AUSTRALIAN ENERGY REGULATOR

Gas and Electricity Distribution Regulatory Guidelines

Scoping Paper

March 2006

Contents

Glossary

AC	Alternating current
ACCC	Australian Competition and Consumer Commission
AEMA	Australian Energy Market Agreement
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
CAPM	Capital Asset Pricing Model
Capex	Capital expenditure
CoAG	Council of Australian Governments
Compendium	Compendium of Electricity Transmission Regulatory Guidelines – released August 2005
DC	Direct current
DORC	Depreciated Optimised Replacement Cost
ESC	Essential Services Commission (Victoria)
ESCOSA	Essential Services Commission of South Australia
Gas Code	National Third Party Access Code for Natural Gas Pipeline Systems
ICRC	Independent Competition and Regulatory Commission
IPART	Independent Pricing and Regulatory Tribunal
MCE	Ministerial Council on Energy
NECA	National Electricity Code Administrator
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules
NGL	National Gas Law
NGR	National Gas Rules
NSP	Network Service Provider
Opex	Operating and maintenance expenditure/non-capital costs
OTTER	Office of the Tasmanian Energy Regulator
QCA	Queensland Competition Authority
RAB	Regulatory Asset Base
TPA	Trade Practices Act 1974
WACC	Weighted Average Cost of Capital

1 Introduction

The purpose of this scoping paper is to set out the AER's proposed process and scope for the development of distribution regulatory guidelines for electricity and gas distribution. This document is the first of a series of consultation documents which will be released over the next 12 to 18 months.

The Ministerial Council on Energy (MCE) has agreed to the transfer of gas and electricity distribution regulatory functions to the Australian Energy Regulator (AER) by 1 January 2007. From this time, the AER will become responsible for the regulation of approximately 40 networks/pipelines across the energy sector.

In order to provide certainty, consistency and transparency to the market place, the AER needs to consider how it intends to implement the regulatory framework for distribution and advise distribution businesses of its approach. A policy review of the framework for the regulation of electricity and gas distribution conducted by the MCE will provide certainty regarding the regulatory framework once it has been completed. However, at present the AER does not have a final framework for distribution regulation on which to base the work it needs to begin to meet the timeline for the next round of distribution reviews.

The AER would like to develop all elements necessary to carry out distribution regulation in time to undertake the electricity distribution reviews, expected to begin mid 2008 (with prices due 12 months later). The AER aims to provide distribution network service providers with the necessary elements of its regulatory regime 12 months prior to the submission on their applications. This should provide sufficient time for distribution businesses to adequately prepare their applications.

The AER has assumed that the future regulatory framework for distribution will be based on what appears to be a consensus on the fundamental principles of regulation among regulators on topics such as use of the building blocks approach, and applying incentive regulation to capital expenditure (capex), operating and maintenance expenditure (opex) and service standards.

The findings of a number of reviews of the energy industry also support this assumption. These include the Gilbert and Tobin Report and the Australian Energy Market Commission's (AEMC) Draft Rules covering Chapter 6 of the National Electricity Rules (NER). There is a high degree of consistency of approach among these documents and the approaches of the AER, the Essential Services Commission of Victorian (ESC) and the Essential Services Commission of South Australian (ESCOSA).

The AEMC's approach to the regulation of transmission is particularly instructive as to how the future distribution framework may be constituted given the similarities between the electricity transmission and distribution industries.

The AER has decided to proceed with developing the means of implementing a regulatory regime based on these fundamental principles to provide distribution with advance notice of how the AER intends to carry out its regulatory responsibilities.

The AER's decision to proceed in this manner is grounded in the objective of achieving regulatory consistency where possible in regulated energy industries. This Scoping Paper addresses the question of the degree of consistency possible particularly in order to investigate the desirability and possibility of achieving consistent regulatory guidelines for electricity transmission and distribution as well as between gas and electricity distribution (particularly given the existence of the propose-respond model of gas regulation).

In light of some of the differences between gas and electricity, the AER is considering whether a single set of uniform guidelines or two separate sets of guidelines should be developed for the regulation of gas and electricity distribution. At present these sectors are regulated by a number of state and federal regulators, under a variety of different arrangements and powers. The occasion of the transfer of these responsibilities to the AER raises the question of the extent to which it is feasible or desirable to harmonise the regulatory regimes governing these different sectors. These issues and others are considered in the chapters that follow.

In its consideration of these issues, the AER is committed to fully engaging with stakeholders on the matters raised in this paper and other relevant matters that may arise over time. To this end, the AER proposes a variety of means to assist it in communicating with interested parties. These proposals are contained below.

There are some important topics which will be dealt with by the reviews mentioned earlier, such as the exact arrangements for the transition of distribution regulatory functions to the AER, and the status of existing State derogations. This consultation process does not cover these matters but will accommodate any changes mandated by these reviews. Where the AER is granted discretion over matters not covered in this Scoping Paper, these will be consulted upon in the manner outlined in this Paper.

Scoping paper structure

This paper is structured as follows:

- Chapter 2 provides an overview of energy market reform including the timing for the transfer of distribution regulation.

- Chapter 3 provides an overview of the gas and electricity industries including an outline of the current regulatory approaches adopted by jurisdictional regulators for the regulation of gas and electricity networks.

- Chapter 4 sets out and discusses the regulatory framework for distribution regulation including considerations of the current legislative framework for gas and electricity distribution and an overview of some of the outcomes of various reviews being conducted by the AEMC and MCE.

- Chapter 5 presents the AER's proposed process and scope for its review and development of distribution regulatory guidelines.

- Chapter 6 provides a summary of the AER's proposed process and seeks comments from interested parties on the AER's proposed scope and approach.

Request for submissions

The purpose of the scoping paper is to seek comments from interested parties on the scope of the AER's considerations, the AER's proposed process and specific issues identified in this paper. Submissions can be sent electronically to aerinquiry@aer.gov.au. Alternatively, written submissions can be sent to:

Mr Sebastian Roberts
General Manager
Australian Energy Regulator
GPO Box 560J
Melbourne VIC 3001

Submissions should be received by **5 May 2006**.

For any enquiries, please contact Ms Eloise Campbell on (03) 9290 1436.

2 Energy market reform

2.1 The AER's role

In June 2001, the Council of Australian Governments (CoAG) recognised that the effective operation of an open and competitive national energy market contributes to improved economic and environmental performance. CoAG charged the MCE to address a series of priority tasks, including:

- existing and potential gas and electricity market regulatory structures and institutional mechanisms and
- the potential for harmonising regulatory arrangements, removing inconsistencies and integrating networks.

Regulatory arrangements across the states and territories differ is some important respects. Currently there are seven economic regulatory agencies across the energy industries with differing regulatory instruments and regulatory approaches. The consequential costs and uncertainty to business was recognised in the Energy Market Review (2003)[1] and is being addressed by the Australian and state and territory governments in their development of a national framework for the energy sector.

As part of the energy reform process undertaken by the MCE, the AER was established as the national energy regulatory body.

On 1 July 2005, the AER assumed responsibility for the economic regulation of wholesale and transmission networks from the Australian Competition and Consumer Commission (ACCC). The AER also assumed responsibility for monitoring, reporting on compliance and enforcing the National Electricity Law (NEL) and the NER from the National Electricity Code Administrator (NECA).

The MCE also agreed that the AER would also assume the following functions:

- Economic regulation of gas transmission networks and distribution networks covered by the Gas Legislation for all parties subject to the jurisdiction of the AER, and enforcement of the National Gas Law (NGL) and National Gas Rules (NGR).
- Economic regulation of gas and electricity distribution and retail (other than retail pricing). Any jurisdiction may, at its discretion, opt to transfer responsibility for retail pricing to the AER once it has assumed distribution responsibilities.

The MCE met on 4 November 2005 to discuss, among other things, amendments to the Australian Energy Market Agreement (AEMA). At that meeting, the MCE agreed to the transfer of gas and electricity distribution functions to the AER by 1 January 2007, stating that it aimed to produce:

[1] Ministerial Council on Energy, *Report to CoAG – Reform of Energy Markets*, 11 December 2003.

