarises the relevant requirements as being that the amount that is payable by a user to the service provider for a reference service be '***cost reflective***', although substantial flexibility is provided.

Sections 8.38 to 8.41 state the principles to be met by the allocation of revenue (costs) ***between reference services***. To the maximum extent that is commercially and technically reasonable, section 8.38 requires that the portion of the Total Revenue that a reference tariff is designed to recover should include:

- all of the Total Revenue that reflects costs incurred (including capital costs) that are directly attributable to the reference service; and
- a share of the Total Revenue that reflects costs incurred (including capital costs) that are attributable to providing the reference service jointly with other services, with this share to be determined in accordance with a methodology that meets the objectives in section 8.1 and is otherwise fair and reasonable.

Section 8.42 states the principles to be met by the allocation of revenue (costs) ***between network users***. To the maximum extent that is technically and commercially reasonable, a particular network user's share of the portion of Total Revenue to be recovered from sales of a reference service is to be consistent with the principles governing the allocation of revenue (costs) between reference services described in section 8.38.

8.2 Issues under consideration

8.2.1 Changes to price structure-related section 8 criteria

Each reference tariff generally has to be set so as to recover the costs expected to be incurred in providing the relevant reference service, as reflected in the composition of target revenue.

The Commission is aware that concerns have been expressed in some quarters about aspects of Envestra's tariff structure in its Access Arrangement, particularly the relatively greater weight given to fixed (as opposed to variable) tariff components compared with the structure implemented in Victoria.

8.2.2 Role of tariff basket (weighted average tariff)

The ESCV's 2002 review focused on the weighted average of reference tariffs offered by a service provider, rather than to each individual reference tariff. This approach has been approved by the ACCC for transmission (GasNet) and by ESCV for distribution (Envestra, Multinet and TXU Australia).

Such an approach provides a service provider with flexibility about how to design individual prices. Multi-part pricing and congestion pricing is not precluded (subject to meeting the overall cap). Indeed, the ESCV advocates the 'tariff basket' form of price control on the basis that it provides incentives for regulated entities to adopt efficient price structures.

The Productivity Commission review too favoured regulating the weighted average reference tariff, rather than each individual reference tariff when there is more than one reference service, on the grounds that this would enable service providers to adopt more efficient pricing strategies than otherwise.

8.3 Views expressed in initial submissions

On assessing compliance with the Code's requirements for allocating costs between difference reference services and between (classes of) users of a reference service, Envestra's position in its initial submission was that:

> *"It would be beneficial if ESCOSA were to publish in advance how it considers it is entitled to assess Envestra's proposed Reference Tariffs and Reference Tariff Policy against the relevant provisions of the Code."*

However, on the role to be played by the weighted average of reference tariffs, Envestra strongly asserted that it did not see a role for the Commission providing guidance on this matter, on the grounds that:

> *"The Code operates under a propose-accept/reject model, where the Service Provider proposes a method/approach and the Regulator assesses the proposal against the relevant provisions of the Code. The Regulator then either accepts the Service Provider's proposal if it is compliant with the Code, or, if not compliant, requires modifications to the proposal to ensure compliance."*

As to network users, EnergyAustralia's position was that it:

> *"… supports the price path being based on weighted average of reference tariffs, to enable Envestra to adopt more efficient pricing strategies."*

TXU was less convinced, arguing that, while acknowledging the theoretical appeal of the 'tariff basket' approach,

> *"… this debate cannot be isolated to the theoretical efficiency of distributors, where there is often an opportunity for gaming..."*

AGL also argued that there should be restrictions on the extent to which Envestra can restructure prices for different types of haulage services (as might be achieved by side-constraints), but on the grounds that any such restructure will fall on network users to manage and implement:

> *"For example, there should be a transition path to smooth prices and avoid any potential "price shocks" to consumers."*

ECCSA called for Envestra to be required to provide details of its approach to tariff setting, so that the tariffs developed can be seen to provide the assessed revenue using the gas consumption assumptions used:

> *"…to the maximum extent possible a transparent approach to the derivation of the approved revenue and the allocation of costs between different customer classes. We believe that the most appropriate method for allocating costs should be on a shared asset basis rather than on a stand alone basis, as a stand alone basis maximises the costs to a single class of consumer. Further we believe that the design of the network needs to be analysed to ensure that the actualities of the system are used in calculating the allocation of costs, rather than use a notional distance methodology which might not replicate the network design."*

8.4 Approaches adopted by other regulators

In its 2002 review, ESCV decided that the Victorian distributors should be responsible for determining their own tariff structures, between (1) an upper limit of the cost to bypass the network; and (2) a lower limit of the marginal cost of supply, provided that they comply with the price control formula and any rebalancing constraints. In the latter regard, ESCV also adopted CPI+2% side-constraints.

8.5 Commission's initial analysis and preliminary views

The Commission acknowledged the point made by Envestra that, under the Code, it is for the service provider to propose a price structure and for the regulator to assess the proposal against the relevant provisions of the Code.

The existing zonal tariff structure was intended to prevent price shocks during the transitional period referred to in section 48 of the *Gas Pipelines Access (South Australia) Act 1997*. The structure is coming to its planned end in any event.

The Commission recognised that there will always be difficulties in establishing a tariff structure where the vast majority of costs of supplying network services are fixed. Under the Code, there are a number of issues that need to be considered when setting a tariff structure in addition to cost reflectivity. Issues such as bypass, smooth transition, competition with electricity and acceptability of non-postage stamp structure need to be considered to ensure that Envestra has a marketable product acceptable to network users.

Were Envestra to propose a tariff basket approach similar to that applying to it in Victoria, the Commission expected to consider leaving the assessment of the compliance of individual reference tariffs to the incentive structure generally recognised to be inherent in such an approach.

If such an approach is not proposed, the Commission indicated it would have little choice but to consider whether each reference tariff in turn complies with the requirements of section 8.38 to 8.42 of the Code.

The Commission's preliminary views were that:

- if Envestra proposes adoption of a tariff basket approach similar to that applying to it in Victoria, it is prepared to consider leaving the assessment of the compliance of individual reference tariffs with the requirements of section 8.38 to 8.42 of the Code to the incentive structure recognised to be generally inherent in a tariff basket approach; and
- if an alternative approach is proposed, it would expect to undertake a detailed assessment as to whether the level and structure of each reference tariff satisfies the requirements of section 8.38 to 8.42 of the Code.

8.6 Views expressed in further submissions

In its further submission, Envestra raised no objections to the Commission's proposed approach, noting however that it had not yet decided whether to submit proposed Access Arrangement Revisions on the basis of a price path approach or a tariff basket similar to that applying in Victoria.

ECCSA argued that:

> *"All users and potential users must be able to understand the derivation of their tariffs and satisfy themselves that the tariffs are fair, reasonable and efficient. Any tariff rebalancing must be transparent and the requisite approval obtained from the Commission. ECCSA recommends that ESCOSA requires Envestra to develop tariffs which are truly cost reflective, and not arbitrarily set at the bounds of cost reflectivity. … If this is not done, there is potential for Envestra to set tariffs which will allow it to over recover the target revenue (adjusted by volume changes) anticipated by the regulatory review."*

8.7 Commission's further analysis and final guidance

The Commission's preliminary view flagged its intention to *consider* leaving the assessment of the compliance of individual reference tariffs to the incentive structure generally recognised to be inherent in such an approach. Much will depend upon the details of Envestra's proposal, if it was to go down such a path. Hence, the approach the

Commission finally takes will depend very much upon Envestra's proposed approach. Considerations such as those raised by ECCSA will be taken into account at that time.

For this reason, the Commission has decided to maintain its preliminary views.

The Commission's final guidance is that:

- ***if Envestra proposes adoption of a tariff basket approach similar to that applying to it in Victoria, the Commission is prepared to consider leaving the assessment of the compliance of individual reference tariffs with the requirements of section 8.38 to 8.42 of the Code to the incentive structure recognised to be generally inherent in a tariff basket approach; and***
- ***if an alternative approach is proposed, the Commission would expect to undertake a detailed assessment as to whether the level and structure of each reference tariff satisfies the requirements of section 8.38 to 8.42 of the Code.***

9 REFERENCE TARIFFS: ANNUAL VARIATION METHOD

This chapter develops the Commission's final guidance in relation to the annual tariff variation method proposed by the service provider.

9.1 Requirements of the Code

Between (cost-based) access arrangement reviews, the Code grants the service provider the discretion to determine how its reference tariffs vary, provided:

- the regulator is satisfied that the section 8.1 general principles for reference tariffs are met (section 8.3); and
- reference tariffs only vary in accordance with an 'approved reference tariff variation method' specified in a service provider's access arrangement (section 8.3A).

Section 8.3 of the Code lists the following examples of how reference tariffs could be varied during an access arrangement period:

- ***cost of service approach***, where initial reference tariffs are set on the basis of the anticipated costs of providing the reference services and are adjusted continuously in light of actual outcomes (such as sales volumes and actual costs) to ensure that the reference tariffs recover the actual costs of providing the reference services;
- ***price path approach***, where reference tariffs are determined in advance for the access arrangement period to follow a path over time (such as a CPI-X path) that is forecast to deliver a revenue stream, with that price path not being adjusted to account for subsequent events until the commencement of the next access arrangement period;
- ***reference tariff control formula***, where an initial set of reference tariffs may vary over the access arrangement period in accordance with a specified formula or process; and
- ***trigger event adjustment***, where reference tariffs are varied in the manner specified in a reference tariff policy upon the occurrence of a specified event.

9.2 Issues under consideration

As the current Access Arrangement combines a price path approach and trigger event adjustment, this chapter focuses on issues associated with these annual tariff variation methods.

9.2.1 Price path approach

The value of X in a CPI-X price path is based, among other things, on an assessment of how far the service provider can reduce its future costs.

There are two alternative methods available for setting an X value:

- by smoothing the achievement of the series of building block forecasts of annual Total Revenue requirements over the access arrangement period; or
- by using a productivity-based method to set the path of prices from one (cost-based) access arrangement review to the next.

The main difference between a building block and productivity-based approach to setting an X value is that the latter is calibrated mainly on the basis of industry or economy-wide trends and not a service provider's own expected costs.

The use of industry or economy-wide trends is viewed as a way to substantially reduce the compliance cost and contentiousness of regulation. For example, some regulators have expressed interest in using the economy-wide trend in productivity to set a price cap for an individual service provider. On the other hand, the Productivity Commission review did not support the use of an economy-wide productivity measure to set price caps for service providers.

"It is not sensible to expect the productivity of individual businesses, or even whole industries, to grow at a rate similar to that of the economy as whole. Such an approach would significantly increase the potential for regulatory error." (Productivity Commission review, p. 276)

9.2.2 Trigger event adjustment

There is a risk that trigger event adjustment proposed by a service provider may only mitigate downside risks faced by the service provider. To the extent that upside risks are excluded, such 'asymmetric review' may bias expected outcomes in favour of the service provider.

