

**INITIAL DRAFT DETERMINATION:
2009 REGULATORY RESET**

OCTOBER 2008



Level 9, 38 Cavenagh Street Darwin NT 0800

GPO Box 915, Darwin NT 0801

utilities.commission@nt.gov.au

www.utilicom.nt.gov.au

Table of Contents

1. Introduction	3
Background	3
Final methodology decision	4
Purpose and Contents of this Paper	5
Documents accompanying this Initial Draft Determination	6
Consultation process and timetable	6
2. 2009 Regulatory Reset: Draft Determination	9
Network services classification proposal	9
Key parameter values	9
Initial regulatory proposal	12
3. Services Classification Proposal	17
Introduction	17
Requirements of final methodology decision	17
Power and Water's proposal	18
Commission's assessment	19
Commission's final decision	21
4. Key Parameter Values: Further Decisions	23
Introduction	23
Initial regulatory asset value	23
Rate of return on capital	26
X factor	29
Other aspects of the Po adjustment model	33
5. Po Adjustment for Standard Control Services	37
Introduction	37
2008/09 opening RAB value	38
2008/09 return on new capital	42
2008/09 return of capital	44
2008/09 operating expenditure	46
2008/09 actual revenue	52
Po adjustment factor	54
6. Other Aspects of the Initial Regulatory Proposal	63
Introduction	63
Network pricing principles and methods	63
Initial pricing proposal	65
Alternative control services	67
Negotiated network services	70
Cost pass through	70
Service target performance incentive scheme	73
Demand management scheme	73

CHAPTER**1****INTRODUCTION****Background**

1.1 Prices paid by network users for the conveyance of electricity through a prescribed electricity network in the Northern Territory are regulated under the Electricity Networks (Third Party Access) Code (“the NT Code”)¹ which is a schedule to the *Electricity Networks (Third Party Access) Act 2000*.

1.2 Part 3 of the NT Code specifies the price regulation framework to be observed by the Commission (as the regulator) and by the network service provider² when setting the prices to be paid by network users. The Commission has been undertaking network price regulation under these provisions of the NT Code since 1 April 2000.

1.3 The network service provider in all regulated networks in the Northern Territory is the networks business division of the Power and Water Corporation (“Power and Water”).

1.4 The current regulatory period – the second regulatory period – began on 1 July 2004 and ends on 30 June 2009. A regulatory period is defined in clause 3 of the NT Code as the period between major price reviews (or ‘resets’) during which time the price control mechanism used in setting network prices is held constant.

1.5 The third regulatory period is the five-year period commencing 1 July 2009. In the lead-up to the commencement of the third regulatory period, the NT Code requires the Commission as regulator – in consultation with interested parties – to review the price control mechanism used in the second regulatory period, with a view to modifying the price control mechanism as appropriate. The Commission is referring to the process of establishing the price control mechanism to apply from 1 July 2009 as the “2009 Reset”.

1.6 The 2009 Reset was initiated by an Issues Paper published in October 2007. The Issues Paper sought to identify the main issues to be dealt with at the initial broad design stage of the Reset, and invited interested parties to add to or modify that list and to put forward preferred approaches.

1.7 Following its consideration of submissions received in response to the Issues Paper and in light of its own further analysis, the Commission published a draft decision on the price control mechanism and related methodology issues in March 2008 (“Draft Methodology Decision”). The price control mechanism involves the practical and technical detail for the administration of network price regulation over which the Commission as regulator – in consultation with stakeholders – has a degree of discretion.

¹ The NT Code can be viewed on the legislation page of the Commission’s website (www.utilicom.nt.gov.au).

² The NT Code uses the term “network provider”. References throughout this Paper to network service provider should be read as referring to the network provider, as defined in the Code.

1.8 Following consideration of submissions received in response to the Draft Methodology Decision and in light of its own further analysis, the Commission published its final decision on the price control mechanism and related methodology issues in May 2008 (“Final Methodology Decision”).

Final methodology decision

1.9 The Final Methodology Decision represents the Commission’s determination on a number of fundamental aspects of the regulatory arrangements to apply during the third regulatory period, specifically:

- Power and Water’s prices for standard control services are to be subject to a price control applied via a ‘tariff basket’, which expresses as an index the weighted average of each year’s prices for such services;
- the size of any Po adjustment to be applied at the end of the second regulatory period – in order to align efficient costs and revenues – is to be determined by an ex-post building block assessment of Power and Water’s 2008/09 network costs and revenues;
- the allowed year-on-year movement in the tariff basket is to be determined by the CPI minus X control, with the value of X as determined by the Commission using a total factor productivity (TFP) based approach;
- the weighted average price for each individual end-use customer for a particular year of the regulatory period is not to exceed the corresponding weighted average price for that individual end-use customer for the preceding regulatory year by more than a permissible percentage (‘the side constraint’);
- in other respects, the structure of network prices is to be consistent with the Network Pricing Principles and Methods Statement;
- for the second and each subsequent year of the regulatory period, and consistent with the relevant requirements of the NT Code, an ‘annual pricing proposal’ is to be submitted:
 - setting out Power and Water’s proposed Network Tariff Schedules for direct control services, including the tariff classes that are to apply for the relevant year, the proposed tariffs for each tariff class and, for each proposed tariff, the charging parameters (i.e., the constituent elements of a tariff) and the elements of service to which each charging parameter relates;
 - describing the nature and extent of change in the proposed Network Tariff Schedules from the tariffs applying in previous regulatory year; and
 - demonstrating compliance with this Final Decision and the approved Network Pricing Principles and Methods Statement; and
- Power and Water is to maintain on its website:
 - the approved Network Tariff Schedules for the relevant year; and
 - a statement of expected network price trends (to be updated for each year) giving an indication of how Power and Water expects network prices to change over the regulatory period and the reasons for the expected changes.

1.10 With regard to the process for establishing network pricing in the first year of the third regulatory period, the Final Methodology Decision was to follow – to the maximum extent possible under the NT Code – the procedures recently included in the *National*

*Electricity Rules*³ for arriving at a Final Determination, in order to achieve consistency with procedural practice now evident elsewhere in Australia in the regulation of infrastructure networks.

1.11 Accordingly, in the Final Methodology Decision, the Commission set out the next stage in the process to arrive at the Final Determination as involving the following:

- by 30 June 2008, Power and Water was required to submit a 'services classification proposal' to the Commission proposing how the network services provided by Power and Water should be distinguished according to the classification in Part B, Division 1 of the *National Electricity Rules*; and
- by 22 August 2008, Power and Water was required to submit an initial regulatory proposal.

1.12 The Final Methodology Decision stated that a regulatory proposal must include:

- in relation to standard control services, a proposed Po adjustment factor calculated using the Commission's Po adjustment model;
- a draft Network Pricing Principles and Methods Statement to apply to the setting of individual prices; and
- for the regulatory year commencing 1 July 2009, the proposed Network Tariff Schedules consistent with all other elements of the regulatory proposal (the 'initial pricing proposal');

and, in relation to the proposed Po adjustment factor and the initial pricing proposal, must be accompanied by:

- details of all amounts, values and inputs relevant to the calculation;
- an explanation of the calculation and the amounts, values and inputs involved in the calculation; and
- a demonstration that each calculation, and the resultant amounts, values and inputs on which it is based, comply with relevant requirements of this Final Decision.

1.13 The Final Methodology Decision also provided that a regulatory proposal must include:

- for alternative control services – a proposed control mechanism; and
- for negotiated network services – a proposed negotiating framework.

Purpose and Contents of this Paper

1.14 As required by the Final Methodology Decision, Power and Water submitted its 'initial regulatory proposal' to the Commission for the third regulatory period covering all of Power and Water's regulated networks on 22 August 2008.

1.15 This Paper presents the Commission's Initial Draft Determination, based on whether or not it proposes to approve Power and Water's initial regulatory proposal and, if not, what revisions it proposes to require before a revised regulatory proposal could be approved by the Commission.

1.16 As required by the Final Methodology Decision, Power and Water also submitted a 'services classification proposal' on 30 June 2008 proposing how the network services

³ The Version of the *National Electricity Rules* used by the Commission for the purposes of the Final Methodology Decision can be viewed on the networks pricing page (2009 Regulatory Reset) of the Commission's website (www.utilicom.nt.gov.au). This version is an extract of the *National Electricity Rules* Version 18.

provided by Power and Water should be distinguished according to the classification in Part B, Division 1 of the *National Electricity Rules*. In July 2008, the Commission issued an interim approval of Power and Water's proposed services classification, subject to certain amendments.

1.17 This Paper also includes the Commission's final determination on whether or not it approves Power and Water's services classification proposal.

1.18 Chapter 2 contains the Commission's initial 'draft determination' regarding network pricing to apply during the third regulatory period. The Commission's reasons for the constituent decisions are developed in the following chapters.

1.19 Chapter 3 contains the Commission's statement of reasons for its decision in relation to Power and Water's services classification proposal.

1.20 Chapter 4 contains the Commission's statement of reasons for its decisions in relation to issues which are subject to the Commission's determination under the Final Methodology Decision rather than being left for resolution under the propose/respond framework. These issues are: the initial regulatory asset value, the allowed rate of return on capital, the value of the X factor in the CPI-X price path and certain framework aspects of the calculation of the Po adjustment factor.

1.21 Chapter 5 contains the Commission's statement of reasons in relation to the Po adjustment factor component of Power and Water's initial regulatory proposal.

1.22 Chapter 6 contains the Commission's statement of reasons in relation to all other matters raised in Power and Water's initial regulatory proposal.

Documents accompanying this Initial Draft Determination

1.23 This Initial Draft Determination is published in conjunction with the following accompanying documents:

- Power and Water, *2009 Networks Regulatory Reset, Initial Regulatory Proposal: 1 July 2009 to 30 June 2014*, August 2008;
- ACIL Tasman, *Review of Power and Water's Initial Regulatory Proposal: Comments and Recommendations*, September 2008;
- GHD Meyrick, *Electricity Distribution X Factors for the NT's Third Regulatory Period, September 2008*; and
- the Commission's *October revised Po adjustment model* (MS Excel workbook).

1.24 These accompanying documents can be viewed or downloaded from the Commission's website.

Consultation process and timetable

1.25 When reviewing the price control mechanism, clause 62(2) of the NT Code requires the Commission:

"...to conduct all its determination and approval processes in an open, transparent and competitively-neutral manner, including by consulting with network users, end-use customers, members of the public and all licensed electricity entities that may be affected, directly or indirectly, by the resultant prices."

1.26 The Commission is therefore required to determine the price control mechanism to be used in regulating network access prices in the third regulatory period by facilitating public consultation and promoting wide-ranging discussion of the issues by all stakeholders.

1.27 The timetable guiding the Commission's consultation process is now as follows:

Due Date	Event
24 October 2008	submissions due from all parties (including Power and Water) on the Initial Draft Determination
7 November 2008	publication of the Commission's Revised Draft Determination, including whether or not it approves the initial regulatory proposal and, if not, what revisions would be required before a revised regulatory proposal could be approved by the Commission
31 December 2008	submission by Power and Water of a revised regulatory proposal, and publication
31 March 2009	publication of the Commission's Final Determination of the regulatory arrangements to apply during the third regulatory period, and the Final Approval of all related matters
before 1 May 2009	submission by Power and Water of its final pricing proposal for the regulatory year commencing 1 July 2009

Call for submissions

1.28 Submissions are invited from interested parties concerning the initial draft determination.

1.29 Submissions, comments or inquiries regarding matters arising should be directed in the first instance to:

Executive Officer	Telephone:	(08) 8999 5480
Utilities Commission	Fax:	(08) 8999 6262
GPO Box 915		
DARWIN NT 0801	Email:	utilities.commission@nt.gov.au

1.30 The closing date for submissions is **Friday, 24 October 2008**.

Matters to be addressed by submissions

1.31 The Commission requests that submissions focus on the Draft Determination as set out in chapter 2 and the associated statement of reasons for the constituent decisions provided in chapters 3 through to 6. Of particular interest to the Commission are whether, in the view of stakeholders:

- any particular draft decisions are not considered consistent with the facts or with the NT Code or otherwise with the *National Electricity Rules*; and
- the draft decisions contain omissions, including in light of material included in Power and Water's initial regulatory proposal.

1.32 The Commission is not seeking views on matters that have already been settled as part of the Final Methodology Decision

Confidentiality

1.33 In the interests of transparency and to promote informed discussion, the Commission intends to make submissions publicly available. However, if a person making a submission does not want their submission to be public, that person should claim confidentiality in respect of the document (or any part of the document). Claims for confidentiality should be clearly noted on the front page of the submission and the relevant sections of the submission should be marked as confidential, so that the remainder of the document can be made publicly available. In addition, a copy of the

submission suitable for publication (i.e., with any confidential material removed) should also be provided.

Public access to submissions

1.34 Subject to the above, submissions will be made available for public inspection at the office of the Commission and on its website (www.utilicom.nt.gov.au).

1.35 To facilitate publication on the Commission's website, submissions should be made electronically by disk or email. However, if this is not possible, submissions can be made in writing.

1.36 Information about the role and current activities of the Commission, including copies of reports, papers and submissions, can also be found on the Commission's website.

CHAPTER

2

**2009 REGULATORY RESET:
DRAFT DETERMINATION**

2.1 This chapter contains the Commission's initial version of its draft determination regarding network pricing to apply during the third regulatory period ("Draft Determination"). The Commission's reasons for the constituent decisions are developed in the following chapters.

2.2 This Draft Determination comprises three elements:

- a final decision on whether or not the Commission approves the services classification proposal submitted by Power and Water;
- further decisions (some draft and some final) by the Commission in relation to certain key regulatory parameters and formulations; and
- a draft decision on whether or not the Commission approves the initial regulatory proposal submitted by Power and Water and, if not, what revisions are required before a revised regulatory proposal could be approved by the Commission.

Network services classification proposal

2.3 The Commission has decided that high load escort services are to be classified as an alternative control service rather than as an unregulated service as initially proposed by Power and Water.

2.4 With this exception, the Commission has decided to approve the network services classification as initially proposed by Power and Water, on the basis that this (amended) classification is not inconsistent with the requirements in the NT Code or (otherwise) clause 6.2.1 of the *National Electricity Rules*.

Key parameter values***Initial value of the regulatory asset base***

2.5 The Commission confirms its earlier decision, made as part of the Commission's final decision regarding the price control mechanism to apply during the third regulatory period ("Final Methodology Decision"), that the regulatory value of Power and Water's regulated network assets at the commencement of 2008/09 for use when calculating the Po adjustment factor is to be based on the initial regulatory asset base ("RAB") value of \$350 million (excluding gifted assets), as at 1 July 2002 (in July 2002 dollars) as determined by its 2005 Off-ramp Decision.⁴

⁴ Utilities Commission, *Networks Pricing: Asset Valuation Off-Ramp Final Decision Statement of Reasons*, April 2005.

2.6 Accordingly, the Commission will only approve Power and Water's revised regulatory proposal if it rolls forward the initial RAB value of \$350 million using amounts calculated, determined or estimated in accordance with the Commission's Po adjustment model, all related requirements elsewhere in this Draft Determination and, for matters not specifically addressed in the model or this Draft Determination, the requirements of clause 6.5.1 of the *National Electricity Rules*.

Rate of return on capital

2.7 The Commission has decided that its Final Determination will involve a Po adjustment factor which is to be determined immediately prior to Power and Water submitting its final pricing proposal for the regulatory year commencing 1 July 2009 based on the relevant weighted average cost of capital (WACC) as calculated at a Nominated Date. The Nominated Date will be the earlier of:

- 24 April 2009; and
- the later of the dates of publication of the AER's final statement of regulatory intent (distribution) published at the completion of its current WACC parameters review and of the Final Distribution Determination for NSW and the ACT.

2.8 Each relevant WACC as at the Nominated Date is to be calculated using the most current formulation adopted by the AER for this purpose and applying:

- for those parameters listed under 'fixed parameters' in Table 2-1 below: the most current AER parameters values published at the time (whether in the form of draft or final values); and
- for those parameters listed under 'market parameters' in Table 2-1 below: the value as measured on the day applying the most current methods adopted by, or proposed for adoption by, the AER for such a purpose.

2.9 For the purposes of the revised regulatory proposal, Power and Water is to take these various parameter values to be as follows:

**Table 2-1
WACC Parameters**

Fixed parameters	symbol	value
Market risk premium	MRP	6.0%
Utilisation of imputation (franking) credits	g	0.5
Proportion of debt funding	D/V	0.6
Equity beta	β_e	1.0
Debt risk premium	DRP	2.0%
Corporate tax rate	T	30.0%
Debt raising cost benchmark	Dr	0.08%
Market parameters	symbol	value
Inflation rate	f	3.0%
Nominal risk free rate	Rf	6.0%

2.10 Together, these parameter values imply a pre-tax nominal WACC of 10.45% and a pre-tax real WACC of 7.23%.

2.11 The Commission will only approve Power and Water's revised regulatory proposal if it applies these parameter values in conjunction with the Commission's Po adjustment model. The Commission's Final Determination will provide for the Po adjustment factor to be used as a basis of Power and Water's final pricing proposal for the regulatory year commencing 1 July 2009 to be based on the relevant WACC as calculated at the Nominated Date.

X factor in CPI-X price path

2.12 The Commission has decided that the following component values are to be used for the purposes of calculating the value of the X factor to apply during the third regulatory period:

- $X_1 = 0.0\%$;
- $X_2 = 0.25\%$; and
- $X_3 = 1.1\%$

where:

X_1 = the difference between the TFP growth for the electricity distribution industry in Australia and that for the economy as a whole;

X_2 = the difference between the best observed operating expenditure partial productivity level in the electricity distribution industry in Australia and Power and Water's operating expenditure partial productivity level; and

X_3 = the difference between the input price growth for Power and Water and that for the economy as whole;

and

$$X = X_1 + X_2 - X_3 .$$

Other aspects of the Po adjustment model

2.13 The Commission acknowledges that the Po adjustment model that it required Power and Water to use for the purposes of the initial regulatory proposal contained an error which in effect double counted the indexation/holding gain element of a year's opening value of the RAB. The indexation/holding gain element of a year's opening RAB value is already allowed for under the 'return on opening capital' element of the building blocks calculation when that element is based on the use of a nominal as opposed to real-terms WACC. Annual straight-line depreciation of any indexed asset values contains a similar indexation/holding gain element. The AER correctly deals with this by netting the indexation/holding gains element off annual depreciation.^{5, 6}

2.14 The Commission has decided that, for the purpose of calculating the Po adjustment factor, the building blocks calculation of required revenue (R^*) in 2008/09 is best modified by explicitly recognising the role of the indexation/holding gain element of the year's opening RAB value as follows:

Required revenue =

Return on opening capital

plus Return on new capital

plus Return of capital (depreciation)

less Holding gains included in nominal depreciation that are already included in the 'return on opening capital' (as measured by the indexation of the year's opening RAB value)

plus Return of efficient/prudent operating expenditure.

⁵ The AER terms straight line depreciation less the holding gain as "regulatory depreciation". The Commission has not adopted this terminology.

⁶ With this error corrected, Power and Water's initial regulatory proposal involves a Po adjustment factor of 61.4%, thereby reducing the Po adjustment factor initially proposed by Power and Water by 23.9 percentage points (from 85.3%).

