Economic Regulation Authority

Guideline on factors that will be considered in new facilities investment test determinations and methods to value net benefits

Decision

20 December 2021

D242107

Economic Regulation Authority

Level 4, Albert Facey House

469 Wellington Street, Perth WA 6000

Telephone 08 6557 7900

Email info@erawa.com.au

Website www.erawa.com.au

This document can also be made available in alternative formats on request.

National Relay Service TTY: 13 36 77

Contents

1. Introduction

The ERA has published a guideline setting out the factors the Economic Regulation Authority will consider when making a new facilities investment test determination and acceptable methods for valuing net benefits under the *Electricity Networks Access Code 2004*.

The new facilities investment test is set out in section 6.52 of the Access Code. It is a determination of whether, or to what extent, expenditure can be added to the capital base of the covered network and recovered through regulated tariffs applied to users of the network.

"Net benefit" is defined in the Access Code as a net benefit (measured in present value terms to the extent that it is possible to do so) to those who generate, transport and consume energy in the covered network. Net benefits are relevant to the new facilities investment test, the approval of non-capital costs under section 6.41 of the Access Code and the regulatory test set out in chapter nine of the Access Code.

The guideline is required under the Access Code. As permitted under section 14.35 of the Access Code, the ERA has published a single guideline addressing:

- The factors the ERA proposes to consider when making a determination under the new facilities investment test set out in section 6.52 of the Access Code.[1]
- Acceptable methods for valuing net benefits by a service provider, which methods must include, but are not limited to, for the SWIS, consideration of changes in costs and benefits for participants in the Wholesale Electricity Market.[2]

The ERA published a draft guideline for consultation on 15 October 2021. Submissions were received from:

- Australian Energy Council
- Perth Energy
- Synergy
- Western Power.[3]

As discussed below, the final guideline incorporates changes made in response to matters raised in submissions.

The final guideline has been published separately on the ERA's website.

[1] Section 6.56 of the Access Code.

[2] Section 6A.6.

[3] The submissions are published on the ERA's website.

2. Stakeholder submissions

While submissions were generally supportive of the draft guideline, some stakeholders sought:

- Detailed prescription for undertaking cost benefit analysis and valuing benefits.
- Providing for the use of real option value in the guideline.

Each of these is discussed below.

Prescriptive guidelines

Synergy and the Australian Energy Council considered that prescriptive guidelines are necessary to ensure that the service provider has sufficient guidance and prevent it from inadvertently flexing methods to suit a particular outcome. They considered that eliminating room for discretion would put all projects on a level playing field.

Synergy was concerned that combining the guideline on acceptable methods for valuing net benefits with the guideline on factors that would be considered when making a new facilities investment test might result in each guideline being less detailed than it otherwise would be. Synergy considered that the guideline should specify the benefits that must be included, how each benefit should be calculated and default parameter values. Synergy considered this would allow network users to independently calculate the net benefits of alternative options proposals using the same methods and assumptions as the network operator and on an ex-ante basis and would reduce the risk of disputes between the network operator and network users over how net benefits should be calculated.

Both submissions refer to guidelines used in the National Electricity Market and the Australian Transport Assessment and Planning Guidelines as examples of best practice.

The ERA agrees there is useful material in the guidelines referred to and has considered it when developing the guideline. However, the Western Australian regulatory framework and processes are different from those in the National Electricity Market (NEM). The cost benefit guidelines referred to by Synergy and the Australian Energy Council were developed by the Australian Energy Regulator (AER) to guide the preparation of an integrated system plan undertaken by the Australian Energy Market Operator (AEMO). The AER does not have a role in approving an integrated system plan. It is required to prepare guidelines on the process that AEMO must follow and deal with any disputes if stakeholders consider the process has not been properly followed.

Submissions also referred to the AER’s regulatory test guidelines. The Western Australian regulatory framework also includes a regulatory test for major augmentations. However, unlike the AER, the ERA must approve all regulatory tests. The AER only becomes involved if a stakeholder lodges a dispute against a service provider. Consequently, the AER guidelines are relatively prescriptive as the process relies on stakeholders being able to challenge service providers.

The AER’s regulatory test guidelines also only apply to certain types of capital investment, whereas the new facilities investment test guidelines apply to all capital expenditure. The new facilities investment test itself is also different to the capital expenditure requirements in the NEM. While both regimes should lead to efficient outcomes for consumers, these differences affect the form of guidelines required.