> "*a clear framework for the transfer of specified retail and distribution functions to national regulatory arrangements, with enabling legislation by the end of 2006 and the transfer of economic regulation of distribution networks to the national regime by 1 January 2007*".

For its part, the AER aims to ensure that it is fully prepared for the task of regulating distribution businesses. In doing this, the AER also aims:

- to implement best practice regulation through an understanding of all available options and constraints;
- to deliver a stable and predictable regulatory regime;
- to contribute to a smooth transition to the new regulatory regime that applies to distribution businesses.

2.2 Preparation and timing

Given that the timetable for the transfer of distribution regulation has been established, the issue for the AER is when it should commence consideration of its approach to distribution regulation.

The AER would like to develop all elements necessary to carry out distribution regulation in time to undertake the electricity distribution reviews, expected to begin mid 2008 (with prices due 12 months later). The AER aims to provide distribution network service providers with the necessary elements of its regulatory regime 12 months prior to the submission on their applications. This should provide sufficient time for distribution businesses to adequately prepare their applications.

Timing of reviews

With the transfer of distribution regulation set for 1 January 2007, a number of distribution businesses are will be reviewed within two years of the transfer of these functions (see Table 1 below). The first distribution reviews that the AER could feasibily undertake are for NSW and ACT electricity distribution. Between 2008 and 2011, the AER will have more than ten reviews occurring concurrently. This highlights the need to ensure that the national framework and its implementation regime are in place before that time.

Table 1 Timing of reviews for gas and electricity businesses

State, Regulator: Regulated Business(es)	Number of networks	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Electricity Distribution														
ACT, ICRC: ActewAGL	1						1							
NSW, IPART: Country Energy; Integral Energy; Energy Australia	3						3							
QLD, QCA: Energex; Ergon	2							2						
VIC, ESC: SPAusnet; AGLE; CitiPower; Powercor; United Energy	5							5						
SA, ESCOSA: ETSA Utilities	1							1						
TAS, OTTER: Aurora	1					1								
Gas Distribution														
ACT, ICRC: ActewAGL	1							1						
NSW, IPART: AGL Gas Networks	1							1						
NSW, IPART: Country Energy Gas	1							1						
QLD, QCA: Energex; Envestra	2								2					
VIC, ESC: SPAusnet; Envestra; Multinet Gas	3					3								
SA, ESCOSA: Envestra	1								1					
Electricity Transmission														
NSW, AER: Energy Australia	1						1							
NSW, AER: TransGrid	1						1							
QLD, AER: PowerLink	1				1									
VIC, AER: SPAusnet	1					1								
VIC, AER: VENCorp	1					1								
VIC, AER: Murray Link	1									1				
SA, AER: Electranet	1						1							
TAS, AER: Transend	1						1							
Gas transmission pipelines, State, pipeline (pipeline owner/system operator)														
NSW, Moomba to Sydney Pipeline (APT)	1							1						
NSW, Central West Pipeline (APT)	1								1					
NSW, Dubbo to Tamworth (Central Ranges Pipeline)	1	Access arrangements not yet in place												
QLD, Roma to Brisbane Pipeline (APT)	1				1					1				
QLD, South West Queensland Pipeline (Epic Energy)	1				1					1				
QLD, Queensland Gas Pipeline (Alinta)														
QLD, Carpentaria Gas Pipeline (APT)	1													
VIC, Transmission network (GasNet)	1					1					1			
VIC, Transmission network (VenCorp - system operator)	1					1					1			
SA, Moomba to Adelaide Pipeline (Epic Energy)	1				1					1				
NT, Armadeus Basin to Darwin Pipeline	1									1				

The table assumes a 12 month review for regulatory determinations (shaded grey)and a five year regulatory period (yellow and blue)..

2.3 Reviews of the regulatory framework

There are currently a number of reviews being conducted, which impact on the regulatory framework for the gas and electricity industries. These include:

- the MCE expert panel review concerning the framework for the regulation of the gas and electricity industries
- the Gilbert & Tobin/NERA paper regarding a national framework for distribution and retail
- the AEMC review of Chapter 6 of the NER
- the development and amendments to the NGL/NEL and NGR/NER.

The AER recognises that these reviews and work streams are relevant to the implementation of the distribution regulatory regime. The AER will ensure that its regulatory regime will incorporate the outcomes of those reviews.

The AER is seeking to commence consideration of how it intends to regulate distribution businesses in order to provide clarity, stability and predictability in the regulatory regime it administers, and to provide interested parties with an indication of how the AER will administer the regulatory regime, well in advance of relevant decisions. In order to do this, the AER has sought guidance from the progress of these reviews so far, in particular the AEMC Review of Chapter 6 of the NER. This provides the clearest indication of the regulatory framework likely to be adopted for distribution regulation.

The AER will also have regard to the existing regulatory regimes of distribution regulators. These regimes are the result of accumulated experience in regulation and of dealing with the specific features of individual distribution businesses and jurisdicvtional legal frameworks. The AER intends to work closely with jurisdicitonal regulators to ensure that the transition of regulation to the AER is smooth and that necessary differences are accommodated.

3 Industry overview

3.1 Introduction

The starting point for this distribution review is a consideration of the differences and similarities between the gas and electricity distribution industries, between the approaches to economic regulation across the jurisdictions; and similar and different characteristics that exist between gas and electricity transmission and distribution.

Any regulatory regime must be informed by the characteristics of the industry being regulated. This section therefore is structured as follows:

- sections 3.2, 3.3 and 3.4 summarise the key features of the gas and electricity distribution industry to provide the context to subsequent discussions on the regulatory framework
- section 3.5 provides an overview of trends in capital and operating expenditure in gas and electricity distribution
- section 3.6 provides an overview of the current approaches adopted by Australian economic regulators in the regulation of gas and electricity distribution businesses
- section 3.7 outlines issues to be considered by interested parties.

3.2 The gas industry

3.2.1 Supply chain

The natural gas industry comprises four distinct sectors within the supply chain. These are – exploration and production, transmission, distribution and retailing. These sectors take the natural gas from the point of extraction to the point of consumption. Gas storage can also occur at various stages of the supply chain.

Transmission and distribution are the midstream stage of the industry. Distribution charges account for 10-70 percent of average residential customer price. This broad range arises because of the variable cost of gas transmission pipelines which largely relates to the distance of the distribution network from the gas source.

The transmission of natural gas involves transporting gas through pipelines from processing facilities at the production stage, to reticulation processing facilities at city gates, and direct supply to major customers. The capacity of transmission pipeline is primarily related to its diameters, its length and the difference in pressure between the two ends of the pipe. The larger the pressure differential, the faster gas will flow. The specific characteristics (length, throughput, diameter, owner and operator) of current major transmission pipelines vary.

After transmission, gas is depressurised at city gate facilities. Distribution networks transport natural gas from gate stations and reticulate it into final users which can include large commercial and industraial users as well as residential users.

Gate stations link transmission pipelines and distribution networks. These stations measure the quantity of gas leaving the transmission pipeline and reduce the pressure of the gas entering the distribution network. Further, drops in pressure occur at regulating stations along a distribution network.

Gas is transported in smaller volumes and at lower pressures through distribution networks than along the transmission pipelines. Gas pipelines are usually installed underground while electricity lines are mainly above ground. There are three classes of distribution network pipelines – high, medium and low pressure pipelines. Low and medium pressure pipelines account for around 60-70 percent of distribution networks. The high and medium pressure pipelines are used to service areas of high demand and to provide the backbone of the system. The low-pressure pipes serve as the last link in the chain to the end customer.

