Financeability of ISP Projects

Response to AEMC Draft Determination: Participant derogation – financeability of ISP projects

18 March 2021

Energy Networks Australia

Contents

Key messages

- The issues highlighted by the TransGrid and ElectraNet derogation proposals are stark examples - given the size of the investments - of a broader trend of emerging issues of financeability for new investment across mature electricity and gas networks.
- To promote the long-term interests of consumers there should be a clear pathway for financeability assessments to play a role in informing future regulatory decision-making.
- The AEMC's draft determination has usefully identified inflexibilities in the current treatment of financeability in the Rate of Return Instrument and broader rules framework which need to be taken forward.
- To support predictability, the final determination needs to be based on a balanced and transparent assessment framework, counterfactual analysis, and assessment criteria which are more clearly linked to the National Electricity Objective and approaches in other rule determinations.

1 Overview

Energy Networks Australia (ENA) welcomes the opportunity to provide a response to the Australian Energy Market Commission's (AEMC) draft determination on ElectraNet and TransGrid's rule change proposals that aim to ensure the financeability of Integrated System Plan (ISP) projects.[1]

The Australian Energy Market Operator's (AEMO) ISP has determined a number of large-scale actionable ISP projects that are critical to address cost, security and reliability issues in the National Electricity Market (NEM). These projects have been independently assessed as providing a net benefit to consumers, and the task is now ensuring that the regulatory framework provides for *financeable* ISP projects.

The rule change proponents have proposed a targeted and proportionate approach that adjusts the revenue profile for only select projects, making them financeable and ensuring that consumers are able to therefore benefit from the implementation of the ISP.

ENA anticipates the rule change proponents will respond to key elements of the draft determination and its underlying analysis. Representing networks, ENA's focus is on the broader framework issues that arise through the draft determination and proposed next steps.

[1] Participant derogation – financeability of ISP projects (TransGrid) – Project Reference ERC0320.
Participant derogation – financeability of ISP projects (ElectraNet) – Project Reference ERC0322.

Need for development of a financeability framework through the Rate of Return Instrument review

The financeability issues of large actionable ISP projects represent a unique challenge – these projects face particularly acute financeability challenges, however mature energy distribution networks are also seeing financeability pressures arise which will worsen over time unless actively addressed.

ENA welcomes the Commission's examination of financeability assessment issues and methodologies, which will need to be considered and developed through 2021 as part of the Rate of Return Instrument (RORI) process. Regulatory determinations are now regularly resulting in negative net profit after tax (NPAT) outcomes for the benchmark entity throughout five-year regulatory periods. No business can be assumed to sustainably operate and make long-lived investments with continuous negative NPAT for between 5-10 years.

AEMC and CEPA have valuably identified and discussed several critical concepts which will need to be fully evaluated and settled through the RORI process. Examples of these include:

- expectations around gearing and equity funding through growth and investment cycles;
- financeability of the notional benchmark firm versus ensuring financeability for major 'one-off' projects; and
- relevant investor expectations around a reasonable opportunity to recover at least the efficient return on capital, and in particular, the timeframe and nature of this expectation.

These are important issues which have substantive linkages across issues of financeability and rate of return estimation.

Identifying inflexibilities in current treatment of financeability in RORI framework and broader rules

AEMC has also correctly observed some potential unintended impacts of the lack of flexibility in the existing RORI framework that should be examined and remedied if confirmed.

AEMC's foreshadowed future review should more fully consider any practical barriers to the Australian Energy Regulator (AER) addressing financeability concerns at both the RORI stage, and individual network determinations.

Need for clear, balanced and transparent assessment framework

The draft rule determination sets out a bespoke assessment framework and criteria which are used to assess the proposals.

This framework is not always clearly reconcilable to previous rule determination processes, or as clearly linked to the specific components of the National Electricity Objective (NEO) as other Commission decisions. This potentially creates a lack of clarity around how the Commission may assess future framework changes in this area. To ensure predictability and stakeholder confidence in AEMC rule assessment processes, it is important for the final determination to address the core issue of promotion of the NEO more clearly and for the assessment to more clearly demonstrate that the determination as made best promotes the NEO, in view of a clear set of potential counterfactuals.

