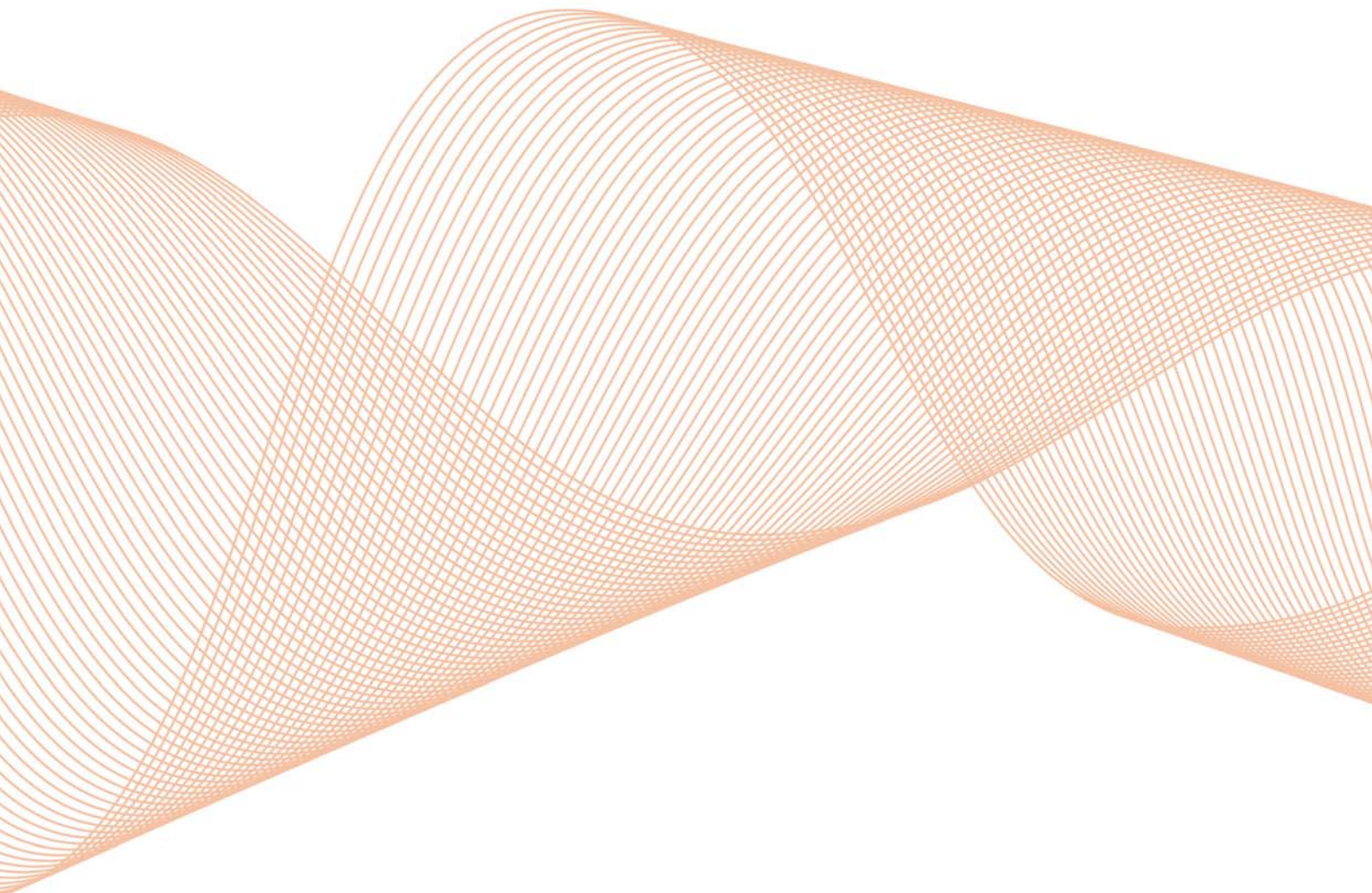


---

# Appendix C – AA1 Speculative Investment

---

**September 2011**





---

# 1 Speculative investment undertaken in AA1

This section sets out why we have added \$244.43 million (\$ real as at 30 June 2012)<sup>1</sup> of AA1 speculative investment that meets the requirements of the New Facilities Investment Test into the opening capital base for AA3.