9.3 Views expressed in initial submissions

In its initial submission, Envestra did not respond regarding the method for setting the value of X in a CPI-X price path.

EnergyAustralia expressed its support for the use of a productivity-based method of setting the price path.

As to trigger event adjustments, Envestra indicated that it would be beneficial if the Commission were:

> *"…to publish in advance how it considers it is entitled to assess whether any trigger events proposed by Envestra complied with the relevant provisions of the Code."*

EnergyAustralia argued that it is important to ensure that trigger event adjustments are symmetrical in nature. Likewise, TXU generally opposed trigger event provisions that allow pass through given certain trigger events on the grounds that these are:

> *"(i) asymmetric, and;*
>
> *(ii) more consistent with rate of return regulation."*

9.4 Approaches adopted by other regulators

As to the basis of X, in its 2002 review, ESCV generally approved approaches involving separated initial year (termed a P_0 adjustment) and X factors. The X factors adopted by ESCV reflect its conclusions regarding the required revenue stream, and its conclusions regarding the forecast level of demand (based on 'normal' weather conditions) for the next access arrangement period. The P_0 and X factors for each distributor are calculated by setting the net present value (NPV) of the allowed reference tariff revenue over the period 2003-07 equal to the NPV of the forecast revenue requirement, for each distributor.

As to trigger event adjustments, the ACCC terms specified events such as those that are used to trigger a reference tariff variation method as 'off ramps', being the circumstances under which an approved access arrangement could be opened for review by the regulator, in effect triggering a reassessment of reference tariffs.

ESCV's 2002 review endorsed the use of tax-related symmetrical trigger events, such that whenever the service provider determines that its costs have increased or decreased materially or will increase or decrease materially as a result of a new tax or a change in a tax, the service provider may apply to the regulator for approval to increase or decrease the reference tariffs. The regulator must then decide whether the change in taxes event specified in the statement will occur, has occurred or is continuing and, if so, the pass through amount and the basis on which the pass through amount is to apply. ESCV undertakes to ensure that the financial effect on the service provider associated with the change in taxes event concerned is economically neutral.

In its 2005 review, IPART expressed a preference for trigger adjustments that operate symmetrically, providing for the pass through of unforeseen costs that AGL incurs as a result of tax and other events, provided these costs are material. However, IPART did not approve review trigger mechanisms aimed at addressing the risk of forecasts proving incorrect.

9.5 Commission's initial analysis and preliminary views

The Commission noted that, under the Code, the value of X relates to the path for reference tariffs not total revenues.

The Commission considered that only proposed X factors that have a transparent and reasonable basis would satisfy the requirements of the Code.

Similar to its approach with respect to the Electricity Distribution Price Determination, the Commission favoured the calculation of X (and P_0) factors by setting the NPV of allowed revenue from reference tariffs over the second access arrangement period equal to the NPV of the Total revenue requirement assessed for the associated reference service. The Commission considered the use of a P_0 component to be up to Envestra, as NPV neutrality will remove any advantage or disadvantage.

As to trigger event adjustments, the Commission acknowledged that care was required when specifying any off-ramps to ensure that any asymmetrical bias in expected outcomes is avoided. In addition, forecasting errors *per se* should not be the basis for trigger event adjustments. Trigger events should be one-off and identifiable exogenous events, not a multitude of small cumulative events. Under the Code, an event that constitutes a trigger in any Reference Tariff Variation Method is intended to enable Reference Tariffs within an access arrangement period to vary in accordance with a defined range of alternative methods without reopening the Access Arrangement.

While sections 8.3A and 8.1 of the Code do not contain explicit references to requirements for symmetry, care is required to ensure that adjustments are both, as far as practicable, symmetrical in nature and imposed in accordance with the Code.

The Commission's preliminary views were that:

- the calculation of X (and P_0) factors by methods other than setting the NPV of allowed revenue over the second Access Arrangement period equal to the NPV of that portion of the Total Revenue requirement applicable to the associated reference service is unlikely to satisfy the requirements of the Code; and
- to satisfy the requirements of the Code, proposed trigger event mechanisms should endeavour to be symmetrical in their application.

9.6 Views expressed in further submissions

In its further submission, Envestra indicated that it did not object to the Commission using an NPV approach to determining the X factors, provided that the total revenue approved by this method was sufficient for Envestra to deliver its forecast service levels on the basis of forecast capital and non-capital expenditure.

9.7 Commission's further analysis and final guidance

As no objections were put, the Commission has decided to maintain its preliminary views.

The Commission's final guidance is that:

- ***the calculation of X (and P_0) factors by methods other than setting the NPV of allowed revenue over the second Access Arrangement period equal to the NPV of that portion of the Total Revenue requirement applicable to the associated reference service is unlikely to satisfy the requirements of the Code; and***
- ***to satisfy the requirements of the Code, proposed trigger event mechanisms should endeavour to be symmetrical in their application.***

10 REFERENCE TARIFFS: INCENTIVE MECHANISM

This chapter develops the Commission's final guidance in relation to the Incentive Mechanism feature of a Tariff Reference Policy.

The chapter deals separately with (1) implementation of the incentive mechanism applying during the first Access Arrangement Period and (2) the design of the incentive mechanism to apply in the second Access Arrangement Period.

The Code (section 8.2(d)) provides that an Incentive Mechanism may be incorporated into the Reference Tariff Policy *wherever the regulator considers this to be appropriate* and such mechanisms are consistent with the principles contained in section 8. In fact, the design and implementation of an incentive mechanism is one of the few features of an access arrangement that is mainly within the power of the regulator to determine.

10.1 Implementation of the first period's incentive mechanism

10.1.1 Provisions in the current Access Arrangement

As part of the first Access Arrangement (section 3.3.7), SAIPAR approved what it termed a 'cross period incentive mechanism'. This involved 100% of the full value of any efficiency gains achieved during the first Access Arrangement Period beyond those factored-in to the Total Revenue requirement, whatever their source, being retained by Envestra during both the first and second periods, including reductions in the costs of providing reference services and any revenue from reference services greater than forecast.

SAIPAR approved this mechanism in order:

> *"…to give Envestra a degree of longer-term certainty for its operations and an incentive for the early introduction of changes to save costs." (SAIPAR's Final Decision, p.12)*

The first Access Arrangement also provided for the estimates relevant to the efficiency gains during that period to be re-examined at the completion of the first Access Arrangement Period, with a view to estimates relating to the carryover of efficiency gains in the second period being adjusted where the regulator concludes that all or a component of the actual efficiency gains achieved were:

- the result of significant decreases in input prices that were reasonably foreseeable at the time that the estimates relevant to the efficiency gains were made; or
- based on excessive under-estimations of sales that were reasonably foreseeable at the time that the estimates relevant to the efficiency gains were made.

10.1.2 Issues under consideration

Assessing whether the first period's efficiency gains were 'reasonably foreseeable'

Provision was made in the first Access Arrangement for an adjustment to be made to efficiency carryover amounts from the first period to the extent that such amounts were assessed to be based on actual decreases in input prices and/or actual increases in sales that were reasonably foreseeable at the time the estimates were originally made. At issue is how the Commission should go about assessing whether the efficiency gains finally achieved during the first period were reasonably foreseeable at the time that the estimates relevant to the efficiency gains were made.

Efficiency carryover mechanism

Where efficiency gains made during the first Access Arrangement Period are to be carried over into the second period, also at issue is how such gains are to be preserved throughout the second period.

10.1.3 Views expressed in initial submissions

Only Envestra commented upon the issues associated with implementing the first period's incentive mechanism, and then only in respect to the issue of assessing whether the first period's efficiency gains were 'reasonably foreseeable'. On this point, Envestra stressed that:

> *"It is not open to ESCOSA to assess whether the forecasts approved by SAIPAR were, in effect, incorrect. The forecasts were approved by SAIPAR, ie they were deemed to be reasonable and best estimates at the time the Access Arrangement was approved. It is not permissible to revisit forecasts in hindsight except as expressly provided in section 3.3.7 of the Access Arrangement. …*
>
> *Section 8.44 refers expressly to the level of returns expected at the beginning of the Access Arrangement – that is, the incentive mechanism is to be based on the level of returns expected at the beginning of the Access Arrangement and not on any subsequent revision of those expected returns."*

10.1.4 Commission's initial analysis and preliminary views

On whether actual increases in sales during the first period were 'reasonably foreseeable', the Commission acknowledged Envestra's observation that excessive under-estimation of sales did not appear to have eventuated in the first Access Arrangement Period. Provided this is documented by Envestra, the Commission's preliminary view was that in such circumstances it would not be necessary to seek any adjustment to efficiency gains achieved during the first period for the purposes of implementing the first period's approved incentive mechanism.

On whether actual decreases in input prices during the first period were 'reasonably foreseeable', the Commission noted that only efficiency gains not based on any deliberate distortions in input cost forecasts underlying the first period's approved Total Revenue requirement are to be retained by Envestra through to the end of the second period. The Commission therefore preferred to await receipt of relevant data from Envestra before considering whether to undertake such assessments. The Commission's general position, however, was that it intended to be cautious in exercising the power it has under the first period's incentive mechanism to consider "reasonable foreseeable" costs to be something other than the forecasts on the basis of which reference tariffs were determined for the first Access Arrangement Period. Exercising this power would generally be contrary to regulatory precedent and may erode the incentives properties of the efficiency carryover mechanism to be applied in the second period.

As to the detailed method for preserving the first period's efficiency gains to be carried over into the second period, the Commission noted that neither the Access Arrangement nor SAIPAR Final Decision provided details of the intended method. In these circumstances, the Commission acknowledged that an interpretation must be adopted which best gives effect to the spirit of SAIPAR's incentive mechanism.

Based upon its reading of SAIPAR's decision, the Commission's preliminary view was that the following detailed efficiency carryover mechanism would best meet SAIPAR's requirements, namely:

- ▲ a 'glide path' mechanism, whereby the gains made in the first period (irrespective of when in that period) are glided out over the whole of the second period;
- ▲ both efficiency gains and losses are considered in the carryover – the exclusion of any losses would distort the incentive to achieve efficiency gains in each year of the regulatory period;
- ▲ as the incentive mechanism refers to gains being preserved, any negative carryover amount from the first period would need to be set to zero and not carried over into the second period; and
- ▲ as the mechanism in Access Arrangement refers only to non-capital cost and revenue efficiency gains, it is not necessary for the first period efficiency carryover mechanism to include savings in capital expenditure made during the first period.

The following Table illustrates the proposed calculation of the efficiency gains to be carried over from the first period to the second period based on these preliminary views. [The numbers included in this Table are purely illustrative.] The efficiency gains carryover so calculated would be added to the required Total Revenue that results solely from the application of Envestra's 'building blocks' analysis to its second period costs.