2.15 The Commission has modified its Po adjustment model accordingly, with the resultant version of the model referred to throughout this Draft Determination paper as the “October revised Po adjustment model”. The Commission will only approve Power and Water’s revised regulatory proposal if, for standard control services, the proposed Po adjustment factor is calculated strictly in accordance with the Commission’s October revised Po adjustment model, and all related requirements elsewhere in this Draft Determination.

Initial regulatory proposal

2.16 The Commission has considered all matters comprising the Initial Regulatory Proposal (“IRP”) submitted by Power and Water:

- where the matter is subject to a specific requirement in the NT Code – in terms of the Code’s requirement;
- where the matter is not subject to any specific requirement in the NT Code – in terms of the relevant provision of chapter 6 of the *National Electricity Rules*; and
- where the matter is not subject to any specific requirement in either the NT Code or chapter 6 of the *National Electricity Rules* – in terms of the NT Code’s pricing principles.

2.17 The Commission approves certain aspects of the IRP, namely:

- the pricing rule element of the control mechanism proposed for ‘fee-based services’ types of alternative control services, on the basis that it complies with the requirements of clause 6.2.5 of the *National Electricity Rules*;
- that no service target performance incentive scheme will apply for the third regulatory period;
- that no demand management scheme will apply for the third regulatory period;
- that no negotiating framework will apply for the third regulatory period; and
- the 2008/09 estimate of gross capital expenditure (“gross capex”) on regulated network assets, and the gross capex series over the second regulatory period for use in the RAB roll forward, namely:

Table 2-2
Annual Gross Capital Expenditure^(a)
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09
Gross capex	11,499	22,385	28,351	44,889	56,582

(a) Before deduction of any asset disposals or (included) gifted assets during the year.

2.18 However, the Commission does not approve all of the proposals made by Power and Water on the basis that they do not meet the requirements of the NT Code or the relevant provision of chapter 6 of the *National Electricity Rules* or the NT Code’s pricing principles. The detailed reasons for these decisions are set out in this Draft Determination. The Commission has specified the amendments it requires in order to approve a revised regulatory proposal.

2.19 If the amendments are applied using the values suggested by the Commission, a Po adjustment factor of 24.4% is implied. This compares with the Po adjustment factor of 61.4% proposed by Power and Water in its IRP.

2.20 The Commission is therefore not satisfied that the IRP as submitted meets the requirements established in the Final Methodology Decision, for the reasons set out in this Draft Determination. The Commission requires changes to the regulatory proposal as listed below (and as explained throughout this Draft Determination) prior to approving any revised regulatory proposal:

Chapter 5: Po adjustment factor

Amendment 5-1

2.21 With regard to the year's opening RAB value for 2008/09 (and the associated series for each of the preceding years in the second regulatory period), the revised proposal must be based on either:

- the values set out in Table 2-3 below:

Table 2-3
Commission's Estimates of Opening RAB Values
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09
Opening RAB	372,278	377,100	394,885	417,015	458,441

- or values which Power and Water clearly demonstrates to the Commission's satisfaction are superior values when used in conjunction with the October revised Po adjustment model and consistent with all related requirements elsewhere in this Draft Determination.

2.22 In order to "...clearly demonstrates to the Commission's satisfaction" that proposed replacement values are "superior" to the Commission's estimates, Power and Water must correctly fill out the roll-forward calculations in the Po adjustment model, including all capital contributions and asset disposals for each of the asset classes over the time period, and using the depreciation calculations and presentation in the model, and to complete all associated reconciliations as part of its documentation.

Amendment 5-2

2.23 With regard to the annual nominal-terms straight-line depreciation charge in 2008/09 (and the associated series for each of the preceding years in the second regulatory period), the revised proposal must be based on either:

- the values set out in Table 2-4 below:

Table 2-4
Commission's Estimates of Depreciation
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09
Depreciation	15,760	16,661	17,743	14,748	16,031

- or values which Power and Water clearly demonstrates to the Commission's satisfaction are superior values when used in conjunction with the October revised Po adjustment model and consistent with all related requirements elsewhere in this Draft Determination.

Amendment 5-3

2.24 With regard to the estimate of actual operating expenditure (“opex”) in 2008/09 (and the associated second regulatory period actual opex series), the revised proposal must be based on *either*:

- the values set out in Table 2-5 below:

Table 2-5
Commission’s Estimates of Actual Opex
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09
Actual opex	41,710	43,215	48,756	56,050	56,998

- *or* values which Power and Water clearly demonstrates to the Commission’s satisfaction are superior values when used in conjunction with the October revised Po adjustment model and consistent with all related requirements elsewhere in this Draft Determination.

Amendment 5-4

2.25 With regard to the ‘return of efficient/prudent operating expenditure’ component of the building blocks calculation for 2008/09, the revised proposal must be based on *either*:

- a percentage factor of 16.9% which is applied to actual opex for 2008/09 in the revised October Po adjustment model in order to arrive at the prudent and efficient level of opex for 2008/09;
- *or* a percentage factor which Power and Water clearly demonstrates to the Commission’s satisfaction is a superior factor based on additional information and estimates on the adverse operating conditions faced by Power and Water relative to its peers.

Amendment 5-5

2.26 With regard to the estimate of actual revenue in 2008/09 (and the associated second regulatory period actual network revenue series), the revised proposal must be based on *either*:

- the values set out in Table 2-6 below:

Table 2-6:
Commission’s Estimates of Actual Revenue^(a)
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09
Actual revenue	79,598	72,406	74,127	78,423	79,994

(a) Includes certain (allowable) non-sales revenue as well as all sales revenue

- *or* values which Power and Water clearly demonstrates to the Commission’s satisfaction are superior values when used in conjunction with the October revised Po adjustment model and consistent with all related requirements elsewhere in this Draft Determination.

2.27 In addition, in view of the unprecedented magnitude of the Po adjustment factor, the Commission also requires one further amendment with respect to the Po adjustment factor before it is prepared to approve any revised regulatory proposal.

2.28 Failure by Power and Water either to comply with this requirement or to provide explanations and statements that the Commission considers satisfactory will result in the

Commission re-considering the Po value suggested by the Commission's estimates of the 2008/09 components of the Po calculation as documented in this chapter.

Amendment 5-6

2.29 Along with its revised regulatory proposal, Power and Water – even if it accepts all of the Commission's estimates of the 2008/09 components of the Po calculation as documented in this chapter – must submit both:

- a fully completed version of the October revised adjustment model, which contains not only all 2008/09 components of the Po calculation but all associated items required to complete the Po calculation and all reconciliations requested in the model; and
- an examination and explanation specifically addressing the main factors accounting for the disparities documented in Table 5-17: Actual Operating and Maintenance Expenditure and Table 5-18: Actual Capital Expenditure in chapter 5 of this paper, along with a statement as to:
 - which of these main explanatory factors were the result of actions or decisions of the owner or board and management of Power and Water, along with a summary of those actions or decisions and the main reasons why such actions or decisions were considered necessary, and
 - which were outside the control (i.e., not a result of the actions) of the owner or board and management of Power and Water.

Chapter 6: all other elements of the IRP

Amendment 6-1

2.30 The revised proposal must be accompanied by a stand-alone document capable of being published on Power and Water's website which detail the principles and methods that Power and Water proposes to apply when establishing the reference tariffs to apply to individual network access tariffs, consistent with clause 75(5) of the NT Code.

Amendment 6-2

2.31 The stand-alone network pricing principles and methods document must include or be accompanied by a framework for negotiating discounted network tariffs to replace the Commission's discounting framework.

Amendment 6-3

2.32 The stand-alone network pricing principles and methods document must include or be accompanied by a capital contributions statement, consistent with clause 81(2) of the NT Code.

Amendment 6-4

2.33 The revised proposal must be accompanied by:

- *indicative* Network Tariff Schedules for the regulatory year commencing 1 July 2009, for direct control services, that are consistent with all other elements of the regulatory proposal;
- a statement of expected network price trends giving an indication of how Power and Water expects network prices – both average prices and the structure of prices – to change over the regulatory period and the reasons for the expected changes; and
- a statement, and a supporting spreadsheet, demonstrating the pricing proposal's compliance with the various control mechanisms established by the Commission's final Methodology Decision and draft determination.

Amendment 6-5

2.34 The activity descriptions of the 'fee-based services' types of alternative control services must be clearly and exhaustively stated, in similar detail to the descriptions in Table 3-1 in chapter 3.

Amendment 6-6

2.35 The activity descriptions of the 'quoted services' types of alternative control services must be clearly and exhaustively stated, in similar detail to the descriptions in Table 3-1 in chapter 3.

Amendment 6-7

2.36 The proposed control mechanism for 'quoted services' types of alternative control services cannot include a WACC-based markup on direct labour and materials costs.

Amendment 6-8

2.37 The cost pass through events proposed by Power and Water additional to the events specified in clause 6.6.1 of the *National Electricity Rules* must be limited to the occurrence of specific events which are unanticipated at the time the regulatory proposal is approved and beyond the control (i.e., not as a result of actions) of Power and Water's owner, board or management and include an explicit materiality provision in relation to the change in cost involved.

CHAPTER

3

SERVICES CLASSIFICATION PROPOSAL**Introduction**

3.1 This chapter contains the Commission's statement of reasons for its decision in relation to Power and Water's services classification proposal.

Requirements of final methodology decision

3.2 The Final Methodology Decision required Power and Water to submit, by 30 June 2008, a 'services classification proposal' to the Commission:

- showing how the network services to be provided by Power and Water should, in Power and Water's opinion, be classified under the classification in Part B, Division 1 of the *National Electricity Rules*; and
- if the proposed classification differed from the Commission's default services classification as set out at Appendix A of the Final Methodology Decision – the reasons for the difference.

3.3 The Part B, Division 1 of the *National Electricity Rules* requires distribution network services to be classified as either:

- direct control services – services that are subject to a direct form of price control. Direct control services are further divided into the following subclasses:
 - standard control services – services that are subject to the weighted average price cap form of price control; and
 - alternative control services – services that do not lend themselves to being regulated by a weighted average price cap form of price control; or
- negotiated network services – services that are not subject to effective competition but do not lend themselves to being regulated by a direct form of price control.

3.4 The Final Methodology Decision also required that the Commission approve the proposal within 30 days of receipt unless it is inconsistent with the requirements in the NT Code or (otherwise) clause 6.2.1 of the *National Electricity Rules*.

Power and Water's services classification proposal

3.5 In its services classification proposal, Power and Water proposed that all of its currently regulated network access services be classified as direct control services. Power and Water provided justification for this classification against the requirements of the *National Electricity Rules* (clause 6.2.1(c)). Power and Water also provided justification for its proposed classification of direct control services between standard and alternative control services against the requirements of the *National Electricity Rules* (clause 6.2.2(c)).

3.6 Power and Water's proposal was consistent with the Commission's default services classification as set out at Appendix A of the Final Methodology Decision, with one exception – the classification of above-standard connection services. These services were classified as a negotiated service in the default classification. Power and Water proposed that these services be classified as an alternative control service.

3.7 Power and Water argued that its proposed classification of above-standard connection services as an alternative control service was consistent with the requirements of the *National Electricity Rules*.

3.8 Power and Water did not propose any negotiated network services.

Commission's interim approval

3.9 In July 2008, the Commission issued an interim approval⁷ of Power and Water's proposed network services classification on the basis that the classification proposed by Power and Water was not inconsistent with the requirements in the NT Code or (otherwise) clause 6.2.1 of the *National Electricity Rules*, subject to the following amendments:

- the classification of high load escort services as an alternative control service rather than an unregulated service; and
- the classification of disconnections and reconnections as a standard control service rather than an alternative control service.⁸

3.10 In amending Power and Water's proposal, the Commission had regard to the Australian Energy Regulator's ("AER") initial interpretation of the *National Electricity Rules*' requirements in considering its proposed position on the services classification for Queensland's distribution service providers, Energex and Ergon Energy, for the next regulatory period.⁹

3.11 In its interim approval, the Commission accepted Power and Water's reasons for its proposed change to the default classification at Appendix A of the Final Methodology Decision.

3.12 The Commission noted in its interim approval that it would consider the services classification further as part of its assessment of the proposed control mechanism for alternative control services. In deciding on the final services classification, the Commission stated that it would consider any submissions received in response to the interim approval and any further developments in relation to the AER's position on these issues.

Power and Water's proposal

3.13 In its IRP, Power and Water accepted the Commission's first proposed amendment to its services classification proposal – the classification of high load escort services as an alternative control service rather than an unregulated service.¹⁰

⁷ The Commission's interim approval of Power and Water's services classification proposal can be viewed on the networks pricing page (2009 Regulatory Reset) of the Commission's website (www.utilicom.nt.gov.au).

⁸ High load escort service is required when a customer (usually a large commercial customer) requests the movement of powerlines to allow a high load to pass underneath. Disconnection and reconnection services relate to the disconnection and subsequent reconnection of a customer's supply, at the request of a retailer or a customer.

⁹ AER's Framework and approach paper, *Classification of services and control mechanisms, Energex and Ergon Energy 2010-15*, July 2008.

¹⁰ IRP, p.5

3.14 However, Power and Water disagreed with the Commission's second proposed amendment – the classification of disconnections and reconnections as a standard control service. Power and Water argued that:

“...disconnections and reconnections are fee for service functions that are provided by Power Networks to Power and Water Retail in the event of a specific query from a customer or retailer. They are very different to connection services – in that connection services are generally not funded by the customer directly and are included as part of the “standard” service. Disconnections and reconnections become quite frequent in a contestable market and therefore are much better dealt with on a fee for service basis than in an environment where no charges are levied.” (p.5)

Commission's assessment

3.15 The AER released its final decision on the services classification for Queensland's distribution service providers in August 2008. The Commission has given further consideration to the network services classification for Power and Water, in light of both the AER's Final Decision and the views expressed by Power and Water in its IRP.

High load escort services

3.16 The Commission considers that Power and Water's high load escort services should be classified as an alternative control service rather than an unregulated service because the depth of competition in the market in the Northern Territory is unclear.

3.17 Power and Water accepted this proposed classification in its IRP.

3.18 The Commission considers that this classification is not inconsistent with the AER's classification of these services in Queensland, where certain aspects of the high load escort service that are currently regulated by the Queensland Competition Authority will be classified as an alternative control service and the aspects that are currently unregulated will be unclassified.¹¹

Disconnections and reconnections

3.19 With regards to the Commission's proposed classification of disconnections and reconnections as a standard control service rather than an alternative control service, the Commission acknowledges that these services are provided in the event of a specific query from a customer or retailer, and that costs can therefore be directly attributed.

3.20 The AER considers that a feature of alternative control services is that the costs of providing these services can be directly attributable to the user and therefore costs do not need to be recovered as part of the 'standard' service charges. In its Final Decision paper, the AER stated that services can be classified as alternative control services on the cost attribution factor alone, even if the service exhibits no signs of competition or potential for competition.¹²

3.21 The Commission therefore accepts that disconnections and reconnections should be classified as an alternative control service as proposed by Power and Water, and should not be included in the connection services group.

¹¹ The AER has not classified high load escort services provided by Energex as these services are currently unregulated. The aspects of Ergon Energy's high load escort service that the AER has classified as an alternative control service are lifting or disconnecting and reconnecting mains.

¹² AER's Final Decision Framework and Approach paper, *Classification of services and control mechanisms, Energex and Ergon Energy 2010-15*, August 2008, p.25

Alternative control services - quoted and fee based services

3.22 Consistent with the AER's Final Decision and Power and Water's proposal, the Commission has also decided to distinguish between two types of alternative control services namely:

- 'quoted services' – services for which their nature and scope cannot be known in advance irrespective of whether it is customer requested or an external event triggers the need (for example, price on application); and
- 'fee based services' – remaining services that are not provided on a quoted basis (Power and Water terms these 'miscellaneous services').

Classification of Power and Water's network services

3.23 Finally, the Commission sees much merit in a detailing of the resultant network services classification similar to that being used by the AER, as set out for Power and Water in Table 3-1.

3.24 The table includes general descriptions of the types of activity that fall within each service group. These activity descriptions have been based on the activity descriptions used by the AER in its final decision on the classification of Energex and Ergon Energy's distribution services for the next regulatory period.

**Table 3-1:
Power and Water's Network Services**

UC proposed group	Activity description	Power and Water proposed group	Current classification	Approved Services Classification
Network Services	Constructing the network	Conveyance services	Regulated network access services	Standard control service
	Maintaining the network	Conveyance services	Regulated network access services	Standard control service
	Operating the network	Conveyance services	Regulated network access services	Standard control service
	Planning the network	Conveyance services	Regulated network access services	Standard control service
	Designing the network	Conveyance services	Regulated network access services	Standard control service
	Emergency response	Not specifically mentioned	Not specifically identified	Standard control service
	Administrative support	Not specifically mentioned	Not specifically identified	Standard control service
Connection Services	Commissioning of connection assets	Standard connection services	Regulated network access services	Standard control service
	Service connection	Standard connection services	Regulated network access services	Standard control service
	Installation inspection	Not specifically mentioned	Regulated network access services	Standard control service
	Operating and maintaining connection assets	Standard connection services	Regulated network access services	Standard control service
Metering Services	Commissioning of metering and load control equipment	Standard connection services	Regulated network access services	Standard control service
	Scheduled meter reading	Not specifically mentioned	Regulated network access services	Standard control service

UC proposed group	Activity description	Power and Water proposed group	Current classification	Approved Services Classification
	Unscheduled metering reading – non-chargeable	Not specifically mentioned	Not specifically identified	Standard control service
	Metering investigation	Not specifically mentioned	Not specifically identified	Standard control service
	Maintaining and repairing meters and control equipment	Not specifically mentioned	Regulated network access services	Standard control service
Quoted Services	High load escorts	Unregulated service	Not specifically identified	Alternative control service
	Covering of low voltage mains	Not specifically mentioned	Not specifically identified	Alternative control service
	Rearrangement of network assets	Excluded services – quoted services	Excluded services	Alternative control service
	Non-standard data services	Not specifically mentioned	Not specifically identified	Alternative control service
	Ancillary metering services	Excluded services – miscellaneous services	Excluded services	Alternative control service
	Supply enhancement	Excluded services – quoted services	Excluded services	Alternative control service
	Metering enhancement	Excluded services – quoted services	Excluded services	Alternative control service
	After hours provision of any service	Excluded services – miscellaneous services	Not specifically identified	Alternative control service
	Emergency recoverable works	Excluded services – quoted services	Not specifically identified	Alternative control service
Fee-based Services	Disconnection and reconnection	Excluded services – miscellaneous services	Excluded services	Alternative control service
	Temporary supply services	Excluded services – miscellaneous services	Excluded services	Alternative control service
	Supply abolishment	Excluded services – miscellaneous services	Not specifically identified	Alternative control service
	Fault response – not service providers fault	Excluded services – miscellaneous services	Not specifically identified	Alternative control service
	Wasted attendance	Excluded services – miscellaneous services	Not specifically identified	Alternative control service
	Provision, construction and maintenance of street lighting assets	Excluded services – miscellaneous services	Not specifically identified	Alternative control service
Unregulated Services	Contestable networks engineering consulting services	Unregulated service	Unregulated service	Unregulated service

Commission's final decision

3.25 The Commission has decided that high load escort services are to be classified as an alternative control service rather than as an unregulated service as initially proposed by Power and Water.