## 1.1 Key messages

- Our opening capital base at 1 July 2010 reflected a lower level of new facilities investment than actually occurred in AA1. The capital base was reduced by \$261.09 million (\$ real as at 30 June 2009)
- We have addressed sections 6.58 – 6.60 of the Access Code in relation to that speculative investment amount
- \$37.73 million (\$ real as at 30 June 2009) of that amount continues not to pass the NFIT and should not be added to the capital base
- \$223.4 million (\$ real as at 30 June 2009) of that amount does meet the NFIT and should be added to our opening capital base for AA3
- A review of documentation of specific projects and programs with investment in both the AA1 and AA2 periods has shown that the NFIT is satisfied for those projects and programs and, by extension, for the amount of \$223.4 million (\$ real as at 30 June 2009)

---

<sup>1</sup> \$223.35 million \$ real at 30 June 2009

## Access Code provisions

Western Power's speculative investment amount is specified in sections 6.58, 6.59 and 6.60 of the Access Code. Speculative investment amounts may be added to the capital base if they satisfy the new facilities investment test in section 6.52 of the Access Code.

### Section 6.58

"speculative investment amount" (if any) for a new facility at any time is equal to:

- a) the new facilities investment; minus:
- b) any recoverable portion; minus:
- c) any amount for which a contribution has been, or is to be, provided to the service provider; minus:
- d) any part of the speculative investment amount for the new facility previously added to the capital base under section 6.60."

### Section 6.59

If the calculation in section 6.58 produces a negative result, the speculative investment amount is zero.

### Section 6.60

If:

- a) a speculative investment amount was created for a new facility at a time; and
- b) a determination is being made under section 6.44 at a later time, then any part of the speculative investment amount which satisfies the new facilities investment test at the later time may be added to the capital base.

### Section 6.52

New facilities investment satisfies the new facilities investment test if:

- a) the new facilities investment does not exceed the amount that would be invested by a service provider efficiently minimising costs, having regard, without limitation, to:
  - i. whether the new facility exhibits economies of scale or scope and the increments in which capacity can be added; and
  - ii. whether the lowest sustainable cost of providing the covered services forecast to be sold over a reasonable period may require the installation of a new facility with capacity sufficient to meet the forecast sales;and
- b) one or more of the following conditions is satisfied:
  - i. either:
    - A. the anticipated incremental revenue for the new facility is expected to at least recover the new facilities investment; or
    - B. if a modified test has been approved under section 6.53 and the new facilities investment is below the test application threshold – the modified test is satisfied;
  - or
  - ii. the new facility provides a net benefit in the covered network over a reasonable period of time that justifies the approval of higher reference tariffs; or
  - iii. the new facility is necessary to maintain the safety or reliability of the covered network or its ability to provide contracted covered services.

New facilities investment is defined under the Access Code as for a new facility, means the capital costs incurred in developing, constructing and acquiring the new facility.

## 1.2 AA1 Investment

Our opening capital base at 1 July 2010 was reduced to reflect a lower level of new facilities investment than had actually been undertaken for AA1. Specifically, the capital base was reduced for AA1 new facilities investment by \$261.09 million (\$ real as at 30 June 2009), which was equivalent to 10.5% of total AA1 new facilities investment.<sup>2</sup>

The adjustments reflected:

---

<sup>2</sup> Paragraph 744, *Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network*, ERA, 4 December 2009.

