



Final decision

**Matters relevant to distribution determinations
for ACT and NSW DNSPs for 2009-14**

Post-tax revenue model

January 2008

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Shortened forms

ARR	annual revenue requirement
AER	Australian Energy Regulator
capex	capital expenditure
CPI	consumer price index
DNSP	distribution network service provider
NEL	National Electricity Law
NER	National Electricity Rules
opex	operating expenditure
PTRM	post-tax revenue model
RAB	regulatory asset base
RFM	roll forward model
SCO	Standing Committee of Officials (of the Ministerial Council on Energy)
WAPC	weighted average price cap

1 Introduction

The Australian Energy Regulator (AER) is responsible for regulating the revenues of distribution network service providers (DNSPs) in the National Electricity Market (NEM) in accordance with the amendments to the National Electricity Rules (NER), which were notified in the South Australian Gazette on 20 December 2007.

Within the NER, Chapter 6 deals with the classification and economic regulation of distribution services, while Chapter 6A deals with the economic regulation of transmission services. The Ministerial Council on Energy Standing Committee of Officials (SCO) decided that transitional arrangements are necessary in the preparation and assessment of the ACT and NSW 2009-2014 distribution determinations. The transitional arrangements for the 2009-2014 distribution determinations for the ACT and NSW are set out in appendix 1 to Chapter 11 of the NER. Clause references in appendix 1 are therefore numbered commencing with a '6'.

The NER distinguishes between the rules in Chapter 6 and Chapter 11 by referring to the Chapter 6 rules as 'general Chapter 6 rules,' and Chapter 11 rules as 'transitional Chapter 6 rules.' The AER has followed this convention in this document when referring to the two sets of rules.

In November 2007 the AER released a preliminary positions paper on the following guideline, schemes and models relevant to DNSPs in the ACT and NSW for the 2009–14 regulatory control period:

- post tax revenue model (PTRM)
- roll forward model (RFM)
- efficiency benefit sharing scheme
- service target performance incentive scheme
- guideline on control mechanisms for direct control services

This paper invited submissions from interested parties of which the AER received six submissions on the PTRM.

This decision sets out the AER's consideration of comments raised in these submissions regarding the PTRM. Specifically, this decision regards the AER's conclusions on the design and use of the PTRM rather than the derivation of specific inputs which was questioned by several stakeholders. Issues that need to be addressed in the preparation and assessment of regulatory proposals are noted throughout this decision. The preparation and publication of this decision, the PTRM and associated 'handbook' are done under clause 6.4.1(d) of the NER.¹

¹ For the purposes of this document and unless otherwise stated, references to the NER mean the transitional chapter 6 provisions for the ACT and NSW in appendix 1 of chapter 11, as amended on 1 January 2008.

2 Rule requirements

This PTRM has been developed by the AER under clause 6.4.1 and will be used to calculate the annual revenue requirements (ARR) of the ACT and NSW DNSPs for the 2009–14 regulatory control period.

The PTRM must comply with the principles prescribed in the NER under rule 6.4. Clause 6.4.1(d) requires that the AER publish the PTRM before 1 February 2008 or one month after the commencement of the amended chapter 6 (also 1 February 2008). In doing so the AER may carry out consultation as it sees appropriate and may take into account consultation undertaken before the commencement date.

This PTRM has been developed for transitional purposes and will eventually be replaced for the purposes of the regulatory control period commencing on 1 July 2014. Clause 6.4.1(e) of the transitional Chapter 6 rules allows the AER to amend or replace the PTRM with the agreement of each affected DNSP. The PTRM that will apply after the AER's determinations for the regulatory control period 2009-14 for the ACT and NSW will be the one developed under the 'general' chapter 6, which will be published by the end of June 2008.

3 Reasons for the post-tax revenue model

Under clause S6.1.3(10) DNSPs are required to submit a completed PTRM to the AER as part of its building block proposal. The PTRM will be used by DNSPs and the AER to propose and determine ARR and X factors for each year of the regulatory control period.