3.26 With this exception, the Commission has decided to approve the network services classification as initially proposed by Power and Water, on the basis that this (amended) classification is not inconsistent with the requirements in the NT Code or (otherwise) clause 6.2.1 of the *National Electricity Rules*.

CHAPTER

4

**KEY PARAMETER VALUES:
FURTHER DECISIONS****Introduction**

4.1 This chapter addresses certain issues which are subject to the Commission's determination under the Final Methodology Decision rather than being left for resolution under the propose/respond framework. These issues are: the initial regulatory asset value, the allowed rate of return on capital, the value of the X factor in the CPI-X price path and certain framework aspects of the calculation of the Po adjustment factor.

Initial regulatory asset value***Requirements of final methodology decision***

4.2 The Final Methodology Decision required that the 2008/09 opening value of the regulatory asset base ("RAB") for use in the Po adjustment model be \$350 million (excluding gifted assets) as at 1 July 2002 (in July 2002 dollars) ("the initial RAB value") rolled forward by Power and Water to 2008/09.

Views submitted by Power and Water

4.3 In its Initial Regulatory Proposal ("IRP"), Power and Water refused to base the calculation of its Po adjustment factor on the initial RAB value of \$350 million:

"Power and Water acknowledges that it has not complied with the requirements of paragraphs 2.24 or 5.39 of the Final Decision Paper, as it has not used the rolled forward 2002 asset base valuation of \$350 million in calculating the Po adjustment factor for standard control services." (p.55)

4.4 Instead, the Po adjustment factor that has been proposed by Power and Water in its IRP is based on an asset valuation prepared by Sinclair Knight Merz (SKM) based on the depreciated optimised replacement cost ("DORC") valuation methodology as at 1 July 2007.

4.5 Power and Water argues as follows:

"One of the main reasons for the engaging SKM, recognised experts in the field of asset valuations, was to address concerns raised by the Commission during the 2004 Regulatory Reset and subsequent Off-ramp Review. ...

[The SKM valuation] is consistent with generally accepted regulatory practice which the Commission must have regard to under Schedule 7, clause 6(2)(c) of the Access Code. ..." (p.2)

"Clause 68 of the Access Code requires the Commission to take into account, when setting either a price or revenue cap, the revenue requirements of the network provider during the relevant years, having regard to nine factors which are listed in the clause.

Clause 68(d) of the Access Code requires the Commission to take into account the network provider's cost of capital applicable to the relevant network access service, having regard to the risk-adjusted rate of return required by investors in commercial enterprises facing similar business risks to those faced by the network provider in the provision of that service. This is not confined to the establishment of an industry standard WACC. The cost of capital is not a rate – it is an annual cost of capital employed. This requires a determination of the value of the capital base.

To meet the requirements of clause 68(d), the Commission must have regard to a fair and market based value of relevant assets. This can only be made based on a consideration or review of the assets involved.

Further, clause 68(e) of the Access Code requires the Commission to take into account the provision of a return on efficient capital investment undertaken by the network provider in order to maintain network capacity that is commensurate with the commercial and regulatory risks involved. ...

A DORC methodology is the valuation methodology most consistent with the Commission's regulatory objectives established under clauses 63 and 68 of the Access Code. Optimised replacement cost (ORC) valuations best replicate the outcomes of a competitive market because they:

- Efficiently compensate the investor for investments over the long run;
- Replicate the lowest cost that would be incurred by a hypothetical new entrant wishing to enter the market, because the assets are optimised to remove obsolete, poorly sized or poorly located assets; and
- Provides the maximum price that a new entrant would be willing to pay the incumbent for existing assets rather than purchasing new assets.

The DORC valuation, as a further refinement of the ORC:

- Addresses issues with depreciated actual cost - the non consistency in relating historical values for capital assets and capital costs with current values for other expenses and revenues; and
- Establishes asset values that minimise incentives for by-pass of the network.

The SKM asset valuation used by Power and Water in this Regulatory Proposal therefore establishes a current, true and correct value of the assets in a workably competitive market which will result in prices:

- That are efficient;
- Meet the efficient long-run costs of providing regulated services, and include a return on investment commensurate with commercial and regulatory risks; and
- That allow Power and Water to replace assets over time.

On this basis the SKM asset valuation meets the regulatory objectives which are established under clause 63 and clause 68 of the Access Code. The SKM Asset Verification and Valuation Report has been included at Appendix C.

There is a wealth of literature on the impact of asset write-downs on investment incentives for regulated companies. In particular, the application of a regulated WACC means that any asset write-down (let alone 30% of the entire asset base [the effective write-down if the Commission rejects this Regulatory Proposal]) results in negative investment returns. In light of this risk, no rational private sector investor would invest. The NEM investment regime reflects this reality." (pp.56-58)

Commission's assessment

4.6 The Commission has already considered the arguments put by Power and Water in the IRP in favour of a DORC valuation of sunk assets as at 1 July 2002, as part of the Commission's Off-ramp Decision.¹³ The Commission stands by its reasoning underlying that Decision and so does not intend to re-open the Decision.

4.7 In particular, the Commission rejects Power and Water's argument that the Off-ramp Decision provides a disincentive to investment. The Commission's approach does not involve writing down the value of any investments made since 1 July 2002,

¹³ Utilities Commission, *Networks Pricing: Asset Valuation Off-Ramp Final Decision Statement of Reasons*, April 2005.

which also happens to be the date of Power and Water's corporatisation by the NT Government. Since corporatisation, all investments made in network assets are recognised at cost under the Commission's approach. In fact, the initial RAB is rolled forward over time according to a simple set of rules widely used by economic regulators across Australia which provide appropriate incentives for future investment by Power and Water.

4.8 The only argument advanced by Power and Water which could justify consideration by the Commission is Power and Water's claim that the Commission's use of the initial RAB:

"...will give rise to financial viability problems for Power Networks" (p56).

4.9 In order for the Commission to evaluate this important issue (in the absence of Power and Water providing its own analysis), on 28 August 2008 the Commission formally requested that Power and Water submit 20-year forecasts – consistent with the most recent Statement of Corporate Intent (SCI) – of key financial variables. Power and Water duly provided the forecasts as requested. The Commission required this information to update the financial model that was used at the time of the Off-ramp Decision.

4.10 In its Off-ramp Decision, the Commission concluded that:

"...the most appropriate single RAB from the plausible range is the asset value that would be sufficient (but no more) to ensure the ongoing financial viability of Power and Water's network business. ...

[By being no less] than a value that ensures the ongoing financial viability of the business, such a RAB would:

- protect the network provider's legitimate business interests and investment in the electricity network,*
- facilitate the financial viability of regulated industries, and*
- ensure the reliability and quality of services and supply in regulated industries.*

[By being no more] than a value that ensures the ongoing financial viability the business, such a RAB would:

- prevent misuse of monopoly or market power, and*
- promote efficiency and competition.*

... the Commission accepts that the financial viability of an asset-intensive business like Power and Water's regulated network business can be interpreted as implying that there is a high level of certainty that the business will be able to pay its bills as they fall due, and have sufficiently strong cashflow to raise the finance required to fund its continuing operations (including growth)."¹⁴

4.11 As explained in the Off-ramp Decision, estimating the probability that an entity may default on its obligations given a particular level of cashflow is similar to the process undertaken by credit rating agencies when assigning a rating to an entity, and hence the methods employed by ratings agencies are commonly drawn upon in any financial viability analysis.

4.12 The minimum strength of the cashflow that is considered desirable is typically defined as that consistent with an investment grade credit rating (that is, using the Standard & Poor's metric, a rating of triple-B or better). In the NT context (which involves slightly higher commercial risk than in the larger, more diversified networks), it is the Commission's view that the ongoing financial viability of Power and Water's regulated networks business requires that business to be in a position to sustainably generate cashflows sufficient to justify at least a single-A credit rating on a stand-alone basis. The RAB required is one that would sustainably generate cashflows sufficient to justify at least a single-A credit rating on a stand-alone basis.

¹⁴ Utilities Commission, *Networks Pricing: Asset Valuation Off-Ramp Final Decision Statement of Reasons*, April 2005, p.27

4.13 The Commission has therefore repeated the financial modelling undertaken for its Off-ramp Decision, updated in the following key respects:

- using Power and Water's latest 20-year financial projections of actual (not efficient) operating expenditures and of planned capital expenditure on network assets to roll forward asset values; and
- using updated benchmark ratios published by Standard & Poor's, the international credit rating agency (sourced from the AER's WACC Review Issues Paper¹⁵).

4.14 The results of this updated modelling indicate that:

- the initial RAB remains capable of generating net cashflows in excess of the minimum necessary to ensure at least a single-A stand-alone credit rating, and so ongoing financial viability; and
- use of the latest DORC value would give rise to cashflows that would sustain a triple-A credit rating for Power and Water's regulated network business. The ultimate beneficiary of such excessive net cashflows would be the NT Government as Power and Water's owner. The resultant excessive dividend stream would be the equivalent of an additional tax on electricity usage in the Northern Territory.

4.15 In view of these results, and having considered the desired outcomes set out in clause 63 of the NT Code, the objectives stated in section 6(2) of the *Utilities Commission Act* and having regard to the factors specified in clause 6(2) of schedule 7 to the NT Code, the Commission considers the initial RAB of \$350 million remains appropriate.

4.16 The modelling undertaken by the Commission is being provided separately to Power and Water for evaluation purposes.

Commission's final decision

4.17 The Commission confirms its earlier decision, made as part of the Final Methodology Decision, that the regulatory value of Power and Water's regulated network assets at the commencement of the 2008/09 year for use when calculating the Po adjustment factor is to be based on the initial RAB value of \$350 million as at 1 July 2002 (in July 2002 dollars), as determined by the Commission's 2005 Off-ramp Decision.

4.18 Accordingly, the Commission will only approve Power and Water's revised regulatory proposal if it rolls forward the initial RAB value of \$350 million using amounts calculated, determined or estimated in accordance with the Commission's Po adjustment model, all related requirements elsewhere in this Draft Determination and, for matters not specifically addressed in the model or this Draft Determination, the requirements of clause 6.5.1 of the *National Electricity Rules*.

Rate of return on capital

Requirements of final methodology decision

4.19 The Final Methodology Decision required that the rate of return on capital for the final year of the second regulatory period must be calculated in accordance with the relevant provisions of chapter 6 of the *National Electricity Rules* as applicable to an ex-post assessment.

¹⁵ AER, *Review of the weighted average cost of capital (WACC) parameters for electricity transmission and distribution: Issues paper*, August 2008, pp. 66-71.

4.20 The Final Methodology Decision also mandated use of the following parameter values in accordance with the transitional arrangements applicable to the AER's upcoming NSW and ACT determinations:

- an equity beta (β_e) of 1.0;
- the market risk premium (MRP) of 6.0%;
- the proportion of debt funding (D/V) of 0.6; and
- the assumed utilisation of imputation credits (γ) of 0.5.

4.21 The Commission considered that the review of weighted average cost of capital (WACC) parameters that the *National Electricity Rules* requires the AER to complete by 31 March 2009 is the appropriate forum for any WACC issues to be comprehensively considered. Accordingly, the Commission indicated that in determining the final values of these parameters for the Draft Determination, the most-recently published views of the AER would be taken into account.

4.22 The Commission's Po adjustment model specifies the method by which the WACC is to be calculated and applied to the RAB to determine the 'return on capital' for the purposes of inclusion in the building block calculation of the revenue requirement for 2008/09, consistent with the relevant provisions of the *National Electricity Rules*.

Views submitted by Power and Water

4.23 Power and Water used the WACC parameter values as prescribed in the Final Methodology Decision, and with regard to other necessary parameters amended only the debt risk premium from 1.1% to 2%. This results in a pre-tax nominal WACC of 10.45% and a pre-tax real WACC of 7.23%.

4.24 Power and Water also noted that the Commission is expected to update the WACC parameters based on latest information in its Final Decision.

4.25 Regarding the risk free rate, Power and Water has argued that:

"Clause 6.5.2(c) of the Rules requires the nominal risk free rate to be the rate determined on a moving average basis from the annualised yield on Commonwealth Government bonds with a maturity of 10 years using the indicative mid rates published by the Reserve Bank of Australia.

Consistent with clause 6.5.2(c) of the Rules, the Commission should therefore estimate the annualised yield on the 10-year government bond as a proxy for the risk free rate. Power and Water suggest using a 30 trading day average as it has extensive regulatory precedent and is regarded as the best balance between current information and avoiding very short term spikes in the rate." (p.61)

4.26 Regarding the debt risk premium, Power and Water has argued that:

"Clause 6.5.2(e) of the Rules states that "The debt risk for a regulatory control period is the premium determined for that regulatory control period by the AER as the margin between the 10 year Commonwealth annualised bond rate and the observed annualised Australian benchmark corporate bond rate for corporate bonds which have a maturity of 10 years and a credit rating from a recognised credit rating agency". Power and Water supports this approach being conducted by the Commission.

Power and Water has not used the value set out in the Commission's Po Adjustment Model of 1.10% for the purposes of this Regulatory Proposal. Instead, it has used a value of 200 basis points, in line with recent regulatory precedent which takes into account the worldwide credit situation. In particular, Power and Water notes a recent memo prepared for the Victorian Regulator by Allen Consulting Group which is supportive of a 200 basis point debt margin." (p.61)

Commission's assessment

4.27 The *National Electricity Rules* provide that the AER must review the WACC parameters to be adopted in determinations for electricity transmission and distribution network service providers. Reviews are to be conducted every five years with the first

review concluded by 31 March 2009, at which time the AER is to release a final decision for both transmission and distribution.

4.28 The AER's reviews are limited by the *National Electricity Rules* to the individual WACC parameters rather than a review of the overarching framework in which the WACC is used. For example, the use of the nominal post-tax framework or the use of the capital asset pricing model (CAPM) for calculating the cost of equity are not subject to review by the AER.

4.29 Instead, the AER may review the values of and methods used to calculate:

- the nominal risk free rate;
- the equity beta;
- the expected market risk premium (MRP);
- the market value of debt as a proportion of the market value of equity and debt (i.e., the gearing ratio);
- the credit rating level to calculate the debt risk premium (DRP); and
- the assumed utilisation of imputation credits (i.e., gamma) to calculate the estimated cost of corporate income tax.

4.30 In the Issues Paper released for its current WACC parameters review,¹⁶ the AER has indicated that it sees merit in also reviewing the methods for determining:

- forecast inflation; and
- debt and equity raising costs.

4.31 The outcome of an AER review will 'lock in' the WACC parameters for all transmission determinations over the relevant period. For distribution determinations, a departure from the outcomes of this review is permissible under the *National Electricity Rules*, but only where there is persuasive evidence to depart from a value or method determined as part of the AER review.

4.32 Key dates for the AER's current WACC parameters review timetable are as follows:

- 9 December 2008 - Publish draft statement of regulatory intent (distribution) and draft decision (transmission) and invite written submissions; and
- 31 March 2009 - Publish final statement of regulatory intent (distribution) and final decision (transmission).

Furthermore, the AER is due to release its final decision for the Final Distribution Determination for NSW and the ACT in April 2009.

4.33 The Commission prefers to await the outcome of these reviews to the maximum extent possible before settling on the WACC values to be used to calculate the Po adjustment factor. As Power and Water is not required to submit its proposed network tariff schedules for 2009/10 until end-April 2009, a mid-April 2009 date is the latest date possible for settling on the WACC values.

Commission's draft decision

4.34 The Commission has decided that its Final Determination will involve a Po adjustment factor which is to be determined immediately prior to Power and Water submitting its final pricing proposal for the regulatory year commencing 1 July 2009 based on the relevant WACC calculated as at a Nominated Date. The Nominated Date will be the earlier of:

¹⁶ AER, *Review of the weighted average cost of capital (WACC) parameters for electricity transmission and distribution: Issues paper*, August 2008, pp. 66-71.

- 24 April 2009; and
- the later of the dates of publication of the AER's final statement of regulatory intent (distribution) published at the completion of its current WACC parameters review and of the Final Distribution Determination for NSW and the ACT.

4.35 Each relevant WACC as at the Nominated Date is to be calculated using the most current formulation adopted by the AER for this purpose and applying:

- for those parameters listed under 'fixed parameters' in Table 4-1 below: the most current AER parameters values published at the time (whether in the form of draft or final values); and
- for those parameters listed under 'market parameters' in Table 4-1 below: the value as measured on the day applying the most current methods adopted by, or proposed for adoption by, the AER for such a purpose.

4.36 For the purposes of the revised regulatory proposal, Power and Water is to take these various parameter values to be as follows:

Table 4-1
WACC Parameters

Fixed parameters	symbol	value
Market risk premium	MRP	6.0%
Utilisation of imputation (franking) credits	g	0.5
Proportion of debt funding	D/V	0.6
Equity beta	β_e	1.0
Debt risk premium	DRP	2.0%
Corporate tax rate	T	30.0%
Debt raising cost benchmark	Dr	0.08%
Market parameters	symbol	value
Inflation rate	f	3.0%
Nominal risk free rate	Rf	6.0%

4.37 Together, these parameter values imply a pre-tax nominal WACC of 10.45% and a pre-tax real WACC of 7.23%.

4.38 The Commission will only approve Power and Water's revised regulatory proposal if it applies these parameter values in conjunction with the Commission's Po adjustment model. The Commission's Final Determination will provide for the Po adjustment factor to be used as a basis of Power and Water's final pricing proposal for the regulatory year commencing 1 July 2009 to be based on the relevant WACC as calculated at the Nominated Date.

X factor

Requirements of final methodology decision

4.39 The Final Methodology Decision stated that the allowed year-on-year movement in the tariff basket would be determined by the CPI minus X control, and that the value of X in the CPI minus X control would be as determined by the Commission using a total factor productivity (TFP) based approach.

4.40 The X factor is comprised of three components as follows:

$$X = X_1 + X_2 - X_3$$

where:

X_1 = the difference between the TFP growth for the electricity distribution industry in Australia and that for the economy as a whole;

X_2 = the difference between the best observed operating expenditure partial productivity level in the electricity distribution industry in Australia and Power and Water's operating expenditure partial productivity level; and

X_3 = the difference between the input price growth for Power and Water and that for the economy as whole.

4.41 For the Final Methodology Decision, a preliminary value of the X factor was estimated by the Commission's consultants GHD Meyrick in order that Power and Water could develop its initial regulatory proposal. GHD Meyrick suggested the following preliminary component values:

- X_1 = 0.0% (compared with 1.75% for the 2004 Reset);
- X_2 = 0.25% (unchanged, as requested, on the 2004 Reset); and
- X_3 = 1.1% (compared with 0% for the 2004 Reset).

4.42 Accordingly, the Final Methodology Decision required the preliminary value of the X factor to be -0.85%, derived as follows:

$$\begin{aligned} X &= X_1 + X_2 - X_3 \\ &= 0.0\% + 0.25\% - 1.1\% \\ &= -0.85\% \end{aligned}$$

This represents a real price *increase* of 0.85% per annum (compared with the real price *decrease* that has been applying during the second regulatory period of 2% per annum).

4.43 The Final Methodology Decision stated that the final X factor (and component values) for use in Power and Water's revised regulatory proposal were to be as determined by the Commission in the Initial Draft Determination.