- \$23.24 million (in 30 June 2009 dollars) for a number of specific transmission projects on the basis that these had been delayed or did not proceed, or should have been recovered through capital contributions. These specifically related to:
  - the North Country region 330kV transmission project (also known as the Mid West Energy Project) (\$9.87 million (\$ real as at 30 June 2009))
  - the Newgen Neerabup power station (\$3.25 million (\$ real as at 30 June 2009))
  - a portion of the cost of the 490MVA Wells terminal station transformer to connect the Boddington Gold Mine (\$3.15 million (\$ real as at 30 June 2009))
  - the Busselton to Margaret River transmission line project (\$6.97 million (\$ real as at 30 June 2009))
- \$126.87 million (\$ real as at 30 June 2009) of *inefficiencies arising from deficiencies in processes of cost estimation and from overcharging by contractors*<sup>3</sup>
- \$110.97 million (\$ real as at 30 June 2009), representing five per cent of new facilities investment net of the adjustments above and gifted assets, that *inefficiencies have occurred in the selection and timing of augmentation projects as a result of deficiencies in methods for forecasting demand for network services and deficiencies in analysis of options for augmentation projects*<sup>4</sup>

The latter two adjustments were based on a review of identified projects or programs in relation to the following:

- \$10.12 million (\$ real as at 30 June 2009) of project specific costs reflecting the costs associated with the Wells terminal station transformers to connect Boddington Gold mine and the Busselton to Margaret River Transmission line project
- \$18.4 million (\$ real as at 30 June 2009) of inefficiencies associated with inadequate cost estimation across a number of specifically identified projects
- \$9.2 million (\$ real as at 30 June 2009) identified overcharging by contractors on a number of reviewed arrangements.

These adjustments related to specific projects did not, and continue not, to pass NFIT and should not be added to the capital base.

The remaining \$223.4 million (\$ real as at 30 June 2009) of investment incurred in AA1 was disallowed on the basis of the extrapolation of specific findings to the whole investment. We have adopted a similar approach to the speculative investment amount.

Our review of certain projects and programs has identified documentation that demonstrates that NFIT is satisfied for those projects and programs. Using a similar approach to that adopted by the Authority, we extrapolate those findings to establish that the full amount of disallowed expenditure that does not relate to the abovementioned identified projects satisfies NFIT.

### **1.2.1 Process review and documentation demonstrating NFIT compliance**

Since the last Access Arrangement review we have comprehensively reviewed our governance and capital planning approach. A particular area of focus has been the

<sup>3</sup> Paragraph 743, *Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network*, ERA, 4 December 2009.

<sup>4</sup> Paragraph 743, *Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network*, ERA, 4 December 2009.

documentation that we use to demonstrate compliance with NFIT. This followed a number of observations and comments made by SKM that there was room for improvement in our documentation.<sup>5</sup> These comments formed the basis for the Authority’s decision in relation to the level of inefficiency associated with our AA1 capital expenditure and we have sought to constructively respond to these matters.

We examined in detail the documentation supporting the highest valued new facilities investment projects and programs to be undertaken in AA2. This review identified opportunities to improve how our project and program documentation demonstrates that the NFIT is satisfied.

Importantly, however, the review did not identify any systemic issues associated with option choice and investment timing.

To improve the documentary evidence of NFIT compliance, we brought together information from a number of sources. We also summarised some of that information in the form of an NFIT compliance summary.

The review and documents collated are relevant to the new facilities investment during the AA1 period because:

- six of the AA2 specific projects reviewed included expenditure in AA1 greater than \$15 million. These projects represent \$319 million or 12% of the total AA1 expenditure
- a number of the programs reviewed related to recurring programs of work (including pole management, bushfire management and reliability improvements), which also occurred during AA1

Table 1 shows the specific projects and programs that have been subject to review and the expenditure undertaken in AA1 period.

**Table 1: Projects and programs reviewed with investment in AA1**

Delivery	Regulatory category	Activity	AA1 total expenditure (\$m real at 30 June 2012)
Distribution	Asset replacement	Distribution pole replacement	104.4
Distribution	Improvement in service	Reliability driven	56.9
Distribution	Regulatory compliance	Bushfire management	38.2
Distribution	Metering	LVAP <sup>6</sup> meters	34.6
Transmission	Capacity expansion	Neerabup - Estab. new terminal station	51.8
Transmission	Capacity expansion	Alinta cogen - Southern Terminal - Install 200 Mvar Svc	32.7

In addition to the specific projects reviewed we have also reviewed the overhead customer service connections program. This program was one of our larger programs in AA1 with expenditure of \$42.2 million. The review of documentation demonstrated that this program of work also meets the requirements of NFIT.