It is also critical that the final rule determination provides consistent and clear signals to stakeholders about existing alternatives where these are identified. In particular, for the assessment framework to be effective in practice, any suggested alternative measures must be reasonably prospective routes for any proponent to pursue. Clearly this condition will not be satisfied where they may have already been pursued unsuccessfully or without resolution in discussions and review processes with either the AEMC or AER.

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2 Background

2.1 Energy Networks Australia

Energy Networks Australia is the national industry body representing Australia's electricity transmission and distribution and gas distribution networks. Our members provide more than 16 million electricity and gas connections to almost every home and business across Australia.

2.2 The energy transformation

Australia's energy system is undergoing a significant transition, moving away from large coal and gas centralised generation to smaller scale dispersed generation that is increasingly renewable generation.

AEMO's ISP is a whole-of-system plan that provides an optimal roadmap for the development of the NEM as electricity generation transforms to a low emissions future. As summarised by AEMO:

> *The ISP identifies investment choices and **recommends essential actions to optimise consumer benefits** as Australia experiences what is acknowledged to be the world's fastest energy transition.*[2]

Provided that the transmission investments are timely and kept at an efficient level, AEMO estimates that the proposed ISP investments will deliver $11 billion in **net** benefits to the NEM.[3] Under credible 'fast change' or 'step change' scenarios, these benefits may be higher.

The 2020 ISP sets out four major integrated transmission investments required across the period 2021-26 to support an efficient, stable and reliable national transmission architecture. A significant common feature of these projects is that they will:

- deliver sustainably lower electricity wholesale prices through enhancing competition and market access for new renewable generators, further supporting employment and economic growth;
- support private capital infrastructure expenditure during a period of extremely low expected capital expenditure across Australia; and
- support and generate significant employment outcomes through the design and construction phases.

These investments have been identified as high priority and energy agencies and Ministers have put in place a series of reforms to make the ISP 'actionable'.

Each proposed investment will be subject to streamlined regulatory arrangements aimed at promoting timely investment outcomes and ensuring positive net market benefit from their commissioning and operation. Clearly identified projects, and revised regulatory assessment processes, provide a required foundation for private investment decisions for individual projects, but do not automatically mean that the projects proceed.

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[2] Australian Energy Market Operator, 2020 Integrated System Plan, July 2020, emphasis added.

[3] Australian Energy Market Operator, 2020 Integrated System Plan, July 2020.

3 Role of financeability assessments

3.1 Financeability and regulatory decision-making

ENA welcomes the consideration given by the Commission to the important issue of financeability under the National Electricity and Gas Rules framework.

The draft determination observes that financeability assessment processes are a standard element of regulatory decision processes internationally. These typically involve the *ex ante* testing of proposed regulatory revenue determinations against common financeability methodologies, to ensure the financeability of the proposed decision. Critically, financeability assessments form part of regulatory practice in jurisdictions in which the regulatory framework includes explicit obligations to consider financeability issues, and in jurisdictions where no such obligations exist.

ENA recently commissioned a report from National Economic Research Associates (NERA) examining the current role and application of financeability in economic regulatory decision-making. A copy of the report is attached (**Attachment A**). The report highlights a number of significant benefits to the long-term interests of consumers of measures ensuring financeability of regulatory decisions. It also highlights that Australia's network regulatory regime shares common specific characteristics with those jurisdictions which these tests are in place (for example, RAB indexation and a benchmark cost of debt estimation approach).

In ENA's previous submission to the AEMC's Consultation Paper, the financeability challenges associated with current regulatory settings were identified. Regulatory determinations are now regularly featuring negative NPAT outcomes for the benchmark entity through the entire regulatory control period.

Should regulatory settings remain unchanged, an efficient benchmark network service provider meeting all service and performance targets will have been assumed to be capable of sustaining year on year losses for 10 years. No business can be assumed to sustainably operate and make the optimum mix of long-lived investments facing continuous negative profits for between 5 to 10 years.

The Commission and its expert advisor CEPA have valuably identified and discussed a range of relevant issues for future financeability assessments. Some of these will need to be considered and resolved in the Rate of Return Instrument review process, and others may require examination and resolution through other mechanisms.