EFFICIENCY CARRYOVER: FOR 1ST PERIOD GAINS

Costs *All values are expressed in nominal prices ($m).*

	First AA Period					Second AA Period				
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
AAI benchmark (CPI adjusted)	100.0	101.0	105.0	106.0	108.0					
Actual	101.0	103.0	108.0	110.0	113.0					
Under/(Over)	-1.0	-2.0	-3.0	-4.0	-5.0					
Cost Efficiency Carry-over to be added to Target Revenue						**-5.0**	**-5.0**	**-5.0**	**-5.0**	**-5.0**

Revenue *All values are expressed in nominal prices ($m).*

	First AA Period					Second AA Period				
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
AAI benchmark (CPI adjusted)	300.0	303.0	315.0	318.0	323.0					
Actual	301.5	306.0	319.5	324.0	330.5					
Over/(Under)	1.5	3.0	4.5	6.0	7.5					
Revenue Efficiency Carry-over to be added to Target Revenue						**7.5**	**7.5**	**7.5**	**7.5**	**7.5**

Annual Efficiency Carry-over to be added to Target Revenue	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**

Net Overall Efficiency Carry-over amount to be added to Target Revenue	**12.5**

Note: The numbers included in this Table are for illustrative purposes only.

The Commission's preliminary views were that:

- it preferred to be cautious in exercising the power it has under the first period's incentive mechanism to consider "reasonable foreseeable" costs to be something other than the forecasts underlying the first period's reference tariffs, as exercising this power would generally be contrary to regulatory precedent and may erode the incentives properties of the efficiency carryover mechanism to be applied in the second period
- it would only consider exercising this power if relevant data from Envestra reveals extraordinary unforecast efficiency gains;
- the detailed method for preserving the first period's efficiency gains requires the Commission to specify the carryover mechanism that best gives effect to the spirit of SAIPAR's incentive mechanism; and
- the detailed efficiency carryover mechanism that best meets SAIPAR's requirements would involve (1) a 'glide path' mechanism, whereby the gains made in the first period are glided out over the whole of the second period, (2) both efficiency gains and losses in each year being considered in the carryover, (3) any negative carryover amount at the end the first period not being carried over into the second period, and (4) only including the non-capital cost and revenue efficiency gains made during the first period, but not savings in capital expenditure.

10.1.5 Views expressed in further submissions

In its further submission, ECCSA agreed with the Commission's preliminary views"

> *"We believe that SAIPAR was exceedingly generous and the Commission is appropriately exercising caution."*

Envestra indicated that it was not anticipating any extraordinary unforecast efficiency gains, and therefore did not expect that the Commission would need to consider this issue further. Envestra also observed that it:

> *"…has not yet determined a mechanism that best meets the needs of SAIPAR's requirements for efficiency sharing."*

10.1.6 Commission's further analysis and final guidance

As no arguments were put opposing the Commission's preliminary views, the Commission has decided to maintain these views.

The Commission's final guidance is that:

- ***the Commission will be cautious in exercising its power under the first period's incentive mechanism to consider "reasonable foreseeable" costs to be something other than the forecasts underlying the first period's reference tariffs, as exercising this power would generally be contrary to regulatory precedent and may erode the incentives properties of the efficiency carryover mechanism to be applied in the second period;***
- ***the Commission will only consider exercising this power if relevant data from Envestra reveals extraordinary unforecast efficiency gains;***
- ***the detailed method for preserving the first period's efficiency gains requires the Commission to specify the carryover mechanism that best gives effect to the spirit of SAIPAR's incentive mechanism; and***
- ***the detailed efficiency carryover mechanism that best meets SAIPAR's requirements involves (1) a 'glide path' mechanism, whereby the gains made in the first period are glided out over the whole of the second period, (2) both efficiency gains and losses in each year being considered in the carryover, (3) any negative carryover amount at the end the first period not being carried over into the second period, and (4) only including the non-capital cost and revenue efficiency gains made during the first period, but not savings in capital expenditure.***

10.2 Design of the second period's incentive mechanism

10.2.1 Requirements of the Code

The Code (section 8.2(d)) provides that Incentive Mechanisms may be incorporated into the Reference Tariff Policy wherever the regulator considers this to be appropriate *and* such mechanisms are consistent with the principles contained in section 8.

Section 8.44 defines an Incentive Mechanism to be a mechanism that permits the service provider to retain all, or any share of, any returns to the service provider from the sale of the reference service in excess of the level of returns expected for that access arrangement period, particularly where the regulator is of the view that the additional returns are attributable (at least in part) to the efforts of the service provider.

Section 8.4 provides that the amount of the benefit to be retained by the service provider under the Incentive Mechanism is to be *determined by the regulator* in the range of between 0% and 100% of the total efficiency gains achieved.

Section 8.46 provides that an Incentive Mechanism should be designed with a view to both:

- providing the Service Provider with an incentive to
  - increase the volume of sales of all services, but to avoid providing an artificial incentive to favour the sale of one service over another;
  - minimise the overall costs attributable to providing those services, consistent with the safe and reliable provision of such services;
  - develop new services in response to the needs of the market for services;
  - undertake only prudent New Facilities Investment and to incur only prudent non-capital costs; and
- ensuring that users and prospective users gain from increased efficiency, innovation and volume of sales (but not necessarily in the Access Arrangement Period during which such increased efficiency, innovation or volume of sales occur).

10.2.2 Issues under consideration

Envestra's forthcoming Access Arrangement Revisions will need to address the incentive mechanism to apply with regard to efficiency gains made during the second Access Arrangement Period. The cross-period incentive mechanism in the current Access Arrangement only relates to efficiency gains achieved during the first Access Arrangement Period.

Sharing realised or unforecast efficiency gains

It is argued by some that only *actual* efficiency gains should be eligible to be shared between service providers and users, rather than the usual approach of sharing *unforecast* gains, that is efficiency gains made that are in excess of gains estimated to be possible by the regulator.

<u>Sharing of both downside and upside returns</u>

Market-based incentives to improve efficiency and to promote efficient growth of the gas market are provided where a service provider is able to earn greater profits (or less profits) than anticipated between reviews if it outperforms (or underperforms against) the benchmarks that were adopted in setting reference tariffs.

As returns below expectations are not mentioned in sections 8.44 and 8.45 of the Code, the question arises whether the sharing of both downside and upside returns is feasible under the Code.

<u>Treatment of forecast efficiency gains</u>

Under the Code, the extent of benefit sharing in an Incentive Mechanism – in the range of between 0% and 100% of the total efficiency gains achieved – is a matter solely *for the regulator to determine*.

The period over which unforecast returns are retained (which under the Code can be for more than a single access arrangement period), and the type of efficiency carryover mechanism involved, determine the extent to which such excess returns are awarded to network users.

While the first period's efficiency carryover mechanism involved a glide path approach, an option available for the second period is the use of a rolling carryover mechanism. Under the rolling carryover mechanism, a service provider is permitted to retain any efficiency gains or losses for a specified number of years following the year in which they were incurred.

<u>Sources of efficiency gains</u>

While the first period's efficiency carryover mechanism involved preserving revenue-based as well as cost-based efficiency gains (as permitted under the Code), an option available for the second period is limiting such gains to cost-based efficiency gains only.

10.2.3 Views expressed in initial submissions

On whether benefit sharing of efficiencies achieved in the second period should be based on realised or forecast levels of return and efficiencies, Envestra argued that:

> *"… a 'year on year' comparison should be made to determine actual realised efficiency gains, rather than assuming a level of efficiency in the forecasts and then only rewarding the Service Provider if additional efficiencies are achieved.*
>
> *Incorporating an assumed level of efficiency in the forecasts is prone to regulatory error and asymmetric risk. There is no risk to users as they receive the benefits of an assumed efficiency gain, regardless of whether it is achieved, but there is a risk to the Service Provider in that the efficiency gain may not be achieved."*

EnergyAustralia did not support an approach that would reduce the incentive properties of the current approach.

On whether the Commission's guidance was appropriate regarding the sharing of downside as well as upside returns, Envestra indicated that:

> *"Given that section 8.44 [of the Code] only refers to sharing of upside return, it is clear that the Access Code does not allow sharing of downside returns."*

TXU, noting that ACCC has allowed the carry over of negative losses for non-capital costs at the end of a regulatory period, indicated support for such a carryover on the basis that it makes the incentive mechanism symmetrical.

EnergyAustralia argued that early guidance regarding the sharing of downside as well as upside returns was warranted in view of the different views that have been expressed in other jurisdictions.

On whether the Commission's guidance was appropriate on the relative incentive merits of alternative gain-sharing ratios and periods, Envestra indicated that it would find it beneficial if the Commission were to provide such guidance.

EnergyAustralia suggested that the Commission should commit to limiting efficiency gains to the access arrangement period in question and to the sharing of gains in greater proportion to the network users, as this:

> *"…will align South Australia with other jurisdictions and in itself provide the certainty it is suggested the service provider requires."*

TXU argued that it:

> *"… would support a regulatory regime that redistributes Opex and Capex gains back to consumers on the basis of the actual gains and a 70:30 redistribution."*

ECCSA argued that maintenance of service standards is essential and a penalty/bonus regime assists in this goal:

> *"… for an incentive program to be fair to both the business and consumers, there must be a countervailing penalty to accompany any bonus, otherwise the program is one sided. …Equally if the business is to benefit from reducing opex and capex costs, then so should they incur penalties if these costs increase."*

10.2.4 Approaches adopted by other regulators

On realised or forecast efficiency gains shared, no regulators allow for the sharing of the anticipated portion of actual efficiency gains.

On the treatment of negative carryovers, only the ACCC has allowed the sharing of downside returns. The ACCC considers that sharing downside and upside returns is feasible under the Code, and required GasNet to adopt a carryover mechanism for operating costs (and not capital costs) that involves the automatic carryover of losses as well as gains. In addition, the ACCC has argued that not carrying forward losses could create a gaming opportunity for service providers.

By contrast, in its 2002 review, the ESCV decided that the automatic carryover of losses was inappropriate because it may dampen incentives to make efficiency gains in the next access arrangement period, since any such gains would be offset by the negative amount carried over. Nevertheless, ESCV also expressed the view that it is appropriate for it to have discretion in determining the treatment of any accrued negative carryover amounts at the end of future access arrangement periods, while recognising that such discretion must be exercised within constraints set by the Code.

On gain-sharing ratios and periods, IPART's 2005 review allows distributors to retain 100% of unforecast gains that arise over the access arrrangement period. ESCV's final decision was that Envestra should carryover efficiency gains (or losses) for a total of five (rather than ten) years after the year in which the gain is made. The five-year carryover period implies a 30:70 sharing ratio of efficiency gains, between the distributors and customers. ESCV considers this sharing ratio to be reasonable in the light of the Code requirements. Specifically, there is nothing in the Code that would require a 50:50 sharing of gains, or the retention of benefit for ten years.

