Consumer Reference Group

Review of the meaning of 'the long term interests of consumers', economic efficiency and assessment criteria for the ERA 2022 gas rate of return instrument

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ACRONYMS

AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
AER CRG	Australian Energy Regulator Consumer Reference Group
CAPM	Capital Asset Pricing Model
CMEWA	Chamber of Minerals and Energy Western Australia
CRG	Consumer Reference Group
ERA	Economic Regulation Authority
NGL	National Gas Law
NGO	National Gas Objective

1 INTRODUCTION

The Economic Regulation Authority (ERA) is currently undertaking a review to help determine the rate of return it will allow for the gas pipelines it regulates in Western Australia for the four-year period starting in January 2023.

As part of the consultation process for the review, the ERA has established a Consumer Reference Group (CRG) to provide direct and ongoing feedback to the ERA on rate of return issues that represents broad consumer perspectives.

The ERA has published a paper setting out the engagement process and also a technical discussion paper on the 2022 gas instrument review. The CRG has prepared a submission on the ERA's technical discussion paper, and a paper on the role and activities of the CRG. Both are available here.

This paper discusses the National Gas Objective reference to 'the long term interests of consumers' various aspects of economic efficiency and assessment 'guiding principles' adopted by the ERA in the application of the methodology it uses in determining an appropriate rate of return for the gas pipelines it regulates.

The CRG is interested in feedback on its views presented in this paper. You can contact the CRG here

2 THE NATIONAL GAS OBJECTIVE

In setting an appropriate allowed rate of return the national gas law (NGL) requires the ERA to have regard to the national gas objective (NGO) and various revenue and pricing principles.[1]

The NGO sets out the aim of the NGL as follows:

The objective of this law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

The revenue and pricing principles relate to the various aspects of economic efficiency and establish that the NGO is to be promoted by targeting economically efficient outcomes, through effective incentives. In summary this includes a reasonable opportunity to recover at least the efficient costs of the service provider and effective incentives for promoting efficient investment in regulated pipeline service, efficient provision of pipeline services and efficient use of the pipeline. [2]

The ERA's regulatory arrangements and associated rate of return framework constitute one form of regulation that has been developed to provide incentives to achieve economic efficiency.

Our interpretation of legal and regulatory precedent is that the long term interests of consumers are served through the promotion of efficient investments in, and efficient operation and use of, natural gas services, with respect to the matters specified, and there is no separate consideration of long term interests of consumers.

To be clear if one is satisfied that the economic efficiency criteria are met with respect to the specified matters, there is not a separate price or other impact on consumers that can lead to a different decision on an appropriate rate of return.[3] This means it is particularly important to understand the aspects of economic efficiency referred to in the NGO and particularly the concept of the efficient use of the regulated services because 'use' is taken to mean use of the regulated services by consumers.

[1] ERA 2021, P. 7.
[2] ERA 2021, P. 8.
[3] See AER 2021 b and AEMC 2019.

3 LONG TERM INTERESTS OF CONSUMERS AND ECONOMIC REGULATION

3.1 MEANING OF LONG TERM

In the economics of the firm or industrial organisation the long term does not refer to a specific temporal period but rather the time frame when there are no fixed costs. The CRG considers that this definition accords well with intent of the NGO, the revenue and pricing principles specified in relation to the efficiency aspects of the NGO and also with the application of the building blocks model and rate of return methodology used by the ERA and other Australian economic regulators.

Thus reference to the long term is taken to mean ensuring the regulatory arrangements recognise the need to provide sufficient incentive for there to be efficient investment given the predominance of sunk costs for regulated entities. Investors need to have assurance that if they invest efficiently in sunk costs they will have a reasonable expectation for the recovery of their investment and with a return that compensates for the risk they face. If this is not the case then it is interpreted as contrary to the long term interests of consumers if it means efficient investment does not occur and with it the services that meet consumer demand.

