



Role of financeability in promoting the long-term interests of energy consumers

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1. Introduction and Summary

Energy Networks Australia (ENA) has commissioned NERA Economic Consulting (NERA) to review the role of financeability assessments in the Australian regulatory framework.

Financeability refers to a business's ability to meet its financing requirements and to raise new capital efficiently. Internationally, particularly in Great Britain, regulators use financeability testing to ensure that the revenues awarded during a price control represent a business plan that is deliverable in practice. The Independent Pricing and Regulatory Tribunal of New South Wales (IPART) also uses financeability testing in the regulation of the water industry. Both the British and IPART's tests assess the financeability of the regulator's view of efficiently-operated businesses, albeit IPART does also test the actual capital structure of the business. Regulated entities are judged not financeable if they are unable to achieve a credit-rating consistent with the benchmark cost of debt in the allowed Rate of Return (RoR).

British regulation and IPART's regulation of the water sector share features with the regulation of energy network service providers (NSPs) in Australia that make the case for financeability testing particularly salient. Like the regulation of energy NSPs in Australia and unlike many regimes that do not include financeability testing, they:

- Defer cost recovery by remunerating regulated companies with a real weighted average cost of capital (WACC) on an inflation-indexed regulatory asset base (RAB);
- Rely on a notional rather than an actual cost of debt; and
- Operate incentive regulation, which exposes regulated companies to additional cost and performance risk.

The precise practice of financeability testing varies between regulatory regimes. All, however, are inspired by the approaches and financial metrics used by credit-rating agencies. As we note in section 3, initial investigation suggests that financeability (as measured by the Funds From Operations (FFO) Over Net Debt Ratio) may have deteriorated since the introduction of the 2018 Rate of Return Instrument (RoRI). While this may indicate pressure on the financeability of regulated firms, establishing a systematic financeability problem would need more investigation and would require consideration of a wider range of metrics.

Regulators adopt financeability testing to protect consumers rather than NSPs. Ensuring the financeability of NSPs is vital to consumers' interests, including that they:

- get access to the investment and services they need from NSPs;
- can have confidence in regulatory decision-making;
- face lower financing costs in the long run, which are material in an asset intensive industry; and
- face lower operational costs by ensuring that NSPs take investment decisions when they minimise costs to consumers not when the business is financeable.

The costs of financeability testing are likely to be low relative to the potential benefits and consist primarily of the administration of a test itself. In a context where NSPs face a material risk of not being financeable, financeability testing offers a basic cross-check that

regulatory determinations are consistent. It is difficult to identify a reason not to conduct financeability testing as part of the regulatory toolkit.

The AER and/or Australian policymakers will need to design a financeability testing regime if they decide to adopt one in Australia. In doing so, they could rely on ready-made international models for financeability tests, albeit that they may need to customise arrangements used elsewhere for an Australian context. The key features of any design to be determined would include the:

- definition of the target entity for the test (e.g. the benchmark efficient entity (BEE) or actual financial position of NSPs);
- methods for assessing financeability, including a reliance on purely quantitative ratios or inclusion of qualitative factors;
- frequency and timing of the test, including whether it would take place during the reset process and/or when designing the RoRI; and
- approach to take when and if regulated entities fail a financeability test.

Structure of this Report

This report examines the case for financeability testing for energy networks in Australia in further detail and proceeds as follows:

- Section 2 reviews the key features of current approaches to assess financeability;
- Section 3 summarises the methodologies used by credit rating agencies.
- Section 4 discusses benefits for consumers of financeability testing.
- Section 5 sets out the possible options for implementing financeability testing in Australia.

2. Introduction to Financeability Testing

2.1. Regulatory Decision-Making Underpins the Ability of Regulated Businesses to Finance their Activities

The term “financeability” refers to a business’s ability to raise sufficient capital to meet its requirements and deliver its operations and its programme of capital expenditure. A business is said to be “financeable” if it can raise sufficient capital to continue to operate and “unfinanceable” if it may not. The ability to raise capital depends on the business’s ability to earn sufficient revenues in future to cover its operating costs, its debt interest payments and retain sufficient profit to attract equity investors. Businesses that are not financeable will ultimately face financial distress, which will disrupt services to their customers.