The main differences between gas distribution and gas transmission stem from their customer bases: distributors deliver gas directly to end-users, while transmission pipelines provide bulk delivery from supply sources to a few large customers, including distributors. Gas distributors serve a much larger number of customers, which are typically clustered in a relatively compact service territory. Distributors are usually required to service new customers provided they meet certain conditions. These customers are diverse but usually have smaller consumption volumes and more 'peaked' load profiles than customers served by transmission pipelines.

3.2.2 Production technology

The production technology for gas distribution is characterised by economies of density, which is one factor that gives rise to natural monopoly supply conditions. Furthermore, at the level of individual small customers, reticulation supply has excess capacity. In contrast, the capacity of gas transmission pipelines can usually be tailored more closely to demand. Further, transmission pipelines also have more tools available to manage capacity and ensure that it is fully utilised. These tools include gas storage and secondary capacity markets. These avenues for optimising capacity utilisation are generally not available to distribution networks.

The largest capital items in gas distribution are pipes and compressor stations which account for a large percentage of capital expenditure. Compressor stations are used to increase the capacity of a pipeline. It increases capacity by raising the pressure and effectively maintaining that pressure along the length of the pipeline. A service provider can also increase capacity through looping – that is, duplicating sections of the pipelines.

3.3 The electricity industry

3.3.1 Supply chain

The electricity supply industry is divided into four sectors within the supply chain. These are generation, transmission, distribution and retailing.

The transmission and distribution sectors are considered to be the midstream stage of the industry. Distribution represents about 30-40 percent of the total end-user price

for electricity. Electricity transmission represents approximately 8-10 per cent of end-user price.

Electricity transmission networks are high voltage wires that transport electricity to distribution networks from large remote generators which are usually situated close to fuel sources. Transmission networks also exist to provide reliability (through duplication of assets). A substantial amount of capex is justified by reliability criteria and to meet peak demand, rather than simply to transport electricity. Distribution network service providers operate a network of low voltage substations and wires that transport electricity from distribution centers to end-users. The network must be maintained and operated securely to provide open access to participants who trade in the NEM. In the electricity industry embedded generation is also capable of contributing to reliability by connecting directly to networks.

3.3.2 Production technology

The primary components of electricity distribution networks are distribution lines (comprising of poles or towers and wires), underground cables, transformers, switching equipment, capacitors and other equipment for regulating reactive power, and various monitoring and signalling equipment necessary to monitor the state of the network.

Electricity can be transported over either alternating current (AC) or direct current (DC) networks. The majority of the Australian distribution networks are AC. In the case of AC (unlike DC) power flows over individual elements of the network cannot be directly controlled. Instead, electrical power, which is injected at one node and withdrawn at another, flows over all the possible paths between the two nodes. As a result, decisions on how much electricity is produced or consumed at one point on the network can affect flows on network elements in different parts of the network.

The electricity industry is characterised by significant economies of scale and scope. Furthermore, electricity distribution is a capital-intensive business. Capital expenditure is necessary to expand the network in response to expansions in the transmission network due to generation and load growth, and refurbish and replace existing assets to maintain service levels.

3.4 Gas and electricity industries

One of the major differences between electricity and gas is that gas can be stored. Gas pipelines serve both as transmission and storage facilities whereas electricity transmission infrastructure only provides a transport service.

Furthermore, with the exception of Victoria, gas does not currently operate within a market where a market operator balances supply and demand or dispatches energy (as is the case in the National Electricity Market (NEM)).

Electrical energy cannot be economically stored. It must therefore be transported to the point of consumption immediately when it is generated. Normally the energy is transported through free-flowing shared transmission and distribution networks. Unless supply and demand can be kept in balance on time scales down to a few seconds, the entire power system can become unstable.

Most electricity networks are meshed networks with multiple paths along which the flow of electricity cannot be readily controlled. In such networks there are strong interactions between flows in different parts of the network. Further, electrical energy cannot be labelled, so it is not possible to determine which generator's energy a customer is using, or which paths a generator's energy takes through the network. Also parts of the network can become constrained, imposing complex restrictions on participants' trading activities.

Compared with gas, there is a closer direct correlations between expenditure and service outcomes in electricity transmission and distribution. However, gas distribution does not generally have the same susceptibility to external influences on performance. Electricity distribution networks are typically located above ground and are not designed for 100 per cent reliability In addition, gas networks are subject to and monitored against very high safety standards and hence have a very narrow range of acceptable performance. This means that there is less of an opportunity for regulatory arrangements to include performance incentive mechanisms.

Electricity transmission and electricity and gas distribution have commonalities including they are meshed networks with strong interdependencies.

3.5 Overview gas and electricity distribution industries

Having discussed the broad characteristics of gas and electricity distribution, this section looks to provide an overview of the distribution businesses that operate in these industries. This is summarised in the following tables/charts.

Thirteen businesses operate in the electricity distribution industry. In general, businesses operating in South Australia and Victoria are privately owned network businesses. Eight businesses operate in the gas distribution industry, a majority of which are privately owned businesses.

A number of businesses (Country Energy, AGL, Energex and SP AusNet) operate across the electricity and gas distribution industry. Further, a number of businesses including SP AusNet, AGL and EnergyAustralia operate assets in both the transmission and distribution sector. (see table 3)

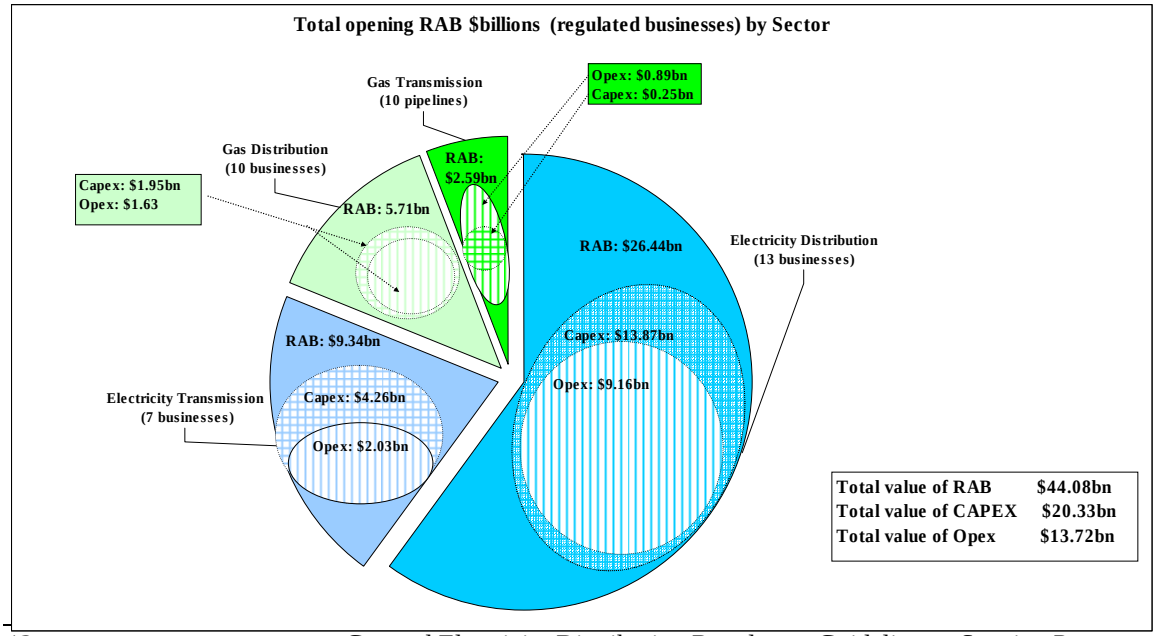
Table 3 Electricity and Gas distribution businesses' spending

State/ Territory	Electricity Distribution		Gas Distribution	
	Business	RAB/capex/opex (real)	Business	RAB/capex/opex (real)
South Australia	▪ ETSA Utilities	$2,466m $753m $649m	▪ Envestra	$771m $138m $203m
Victoria	▪ Powercor ▪ Citipower ▪ United Energy ▪ AGL ▪ SP AusNet	$5,723m $2,843m $2,014m	▪ Multinet Gas ▪ Envestra ▪ SP AusNet	$2,368m /$593m $628m
ACT	▪ Actew AGL	$500m $112m $195m	▪ Actew AGL	$220m $57.7m $79m
NSW	▪ Integral ▪ EnergyAustralia ▪ Country Energy	$8,560 $4,645m $3,695m	▪ Country Energy ▪ AGL	$1,920m $486m $589m
Queensland	▪ Ergon ▪ Energex	$8,506m $5,288m $2,439m	▪ Energex ▪ Envestra	$408m $157m $128m
Tasmania	▪ Aurora	$691m $232m $173m	unregulated	n/a

Figures presented in these tables and charts are based on allowances provided in regulatory determinations for distributors' current regulatory periods.