Views submitted by Power and Water

4.44 Power and Water did not comment directly on the X values included in the initial Po adjustment model.

4.45 Power and Water instead reiterated its criticisms of the TFP foundations of the Commission's approach to setting the X values. In particular, Power and Water criticised the Commission's proposed approach on the grounds that it did not allow for the RAB to be rolled forward through the regulatory period. Specifically, Power and Water claimed that the Commission's approach:

"...does not roll forward Power and Water's RAB between each year of the regulatory control period, meaning that Power and Water's asset base is not assumed to grow in real terms at all over the regulatory period. This is at odds with what Power and Water considers will be the case. The proposed method therefore does not meet Power and Water's requirements to maintain financial capital maintenance, because Power and Water will essentially only receive a return on, and of, capital for 2008-09 expenditure (and the RAB at the start of the regulatory control period), not on its forecast rolled forward RAB." (p.20)

Consultant's recommendation

4.46 GHD Meyrick was requested to make its final recommendation to the Commission on the value of each of the three X components prior to release of the Initial Draft Determination.

4.47 This has seen GHD Meyrick confirm its recommended X factor for the Northern Territory's third regulatory period as -0.85% (i.e., a real price increase of 0.85% or a nominal price increase of CPI + 0.85%) derived as follows:

$$\begin{aligned} X &= X_1 + X_2 - X_3 \\ &= 0\% + 0.25\% - 1.1\% \\ &= -0.85\%. \end{aligned}$$

4.48 GHD Meyrick's full report is available on the Commission's website.

X₁ component

4.49 In finalising the X₁ component recommendation, the Commission requested GHD Meyrick to undertake further reviews of recent studies of electricity distribution TFP in Australasia, North America and Europe. In addition, GHD Meyrick requested data from Power and Water to support the calculation of a TFP index for Power and Water over the last several years, to check Power and Water's recent productivity growth performance for consistency with that observed for network service providers in other jurisdictions.

4.50 GHD Meyrick's assessment is that TFP growth rates of 0.9% and 0.7% per annum are reasonable estimates of the electricity distribution industry's and the economy's TFP performance, respectively, in recent years. This is based on trend growth rates of 0.9% for the electricity distribution industries in New Zealand and the US and a range of 0.4% to 1.3% for sustainable TFP growth in Victoria, and average multifactor productivity growth since 2000 for the market sector as constructed by the ABS.

4.51 While these TFP growth rates produce a productivity differential of 0.2%, GHD Meyrick has recommended that the X₁ component be set at zero in recognition of the data uncertainties involved.

4.52 Furthermore, this 0% recommendation is conservative (i.e., in favour of Power and Water) when Power and Water's TFP performance of 1.1% per annum since 2000 is considered. GHD Meyrick believes that it is appropriate to allow a margin for recent increased input usage possibly contributing to increases in currently unmeasured (in TFP analysis) outputs such as reliability and system security.

X₂ component

4.53 To help finalise recommendations for the X₂ component, the Commission requested GHD Meyrick to undertake an update of the 2003 Meyrick analysis of Power and Water Network's operating expenditure ("opex") productivity gap taking account of operating environment differences. GHD Meyrick was requested to use the updated data for Power and Water and benchmarking data for other businesses rolled forward by adjusting for price movements and, where practical, estimated industry productivity growth.

4.54 GHD Meyrick's results show that Power and Water has the highest unit opex of the 13 included electricity distribution businesses, even after allowing for Power and Water's adverse operating conditions and transmission equivalent operations. For this reason, GHD Meyrick preferred to take the average of the four rural electricity distribution businesses that have the most similar customer densities to Power and Water as the relevant benchmark. These electricity distribution businesses are Ergon Energy, Country Energy, Powercor and SP AusNet. For Power and Water to reach the same unit opex as its four peers, after allowing for Power and Water's adverse operating conditions and transmission equivalent operations, GHD Meyrick estimates that Power and Water would have to reduce its unit opex by 26.9%. This identified reduction in annual unit opex is larger than that identified in the 2003 analysis because it now appears that Power and Water understated its corporate overhead and IT services cost allocations in the earlier study.

4.55 GHD Meyrick has recommended retaining the conservative X₂ component of 0.25% from the second regulatory period to account for 10 percentage points of the

identified 26.9% opex efficiency gap over a 10 year period. Its recommendation is that the remaining 16.9 percentage points of the identified efficiency gap should be incorporated in the Po adjustment at the end of the second regulatory period.

4.56 These recommendations are based on setting the conservative benchmark of the average opex efficiency of the four electricity distribution businesses with customer density closest to Power and Water and assuming those electricity distribution businesses have had no opex partial productivity growth since 2003.

X₃ component

4.57 The Commission requested GHD Meyrick to examine available evidence on movements in electricity distribution input prices relative to the economy as a whole before finalising its recommendation on the X₃ component.

4.58 GHD Meyrick considers that extrapolation of the electricity, gas and water (“EGW”) sector labour price index differential relative to the labour price index for all industries for the period 2002–07 represents the best forecast of the opex price differential for the third regulatory period. Similarly, it considered that extrapolation of the EGW sector capital goods price index differential relative to the capital goods price index for all industries for the period 2002–07 represents the best forecast of the capital price differential for the third regulatory period.

4.59 Between 2002 and 2007, the labour price index for electricity, gas and water increased by an average annual rate of 4.59% compared to an increase for all industries of 3.72% producing a labour price differential of 0.89%. This labour price differential is also of similar magnitude to those obtained from recent forecasting exercises.

4.60 The capital goods price index for electricity, gas and water increased annually by 5.27% on average between 2002 and 2007 compared to an increase of 4.07% for all industries producing a capital input price differential of 1.19%. Based on available electricity industry capital price forecasts, GHD Meyrick considered its use of the ABS EGW capital price index growth for 2002–07 to forecast electricity distribution capital prices for the third regulatory period as a conservative approach.

4.61 GHD Meyrick concluded that, assuming that opex accounts for one third of electricity distribution costs while capital costs account for the remaining two thirds, it was reasonable to consider that available data produces an overall input price differential or X₃ component estimate of 1.1%.

Commission’s assessment

4.62 The Commission has previously considered and rejected Power and Water’s arguments that the Commission’s use of a TFP-based X factor does not consider future costs or the roll forward of Power and Water’s regulated asset base between each year of the regulatory period.

4.63 To reiterate, if Power and Water’s contention regarding expected future cost pressures is supported by the evidence available to the Commission, under the Commission’s approach (through the X₃ component) electricity distribution prices will be allowed to increase in real terms during the third regulatory period. Revenue will be aligned with efficient costs through the Po adjustment, such that real revenue will then increase more than proportionately with increases in output in recognition of the trend to slower productivity growth and higher input price increases facing the electricity distribution industry.

4.64 Likewise, once revenue is aligned with efficient costs for the final year of the second regulatory period via the Po adjustment, the Commission’s approach involves network tariffs being adjusted year by year over the third regulatory period on the basis of a weighted average price cap using productivity-based methods. Because a price cap mechanism is being used, revenue is set on a per unit of output basis rather than as an absolute amount (as would be the case if a revenue cap was being used instead of a price

cap). This means that as output grows over time, so does allowed revenue and, correspondingly, allowed costs. Implicitly, the RAB is allowed to grow in line with output (adjusted for forecast productivity growth) rather than being held constant in real terms as implied by Power and Water.

4.65 In productivity analysis, the value of the capital stock (the equivalent of the RAB) is rolled forward using actual capital expenditure and an assumed rate of economic depreciation. The annual user cost of capital is then determined by multiplying the value of the capital stock each year by the depreciation rate plus a rate reflecting the opportunity cost of capital. This allows a return of and return on capital in a process broadly equivalent to the building block approach.

4.66 Productivity- and building block-based approaches differ mainly because the productivity approach sets the future change in allowed revenue (and, thus, costs) on the basis of industry-wide developments rather than specific forecasts of the business' own costs.

4.67 After carefully considering the GHD Meyrick analysis and recommendations, the Commission is confident that the X factor estimated by GHD Meyrick – a recognised expert in the field – and derived by reference to industry-wide total factor productivity and inflation provides a no less (statistically) unbiased estimate of the change in Power and Water's unit costs over the regulatory period than would be derived under a building block approach.

Commission's final decision

4.68 The Commission has decided that the following component values are to be used for the purposes of calculating the value of the X factor to apply during the third regulatory period:

- $X_1 = 0.0\%$;
- $X_2 = 0.25\%$; and
- $X_3 = 1.1\%$

where:

X_1 = the difference between the TFP growth for the electricity distribution industry in Australia and that for the economy as a whole;

X_2 = the difference between the best observed operating expenditure partial productivity level in the electricity distribution industry in Australia and Power and Water's operating expenditure partial productivity level; and

X_3 = the difference between the input price growth for Power and Water and that for the economy as whole;

and

$$X = X_1 + X_2 - X_3$$

Other aspects of the Po adjustment model

Requirements of final methodology decision

4.69 The Commission's Po adjustment model ("the model") sets out the manner in which Power and Water's efficient costs of supplying standard control services in a single regulatory year are to be calculated for the purposes of the 2009 Reset.

4.70 Central to the Commission's Po adjustment model is the following formulation of the building blocks method for calculating the required level of revenue in a particular year:

Required revenue =

Return on opening capital

plus Return on new capital

plus Return of capital (depreciation)

plus Return of efficient/prudent operating expenditure.

Corrections to the Po adjustment model

4.71 The Final Methodology Decision made provision for Power and Water (and other stakeholders) to request corrections and modifications to the Po adjustment model issued by the Commission where this is considered necessary to achieve consistency with the applicable provisions of the *National Electricity Rules* or of the NT Code. Requests for corrections or modifications were to be lodged with the Commission by no later than 30 June 2008.

4.72 Power and Water sought – and the Commission agreed – to a number of minor changes to the Po adjustment model in June 2008.

4.73 First, to reflect Power and Water’s practice of calculating depreciation at the individual asset level in its asset register, the Commission agreed to Power and Water’s actual depreciation becoming an input into the model. In the initial version of the model, depreciation was calculated based on average remaining asset lives for each of Power and Water’s asset classes.

4.74 Secondly, calculation of 2008/09 annual depreciation (return of capital) was amended to include the depreciation of 2008/09 new capital. In the initial version of the model, this component of annual depreciation in 2008/09 was unintentionally omitted.

4.75 Thirdly, the Commission sought to correct the 2008/09 new capital formula so that only depreciation of 2008/09 new capital is subtracted from the 2008/09 new capital value. In the initial version of the model, total annual depreciation was incorrectly subtracted from the 2008/09 new capital value.

4.76 The Commission requested its consultants ACIL Tasman to undertake an appraisal of Power and Water’s proposed Po adjustment and make a recommendation to the Commission as to whether that proposed adjustment should be accepted or rejected (and why).

4.77 During its work for the Commission, ACIL Tasman also identified an error in the Commission’s Po adjustment model which had the effect of erroneously including in the ‘return of’ capital component of the building blocks calculation all of the nominal straight-line depreciation amount rather than only regulatory depreciation. Regulatory depreciation is nominal straight-line depreciation *less* the holding gain (or indexation) component. This error would have resulted in Power and Water being compensated for the depreciation of its assets, but not having this compensation reduced by the amount by which the value of these assets has appreciated on account of the holding gain.

4.78 When correcting for this error in the Commission’s Po adjustment model (as shown in Table 4-2), Power and Water’s IRP proposed a Po adjustment factor of 61.4%.

Table 4-2
Impact of Modelling Correction

2008/09	\$000s	Po
Actual revenue	76,034	
Original required revenue	140,871	85.3%
<u>less</u> Holding gains included in nominal depreciation	-18,187	-23.9%
Corrected required revenue	122,684	61.4%

Commission's final decision

4.79 The Commission acknowledges that the Po adjustment model that it required Power and Water to use for the purposes of the initial regulatory proposal contained an error which in effect double-counted the indexation/holding gain element of the 2008/09 opening RAB. The indexation/holding gain element of the opening RAB value is already allowed for under the 'return on opening capital' element of the building blocks calculation when that element is based on the use of a nominal as opposed to real-terms WACC. Annual straight-line depreciation of any indexed asset values contains a similar indexation/holding gain element. The AER correctly deals with this by netting the indexation/holding gains element off annual depreciation.¹⁷

4.80 The Commission has decided that, for the purpose of calculating the Po adjustment factor, the building blocks calculation of required revenue (R*) in 2008/09 is best modified by explicitly recognising the role of the indexation/holding gain element of the year's opening RAB value as follows:

Required revenue =

Return on opening capital

plus Return on new capital

plus Return of capital (nominal straight-line depreciation on opening RAB)

less Holding gains included in nominal depreciation that are also included in the 'return on opening capital' (as measured by the indexation of the year's opening RAB value)

plus Return of efficient/prudent operating expenditure.

4.81 Accordingly, the Commission has modified its Po adjustment model, with the resultant version of the model referred to throughout this Draft Determination paper as the "October revised Po adjustment model". The Commission will only approve Power and Water's revised regulatory proposal if, for standard control services, the proposed Po adjustment factor is calculated strictly in accordance with the Commission's October revised Po adjustment model, and all related requirements elsewhere in this Draft Determination.

¹⁷ The AER terms straight line depreciation less the holding gain as "regulatory depreciation". The Commission has not adopted this terminology.

CHAPTER

5

Po ADJUSTMENT FOR STANDARD CONTROL SERVICES

Introduction

5.1 As required by the Final Methodology Decision, the initial regulatory proposal (“IRP”) submitted by Power and Water on 22 August 2008 included, in relation to standard control services, a proposed Po adjustment factor calculated using the Commission’s Po adjustment model.

5.2 This chapter contains the Commission’s statement of reasons for its decision in relation to the Po adjustment factor proposed by Power and Water.

5.3 The Po adjustment factor to apply to the tariff basket in 2008/09 (the final year of the second regulatory period) is calculated as follows:

$$Po = (R^* - R)/R$$

where:

R* is the estimated total efficient cost of Power and Water supplying standard control services in 2008/09 (in \$ millions); and

R is the estimated total revenue derived by Power and Water from the existing prices applying to standard control services in 2008/09 (in \$ millions).

5.4 The Commission’s Po adjustment model¹⁸ calculates the Po adjustment factor using the following building blocks specification of required revenue (R*) in 2008/09:

Required revenue =

Return on opening capital

plus Return on new capital

plus Return of capital (depreciation)

less Holding gains included in nominal depreciation that are also included in the ‘return on opening capital’ (as measured by the indexation of the year’s opening RAB value)

plus Return of efficient/prudent operating expenditure.

5.5 To be approved by the Commission, the proposed Po adjustment factor must comply with the Final Methodology Decision, any accompanying regulatory information instrument and the approved services classification.

¹⁸ The Commission’s Po adjustment model, which was published in conjunction with the Final Methodology Decision, sets out the manner in which Power and Water’s efficient costs of supplying standard control services in a single regulatory year are to be calculated.

5.6 For standard control services:

- the proposed Po adjustment factor must:
 - be calculated in accordance with the Commission's Po adjustment model; and
 - comply with any additional requirements of any accompanying regulatory information instrument issued by the Commission.

5.7 If the Commission refuses to approve an amount or value, the substitute amount or value on which a determination is based will be:

- calculated on the basis of all applicable approved components of the regulatory proposal; and
- amended from that basis only to the extent necessary to enable the amount or value to be approved in accordance with the Final Methodology Decision or (otherwise and as applicable) the relevant provisions of chapter 6 of the *National Electricity Rules* or the NT Code's pricing principles.

5.8 The Commission requested its consultants ACIL Tasman, as the Commission's expert adviser on this matter, to undertake an appraisal of the proposed Po adjustment factor and make a recommendation to the Commission as to whether that proposed adjustment factor should be accepted or rejected (and why).

2008/09 opening RAB value

Introduction

5.9 Both the 'return on opening capital' and the 'return of capital (or depreciation)' building block components depend crucially on the opening value of the regulatory asset base ("RAB") for the final year of the second regulatory period (2008/09). This 2008/09 opening value is the RAB value as at 1 July 2008.

Requirements of final methodology decision

5.10 The Final Methodology Decision required the 1 July 2008 RAB value for the purposes of calculating the Po adjustment factor to be the initial RAB value (as at 1 July 2002) of \$350 million (in July 2002 dollars) rolled forward using amounts calculated, determined or estimated in accordance with the requirements of clause 6.5.1 of the *National Electricity Rules*.

5.11 The Commission has provided its reasons for confirming the initial RAB value (as at 1 July 2002) at \$350 million in chapter 4. The focus of this section is on the roll-forward mechanism used by Power and Water.

5.12 The roll forward mechanism specified in the *National Electricity Rules* effectively involves the following:

closing RAB value =

opening RAB value

plus the indexation of the year's opening RAB value

plus annual net capital expenditure (= annual gross capital expenditure net of any asset donations or contributions)

less the written down regulatory value of any assets disposed of during the year

less annual nominal straight-line depreciation on the opening RAB value.

5.13 The depreciation element of the roll forward is dealt with in the following section.

Power and Water's proposal

5.14 Power and Water's proposed 2008/09 opening RAB value is \$606.2 million.

5.15 Power and Water did not roll forward the initial RAB value as at 1 July 2002 annually through to 2008/09. Instead, its IRP derived the 2008/09 opening RAB value by starting with an opening asset value as at 1 July 2007 which was then rolled forward to 1 July 2008.

5.16 Power and Water's roll forward is summarised in Table 5-1.

**Table 5-1
Power and Water's RAB Roll Forward**

(\$'000)	year's opening RAB value	plus indexation of opening value	plus annual net capex (a)	less asset disposals (b)	less annual dep'n of assets (c)	equals year's closing RAB value
2002/03	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2003/04	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2004/05	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2005/06	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2006/07	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2007/08	562,335	15,216	44,889	0	16,199	606,242
2008/09	606,242					

(a) annual gross capital expenditure net of any asset donations or contributions.

(b) written down regulatory value of any assets disposed of during the year.

(c) annual nominal straight-line depreciation on the opening RAB value.

Consultant's recommendation

5.17 ACIL Tasman observed that Power and Water's:

"...abandonment of the initial Regulatory Asset Base of \$350 million as at 1 July 2002 and Power and Water's refusal to provide any information which would assist ACIL Tasman or the UC in rolling the Regulatory Asset Base forward from the previous price control."(p.2)

represented the "most material" failure to comply with the methodology in the Po workbook.

5.18 ACIL Tasman was able to perform this roll forward using information submitted in past regulatory accounts by making the following simplifying assumptions:

- *Asset additions are in the same proportion as the calculated 1 July 2002 asset categories.*
- *Solver [in MS Excel] was used to determine the 1 July 2002 asset values subject to:*
 - *Total must sum to \$350 million*
 - *Non-negativity constraint*
 - *Minimising the sum of squared differences between estimated 1 July 2007 asset proportions and the SKM 1 July 2007 asset proportions (i.e. implying that at 1 July 2007 the rolled-forward RAB asset categories are in the same proportion as the SKM report)*
- *Regulatory depreciation was calculated as straight-line nominal depreciation less inflation of opening assets." (p.5)*

5.19 ACIL Tasman also identified some errors in Power and Water's calculation of depreciation. To check that Power and Water was using an appropriate methodology,

ACIL Tasman re-performed the calculation of straight-line depreciation. In calculating this, ACIL Tasman used the SKM valuations of remaining life and standard life in 2007, assuming that the remaining life at 2002 was simply five years' higher than the remaining life in 2007. New additions received half a year's depreciation charge, based on the standard life of assets for that category – again from the SKM valuation. This calculation suggested that Power and Water was underestimating nominal straight-line depreciation in its IRP by 16% to 19%.

