Rate of Return Instrument and Long-term Interests of Consumers

Initial network sector perspectives

AER Network Committee Discussion

25 March 2021

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Overview

- Network businesses **support a clear established framework** for the evaluation of the long-term interests of consumers and rate of return issues early in the process

- Returns that lead to **deferrals of efficient investment are not in customers' long-term (and short-term) interests**. They can contribute to sub-optimal service outcomes, higher maintenance costs (opex) and reduce customers' energy choices (e.g. ability to connect gas, export and realise value from DER).

- For reasons that were documented at the start of the NEO/NGO framework, the long-term interests of consumers is best served by an **economic efficiency focus**

- This has also been AER practice; the 2018 Rate of Return Instrument proceeded on the basis that **estimating the efficient financing costs (both debt and equity) that would be incurred by a benchmark firm** and then combining them would best promote the NEO/NGO: this broad approach is well-understood, supported and allows clear focus on the relevant issues

- There are a **range of available tools, used by others, that can assist** in reaching a rate of return outcome in the long-term interests of consumers, including financeability checks and 'cross-checks' on key decision elements

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1. Practical Assessment of the Rate of Return in the LTIC

- Focus on the long-term impacts on price, quality, safety, reliability and security of supply
- 2018 RORI approach of estimating efficient benchmark cost of debt and equity supported

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Practical assessment of the rate of return and long-term interests of consumers

» Starting point of the NEO and NGO:

…to promote efficient investment in, and efficient operation and use of, the relevant electricity or gas services, for the long term interests of consumers with respect to the price, quality, safety, reliability and security of supply

» Suggests a focus on the **long-term impacts** of choices and decisions on the NEO/NGO factors, taking into consideration the Revenue and Pricing principles

– Assessing for the impacts on individual and linked dimensions of price, quality, safety, reliability and security of supply

» Different stakeholders may have expressed different perspectives, but AER's assigned task is delivering an outcome which **best promotes the NEO/NGO taking into account the revenue and pricing principles**

» 2018 framework concluded that estimating the efficient financing costs (both debt and equity) that would be incurred by a benchmark firm would best promote the NEO/NGO: this broad approach is supported and allows clear debate and focus on the relevant issues *(Explanatory Statement, Section 2-2.3)*

– It is unclear how an alternative framework could be constructed and applied, which would promote confidence in both consumers and investors.

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2. Meaning of the Long-term Interests of Consumers

- Ensuring a clear focus on the NEO/NGO and Revenue and Pricing Principles through the defined prism of economic efficiency
- Rate of return that delivers the efficient mix of investments to underpin the services customers value
- Introduction of supplementary objectives likely to promote outcomes not consistent with the defined regulatory task under the Law

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Meaning of the long-term interests of consumers

- **What outcome will the right outcome deliver for customers?**
  - A rate of return which promotes the long-term interests of consumers will be that which delivers the efficient mix of investments across networks and customers through time to meet current and future customers willingness to pay for network access, capacity and service capability (including reliability) delivered safely
- **Clarity of the objective of the process around the NEO/NGO**
  - Introduction of other subsidiary or competing objectives in the rate of return estimation task is likely to promote outcomes that are inconsistent with the regulatory purpose of setting a forward-looking rate of return (e.g. reaching a 'consensus' outcome, ensuring a particular projected price outcome, or seeking to address stakeholders' perspectives that past outcomes have been 'too high' or 'too low')
- Second reading speech of National Electricity Law makes clear that the objective is intended to be 'economic efficiency' focused
- Similarly, AEMC guide to applying the NEO/NGO discusses the background to removal of affordability as an overarching market objective and its replacement by 'price' (p.10)

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Meaning of the long-term interests of consumers: objectives

The purpose of the National Electricity Law is to establish a framework to ensure the efficient operation of the national electricity market, efficient investment in, and the effective regulation of electricity networks. As previously noted, the national electricity objective also guides the Australian Energy Market Commission and the Australian Energy Regulator in performing their functions. ***This should be guided by an objective of efficiency that is in the long term interests of consumers. Environmental and social objectives are better dealt with in other legislative instruments and policies which sit outside the National Electricity Law.***

- *Second Reading Speech, Minister for Mineral Resources and Development (South Australia), Legislative Council, South Australia, 16 October 2007 Hansard p 883.*

» What does this mean in the context of 'zero by 2050' established targets of each State and Territory and the associated investment task?