The total value of the opening RABs for all regulated energy sectors is approximately $44.08 billion. Of the total value, electricity distribution accounts for around 60 per cent, electricity transmission accounts for around 21 per cent, gas distribution accounts for around 13 per cent and gas transmission accounts for around 6 per cent (see Figure 1).

Figure 1 Value of gas and electricity distribution



The value of the electricity distribution opening RABs are largest for New South Wales (around $8.5 billion) and Queensland (around $8.5 billion) followed by Victoria (around $5.7 billion) and South Australia (around $2.5 billion). In all these states, capex is around 40-60 per cent of the value of the opening RABs. In the ACT and Tasmania the value of the opening RABs and capex is small (under $1 billion in each case) (see Figure 2).

The value of gas distribution opening RABs in Victoria and New South Wales are significantly higher than all other states. The value of capex as a proportion of the opening RABs is much smaller (around one-quarter of the opening RABs) compared to capex as a proportion of the RABs for electricity distribution (See Figure 3).

Figure 2 Electricity distribution – RAB and capex

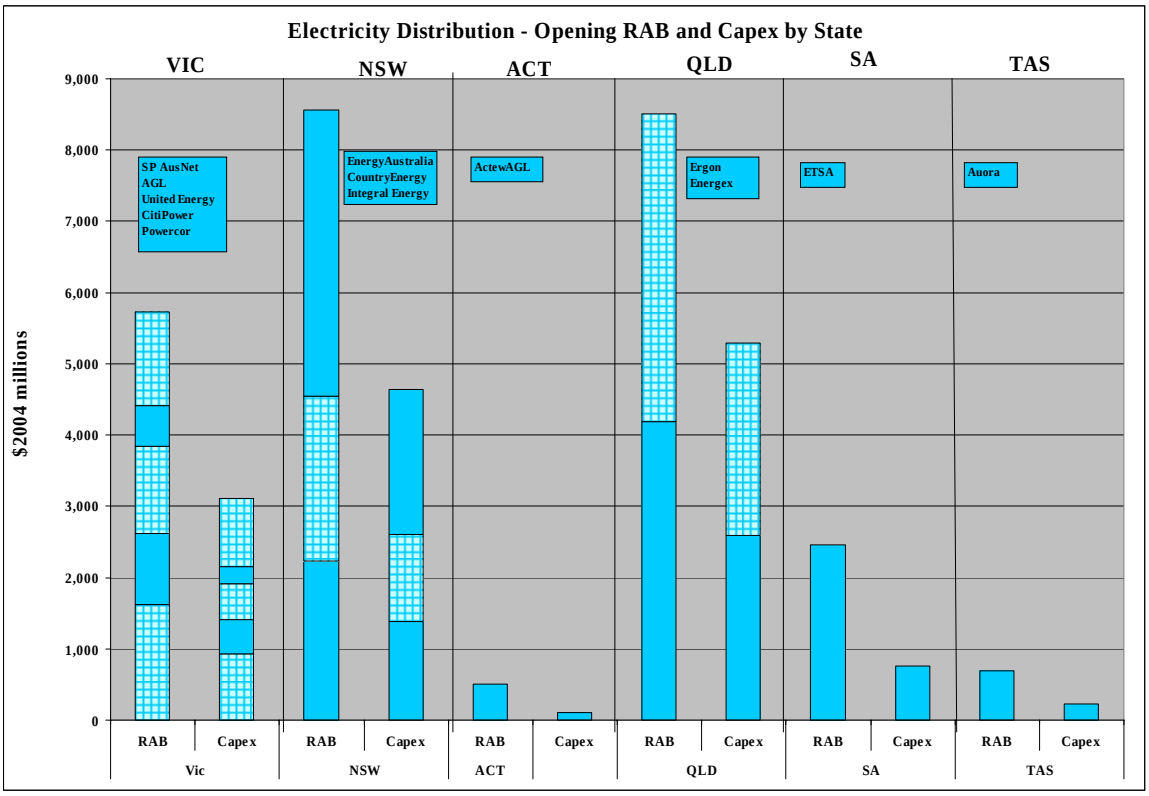
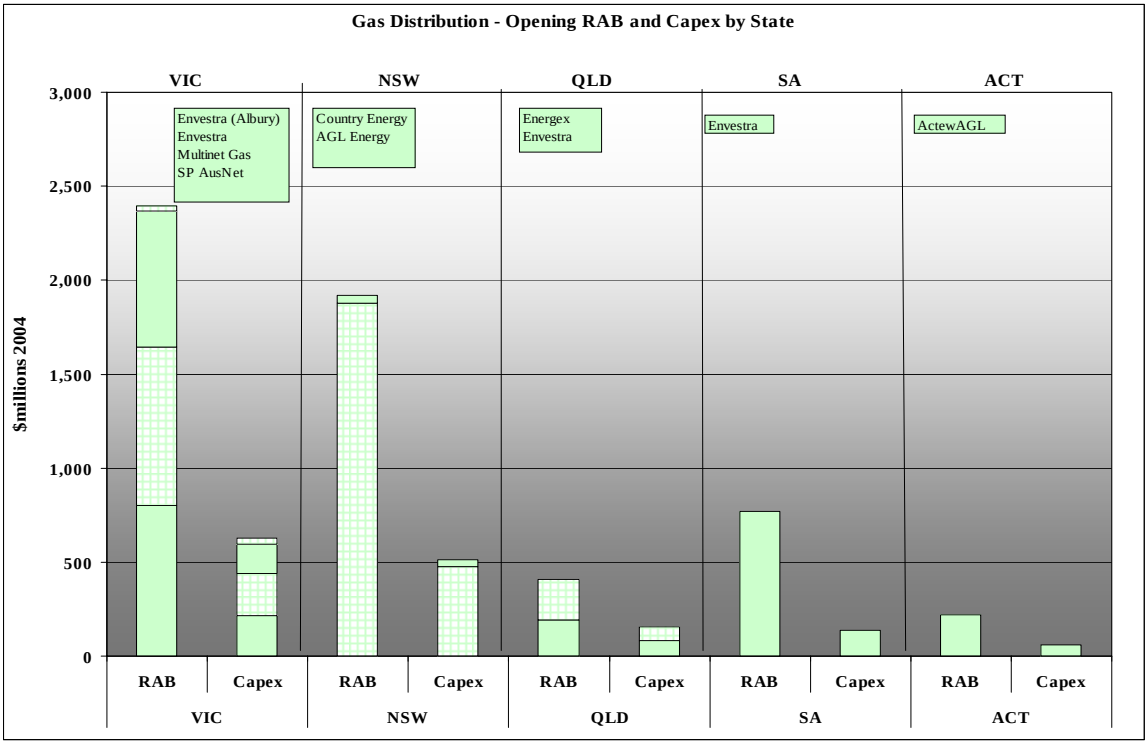


Figure 3 Gas distribution – RAB and capex



3.6 Overview of jurisdictional regulators' approaches to gas and electricity distribution regulation

This section compares elements of the regulatory regimes adopted by jurisdictional regulators for the regulation of gas and electricity distribution businesses.

