



Decision

**Contingent project application: EnergyAustralia
Replacement of feeder cables 908 and 909**

July 2008

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Shortened forms

ACCC	Australian Competition and Consumer Commission
ACCC determination	<i>ACCC, Decision: NSW and ACT transmission network revenue cap EnergyAustralia 2004–05 to 2008–09</i> 27 April 2005
AER	Australian Energy Regulator
capex	capital expenditure
CHC	CHC Associates Pty Ltd ABN 25 081 830 506
current regulatory period	the regulatory period from 1 July 2004 to 30 June 2009
MAR	maximum allowed revenue
NER	National Electricity Rules
next regulatory control period	the regulatory control period from 1 July 2009 to 30 June 2014
opex	operating expenditure
PTRM	post-tax revenue model
RAB	regulatory asset base

1 Introduction

EnergyAustralia lodged a contingent project application with the Australian Energy Regulator (AER) on 9 May 2008 to replace feeder cables 908 and 909. These underground 132 kV feeder cables run between Canterbury STS and Bunnerong STS.

In the Australian Competition and Consumer Commission's (ACCC) 2005 revenue determination for EnergyAustralia (the ACCC determination), the ACCC accepted that feeder cables 908 and 909 would need to be replaced during the regulatory period from 1 July 2004 to 30 June 2009 (the current regulatory period) but considered the forecast costs of the project to be uncertain. Therefore, the ACCC classified this as a 'contingent project' and included \$37 million (\$2004) as an 'indicative capital expenditure (capex) allowance' being the minimum amount it considered the project would cost. The ACCC anticipated that EnergyAustralia would make a contingent project application to amend the ACCC determination to include additional revenue as soon as it had an accurate forecast of the cost of the project.¹

EnergyAustralia has proposed to retire feeder cables 908 and 909 and replace their electrical function which provides power transfer capacity between TransGrid's Sydney South bulk supply point (BSP) to EnergyAustralia's Bunnerong STS. However, EnergyAustralia does not propose to replace them using like for like cable infrastructure. Rather it proposed to provide this capacity using cables on a new southern route via Kurnell, rather than replace the existing cables which currently run via Canterbury and Mascot. EnergyAustralia submitted this route will provide additional power transfer capacity to allow for future growth in the Bunnerong and inner city load areas.

In assessing this application the AER is required to follow the assessment process set out in the ACCC determination which was made pursuant to the ACCC's 2004 *Statement of principles for the regulation of electricity transmission revenues*. The AER is also required to comply with the requirements of the relevant transitional provisions set out at clause 11.6.19 of the National Electricity Rules (NER).

Accordingly, the AER has published this decision which sets out its assessment and effects its decision in accordance with these requirements and its obligations.

¹ ACCC, *Decision: NSW and ACT transmission network revenue cap EnergyAustralia 2004–05 to 2008–09*, 27 April 2005, pp. 67 and 149.

For the avoidance of doubt, the AER notes that since 1 July 2005, the economic regulatory functions with respect to electricity transmission network service providers in the National Electricity Market were transferred from the ACCC to the AER. Accordingly, for the purposes of this decision, obligations relating to the assessment of contingent projects of the ACCC as referred to in its 2005 revenue determination have become obligations of the AER.

2 Regulatory framework

2.1 The ACCC determination

The process for making and assessing a contingent project application under the ACCC determination is set out below:²

- Stage 1—EnergyAustralia identifies the needs or drivers of the project. The AER notes the ACCC stated in its determination that it considered this contingent project to be triggered already.³
- Stage 2—EnergyAustralia identifies options to address the needs identified in stage 1. EnergyAustralia will conduct an investment appraisal to determine the most efficient option. The ACCC must be satisfied that EnergyAustralia has lodged sufficient information to constitute a compliant application.
- Stage 3—In setting the incentive over the current regulatory period the ACCC will write to EnergyAustralia informing it of the value the ACCC intends to include in the regulatory asset base (RAB) for the period of the incentive. When forming an opinion about the value to be included in the RAB, the ACCC determination states the ACCC will consider:
 1. issues raised by submissions
 2. justification of project selection
 3. expert advice.
- Stage 4—EnergyAustralia invests in the contingent project.
- Stage 5—The ACCC will make appropriate adjustments to the RAB and allowed revenue to reflect the capex it intends to include in the RAB in stage 3 for the period of the incentive.