- **Gearing and financeability cycles** – there is a need for clarity around expectations of gearing and equity funding through potential growth and investment cycles and the relationship of this to the estimated rate of return. Definitionally, any financeability problem can be assumed away by assuming the presence of equity investors willing to provide equity for lower returns than assumed to be necessary by the AER. However, such an approach does not appear a promising long-term resolution of any underlying issues.
- **Network or project financeability** – As CEPA and the Commission recognise, financeability of stand-alone major transmission projects constitutes a distinct, if related, challenge to the underlying financeability challenges also arising under current regulatory settings for mature energy distribution and transmission networks. Our understanding is that the financeability of IPS projects will be a matter considered in the AEMC's foreshadowed review.

- **Clarity on assumed investor return expectations** – A key matter will be 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. For example, some key questions are whether AEMC and AER are making consistent and explicit assumptions around (i) whether this expectation applies on 'average' (ii) the term of this conceptual 'average' assumption, and (iii) the relationship of this to either investment cycles, or the economic lives of the assets.

ENA supports the final determination providing a clear reference to the above issues, and any others emerging from the Commissions' process, being taken forward in a coordinated manner by the 2022 RORI process which is currently in its initial stages.

3.2 Identified issues in current applying financeability measures

The Commission's review process has identified existing inflexibilities in the current treatment of financeability in the Energy Law and Rules framework.

These are significant issues which should be further considered by stakeholders, the Commission, and the AER as they have implications for decisions that promote the long-term interests of consumers in efficient investment in network services.

This is because while the specific financeability issues of large actionable ISP projects represent a unique challenge – mature energy networks are also seeing financeability pressures arise which will worsen over time unless actively addressed.

CEPA has highlighted that in relation to the legislative framework establishing the binding RORI, the AER face a number of constraints in recognising financeability issues, or in recognising efficient alternatives to benchmark financing practices to support a network undertaking a heavy investment programme.[4]

Some of these identified constraints are:

- A potential inability to recognise equity issuance costs, where a network is required to adopt gearing below the notional level in a period of rapid RAB growth.
- A potential inability for the AER to consider whether benchmark efficient debt costs should be different for a network business with a substantially different investment profile, for example, if it were established to be feasible and efficient for such a firm to fund a portion of its investment through index-linked debt (an alternative to the derogation proceeding examined by the Commission and CEPA).
- A potential lack of flexibility to consider whether adjustments to other cost of capital parameters could be appropriate to recognise financeability issues.

In response to these constraints CEPA advise:

> *Accordingly, it is possible that the current rate of return arrangements could prevent the AER from fully recognising instances where efficient financing costs might be different from the current view of a benchmark efficient entity.*

[4] CEPA *Financeability of ISP Projects – Report to AEMC*, January 2021, p.52

> *While we note that the rate of return framework sits outside the AEMC's scope for a rule change,* ***we suggest that further exploration of these issues may be appropriate.***[5] *(emphasis added)*

Future AEMC reviews should more fully consider any practical barriers to the AER to addressing financeability concerns at both the RORI stage, and at the level of individual network determinations. The attached NERA report also provides some initial commentary on potential approaches which could be taken in this regard.

4 AEMC assessment framework

4.1 Clarity in NEO assessment process

The Commission has identified that its primary reason for rejection of the proposed derogation is that it considers that the regulatory framework does not 'create a barrier' to TransGrid or ElectraNet financing their ISP project commitments.

4.1.1 Creation of a gateway 'barrier' test or promotion of NEO/NGO?

The draft determination suggests that 'nevertheless' it has assessed the proposal against the NEO to understand the potential impact of the proposed solution.[6]

This assessment framework and approach appears to differ from the standard process generally adopted by the Commission, in which the proposed change is considered with regard to whether the change will promote the NEO, having regard to the impacts on the long-term interests of consumers.

By contrast, the draft determination appears to apply a preceding 'gateway' assessment of whether the existing regulatory framework creates a 'barrier' to project financing on the part of TransGrid or ElectraNet.

If such a 'gateway' assessment has been applied, it is not readily reconcilable with a set of recent rule changes which were specifically designed and approved in order to positively enable and progress implementation of 'actionable ISP' projects. The approval of these actionable ISP rules was clearly on the basis that the new rules *better* enabled the delivery of ISP projects, and therefore promoted the NEO.

ENA may have misunderstood the description of the assessment process in this regard but considers it critical that a consistent and predictable analytical framework is adopted across rule change proposals.