In most industries, market forces determine the financeability of a business. For “natural monopolies”, such as NSPs, where competition is impractical, economic regulators determine the revenues businesses may earn over a given price control period. Accordingly, the financeability of NSPs in practice is at least partly due to regulatory decision-making. The financeability of the regulator’s view of an efficient NSP is entirely due to regulatory decision-making (at least given information available at the time the decision was made). If the regulator sets cost allowances in line with those of an efficient NSP and a rate of return that is sufficient to provide the market rate of return required by debt and equity holders for the profile of recovered revenues, efficient NSPs will be financeable.

2.2. Regulators Have Adopted Financeability Testing as a Cross-Check on Their Own Decision-Making

Internationally, and particularly in Great Britain (i.e. England, Scotland and Wales) as well as for water in New South Wales, explicit testing of whether regulated businesses are financeable emerged for two main reasons:

- Regulatory decisions carry with them a risk of error. Regulators may inadvertently set allowed revenues for a regulated business at a level that did not allow an efficient business to finance its activities.
- Consumers have a clear interest in the continued provision of network services by efficient providers.

In response, regulators have considered that explicitly testing whether proposed allowances for network businesses allowed those business to finance their activities was in the interests of the consumers that they serve.

A regulated business may be unfinanceable for a range of reasons, including underperformance relative to its operating cost allowances. That underperformance may be due to the regulator misestimating the level of efficient operating costs or inefficiency by the unfinanceable firm. However, ensuring that the notionally-efficient regulated business is financeable acts as the most basic cross-check on the consistency of the price control. Testing the financeability of the notionally-efficient firm boils down to assessing whether debt and equity holders would be willing to make capital available to the business on the terms assumed by the regulator.

2.3. Financeability Testing Measures the Consistency of Regulated Allowances with Guidance from Credit-Rating Agencies

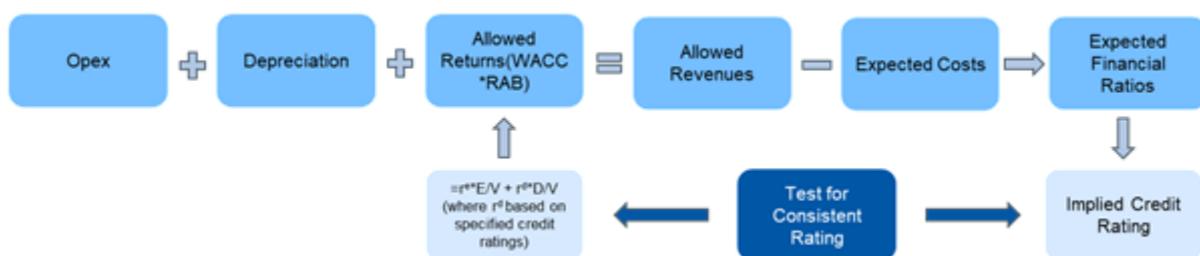
Financeability testing provides an opportunity for stakeholders to test regulators' decision-making. It provides an objective basis for assessing claims and evidence submitted by the stakeholders to price control decisions. It therefore provides an opportunity to improve the consistency and evidential basis of regulatory decision-making.

Assessing the underlying cost of equity is challenging from market data, which affords regulators discretion in setting the key parameters that underpin their estimate. Accordingly, financeability tests focus on the ability of regulated businesses to raise debt on the terms assumed by their regulators.

In setting allowances for debt costs, regulators implicitly or explicitly identify the credit-rating that they anticipate that regulated entities will be able to achieve (typically BBB+). Credit rating agencies, such as Moody's and S&P, provide clear guidance on the financial ratios that are consistent with each credit rating. Investors use that guidance in setting the interest rates that they require from borrowing firms.

Financeability tests rely on the key building blocks of the price control, including opex, depreciation and the allowed return on capital (see Figure 2.1). The regulator calculates financial ratios from those allowed revenues by deducting expected costs. The relative importance of financial ratios and which ones regulators use vary, however the most critical ratios are typically those of Funds From Operations (FFO)¹ to interest coverage or net debt. If the financial ratios are higher than or consistent with the guidance issued by credit-rating agencies for the assumed credit rating, an NSP passes the test and is financeable. If the financial ratios are not consistent with the guidance issued by credit rating agencies, it fails the test and is unfinanceable.