The AER notes that when the ACCC determination was made on 27 April 2005 the National Electricity Code (in force at the time but replaced by the NER) did not allow for a revenue cap to be reopened. The additional revenue attributable to the contingent project was to be added at the next revenue reset.

2.2 Transitional provisions in the NER

Clause 11.6.19 of the NER sets out the transitional provisions applicable to EnergyAustralia. Specifically, clause 11.6.19(d)(3) provides for EnergyAustralia's revenue cap to be reopened during the current regulatory period which varies the operation of stage 5 in the ACCC determination as noted above.

In assessing an application for a contingent project which has been triggered, clause 11.6.19(d)(1) requires the AER to determine:

² *ibid.*, pp. 151–157.

³ *ibid.*, p. 149.

1. the total capex reasonably necessary to undertake the project
2. the amount of capex and incremental operating expenditure (opex), for each remaining regulatory year, that is reasonably necessary to undertake the project
3. the likely commencement and completion dates
4. the incremental revenue likely to be required in each remaining regulatory year
5. the maximum allowed revenue (MAR) for each remaining regulatory year.

Clause 11.6.19(e) sets out matters relating the extent to which the AER is able to vary the ACCC determination to include EnergyAustralia's contingent project application.

Clause 11.6.19(f) requires that the contingent project must commence during the current regulatory period.

Clause 11.6.19(g) requires that the forecast capex for the next regulatory control period must be determined by applying the provisions of clause 6A.6.7 of the NER in respect of the capex for a contingent project, with such modifications as are necessary to properly apply clause 6A.6.7.

3 AER considerations

3.1 Trigger event

The AER notes the ACCC determination stated that this project had been triggered already.⁴

3.2 Expert advice sought

The AER engaged CHC Associates Pty Ltd (CHC) to provide expert advice to aid its assessment of EnergyAustralia's contingent project application.

3.3 Information provided

Based on the assessments undertaken by the AER and CHC, the AER considers EnergyAustralia's contingent project application complies with the information required under the ACCC determination and clause 11.6.19 of the NER.

3.4 Consultation

On 13 May 2008, the AER published EnergyAustralia's contingent project application and called for submissions from interested parties. The AER did not receive any submissions.

3.5 Assessment pursuant to stage 3 of the ACCC determination

As set out at section 2.1 of this decision, in forming an opinion about the value to be included in the RAB, the ACCC determination stated that the ACCC will consider issues raised by submissions, justification of project selection and expert advice.

3.5.1 Issues raised by submissions

As noted in section 3.4 of this decision, the AER did not receive any submissions to EnergyAustralia's contingent project application.

3.5.2 Justification of project selection (regulatory test)

EnergyAustralia undertook a regulatory test to satisfy its obligation to conduct an investment appraisal of the project.⁵ The AER considers that this investment appraisal, as part of the contingent project application, is consistent with the requirements under the ACCC determination.

In undertaking the regulatory test EnergyAustralia proposed two possible options to replace feeders 908 and 909:

⁴ *ibid.*, p. 149.

⁵ See EnergyAustralia, *Final Report: Replacement Of 132kV Feeders 908 & 909 Canterbury To Bunnerong*, 29th April 2008 (Appendix A to EnergyAustralia's submission). This report details the results of EnergyAustralia's application of the regulatory test version 3, as promulgated by the AER on September 2007. The regulatory test is available at the AER's website www.aer.gov.au.

Option 1—establish a new Kurnell to Bunnerong 400MVA feeder.