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3. Long-term Interests of Consumers in the context of the Rate of Return

- A focus on current and future customers and intergenerational issues critical
- The relative risks and costs of under and over investment and utilisation already look different in than in 2018: careful analysis needed
- Investment task and requirements will be shaped by community and policy maker expectations of what roles networks play
- Impact of low comparative international returns on long-term interests of consumers

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LTIC in the context of the rate of return

- Recognise the need for a **current and <u>future</u> customer** focus
  - Current and anticipated future rate of return will **impact irreversible network investment decisions around long-lived assets that have consequences for both current and future users**, for example for their ability to efficiently connect (e.g. gas and electricity transmission network customers), and their experienced levels of capacity, service and reliability.
- Refreshed assessment needed on the potential risks and costs of under and over-investment
  - Value of connection and ability to realise value of distributed generation or large-scale renewable sources is likely to be significantly higher than in past guideline periods (2009, 2013, 2018) of predominantly 'one-way' supply of network services (due to EVs, large scale solar, increasing grid and customer side storage)
  - Changing risk profile and business model of gas networks with potential hydrogen transition

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The future network investment task: examples

» Growth in **absolute grid demand in many regions** likely to return:

In the longer term (10-20 years), many NEM regions are forecast to return to growth in operational energy consumption and maximum demand, driven by electric vehicles (EVs) and a level of saturation in distributed PV and EE investments (2020 ESOO, p.6)

» Set against **emerging minimum demand and system strength issues** - in evidence in South Australia today

» **With DER playing a bigger role than today** - 20 per cent of total NEM production by 2039-40 is projected to be sourced from distributed PV (2020 ESOO, p.38)

» Where some network investment will be required to **build a resilient grid to meet customers' expectations** - e.g. climate change impacts

» **And a need to recognise a strong societal 'option value' for existing gas networks** - e.g. to serve new commercial, industrial, transport, and residential hydrogen demand and store excess renewable power for the market

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Addressing the economic risks to investment - ‘aiming up’

- The 2018 Rate of Return Instrument clearly did not ‘aim up’ in reaching a rate of return estimate
- The **revenue and pricing principles** invite AER examination of the economic ‘risks and costs’ over and under-investment
- Given the changed environment between 2018 and 2022, there should be **careful consideration of risks and costs of under and over-investment**
  - e.g. what are the risks and costs around network connection, reliability and capacity than in the past
- Internationally, other regulators (UK, NZ) have determined that the **consumer interest in promoting adequate investment in network infrastructure has warranted ‘aiming up’** to avoid the acknowledged high cost of under-investment (including unavailability of network or reliability).

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International comparisons on regulatory returns

Summary of equity and debt premium

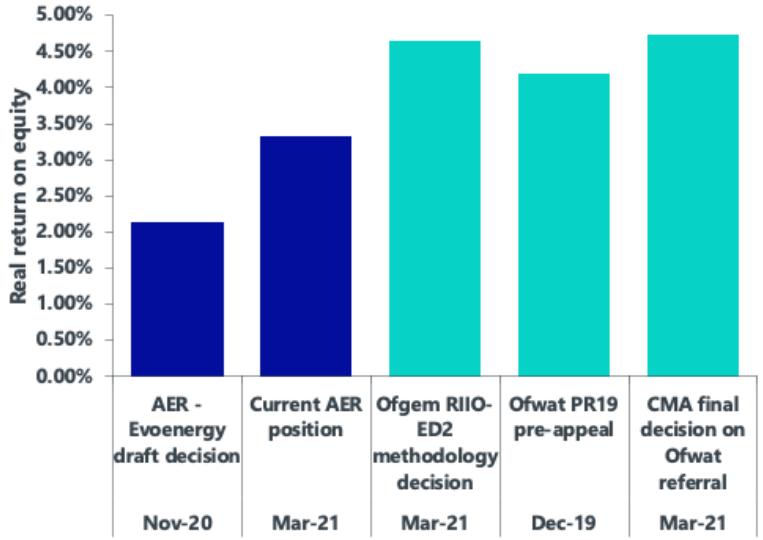
		AER	ACM	FERC	STB	ARERA	NZCC	Ofgem	Ofwat
Decision year		2020	2016	2020	2018	2019	2019	2019	2019
Nominal									
Cost of debt, excluding issuance cost	[1]	*4.76%*	*2.04%*		*4.16%*		*2.72%*		
Cost of equity	[2]	4.69%	5.02%	10.05%	13.86%		*5.87%*		
Rf	[3]	1.03%	1.28%	2.70%	3.02%		1.12%		
Equity premium	[4]	*3.66%*	*3.74%*	*7.35%*	*10.84%*		*4.75%*		
Debt premium	[5]	*3.73%*	*0.76%*		*1.14%*				
Real									
Cost of debt, excluding issuance cost	[6]	*2.49%*				*2.39%*		*1.93%*	*2.04%*
Cost of equity	[7]	*2.42%*				5.77%		4.80%	4.19%
Rf	[8]	*-1.24%*				1.89%		-0.75%	-1.39%
Equity premium	[9]	*3.66%*				*3.88%*		*5.55%*	*5.58%*
Debt premium	[10]	*3.73%*				*0.50%*		*2.68%*	*3.43%*

Notes

Non-italized numbers come from the Appendix Tables corresponding to the individual regulators.