However, this emphasis on ensuring efficient investment can come at the expense of not achieving efficient use of the services if there are not complementary pricing arrangements that allow prices to reflect marginal costs, or other arrangements, while also ensuring revenue is sufficient to cover all costs i.e. there can be an allocative efficiency loss as recognised in the standard economics of setting a regulated price for a monopoly that reflects average total cost.

3.2 ECONOMIC REGULATION

The standard economics of an unregulated profit maximising monopoly entails a price that, depending on demand, means profits in excess of what is needed to ensure efficient investment occurs. It also entails the realisation of what is known as an allocative efficiency loss representing the lost net value for consumers for marginal units of production where the value to consumers exceeds the relevant marginal cost of supply because prices are set too high. This allocative efficiency loss is also reflective of not making efficient use of capacity of the firm's services, in this case the services of the regulated pipelines.

Economic regulation aims, inter alia, to allow a rate of return that is consistent with providing effective incentives for efficient investment but which prevents the realisation of monopoly type profits while also promoting allocative efficiency.

The ERA has described its regulatory framework in Section 2 of its Discussion Paper.[4]

[4] ERA 2021, Section 2.

The ERA aims to specify an expected rate of return based on the market return for an efficient benchmark gas network service provider with a similar degree of risk in the provision of reference services. The ERA describes its aim as follows:[5]

> "56. The ERA will aim to determine its best estimate of an efficient rate of return, consistent with the risks involved in providing regulated gas services. This is a best possible rate of return estimate that is neither too high nor too low. The ERA considers that the best approach to estimating the efficient cost of capital is to base estimates of the parameters of the WACC on observations of market data, because market data reflects the aggregate expectations of investors."

And explains the potential effects of not setting an 'efficient' rate of return as follows:[6]

54. The allowed rate of return must not be set too high because:

- Investors will be overcompensated for the risk involved in supplying capital to service providers compared to other investments.
- Service providers will have an incentive to over-invest in regulated assets.
- Consumers will pay higher prices than is efficient, which may distort downstream and upstream investment decisions.

55. The allowed rate of return must not be set too low because:

- Investors will be undercompensated for the risk involved in supplying capital to service providers compared to other investments.
- Service providers will be discouraged from investing in regulated assets and there may be under-investment.
- Consumers will pay lower prices than is efficient, which may distort downstream and upstream investment decisions.

The CRG recognises the importance of setting the best estimate of an efficient rate of return in terms of promoting incentives for efficient investment in and use of gas pipelines. However, it notes that the setting of efficient rate of return while necessary for achieving efficient use of the pipeline may not also be sufficient by itself in ensuring efficient use because the pipeline could have excess capacity reflecting the difference between a price that covers efficient average costs and the relevant costs at the margin for additional use. In other words while investment efficiency may be maximised there could still be some allocative inefficiency in relation to use.

It is possible to limit adverse allocative efficiency losses while still achieving efficient investment and efficient operation but this requires appropriate pricing arrangements to encourage demand and achieve higher utilisation of regulated services. The CRG notes that this aspect is, however, a separate consideration to the determination of an efficient rate of return but is noted here for completeness.

[5] ERA 2021, p.11.
[6] ERA 2021, p. 11.

There can be other problems with regulation that affect profit outcomes including the incentive to under-estimate demand (and expected profits) if there is price regulation which in turn can mean realised profits in excess of an economically efficient outcome.

The CRG considers that these issues also point to the need to understand other key aspects of the regulatory arrangements, apart from a focus on the rate of return methodology, because the regulatory arrangements collectively affect the scope for profits, the compensation for risk and the scope to achieve the various aspects of economic efficiency.