The PTRM calculates the ARR for each year of a regulatory control period using the building blocks approach. Under clause 6.4.3, the building blocks are:

- indexation of the regulated asset base (RAB)
- the return on capital
- the return of capital (depreciation)
- the estimated amount of corporate income tax payable
- any revenue increments or decrements arising from the application of the service target performance incentive scheme and demand management incentive scheme
- any revenue increments or decrements arising from the application of a control mechanism in the previous regulatory control period
- forecast operating expenditure (opex)
- revenue increments or decrements arising from the D-factor carry-forward.

4 AER preliminary positions

In its preliminary positions paper, the AER proposed to use the PTRM developed by the AER for transmission regulation under chapter 6A as the basis for the PTRM to apply to the ACT and NSW DNSPs. This model incorporates a post-tax nominal approach to calculating building block revenue requirements which are used to derive X factors under a revenue cap form of control.

After considering the appropriateness of using the electricity transmission PTRM as a basis for the distribution PTRM, the AER considered that many ‘core’ calculations could be retained although some amendments would be required. Such amendments and other considerations in this context were:

- the model would need to be amended to recognise contributed assets as part of capital expenditure (capex) and in tax calculations
- the model would also need to account for X factors being calculated under different forms of control
- straight-line depreciation should comply with clause 6.5.5 and should be retained as a default calculation in the PTRM
- a ‘hybrid’ approach to recognising capex was likely to be compliant with the requirements of clauses 6.5.5 and 6.5.2, that is, assets should be depreciated from when they are commissioned while returns on capital should be based on capex as it is incurred
- the AER would not seek to make adjustments for potential windfall gains in moving DNSPs to a post-tax framework
- modifications may be required to the PTRM to account for EnergyAustralia’s joint treatment of distribution and transmission networks
- while the PTRM’s timing assumptions may need revisiting in the context of distribution regulation, this was not proposed for the NSW ACT PTRM given time constraints.

The AER made the following key amendments to the PTRM accompanying its preliminary positions paper:

- creation of inputs and X factor calculations under a revenue yield and weighted average price cap (WAPC)
- provision for inputs for contributed assets, and netting these from subsequent asset calculations.

5 Issues raised in submissions and the AER response

5.1 Depreciation

5.1.1 Stakeholder comments

ActewAGL, Country Energy and EnergyAustralia each sought clarification regarding the flexibility to adopt alternative depreciation profiles to the straight-line method adopted in the PTRM.

EnergyAustralia accepted the AER's assessment that the straight-line method was compliant with clause 6.5.5, but questioned whether the PTRM ensures that assets are depreciated over their economic lives due to the merging of assets and their lives into larger classes. EnergyAustralia requested that the AER specify those areas of the PTRM, including depreciation methods that represented such 'default' methodologies, but where alternatives could be proposed by DNSPs.

The Major Energy Users Inc. (MEU) noted the AER's analysis for the transition to a post-tax framework.

5.1.2 AER conclusion

The AER has noted that it considers the straight-line method for calculating depreciation is most likely to satisfy clause 6.5.5(b) of the transitional Chapter 6 rules in each case. This is because the expenditure profile reflects the nature of the assets over their economic life and the sum of real depreciation values over the asset's economic life is equivalent to the value at which that asset was first included in the RAB.

The AER has incorporated the straight-line depreciation method in the PTRM as a rule compliant approach, although the AER will in each case assess the depreciation schedules proposed by each DNSP against the requirements of clause 6.5.5. To the extent that DNSPs propose a depreciation method other than straight-line, the AER considers that DNSPs must explain how the alternative method satisfies the requirements in clause 6.5.5. The ability of DNSPs to propose alternative methods is noted in the PTRM handbook.

Where the PTRM calculates forecast depreciation for capex based on a particular method (e.g. straight-line), under clause S6.2.3(c)(2) the RFM would also use the same depreciation method based on actual capex. If the AER accepts an alternative method, the RFM used subsequently must also incorporate this method.