The extent to which efficiency gains are redistributed under approved access arrangements in other jurisdictions is illustrated in the following Table included in the Productivity Commission review:[23]

Table 7.1 **Treatment of efficiency gains by regulated gas businesses**

Jurisdictional regulator	*Treatment of forecast efficiency gains*	*Net present value sharing of forecast gains (business/ user)*	*Treatment of unforecast efficiency gains*	*Net present value sharing of unforecast gains (business/ user)*	*Inter-period efficiency carryover mechanism*
Commonwealth	Not retained	0/100	Retain minimum five years	30/70	Yes
Victoria	Not retained	0/100	Retain minimum five years	30/70	Yes
New South Wales	Not retained	0/100	Retain until reset	30/70[a]	No
South Australia	Not retained	0/100	Retain ten years	50/50	Yes
Western Australia	Not retained	0/100	Retain until reset	30/70[a]	No
Queensland	Not retained	0/100	Retain until reset	Not defined	No

[a] First year efficiency gains only.

Source: AGA, sub. 13, p. 55.

10.2.5 Commission's initial analysis and preliminary views

The Commission acknowledged that, while future efficiency improvements are difficult to forecast, passing on reasonably foreseeable efficiency gains to network users is fully consistent with the requirements of the Code that costs used to

[23] Productivity Commission review, p. 246.

determine the Total Revenue requirement be based on the service provider acting efficiently and achieving the lowest sustainable cost of delivering services. This is also consistent with the outcomes of a workably competitive market.

Benefit sharing should only apply to benefits actually realised that are beyond those estimated to be possible if the service provider acts efficiently and achieved the lowest sustainable cost of delivering services. Benefit sharing on any other basis would present risks to service providers.

On gain-sharing ratios and periods, the Commission recognised that the extent of benefit sharing in an Incentive Mechanism – in the range of between 0% and 100% of the total efficiency gains achieved – was a matter solely for the regulator to determine.

The Commission noted that, by permitting Envestra to retain unforecast efficiency gains for ten years, the current Access Arrangement was generous relative to the incentive mechanisms approved for gas distribution in other jurisdictions and for the electricity distribution industry in South Australia. While there should be encouragement for efficiency gains to be made, excessive retention provides reduced user benefits. As this is a matter within the Commission's power, it envisaged exercising this power in a manner that results in gain-sharing ratios and periods in South Australia's gas distribution network that are consistent with those generally applying to the State's electricity distribution network and to gas distribution in other jurisdictions.

The Commission's preliminary view was that the following detailed efficiency carryover mechanism would best achieve the objectives of the Code, namely:

- a 'rolling carryover' mechanism, under which any efficiency gains or losses are retained for a specified number of years following the year in which they were achieved;
- a (rolling) gains maintenance period of five years;
- the inclusion of both efficiency gains and losses in each year when calculating the efficiency gains achieved in any one year;
- how any negative carryover amount at the end of the second period should be treated must await the Commission's assessment of the overall incentive characteristics of the proposed Access Arrangement; and
- whether revenue-based efficiency gains are to be included, and the associated gains sharing ratio, should depend upon the treatment of costs (such as marketing costs) associated with Envestra's efforts to increase usage of the distribution system.[24]

[24] For example, in its recent *2005-2010 Electricity Distribution Price Determination*, the Commission decided to apply what was in effect a gains sharing ratio relating to the difference between originally forecast sales quantities and outturn sales quantities that was less than 100%.

In three respects, this mechanism differs from the first period carryover mechanism approved by SAIPAR, notably:

- ▲ the use of a five-year rolling carryover mechanism, rather than a glide path mechanism;
- ▲ leaving open the possible inclusion of the negative carryover amount at the end of the second period, rather than such negative amounts necessarily being set at zero; and
- ▲ the possible restriction of efficiency gains to those associated with better-than-expected costs of service and/or the adoption of a gains sharing ratio for revenue-based efficiency gains that differs from that applying to cost-based efficiency gains.

In particular, allowing efficiency gains or losses to be retained for five years after they are made in effect permits Envestra to retain approximately 30% of such efficiency gains. This compares with its retention of approximately 50% of the efficiency gains made during the first period.

10.2.6 Views expressed in further submissions

In its further submission, Envestra indicated that it did not support the mechanism proposed by the Commission because:

> *“• The five year timeframe for retention of efficiency gains by Envestra is inappropriate. Ten years is a more appropriate timeframe as it provides for a fairer sharing of efficiency gains between customers and Envestra; and*
>
> *• Efficiency losses should not be included in the carryover each year. Section 8.44(a) of the Code restricts the application of an incentive mechanism during an Access Arrangement Period to returns that are in excess of those expected (not less than those expected); ·*
>
> *• Envestra does not believe that revenue gains should be included within the efficiency mechanism, as this weakens the incentive powers inherent in both a price path approach and a tariff basket mechanism. Envestra believes that it should be able to retain the benefits of delivering service at lower than benchmark costs, where this can be achieved without lowering service quality, yet retain the upside revenue from additional tariff revenue.”*

10.2.7 Commission’s further analysis and final guidance

Under the Code, the detailed method for preserving the second period’s efficiency gains is a matter for the Commission to determine in light of the objectives of the Code.

Passing on reasonably foreseeable efficiency gains to network users is an essential requirement of the Code. Only realised unforecast efficiency gains should be retained for an appropriate period (“benefit sharing”) by the network service provider.

The Commission notes that ECCSA has raised the possibility, in the service policy context, of a reliability-related incentive mechanism, especially with regard to unaccounted for gas and for service standards that fall below guaranteed service levels. The Commission will consider such a possibility once details of Envestra's proposed Access Arrangement Revisions are known.

As the nature of any incentive mechanism to apply to efficiency gains achieved during the second Access Arrangement Period is a matter to be determined by the Commission, it sees no reason to alter its preliminary views at this stage. The Commission's eventual determination will need to be compliant in all respects with the requirements of the Code.

The Commission's final guidance is that:

- ***the detailed method for preserving the second period's efficiency gains is a matter for the Commission to determine in light of the objectives of the Code;***
- ***passing on reasonably foreseeable efficiency gains to network users is an essential requirement of the Code;***
- ***benefit sharing should only apply to realised unforecast efficiency gains; and***
- ***the detailed efficiency carryover mechanism that best achieves the objectives of the Code involves (1) a five-year 'rolling carryover' mechanism, whereby the gains made in the second period are to be retained by Envestra for five years following the year in which they were achieved, (2) both efficiency gains and losses in each year being considered in the carryover, (3) any negative carryover amount at the end of the second period not being carried over into the third period only where this is consistent with the overall incentive characteristics targeted for the Access Arrangement, and (4) inclusion of revenue-based efficiency gains only where this is consistent with the treatment of costs (such as marketing costs) associated with Envestra's efforts to increase usage of the distribution system when calculating allowed Total Revenue and, in which case, a gains sharing ratio could be applied that differed to the ratio applying to cost-based efficiency gains.***

11 REFERENCE TARIFFS: INFORMATION DISCLOSURE

This chapter develops the Commission's final guidance in relation to the Code's requirement (section 2.28) that the service provider must accompany its proposed revisions to the access arrangement with the information required to enable the derivation of each of the elements of an access arrangement to be understood and an opinion to be formed on whether the access arrangement complies with the Code.

11.1 Requirements of the Code

The Commission's powers (as the relevant Regulator) to obtain the information necessary to perform any of the regulator's prescribed duties under the Gas Pipelines Access Law are set out in section 41 of Schedule 1 to the *Gas Pipelines Access (South Australia) Act 1997*. That section defines such a regulator's "prescribed duty" under the Gas Pipelines Access Law to include:

- deciding whether to approve changes to an access arrangement under the Code;
- deciding under the Code whether to approve, disallow or make a variation of a reference tariff within an access arrangement period (within the meaning of the Code); and
- monitoring compliance with the Code.

Nothing in the Code limits the regulator's power under the Gas Pipelines Access Law to obtain information, including information in an uncategorised or unaggregated form.

As to information to assist network users, the Code (section 2.6) states that the Access Arrangement Information document must (*in the regulator's opinion*) adequately enable users to understand how each of the elements of an access arrangement was derived (including reference tariffs), and to form an opinion on whether the access arrangement complies with the Code.

In addition, section 2.7 of the Code provides that the Access Arrangement Information document may include any relevant information, but must include at least the categories of information described in Attachment A to the Code, including:

- access and pricing principles;
- capital costs;
- operations and maintenance;
- overheads and marketing costs;
- system capacity and volume assumptions; and
- key performance indicators.

If a regulator considers the information is not adequate, it can then request the service provider to amend and resubmit the information (section 2.30).

The Code (section 2.8) also specifically provides that information included in Access Arrangement Information document may be categorised or aggregated to the extent necessary to ensure the disclosure of the information is, *in the opinion of the Regulator*, not unduly harmful to the legitimate business interests of the service provider or a network user or prospective user.

Finally, section 7 of the Code makes general provisions regarding the disclosure of confidential information. In particular, sections 7.11 to 7.14 provide that:

- at the time when the service provider furnishes information to the regulator, the service provider may state that the information or document or part of the information or document is of a confidential or commercially sensitive nature; and
- the regulator must not disclose the contents of any such information except where *the regulator is of the opinion* that the disclosure of that information would not be unduly harmful to the legitimate business interests of the service provider.

11.2 Issues under consideration

There seems to have been general disquiet among network users about the adequacy of information disclosure and reporting associated with the first Access Arrangement, including the acceptance by SAIPAR of Envestra's claims of confidentiality over much of the information submitted. The Commission will need to consider the degree of transparency of regulatory decisions warranted under the Code.

Furthermore, the extent of information disclosure by the service provider outside the review process also deserves consideration. The Commission is aware that, under the Code, the preferred time to deal with information requirements is at reviews of access arrangements. During the review process, the Commission intends to examine the extent to which annual reporting of certain information is required for monitoring of compliance with the approved Access Arrangement to be effective.

However, as the Productivity Commission review stressed, information requirements are not costless. The Productivity Commission recommended deleting sections of the Code that require detailed information on cost allocations between individual reference services and users. The Productivity Commission also did not consider that the benefits of allowing regulators to obtain information between access arrangement reviews would be greater than the costs on service providers.

11.3 Views expressed in initial submissions

In its initial submission, Envestra argued that it sees no need for the Commission to publish information requirements in anticipation of Envestra's submission as it:

> *"…will be providing Access Arrangement Information that enables users to understand the derivation of elements in the proposed Access Arrangement revision, in accordance with section 2.6 of the Code."*

EnergyAustralia suggested that:

> *"…the test of confidentiality that was used by SAIPAR should be reviewed to ensure that it both maximises the information available in the AA review process, and protects information that is truly commercially sensitive."*

11.4 Commission's initial analysis and preliminary views

The Commission's powers to obtain information from any person in order to undertake its duties under the Code are clear, whether the person is the service provider or an agent of the service provider or a network user. The limit on the Commission is that the information so requested must be reasonably required for the performance of one of functions (in this case) under the Gas Pipelines Access Law.