4 ASSESSMENT CRITERIA FOR DETERMINING AN ALLOWED RATE OF RETURN

When deteriming the rate of return the ERA's primary consideration is to the NGO and revenue and pricing principles. When considering rate of return matters the ERA has developed some secondary guiding principles as follows:[7]

> "64. The ERA's aim is to set the best possible estimate of an efficient rate of return, consistent with the risks involved in providing regulated gas services.
>
> 65. When using its regulatory judgement on rate of return matters the ERA's decisions will also be informed by the following set of guiding principles. The ERA will select rate of return estimation methods that are:
>
> 1. reflective of economic and finance principles and market information
> 2. fit for purpose
> 3. transparent
> 4. implementable and replicable
> 5. sufficiently flexible as to allow for changing market conditions."

The AER also has a set of assessment criteria that overlap with the ERA criteria and has recently expanded the criteria following input from the AER CRG, who have suggested five principles that they consider better represent the interests of consumers.

The AER CRG views its five principles as integral to the AER achieving the second part of its statutory objective of the promotion of efficient operation and use of energy for the long-term interests of consumers. (The first part of the statutory objective relates to the promotion of efficient investment).

The AER CRG submitted that its five principles should be taken into account before proposing a change to an established regime and considers its criteria are the minimum required of the AER to engender consumer confidence in regulatory processes and outcomes. The five principles are:[8]

1. A regulatory framework serving the long-term interests of consumers must promote behaviours that engender consumer confidence in the framework.
2. Any change to the regulatory model must be tested against detrimental consumer impacts in relation to absolute prices and price changes.
3. Any change to the regulatory model must be tested against acceptable consumer impacts in relation to service standards.
4. Risks should be borne by the party best placed to manage them.

[7] ERA 2021, p. 12.
[8] AER CRG 2021, pp. 12-13.

5. There should be a high bar for change.

The AER summarises its assessment principles as follows:[9]

> "Generally, most stakeholders expressed the need for an objective and transparent assessment framework. To this end, we use a set of assessment criteria to evaluate the information before us. These are the same criteria we have used since our 2013 Rate of return guideline. However, we have adopted two new criteria for the 2022 Instrument: the materiality of any proposed change; and the longevity or sustainability of new arrangements (see appendix A). Our assessment criteria in summary are:
>
> 1. Reflective of economic and finance principles and market information.
>
> 2. Fit for purpose.
>
> 3. Implemented in accordance with good practice.
>
> 4. Models are based on quantitative modelling that is sufficiently robust and avoids arbitrary filtering.
>
> 5. Market data is credible, verifiable, comparable, timely and clearly sourced.
>
> 6. Flexible to allow changing market conditions and new information.
>
> 7. Materiality.
>
> 8. Longevity or sustainability of new arrangements.
>
> We agree with the CRG that we should use a principled approach to assessing new information before making a change and as noted above our assessment criteria is for that purpose. However, it must be noted that we have legislated objectives that guide our decision making. Whilst our **legislative objectives must take primacy**, additional principles can be useful in helping us apply the primary objectives. We are required to assess our decisions against the NEO and NGO and must have regard to the Revenue and Pricing Principles (RPPs) when setting the rate of return Instrument.
>
> We have previously noted that it is important that the regulatory framework remains contemporary to circumstances and changing evidence, and where we think changes are needed to protect the long-term interest of consumers then we should make those changes. We have also stated that we see overlap between the CRG's consumer principles and the way we currently look to implement the NEO and NGO and RPPs. As such, we consider our assessment criteria capture the CRG's criteria. This overlap between the CRG's principles, with our assessment criteria and our regulatory framework is set out in Table 1."

An abbreviated Table 1 below, based on the AER comparison, shows how the AER considers its assessment criteria capture the CRG criteria.

[9] AER 2021a, pp. 11-1.