Option 2—replace 908/909 with a 2 x 200MVA feeder and upgrade 910/911 feeders to 400MVA.

The outcome of the regulatory test recommended option 1, the replacement of feeders 908 and 909 with feeders from Kurnell to Bunnerong. This recommendation was made based on option 1 being the least cost option (in accordance with the regulatory test) to provide increased future capacity and to meet EnergyAustralia's reliability standard.

The AER considers that the analysis contained in the regulatory test demonstrated that the selected option, taken in the context of the impact on the timing of other projects, has the least net present value cost under the base case assumptions, as well as under a range of different assumptions.

3.5.3 Expert advice

3.5.3.1 CHC consideration of the regulatory test

CHC advised the AER that EnergyAustralia's proposed option to replace feeder cables 908 and 909 has been appropriately selected as the best-ranked option of those examined. CHC also considered, and the AER concurs, that the regulatory test as applied by EnergyAustralia satisfies the AER's requirements for an economic assessment of options as part of the project selection process.⁶

CHC considered that the conclusions in the regulatory test are robust for all assumptions used in the analysis.⁷

3.5.3.2 CHC consideration of the cost estimates

CHC stated that the project costs (excluding the contingency allowance) derived from the tenders are likely to be efficient. CHC highlighted that EnergyAustralia has called for tenders for the actual proposed works and noted that the cost estimates proposed in the application are based on those tenders.

CHC has identified several factors which have led to increased costs above those which were estimated in 2005 (apart from the contingency), such as:

- the complex engineering works that are now more fully scoped
- the selection of a larger cable to achieve higher capacity
- the cost increases in raw materials used for cable manufacture (mainly copper).⁸

EnergyAustralia has advised that due to the unique circumstances of this project it has applied a contingency amount to the total capex. There are two aspects to this project—land construction as well as marine construction. EnergyAustralia has also

⁶ CHC Associates, *Report to the Australian Energy Regulator: Contingent Project Application by EnergyAustralia—Replacement of 908/909 Cables*, May 2008, p. 5.

⁷ *ibid.*, p. 5.

⁸ *ibid.*, p. 6.

advised that it has applied a higher contingency allowance for the marine construction and a lower contingency allowance for the land construction. EnergyAustralia has informed the AER this is due to the inherent risks associated with marine construction and the lack of experience in Australia with marine construction.

CHC concurred with EnergyAustralia that the events and conditions identified by EnergyAustralia may result in extra costs under the contract. CHC also agreed that it is appropriate and reasonable for a contingency allowance to be included as part of capital costs in the AER's determination. However, CHC advised that it has two specific concerns with the contingency allowance proposed by EnergyAustralia to be included with the project cost, in particular:

1. the items subject to a higher contingency allowance
2. the higher contingency allowance for the marine aspect of the project.

The items subject to a higher contingency allowance

CHC noted that not all of the expenditure on the submarine portion of the contract is subject to higher risk. In particular, it is unlikely that such a high contingency amount would be payable by EnergyAustralia in respect of the following cost items:

- marine survey
- submarine cable manufacture
- submarine fibre optic cable manufacture
- mobilisation (marine).

The cost estimate for these items is about \$20.9 million (\$nominal), and reducing the proposed higher contingency level to the lower level (more consistent with EnergyAustralia's experience in project construction over land) would result in a reduction of about \$4.2 million.

The higher contingency allowance for the submarine aspect of the project

CHC agreed with EnergyAustralia that the events and conditions that have been identified by EnergyAustralia have the potential to result in extra costs under the contract. However, CHC noted that while EnergyAustralia indicated it has no experience in this type of cable installation, it has chosen a contractor that has considerable experience world-wide. Many of the parameters are fairly closely determined at this stage of the project, and EnergyAustralia claimed that the contractor has accepted the 'site conditions'. CHC stated it would be surprising if the contractor intended to rely upon 'justifying that a variation had occurred' to recover its expected costs, and therefore the tendered amount should represent an upper boundary for the base cost that is not dependent on EnergyAustralia's experience.⁹

CHC also noted that it would be quite unusual for a business to agree to a contingency amount which does not cover the majority of the risk of increased costs. Accordingly,

⁹ *ibid.*, p. 6.