The obligation on the Commission to ensure that network users can understand how each of the proposed elements of an access arrangement is derived (including reference tariffs) and to form an opinion on whether the proposed access arrangement complies with the Code, is also clear. The disclosure of information for this purpose is not subordinate to any restrictions on disclosure of confidential or commercially sensitive information, as section 2.8 of the Code provides that information included in the Access Arrangement Information document may be categorised or aggregated to the extent necessary to ensure the disclosure of the information is, *in the opinion of the regulator*, not unduly harmful to the legitimate business interests of the service provider or a network user or prospective user.

While there was evidently some dissatisfaction with the adequacy of information apparently provided to SAIPAR and published in the Access Arrangement Information document as part of the current Access Arrangement, the Commission considered that such problems were less likely to re-occur if it placed on the record the importance it attributes to the role of information disclosure under the Code. Also, the Commission indicated its intent not to pre-judge the likely adequacy of information to be provided in conjunction with Envestra's Access Arrangement Revisions.

Finally, the Commission considered that there could be a role, in some instances, for the disclosure of certain information progressively through the second Access Arrangement Period, in order to provide assurance of compliance with the approved Access Arrangement (and so the Code). Approval of proposed Access Arrangement Revisions could even be made conditional upon provision of such information. The scope for such a reporting requirement must, however, await Envestra's proposed Access Arrangement Revisions.

The Commission's preliminary views were that:

▲ irrespective of whether such information is confidential or commercially sensitive, unless Envestra provides all the information that the Commission itself needs to understand how each of the proposed elements of the Access Arrangement to apply during the second period is derived (including reference tariffs) and to form an opinion on whether the proposed Access Arrangement complies with the Code, the Commission would be unable to conclude that the proposed Access Arrangement Revisions satisfy the requirements of the Code;

- before approving the proposed Access Arrangement Information document, it would need to be satisfied that the document discloses sufficient information to enable network users to understand how each of the elements of the Access Arrangement to apply during the second period is derived (including reference tariffs) and to form an opinion on whether the Access Arrangement complies with the Code;
- an Access Arrangement Information document should be able to meet such requirements without disclosing information that would unduly harm the legitimate business interests of the service provider or network users; and
- it would give consideration, as necessary, to approving proposed Access Arrangement Revisions subject to periodic reporting during the second Access Arrangement period capable of providing assurance of compliance with the approved Access Arrangement.

11.5 Views expressed in further submissions

In its further submission, ECCSA argued that information disclosure:

> *"… is a very critical issue …The previous access arrangement determination was grossly deficient in the area of information disclosure, transparency and rigour. …Consumers were significantly disadvantaged in contributing to the [SAIPAR] review due to a lack of useful and accurate data which is needed for assessing the reasonableness of the review outcome."*

Envestra emphasised its intention to provide sufficient information in order for the Commission to adequately assess how each of the proposed elements of the Access Arrangement would apply in the second period.

11.6 Commission's further analysis and final guidance

As there was no disagreement with its preliminary views, the Commission has decided to maintain these views.

The Commission's final guidance is that:

- ***irrespective of whether such information is confidential or commercially sensitive, unless Envestra provides all the information that the Commission itself needs to understand how each of the proposed elements of the Access Arrangement to apply during the second period is derived (including reference tariffs) and to form an opinion on whether the proposed Access Arrangement complies with the Code, the Commission will be unable to conclude that the proposed Access Arrangement Revisions satisfy the requirements of the Code;***
- ***before approving the proposed Access Arrangement Information document, the Commission will need to be satisfied that the document discloses sufficient information to enable network users to understand how each of the elements of the Access Arrangement to apply during the second period is derived (including reference tariffs) and to form an opinion on whether the Access Arrangement complies with the Code;***
- ***an Access Arrangement Information document should be able to meet such requirements without disclosing information that would unduly harm the legitimate business interests of the service provider or network users; and***
- ***the Commission will give consideration, as necessary, to approving proposed Access Arrangement Revisions subject to periodic reporting during the second Access Arrangement period capable of providing assurance of compliance with the approved Access Arrangement.***

12 TERMS AND CONDITIONS

This chapter develops the Commission's final guidance in relation to the Terms and Conditions element of an access arrangement.

12.1 Requirements of the Code

The Code (section 3.6) provides that an access arrangement must include the Terms and Conditions on which the service provider will supply each reference service.

The only specific principle to be met by such Terms and Conditions is the requirement, in section 3.6, that:

> *"The terms and conditions included must, in the Relevant Regulator's opinion, be reasonable."*

12.2 Issues under consideration

The Terms and Conditions element of Envestra's current Access Arrangement mainly details the obligations imposed on network users (rather than the commitments made to network users by the service provider). [The latter are mainly addressed in the Services Policy element of the Access Arrangement – see chapter 2 above.]

The Commission's guidance regarding the criteria to be met by the terms and conditions may be important because of the Code's requirement (in section 3.6) that the terms and conditions included in an access arrangement must, *in the relevant regulator's opinion*, be reasonable.

A key issue is what, in the Commission's opinion, constitutes a 'reasonable' term or condition of supply.

Another issue involves the appropriate division between 'standard*'* terms and conditions, being terms and conditions that are subject to regulatory approval, and 'specific' terms and conditions, being terms and conditions that are not subject to regulatory approval but instead are negotiated between Envestra and each network user.

Finally, as discussed in chapter 2, there is a question about whether any specification of standards (or quality) of service as part of the standard Terms and Conditions needs to go beyond any minimum obligations under licences or other regulatory instruments.

12.3 Views expressed in initial submissions

In its submission, Envestra agreed that it would be beneficial if the Commission were to publish in advance how it intends to assess the reasonableness of terms and conditions.

Network users (EnergyAustralia, AGL and TXU) too were supportive of the issuance of guidance, as they were of the clarification of service standards.

12.4 Approaches adopted by other regulators

In its 2002 review, ESCV expressed preference for a complete set of default contractual provisions, and for proposed terms and conditions to contain standard commercial terms, that are sufficiently complete, clear and unambiguous, and practical and workable. It also established a Terms & Conditions Working Group to consider proposed Terms and Conditions.

In its 2005 review, IPART relied upon an independent consultant to review the reasonableness of AGL's proposed Terms and Conditions.

12.5 Commission's initial analysis and preliminary views

The Commission acknowledged that it must await receipt of Envestra's proposed Terms and Conditions before judging the extent to which they meet the Commission's reasonableness test.

That said, the Commission suggested that standard terms which were not generally consistent across jurisdictions would, on the face of it, be unlikely to be reasonable. Furthermore, the Commission indicated it would be guided by the tests of reasonableness suggested by IPART's independent consultant in its review of the reasonableness of AGL's proposed Terms and Conditions.

In addition, the Commission indicated that, unless all substantive terms and conditions that appear in Envestra's normal access agreements with network users were included in the Access Arrangement's standard Terms and Conditions, the standard Terms and Conditions were unlikely to comply with the requirements of the Code, let alone be reasonable.

The Commission proposed to convene a Terms & Conditions Working Group to consider Enevstra's proposed Terms and Conditions once they are received.

In addition, the Commission recognised that some specification of standards (or quality) of service may be appropriate as part of the Access Arrangement's standard Terms and Conditions. Envestra had itself acknowledged that the proper place for any specification of service levels was in these Terms and Conditions, and that the Commission's discretion was limited to determining whether the related proposed terms and conditions are reasonable.

The Commission acknowledged that network users were generally supportive of moves to clarify service standards. It was therefore difficult to envisage circumstances where the omission of any specification of standards of service could be regarded as reasonable. While Envestra's preference was for a statement of service standards based upon its minimum obligations under its licence and attendant codes, it is possible that users were paying for a standard of service in excess of such minima during the first Access Arrangement Period.

On balance, the Commission considered that a general condition in the standard terms and conditions of the Access Arrangement was needed in which Envestra undertook to continue to provide a quality of supply consistent with that provided over the five years of the first Access Arrangement Period. Whether and how Envestra specifies or qualifies such an undertaking was a matter for it to consider in the first instance.

The Commission's preliminary views were that:

- to be assessed as reasonable, proposed standard Terms and Conditions need to be comprehensive, clear and unambiguous, practical and workable, and generally consistent in their application across jurisdictions;
- it proposed to convene a Terms & Conditions Working Group soon after Envestra submits its proposed Access Arrangement Revisions, comprising representatives of Envestra, network users and the Commission, to help it consider Envestra's proposed standard Terms and Conditions;
- to avoid doubt about whether any terms and conditions are standard or specific, Envestra should clarify the criteria it uses to distinguish specific terms and conditions that are agreed between Envestra and each network user in their access agreement from the standard Terms and Conditions approved as part of the Access Arrangement; and
- the exclusion of a general condition that specifies how the quality of supply to be provided during the second Access Arrangement period relates to that provided over the five years of the first period would be unlikely to satisfy the test of reasonableness required by the Code.

12.6 Views expressed in further submissions

On assessing whether proposed standard Terms and Conditions are reasonable, Envestra agreed in its further submission that such terms and conditions should meet the criteria of clarity, lack of ambiguity, practicality and workability. It however doubted the merit of achieving a goal of jurisdictional consistency in the standard Terms and Conditions because the terms and conditions in South Australia have been developed over time, and on consultation with network users, to a stage where they reflect the SA market, retailer mix and customer base, with terms and conditions from another State unlikely to be always suitable for the SA market.

In its further submission, AGL argued that some of the standard Terms and Conditions in Annexure E of the Access Arrangement needed review, specifically those relating to demand delivery points, in particular to MDQ re-sets and the provision of metering data:

> *"MDQ re-set provisions could be improved and better assurance is required by network users concerning the quality and timeliness of demand delivery point metering data."*

Both AGL and ECCSA supported the Commission's proposal to convene a Terms and Conditions Working Group to consider Envestra's proposed Terms and Conditions.

While Envestra argued that the specific terms and conditions additional to the approved standard Terms and Conditions were limited to user-specific information and the outcomes of commercial negotiations in which parties update the terms and conditions for their specific commercial and practical needs, AGL's view was that a large portion of the specific terms and conditions could be incorporated into the standard Terms and Conditions:

> *"This would make haulage agreements more equitable between retailers as well as improve the process for negotiating haulage agreements. The current negotiating process is lengthy and cumbersome, with most of the issues arising over clauses in the Specific Terms and Conditions."*

Finally, Envestra indicated that it did not support the inclusion of a general condition undertaking how the quality of supply to be provided during the second Access Arrangement period related to those provided in the first period because:

> *"Quality of service encompasses a very broad range of activities conducted by Envestra, as well as measures specified in the Distribution Code and other instruments. There may be varying views amongst users and ESCOSA of which aspects of service quality are important…The actual performance provided to individual retailers or customers may differ between customers and retailers within an area, and between areas."*

12.7 Commission's further analysis and final guidance

The Commission holds to the view that proposed standard Terms and Conditions should be *generally* consistent in their application across jurisdictions. This allows for differences where warranted by different circumstances between jurisdictions.

As to whether any of the current specific terms and conditions would be better part of the standard Terms and Conditions is something that can be further considered by the Terms & Conditions Working Group that the Commission proposes to establish, comprising representatives of Envestra, network users and the Commission. This consideration will be assisted by Envestra clarifying the criteria it uses to distinguish specific terms and conditions that are agreed between Envestra and each network user by negotiation from the standard Terms and Conditions approved as part of the Access Arrangement.