Table 1 Comparison of AER CRG and AER assessment principles

AER CRG principle	AER principles
1. Promote behaviours that engender consumer confidence in the regulatory framework.	1. Reflective of economic and finance principles and market information. 2. Fit for purpose. 3. Implemented in accordance with good practice. 4. Models are based on quantitative modelling that is sufficiently robust and avoids arbitrary filtering. 5. Market data is credible, verifiable, comparable, timely and clearly sourced. 6. Flexible to allow changing market conditions and new information.
2. Test against consumer impacts on prices and 3. Test against impacts on service standards.	2. Fit for purpose. 7. Materiality. 8. Longevity or sustainability of new arrangements.
4. Risks are borne by those best placed to manage them.	1. Reflective of economic and finance principles and market information.
5. There should be a high bar to change.	7. Materiality. 8. Longevity or sustainability of new arrangements.

Source: AER 2021a, pp.12-14.

There is additional explanation for each principle. One key point is that the AER[10] says in relation to price impacts: "scenario testing and sensitivity modelling will assess the impacts on price levels". It is not clear, however, how these modelled price impacts in turn affect conclusions.

There is also a separate chapter (6) on "Use of cross checks to sense check overall rate of return" where there is some discussion of scenario testing as one of several cross checks. The others are financeability, RAB multiples, historical profitability, investment trends and other regulators' rate of return.

The AER does not explicitly show how it would adjust its decision if there was a material increase in prices for a preferred scenario based on its criteria as a whole. This is consistent with the interpretation that the assessment of economic efficiency considerations with reference to the assessment principles would have priority and this relates back to the reference to the primacy of legislative objectives.

On risk, it is relevant to recognise that the rate of return methodology, with respect to the equity return in the form of the CAPM, is supposed to only allow the expected recovery of risks that are not diversifiable by investors i.e. as reflected in the beta parameter which measures the sensitivity of the specific investment returns to the market as a whole. All other risks specific to the firm are not priced in the CAPM. Equity investors in effect absorb these risks by having

[10] AER 2021a, p.14.

them offset in a diversified investment portfolio. So there is risk sharing by investors in that sense. They are unable to pass diversifiable equity risks on to consumers given the methodology that is applied. However, this assumes that other aspects of the regulatory arrangements are being applied in a complementary and consistent fashion. For example is there appropriate sharing of the risks of over and under recovery of allowed capital and operating expenditure. It should also be noted that debt holders are compensated for the risk of default which is based on the specified credit rating and gearing levels.

On the AER CRG principle 1 of consumer confidence in the regulatory framework, the CRG considers this is a good principle, but that it functions as a meta principle whereby all of the other principles if effective relate to it. It is important that all stakeholders have confidence in the regulatory framework, for if investors do not have confidence and it deters efficient investment then that would be contrary to the long term interests of consumers as well.

The CRG considers there is considerable overlap between the ERA assessment principles and the first six AER principles and, drawing on the information provided by the AER CRG and our own assessment, there is merit in expanding the ERA's guiding assessment principles as proposed below.

The CRG recommends the ERA consider using the following assessment criteria in making its decision for an allowed rate of return.

CRG proposed assessment criteria:

1. Reflective of economic and finance principles and market information
2. Fit for purpose
3. Transparent
4. Implementable and replicable
5. Sufficiently flexible as to allow for changing market conditions."
6. Test against the price and service impacts on consumers to ensure efficient use.
7. Ensure there is sufficient information to support change.
8. Consider how the rate of return methodology in conjunction with other aspects of the regulatory arrangements are likely to impact on risk, return and the realisation of the economic efficiency criteria.
9. Ensure the decision process engenders confidence of all stakeholders in the regulatory arrangements.

The first five criteria are the same as the existing guiding principles used by the ERA.

Criterion 6 has been added to ensure the efficient use objective is given more explicit attention.

Criterion 7 is considered as more meaningful and appropriate then 'a high bar for change' and captures the AER criteria of materiality and longevity.

Criterion 8 is included to ensure other relevant aspects of the regulatory arrangements are considered where they are likely to impact on risk, return and the realisation of the economic efficiency criteria.

Criterion 9 needs to be considered with reference to the application of all the other criteria.

The CRG recognises this is a long list and there may be scope for streamlining the criteria but considers that the additional perspectives offered here are relevant.

6 REFERENCES

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