5.20 Offsetting this understatement was Power and Water's use of the SKM valuation rather than the \$350 million initial RAB value.

5.21 The results of ACIL Tasman's roll forward are summarised in Table 5-2.

Table 5-2
ACIL Tasman's Estimation of the RAB Roll Forward

(\$'000)	year's opening RAB value	plus indexation of opening value	plus annual net capex (a)	less asset disposals (b)	less annual dep'n of assets (c)	equals year's closing RAB value
2002/03	350,000	10,813	15,078	0	14,338	361,553
2003/04	361,553	8,513	17,266	0	15,054	372,278
2004/05	372,278	9,083	11,499	0	15,760	377,100
2005/06	377,100	12,061	22,385	0	16,661	394,885
2006/07	394,885	11,522	28,351	0	17,743	417,015
2007/08	417,015	11,284	44,889	0	14,748	458,441
2008/09	458,441					

(a) annual gross capital expenditure net of any asset donations or contributions

(b) written down regulatory value of any assets disposed of during the year

(c) nominal straight-line depreciation on the opening RAB

Commission's assessment

5.22 The fact that ACIL Tasman was able to perform the roll forward does not mitigate the fact that Power and Water has performed this analysis itself and prefers not to provide it to ACIL Tasman or the Commission.

5.23 Ignoring the initial RAB value used, Power and Water:

- did not submit its capital expenditure for the required period (only providing capex for 2006/07, 2007/08 and 2008/09);
- did not report/explicitly exclude asset disposals or capital contributions for the period;
- appear to have estimated depreciation; and
- did not separate out the depreciation on the rolled forward asset base and new additions each year.

5.24 As shown in Table 5-3, after correcting for Power and Water's depreciation under-estimation in the Po adjustment model, the impact of using the \$350 million valuation as at 1 July 2002, rather than Power and Water's submitted SKM asset valuation, results in a 24% decrease to the opening RAB in 2008/09. There is also a commensurate reduction to the return on opening capital in 2008/09.

Table 5-3
2008/09 Opening RAB
Summary of Adjustments

	(\$'000)
Power and Water proposed opening RAB	606,242
Adjustment of RAB to reflect \$350m valuation at 1 July 2002	-145,147
Corrections to depreciation calculation	-2,654
Adjusted opening RAB	458,441

5.25 For the purposes of this Draft Determination, the Commission accepts ACIL Tasman's estimate of the 2008/09 opening RAB value of \$458.4 million.

5.26 No adjustments have been proposed to the capital expenditure values submitted by Power and Water. However, the Commission assumes that the capital expenditure values submitted by Power and Water in its IRP are gross capex. This is because Power and Water's model implies that there have not been any asset disposals or capital contributions since 2002.

5.27 Despite this, there is evidence that Power and Water has disposed of some assets since 2002. The RAB roll forward submitted by Power and Water as part of its 2006/07 Regulatory Accounts includes -\$0.2 million of disposals in 2006/07, and Power and Water included Proceeds from Asset Disposals in 2006/07 and 2007/08 in the Po model revenue sheet.

5.28 As shown in Table 5-4, there is also a 24% reduction in 2008/09 'indexation of the opening RAB value' component of the required revenue calculation when the initial RAB value is set at \$350 million as at 1 July 2002, rather than Power and Water's submitted SKM asset valuation:

Table 5-4
2008/09 Indexation of the Year's Opening RAB value
Summary of Adjustments

	(\$'000)
Indexation of the year's opening RAB value implicit in Power and Water's figuring	18,187
Adjustment due to setting initial RAB at \$350m at 1 July 2002	-4,434
Adjusted indexation of the year's opening RAB value	13,753

5.29 The 2008/09 amount of the 'indexation of the year's opening RAB value' component of the RAB roll forward also decreases due to the lower RAB. As explained in chapter 4, the holding gains element is netted off the annual depreciation as it is already allowed for under the 'return on opening capital' element of the building blocks calculation. Consequently, a decrease in the holding gains amount results in an increase to required revenue.

Commission's draft decision

5.30 The Commission approves certain aspects of the IRP, namely:

- the series of gross capital expenditures ("gross capex") on regulated network assets, over the second regulatory period submitted by Power and Water for use in the RAB roll forward, namely:

Table 5-5
Annual Gross Capital Expenditure^(a)
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08
Gross capex	11,499	22,385	28,351	44,889

(a) Before deduction of any asset disposals or (included) gifted assets during the year.

5.31 However, the Commission is not satisfied that in any other respects the IRP as submitted meets the requirements established in the Final Methodology Decision in relation to the 2008/09 opening RAB value. The Commission requires the following changes to the regulatory proposal before it is prepared to approve any revised regulatory proposal:

Amendment 5-1

5.32 With regard to the year's opening RAB value for 2008/09 (and the associated series for each of the preceding years in the second regulatory period), the revised proposal must be based on *either*:

- the values set out in Table 5-6 below:

Table 5-6
Commission's Estimates of Opening RAB Values
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09
Opening RAB	372,278	377,100	394,885	417,015	458,441

- *or* values which Power and Water clearly demonstrates to the Commission's satisfaction are superior values when used in conjunction with the October revised Po adjustment model and consistent with all related requirements elsewhere in this Draft Determination.

5.33 In order to "...clearly demonstrates to the Commission's satisfaction" that proposed replacement values are "superior" to the Commission's estimates, Power and Water must correctly fill out the roll-forward calculations in the Po adjustment model, including all capital contributions and asset disposals for each of the asset classes over the time period, and using the depreciation calculations and presentation in the model, and to complete all associated reconciliations as part of its documentation.

2008/09 return on new capital

Requirements of final methodology decision

5.34 The Commission's Po adjustment model involves the 'return on new capital' component of required revenue being calculated as follows:

2008/09 net capex less depreciation of 2008-09 new capital

multiplied by $((1 + \text{pre-tax real WACC})^{0.5} - 1)$.

5.35 Calculation of the pre-tax real WACC has already been addressed in chapter 4.

5.36 This section deals with the 2008/09 net capex amount on which the 'return on new capital' component of required revenue is calculated.

5.37 The Final Methodology Decision did not explicitly state the requirements to be met by the 2008/09 net capex being used in Power and Water's regulatory proposal. However, the Final Methodology decision provided that, where a regulatory proposal relates to a

matter not specified or prescribed in the Final Decision, the Commission will refuse to approve that matter only if:

- where the matter is subject to a specific requirement in the NT Code – it is inconsistent with the Code’s requirement;
- where the matter is not subject to any specific requirement in the NT Code – it is inconsistent with the relevant provision of chapter 6 of the *National Electricity Rules*; or
- where the matter is not subject to any specific requirement in either the NT Code or chapter 6 of the *National Electricity Rules* – it is inconsistent with the NT Code’s pricing principles.

Power and Water’s proposal

5.38 The net capital expenditure figure included in the Po adjustment model for 2008/09 was \$56.6 million. This compares with \$28.4 million in 2006/07 and \$44.9 million in 2007/08.

5.39 Power and Water stated that:

“Despite the higher forecast expenditure, the 2008-09 expenditure forecast is both efficient and prudent and meets the required capital expenditure objectives, factors and criteria set out in the Rules.

The Commission has not explicitly requested that Power and Water explain its forecast capital expenditure for 2008-09 in terms of the requirements of clause 6.5.7 of the Rules. However, there is a very strong relationship between the size of the Po and the 2008-09 capital expenditure forecast.

For that reason, Power and Water has undertaken a detailed review of the 2008-09 capital expenditure program on the basis that it considers that paragraphs 2.22 and 3.35 of the Final Decision Paper require that Power and Water must comply with Chapter 6 of the Rules in the event that a matter has been dealt with in the Rules but has not been dealt with in the Access Code. The Rules require that capital expenditure be justified against clause 6.5.7.” (p.49)

5.40 Power and Water acknowledged that its capital expenditure has increased rapidly since 2005/06. Power and Water explained that this increase, in particular the increase in expenditure between 2006/07 and 2007/08, is attributable to Power and Water’s movement away from a funding approach used prior to 2007/08 which involved determining an aggregate capital spend based on a number of financial indicators which was then allocated among Power and Water’s various business arms. The movement away from this approach to an ‘objective need’ and ‘capacity to deliver’ funding methodology in 2006/07 identified a significant increase in capital expenditure for 2007/08.

Consultant’s recommendation

5.41 With regard to Power and Water’s capital improvement plan and the results of moving away from the funding envelope which was self-imposed prior to 2007/08, ACIL Tasman’s assessment was that:

“It seems reasonable that the capital expenditure scheduled for completion in 2008/09 represents a degree of “catch-up” expenditure, although the IRP and discussion with Power and Water suggest that going forward capital expenditure will continue to be of this magnitude.” (p.7)

5.42 ACIL Tasman did not undertake an efficiency audit of capital expenditure planned in 2008/09. They did however observe that:

“We have some concerns regarding Power and Water’s ability to manage so many projects in one year, although we note that many of these expenditures relate to the continuation of projects which are already underway (for example the activities related to the Ron Goodin Power Station, which represents 30% of planned expenditure). Minor capital works projects represent another 28% of total expenditure, and we have some concerns that these might not all be completed within 2008/9. However, such questions

require a full engineering efficiency audit. Consequently, we propose no adjustments to the capital expenditure used for the roll forward.” (p.7)

Commission’s consideration

5.43 Power and Water’s 2008/09 net capex figure of \$56.6 million represents a 26% annual increase over the 2007/08 level, which in turn was a 58% increase on the 2006/07 level, which in turn was a 27% increase on the 2005/06 level. The 2008/09 net capex figure represents an average annualised increase of 36% on the \$22.4 million level in 2005/06.

5.44 The Commission is not convinced that these very high annual levels of capex will be maintained, as they appear to mainly reflect a catch up on account of under-spending on asset renewal and replacement in earlier years. The Corporation’s SCI forecasts imply some easing back in overall capex spending. Nevertheless, the Commission is prepared to accept the IRP estimate as a basis for calculating the ‘return on new capital’ component of required revenue in 2008/09. It seems likely that any under-spending against this figure in 2008/09 will be incurred in the following year or two.

Draft decision

5.45 The Commission approves the submitted 2008/09 estimate of gross capital expenditure (“gross capex”) of \$56.582 million for use in calculating the 2008/09 ‘return on new capital’ component of required revenue.

2008/09 return of capital

Requirements of final methodology decision

5.46 The Commission’s Po adjustment model requires Power and Water to show the calculation of its nominal straight-line depreciation on the regulatory asset base.

5.47 The Final Methodology Decision required that, with respect to this annual depreciation expense, the depreciation schedules used must conform with the requirements set out in clause 6.5.5(b) of the *National Electricity Rules*.

Power and Water’s proposal

5.48 Power and Water’s proposed depreciation amount for 2008/09 is \$18.0 million.

5.49 The Commission’s amended Po adjustment model did not calculate the annual depreciation expense, but allowed Power and Water to determine the values of the annual depreciation expense outside of the model and to input these values into the model for the purposes of determining the 2008/09 building block revenue requirement. This was done on the basis that Power and Water possessed the capacity to calculate regulatory depreciation more accurately on an asset by asset basis.

5.50 As it turned out, because Power and Water used the SKM asset valuation, it reverted to calculating depreciation in the Po adjustment model. This saw Power and Water insert formulae into the Po adjustment model.

5.51 Power and Water explained its calculations as follows:

- “ • *Depreciation for the 2007-08 year by dividing the opening asset base as at 1 July 2007 by the estimated remaining useful lives of assets as recommended by SKM;*
and
- *Depreciation for 2008-09 as comprising depreciation on the capital expenditure during 2007-08 and depreciation on half of the capital expenditure in 2008-09.”*
(p.63)

5.52 Power and Water’s justified its approach to determining depreciation as meeting the requirements of clause 6.5.5(b) of the *National Electricity Rules* as follows:

- “ • *Power and Water’s depreciation values reflect the nature of its assets, and category of assets, over their economic lives, as is required by clause 6.5.5(b)(1) of the Rules. This is because it has applied a straight line approach to depreciating its assets;*
- *The sum of the real value of the depreciation that is attributable to any of Power and Water’s assets or categories of assets is equivalent to the value at which the asset or category of asset was first included in the regulatory asset base, as is required by clause 6.5.5(b)(2) of the Rules. This is because Power and Water has determined its depreciation values by using:*
 - o *A straight line approach to depreciating its individual assets;*
 - o *Values for the existing asset base that were recommended by SKM;*
 - o *Values for capital expenditure for 2008-09 that are explained and justified in this Regulatory Proposal; and*
 - o *Remaining and useful asset lives that were determined by SKM.*
- *The economic lives of the relevant assets and the depreciation methods and rates underpinning the calculation of Power and Water’s depreciation are consistent with those determined for the same assets on a prospective basis, as is required by clause 6.5.5(b)(3) of the Rules. This is because Power and Water has determined its depreciation values by using:*
 - o *A straight line approach to depreciating its individual assets; and*
 - o *Remaining and useful asset lives that were approved by the Commission and determined by SKM.”(pp.63-64)*

Consultant’s recommendation

5.53 Based on the roll forward of the \$350 million initial RAB value, ACIL Tasman estimated that the nominal straight-line depreciation amount on the 2008/09 opening RAB value was \$16.0 million.¹⁹

“In calculating this ACIL Tasman used the SKM valuations of remaining life and standard life, assuming that the remaining life at 2002 was simply five years’ higher than the remaining life in 2007. New additions received half a year’s depreciation charge, based on the standard life of assets for that category – again from the SKM valuation.” (p.8)

5.54 In addition to the role played by Power and Water’s use of a different initial RAB value, ACIL Tasman summarised the deficiencies in Power and Water’s calculation in the following terms:

“...[it] did not separate out depreciation on the rolled forward asset base and new additions each year, and did not clearly demonstrate that the calculations were correct and based on nominal asset values. Some small errors were also identified in the Power and Water calculation.” (p.8)

Commission’s assessment

5.55 The Commission is persuaded that Power and Water under-estimated its nominal straight-line depreciation in the Po adjustment model. This offsets to a degree the over-estimation of the depreciation of sunk assets (i.e., pre-2002 assets) when based on the 2007 DORC valuation.

5.56 As shown in Table 5-7, the overall impact of these two adjustments is a 2008/09 return on capital that is 10.8% below the figure proposed by Power and Water in its IRP.

¹⁹ There is a decrease in the 2007/08 straight-line depreciation estimate in the roll forward due to a significant group of assets in the initial \$350 million initial RAB reaching the end of their economic lives in 2007/08.

Table 5-7
2008/09 Return of Capital (Depreciation)
Summary of Adjustments

	(\$'000)
Power and Water proposed annual depreciation	17,978
Adjustment to correct Power and Water's depreciation understatement	2,693
Adjustment to depreciation on revised RAB to reflect \$350m valuation at 1 July 2002	-4,640
Adjusted Return of Capital (Depreciation)	16,031

Commission's draft decision

5.57 The Commission is not satisfied that the IRP as submitted meets the requirements established in the Final Methodology Decision in relation to the 2008/09 return of capital component. The Commission requires the following change to the regulatory proposal before it is prepared to approve any revised regulatory proposal:

Amendment 5-2

5.58 With regard to the annual nominal-terms straight-line depreciation charge in 2008/09 (and the associated series for each of the preceding years in the second regulatory period), the revised proposal must be based on *either*:

- the values set out in Table 5-8 below:

Table 5-8
Commission's Estimates of Depreciation
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09
Depreciation	15,760	16,661	17,743	14,748	16,031

- *or* values which Power and Water clearly demonstrates to the Commission's satisfaction are superior values when used in conjunction with the October revised Po adjustment model and consistent with all related requirements elsewhere in this Draft Determination.

2008/09 operating expenditure

Requirements of final methodology decision

5.59 The Final Methodology Decision required that, with respect to estimated operating expenditure, amounts calculated, determined or estimated must be consistent with:

- the operating expenditure criteria stated in clause 6.5.6(c) of the *National Electricity Rules*;
- the manner used to calculate the X₂ value underlying the X factor as determined by the Commission; and
- Power and Water's approved cost allocation procedures.

5.60 Specifically, the operating expenditure criteria stated in clause 6.5.6(c) of the *National Electricity Rules* require that operating expenditure must reasonably reflect:

- the efficient costs of achieving the operating expenditure objectives (as stated in clause 6.5.6(a) of the *National Electricity Rules*);

- the costs that a prudent operator in the network service provider's circumstances would require to achieve the operating expenditure objectives; and
- a realistic expectation of the demand forecast and cost inputs required to achieve the operating expenditure objectives.

5.61 With regard to whether operating expenditure is prudent or efficient, the Final Methodology Decision also required these matters to be addressed in a manner consistent with the calculation of the X_2 value underlying the X factor that has been determined by the Commission. To this end, the Commission formally requested its TFP advisor GHD Meyrick to take responsibility not only for recommending the X_2 value – see chapter 4 – but also for assessing the proportionate (%) 'efficiency' adjustment necessary to the estimated actual aggregate operating expenditure (for 2008/09) used to calculate the Po adjustment factor. The intention of this was to ensure absolute consistency with the finalised X_2 value.

Power and Water's proposal

5.62 Power and Water's proposed operating and maintenance expenditure ("opex") estimate for 2008/09 is \$57.6 million.

5.63 Power and Water explained this figure in the following terms:

"Power and Water's operating and maintenance costs have increased steadily and significantly over the current regulatory control period, as a consequence of several critical cost drivers, being:

- *Real wages growth, consequential to the changes in Power and Water's 2007-2010 Union Collective Agreement (2007-2010 UCA). In order to attract and retain required skilled personnel in a tight labour market, Power and Water has agreed salaries and allowances in the 2007-2010 UCA. This is a result of an increased demand for employment in the Northern Territory infrastructure, construction and mining sectors by employers which compete for skilled personnel directly with Power and Water;*
- *Ageing infrastructure – Much of Power and Water's network is now over 30 years old, as it was rebuilt following Cyclone Tracy in 1974. Due to the increasing age of its network, Power and Water is required to invest increasingly to maintain network reliability and security of supply and to prudently address the risks associated with ageing infrastructure located in tropical and arid environments. Power and Water is continuing to develop new asset management procedures and systems to assist it in cost effectively meeting these needs;*
- *Increasing Asset Base – Growth in forecast load demand is driving the need for significant network investment to meet security of supply and reliability standards, particularly in the Darwin area. Increased capital investment is in turn resulting in higher levels of required operating expenditure. As the network grows through capital investment, the costs of operating and maintaining the network therefore also grows; and*
- *Rising material and equipment costs – Strong global demand has seen copper, aluminium and steel prices, as well as equipment costs rising well above the CPI. Power and Water notes that price increases of certain equipment/materials have been as much as 80.5% per annum since 2002.*

The increased operating expenditure requirement between the second regulatory control period and the forecast expenditure for 2008-09 reflects the combined effect of an increased volume of work and higher prices.