Finally, the Commission also holds to its view that standard Terms and Conditions should specify how the quality of supply to be provided during the second Access Arrangement period relates to that provided during the first period. This may need to be specified in relatively general terms, and in a way that acknowledges differences between actual performance provided to individual retailers or customers within an area and between areas.

For these reasons, the Commission has decided to maintain its preliminary views.

The Commission's final guidance is that:

- ***to be assessed as reasonable, proposed standard Terms and Conditions need to be comprehensive, clear and unambiguous, practical and workable, and generally consistent in their application across jurisdictions;***
- ***the Commission proposes to convene a Terms & Conditions Working Group soon after Envestra submits its proposed Access Arrangement Revisions, comprising representatives of Envestra, network users and the Commission, to help it consider Envestra's proposed standard Terms and Conditions;***
- ***to avoid doubt about whether any terms and conditions are standard or specific, Envestra should clarify the criteria it uses to distinguish specific terms and conditions that are agreed between Envestra and each network user in their access agreement from the standard Terms and Conditions approved as part of the Access Arrangement; and***
- ***the exclusion of a general condition that specifies how the quality of supply to be provided to individual retailers and customers during the second Access Arrangement period relates to that provided to each over the five years of the first period would be unlikely to satisfy the test of reasonableness required by the Code.***

13 CAPACITY MANAGEMENT, TRADING AND QUEUING POLICIES

This chapter develops the Commission's final guidance in relation to the Capacity Management Policy, Trading Policy and Queuing Policy elements of an access arrangement.

13.1 Requirements of the Code

The Code (section 3.7) provides that an access arrangement must include a ***Capacity Management Policy***, being a statement outlining how the capacity of a gas pipeline will be allocated to different users. The Code provides for the covered pipeline to be either:

- a 'Contract Carriage' pipeline; or
- a 'Market Carriage' pipeline.

Market carriage involves network users gaining capacity rights based on existing contractual arrangements and/or historical usage, and the opportunity for network users to trade these quantities. The Code (section 3.8) states that the relevant regulator must not accept an access arrangement which states that the covered pipeline is a market carriage pipeline unless permitted by the relevant State Minister.

Contract carriage involves the service provider managing the pipeline's capacity by entering into bilateral contracts with shippers, usually made in advance on a long-term basis. Under these contracts, shippers have an exclusive right to the contracted capacity.

If a covered pipeline is operated under a contract carriage model, then the Code also provides (section 3.9) that the service provider must have a ***Trading Policy*** that explains the rights of network users to trade capacity. Under this policy, users of a pipeline must be able to transfer all or part of their contracted capacity.

The specific principles to be met by the Trading Policy element of an access arrangement are stated in sections 3.10 and 3.11 of the Code. In particular, a network user must be permitted to transfer or assign all or part of its contracted capacity without the consent of the service provider concerned if:

- the user's obligations under the contract with the service provider remain in full force and effect after the transfer or assignment; and
- the terms of the contract with the service provider are not altered as a result of the transfer or assignment (a Bare Transfer).

Following a Code change (Fourth Amending Agreement), the Code (section 3.12) now provides that, for any covered distribution pipeline, an access arrangement must include a ***Queuing Policy*** *only if the relevant regulator so requires*. Such a policy determines the priority that a prospective user has to access spare and developable capacities, where such access may impede the ability to provide a service to another prospective user.[25] Among the factors to be considered by the regulator when assessing whether a Queuing Policy should be required for a distribution pipeline are the nature of the covered pipeline and the services likely to be sought by prospective network users. The specific principles to be met by the Queuing Policy element of an access arrangement are stated in sections 3.13 to 3.15 of the Code.

13.2 Issues under consideration

Capacity management, trading and queuing are generally only relevant for transmission pipelines.

Market carriage currently is only used in Victoria, where an independent system operator (VENCorp) manages the pipeline capacity through a 'poolco' approach.

If a covered pipeline is operated under a contract carriage model (as is currently the case for Envestra's SA gas distribution system), users of a pipeline must be able to transfer all or part of their contracted capacity in accordance with a Trading Policy. Depending on the circumstances, users might have to seek a service provider's permission to trade their capacity right.

Trading Policies generally have not involved use-it-or-lose-it rules for unutilised contracted capacity. In its submission to the Productivity Commission review, the South Australian Government supported the introduction of such rules to encourage network users to trade their unutilised contracted capacity. Whether such rules have a role to play depends largely upon whether there is unutilised contracted capacity in the South Australian gas distribution system.

Likewise, whether there are any issues deserving the Commission's consideration and possible guidance with regard to Envestra's Queuing Policy depends heavily on any experience with this policy during the first Access Arrangement Period.

13.3 Views expressed in initial submissions

On the possible role of use-it-or-lose-it rules, Envestra's position was that it did not believe this issue to be relevant to distribution networks:

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25 The Code (section 10.8) defines the relevant key terms as follows:
- capacity means the measure of the potential of a covered pipeline to deliver a particular service between a receipt point and a delivery point at a point in time;
- spare capacity means:
  - in relation to a contract carriage pipeline, the difference between the capacity and the contracted capacity which is being used; and
  - in relation to a market carriage pipeline, the capacity to provide a service without impeding the provision of the service to any other user;
- developable capacity means the difference between the capacity and the capacity which would be available if additions of plant and/or pipeline were made, but does not include any extension of the geographic range of a covered pipeline;
- contracted capacity means that part of the capacity which has been reserved by users pursuant to a contract entered into with the service provider.

> *"…since unlike transmission pipelines, retailers do not have contracted capacity. Envestra contracts with retailers to deliver gas to their customers, and that capacity stays with the customer when or if it transfers to a different retailer."*

EnergyAustralia argued that, while the ability to contract but not use capacity is at the commercial discretion of the user as the user fully funds the capacity rights:

> *"…for the uncontracted capacity on the distribution network, the distributor should have the right to auction the spare capacity to the market to improve the utilisation of the network."*

On Queuing Policy, Envestra stated that the Queuing Policy in its current Access Arrangement has not been used because, unlike transmission pipelines, capacity in a distribution network is not allocated to specific retailers. Also, Envestra sought the Commission's confirmation that, in accordance with (amended) section 3.12 of the Code, a Queuing Policy is not required for the network.

While EnergyAustralia stated it was not aware of any adverse experiences and does not see the need for Envestra's Queuing Policy to be reconsidered, ECCSA called for capacity of the Envestra network to be effectively held by consumers (as it is in Victoria) rather than allowed to be held by a supply side entity, which is then able to extract monopoly rents.

13.4 Approaches adopted by other regulators

In its MAPS Final Decision,[26] the ACCC considered that, in an environment of excess demand, a first-come first-served queuing policy would not be able to allocate capacity in an efficient manner and satisfy the requirements of the Code. Accordingly, the ACCC considered a number of other alternative approaches, including pro-rating demand, priority on the basis of public benefit, priority for foundation customers and an auction process.

While the ACCC considered that most of the alternatives have merit, it did not appear that any of the approaches are able to allocate existing capacity consistently within the requirements of the Code in all circumstances. As such, the ACCC raised the possibility of having an open season with a dispute resolution process with potential users and Epic.

In the end, the ACCC approved a revised queuing policy submitted by Epic which provided for two queues:

- a first in first served queue for developable capacity; and
- for existing capacity, an open season with capacity being allocated on the basis of pro rata where there is excess demand, but with a dispute resolution process to be conducted to allocate capacity if a user does not agree with the pro rata allocation.

In its 2002 review, ESCV acknowledged that the requirement for distributors to include a queuing policy in their access arrangements had been removed, with such a policy being

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[26] ACCC, *Access Arrangement proposed by Epic Energy South Australia Pty Ltd for the Moomba to Adelaide Pipelines System: Final Decision*, September 2001 [hereafter "ACCC's MAPS decision"]

more relevant for gas transmission rather than distribution. Accordingly, ESCV did not require the Victorian distributors to propose revisions to their approved Queuing Policies.

13.5 Commission's initial analysis and preliminary views

The Commission acknowledged that capacity management and trading are generally only relevant for transmission pipelines.

Although there may be strong arguments for the adoption of use-it-or-lose-it rules in the South Australian context (particularly prior to the commissioning of the SEA Gas Pipeline), the Commission's preliminary view was that it doubts whether they could be imposed under the Code in its present form. The Code does not explicitly enable a regulator to require a network user to relinquish unused capacity. Moreover, a use-it-or-lose-it rule would need to define specific routes for the gas haulage, and this cannot always be done in a distribution system.

On queuing policy, as ESCV has done, the Commission acknowledged that the fourth amendment to the Code removed the mandatory requirement for distributors to include a queuing policy in their Access Arrangements. Accordingly, until congestion becomes an issue or unless clearly necessitated by the FRC market rules and the connection of the SEA Gas pipeline, the Commission agreed with Envestra that, in accordance with section 3.12 of the Code, a Queuing Policy is not required for the network.

The Commission's preliminary views were that:

- use-it-or-lose-it rules may not be possible under the Code in its present form; and
- until congestion becomes an issue or unless necessitated by FRC, the retail market rules or transmission developments, a Queuing Policy is not required for the SA distribution network, in accordance with section 3.12 of the Code.

13.6 Views expressed in further submissions

Both Envestra and ECCSA supported the Commission's preliminary views in their further submissions.

In doing so, ECCSA urged the Commission to closely review the approach used by retailers (especially the dominant retailer which has affiliations with Envestra through ownership and operating contracts) to lock up capacity in key elements of the distribution networks and the preparedness of Envestra to work with the retailer to this end.

Envestra argued that concerns about retailers contracting full capacity to prevent competition were misplaced:

> *"Envestra contracts with retailers to deliver gas to specific customers – ie it does not sell blanket capacity to retailers. Retailers cannot, for example, buy all of the capacity in a section of the network in order to block new entrants. When an existing customer supplied from the Envestra network transfers to a new retailer, that new retailer is then able to contract with Envestra for the capacity allocated to that customer. Accordingly, Envestra cannot see any way that a retailer could somehow 'hold onto' the capacity for a lost customer and thereby stop customers transferring. "*

13.7 Commission's further analysis and final guidance

As there was no opposition to its preliminary views, the Commission has decided to maintain these views.

The Commission's final guidance is that:

- ***use-it-or-lose-it rules may not be possible under the Code in its present form; and***
- ***until congestion becomes an issue or unless necessitated by FRC, the retail market rules or transmission developments, a Queuing Policy is not required for the SA distribution network, in accordance with section 3.12 of the Code.***

14 EXTENSIONS/EXPANSIONS POLICY

This chapter develops the Commission's final guidance in relation to the Extensions/Expansions Policy element of an access arrangement.