The ERA considers a principles-based guideline is better suited to the Western Australian regulatory framework. It achieves the best balance between providing guidance on what is required while allowing flexibility to deal with different circumstances. As all expenditure is approved on either an ex-ante or ex-post basis the ERA considers it has adequate oversight to ensure that the principles are applied consistently and discretion is applied appropriately.

As stated in the guideline, benefits claimed should not include benefits that are simple transfer payments between producers of electricity, network owner, network users and/or consumers of electricity. With rapidly changing technology, decarbonisation and new business models, the identification and valuation of benefits attributable to or provided by the network will become increasingly challenging. The ERA considers a principles-based guideline is necessary to accommodate these challenges.

Furthermore, the ERA considers that the critical factor in identifying the most efficient investment option, including non-network options provided by third parties, is sufficient information and time for options to emerge and be developed. In the past, there has been a lack of timely information on network planning available to third parties. Stakeholders have also expressed concerns about the network operator conducting limited tenders with inadequate broader market notification.

The recent Energy Transformation changes to the Access Code that require regular publication of network opportunities should address this.

The ERA considers that improvement in the quality and timeliness of information to, and engagement with, third parties about network opportunities is a more effective tool for supporting the development of efficient expenditure proposals than more prescription on the calculation of net benefits.

As was set out in the draft guideline, Western Power must demonstrate that it has properly identified and evaluated non network options, including those that could be developed by third parties, before itself proceeding with a new facilities investment.

Real option value

Western Power and Synergy considered that the guideline should be expanded to include consideration of real option value.

As identified in Western Power's submission, when planning the network, there may be value in retaining flexibility to changing market developments or scenarios. For example, when considering augmentation of a section of the network, forecast future demand may be subject to uncertainty. In a high demand scenario, investment in a substation and additional poles and wires may be required. However, this may not be required in a lower demand scenario.

The ERA agrees that real options analysis is a useful method to take account of:

- Uncertainties in relation to key aspects of the future environment within which the investment is being undertaken.
- Possibilities for the business improving its understanding of those uncertainties over time.
- Different degrees of flexibility for addressing those uncertainties among the investment alternatives being considered.
- Avoiding no regret investments.

The ability to stage investment and preserve options for responding to new information promotes efficient investment. This is particularly relevant in the current environment of uncertainty over future technologies, demand for network services and asset lives. As identified in Western Power's submission, enabling the ability to expand, change or curtail projects based on changing economic, technological or market conditions where uncertainty exists around the optimum timing and/or level of investment should reduce the risk of regrettable investment. Accordingly, the ERA has revised the draft guideline to more clearly accommodate consideration of option value in the new facilities investment test.

However, real options analysis relies on a much larger number of inputs, assumptions and analysis than would be the case under a more traditional approach. Western Power would need to provide robust assumptions supported by rigorous evidence. Decision points and choices in those decisions would need to be clearly identified and explained. A full set of relevant uncertainties, their relationships and the learning that takes place about their evolution over time would need to be considered.

A summary of amendments made to the guidelines is included in the following section.

3. Amendments to draft guidelines

To address the matters discussed above and other matters raised in submissions, the following amendments have been made to the draft guideline.

- The introductory section has been expanded to include:
  - The overall regulatory framework.
  - Issues that may arise due to uncertainty over future technologies, demand for network services and asset lives.
  - How the new facilities investment test fits within this framework.
- The guideline notes that the processes for preparing the whole of system plan are set out in the Wholesale Electricity Market Rules. The ERA anticipates that as the process develops the Rules will incorporate how projects are determined to be priority projects. The guideline will be updated as required to incorporate any new developments.
- The guideline has been amended to emphasise that Western Power must demonstrate that it allowed adequate time for third parties to develop feasible alternatives.
- The ERA considers the draft guideline would permit the use of real options analysis as a tool to select the most efficient option. However, to make this clearer, the guideline has been updated to include specific mention of real options analysis when identifying and selecting the most efficient option. Factors that will be considered include:
  - Whether a full set of relevant uncertainties, their relationships and the learning that takes place about their evolution over time has been considered.
  - Clear identification and explanations of decision points and choices in making those decisions.
  - The robustness of assumptions and evidence to support them.
- The list of examples of possible benefits has been expanded to include improvements in customer service and reductions in whole of system costs.
- Factors the ERA proposes to consider when assessing net benefits has been expanded to include:
  - The time period used should generally be the shorter of the expected economic life of the principal assets of the new facility or the period over which the benefit will be available.
  - There must be evidence that the benefit claimed is directly (and solely) attributable to the investment.
- The guideline has been restructured to include a separate section on acceptable methods to value net benefits.