Regarding EnergyAustralia's more general comment on areas of discretion in the PTRM, the AER considers that the straight-line depreciation method used in the return of capital building block is the only substantive calculation that could be amended or replaced by DNSPs.

The AER considers that DNSPs do not have discretion to amend any other element of the PTRM as these are necessary to calculate each building block and have been

designed to achieve transparency and simplicity in the model. Furthermore, amendments to the model without proper consideration may introduce an inconsistency in the PTRM's particular timing assumptions and may produce inaccurate results. The AER has specified areas of discretion in the PTRM handbook and within the model itself to minimise such errors.

5.2 Use of 'hybrid' approach to recognising capital expenditure

5.2.1 Stakeholder comments

All DNSPs argued against the AER's position to recognise capex on a hybrid basis², instead preferring a full as-incurred approach. Stated reasons included:

- there is unlikely to be significant difference between the annual values of incurred and commissioned expenditure because most projects having lead times of less than one year (this was expected to be the case for all DNSPs)
- general costs and time required to implement a change in approach
- while theoretically assets start depreciating when they contribute to service delivery, in reality a large proportion of assets depreciate from when they are constructed
- while the hybrid approach may be appropriate for transmission networks (which have a smaller number of larger, long-term projects) distribution capex is characterised by annual programs of expenditure and many small projects.

ActewAGL requested that, should the AER implement a hybrid approach, only assets valued above \$10 million should be recognised on an as-commissioned basis.

The MEU concurred with the AER's proposed hybrid approach, noting that it should eliminate the requirement to recognise work in progress.

5.2.2 AER conclusion

DNSPs indicated that their current regulatory arrangements determine return of capital or economic depreciation on an as-incurred basis and that a move to an as-commissioned approach would involve additional regulatory costs. This deserves considerable weight in any judgment of this issue.

When the AER considered the merits of alternative approaches in the context of electricity transmission, it took account of a concern that the move to an as-incurred approach would result in a bring forward of cash flows with a transitional price spike effect. As DNSPs currently record depreciation on an as-incurred basis the price spike effect is unlikely to be an issue.

DNSPs also questioned their capacity to actually forecast depreciation on an as-commissioned basis. This argument is problematic. Determining depreciation on an as-commissioned basis is consistent with Australian Accounting standards. The

² The 'hybrid' method for recognising capex calculates the return on capital using an as-incurred approach and the return of capital (depreciation) is based on an as-commissioned approach.

proposition that DNSPs would not be able to record depreciation on an as-commissioned basis is likely to be an overstatement.

Given the advice provided by the DNSPs about the differences between transmission and distribution capex, the AER accepts that for DNSPs there might not be a substantial difference in practice between recording depreciation on an as-incurred rather than an as-commissioned basis. That is the commissioning date might coincide with the timing of the expense as recorded in the PTRM.

It also needs to be noted that the as-incurred approach is simpler to model and will also strengthen the incentive properties of the ex ante capital allowance framework.

The AER has therefore amended the PTRM for the ACT and NSW DNSPs to recognise capex on a full as-incurred basis. The MEU correctly notes that recognising capex on a hybrid basis negates the need to account for work in progress. This is, however, also the case under an as-incurred framework.

5.3 Treatment of capital contributions

5.3.1 Stakeholder comments

The MEU stated that, while the value of contributed assets should be excluded from the RAB, they should be recognised as taxable income, provided this treatment is fully ring-fenced from regulatory accounts.

Integral Energy stated that capital contributions need to be recognised as taxable income and included in depreciation for tax purposes.

EnergyAustralia sought confirmation that the AER would recognise the capital costs of the maintenance, augmentation or replacement of contributed assets in its regulated capex. It noted that these costs did not include opex associated with these contributed assets. EnergyAustralia stated that the AER should review the PTRM to recognise that it already reports capex net of customer contributions.

5.3.2 AER conclusion

The AER accepts stakeholder comments and has amended the PTRM to recognise the value of capital contributions as part of taxable income. Consistent with this, the PTRM has also been amended to include contributed assets as capex for tax purposes to calculate the appropriate value of tax depreciation.