14.1 Requirements of the Code

The Code (section 3.16) provides that an access arrangement must include a policy (Extensions/Expansions Policy) which:

- specifies the method for determining whether or not a pipeline extension or capacity expansion is to be treated as part of the covered pipeline for all (or some) purposes under the Code;
- specifies how any extension or expansion which is to be treated as part of the covered pipeline will affect reference tariffs; and
- if the service provider agrees to fund new facilities if certain conditions are met, describes those new facilities and the conditions on which the service provider will fund the new facilities.

The Code (section 3.16(c)) specifically prevents the relevant regulator requiring the Extensions/Expansions Policy to state that the service provider will fund new facilities, unless the service provider agrees.

The Code does not provide any specific principles to be met by the Extensions/Expansions Policy element of an access arrangement.

14.2 Issues under consideration

14.2.1 Coverage

The currently-approved policy relating to coverage of an extension or expansion depends upon the definition of the two terms. These terms are not explicitly defined in the Code. In practice, these terms are typically interpreted as follows:

- ***extension*** means the connection of a gas pipeline or facility which extends the geographical boundaries of a network; and
- ***expansion*** means an increase in the capability of a network to transport gas, including by the acquisition or construction of new network assets, but does not include an extension.

An Extensions/Expansions Policy must specify the method for determining whether or not an extension or expansion will be treated as part of the covered pipeline for any purpose under the Code. The currently-approved policy involves significant extensions being treated as a stand-alone pipeline at Envestra's option. What this means regarding the 'coverage' of any extensions nominated as a stand-alone pipeline could be subject to interpretation. It could be argued, for example, that the

Australian Competition Tribunal's decision for the Moomba–Adelaide pipeline system[27] supported the view that extensions should not be covered unless an application for coverage is made and consequent due process follows.

An alternative approach might be to treat any extension of a covered pipeline – whether 'significant' or not – as part of the covered pipeline unless the service provider nominates otherwise *and the regulator agrees*.

14.2.2 Obligations on the service provider

An Extensions/Expansions Policy must specify how any extension or expansion of a covered pipeline will affect reference tariffs. For example, the policy might state that reference tariffs remain unchanged but a surcharge will be levied on incremental users. In addition, if a service provider agrees to fund an expansion under certain conditions, then the policy must give a description of the type of expansion and the conditions under which the service provider will fund it.

Generally, all extensions of the network must meet the requirements of section 8.16(a) of the Code. This includes the requirement that revenue to be generated by the additional customers connecting to the network must be at least equal to the costs incurred in extending the network to these customers. Any shortfall may be overcome by levying a surcharge on those particular customers.

The central issue regarding the arrangements that apply to network extensions that connect new customers is to ensure that customers receive gas distribution services where it makes sense for them to do so. In other words, if customers want the distribution services and are willing to pay an amount, over time, that is at least equal to the additional costs incurred, then the arrangements should facilitate efficient delivery of the services.

14.3 Views expressed in initial submissions

Envestra agreed with the distinction made by the Commission between expansions and extensions, stating that:

> *"Expansion of a pipeline is commonly understood to refer to increasing the flow capacity of the relevant section of pipeline, whereas an extension is understood to relate to a physical increase in the length of pipeline."*

In relation to coverage, Envestra acknowledged:

> *"… the recommendation of the Productivity Commission that "section 3.16 of the Code should be amended so that it unambiguously clarifies that any expansion of a covered pipeline will also be covered". Envestra intends to reflect this recommendation in its Access Arrangement."*

[27] Australian Competition Tribunal, *Application by Epic Energy South Australia Pty Ltd [2003] ACompT 5*

As to the coverage of an extension, Envestra argued that the Commission:

> *"...cannot reject an access arrangement on the grounds that coverage of an extension is at Envestra's discretion. ESCOSA can only reject an extensions policy if it does not meet the requirements of the Code, and the Code allows a Service Provider to elect how it will treat extensions to the covered pipeline."*

By contrast, EnergyAustralia argued that coverage of an expansion as well as an extension should not be at Envestra's option:

> *"The expansion or extension of a covered pipeline should be covered because the market power of the 'old' and 'expanded' pipeline will be the same."*

Finally, on the matter of customers receiving gas distribution services where they are prepared to meet the net incremental costs of receiving those services, Envestra stated that it was not aware of any instances where a customer has not been connected where they were prepared to meet any shortfall resulting from application of the economic feasibility test.

EnergyAustralia saw value in the Commission only approving an Expansions/Extension Policy if it ensured that:

> *"... customers will receive gas distribution services whenever they are prepared to meet the net incremental costs of receiving those services."*

14.4 Approaches adopted by other regulators

In its 2002 review, ESCV required the Victorian access arrangements to provide for any extension or expansion to be covered unless:

- the extension is considered by the distributor to be a significant extension (which will service a minimum of 5,000 customers) and written notice is given to the regulator before the extension comes into service that the extension will not form part of this Access Arrangement; or
- where the extension is not a significant extension and the regulator agrees, unless the extension was included in the calculation of the Reference Tariffs.

In its 2005 review, IPART approved a provision in AGL's access arrangement that an extension or expansion be treated as part of the covered pipeline, unless AGL obtains IPART's consent to exclude it.

In its 2001 MAPS decision, the ACCC required Epic to amend its expansions policy so that all expansions are covered unless Epic obtains the ACCC's consent otherwise. However, on the basis that Epic does not possess the same capability to exercise market power in respect of extensions, the ACCC has accepted Epic's proposal for extensions to be covered unless Epic, by notice to the ACCC, elects otherwise.

The ACCC also accepted Epic's proposal that extensions and expansions be priced on an incremental basis. Incremental pricing is preferred by market participants, largely because of the certainty it provides for future tariffs. On balance, the ACCC considered that an incremental approach to expansions to be acceptable because:

- it does not distort economic incentives for expansion and new investment;
- a roll-in approach, where new investment would be rolled into the capital base and all users would pay the same price, may not satisfy section 8.16(b) of the Code; and
- the allocation problem created by incremental pricing, because different tranches of capacity attract different tariffs and users preferring existing capacity at the reference tariff over the incremental capacity, can be solved by other means.

14.5 Commission's initial analysis and preliminary views

The Commission acknowledged that section 3.16 of the Code clearly envisages the possibility that extensions and expansions will not necessarily be covered, and that a service provider may, with the relevant regulator's consent, elect at some point in time whether or not an extension or expansion will be part of the covered pipeline. Nevertheless, it appears that the method to be applied under section 3.16(a) to determine whether an extension or expansion is to be treated as part of the covered pipeline could differ for extensions and expansions.

On the coverage of any extension to the existing system, the Commission accepted that an extensions and expansions policy needs to contain a decision rule for determining whether an extension is to be treated as part of the existing system and, hence, covered under an existing access arrangement. The network is regularly being extended into new subdivisions where economic, and it would be costly to Envestra if it required Commission approval for each subdivision extension.

The Commission noted that, under clause 8.1 of Envestra's Access Arrangement, Envestra is currently required to obtain the Commission's written approval to exclude an extension prior to the extension entering into service. This is in accordance with section 3.16 of the Code. That said, if an extension is not covered, it is always possible for an application for coverage to be made under section 1.3 of the Code. Section 1.3 clearly envisages the possibility that only a part of a pipeline might be covered.

On the coverage of any expansion to the existing system, the Commission noted the problems which the Productivity Commission identified could emerge if expansions of covered pipelines are not covered, which included:

- the scope for regulatory error could increase because a service provider's reference tariffs would be based on the theoretical costs of a smaller pipeline (which excludes the uncovered expansion); and
- if a pipeline expansion generates economies of scale (that is, average costs fall), not covering the expansion means that over the long term a service provider could recover average revenue from reference services that is greater than the average costs of delivering these services.

Further, the Commission agreed with the Productivity Commission's conclusion that:

> *"It is difficult to see how a case could be made that the market power of a covered pipeline did not apply to an expansion of that pipeline. Under these circumstances, not covering an expansion by default has the potential to add to the administrative costs of the regime without increasing its benefits. If a service provider considers that the expansion has reduced its ability to exert market power in the relevant market, then the appropriate approach is to apply for revocation of the entire pipeline.*
>
> *It is also unlikely that coverage of expansions by default will increase to a greater degree than a case-by-case assessment of expansions, the incentive to build expansions that are essentially fully contracted prior to construction. An uncovered expansion of an otherwise covered pipeline might still be subject to an application for coverage. Therefore, the incentive to build only to meet contracted demand would be similar under either approach.*
>
> *… the Commission is of the view that expansions of covered pipelines should be covered by default under the Gas Access Regime." (Productivity Commission review, p. 328)*

On pricing, the Commission indicated that an extensions and expansions policy also needed to state how users would be charged where the provision of their service requires an extension or an expansion. The option of determining tariffs and surcharges on a project-by-project basis would introduce additional complexity into the administration of Access Arrangements.

The Commission recognised that Envestra has a commercial incentive to connect residential customers. Nor was it clear that there have been significant numbers of potential customers whom Envestra has not been prepared to connect. In the case of demand customers, it would normally be possible to determine the incremental cost of receiving the services. Nevertheless, a lack of transparency of any cost sharing arrangements for such extensions can give rise to concerns on the part of network users (or prospective users).

However, as the issue of the cost of providing extensions is covered in the Gas Distribution Code,[28] the Commission proposed to continue to rely on that code unless network users can identify reasons why the associated provisions are not reasonable.

The Commission's preliminary views were that:

- on the coverage of any extension to the existing system, it saw no reason to require a change to the provision in Envestra's current Access Arrangement that the Commission's written approval be obtained to exclude an extension prior to the extension entering into service;
- on the coverage of any expansion to the existing system, such expansions of covered pipelines should be covered by default under the Access Arrangement;

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[28] Essential Services Commission of South Australia, *Gas Distribution Code*, March 2004, clause 3.5. In particular, clause 3.5.1 provides that:

> *"If a distributor proposes to recover the costs of extensions or expansions from another person, the distributor must:*
>
> *(a) undertake the extensions or expansions on fair and reasonable terms and conditions; and*
>
> *(b) complete the extensions or expansions within a reasonable time."*

- as the pricing of extensions is covered in the Commission's Gas Distribution Code, it should continue to rely on that code unless network users can identify reasons why the associated provisions are not reasonable; and
- the pricing of expansions should generally be charged to affected network users on an incremental cost basis.

14.6 Views expressed in further submissions

In its further submission, while Envestra agreed in full, ECCSA qualified its support on the basis that some oversight was required to ensure that expansions and extensions were commercially viable and not a cost burden to existing consumers. In this regard, ECCSA has noted that:

> *"…the Victorian Government has provided the necessary additional funds where an extension is in the interests of Victoria as a whole but has been identified to be non-viable when considered on a purely commercial basis. This approach is supported by ECCSA."*

14.7 Commission's further analysis and final guidance

The funding option raised by ECCSA is a policy matter that is not for the Commission to consider.

As no objections were raised regarding its preliminary views, the Commission has decided to maintain those views.