Appendix A provides a summary of the current approaches to the regulation of gas and electricity distribution and provides a high level guide on similarities and differences in aspects of the regulatory regimes. In general, there is a high degree of commonality in the approach to regulating gas and electricity distribution businesses. The divergence lies in the implementation and interpretation of the regulatory framework.

3.6.1 Similarities in the regulatory approach

Overall, the regulatory approaches adopted by jurisdictional regulators to gas and electricity distribution regulation are largely consistent. However, the application of common regulatory principles does differ across and between gas and electricity distribution industries. The fact that the gas industry operates under propose respond model, under which a regulated entity proposes the form of regulation, rather than the regulator, accounts for some of these differences.

Most jurisdictions have adopted the CPI-X form of regulation, and a building block approach for both the regulation of gas and electricity distribution networks. There are however some variants in the treatment of specific elements of the building block

model. The variation in the approaches largely stems from differences in the implementation of the regulatory regime and interpretation of the relevant legislation.

For the purposes of both gas and electricity distribution, most regulators have implemented a lock-in and roll-forward approach[2] to the establishment of a regulatory asset base, with the exception of the Queensland Competition Authority (QCA) in its recent electricity distribution review. The QCA, revalued Energex and Ergon Energy's asset bases, adopting the depreciated optimised replacement cost (DORC) methodology to determine the distributors' asset base valuations.

For gas distribution, the Gas Code requires that a roll-forward approach is to be adopted once an initial asset base has been established. In regulatory decisions, subsequent to the establishment of the initial base, a lock-in and roll forward approach has been implemented.

Australian regulators universally adopt the Capital Asset Pricing Model (CAPM) model to calculate the return on equity component in the Weighted Average Cost of Capital (WACC) framework. There are some differences in the determination of WACC parameters and in the use of a pre/post tax[3] and real/nominal[4] rate of return. The WACC/CAPM framework provides an estimate of required post-tax returns to investors. The Essential Services of South Australia (ESCOSA), the Independent Pricing and Regulatory Tribunal (IPART), the Independent Competition and Regulatory Commission (ICRC), and the Office of the Tasmanian Energy Regulator (OTTER) have each chosen to adopt a pre-tax WACC framework. Furthermore, such an approach has been required under the South Australian regulatory framework.[5]

For electricity distribution, a number of regulators, the Essential Services Commission of Victoria (ESC), ESCOSA and OTTER have adopted an ex ante incentive framework for capital expenditure. On the other hand, most regulators for gas distribution have adopted an ex-post prudency assessment in accordance with the Chapter 8 prudency criteria in the Gas Code.

Most jurisdictional regulators have put in place pass through mechanisms to deal with specified exogenous costs. The detail of the implementation and events covered vary. In its present form, the Gas Code contains provisions that can be used to approve pass-through type rules, and provisions that can be used by gas transmission and distribution service providers to effectively 're-open' an access arrangement at any time. The NER is currently restrictive on this issue.

---

2 The lock in and roll forward approach to asset valuation involves locking the value of the opening asset base of the prior regulatory period but adjusting for inflation and depreciation, and assess capex incurred during the regulatory period based on the capex framework established by the regulator.

3 Under the pre tax approach, the calculated return on assets includes an amount to cover tax liabilities of business while under post tax approach the amount corresponding to tax liabilities must be added as a separate item within the cost of service calculation.

4 For transmission, a nominal post tax approach is adopted given it is comparable with other financial benchmarks particularly the nominal rate of return on other investments. However, for consistency purposes, a real post-tax rate of return is also published.

5 Electricity Pricing Order on 11 October 1999.

3.6.2 Differences in the regulatory approach

There is some divergence, in particular, in the treatment of the form of regulation, service standards and information requirements. A number of other distribution matters, such as requirements for connection and capital contribution, ring-fencing guidelines and non-pricing elements of an access arrangement differ between jurisdictions, with the non-pricing elements of an access arrangement not relevant for the purposes of electricity distribution.

There is currently deviation in the form of regulation adopted. For electricity distribution, Victoria and NSW have implemented a weighted average price cap, Queensland and the ACT have implemented revenue caps, Tasmania has implemented a hybrid revenue cap, and South Australia an average revenue cap.

The gas transmission businesses regulated by the ACCC adopt a weighted average price cap in their access arrangements, with the exception of GasNet, which adopts an average revenue cap. For gas distribution, price caps are implemented. It is important to note however that under the propose respond model distribution companies have proposed different varieties of price cap.

On the issue of information requirements, most jurisdictions have adopted a building block approach to the regulation of distribution businesses. Given that there can be variations in the elements of the building block approach, there is some variation in the annual and regulatory reset information requested by jurisdictional regulators.

There are differences between gas and electricity on the issue of service standards and service standard incentive schemes. There is a range of jurisdictional-specific service standards for electricity distribution set out in the legislation, regulations, licences and codes to complement requirements in the NER, including: design planning criteria[6], average reliability performance standards[7], guaranteed customer service standards[8], worst performing feeder standards[9], and service standards incentive regimes[10]. The ESC and ESCOSA are the only jurisdictional regulators, which have a service standards incentive regime for electricity distribution.

No jurisdictional regulators have applied a service standards incentive regime to gas. However, guaranteed service levels (payments in relation to the restoration of end-user services following interruption) have been introduced in some jurisdictions. Furthermore, most access arrangements and contracts cover service quality issues.

---

6 These are the standards that a Network Service Provider (NSP) uses to plan and develop its network.

7 These standards define the maximum average duration and frequency of outages allowed across an NSP's network

8 An NSP is required to make a payment to a customer if it exceeds these standards in recognition that the quality of service that the customer has received is unsatisfactory

9 These are minimum standards for individual feeders before an NSP must investigate and, where necessary, take remedial action to improve their performance. An NSP may also be required to report on the reliability of its worst performing feeders or to its work serviced customer.

10 These regimes incentives NSPs to improve their service performance through explicit financial arrangements included in their regulatory control.

Most jurisdictions have implemented a carry-forward incentive mechanism for opex as part of the regulatory framework in gas and electricity distribution regulation. However, the nature and mechanics of the carry-forward vary. For example, the Victorian and South Australian regulatory regimes provide the regulator with discretion as to whether losses are carried forward or not. In Tasmania only gains are carried forward above a one per cent efficiency factor. For gas distribution, Victoria has implemented a five-year symmetrical efficiency carry over mechanism. Other jurisdictional regulators do not have a carry over mechanism but rather determine an efficient level of opex and then allow gas distributors to retain spending under this level for the remainder of the regulatory period.

4 The regulatory framework

4.1 Introduction

While reforms in utility industries such as those facilitated by National Competition Policy have encouraged competition, the continued existence of monopoly power in parts of those industries has left a residual need for some form of price regulation. Infrastructure industries such as electricity and gas are examples where there can be such a residual need for regulation.

This chapter is structured as follows:

- section 4.2 provides an overview of the current legislative framework for the gas and electricity industries
- section 4.3 provides an overview of some of the reviews being conducted by the AEMC and MCE
- section 4.4 provides some considerations for the AER in its development of distribution regulatory guidelines
- section 4.5 sets out the conclusions on these matters.

4.2 The current legislative framework

4.2.1 The current framework for gas distribution

In setting up the gas regime, governments recognised that the developing nature of the gas industry warranted a more specific approach than was available under the general access provisions. The National Third Party Access Regime for Natural Gas Pipelines is an industry specific regime that is given legislative effect in the Gas Pipeline Access Act in each State and Territory. The legislation implements the National Third Party Access Code for National Gas Pipeline Systems (Gas Code). The Gas Code is certified as an industry specific access regime under part IIIA of the *Trade Practices Act 1974* (TPA).

The Gas Code is implemented on the basis of separating pipelines into those that are 'covered' and those than are not. Owners or operators of pipelines that are not covered are not subject to any of the provisions of the Gas Code. Rather, they are subject to the general anticompetitive provisions of the TPA. An uncovered pipeline might become covered at a later stage through one of the coverage avenues. Similarly, through the revocation process, a pipeline can move from being covered to uncovered.