ACM: The latest method decision was issued in 2016 for for the regulatory period 2017 - 2021, in which the ACM determines a WACC for 2016 and 2021, then interpolates the WACC for each year of the regulatory period. The ACM also determines WACC for new and existing capital separately. This table shows the WACC determined for 2021 for new capital.

ARERA: Numbers shown are for gas distribution. Risk-free rate is the 0.5% risk-free rate plus the 1.39% country risk premium.



» What is the likely impact on the long-term interests of consumers if expected Australian network regulatory returns are not competitive with, or consistently lower than with available regulatory returns internationally?

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4. Consumption efficiency

- Agree with AER's 2018 Explanatory Statement approach
- Setting an efficient market-based rate of return will promote efficient network investment and consumption

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Consumption efficiency

- Agree that a focus on consumption efficiency - avoiding the risk of under-utilisation of network services - is appropriate and required by the framework
- Support the framework and approach set out in the 2018 Explanatory Statement on this issue:

In this context, for the allowed rate of return to contribute to the achievement of the legislative objectives it should reflect the efficient cost of capital. If it does, then it will (all else equal) promote both efficient investment in, and efficient use of, energy network services.

2.3.5 Conclusion

An allowed rate of return that reflects the efficient market cost of capital will promote both investment and consumption efficiency. (p.40)

- The rate of return represents the single 'clearing' value that promotes efficient usage and investment decisions
- Complemented by move towards cost-reflective pricing. Adjusting the WACC to counteract issues with tariffs is not practical nor desirable. Introduces more potential for economic distortions and pace of tariff reform varies by jurisdiction; the WACC is applied NEM-wide.

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5. Guiding principles

- An efficient market-based estimate of cost of financing will deliver the outcome of a rate of return which is neither too high or too low
- The decision framework, and irreversibility of the AER's decision should influence how the rate of return approach is reached and applied
- There are existing tools that can help deliver a NEO/NGO promoting rate of return

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Guiding principles

- Best possible estimate, consistent with risks, should by definition not be too high or too low
- Further suggested principles and insights
  - **Design of decision framework should inform approach**: Where decisions are irreversible with long-term consequences, and cannot be re-opened, departed from, or reviewed, a **precautionary approach** is warranted. Regulators should explicitly consider what the future '*cost of correcting*' a particular approach could be (e.g. any measures required to restore investment confidence). In current unusual capital market conditions this means the RORI must be robust to a wide range of plausible scenarios (e.g. paths of risk-free rates, monetary policy interventions)
  - **Rate of return should reflect costs of financing a 'benchmark efficient entity':** Benchmark financing practices should be clearly defined and compensated for.
  - **Balanced appraisal of all evidence**: An outcome or framework where the rate of return is effectively continuously lowered with reference to a narrow set of evidence including past RAB multiples or historical profitability metrics until 'clear evidence' of underinvestment, adverse customer outcomes or sustained financial distress emerges is likely to be dynamically unstable, costly and result in a harmful pendulum of more extreme outcomes, because it will be based on imperfect and largely lagging indicators.
  - **Best estimate or 'NPV=0' ex ante approaches sustain regulatory confidence:** Concepts of 'swings and roundabouts' can validly apply to the presence of estimation errors, but should not form part of the estimation process itself
  - **Clarity on assumed investor return expectations critical**: a key issue is assumptions about investor expectations relating to a reasonable opportunity to recover at least the efficient return on capital. A specific issue in this regard is clarity around the assumed timeframe and nature of this expectation. Investors should expect to receive at the efficient return on capital at the start of each determination period.

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Achieving the long-term interests of consumer: available tools

- There are a set of available tools used by other regulators that can assist in the task
  1. **Financeability is a tool to promote confidence and ensure low-cost financing** - Careful forward-looking assessment and monitoring of the financeability of the benchmark efficient firm at the time of the RORI decision, and through time (including in network determinations) can help avoid errors which are costly to correct and which undermine confidence in the regulatory framework, raising the cost of financing. Financeability frameworks maintain downward pressure on the cost of financing, benefiting the long-term interests of current and future consumers.
  2. **Equity cross-checks** - Cross-checks can provide a valuable additional mechanism used by other regulators to ensure that the cost of equity is sufficient to bring forward efficient investment to underpin customer valued outcomes
  3. **Some survey or other evidence is available to help forming conclusions on likely consumer views on issues of safety, reliability, and price** - An example of this approach might be using the AER's established findings on the value of customer reliability to conduct baseline and sensitivity assessments around the potential customer costs and impacts of under or over-investment. The ENA has also offered the CRG use of existing engagement channels to assist them to consult with a broad range of customers on these matters.

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