CHC considered that the total cost outcome will have only a small probability of exceeding the full level of contingency that has been approved by the EnergyAustralia Board. The mean expectation would be in the general range of about half this amount of contingency.

Selecting a lower contingency will result in a further reduction of approximately \$6.2 million (\$nominal) from the capital cost.¹⁰

3.5.4 Period of the incentive

The AER notes stages 3 and 5 in the ACCC determination refer to a five year 'incentive period' which was envisaged to be specifically set for a particular contingent project.

However, the AER is only able to vary EnergyAustralia's determination in this instance in accordance with clause 11.6.19(e) of the NER. As clause 11.6.19(e) does not refer to a five year incentive period, the AER considers it is not appropriate for it to determine a five year incentive period for EnergyAustralia's contingent project application. Rather, clause 11.6.19(e) only provides for the AER to make adjustments to forecast capex and opex for the remaining regulatory years of the relevant regulatory control period. That is, the incentive period, which is not defined in the NER, for this contingent project will run from each regulatory year in which capex is forecast to incur until the conclusion of the same regulatory control period.

The AER is aware this contingent project requires forecast capex to be incurred over the current (2004–09) and the next (2009–14) regulatory control periods. Therefore the incentive period for capex forecast to be incurred in the first regulatory control period will conclude at the end of the first regulatory control period. The incentive period for the remaining forecast capex to be incurred in the second regulatory control period will conclude at the end of the second regulatory control period.

The AER considers this is consistent with the ACCC's reference to incentive period.

3.5.5 Applicability to the next regulatory control period

As noted above, the AER is aware that the forecast capex for this contingent project will be incurred in both the current and the next regulatory control periods and, therefore, this contingent project spans two regulatory control periods.

In accordance with clause 11.6.19(e), the AER will adjust EnergyAustralia's MAR as provided for in the ACCC determination to reflect the forecast capex and incremental opex to be incurred in the remaining regulatory years of the current regulatory period.

For the remaining forecast capex to be incurred during the next regulatory control period, the AER will apply clause 6A.6.7 as part of its determination for EnergyAustralia for that regulatory control period to reflect the amounts it has determined in this decision. This approach is pursuant to clause 11.6.19(g) of the NER.

¹⁰ Total reduction is \$10.3 million (\$nominal) or \$8.9 million (\$2004).

3.6 Assessment pursuant to clause 11.6.19 of the NER

As set out at section 2.2 of this decision, clause 11.6.19 of the NER requires the AER to determine five matters in relation to a contingent project. The AER's determination and reasons are set out below.

3.6.1 Total capex reasonably necessary to undertake the project

On the basis of the advice provided by CHC and the tender process that was undertaken, the AER considers total capex of \$133.6 million (\$2004) is an amount reasonably necessary to undertake the project.

The AER concurs with CHC's advice that there are several cost items which have been allocated a higher contingency allowance than is necessary and is satisfied that CHC has provided a robust analysis of an appropriate contingency allowance. The AER is concerned that including a contingency allowance which is too high reduces the incentive for EnergyAustralia to mitigate the risks associated with general cost uncertainty through risk management strategies that might be adopted by a prudent and efficient service provider, and in accordance with good industry practice. The AER agrees with CHC, however, that this project is unique and there may be some unidentified costs that are beyond the control of EnergyAustralia which may leave EnergyAustralia exposed to higher costs. Accordingly, the AER has decided to provide EnergyAustralia with an allowance for these potential costs but which is less than the contingency allowance requested by EnergyAustralia.

The AER notes that in approving this contingent project it is required to approve the total capex required for the project. At the next revenue determination, the AER will include in the forecast capex allowance the difference between the total capex required for the contingent project and the capex forecast approved by the AER under this determination to be incurred during the current regulatory period.