<sup>5</sup> p 61, *Western Power’s second submission to the Economic Regulation Authority’s Draft Decision on the proposed revisions to the access arrangement for the SWIN, Attachment F2 - Opinion by Sinclair Knight Merz*, 10 September 2009.

<sup>6</sup> Low Value Asset Pool

Given the representative nature of the projects reviewed, and that no systemic failures were identified, we believe it is reasonable to assume that the whole of the disallowed expenditure satisfies NFIT.

We have provided confidentially the documentation for two of these programs of work with the rest available on request.

### **1.2.2 Adjustments for inefficiency in planning, design and governance processes**

The Authority adjusted Western Power's opening capital base for AA2 by \$110.97 million (\$ real as at 30 June 2009) for inefficiencies it determined had occurred in relation to the planning, design and governance of network augmentations.

*The Authority is of the view that there have been inefficiencies in the planning and design of augmentations of the network as a result of deficiencies in forecasting of demand for services, deficiencies in consideration of all relevant options for augmentations, and over-engineering of augmentation designs.<sup>7</sup>*

The Authority made a 5 % adjustment for these inefficiencies:

*The Authority does not have sufficient information to be able to assess the extent of inefficiency on a project-by-project basis. However, for the reasons set out above, the Authority remains of the view that the extent of inefficiency is greater than a nominal amount. The Authority considers that the extent of inefficiency is in the order of five per cent.<sup>8</sup>*

Western Power recognises that the determination of the Authority was based on the material it had before it at that time. However, our subsequent review of the governance and capital planning documentation outcomes for a sample of AA2 projects that are relevant to AA1 demonstrates that our options assessment and works choice is consistent with efficiently minimising costs (as defined in the Code with its emphasis on good electricity industry practice) and satisfying the NFIT requirements of the Access Code.

For the reasons outlined above, we have added to the opening AA3 capital base \$110.97 million of investment during AA1.

### **1.2.3 Adjustments for cost estimation inefficiencies**

The Authority adjusted Western Power's opening capital base for AA2 by \$126.87 million (\$ real as at 30 June 2009) for inefficiencies arising from deficiencies in Western Power's cost controls. In doing so, the Authority relied upon a report prepared by SKM which identified:

- 32 significant<sup>9</sup> projects with a total expenditure of \$198 million (\$ real as at 30 June 2009) had original approved cost estimates that were more than 10 per cent less than the final delivered cost
- 20 significant projects with a total expenditure of \$77 million (\$ real as at 30 June 2009) had original approved cost estimates in excess of 20 per cent above the final delivered cost and

---

<sup>7</sup> Paragraph 737, *Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network*, ERA, 4 December 2009.

<sup>8</sup> Paragraph 738, *Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network*, ERA, 4 December 2009.

<sup>9</sup> SKM defined a significant project as one having expenditure in excess of \$2 million.

- 13 significant projects with a total value of \$76 million (\$ real as at 30 June 2009) for which SKM was not able to identify a record of the original cost estimate.<sup>10</sup>

On the basis of reviewing this sample of projects, SKM concluded that it may be appropriate to apply an inefficiency factor to reflect these cost control issues to that sample of projects.

We accepted, and continue to accept that SKM's assessment supported an adjustment to our new facilities investment of approximately \$18.4 million (\$ real as at 30 June 2009) to reflect cost estimation deficiencies based on applying 5% to the \$351 million (\$ real as at 30 June 2009) worth of projects that SKM specifically reviewed.

The Authority applied a 5% reduction to the whole of the AA1 expenditure based on a lack of supporting information from Western Power.

We have reconsidered the issue of supporting information. Our subsequent review of AA2 projects and programs that are relevant to AA1 projects found that inefficiencies due to cost estimation were not apparent.