The AER confirms that the value of contributed assets in the PTRM is only intended to reflect that provided by other parties, and not capex incurred by the DNSP in maintaining or developing the originally contributed asset.

At this point it is unclear whether EnergyAustralia's presentation of capex is common across other DNSPs which would warrant amendments to the model by the AER. Instead, when reporting capex data in the PTRM, EnergyAustralia will either need to:

- incorporate contributed assets in its gross capex, or

- report its net capex directly in the respective input table (overriding the calculations already in place) while ensuring this is consistent with the reported values of disposals and customer contributions which are required inputs.

Either approach is acceptable to the AER and will not affect the transparency of the modelling since the value of contributed assets is still presented.

5.4 Timing assumptions

5.4.1 Stakeholder comments

Integral Energy stated its support of IPART's approach to working capital and considered that a return on working capital be included in the PTRM.

The MEU supported the AER's proposal not to examine cash-flow timing assumptions as a matter of expediency.

EnergyAustralia stated that it favoured a simple and transparent modelling approach and that attempts at greater precision are unlikely to satisfy all stakeholders. EnergyAustralia supported the AER's deferral of reviewing the PTRM's timing assumptions given the limited time allowed to consult on the issue under the transitional Chapter 6 rules.

Country Energy supported the AER's current modelling approach as practical and transparent.

5.4.2 AER conclusion

The AER does not recognise working capital in the PTRM since cash-flows are assumed to occur on the same (final) day of each year. Since cash-flows are assumed to occur simultaneously, there is no need in the PTRM for a DNSP to hold working capital. The AER's treatment of working capital under clause 6.4.2(b)(3) is, therefore, to exclude such values from the PTRM.

The notable exception to this general timing assumption is that capex is recognised mid-year and adjusted for a half-year return before being capitalised into the RAB. The AER would like to assess whether these timing assumptions result in any bias, and if so, whether it is material and could be addressed through a simple adjustment to the model. These issues will be explored in consultation on the PTRM developed under the general chapter 6 in the coming months.

5.5 Pre-tax to post-tax transition

5.5.1 Stakeholder comments

The MEU accepted that the AER would not pursue potential windfall gains to DNSPs in the transition from a pre-tax to a post-tax approach. It considered that this benefit must be recognised when making overall assessments of regulatory bias during review processes.

Integral Energy did not support the AER's proposal to roll tax asset values from the application date of the National Tax Equivalence Regime, instead proposing to

establish these values as at 1 July 2009 based on the assumption that DNSPs had taken full advantage of changes to tax legislation over the period of investment.

Integral Energy noted that it was indifferent to whether taxable income was based on smoothed forecast revenues or the ARR.

EnergyAustralia stated that the AER has no mandate to model assets for tax purposes as this is not explicitly provided for in clause 6.5.3. It stated that the rules provide for DNSPs to submit their estimate of corporate income tax which the AER would assess under clause 6.5.3. It stated that PTRM should be restricted to calculating taxable income, the tax rate and imputation credits.

5.5.2 AER conclusion

The tax asset base is required as an input to the PTRM upon transition to the post-tax approach to regulation. However, the establishment of these starting tax asset values is not a matter that requires resolution in the PTRM guideline. The AER will work with the DNSPs to ensure that the tax asset values on commencement of the post-tax approach are reasonable and appropriately substantiated.

The AER does not support EnergyAustralia's suggestion to remove asset calculations for tax purposes in the PTRM. The primary function of the PTRM is to calculate a DNSP's ARR, which includes an amount representing the cost of corporate income tax. In assessing this amount under clause 6.5.3, the AER needs to verify deductions for tax purposes, including tax depreciation. The AER considers that the tax calculations in the PTRM, while somewhat simplified, provide a systematic and transparent approach to assessing a DNSP's tax liability. The AER considers that the corresponding calculations in the RFM ensure that these deductions and the cost of income tax are measured consistently over time.