For these reasons the AER has determined that \$133.6 million is the amount of total capex reasonably necessary for EnergyAustralia to undertake its contingent project in accordance with clause 11.6.19(d)(1)(i) of the NER. The AER notes this is \$8.9 million less than the total capex requested by EnergyAustralia and this is attributable to the reduction of the proposed contingency allowance.

3.6.2 Capex and opex for each remaining regulatory year of the current regulatory period

EnergyAustralia has included \$3.5 million in opex for 2008–09 which was not included in the 2005 determination. This opex is attributable to the additional maintenance expenditure necessary due to the deferral of the project by one year. The AER notes CHC's concerns with the model that EnergyAustralia used to develop the incremental opex. However, the AER considers that the model is not inconsistent with that approved by the ACCC at the 2005 determination. Accordingly, the AER will include this opex allowance for the purpose of the additional maintenance expenditure.

CHC has identified, at table 11 of EnergyAustralia's application, that EnergyAustralia has included \$8000 in 2008–09 attributable to the new contingent project allowance. CHC noted that this amount is included in the year prior to the commissioning of the

cables. The AER concurs with CHC that it is not appropriate to include an allowance for opex prior to the commissioning of the cables.

The AER considers that the appropriate incremental capex and opex attributable to the contingent project for the current regulatory period, is as set out in table 1.

Table 1: Incremental capex and opex (\$m, 2004)

Expenditure	2004–05	2005–06	2006–07	2007–08	2008–09
Incremental capex	-0.4	-0.8	-15.6	-6.4	32.17
Incremental opex	0.00	0.00	0.00	0.00	3.49

The AER has determined the incremental capex and opex as detailed in table 1 is reasonably required for the purpose of undertaking this contingent project in accordance with clause 11.6.19(d)(1)(ii) of the NER.

3.6.3 Commencement and completion dates

EnergyAustralia has informed the AER that work will commence on the project in July 2008 and will be completed by June 2010. The AER considers the proposed commencement and completion dates while not specific to be reasonable given the nature of the project.

For these reasons the AER has determined the commencement and completion dates meet the requirements of clause 11.6.19(d)(1)(iii) of the NER. These dates also meet the requirement in clause 11.6.19(f) that the contingent project commence in the current regulatory period.

3.6.4 Incremental revenue required for each remaining regulatory year of the current regulatory period

The AER has assessed the incremental revenue associated with the replacement of feeder cables 908 and 909. The incremental revenue for 2008–09 approved by the AER will be different to that proposed by EnergyAustralia in its application for the following reasons:

- the AER’s decision to reduce the contingency allowance on capex by \$8.9 million (discussed at 3.6.1)
- the AER’s decision to not allow \$8000 for opex in 2008–09 (discussed at 3.6.2)¹¹
- the AER has identified an error in the ‘input’ section of the post-tax revenue model (PTRM) that EnergyAustralia provided to the AER. Specifically, the additional \$3.5 million of opex for 2008–09 did not flow through to the incremental revenue modelling.

The AER notes that while the project will be more costly than initially forecast, less capex will be incurred in the current regulatory period than was forecast in the ACCC

¹¹ Due to rounding the lower amount is not evident in this decision document.

determination. For this reason, there will be a reduction in EnergyAustralia's allowed revenue for the final year of the current regulatory period.

Accordingly, the AER has decided to adjust the revenue to be earned by EnergyAustralia in 2008–09 by –\$0.5 million which has been determined in accordance with clause 11.6.19(d)(1)(iv) of the NER.

3.6.5 The MAR for each remaining regulatory year of the current regulatory period

As discussed at 3.6.4, the AER has amended the capex and opex allowances proposed by EnergyAustralia and has also identified an error in the PTRM provided to the AER. This will result in a different MAR for 2008–09 to that set out in EnergyAustralia's application.