Figure 2.1: Financeability Test – Test for Consistency Between Allowed Return and the Expected Financial Ratios



Source: NERA illustration.

¹ FFO is equal to revenue less opex, tax and interest payments.

2.4. Australian Regulation Has Common Features with Regimes that Have Adopted Financeability Testing

Developed international regimes have not universally adopted financeability testing but neither is that lack of universality surprising. Financeability testing is most necessary where there is the highest risk that the price control allowances will not automatically ensure that the NSP is financeable. Many international regimes include safeguards, such as operating broad cost-pass through regulation (including in some cases, the cost of debt), which would make financeability testing redundant. Australia, however, shares many features with British regulation that make financeability testing an important tool for regulators to protect consumers, including that it:

- uses benchmark costs of debt, instead of passing through actual debt costs. As a result, efficient NSPs whose profile of embedded debt does not precisely match the benchmark index may be non-financeable, even if they procured that debt on efficient and competitive terms at the time of issuance;
- remunerates NSPs with a real return and indexes the Regulated Asset Base (RAB) with inflation, an approach known as “Current Cost Accounting”, which defers cost recovery. In practice, most NSPs face debt costs in nominal terms because markets for inflation-indexed debt are illiquid, particularly in Australia, and issuance costs are higher. As a result, NSPs receive revenues which only cover real interest costs (i.e. interest payments *excluding* inflation) but must pay out nominal interest costs (i.e. interest payments *including* inflation) to debt holders; and
- operates an under incentive regulation rather than under a cost pass-through regime. As a result, NSPs are exposed to risk around differences between the level of allowances and outturn costs, which can put the financeability of NSPs at risk.

3. Credit Rating Agencies Publish Methodologies Which Could be Used for Financeability Testing in Whole or Part

British regulators for energy and water (Ofgem and Ofwat) ask companies to demonstrate that their business plans are financeable as part of price control assessments. Ofgem and Ofwat require companies to calculate the financial ratios used by credit-rating agencies as part of price control submissions and expect companies to demonstrate that they are credit-worthy using qualitative and quantitative evidence.

The Independent Pricing and Regulatory Tribunal of New South Wales (IPART) relies on financial ratios “Real FFO Interest Cover” and “Real FFO Over Debt” inspired by those used by credit rating agencies. It does so because it considers focusing only quantitative ratios is more transparent than tests that involve both qualitative and quantitative factors.²

Moodys and S&P are the two largest credit rating agencies and serve around three quarters of the global ratings market between them.³ Both publish methodologies setting out their detailed approaches to calculating credit ratings for energy networks. Moody’s awards scores from C-grade (in default) to Aaa-grade (Prime-1, such as sovereign debt in low-risk jurisdictions). S&P awards scores between SD/D (in default) to AAA (Prime-1). Both rely on a mix of qualitative and quantitative factors to determine the credit rating of firms. However, the method by which qualitative factors feeds into each differs.

Moody’s relies on a mix of qualitative and quantitative factors with a fifty-fifty weighting. For Moody’s the scores for qualitative factors are therefore direct part of the calculated credit score. Moody’s qualitative factors are mostly external to the control of the firm being rated and flow from the risks imposed by the regulatory environment and revenue cap model.⁴ Moody relies on five financial ratios for its quantitative assessment (with equal weighting):

- Scale and complexity of the capital programme: equal to capex divided by the Regulated Asset Base. Firms with larger and more complex programmes may receive a lower credit score.
- The extent to which revenues less operating costs and taxes (defined as “Funds from Operations” or “FFO”) cover interest payments, where a higher ratio denotes a firm more able to cover its interest payments and therefore earns a higher credit rating;
- Gearing (Net Debt divided by RAB), where a higher ratio indicates more leverage and a lower score;
- The size of free cash flows relative to the debt owed by the business (FFO divided by Net Debt), where a higher ratio indicates a more creditworthy business; and
- The stockpile of cash in the business relative to the outstanding debt (Retained Cash Flows divided by Net Debt), where more cash indicates a more creditworthy business.

S&P does not have a formal weighting between qualitative and quantitative factors but first applies a qualitative rating that sets the range of expected credit ratings. It then applies a

² IPART (November 2018), Review of our financeability test, p. 20.