The Commission's final guidance is that:

- ***on the coverage of any extension to the existing system, the Commission sees no reason to require a change to the provision in Envestra's current Access Arrangement that the Commission's written approval be obtained to exclude an extension prior to the extension entering into service;***
- ***on the coverage of any expansion to the existing system, such expansions of covered pipelines should be covered by default under the Access Arrangement;***
- ***as the pricing of extensions is covered in the Commission's Gas Distribution Code, the Commission should continue to rely on that code unless network users can identify reasons why the associated provisions are not reasonable; and***
- ***the pricing of expansions should generally be charged to affected network users on an incremental cost basis plus a reasonable share of all overheads and fixed capital costs.***

15 DURATION OF ACCESS ARRANGEMENT

This chapter develops the Commission's final guidance in relation to the related matters of:

- the review and expiry of the Access Arrangement; and
- the provision that allows certain reference tariff principles to be extended beyond the review and expiry provisions applying to other elements of an access arrangement.

15.1 Review and expiry of the Access Arrangement

15.1.1 Requirements of the Code

The Code (section 3.17) provides that an access arrangement must include:

- a date upon which the Service Provider must submit revisions to the Access Arrangement (a ***Revisions Submission Date***); and
- a date upon which the next revisions to the Access Arrangement are intended to commence (a ***Revisions Commencement Date***).

Sections 3.17 to 3.20 also provide the specific principles to be met by these review and expiry elements of an access arrangement. The overview to section 8 summarises these principles in the following terms:

> *"The principles that guide the determination of the Reference Tariff Period … permit the Reference Tariff Period to be any length of time that is consistent with the objectives for setting Reference Tariffs. However, the Relevant Regulator must consider (but is not bound to require) inserting safeguards against excessive forecast error if the Reference Tariff Period is over five years."* [29]

15.1.2 Issues under consideration

The Code (section 3.18) allows regulators to consider approving an access arrangement period of any length.

The Productivity Commission review noted that the mechanisms in the Code involving:

- the scope for regulators to approve access arrangements of extended duration, and
- fixed principles that lock in certain regulatory parameters over a long period

[29] The Code states that the mechanisms to deal with cases where the forecasts used to determine an access arrangement prove to be incorrect may include:

- a trigger mechanism that requires a service provider to submit revisions to its access arrangement if certain events occur (for example, if profits fall outside a pre-specified range); and
- a benefit sharing mechanism that involves service providers returning some revenues or profits in excess of a certain amount to users.

These matters are dealt with separately above in chapters 9 and 10 respectively.

both provide scope for reducing the risk of unforeseen changes in regulatory parameters (parameter risk). Regulatory risk occurs when additional risks are imposed on a project's returns due to uncertainty about a regulator's future behaviour. This increase in project risk, if there is no compensating increase in the expected return of the project, will act as a deterrent to investors. However, the extent to which risk is reduced depends on the types of review mechanisms that regulators require in an access arrangement of extended duration.

15.1.3 Views expressed in initial submissions

In its initial submission, Envestra stated that it was its intention to have an Access Arrangement period of five years. Thus, Envestra saw no need for the Commission to give consideration to approval of a longer term.

The SA Minister for Energy indicated that the South Australian Government strongly supported Envestra's Access Arrangement applying for a period of no longer than five years.

Likewise, EnergyAustralia argued that an extended Access Arrangement term was not required:

> *"The timing of establishment and powers of the successor are not ascertainable at this time, and should not be a part of ESCOSA's consideration of the Access Arrangements."*

ECCSA argued that the scope for longer access arrangements is one sided and acts against the interests of consumers.

15.1.4 Approaches adopted by other regulators

Five years is the standard length of access arrangements periods in Australia.

One exception is the ACCC's decision for the Central West Pipeline (Marsden–Dubbo pipeline), which provided for a 10 year access arrangement and thus enabled benefits from better than forecast cost reductions to be kept for up to 10 years.

15.1.5 Commission's initial analysis and preliminary views

The Commission indicated that it saw no valid reason why the second Access Arrangement period should not be of the standard five-year length. As likely as not, regulatory uncertainty would be created if the duration of the access arrangement was varied despite expected Code changes and the eventual transfer of regulatory responsible to a national economic regulator.

The Commission's preliminary view was that a five-year Access Arrangement term remains appropriate at this time.

15.1.6 Views expressed in further submissions

In its further submission, Envestra agreed with the Commission's preliminary view.

ECCSA agreed with the Commission that increased regulatory uncertainty (and therefore the potential for increased costs arising from such inherent risks) should preclude the regulatory period exceeding five years. ECCSA added that:

> *"From a consumer viewpoint the past period which effectively lasted seven years has prevented consumers from addressing the high cost of gas distribution for an additional 2 years."*

15.1.7 Commission's further analysis and final guidance

As no objections were raised regarding its preliminary view, the Commission has decided to maintain that view.

The Commission's final guidance is that:

- ***a five-year Access Arrangement term remains appropriate at this time.***

15.2 Fixed principles

15.2.1 Requirements of the Code

The Code (sections 8.47 and 8.48) allows some components of a Reference Tariff Policy to be locked in for longer than a single access arrangement period. These components are termed '***Fixed Principles***' and are limited to '***structural elements***'. Structural elements are reference tariff calculation principles and methods that do not vary with changing market conditions and that are structured for longer than a single access arrangement period. They include the depreciation schedule and the assumed financing structure. Elements that cannot be locked in as Fixed Principles (termed by the Code as '***market variable elements***') include sales forecasts, real interest rates, and capital and non-capital costs.

15.2.2 Issues under consideration

There may be benefits attributable to the use of Fixed Principles, namely increased market certainty. However, the scope to modify aspects of an access regime as lessons are learned may also be important.

15.2.3 Views expressed in initial submissions

In its initial submission, Envestra acknowledged that it may be beneficial if the Commission were to publish in advance how the Commission intends to assess any proposals for fixed principles.

EnergyAustralia considered that fixed principles should be avoided:

> *"… to allow maximum flexibility to deal with changes as the gas market and access needs evolve."*

15.2.4 Approaches adopted by other regulators

The ACCC decision for the Central West Pipeline involved a Fixed Principle allowing a depreciation schedule that under recovers in initial years to build demand and then recovers losses with higher tariffs later.

Fixed principles have also been approved by the ESCV for the Victorian distributors, in its 2002 review, including commitments to:

- until the end of the next access arrangement period:
  - adopt incentive based regulation using a CPI-X price cap, rather than rate of return regulation; and
  - use the capital asset pricing model (CAPM) to calculate the rate of return on the capital base, if the rate of return is relevant to the determination of reference tariffs; and
- for 30 years from the commencement of the access arrangement, not reduce the value of the capital base at the start of the access arrangement period as a result of assets becoming redundant.

By contrast, both IPART's and ICRC's recent reviews did not approve any fixed principles.

15.2.5 Commission's initial analysis and preliminary views

The Commission acknowledged that there can be benefits attributable to the use of Fixed Principles, namely those associated with increased market certainty. But the extent to which any regulatory risk is reduced by a Fixed Principle depends very much on the circumstances. Moreover, given the uncertainty associated with setting regulatory parameters, there is a possibility that a Fixed Principle will lock in a regulatory error for an extended period. This possibility might cause regulators to err on the side of caution by requiring regulatory parameters that are less advantageous for a service provider.

Also relevant was the Commission's view that it is required to make a determination on Envestra's proposed Access Arrangement Revisions under the Code as it exists and without regard to possible future changes to the Code. This is not to deny that changes to the regulatory regime and its administration are in prospect – aimed in part at increasing regulatory certainty. However, the Commission considered unlikely that it would be able to agree to Fixed Principles that anticipate possible changes to the regulatory regime and its administration. Nevertheless, the Commission was also unlikely to agree to any proposed Fixed Principles to apply beyond the second period where its assessment was that the main purpose is to lock-in arrangements or practices that are under review in the lead up to such prospective changes.

The Commission's preliminary view was that, in the current circumstances, it would be difficult for any proposal for a fixed principle to satisfy the requirements of the Code.

15.2.6 Views expressed in further submissions

In its submission, Envestra argued that, by January 2007, it:

> *"…expects that the form and structure of distribution regulation in Australia will have changed significantly, …[this] introduces a significant degree of regulatory and commercial risk to Envestra given the timing of the Access Arrangement submission.…one possibility that Envestra is considering is the use of fixed principles to mitigate some of this risk."*

In these circumstances, Envestra opposed the Commission's preliminary view that it cannot agree to fixed principles which anticipate possible changes to the regulatory regime and its administration.

> *"Envestra believes that this is the purpose of a fixed principle, to provide certainty to the service provider and to users and prospective users (in the face of either market, regulatory or legislative uncertainty)."*

15.2.7 Commission's further analysis and final guidance

The Commission does not agreed with Envestra's contention that the purpose of a fixed principle is to provide certainty to the service provider and to users and prospective users in the face of legislative and market uncertainties. Only regulatory uncertainty is targeted by the fixed principle provision. Market uncertainties are explicitly precluded. In addition, the role of fixed principles is not to mitigate against legislative uncertainty, and so what could be regarded as 'sovereign risk'.

For these reasons, the Commission has decided to maintain its preliminary view.

The Commission's final guidance is that:

- ***in the current circumstances, it would be difficult for any proposal for a fixed principle to satisfy the requirements of the Code.***

16 NEXT STEPS

Envestra has until 1 October 2005 to submit its proposed Access Arrangement Revisions to the Commission.

Once Envestra has submitted its proposed Access Arrangement Revisions, the Commission will then be guided by the requirements to be met by the formal review process under sections 2.31 to 2.44 of the Code.

In particular, on receipt of Envestra's proposed Access Arrangement Revisions, the Commission will:

- invite submissions in response to the proposed revisions to the Access Arrangement and consider those responses in its draft decision;
- issue a draft decision that either proposes to approve the Access Arrangement Revisions or proposes not to approve Access Arrangement Revisions and states the amendments (or nature of amendments) that are required in order for the revisions to be approved;
- invite submissions on its draft decision and consider those responses in its final decision;
- release a final decision that either approves the Access Arrangement Revisions or does not approve the Access Arrangement Revisions and states the amendments (or nature of amendments) that are required in order for the revisions to be approved; and
- if need be, release a further final decision that either approves the Access Arrangement Revisions or does not approve the Access Arrangement Revisions and approves instead an Access Arrangement developed by the Commission.

Under section 2.43, the Commission's (initial) final decision must be made within six months of having received Envestra's proposed Access Arrangement Revisions, as well as ensure that there is a period of at least:

- 28 days between the publication of a notice of receipt of the proposed Access Arrangement Revisions and the last day for submissions specified in that notice;
- 14 days between the publication of a draft decision and the last day for submissions on the draft decision specified by the Commission; and
- 14 days between the publication of a final decision and the date specified by the Commission as the last day for Envestra to submit amended revisions to the Access Arrangement.

Under section 2.44, the Commission may increase the period of six months specified in section 2.43 by periods of up to two months on one or more occasions, provided it publishes in a national newspaper notice of the decision to increase the period.