Despite the higher forecast operating expenditure, the 2008-09 expenditure forecast is both efficient and prudent and meets the required operating expenditure objectives, factors and criteria set out in the Rules." (pp.21-22)

5.64 Power and Water addressed the requirements of the *National Electricity Rules* in its IRP documentation.

Consultants' recommendations

Opex reasonableness assessment

5.65 The main issues that arose with the opex series provided by Power and Water in its submitted Po adjustment model, which were inadequately or only partly explained in the IRP, were that:

- 2008/09 opex forecasts were significantly higher than the 2007/08 actual opex. For example, Power and Water forecasts repairs and maintenance to increase by 24%, raw materials and consumables to increase by 151%, and personnel (direct) to increase by 57% in 2008/09; and
- the time series for certain opex line items showed significant volatility. For example, corporate overheads decreased by 50% in 2005/06, increased by 18% in the following year, were unchanged in 2007/08 and increased by 55% in 2008/09.

5.66 In response to its inquiries, ACIL Tasman subsequently established that the large increase in opex between 2007/08 actuals and 2008/09 forecasts is mostly due to a business restructure. In December 2007, functions performed by Power and Water's Technology Services business unit were transferred to the business units that predominately used the functions.²⁰

5.67 The net effect of this re-structure should be minimal, as the increase in networks costs would normally be associated with a commensurate decrease in the Networks' transfer pricing expense from Technology Services. However, ACIL Tasman was persuaded that the earlier Service Level Agreement between Networks and Technology Services did not adequately cover the costs of the functions that Technology Services had been performing for Networks and that Technology Services have been absorbing these costs.

"... the inclusion of Tech Services ... has internalised an estimated loss of approximately \$5 million in the Networks business." (p.12)

5.68 In the end, ACIL Tasman only recommended an adjustment to Power and Water's 2008/09 opex to correct for the inclusion of Technology Services' employees who were working on System Control in the 2008/09 forecasts. Correcting this reduces the 2008/09 operating expense attributed to Regulated Networks by \$0.5 million.²¹

5.69 As a result, ACIL Tasman's view was that Power and Water's actual opex in 2008/09 was expected to be \$57.1 million.

5.70 In response to its inquiries, ACIL Tasman was also able to subsequently establish that the volatility in the opex time series data submitted by Power and Water is mainly a consequence of Power and Water's frequent changes to accounting policies:

"Generally Power and Water have undertaken a large exercise in trying to organise its financial processes and improve its financial reporting, but frequent changes to accounting policies, lack of continuity of staff, and a fundamental restructure which occurred in December 2007, have all meant that Power and Water is generally not able to produce any time series which are unaffected by some of these effects." (p.11)

5.71 ACIL Tasman formulated a consistent opex time series for use in determining an efficiency adjustment parameter for the Po model.

²⁰ The following Technology Services' functions were transferred to the Networks business unit: electrical engineering and testing, electricity metering, controls & communications (SCADA), and projects & procurement for Network's major capital investment projects.

²¹ ACIL Tasman, pp.13-14.

5.72 The major adjustments that ACIL Tasman made to Power and Water's opex series were as follows:

- adjustment to time series to re-allocate corporate overheads using the 2008/09 allocation methodology;
- adjustment to include the portion of Technology Services' unfunded loss attributable to Regulated Networks in 2004/05, 2005/06 and 2007/08;²²
- adjustment to raw materials and consumables used to correct for a system error which was overstating accruals in 2007/08;
- inclusion of transfer pricing expense not included in 2004/05 and 2005/06; and
- removing a corporate allocation of tax from Networks in 2004/05.

Opex efficiency and prudence assessment

5.73 Of Power and Water's claimed \$20.4 million in extraordinary opex due to the NT operating environment conditions, GHD Meyrick regarded \$14.1 million of this claimed amount as acceptable. GHD Meyrick's summary table follows, and its detailed explanations can be viewed at pages 19-26 in its report.

Table 2: PWP quantified opex due to operating environment conditions, 2008–09

<i>Factors causing extraordinary opex</i>	<i>PWP claim</i>	<i>GHD Meyrick acceptance</i>
1. Materials and spare parts costs	\$0	\$0
2. Unplanned outages due to wet season weather conditions	\$282,350	\$86,481
3. Equipment wear and tear due to climatic conditions	\$2,034,085	\$403,267
4. Vegetation trimming	\$2,928,571	\$2,928,571
5. Termites	\$1,148,552	\$1,100,195
6. Bats and Birds	\$770,909	\$513,939
7. Cyclones and flooding	\$1,063,053	\$1,063,053
8. Reduction in labour productivity	\$1,052,785	\$350,928
9. High earth resistivity	\$632,411	\$632,411
10. Higher costs resulting from inability to recruit staff in some locations	\$2,508,000	\$342,836
11. Higher labour costs in the Northern Territory	\$0	\$0
12. Differences in overhead capitalisation	\$7,966,200	\$6,638,500
Total quantified extraordinary opex	\$20,386,916	\$14,060,182

5.74 In addition, while Power and Water did not quantify an adjustment for its 'transmission equivalent' operations, GHD Meyrick adjusted Power and Water's opex downwards by 5% in recognition of the extra functions Power and Water performs relative to interstate electricity distribution businesses. This is the same approach adopted in the 2003 benchmarking study but in this case the 5% adjustment is made to total opex and not opex net of the identified operating environment factors. This was equivalent to assuming that the quantified operating environment factors apply only to Power and Water's distribution operations.

5.75 After adjusting for transmission equivalent operations and taking the figure of \$14.1 million for operating environment factors presented, GHD Meyrick estimate that the prudent and efficient level of Power and Water's opex for 2008/09 is \$39.6 million.

²² In 2006/07, Technology Services' loss was allocated to business units at the end of the financial year.

5.76 GHD Meyrick's assessment was therefore that, for Power and Water to reach the same unit opex as the four electricity distribution businesses with customer density closest to Power and Water (assuming those electricity distribution businesses have had no opex partial productivity growth since 2003, and after allowing for Power and Water's adverse operating conditions and transmission equivalent operations), Power and Water would have to reduce its unit opex by 26.9%.

5.77 In translating such a performance gap judged to be under management control into 'X' factors for use in CPI-X price cap regulation, it is necessary to form a view on the timeframe required for the performance gaps to be removed. GHD Meyrick argued that:

"If the timeframe is set too short there is scope for the electricity distribution business to be placed under excessive financial stress and for service quality to drop substantially as maintenance programs are terminated to meet overly onerous annual cost reduction targets. This runs the risk of consumers seeing quick price reductions but at the expense of receiving a degraded product in the future.

Conversely, setting the timeframe too long may place little pressure on the business to reduce costs and see consumers paying more than they should be for many years. This would be contrary to the principles of effective regulation which require that regulated prices be based on efficient forward looking costs, with any inefficient costs being to the cost of shareholders, not network users.

In capital intensive infrastructure industries like electricity supply with relatively long-lived assets, sufficient time has to be allowed to optimise assets in synchronisation with reductions in opex. Meyrick (2003a) identified a ten year timeframe as being likely to be a reasonable timeframe for this to occur in. Any shorter than this was thought to place system integrity and service quality at risk if relatively large reductions in opex were being contemplated. Any longer than this was thought to be overly generous to the electricity distribution business.

[For the 2004 Reset, the Commission] adopted a 10 year timeframe and decided to allocate half of the 20 per cent opex efficiency gap identified in Meyrick (2003a) to the X₂ factor with the remaining half being accounted for in the initial P₀ price change. After some rounding down, an X₂ of 0.25 per cent was set to account for 10 percentage points of the then identified 20 per cent opex efficiency gap over 10 years.

While 5 years of the original 10 year adjustment period has now passed, GHD Meyrick believes it is appropriate to retain a 10 year adjustment timeframe from the start of the third regulatory period given that Power and Water has undertaken some restructuring during the second regulatory period and given the new information regarding previous understatement of some allocated overhead costs. Consequently, GHD Meyrick recommends retaining the conservative X₂ factor of 0.25 per cent to account for 10 percentage points of the identified 26.9 per cent opex efficiency gap." (p.33)

5.78 It was therefore GHD Meyrick's recommendation that the remaining 16.9 percentage points of the identified efficiency gap should be incorporated in the P₀ adjustment factor to be applied at the start of the third regulatory period.

Commission's assessment

5.79 After due consideration, the Commission has accepted ACIL Tasman's recommendation that Power and Water's actual opex in 2008/09 was expected to be \$57.1 million.

5.80 In addition, Power and Water's application of the P₀ adjustment model calculated an amount of \$0.3 million as being related to 'benchmark' debt raising costs, which (consistent with the AER's approach) was included as an opex line item. The cost of this item is driven by the following formula:

2008/09 opening RAB

multiplied by Debt raising cost benchmark (estimated by AER)

multiplied by the Debt funding proportion (used in the calculation of the WACC).

5.81 This proposed amount was based on the 2007 DORC valuation of Power and Water's network assets rather than the \$350 million initial RAB value. When calculated

based on the \$350 million initial RAB value, the 'benchmark' cost of raising debt decreases from \$0.3 million to \$0.2 million. This decreases total opex by 0.13%.

5.82 In addition, after due consideration, the Commission has accepted GHD Meyrick's 16.9% efficiency adjustment factor. Applying this efficiency adjustment factor to the adjusted actual opex in 2008/09 of \$57.1 million results in the Commission's estimate of efficient operating expenditure for 2008/09 of \$47.365 million.

5.83 The adjustments that the Commission has made to the figure proposed by Power and Water are summarised in Table 5-9.

Table 5-9
2008/09 Operating Expenditure
Summary of Adjustments

	(\$'000)
Power and Water proposed Operating Expenditure	57,570
Accuracy adjustment – correction of an error resulting from restructure estimates	-500
Decrease in debt raising costs due to revised RAB	-72
Efficiency adjustment (16.9%)	-9,633
Adjusted Efficient Operating Expenditure	47,365

Commission's draft decision

5.84 The Commission is not satisfied that the IRP as submitted meets the requirements established in the Final Methodology Decision in relation to the 2008/09 efficient opex amount. The Commission requires the following changes to the regulatory proposal before it is prepared to approve any revised regulatory proposal:

Amendment 5-3

5.85 With regard to the estimate of actual operating expenditure ("opex") in 2008/09 (and the associated second regulatory period actual opex series), the revised proposal must be based on *either*:

- the values set out in Table 5-10 below:

Table 5-10
Commission's Estimates of Actual Opex
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09
Actual opex	41,710	43,215	48,756	56,050	56,998

- *or* values which Power and Water clearly demonstrates to the Commission's satisfaction are superior values when used in conjunction with the October revised Po adjustment model and consistent with all related requirements elsewhere in this Draft Determination.

Amendment 5-4

5.86 With regard to the 'return of efficient/prudent operating expenditure' component of the building blocks calculation for 2008/09, the revised proposal must be based on *either*:

- a percentage factor of 16.9% which is applied to actual opex for 2008/09 in the revised October Po adjustment model in order to arrive at the prudent and efficient level of opex for 2008/09;

- *or* a percentage factor which Power and Water clearly demonstrates to the Commission's satisfaction is a superior factor based on additional information and estimates on the adverse operating conditions faced by Power and Water relative to its peers.

2008/09 actual revenue

Requirements of final methodology decision

5.87 The Final Methodology Decision required that, with respect to actual annual revenue:

- the amounts calculated, determined or estimated must be consistent with the NT Code's pricing principles and the requirements of the Final Methodology Decision;
- the estimated annual revenue being raised from relevant network tariffs during the final year of the second regulatory period (2008/09) is to be derived from existing tariffs relating to standard control services;
- estimates of the volumes of standard control services expected to be sold in 2008/09 must be 'realistic expectations' consistent with the meaning given to this term by clause 6.5.6(c)(3) of the *National Electricity Rules*; and
- non-sales revenue network items to be excluded from measuring the efficient revenue collections are those that recover costs aside from those included in the building block analysis. All on-going non-sales revenues which are clearly a substitute for sales revenues should be included.

Power and Water's proposal

5.88 Power and Water's proposed actual revenue for 2008/09 is \$76.0 million.

5.89 Power and Water stated that:

"This estimate has been determined on the basis of:

- *Power and Water's existing network tariffs for 2008-09 for the equivalent of its standard control services, as required by paragraph 5.59 of the Final Decision Paper; and*
- *Power and Water's 'realistic expectations' of the volumes of the equivalent of standard control services that it expects to sell in 2008-09, consistent with the meaning given to this term by clause 6.5.6(c)(3) of the Rules, as required by paragraph 5.60 of the Final Decision Paper.*

Power and Water also confirms that:

- *All estimated revenue derived from the capital and operating costs that form part of the building block analysis is included in the associated annual revenue collections, as is required by paragraph 5.61 of the Final Decision Paper; and*
- *Non-sales revenue network items that recover costs aside from those included in the building block analysis for standard control services (i.e. alternative control services provided to retail, developers and customers) have been excluded from the 2008-09 expected annual revenue. All on-going non-sales revenues which are clearly a substitute for sales revenues have been included. This therefore meets the requirements of paragraph 5.62 of the Final Decision Paper.*

In addition, as required by clause 2.24 of the Final Decision Paper, Power and Water confirms that its estimate of annual revenue for 2008-09 is consistent with the pricing principles in the Access Code, as its network tariffs for 2008-09 have been developed consistent with these pricing principles." (pp.65-66)

Consultant's recommendation

5.90 ACIL Tasman confirmed that:

"[Power and Water's] forecast is based on the Networks Transfer Pricing Model – a model used by Power and Water to forecast intercompany charges. For the past history it would

have been more appropriate to use actual revenue rather than revenue per a forecast model.

We note that by reviewing the past two years' history one can see that the network pricing model has consistently under predicted the sales revenue attributable to Regulated Networks. Although we are led to believe the model is in nominal terms, the extent of the under prediction seems to approximate one year's movement in the CPI index." (p.16)

5.91 ACIL Tasman's table providing a comparison between Power and Water's actual and forecast network revenue follows:

Table 10 Comparison of actual and forecast revenues in Networks

	2006/7	2007/8	2008/9
Regulated - Non contestable	54,268	56,215	58,264
Regulated – Contestable	16,365	17,110	17,674
Total - Regulated Networks	70,634	73,325	75,938
Actual - Regulated Networks	72,873	77,457	
Difference	3.2%	5.6%	

Data source: Networks Transfer Pricing Model

Commission's assessment

5.92 The Commission accepts ACIL Tasman's assessment that Power and Water's forecast of network sales revenue in 2008/09 is likely to be understated by around 5%.

5.93 The Commission has undertaken its own analysis of the network sales revenue it would expect Power and Water to earn under the approved Network Tariff Schedules. That analysis is summarised in Table 5-11.

Table 5-11
Commission's Estimates of Actual Revenue
Second Regulatory Period

(\$'000)	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
CPI		2.77%	2.34%	2.67%	3.54%	2.33%
Price cap index (CPI-X+Po)		103.569	92.134	92.699	94.060	94.329
annual growth in quantity (Gwh) ^(a)		1.20%	2.24%	1.76%	2.79%	1.77%
Predicted sales revenue	74,716 ^(b)	79,504	72,312	74,033	77,425	79,797
Non-sales revenue ^(c)		94	94	94	998	196
Total revenue		79,598	72,406	74,127	78,423	79,994

(a) GWh have been used as a proxy for quantity, as revenue from energy-based tariffs comprises over 80% of total revenue

(b) Actual revenue earned by Power and Water in 2003-04

(c) Non-sales revenue includes items that recover costs included in the building block analysis. This includes miscellaneous charges revenue, as costs relating to this item are included in the opex amount. The 2004/05 and 2005/06 amounts are unknown, and have been set equal to the 2006/07 amount.

5.94 Using these revenue figures results in estimated actual revenue in 2008/09 which is some 5% above Power and Water's proposed amount as summarised in Table 5-12:

Table 5-12
2008/09 Actual Revenue^(a)
Summary of Adjustments

	(\$'000)
Power and Water proposed Actual Revenue	76,034
Under-estimation of revenue	3,960
Adjusted Actual Revenue	79,994

(a) Includes certain non-sales revenue as well as all sales revenue.

Commission's draft decision

5.95 The Commission is not satisfied that the IRP as submitted meets the requirements established in the Final Methodology Decision in relation to the 2008/09 actual revenue amount. The Commission requires the following change to the regulatory proposal before it is prepared to approve any revised regulatory proposal:

Amendment 5-5

5.96 With regard to the estimate of actual revenue in 2008/09 (and the associated second regulatory period actual network revenue series), the revised proposal must be based on *either*:

- the values set out in Table 5-13 below:

Table 5-13
Commission's Estimates of Actual Revenue^(a)
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09
Actual revenue	79,598	72,406	74,127	78,423	79,994

(a) Includes certain (allowable) non-sales revenue as well as all sales revenue

- *or* values which Power and Water clearly demonstrates to the Commission's satisfaction are superior values when used in conjunction with the October revised Po adjustment model and consistent with all related requirements elsewhere in this Draft Determination.

Po adjustment factor

Requirements of final methodology decision

5.97 The Final Methodology Decision required Power and Water's regulatory proposal to include a proposed Po adjustment factor to apply to the weighted average of network tariffs in the final year (2008/09) of the second regulatory period for standard control services.

5.98 In order to ensure that efficient costs and revenues are aligned, the size of any Po adjustment is to be determined by an ex-post building block assessment of Power and Water's 2008/09 network costs and revenues, calculated as follows:

$$P_o = (R^* - R)/R$$

where:

R^* is the estimated total efficient cost of Power and Water supplying standard control services in 2008/09 (in \$ millions); and

R is the estimated total revenue derived by Power and Water from the existing prices applying to standard control services in 2008/09 (in \$ millions).

Power and Water's proposal

5.99 After correcting for the error in the Commission's Po model (discussed in chapter 4), Power and Water's proposed Po adjustment factor is 61.4%.

5.100 The calculation of this proposed Po value is summarised in Table 5-14.

Table 5-14
Power and Water's Proposed Po Adjustment Factor

Building block component	Power and Water's proposal 2008/09 (\$'000)
Return on Opening Capital	63,334
<i>plus</i> Return on New Capital	1,989
<i>plus</i> Return of Capital (Depreciation)	17,978
<i>less</i> Holding Gains	-18,187
<i>plus</i> Efficient Operating Expenditure	57,570
Total Required Revenue	122,684
Estimated Revenue	76,034
Proposed Po adjustment factor	61.4%

5.101 Power and Water has acknowledged that its proposed Po adjustment factor implies a very significant increase in network tariffs.

"Once approved, there will be a significant increase in weighted average prices, caused by two further factors.

Firstly, Power and Water's electricity network capital and operating expenditure in 2008-09 is much larger than in 2003-04 when the last Po was established. It has become more expensive per unit to offer network services in the Northern Territory over the second regulatory control period, both because the network has grown faster than energy use and also because the costs of sourcing the inputs for these services (both labour and capital) have increased significantly.