³ See, e.g., <https://www.esma.europa.eu/press-news/esma-news/esma-publishes-2019-cra-market-share-calculation-in-eu>

⁴ These factors are: “Stability and Predictability of Regulatory Environment”, “Asset ownership model”, “Cost and Investment Recovery (Sufficiency & Timeliness)”, “Revenue Risk” and “Financial policy”.

quantitative rating to determine where within the range each business sits. S&P relies on qualitative estimates of country risk, industry risk and competitive position. It also uses quantitative financial ratios, primarily ratios of operating profit to the debt in the business.⁵ By contrast to Moody's, where the qualitative factors directly flow into the calculated score, S&P's qualitative factors set a floor and a ceiling on the credit rating determined by the quantitative factors.

These methods – those used by regulators internationally and by credit rating agencies – provide models for financeability testing for NSPs in Australia.

Initial investigation suggests that testing financeability could require changes to recent reset decisions. Based on the Real FFO Over Debt Ratio in the Post Tax Revenue Model for the Benchmark Efficient Entity, more than 85% of the AER's decisions taken since it introduced the 2018 RoRI fail by the IPART and/or S&P standards. While this may indicate pressure on the financeability of regulated firms, establishing a systematic financeability problem would need more investigation and would require consideration of a wider range of metrics.

⁵ S&P's primary ratios are FFO to Debt and Debt/EBITA.

4. Benefits for Consumers

4.1. Financeability Testing is a Tool to Protect Consumers, Not NSPs

Financeability testing, insofar as it results in financeable NSPs, offers at least four broad categories of benefits for consumers.

Firstly, financeability testing ensures that **consumers get access to the investment that they need**. Failing a well-calibrated financeability test means that an NSP would be unable to raise capital to finance new investments. NSPs would have an incentive to sweat assets and avoid new investments. If NSPs responded to that incentive it would result in higher costs for consumers over the long term (e.g. due to excessive opex and reductions in the quality of service). In some circumstances, even unfinanceable NSPs could be incentivised to invest in the network to, for instance, avoid penalties for failing to meet licence obligations. However, over the long term, NSPs will require new debt and/or equity injections to finance new investment. By definition, these capital injections will not be forthcoming in exchange for the returns on offer, if NSPs are not financeable.

Secondly, financeability testing **provides confidence in regulatory decision-making**. It is possible in principle to set a reset allowance that resulted in efficient NSPs that were financeable without testing that financeability. However, without conducting financeability testing, it is not possible to be sure that reset allowances *ensure* that NSPs are financeable. Financeability testing offers a transparent method for cross-checking regulatory decisions and ensuring that the regulator is creating an investment climate that will deliver on consumers' needs.

Thirdly, by building confidence in the regulatory process, it **minimises financing costs for consumers**. In asset-intensive industries, the cost of capital accounts for a material proportion of the total price paid by consumers (on average the allowed return comprises over 40% of the allowed revenues).⁶ Providing a stable and transparent framework for assessing the financeability of networks provides investors with confidence and ultimately reduces, over the long-term, the returns investors require for investing in the sector.

Fourthly, financeability testing **minimises costs of service over time**. In the absence of financeability testing, NSPs may go through periods of time in which they are not financeable as businesses. In these periods, they will be incentivised to eschew investment and wait for periods in which the regulator increases the cost of capital. Starving networks of the investment they need in fallow periods and investing intensively in periods when the business is financeable results in a boom and bust cycle which is likely to increase investment costs over time. This deferral could also have the effect of inequitably shifting costs to future consumers.

⁶ AER (December 2018), Rate of return instrument – Explanatory statement, p.412.

4.2. The Potential Benefits of Introducing Financeability Testing Materially Exceed the Cost of Doing So

Failed financeability tests stem from setting the allowed rate of return below the cost of capital given the risks and planned profile of recovery of capex. Much like the consequences of setting the cost of capital too low, the costs of failing to test for financeability are both potentially severe and asymmetric. The consequences of a reset process that over-rewards investment are additional capex whilst the consequences of under-investment can be lost load, priced at \$15,000/MWh,⁷ causing higher prices for customers and imposing wider effects on the economy by having unreliable electricity.