More broadly, the AER disagrees with EnergyAustralia's comment that policy makers intended to limit the AER's ability to perform calculations by not listing certain parameters in the rules. For example, clause 6.4.2(b) is clearly a non-exhaustive list of the PTRM's contents, which reflects the policy decision to not have the rules prescribe every calculation and parameter that would be required by the regulator.

5.6 X factors

5.6.1 Stakeholder comments

The MEU concurred with the AER's approach to the calculation of X factors.

Integral Energy stated that the representation of the WAPC constraint in the model should be removed as the form of control is expressed as a percentage change.

5.6.2 AER conclusion

The AER has noted Integral Energy's comments about the expression of the WAPC as a percentage change and has removed the alternative expression (i.e. as a price index) from the model.

5.7 Inflation

5.7.1 Stakeholder comments

EnergyAustralia stated that DNSPs must be allowed to propose an appropriate measure of inflation for the period as part of its regulatory proposal, and that it understood that this is allowed by the PTRM which does not specifically calculate forecast inflation.

5.7.2 AER conclusion

The AER confirms EnergyAustralia's understanding in that DNSPs are to propose an inflation input in the PTRM. The AER will assess this using a method that it deems produces the best estimates of forecast inflation.

Previous versions of the PTRM used the difference between the yields of indexed and nominal Commonwealth Government Securities (using the Fisher equation) to derive an estimate of forecast inflation. Recent evidence has arisen that this method no longer provides an accurate forecast and alternatives are still being considered. At present the AER considers that an appropriate methodology for deriving forecast inflation would incorporate the forecasts and target inflation range of the Reserve Bank of Australia. This issue and its relationship with the PTRM will be considered by the AER in developing the PTRM under the 'general' chapter 6 in the coming months, as well as during its review of WACC parameters to commence in 2008.

5.8 Tariff calculations

5.8.1 Stakeholder comments

Country Energy suggested changes to incorporate additional tariff inputs for DNSPs (like itself) with many tariff classes. It also suggested standardising the tariff input cells with revenue calculations elsewhere in the model.

5.8.2 AER conclusion

The AER has amended the PTRM to standardise tariff inputs and forecast revenue calculations, which is expected to improve the ability to add tariff classes.

5.9 Other issues to be addressed in regulatory submissions

5.9.1 Stakeholder comments

During discussions between AER staff and DNSPs, the following issues were identified that related to use of the PTRM or otherwise required clarification before the development of regulatory proposals:

- the degree of rigour that will be applied to assessing forecast quantities by tariff component
- considerations with respect to justifying X factor values

- clarification on whether EnergyAustralia would be required to submit two completed PTRMs (one each for its transmission and distribution businesses).

5.9.2 AER conclusion

With respect to X factors, DNSPs will be required to justify how the values comply with clause 6.5.9.

Tariff quantity inputs for the PTRM will need to be justified according to a robust methodology and, where possible, be consistent with other demand forecasts presented to the AER.

Under the transitional Chapter 6 rules, EnergyAustralia's transmission support network is deemed to be part of its distribution network. In this regard, the AER confirms that EnergyAustralia will be able to submit separate completed PTRMs for its transmission support network and for its distribution business as a matter of administrative convenience only. In doing so EnergyAustralia will need to combine the outputs of both models to ensure that the calculation of its ARR and X factors is consistent with the requirements of the transitional Chapter 6 rules.

6 AER decision

In response to stakeholder comments and in the context of the AER's conclusions listed in previous sections, the AER has decided to publish the transitional PTRM for ActewAGL and the NSW DNSPs set out at Appendix B. The AER has published a PTRM handbook to accompany this model.

Appendix A: Submissions received on the PTRM

The following interested parties provided submissions on issues relevant to the AER's proposed PTRM:

- ActewAGL
- Country Energy
- EnergyAustralia
- ETSA Utilities
- Integral Energy
- Major Energy Users Inc.

Copies of these submissions are available on the AER's website at www.aer.gov.au.

Appendix B: Post-tax revenue model

Appendix C: Post-tax revenue model handbook