Secondly, and more importantly, it is now clear that the Po and weighted average prices set in 2004 were too low, and that there has been a widening gap between Power and Water's prudent costs and the network prices allowed by the Commission. This is because the Commission's 2004 Final Determination:

- established a Total Factor Productivity (TFP) methodology to derive allowable revenue which did not take account of (then) future costs, despite forecasts available at that time; and*
- applied benchmarking studies that aggressively reduced the allowed operations and capital expenditure costs to less than Power and Water was actually and efficiently spending.*

Power and Water's prudent expenditure in both capital and operating terms, in contrast, increased significantly faster than the Determination. Consequently a real increase in the weighted average tariff is now required." (pp.2-3)

5.102 Power and Water has further argued that the very significant Po adjustment factor which it has proposed:

"...is due to a significant divergence between the costs incurred in supplying services, and those recovered through network tariffs as measured by the Commission's Po Adjustment Model.... [It is] clear that:

- The issues which have given rise to such a large Po were reasonably predictable at the time of the 2004 Reset;*

- *The Commission's methodology in the Final Decision Paper for the upcoming regulatory control period is essentially the same Final Methodology as it applied in the last regulatory control period. Consequently the Commission must apply this Final Methodology with due regard for the implications, financial and operational, that it will have on Power and Water;*
- *The Final Methodology will not fully compensate Power and Water for its costs during the third regulatory control period, and will instead risk significant regulatory error; and*
- *In likening the TFP approach in the Final Decision Paper to the application of TFP in New Zealand, the Commission has not properly recognised a crucial difference. The New Zealand application includes the opportunity to have a full forward looking building blocks review carried out when TFP is no longer tenable." (p.16)*

5.103 As to Power Networks' operating expenditure, Power and Water claims that:

"...[this] expenditure increased almost immediately following the 2004 Final Determination, and was maintained at between \$35 million and \$50 million per annum throughout the second regulatory control period..."

In particular, the numbers make clear that the operations and maintenance benchmarking study that was conducted in 2002, on which the Commission determined that Power and Water's costs were 20% higher than efficient levels, was not a reliable method on which to base future costs. Power Networks' operations and maintenance costs did not decrease from \$28 million by 2% each year – rather it increased to \$49 million as the system grew to support an international minerals, resources and energy boom, and to address system security and reliability factors. This issue alone is a major contributor to both Power and Water's losses over the second regulatory control period, and the Po factor for the third regulatory control period." (p.18)

5.104 As to Power and Water's capital expenditure, Power and Water claims that:

"...[this] expenditure has also increased significantly over the period. ...

It is acknowledged that there were limitations around Power and Water's ability to forecast future expenditure requirements accurately at that time. All the same:

- *All the available forecasts were well in excess of its 2002-03 costs; and*
- *The eventual control did not take those forecasts into account." (p.18)*

5.105 Power and Water has summed up by asserting that:

"Power and Water's ... forecasts made in 2004 have proved to be more reliable than the 2004 Final Determination." (p.17)

"In fact, the TFP Final Methodology has been financially disadvantageous for Power and Water over the current regulatory control period and now a daunting Po is required for Power and Water to meet its costs commencing in 2009-10." (p.20)

Commission's assessment

5.106 The various adjustments and corrections required by the Commission and documented so far in this chapter together give rise to a Po adjustment factor of 24.4%, compared with Power and Water's proposal of 61.4%.

5.107 Power and Water's proposed Po adjustment factor is reconciled with the lower Po value estimated by the Commission in Table 5-15.

Table 5-15
Summary of Significant Adjustments to Po Value

	(\$'000)	Po	Reason for adjustment
Power and Water's proposed Po		61.4%	
Return on Opening Capital	-15,441	-20.3%	Adjustment of RAB to reflect \$350m valuation at 1 July 2002
Return of Capital (Depreciation)	-1,944	-2.6%	Adjustment to depreciation on revised RAB and adjustment to correct Power and Water's depreciation calculation errors
Holding Gains adjustment	4,434	5.8%	Reduction in holding gains resulting from the revised RAB
Efficient Operating Expenditure	-10,205	-13.4%	Efficiency and accuracy adjustments, and decrease in debt raising costs resulting from lower RAB
Actual Revenue	3,960	-6.5%	Increase in estimated revenue
Commission's adjusted Po		24.4%	

5.108 Table 5-16 provides a comparison of the makeup of the Commission's Po estimate and Power and Water's proposal.

Table 5-16
Comparison of the Commission's Estimate and Power and Water's Proposal

	2008/09 (\$'000)	
	Power and Water's proposal	Commission's estimate
Return on Opening Capital	63,334	47,894
<i>plus</i> Return on New Capital	1,989	1,992
<i>plus</i> Return of Capital (Depreciation)	17,978	16,031
<i>less</i> Holding Gains	-18,187	-13,753
<i>plus</i> Efficient Operating Expenditure	57,570	47,365
Total Required Revenue	122,684	99,528
Estimated Revenue	76,034	79,994
Po adjustment factor	61.4%	24.4%

5.109 While the Commission's examination of Power and Water's proposal has led to a significant reduction in the Po adjustment factor (from 61.4% to 24.4%), the fact of the matter is that the Po value as estimated by the Commission of 24.4% would still involve a very substantial increase in network tariffs.

5.110 The Commission is far from comfortable with such a significant Po value.

5.111 It is therefore necessary to take a closer look at the reasons giving rise to such a large Po value. How much is due to mistakes made at the time of the 2004 Reset? By the Commission? By Power and Water? How much is explained more recently by decisions made by the owner or board and management of Power and Water?

5.112 If Power and Water is to be believed, it is all the Commission's fault – and the Commission's myopia at the time of the 2004 Reset.

5.113 Power and Water provided little substantiation and no analysis in support of this claim. In fact, by the Commission's reckoning (which follows), the Commission is responsible for about 3½ percentage points of the 24.4% Po value, with responsibility for the remaining 21 percentage points lying squarely with Power and Water itself.

5.114 The facts of the matter are that, for the 2004 Reset, Power and Water was not required to lodge any forecasts covering the second regulatory period (2004/05 to 2008/09). However, Power and Water did lodge such forecasts with the Commission six months after the 2004 Reset for the purposes of the asset valuation off-ramp review. The Commission has no reason to believe that these off-ramp forecasts were any different than the forecasts in Power and Water's possession at the time of the 2004 Reset.

5.115 Table 5-17 compares the second regulatory period forecasts of actual opex provided by Power and Water for the off-ramp review with the outturn accepted by the Commission for this Draft Determination.

Table 5-17
Actual Operating and Maintenance Expenditure
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09	5-yr total
Power and Water 2004 forecasts	35,451	37,640	38,318	38,443	39,008	188,859
Outcomes (as per the 2009 Draft Determination)	41,710	43,215	48,756	56,050	56,998	246,729
error	-18%	-15%	-27%	-46%	-46%	-31%

5.116 It is evident from Table 5-17 that Power and Water's own opex forecasts at the time of the 2004 Reset were substantially off the mark, contrary to Power and Water's assertions in its IRP document.

5.117 Table 5-18 compares the second regulatory period forecasts of actual capex provided by Power and Water for the off-ramp review with the outturn accepted by the Commission for this Draft Determination.

Table 5-18
Actual Capital Expenditure
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09	5-yr total
Power and Water 2004 forecasts	21,142	18,340	23,597	19,053	15,536	97,668
Outcomes (as per the 2009 Draft Determination)	11,499	22,385	28,351	44,889	56,582	163,705
error	+46%	-22%	-20%	-136%	-264%	-68%

5.118 Once again, as is evident from Table 5-18, Power and Water's own capex forecasts at the time of the 2004 Reset were wildly off the mark, contrary to Power and Water's assertions in its IRP document.

5.119 Table 5-19 shows what might have happened had the Commission opted to use a multi-year building blocks approach rather than the TFP-based approach at the 2004 Reset based on Power and Water's forecasts *at that time* (in conjunction with the parameters values used at that time, such as the WACC, quantity growth and opex efficiency adjustment factor).

Table 5-19
Required Revenue Calculated using the Building Blocks Approach
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09	5-yr total
Using Power and Water's 2004 forecasts (and the 2004 Reset parameters)	73,865	78,149	81,184	75,541	82,669	391,408
Using outcomes as per the 2009 Draft Determination (and the 2009 Reset parameters)	80,638	80,703	88,997	95,201	99,528	445,067
error	-9%	-3%	-10%	-26%	-20%	-14%

5.120 It is evident from Table 5-19 that, even if the Commission had used a multi-year building blocks approach rather than the TFP-based approach at the 2004 Reset as urged by Power and Water, basing such an approach on Power and Water's forecasts at the time (and the 2004 parameters) would still have necessitated a Po adjustment at the end of the second regulatory period of around 20%.

5.121 The Commission does, however, acknowledge that the TFP-based approach as applied in the 2004 Reset was itself responsible for an additional shortfall in revenue, as shown in Table 5-20.

Table 5-20
Allowed Revenue^(a)
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09	5-yr total
Under the 2004 TFP approach	79,598	72,406	74,127	78,423	79,994	384,548
Calculated using a building blocks approach and Power and Water's 2004 forecast (with 2004 parameters)	73,865	78,149	81,184	75,541	82,669	391,408
difference	+7%	-8%	-10%	+4%	-3%	-2%

(a) Includes certain non-sales revenue as well as all sales revenue.

5.122 The Commission accepts that it must take primary responsibility for the shortfall evident in Table 5-20.

5.123 The Commission has examined the sources of this shortfall. Three general factors were at work.

5.124 First, the Commission recognises that, in the 2004 Reset, it applied what in hindsight can be described as a 'hybrid approach' rather than a 'pure TFP approach' when calculating the X_1 component of the CPI-X price path. In the 2004 Reset, Meyrick was involved only in estimating the X_2 component and the associated opex efficiency adjustment factor. GHD Meyrick has advised the Commission that had they been involved in recommending the X_1 component at the time of the 2004 Reset, the X_1 value would have been around 1% based on strict TFP principles, not 1¾%. The higher X_1 value determined by the Commission for the 2004 Reset reflects mainly the influence of some building block-based X factors. Table 5-21 shows the results if the Commission had instead used a pure TFP approach to calculating the X_1 value for the 2004 Reset rather than the hybrid approach it used at the time.

Table 5-21
Allowed Revenue^(a)
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09	5-yr total
Using the 2004 Reset value for X_1 of 1¾%	70,703	72,026	72,788	75,318	76,222	367,057
Using a corrected X_1 value of 1%	71,242	73,128	74,463	77,609	79,132	375,575
difference	-1%	-2%	-2%	-3%	-4%	-2%

(a) Includes certain non-sales revenue as well as all sales revenue.

5.125 The second factor at work is indicated by the gap remaining even between this corrected TFP-based allowed revenue and use of a building blocks approach based upon Power and Water's forecasts at the time. The Commission's approach in the 2004 Reset clearly did not factor-in all the cost increases forecast by Power and Water at the time. It can be demonstrated that only if an X factor of around 0% had been used – rather than the corrected 1% – would the Commission's 2004 Reset approach have achieved an allowed revenue equivalent to the building blocks approach applied using Power and Water's forecasts at the time. Playing a role was the fact that the Commission's 2004 Reset approach failed to anticipate the disconnect which emerged over the second regulatory period between consumer prices movements and movements in input prices in the energy sector. This is why the Commission has added the X_3 factor to the 2009 Reset specification of the TFP-based price path. Effectively, in the 2004 Reset, X_3 was set at zero. Had an X_3 value of 1% been used in the 2004 Reset, actual revenue by the end of the second regulatory period would have been practically identical with that resulting under the building blocks approach. This result is shown in Table 5-22.

Table 5-22
Allowed Revenue^(a)
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09	5-yr total
Using a corrected X ₁ value of 1% and an X ₃ value of 1% (and with 2004 parameters)	71,954	74,596	76,716	80,717	83,115	387,099
Calculated using a building blocks approach and Power and Water's 2004 forecast (with 2004 parameters)	73,865	78,149	81,184	75,541	82,669	391,408
difference	-3%	-5%	-6%	+6%	+1%	-1%

(a) Includes certain non-sales revenue as well as all sales revenue.

5.126 A third, offsetting, factor was also at work over the second regulatory period. The Commission's use of a price cap (rather than a revenue cap) approach has resulted in allowed revenue escalating in line with actual quantity growth (rather than being locked into the quantity growth forecast at the time of the 2004 Reset). Such an allowance is not evident under the building blocks-based revenue cap approach favoured by Power and Water. As Table 5-23 shows, this feature of the Commission's TFP approach itself was responsible for offsetting over one half of the combined difference resulting from the first two factors.

Table 5-23
Allowed Revenue^(a)
Second Regulatory Period

(\$'000)	2004/05	2005/06	2006/07	2007/08	2008/09	5-yr total
actual revenue under the 2004 TFP approach	79,598	72,406	74,127	78,423	79,994	384,548
allowed revenue under 2004 TFP approach (2004 forecast quantity growth)	70,703	72,026	72,788	75,318	76,222	367,057
difference	+13%	+1%	+2%	+4%	+5%	+5%

(a) Includes certain non-sales revenue as well as all sales revenue.

5.127 In summary, it is evident from Table 5-20 that the Commission's 2004 Reset approach could be responsible for an annual shortfall in Power and Water's actual revenue of around \$2.7 million at the end of the second regulatory period. On its own, this shortfall would warrant a Po adjustment of only 3.3%. Over all five years of the second regulatory period, the shortfall attributable to the Commission's 2004 Reset approach could total around \$7 million.

5.128 The Commission is confident that it now has in place a specification of the TFP approach which will avoid a repeat of the type of shortfalls for which its previous specification was responsible during the second regulatory period.

5.129 These numbers must be put into context, however, by comparing them with the shortfalls on account of forecasting errors that can be attributed only to Power and Water. From Table 5-19, it is evident that Power and Water's under-estimation of its own operating and capital expenditures is directly responsible for an annual shortfall in its actual revenue of nearly \$17 million at the end of the second regulatory period. On its own, this shortfall would warrant a Po adjustment of around 20%. Over all five years of the second regulatory period, the aggregate revenue shortfall attributable to Power and Water's forecasting deficiencies could total around \$55 million.

5.130 Hence, the Commission accepts responsibility for about 15% of the Po adjustment factor. Responsibility for the remaining 85% must be laid squarely at the feet of Power and Water. That said, neither fact provides much comfort to end-users.

Commission's draft decision

5.131 The Commission is not satisfied that the IRP as submitted meets the requirements established in the Final Methodology Decision in relation to the Po adjustment factor. The Commission requires the changes listed throughout this chapter (chapter 5) to be made to the regulatory proposal before it is prepared to approve any revised regulatory proposal.

5.132 In addition, in view of the unprecedented magnitude of the Po adjustment factor, the Commission also requires one further amendment with respect to the Po adjustment factor before it is prepared to approve any revised regulatory proposal.

Amendment 5-6

5.133 Along with its revised regulatory proposal, Power and Water – even if it accepts all of the Commission's estimates of the 2008/09 components of the Po calculation as documented in this chapter – must submit both:

- a fully completed version of the October revised adjustment model, which contains not only all 2008/09 components of the Po calculation but all associated items required to complete the Po calculation and all reconciliations requested in the model; and
- an examination and explanation specifically addressing the main factors accounting for the disparities documented in Tables 5-17 and 5-18 above, along with a statement as to:
 - which of these main explanatory factors were the result of actions or decisions of the owner or board and management of Power and Water, along with a summary of those actions or decisions and the main reasons why such actions or decisions were considered necessary, and
 - which were outside the control (i.e., not a result of the actions) of the owner or board and management of Power and Water.

5.134 Failure by Power and Water either to comply with this requirement or to provide explanations and statements that the Commission considers satisfactory will result in the Commission re-considering the Po value suggested by the Commission's estimates of the 2008/09 components of the Po calculation as documented in this chapter.

CHAPTER

6

**OTHER ASPECTS OF THE
INITIAL REGULATORY PROPOSAL****Introduction**

6.1 As required by the Final Methodology Decision, besides a proposed Po adjustment factor (as discussed in chapter 5), the initial regulatory proposal (“IRP”) submitted by Power and Water on 22 August 2008 also included:

- a draft Network Pricing Principles and Methods Statement to apply to the setting of individual prices;
- for the regulatory year commencing 1 July 2009, the proposed Network Tariff Schedules consistent with all other elements of the regulatory proposal (the ‘initial pricing proposal’);
- a proposed Po adjustment factor for standard control services; and
- a proposed control mechanism for alternative control services.

6.2 This chapter contains the Commission’s statement of reasons for its decisions in relation to these other matters raised in Power and Water’s initial regulatory proposal.

Network pricing principles and methods***Requirements of final methodology decision***

6.3 The Final Methodology Decision required Power and Water’s regulatory proposal to include a draft ‘Network Pricing Principles and Methods Statement’ to apply to the setting of individual network tariffs for direct control services.

6.4 As required by clause 75(5) of the NT Code, the Network Pricing Principles and Methods Statement must set out the details of the principles and methods to be used for establishing the reference tariffs to apply to individual network access tariffs.

6.5 The Final Methodology Decision indicated that the Commission would approve the draft Network Pricing Principles and Methods Statement submitted by Power and Water if it is satisfied that this statement is consistent with:

- the applicable requirements of the Final Methodology Decision;
- any applicable requirements of the NT Code; and
- clause 6.18.3, clause 6.18.4 and clause 6.18.5 of the *National Electricity Rules*.

Power and Water's proposal

6.6 In chapter 12 of the IRP, Power and Water provided justification for its pricing principles and methods against the applicable requirements of the *National Electricity Rules*.

6.7 However, Power and Water did not submit a draft Network Pricing Principles and Methods Statement as such outlining the details of the principles and methods used for establishing the reference tariffs for the next regulatory period.

6.8 Power and Water has not altered its pricing structure and therefore its pricing principles and methods that have been in place since 2000.

"Power and Water selected its tariff classes in 2000 and 2001 prior to the first regulatory control period and other than to remove unused tariff sub-categories in this Regulatory Proposal, has not modified these since." (p.77)

Commission's assessment

6.9 The Commission is unable to make a comprehensive assessment of Power and Water's pricing principles and methods until Power and Water submits its draft Pricing Principles and Methods Statement.

6.10 The Commission acknowledges that some of Power and Water pricing principles and methods are by necessity included in Power and Water's justification in chapter 12 of the IRP. Nevertheless, a stand-alone document setting out the details of the principles and methods to be used for establishing the reference tariffs to apply to individual network access tariffs is essential, consistent with clause 75(5) of the NT Code.

6.11 For the avoidance of any doubt, the stand-alone network pricing principles and methods document should also include or be accompanied by:

- a framework for negotiating discounted network tariffs to replace the Commission's existing framework; and
- a capital contributions statement consistent with clause 81(2) of the NT Code.

6.12 The framework for negotiating discounted network tariffs referred to the previous paragraph is distinct from a negotiating framework for negotiated network services. The former framework is to deal with a limited number of situations where network tariffs may be negotiated below the approved reference tariffs. These limited situations are:

- where below-standard network access services sought by a particular end-user may result in cost savings to the network provider; or
- where there is a genuine threat of network 'by-pass' by a particular end-user – either in whole or in part.

Commission's draft decision

6.13 The Commission is not satisfied that the IRP as submitted meets the requirements established in the Final Methodology Decision in relation to the network services pricing principles and methods statement. The Commission requires the following changes to the regulatory proposal before it is prepared to approve any revised regulatory proposal:

Amendment 6-1

6.14 The revised proposal must be accompanied by a stand-alone document capable of being published on Power and Water's website which details the principles and methods that Power and Water proposes to apply when establishing the reference tariffs to apply to individual network access tariffs, consistent with clause 75(5) of the NT Code.