The direct costs of financeability testing are low and largely administrative. The AER already produces detailed models of the costs and revenues of NSPs under the existing reset processes. A financeability test would require the AER only to select a set of credit metrics for analysis, consult on those credit metrics with stakeholders and then calculate those credit metrics during the Rate of Return Instrument process and/or reset processes to cross-check its proposed allowances. International precedent for financeability testing offers models that the AER could readily adopt in Australia.

In addition to the theoretical merits of financeability testing, international regulatory practice suggests that it is likely to have benefits for consumers. Regulators (and legislators) internationally introduced financeability testing for the purpose of protecting long-term consumer interests. British regulators must have regard to the ability of licensed entities to finance their activities (the “financing duty”). British legislation requires regulators to have regard to the ability of licensed entities to finance their activities in order to protect consumers, not instead of it. Ofwat and Ofgem have chosen how to interpret those duties and both have concluded that explicit financeability testing is necessary to promote consumers’ long-term interests. Indeed, IPART, without a specific legal framework which suggests that it should conduct financeability testing also decided that it was necessary to do so to protect consumers’ interests.

⁷ Australian Energy Market Operator (28 July 2020), The National Electricity Market – Fact Sheet, p.3.

5. Implementation in Australia

Introducing financeability testing in Australia would require legislators, policymakers and/or regulators to take a series of decisions about the design of any test. In designing a financeability test, governmental bodies would need to decide at least four dimensions of any test in order to realise the benefits of financeability testing.

1. **Identity of the Target Firm:** As a first step, financeability tests require a notional firm and a set of accounts in order to calculate financial ratios. In principle, the AER could run financeability tests based on the:
 - *Benchmark Efficient Entity (BEE)*: The starting point for incentive regulation is usually that decisions on costs and allowances should be made with reference to notional costs and financial structures. This approach would be in line with Ofgem’s, Ofwat’s and IPART’s approaches.
 - *Actual Entity*: The risk of failure of actual entities could provide an argument for relying on actual costs to assess financeability.
 - *Hybrid of actual and BEE (IPART approach)*: Hybrid approaches are also possible: IPART used what it described as “actual” financeability as a cross-check on its work in previous price controls, applying the test to the BEE but using actual financing costs.
2. **Methodology and Calculations:** We briefly described the approaches used by British regulators and IPART as well as the methodologies taken by credit-rating agencies in section 3. The AER could adopt one of these methodologies or approaches directly as part of the reset decision-making process. Alternatively, it could set out its own set of credit metrics drawn from the methodologies used by credit-rating agencies.
3. **Frequency of testing:** Financial market conditions change over time and the financeability of NSPs will also change. In Australia, unlike Britain, the cost of capital is determined separately from the reset process. There are therefore two points where the AER is making decisions which affect the financeability of NSPs: the Rate of Return Instrument determination process and the reset process. Therefore, in principle we envisage that AER could conduct financeability tests:
 - Annually, for all networks throughout the price control, which would allow the AER to respond to financial conditions as they emerged;
 - At periodic resets, which would give the AER the opportunity to assess financeability for the forthcoming reset period for each network to ensure they were financeable on an *ex-ante* basis; and/or
 - During the Rate of Return Instrument process, which would give the AER the opportunity to assess the impact of its allowed rate of return methodology decisions on financeability of NSPs.
4. **Remedies:** Testing the financeability of NSPs will not increase the financeability of NSPs or the consistency of reset decisions per se. The financeability of NSPs will only improve if:

- following a failed test, the AER acts and adjusts the reset decision to ensure that NSPs are more financeable; or
- anticipating the potential for a failed test, the AER adjusts the reset decision.

In principle, remedies could consist of accelerating the profile of recovery to ensure that the network remains financeable or increasing the rate of return. Which remedy meets consumers' needs will depend on the underlying cause of the financeability problem, i.e. whether the profile or the sufficiency of the rate of the return is the primary driver of the lack of financeability.

Each of the dimensions of a financeability test described in 1-4 above will require careful design for the Australian context. Getting the design right for the test itself (i.e. 1-3) will be critical to identifying when financeability problems occur. However, testing in and of itself will not deliver improved reset outcomes: success requires a regulatory commitment to resolving financeability problems by applying a remedy that addresses the underlying cause of the lack of financeability.

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