Service providers of pipelines that are covered must comply with the provisions in the Gas Code. They must submit access arrangements to the relevant regulator for approval, and comply with other provisions, such as ring fencing. Unlike the NER, the same provisions for assessing access arrangements apply to both distribution networks and gas transmission pipelines.

An access arrangement sets out the provisions under which access to a pipeline can be granted. Under the Gas Access Regime, access arrangements are approved for a period of time after which there is a review of the access arrangements. The service provider and access seeker are free to negotiate terms of access that differ from an existing arrangement, except in relation to queuing policy. However, an arbitrator must apply the provisions of the access arrangement in resolving any disputes.

The process to approve an access arrangement includes the proposal of an arrangement by the distribution business, public consultation, leading to draft and final decisions. Between decisions, the regulator provides opportunities for the service provider to amend the proposed arrangement. If the service provider proposes amendments after the final decision, then the regulator must consider any amendments and issue a further final decision. Where the regulator is not satisfied with the final amendments, it must draft and approve the access arrangement to apply.

A regulator can approve an access arrangement only if the access arrangement satisfies the requirements of the Gas Code. Section 8 of the Gas Code sets out three methodologies for setting reference tariffs: cost of service, internal rate of return or net present value. Furthermore, section 8 of the Gas Code outlines the treatment of certain elements of the access arrangement – for example, the Gas Code requires a roll forward approach once an initial asset base has been established. The Gas Code also outlines a prudency test and the process for assessing and inclusion of augmentation expenditure.

Six categories of supporting access arrangement information must be submitted at the same time as an access arrangement (outlined in attachment A of the Gas Code). This information must include – access and pricing principles, capital costs, operations and maintenance, overhead and marketing costs, system capacity and volume assumptions, and key performance indicators.

4.2.2 The current framework for electricity distribution

The legislative scheme for electricity market regulation came into operation in December 1998. The "lead" legislation is the National Electricity (South Australia) Act. The NEL is a schedule of the Act, and the NER is in force under the NEL. The NEL is applied by the Applications Acts in each of the participating jurisdictions. The NEL and the NER establish a wholesale exchange of electricity for participants in the national electricity market and an open access regime for transmission and distribution network.

The NEL stipulates the NEM objective, which the regulator is to have regard to in the regulation of network business. The NEM objective is:

> "The national electricity market objective is to promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity and the reliability, safety and security of the national electricity system."

In addition to the NEM objective, the NER sets out the principles upon which distribution networks are regulated. The electricity distribution regulation provisions of the NER are contained in Chapter 6, Part D. Clauses 6.10.2 and 6.10.3 outline

objectives and principles upon which distribution regulation is administered, which require, among others, the following outcomes:

- an efficient and cost-effective regulatory environment
- an incentive-based regulatory regime which provides equitable allocation of savings, a sustainable commercial revenue stream which includes a fair and reasonable rate of return, and consistency in the regulation of connection and distribution service pricing
- an environment which fosters an efficient level of investment, operating and maintenance practices, and use of existing infrastructure
- regulatory accountability through transparency and public disclosure of regulatory processes and the basis of regulatory decisions, and reasonable certainty and consistency over time of the outcome of regulatory processes.

Clause 6.10.5 (a) requires economic regulation of the CPI-X form, or some incentive-variant. Clause 6.10.5 (b) states that the regulator must specify the form of economic regulation to be in the form of a revenue cap, a weighted average price cap, or a combination of the two. Clauses 6.10.6 and 6.10.7 outline, respectively, the requirements with respect to monitoring of regulatory determinations through annual certified financial statements, and information disclosure matters for regulators.

In setting a regulatory cap, the regulator is to have regard to the following matters (as well as other matters):

- demand growth
- any service standards applicable
- price stability
- potential for efficiency gains in opex and capex
- the weighted average cost of capital and the provision of a fair and reasonable risk-adjusted cash flow rate of return on efficient investment including sunk assets.

Furthermore, pricing and tariff orders are currently in operation in South Australia and Victoria. These orders are important determinants of the regulatory structure in these states and will need to be considered in the formation of the regulatory framework for distribution.

4.3 Reviews of the regulatory framework

There are currently a number of reviews which are being conducted which will influence the regulatory regime for gas and electricity distribution.

While the AER recognises that there still exists legislative uncertainty surrounding the regulatory framework for the gas and electricity industries, the AER considers that the AEMC Chapter 6 review, the Gilbert and Tobin/NERA review and the Expert Panel review will influence the economic regulatory framework for the gas and electricity industries.

4.3.1 The Gilbert & Tobin/NERA review

On 17 October 2005, the MCE Standing Committee of Officials (SCO) released a paper prepared by NERA Economic Consulting and Gilbert and Tobin. The paper sets out a proposal for a nationally legislated framework for distribution and retail regulation rules made and administered by the AEMC and enforced by the AER.

The options paper proposes that the transfer of distribution and retail functions currently carried out by jurisdictional regulators will occur through amendments to the NEL and NGL.

On the issue of economic regulation, the options paper also proposes that the AER is to have the power to issue "Statements of Requirements", which are detailed and binding upon the service provider. Statement of Requirements would cover ring fencing, regulatory accounts, connection and capital contributions and "other reporting requirements", where such reporting is reasonably required for the purposes of the AER's regulatory functions.

The options paper also proposes that the NEL/NGL would provide that the price control will be in the form of CPI-X regulation and prescribe one or more allowed forms of regulation under the Rules. The paper notes that this approach provides regulatory certainty and predictability for the regulated businesses.

4.3.2 The AEMC Chapter 6 review

The NEL requires the AEMC to amend the NER governing the regulation of electricity transmission revenue and prices before 1 July 2006. On 15 February 2006, the AEMC released draft Rules outlining its proposed amendments to the transmission revenue regulation provisions of the NER.

The draft Rules propose the elevation of a number of elements of the economic regulatory framework into the NER. The key aspects of the Rule proposal include:

- the outline of the scope and form of regulation for prescribed transmission services, negotiated transmission services and non-regulated transmission services
- the adoption of a revenue cap approach for transmission regulation
- the adoption of a post tax revenue model using the building block approach, and the elevation to the NER the methodology and elements for making a revenue cap determination for prescribed transmission services, including:
    - the calculation of the RAB on a 'lock in' value of the assets. The value is adjusted, each year, for capital expenditure and depreciation profiles
    - the methodology for calculating the cost of capital (based on CAPM), and a number of the parameters, will be included in the NER. The parameters will be subject to review by the AER every five years
    - operating expenditure will be based on efficient forecasts on a firm-specific basis. An efficiency benefit scheme will apply

- the actual expenditure of the transmission network service provider will be rolled into the RAB at the commencement of the next regulatory period, subject to the AER's discretion to conduct efficiency and prudency reviews, in accordance with the criteria set out in the draft Rules. The transmission business will retain the benefits (or bear the cost) in relation to the return on capital allowed for the revenue cap determination for any under (over) spend compared with the forecast. However, depreciation will not form part of the incentive design

- a regulatory period no less than five years, but can be longer

- the Rule proposal provides that the revenue cap may be reopened in specified circumstances where a transmission network service provider needs to undertake significant capital expenditure which was not provided at the commencement of the regulatory period

- inclusion of the applicable service target performance incentive scheme. The penalty/reward adjustment in the service standards incentive mechanism is proposed to be capped at no more than +/- 1 percent of the revenue cap

- inclusion, into the NER, cost pass through events with a materiality threshold of one percent.

- codification of a propose-respond process and specifies a fixed timetable for regulatory decisions

- specification of matters on which the AER must consult and areas in which guidelines are to be developed.

The draft Rules proposal requires the AER to develop, by 31 December 2006, guidelines on the following matters:

- information guidelines

- cost allocation guidelines

- service performance target incentive scheme

- efficiency benefit scheme

- post tax revenue model

- roll forward of regulatory asset base model.

It is expected that the Rules will be finalised by mid June 2006.