Amendment 6-2

6.15 The stand-alone network pricing principles and methods document must include or be accompanied by a framework for negotiating discounted network tariffs to replace the Commission's discounting framework.

Amendment 6-3

6.16 The stand-alone network pricing principles and methods document must include or be accompanied by a capital contributions statement consistent with clause 81(2) of the NT Code.

Initial pricing proposal***Requirements of final methodology decision***

6.17 The Final Methodology Decision required Power and Water's regulatory proposal to include, for direct control services, a pricing proposal that set out Power and Water's proposed Network Tariff Schedules for the regulatory year commencing 1 July 2009.

6.18 Direct control services include both standard control services and alternative control services. Power and Water's pricing proposal for its alternative control services is dealt with in the following section.

6.19 For standard control services, an initial pricing proposal is to be comprised of proposed Network Tariff Schedules consistent with all other elements of the regulatory proposal and using values of the CPI and the X factors applying to the control mechanism for standard control services as determined at the time by the Commission.

6.20 The Final Methodology Decision indicated that the Commission would approve Power and Water's annual pricing proposal for standard control services if the Commission is satisfied that the proposed tariffs in the Network Tariff Schedules:

- comply in full with the Final Methodology Decision; and
- in all other respects are consistent with the Network Pricing Principles and Methods Statement.

6.21 In particular, the Final Methodology Decision required that the weighted average tariff for each individual end-use customer for a particular year of the regulatory period not exceed the corresponding weighted average tariff for that individual end-use customer for the preceding regulatory year by more than a permissible percentage (i.e., the side constraint). The permissible percentage for the first year of the third regulatory period is to be the greater of the following:

- $CPI - X + P_0$ plus 2%; and
- CPI plus 2%.

Power and Water's proposal

6.22 Power and Water submitted proposed Network Tariff Schedules as part of its IRP. Power and Water also set out the weighted average revenue for 2008/09 and expected revenue for each tariff class for 2009/10.

6.23 The only changes proposed by Power and Water to its current pricing structure are to:

- *Combine the second last step with the last step ("Next 1000 KvA" with "Any Further KvA") of the Northern Above 750 MWh Per Annum tariff, in the "Peak" and "Off-Peak" sub-categories. These tariff steps have historically been set at the same price and therefore this convergence will have no impact on any customer. Further, Power and Water does not consider that there are any impacts on cost*

signalling or any other relevant issues associated with the convergence of these tariff steps;

- Combine the second last step with the last step (“Next 1000 KvA” with “Any Further KvA” and “Next 200,000 KWh per month” with “Any Further “kWh per month”) of the Alice Springs Above 750 MWh Per Annum tariff, in the “Peak” and “Off-Peak” sub-categories for both energy and demand. These tariff steps have historically been set at the same price and therefore this convergence will have no impact on any customer. Further, Power and Water does not consider that there are any impacts on cost signalling or any other relevant issues associated with the convergence of these tariff steps;
- Combine the last four steps in the Tennant Creek Above 750 MWh Per Annum tariff, in the “Demand Peak” and “Demand Off-Peak” sub-categories and “Energy Peak” and “Energy Off-Peak” categories. These tariff steps have not been used by any customers for at least five years and therefore this convergence will have no impact on any customer. Further, Power and Water does not consider that there are any impacts on cost signalling or any other relevant issues associated with the convergence of these tariff steps; and
- Remove the DKTL charge. This charge is no longer necessary to be distinguished from the standard Darwin/Katherine tariffs because it levies a fixed c/KWh charge on all KWh used in the Darwin/Katherine system. It can therefore be subsumed within Tariff Schedule 1 and 2 without impacting any customers.” (pp.83-84)

6.24 Power and Water stated that its proposed Network Tariff Schedules for 2008/09 are consistent with the price control mechanism as determined by the Commission, and with the approved Network Pricing Principles and Methods Statement.²³

6.25 Power and Water advised that it had not sought to demonstrate compliance with the side constraint, as it did not know the final X factor.²⁴

Commission’s assessment

6.26 The Commission’s purpose in requiring Power and Water to submit its pricing proposal for 2009/10 was in order to illustrate Power and Water’s Po proposal. The fact that the final X is not yet known was offset by the Final Methodology Decision nominating preliminary X factor components. Power and Water should be capable of demonstrating compliance of these resultant preliminary tariff schedules with the all aspects of the control mechanism other than the side constraint.

6.27 For the avoidance of any doubt, the Commission expects the revised regulatory proposal to include Power and Water’s indicative Network Tariff Schedules for direct control services in order to illustrate Power and Water’s regulatory proposal and to help demonstrate compliance with the various control mechanism requirements.

6.28 Consistent with the Part I of the *National Electricity Rules*, the Final Methodology Decision requires the submission of pricing proposals for both standard control services and alternative control services.

6.29 Following the publication of the Commission’s Final Determination on 31 March 2009, Power and Water will be required to submit its final pricing proposal for the regulatory year commencing 1 July 2009 in a timeframe consistent with that required under clause 78 of the NT Code. Consistent with the annual pricing proposal process required by the *National Electricity Rules* and the Commission’s Final Methodology Decision, this pricing proposal must:

- set out Power and Water’s proposed Network Tariff Schedules for direct control services (including alternative control services);

²³ IRP, p.83

²⁴ IRP, p.76

- set out how Power and Water expects network prices – both average prices and the structure of prices – to change over the regulatory period and the reasons for the expected changes; and
- demonstrate compliance with the Final Methodology Decision, the Final Determination and the Network Pricing Principles and Methods Statement.

Commission's draft decision

6.30 The Commission is not satisfied that the IRP as submitted meets the requirements established in the Final Methodology Decision in relation to the initial pricing proposal. The Commission requires the following change to the regulatory proposal before it is prepared to approve any revised regulatory proposal:

Amendment 6-4

6.31 The revised proposal must be accompanied by:

- *indicative* Network Tariff Schedules for the regulatory year commencing 1 July 2009, for direct control services, that are consistent with all other elements of the regulatory proposal;
- a statement of expected network price trends giving an indication of how Power and Water expects network prices – both average prices and the structure of prices – to change over the regulatory period and the reasons for the expected changes; and
- a statement, and a supporting spreadsheet, demonstrating the pricing proposal's compliance with the various control mechanisms established by the Commission's final Methodology Decision and draft determination.

Alternative control services

Requirements of final methodology decision

6.32 The Final Methodology Decision required Power and Water's regulatory proposal to include a proposed control mechanism for alternative control services.

6.33 The Final Methodology Decision indicated that the Commission will approve the control mechanism(s) proposed for alternative control services if it complies with the requirements of clause 6.2.5 of the *National Electricity Rules*.²⁵

6.34 As explained in chapter 3, the Commission has decided to group alternative control services between:

- 'quoted services' – services for which the nature and scope cannot be known in advance irrespective of whether it is customer requested or an external event triggers the need (for example, price on application); and
- 'fee based services' – remaining services that are not provided on a quoted basis (Power and Water term these 'miscellaneous services').

²⁵ The Final Methodology Decision also required Power and Water's regulatory proposal to include for direct control services, for the regulatory year commencing 1 July 2009, its proposed Network Tariff Schedules consistent with all other elements of the regulatory proposal. Direct control services include both standard control services and alternative control services. Power and Water's proposed Network Tariff Schedules for its standard control services was dealt with in the previous section.

Power and Water's proposal

6.35 Chapter 10 of Power and Water's IRP sets out its proposed treatment of alternative control services in relation to its proposed control mechanism and pricing methodology.

Fee based services

6.36 Power and Water proposed a schedule of fixed prices as its control mechanism for 'fee based services' types of alternative control services.

6.37 The methodology proposed by Power and Water for establishing the prices for these services is a build-up of costs based on the estimated forward-looking costs of providing these services.

6.38 Power and Water proposed to estimate the forward-looking costs of providing these services by:

- “ • *Estimating the time taken in hours for travel to and from Power and Water's depot for the identified service;*
- *Estimating the time taken in hours for Power and Water to undertake and complete the works;*
- *Estimating the number of Power and Water staff required to undertake the works;*
- *Developed prices for the services based on business hours or after hours where:*
 - *Services in business hours were costed using an average labour rate (overheads inclusive) of \$65 per hour;*
 - *Services after-hours were costed using an average labour rate (overheads inclusive) of \$85 per hour;*
 - *No allowance was made for trucks or capital equipment to deliver the service, as there is no practical basis for making such an allocation; and*
 - *A zero margin was included in the prices for all services. This means that only the full cost is being recovered by Power and Water.*

The prices for [fee based alternative control] services will be set out in an Excluded Services Tariff Schedule which Power and Water will publish once the Commission has made its Final Determination. This is consistent with the manner in which these services are regulated under the Rules.” (pp.69-70)

Quoted services

6.39 Power and Water proposed that the control mechanism for 'quoted services' types of alternative control services be a cost-based quotation provided by Power and Water before the service is provided, due to the uncertain nature of these services.

6.40 The methodology proposed by Power and Water for establishing the prices for these services is:

- “...a formula such that the price is equal to:*
- *The materials employed for the project multiplied by the cost of those materials;*
PLUS
 - *The labour involved for the project (in hours) multiplied by the hourly rate including on-costs for that project.*

Power and Water also reserves the right to charge a profit margin not exceeding the WACC amount approved by the Commission.” (pp.68-69)

6.41 Power and Water submitted that this approach is necessary due to the uncertain nature of these services.

“This formula is necessary because cost inputs cannot be set in advance for quoted services as the nature of the services that need to be provided cannot be known before they are requested by the customer and the job is scoped.

This control setting method will allow Power and Water to quote an amount that is appropriate for the type of job to be provided. These types of services could vary from

moving a meter at a cost of several hundred dollars to removing distribution infrastructure for Government to relocate a highway which could cost several million dollars.” (p.69)

Commission’s assessment

Fee based services

6.42 The Commission is broadly satisfied that Power and Water’s proposed control mechanism for ‘fee based services’ types of alternative control services complies with the requirements of clause 6.2.5 of the *National Electricity Rules*.

6.43 However, for the Commission to be able to accurately assess the methodology, Power and Water must outline the different types of activities that fall within the fee based services group, in similar detail to the descriptions in Table 3-1 in chapter 3.

6.44 Also, Power and Water must submit pricing proposals for both standard control services and alternative control services. In relation to fee based types of alternative control services, Power and Water must submit its proposed fee schedules.

Quoted services

6.45 The Commission is broadly satisfied that Power and Water’s proposed control mechanisms for ‘quoted services’ types of alternative control services complies with the requirements of clause 6.2.5 of the *National Electricity Rules*.

6.46 The Commission acknowledges that it is not possible to set a fixed price for services where the scale and scope of each individual service is initially unknown.

6.47 Power and Water’s proposed methodology for establishing prices for quoted services based on a cost-based quotation provided by Power and Water before the service is provided is appropriate, with one exception. If the prices charged for these services are to be cost-reflective, Power and Water cannot include a profit-like markup on direct labour and materials costs. A WACC-based markup is only appropriate as a return on capital invested in any assets involved. If the markup is intended instead as a margin to cover indirect costs (such as overheads), the % markup needs to be unrelated to Power and Water’s WACC and derived instead from a standard ratio between direct and indirect costs.

6.48 Also, for the Commission to approve this aspect of the regulatory proposal, the Commission requires that Power and Water outline the different types of activities that fall within the quoted services group, in similar detail to the descriptions in Table 3-1 in chapter 3.

6.49 Power and Water must submit pricing proposals for both standard control services and alternative control services. In relation to quoted types of alternative control services, Power and Water should set out its pricing methodology.

Commission’s draft decision

6.50 The Commission approves the pricing rule element of the price control mechanism proposed for ‘fee-based services’ types of alternative control services, on the basis that it complies with the requirements of clause 6.2.5 of the *National Electricity Rules*.

6.51 However, the Commission is not satisfied that the IRP as submitted meets other requirements established in the Final Methodology Decision in relation to the control mechanism for alternative control services. The Commission requires the following changes to the regulatory proposal before it is prepared to approve any revised regulatory proposal:

Amendment 6-5

6.52 The activity descriptions of the ‘fee-based services’ types of alternative control services must be clearly and exhaustively stated, in similar detail to the descriptions in Table 3-1 in chapter 3.

Amendment 6-6

6.53 The activity descriptions of the ‘quoted services’ types of alternative control services must be clearly and exhaustively stated, in similar detail to the descriptions in Table 3-1 in chapter 3.

Amendment 6-7

6.54 The proposed control mechanism for ‘quoted services’ types of alternative control services cannot include a WACC-based markup on direct labour and materials costs.

Negotiated network services***Requirements of final methodology decision***

6.55 The Final Methodology Decision required Power and Water’s regulatory proposal to include a proposed negotiating framework for negotiated services.

6.56 The Final Methodology Decision required that the proposed negotiating framework must be consistent with:

- the applicable requirements of this Final Decision;
- any applicable requirements of the NT Code, including the requirements set out in the chapter 2 Negotiation of Access and chapter 3 Access Terms; and
- the minimum requirements for a negotiating framework listed in clause 6.7.5(c) of the *National Electricity Rules*.

Power and Water’s proposal

6.57 Power and Water did not propose any negotiated services, and therefore did not propose a negotiating framework.

Commission’s draft decision

6.58 As Power and Water did not propose any negotiated services, no negotiating framework will apply for the third regulatory period.

Cost pass through***Requirements of final methodology decision***

6.59 The Final Methodology Decision required the price control mechanism to allow for cost pass through arrangements, applied in a manner consistent with relevant provisions of the *National Electricity Rules* if events occur which, if not passed through, could put at risk the efficiency of Power and Water’s decisions and actions.

6.60 Consistent with the *National Electricity Rules*, a pass through event is limited to specified events (most notably: a tax change event, a terrorism event, and a service standard event). However, as part of its regulatory proposal, Power and Water can (if it wishes) propose any additional types of cost pass through events which it considers should apply, for the Commission’s consideration and possible approval.

Power and Water's proposal

6.61 Power and Water has proposed the following pass through events additional to the specified events in clause 6.6.1 of the *National Electricity Rules*:

- *Force majeure event* – provision for fire, flood, earthquake, storm or other weather related event or natural disaster, act of God, riot, civil disorder or rebellion or other similar cause beyond the reasonable control of Power and Water that occurs during a regulatory period and materially increases the cost to Power and Water of providing standard control services;
- *Cost or demand input variance event* - an event involving any change in actual cost movements or demand during the regulatory period from cost movements or demand forecasts used in Power and Water's expenditure forecasts that materially increases or decreases the cost to Power and Water of providing standard control services;
- *Compliance event* - an event other than a service standard event or a regulatory change event involving:
 - a change in a compliance obligation (meaning a general law obligation or a requirement of a non-mandatory code, standard or guideline which represents standards acceptable to the workforce or to the community); or
 - a change in the way a compliance obligation is interpreted; or
 - any new compliance obligation, which materially increases or decreases the cost to Power and Water of providing standard control services;
- *Large customer connection event* – a network connection for a developer, an end-use customer or a generator, or a requirement for Power and Water to establish a new substation to supply load requested by a developer or end-use customer that materially increases or decreases the costs, relative to those allowed in the proposal, to Power and Water of providing standard control services; and
- *Separation event* – a legislative or administrative act or decision to separate any business or function of Power and Water in whole or in part from any other business or function of Power and Water, which materially increases or decreases the costs to Power and Water of providing standard control services.²⁶

6.62 Power and Water considers that:

“Acceptance of these pass through events is critical to the continued efficient provision of standard control services in accordance with its regulatory and legislative obligations. The occurrence of any of these events in the absence of a pass through mechanism will have the effect of penalising Power and Water for expenditure which is:

- *Driven by events over which Power and Water has little or no ability to control; and*
- *Required to incur above the forecast allowance determined by the Commission.”*
(p.72)

Commission's assessment

6.63 A cost pass through mechanism provides a degree of protection for a service provider from the impact of unexpected changes in costs that are outside of its control, which arise during a regulatory period. The triggering events usually involve change in tax events, insurance events, terrorism events, or service standard events.

6.64 A pass through mechanism lowers the risks faced by the service provider, which would otherwise have to be compensated for in the calculation of the WACC and allowed revenues. The Commission considers provision for appropriate cost pass throughs to be an important component of the overall regulatory framework.

²⁶ IRP pp.72-75

6.65 That said, it is important that such events are:

- both unanticipated at the time the regulatory reset and beyond Power and Water's control (i.e., not as a result of Power and Water's actions);
- would be triggered in circumstances where costs fall short of as well as exceed forecast costs because of a specified event, so that the approach proposed is symmetrical; and
- meet a reasonable materiality threshold.

6.66 Provided they are subject to a materiality threshold, the Commission considers that cost pass throughs associated with the following proposed pass through events meet these requirements:

- *force majeure* event; and
- compliance events.

6.67 However, the case for Power and Water's other proposed pass through events (cost or demand input variance events, separation events, and large customer connection events) is more problematic.

6.68 Variances in costs or demand inputs, even material ones, seem to be a catch all which of themselves are not clearly restricted to events outside of Power and Water's control.

6.69 Any future structural separation of Power and Water or similar reforms is a matter for the NT Government as owner of Power and Water.

6.70 The connection of large customers is a matter that should be handled under the approved capital contributions policy, and not necessarily impact on existing network users.

6.71 In order for Power and Water's proposed revised Regulatory Proposal to be approved, Power and Water must:

- limit the qualifying events to those which are unexpected and beyond Power and Water's control and not as a result of Power and Water's actions; and
- include a materiality provision.

Commission's draft decision

6.72 The Commission is not satisfied that the IRP as submitted meets the requirements established in the Final Methodology Decision in relation to the cost pass through arrangements. The Commission requires the following change to the regulatory proposal before it is prepared to approve any revised regulatory proposal:

Amendment 6-8

6.73 The cost pass through events proposed by Power and Water additional to the events specified in clause 6.6.1 of the *National Electricity Rules* must be limited to the occurrence of specific events which are unanticipated at the time the regulatory proposal is approved and beyond the control (i.e., not as a result of actions) of Power and Water's owner, board or management and include an explicit materiality provision in relation to the change in cost involved.

Service target performance incentive scheme

Requirements of final methodology decision

6.74 The Final Methodology Decision provided that, in relation to standard control services, a regulatory proposal may include a service target performance incentive scheme. Otherwise, no such scheme will apply.

Power and Water's proposal

6.75 Power and Water did not propose a service target performance incentive scheme in its regulatory proposal.

Commission's draft decision

6.76 As Power and Water did not propose a service target performance incentive scheme in its regulatory proposal, no such scheme will apply for the third regulatory period.

Demand management scheme

Requirements of final methodology decision

6.77 The Final Methodology Decision provided that, in relation to standard control services, a regulatory proposal may include a demand management scheme. Otherwise, no such scheme will apply.

Power and Water's proposal

6.78 Power and Water did not propose a demand management scheme in its regulatory proposal.

Commission's draft decision

6.79 As Power and Water did not propose a demand management scheme in its regulatory proposal, no such scheme will apply for the third regulatory period.