The AER has determined the MAR for the remainder of the current regulatory period in accordance with clause 11.6.19(d)(1)(v) of the NER. The AER considers EnergyAustralia's MAR for 2008–09 should be adjusted to \$130.7 million (\$nominal), not \$127.0 million as set out in EnergyAustralia's application. The AER notes that the MAR for 2008–09, following the AER's decision to revoke the 2005 determination, was \$131.2 million. Accordingly, approval of the contingent project will result in a reduction of \$0.5 million in EnergyAustralia's MAR for 2008–09.

4 AER decision

This decision sets out the AER's assessment of EnergyAustralia's contingent project application to replace the feeder cables 908 and 909 in accordance with the ACCC determination and the relevant transitional provisions of the NER.

The AER notes that EnergyAustralia's application of the regulatory test was finalised on 29 April 2008 and that option 1 was endorsed without amendment. The AER is, therefore, satisfied that EnergyAustralia has met its obligations with respect to the regulatory test and that this process produced robust outcomes.

The AER agrees with CHC that the tender process EnergyAustralia engaged in has revealed the efficient costs of this project. The AER acknowledges that while the costs of the project are substantially higher than allowed under the indicative capex provided in the ACCC determination, the ACCC stated at the time that the allowance was only indicative of the minimum cost required.

The AER considers that EnergyAustralia has sufficiently demonstrated that the costs of the project (excluding the contingency allowance) meet the requirements in the ACCC determination and the relevant transitional provisions set out at clause 11.6.19 of the NER. The AER is satisfied that the proposed expenditure (excluding the contingency allowance) reflects:

- efficient costs
- the costs a prudent operator would incur
- a realistic expectation of demand forecasts and cost inputs.

The AER has decided to reduce the contingency allowance proposed by EnergyAustralia. The AER considers that several items that were allocated a higher contingency allowance should be subject to the lower contingency allowance. The AER also notes that EnergyAustralia has engaged a contractor with significant experience and considers it would be unlikely that this contractor would rely on 'justifying that a variation had occurred' to recover possible higher project costs. While there is the potential for costs to exceed forecasts, the AER considers that the regulatory framework is based on incentives to limit risk and seek out efficiencies. Accordingly, the AER has included a contingency allowance but it is lower than that requested by EnergyAustralia.

The AER also notes that although the project's costs exceed that which was originally forecast in 2005, there will be a lower amount of capex incurred in the current regulatory period resulting from the deferral of this project. For this reason, there is a reduction in EnergyAustralia's allowed revenue for the final regulatory year (2008–09) of the current regulatory period as set out in table 2.

Table 2: Change in the revenue requirement in 2008–09 (\$m, nominal)

	2004–05	2005–06	2006–07	2007–08	2008–09
Existing revenue cap	91.27	98.59	106.50	115.05	131.21
Amended revenue cap	91.27	98.59	106.50	115.05	130.74
Difference	–	–	–	–	–0.47

Accordingly, the AER has published this decision which:

1. Determines that the total forecast capex of \$133.6 million (\$2004) for this contingent project to be appropriate.
2. Determines that the amounts for capex and incremental opex specified in table 1 are in accordance with the requirements in the ACCC determination and the relevant transitional provisions set out in clause 11.6.19 of the NER.
3. Approves amending the MAR to allow for the revised profile of capex attributable to the deferral in commencing the project as set out in table 2. The amended MAR of \$130.7 million (\$nominal) for 2008–09 is based on a revised X factor of –10.88 per cent (after the 2008 revocation and substitution of the ACCC determination, the X factor was determined to be –11.29 per cent).
4. Determines that the amended MAR of \$130.7 million (\$nominal) for 2008–09 varies the ACCC determination to the extent necessary to adjust for the changes in capex and opex in accordance with clause 11.6.19(e) of the NER.
5. Determines to apply clause 6A.6.7 accordingly to reflect the remaining forecast capex to be incurred in the next regulatory control period at the time it makes that determination.