4.3.3 The Expert Panel Review

In November 2005, the MCE appointed an Expert Panel to advise on a model to achieve a common regulatory approach to gas and electricity networks. The Expert Panel invited comments on a number of issues including the extent to which the regulatory arrangements for gas and electricity can be harmonised. Furthermore, the

Panel was directed to take into account the recommendations of the Productivity Commission's review of the National Access Regime and Gas Access Regime, and provide the MCE with proposed responses to the latter reviews.

The Panel has released its draft findings. The AER will consider the final outcomes of the Panel review in considering its approach to regulating gas and electricity industries.

4.4 Distribution regulatory framework

In the context of these Reviews, the AER believes that there are two threshold issues for the AER when considering its approach to the regulation of gas and electricity industries: (1) should the scope of its review consider gas and electricity simultaneously and (2) what should be the scope of the AER's consideration given the current reviews being conducted?

4.4.1 Gas and electricity guidelines

At present, electricity and gas distribution are subject to a mix of national and state-based regulatory requirements. As highlighted in this paper, these regimes have much in common but also differ in certain respects. A particularly important difference is the propose-respond regime for gas.

The regulatory framework for both industries is currently under review. The Gilbert and Tobin/NERA consultation paper and the AEMC draft Rules for electricity transmission revenue regulation have provided some insight into the possible economic regulatory approach to electricity distribution regulation. While some of these principles are applicable to gas, there is still some uncertainty surrounding the framework for gas regulation, in particular what aspects of the economic regulatory approach require further input from the regulator through the development of guidelines.

At present there are fewer indicators as to what the regulatory framework for gas distribution will be. The AER is therefore reluctant to move forward with work on how to align regulation of the two industries. The scope for any guidelines to be developed by the AER for the purposes of gas will be considered further once the AER considers there is sufficient policy direction to proceed with its considerations. This will likely be provided by the MCE's review process. The AER does not rule out the possibility of further aligning the gas and electricity regimes in the future in light of review outcomes.

Therefore, for reasons outlined above, at this stage the AER's preferred position is to conduct separate processes for developing guidelines for gas and electricity distribution.

Issues for consideration

The AER's preliminary view is to develop electricity distribution regulatory guidelines and conduct a separate process for the development of guidelines for gas. The AER seeks comments from interested parties on whether such an approach is appropriate.

4.4.2 Electricity distribution guidelines

In light of the recently released Gilbert and Tobin/NERA options paper, the MCE Expert Panel Draft Report and the AEMC's draft Rules for electricity transmission revenue regulation, the issue is what should be the scope of the AER's electricity distribution regulatory guidelines.

As noted above, the draft Rules have prescribed and elevated much of the economic regulatory framework into the NER, and also proposes requiring the AER to develop a number of guidelines to complement the regulatory framework. The Gilbert and Tobin/NERA options paper also envisages the development of regulatory guidelines for distribution. The AER presumes that the Rules to be developed for distribution regulation will largely reflect the Gilbert and Tobin/NERA options paper, the MCE Expert Panel Draft Report and the AEMC's proposed regulatory regime for electricity transmission - that is, a building block approach to economic regulation. Therefore, at this stage, the AER's preliminary view is that it is appropriate to develop guidelines for electricity distribution which cover the economic regulatory framework.

The AER recognises that there may be some aspects, such as the form of regulation and the service standards incentive framework, which may differ between electricity distribution and transmission. The AER also recognises that the AEMC's proposed Rules and the MCE Expert Panel Draft Report are in draft form, and the Gilbert and Tobin/NERA paper is an options paper. The AER may need to reconsider its scope should the final Chapter 6 Rules relating to electricity transmission regulation significantly differ from the draft Rules currently released for consultation.

The AER's preliminary view, based on the outcomes of reviews to date, is that an incentive economic regulatory framework, in the form of a CPI-X building block approach, will be adopted for distribution regulation. The AER notes that such an approach is the most developed model of regulation and has been adopted by most regulators for the regulation of both gas and electricity distribution.

Assuming that the Rules for distribution are consistent with those developed for transmission, the issue is should the AER develop uniform regulatory guidelines, as specified in the draft Chapter 6 Rules, for both electricity distribution and transmission?

The AER considers that there are a number of advantages to developing the electricity distribution and transmission guidelines simultaneously. However the AER notes the timetable proposed by the AEMC may limit the AER's ability to finalise guidelines for both electricity transmission and distribution. Should the timetable for the development of transmission regulatory guidelines be amended, the AER will consider whether it is appropriate to develop transmission and distribution guidelines together.

Issues for consideration

The AER presumes that the economic regulatory framework, in particular the detailed elements of the building block approach outlined in the draft Chapter 6 Rules for transmission, are largely applicable to electricity distribution, with the exception of the service standards incentive regime and the form of regulation.

Therefore, in light of the draft Chapter 6 Rules, the AER, at this stage, does not propose to set out the economic regulatory framework – i.e. the treatment of the building block elements for electricity distribution.

The AER's preliminary view is that electricity distribution guidelines should be developed. The scope of these guidelines will be largely influenced by the AEMC Chapter 6 review and the Gilbert and Tobin/NERA options paper.

The AER notes that the timetable proposed by the AEMC for the development of electricity transmission regulatory guidelines by the AER may limit the AER's ability to finalise guidelines for both electricity distribution and transmission simultaneously. Therefore, at this stage, the AER proposes conducting a separate process for the development of regulatory guidelines for both electricity distribution and transmission.

The AER seeks comments from interested parties on whether such an approach is appropriate.

4.5 Conclusion

At this stage, subject to interested parties' comments, the AER considers it appropriate to develop regulatory guidelines for electricity distribution. The scope of these guidelines is largely influenced by the proposals in the draft Chapter 6 Rules relating to transmission regulation, which was released by the AEMC in February 2006, the MCE Expert Panel Draft Report and the Gilbert and Tobin/NERA options paper. As noted above, the AER may need to reconsider the scope of these guidelines should the final Chapter 6 Rules relating to electricity transmission regulation significantly differ from the draft Rules currently released for consultation.

The next chapter outlines the AER's proposed process for developing these guidelines.

5 Distribution regulatory guidelines – process

5.1 Introduction

This chapter outlines the AER's proposed scope of and process for the development of distribution regulatory guidelines. The AER considers that the review should be segmented to provide interested parties sufficient time to consider the issues and options at hand, and allow the AER to finalise certain issues before other matters are addressed.

The AER's proposed process is outlined below. As noted previously, the AER recognises that there are currently a number of reviews being conducted by the MCE and the AEMC, which are relevant to the design of the regulatory framework for distribution. In developing its regulatory approach for distribution regulation, the AER will monitor and have regard to the outcomes of relevant reviews and seek to ensure that guidelines developed are consistent with the legislative framework.

The AER also recognises that many of these work programs are interlinked and seeks submissions on whether the proposed sequencing is the optimal approach.

For each guideline, the AER proposes to release a discussion paper, a draft decision and a final decision.

5.2 Regulatory guidelines – proposed process

5.2.1 Scope of regulatory guidelines

Stage 1

Scoping Paper

The first stage of this process is the release of this Scoping Paper which sets out the purpose and objectives of the development of regulatory guidelines for distribution. The paper also provides a guide to the indicative consultation timetable, including an outline of the various elements of the distribution project.

Stage 2

The second stage of the consultation process will cover the following areas:

- **Models.** The AER proposes to develop guidelines for a Post Tax Revenue Model and a roll forward model to be appied to distribution regulation.
- **Cost allocation methodology.** The AER proposes to develop guidelines on cost allocation for distribution businesses.
- **Opex incentive mechanism.** An incentive framework for opex will be proposed by the AER.

- **Information requirements.** The AER will develop information requirement templates for DB reviews and annual financial accounts.