We have also considered our programs of work that will continue throughout the periods (such as bushfire management and wood pole replacement) that have already been regarded as complying with NFIT. We note, in particular, the findings of Geoff Brown & Associates Ltd in the last review:

*There appears little doubt that Western Power's pole replacement program meets the safety and reliability component of the NFIT, and, while limited information has been provided, the unit cost per pole does not seem unreasonable.*

*We therefore consider that his program meets the requirements of the NFIT.<sup>11</sup>*

Given that these recurrent programs of work do not suffer from cost inefficiencies in relation to cost estimation, we believe it is reasonable to apply the outcomes of our documentary review across the expenditure not subject to specific disallowances.

We have added \$99.25 million (\$ real as at 30 June 2009) to the opening capital base for AA3. This reflects the \$126.87 million adjustment for inefficiency due to cost estimation less the amounts relating to specific projects; \$18.4 million (\$ real as at 30 June 2009) SKM identified for cost estimation deficiencies on specific projects and the \$9.2 million (\$ real as at 30 June 2009) adjustment for specific incidences of overcharging by contractors.

## 1.2.4 Adjustments to specific projects

In the AA1 period, we incurred \$9.9 million (\$ real as at 30 June 2009) of early planning and design costs related to the north country region 330 kV transmission project (since renamed the Mid West Energy Project – Southern Section). This expenditure was necessary to complete system modelling, options analysis, regulatory test preparation and design development.

At the time of incurring the \$9.9 million (\$ real as at 30 June 2009), the Authority had determined that the project satisfied the NFIT based on information provided in the pre-NFIT approval<sup>12</sup> and Regulatory Test.<sup>13</sup>

<sup>10</sup> p. 78, *Western Power's second submission to the Economic Regulation Authority's Draft Decision on the proposed revisions to the access arrangement for the SWIN, Attachment F2 - Opinion by Sinclair Knight Merz*, 10 September 2009.

<sup>11</sup> Geoff Brown & Associates Ltd, *Review of New Facilities Investment Test Compliance Western Power AA1 Projects, Appendix B: Distribution Project Assessments*, July 2009, pg B8

<sup>12</sup> Submitted in April 2008 and approved in September 2008 (Available from the Authority's website: [http://www.erawa.com.au/3/644/48/kv\\_mid\\_west\\_augmentation\\_\\_nfit.pm](http://www.erawa.com.au/3/644/48/kv_mid_west_augmentation__nfit.pm))

<sup>13</sup> Submitted in October 2007 and approved by the Authority in December 2007 under chapter 9 of the Access Code.



However, in the AA2 Final Decision the expenditure was excluded from the capital base on the basis that:

*it is uncertain whether the North Country Region 330 kV transmission project will proceed as currently proposed and, if so, the timing of the project... For reason of the uncertainty with the project, the Authority considers that costs to date on this project should not be added to the capital base at this time.<sup>14</sup>*

Western Power does not accept that timing uncertainty is relevant to the NFIT but does not take issue with that point. This \$9.9 million (\$ real as at 30 June 2009) of AA1 investment for the Mid West Energy Project meets the requirements of NFIT and has been added to the opening capital base for AA3. This project is now proceeding and the uncertainty no longer exists.

### 1.3 Summary of adjustments to capital base

Table 2 shows the speculative investment from the AA1 period that is to be added to the opening capital base for AA3.

**Table 2: Speculative investment to be added to the AA3 opening capital base**

	2006/07	2007/08	2008/09	AA1 total
<b>\$ million real at 30 June 2009</b>				
Distribution speculative investment that satisfies NFIT	27.8	28.8	32.4	134.4
Transmission speculative investment that satisfies NFIT	37.1	42.2	55.1	89.0
<b>\$ million real at 30 June 2012</b>				
Distribution speculative investment that satisfies NFIT	40.6	46.2	60.2	147.1
Transmission speculative investment that satisfies NFIT	30.4	31.5	35.5	97.4
<b>Total to be added to the capital base</b>	<b>71.0</b>	<b>77.7</b>	<b>95.7</b>	<b>244.4</b>

Before being added to the opening capital base on 1 July 2012 these values are adjusted to account for the time value of money and equivalent, in net present value terms, to the AA1 written down capital expenditure of \$223.4 million (\$ million at 30 June 2009).

<sup>14</sup> Paragraph 700, *Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network*, ERA, 4 December 2009.