4.1.2 Net present value: one discount rate or multiple?

A further area requiring clarification is the Commission's approach to NPV neutrality and discount rates. In the draft determination the Commission notes some stakeholder positions that different discount rates may be appropriate to use in discounting costs and benefits of the project. In discussing the proposal, the Commission states:

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[5] CEPA (January 2021), p.52

[6] AEMC *Draft Determination: Participant derogation – financeability of ISP projects*, January 2021, p.10

> *The Commission considered the proponent's argument about the NPV-neutrality of their proposal but noted that stakeholders pointed out that consumers may have different discount rates yielding different NPV impacts than those experienced by the proponent.*[7]

It is unclear what this observation is intended to convey, or the role it plays in the Commissions draft decision.

The surrounding discussion highlights the clear point that not all NPV paths (100% upfront payment versus deferred payment) will have equal preferability. The concept of undertaking an NPV analysis using different discount rates in this context, however, would not seem to align with the purpose and function of an NPV analysis for regulatory purposes.

This is because the only relevant discount rate for NPV analysis in this regulatory context is the AER determined regulatory rate of return, established under the RORI. This is the discount rate set by the AER as required to attract efficient investment and support the efficient operation and use of network infrastructure for the long-term interest of consumers.

It is unclear what is the basis for the use of, or weight being applied to, any alternative discount rate, as this would explicitly undermine the role of the AER's rate of return assessment process.

4.1.3 Application of assessment criteria

ENA continues to have some concerns with the criteria the AEMC has applied to help assess whether the rule is likely to promote the NEO.

In ENA's view it would be appropriate to assess all aspects of the rule change proposal with direct reference in any assessment criteria to each aspect of the NEO and the long-term interests of consumers. In some cases, the linkage between the overarching NEO and elements of the AEMC criteria are not clear.

As an example, the criteria '*Impacts on economic regulatory framework'* and '*Impact on regulatory compliance and administration costs*' are not as clearly relevant to achieving the NEO as other criteria and should not be given significant weight in the AEMC's decision making process alongside such primary considerations such as the impact on the efficient operation of and investment in the national electricity system.

To further illustrate, the modest administrative impact of the AER maintaining a separate Post Tax Revenue Model (PTRM) assessment in relation to several ISP projects, which is a natural extension of its funded role as a national economic regulator, is clearly not a material factor compared to whether the rule change would be more likely to deliver efficient investment outcomes under the actionable ISP.

Similarly, the current PTRM is, properly considered, simply a regulatory tool designed to meet the objectives of and support the application of the existing Rules. Its current outcomes do not provide clear evidence that alternative rules would not *better* promote the NEO. The PTRM was designed as an instrument to practically implement the requirements and intent of the current rules in a transparent manner to stakeholders. Axiomatically, its outcomes cannot be said to have any particular 'normative' weight on what the applicable Rules, which sit above and govern the PTRM, should be.

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[7] AEMC (January 2021) p.55

The specific economic regulatory framework to be applied for achieving the NEO is a matter for consideration and potential adjustment. Consideration of administrative follow-on impacts of any determined adjustments are a matter for consideration but should not ultimately have the effect of outweighing other NEO factors. Similarly, all other aspects of the rule change that the AEMC considers should be assessed with direct reference to the NEO.

4.2 Need for clear counterfactual assessment

4.2.1 Analytical framework for promotion of NEO decisions

To clearly assess the merits of any proposed rule change, the AEMC requires a clear counterfactual scenario or a set of clear counterfactual scenarios to assess the rule change against.

Without these counterfactuals, it is not clear on what basis the AEMC can form a full assessment of whether a rule change requested is in the long-term interests of consumers and meets the NEO compared, for example, to the circumstances in which a rule is not made.

The draft determination does not state explicitly what counterfactual underlies it decisions. From the discussion in the draft determination, however, the apparent counterfactuals viewed as most likely appears to be that the identified ISP project:

1. proceeds without delay funded by the derogation proponent, potentially with new equity partners or through alternative debt funding arrangements; or
2. does not proceed, resulting in the identified wholesale market benefits not being available to customers, or alternatively that these will be captured by alternative unspecified means.

Meaningful assessment of the strength and quality of the AEMC's final determination will not possible unless further clarity is provided in that document around the primary counterfactuals that informed the decision that the derogation would not promote the NEO, relative to no rule change being made.

An analytical decision-making framework which assumes that *both* a private investment proceeding, and the same investment *not* proceeding, as outcomes that equally contain no implications for regulatory decisions on appropriate investment incentives is incapable of being assessed.