Stage 3

The third stage of the AER's consultation process will cover service standards, tariff setting and ring fencing:

- **Service standards and service standards incentive design.** The AER proposes to develop guidelines relating to service standards for electricity distribution. The AER considers that the issue of service standards is likely to be a significant issue during the review process given the differences across the jurisdictions schemes.

- **Tariff Setting.** This stage of the process will consider the issues associated with tariff and price setting. The AER considers that consultation on these issues should commence once positions are released on the form of regulation issues.

- **Connection and capital contribution.** This stage of the process will consider the development of guidelines to deal with the issues associated with connection and capital contributions.

- **Ring fencing.** This stage of the process will consider the development of ring fencing guidelines for electricity distribution.

5.2.2 Engagement with stakeholders

The AER is committed to fully engaging with stakeholders on the matters raised in this paper and other relevant matters that may arise over time. To this end, the AER proposes the following consultation structures to assist it in communicating with interested parties:

- Stages 2 and 3 of the consultation process will proceed with an Issues Paper, followed by Draft and Final Decisions. Public consultation will be invited on the Issues Papers and Draft Decisions.

- The AER proposes to establish working groups with regulated entities in which Guidelines and other regulatory instruments will be discussed and developed. This may be through existing structures in the Energy Networks Association.

- The AER proposes to utilise state regulators' existing user consultative committees to engage with user groups on the development of Guidelines and other regulatory instruments.

- The AER will seek to establish a formal process of consultation with state regulators during the development of Guidelines and other regulatory instruments.

The AER will move to establish these and other structures where necessary following the release of the Scoping Paper in consultation with the parties mentioned.

5.2.3 Indicative timetable

The AER's indicative timetable for the development of distribution electricity regulatory guidelines is outlined in table 3.

The AER will inform all interested parties of any substantial changes in the scope and timing of the development of electricity distribution regulatory guidelines outlined in table 3.

Table 3: Indicative timetable

	Discussion Paper	**Draft Decision**	**Final Decision**
Stage 1 Scoping Paper	Mid March 2006	No Draft	June 2006
Stage 2 PTRM Roll forward model Incentive mechanism for opex Cost Allocation methodology Information requirements	Third quarter 2006	Early 2007	Mid 2007
Stage 3 Connection and capital contribution Service standards Tariff setting Ring fencing	Early 2007	Mid 2007	Early 2008

5.3 Issues for consideration

Issues for consideration

The AER invites interested parties to comment on:

- *The scope of the AER's proposed distribution review and*
- *The proposed process, sequencing and timeframes for the development of distribution regulatory guidelines.*

6 Summary and request for submissions

The purpose of this scoping paper is to seek comments from market participants and other stakeholders on the scope of the AER's considerations, the AER's proposed process for its considerations, and issues identified in this scoping or any other broader comments or issues that interested parties may wish to make.

At this stage, the AER's preliminary views are:

- To develop electricity distribution regulatory guidelines and conduct a separate process for the development of guidelines for gas.
- The AER presumes that the economic regulatory framework, in particular the detailed elements of the building block approach outlined in the draft Chapter 6 Rules for transmission, are largely applicable to electricity distribution, with the exception of the service standards incentive regime and the form of regulation.

  Therefore, in light of the draft Chapter 6 Rules, the AER, at this stage, does not propose to set out the economic regulatory framework – i.e. the treatment of the building block elements for electricity distribution.
- Electricity distribution guidelines should be developed. The scope of these guidelines will be largely influenced by the AEMC Chapter 6 review and the Gilbert and Tobin/NERA options paper.
- The AER proposes conducting a separate process for the development of regulatory guidelines for both electricity distribution and transmission.

Issues for consideration

The AER seeks comments on the following matters:

- *Whether its proposed approach, as outlined above, is appropriate*
- *The scope of the proposed distribution review as outlined in Chapter 5 and*
- *The proposed process and timeframes for the development of distribution regulatory guidelines, as outlined in Chapter 5 of this scoping paper.*

Request for submissions

Submissions can be sent electronically to aerinquiry@aer.gov.au. Alternatively, written submissions can be sent to:

Mr Sebastian Roberts
General Manager
Australian Energy Regulator
GPO Box 560J
Melbourne VIC 3001

Submissions should be received by **5 May 2006**.

For any enquiries, please contact Ms Eloise Campbell on (03) 9290 1436.

Appendix 1: Comparison of Electricity and Gas distribution regulatory framework

	GAS DISTRIBUTION PRICING REGULATION	ELECTRICITY DISTRIBUTION PRICING REGULATION
Building Block component of gas pricing decision	**Is there any consistency in approaches between jurisdictions in determining values or parameters for these components?**	**Is there any consistency in approaches between jurisdictions in determining values or parameters for these components?**
Form of regulation	**YES** Price cap (some variationin the operation of price cap arising from propose respond model).	**NO** Weighted average price cap: Victoria and New South Wales. Revenue Cap: Queensland and the Australian Capital Territory. Hybrid revenue cap: Tasmania. Average revenue cap: South Australia
Economic regulation methodology	**YES** Building block methodology, CPI – X economic regulation	**YES** Building block methodology, CPI-X economic regulation.
Regulatory asset base	**YES** Asset bases are "locked-in" and "rolled forward" once an initial asset base has been established. In determining the initial capital base, jurisdictions have incorporated either DORC or DORC-hybrid (where the pipeline assets are valued at DORC but non-pipeline assets are valued using another methodology with these totals being combined to determine an appropriate valuation).	**YES** Asset bases are locked-in and rolled -forward: All jurisdictional regulators have adopted a roll forward approach with the exception of Queensland.
Weighted average cost of capital	**YES** All jurisdictional regulators use a WACC and the CAPM to determine the return on equity. There is however some differences in the determination of some WACC parameters. For example, there is a consistent approach for determining the gearing ratio for WACC and market risk premium. All decisions incorporate a ten-year risk free bond rate and use the Fischer equation to determine the inflation rate.	**YES** There is a consistent approach for determining some of the WACC parameter values. **NO** The actual form of WACC applied is different across the jurisdictions. Pre-tax real: New South Wales, South Australia, Tasmania, and the Australian Capital Territory. post-tax nominal WACC: Queensland. Post-tax real WACC: Victoria.
Capital expenditure assessment	**YES** All capex proposals are assessed by the relevant regulator to determine if they meet the relevant test to be accepted as forecast for the regulatory period. There is one approach to the assessment of capex: a test to determine if capex is "prudent or efficient" (as required by the Gas Code).	**YES** Ex-post prudency: New South Wales, Queensland, and the Australian Capital Territory. **NO** Ex-ante assessment: Victoria, South Australia. The Tasmanian regulator – OTTER is also proposing an ex ante capital expenditure assessment going forward. .
Operating Expenditure	**YES** All opex proposals are assessed by the relevant regulator. There is one approach to the assessment of opex: a test to determine if opex is "prudent or efficient" (as required by the Gas Code). **NO** These are adjusted based on different approaches, which include efficiency savings targets, or adjustments due to growth in demand for network services.	**YES** All the jurisdictions determine the opex allowance by assessing the efficient operating and maintenance practices of the distribution business. **NO In Victoria efficient costs inferred from expenditures under revealed cost incentive framework**.
Incentive mechanism	**Yes** Some jurisdictions have included incentive mechanisms in their regulatory pricing decisions however, there is no consistent approach to the methodology underpinning such mechanisms.	**YES** CPI-X approach. Benchmarking is used to some degree to determine the efficiency of the opex and capex proposals, but is not solely relied on. **NO** Efficiency-carry over for opex and capex: South Australia. Efficiency carry forward for opex: Victoria. The other jurisdictions do not apply an efficiency carry-over. NSW has a glide path arrangement. **NO** Demand management incentive scheme: New South Wales.
Service standards	**YES** No jurisdiction has a service standards incentive regime. **YES** Guaranteed service levels (payments in relation to the restoration of end-user services following interruptions) have been introduced in most jurisdictions. Most access arrangements and contracts cover service quality issues.	**NO** Service standards incentive scheme: Victoria and South Australia.