Such a circumstance arising would represent an asymmetric framework, which would over time weaken the capacity of the rule assessment process to benefit and improve from the observed 'real world' results of Commission decisions. Over time, an approach which consistently fails to specify a clear point of comparison, against which promotion of the NEO is assessed, will also risk degrading the credibility, quality and strength of the regulatory framework

4.2.2 Consideration of existing alternative options to address issues

The AEMC's draft determination to reject the proposed derogation appears to be based on findings that a range of existing alternative options exist to address the financeability issues identified by the rule change proponents.

For clarity around the basis of the final determination, ENA considers that this decision should clearly separate:

- existing mechanisms and options that can be carried out under the existing rules within the actionable ISP timelines;

- options that may be adopted in the future, but which would require law or rule changes taking them beyond the scope and timelines of the actionable ISP; and
- options that may be considered in a future Commission review, but which are not currently available to any party.

This will provide critical clarity regarding the Commission's views on which alternate option were considered as workable alternatives to the derogation application.

As an example, the Commission's draft determination highlights that movement to total expenditure (or 'TOTEX') style allowances could in future play a role in addressing financeability issues.

Network businesses have previously supported a long-term Commission-led examination of the potential benefits and implementation options of TOTEX style approach. The Commission has not progressed work in this area, following earlier exploratory work in a previous review of network regulation issues. In this context, where no active consideration of movement to TOTEX is in place or planned, and the Commission has elected not to further progress the issue at this time, it is difficult to view TOTEX as a relevant existing or alternative option for addressing the issues raised by proponents.

Similarly, as highlighted previously, the Commission's expert adviser CEPA has identified limitations and inflexibilities in the existing Law and Rules frameworks relating to rate of return and depreciation issues which may present a barrier to a number of the alternative 'options' highlighted in the draft determination.

A further matter not discussed in detail in relation to these existing options is the extent to which prior discussions between the primary rule proponent and AER had already ruled out these options as viable alternatives to the proposed changes.

From statements from a number of parties at the public forum, ENA understands that TransGrid engaged in detailed discussions over months on potential existing alternatives under the current Rules to address the underlying financeability issues identified. The progression to the rule change process beyond these discussions suggests that these discussions did not provide any clear alternatives within the scope of the existing rules.

It would be beneficial for stakeholders to more fully understand whether the alternatives discussed in the draft determination go beyond, or are a subset of, any alternatives suggested by AER in discussions prior to the application. Clearly, it would be invalid to regard an alternative as a strongly credible existing option if the AER had previously indicated to parties it would not be likely to be able to implement that option.

This clarity would help provide transparency around any alignment, or misalignment in views between the AEMC and AER as to what constitutes a credible alternative option to the rule change.

Regulatory confidence and predictability would not be supported in circumstances in which rule change proponents are informed by one market body that no existing alternatives can be applied under the Rules, but such options are erroneously considered as reasonable and open alternatives to be given weight in determinations on rule changes.

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NERA
ECONOMIC CONSULTING

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

Prepared for Energy Networks Australia

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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 ensuring 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 Nebt 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

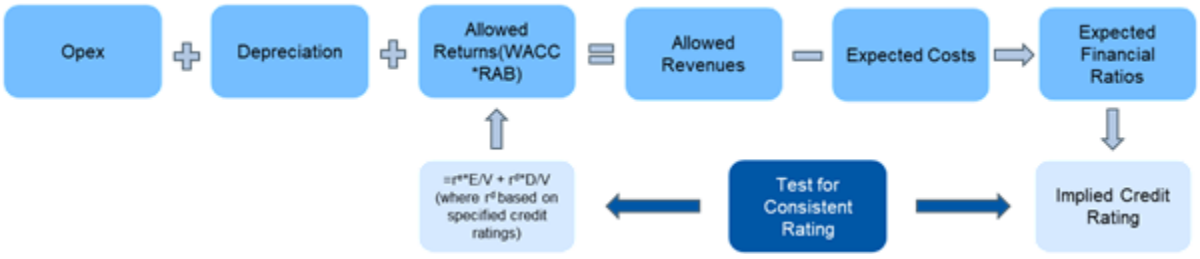
Financeability testing provides an opportunity for stakeholders to test regulators' decision-making. It provides an objective basis for assessing claims and evidence submitted by the stakeholders to price control decisions. It therefore provides an opportunity to improve the consistency and evidential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