

**NETWORKS PRICING:
2009 REGULATORY RESET**

ISSUES PAPER

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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 Code”)¹ which is a schedule to the *Electricity Networks (Third Party Access) Act 2000*.

1.2 Part 3 of the Code specifies the price regulation framework to be observed by the Commission and by the network service provider² when setting the prices to be paid by network users.³ Specifically:

- Chapter 6 of the Code sets out the approach that the Commission is to use when determining the network service provider’s annual network revenue or price cap;
- Chapter 7 of the Code regulates the structure and level of individual network tariffs within the network service provider’s annual revenue or price cap; and
- Chapter 8 of the Code provides for regulatory oversight of capital contributions expected of network users.

1.3 The Commission has been undertaking network price regulation under these provisions of the Code since 1 April 2000.

1.4 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 Networks”).

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

1.6 In the lead-up to the commencement of the third regulatory period (the five-year period commencing 1 July 2009), the Code requires the Commission as regulator – in consultation with interested parties – to review the network price regulation methodology used in the second regulatory period, with a view to modifying the methodology as appropriate. The Commission is referring to this process of establishing the network price regulation methodology to apply from 1 July 2009 as the “2009 Regulatory Reset” (or the Reset).

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

² The 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.

³ This Paper does not deal with the regulatory oversight of the setting of out-of-balance energy prices payable between generators. These prices are regulated under Chapter 9 of the Code, and are subject to separate processes.

Purpose of this Paper

1.7 This Paper initiates the 2009 Regulatory Reset. It seeks to identify the main issues to be dealt with at the initial, broad design stage of the Reset, and invites interested parties to add to or modify that list as well as to put forward preferred approaches.

1.8 To facilitate public consultation, this Paper is designed to identify the key issues within the scope of the Reset and to invite submissions on these issues. The Commission's hope is that the questions it has identified in this Paper will both:

- directly elicit answers from interested parties; and
- in turn, suggest related or alternative questions (or issues) that interested parties might wish to explore.

1.9 The draft methodology report that will be prepared following this Paper will indicate the Commission's proposed position on these various issues, in view of both submissions received and its own further analysis.

Consultation process and timetable

1.10 When reviewing the network price regulation methodology, clause 62(2) of the 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."

1.11 The Commission is therefore required to determine the methodology 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.

1.12 Only in making their views known, and by articulating arguments in support of these views, can interested parties assist the Commission reach decisions which achieve an acceptable balancing of the interests of the network service provider, network users and the public interest.

1.13 The timetable that will be guiding the Commission's consultation process is set out on the following page.

Submissions

Call for submissions

1.14 Submissions are invited from interested parties concerning the issues raised in this Paper and related matters.

1.15 Submissions, comments or inquiries regarding issues raised in this Paper 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 |

1.16 The closing date for submissions is **Friday, 21 December 2007**.

| Due Date | Event |
|-------------------|--|
| 21 December 2007 | submissions on the Issues Paper due |
| 7 March 2008 | publication of the Commission's Draft Methodology Report on the network price regulation methodology to apply in the third regulatory period |
| 18 April 2008 | submissions on the Draft Methodology Report due |
| 30 May 2008 | publication of the Commission's Final Methodology Report on the network price regulation methodology to apply in the third regulatory period, including the data requirements for applying the revised methodology |
| 1 August 2008 | publication of the Commission's Draft Determination of the numerical value of the parameters required by the network price regulation methodology applying in the third regulatory period |
| 29 August 2008 | submissions on the Draft Determination due |
| 3 October 2008 | publication of the Commission's Final Determination of the numerical value of the parameters required by the network price regulation methodology applying in the second regulatory period |
| 19 December 2008 | submission by Power and Water Networks of a draft Pricing Principles Statement and a draft Capital Contributions Policy |
| end January 2009 | final date for the Commission's approval of Power and Water Networks' Pricing Principles Statement and Capital Contributions Policy |
| end February 2009 | submission by Power and Water Networks of proposed network tariff schedules for the year commencing 1 July 2009 |
| end March 2009 | publication of the Commission's approval of the network tariff schedules for 2009-10 |

Confidentiality

1.17 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.

Public access to submissions

1.18 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).

1.19 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.

1.20 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

FOCUS OF THE RESET

Scope of the Reset

2.1 Part 3 of the Code specifies the price regulation framework to be observed by the Commission as regulator and by Power and Water Networks as the network service provider when setting the prices to be paid by network users.

Matters outside the scope of the Reset

2.2 Some of the key aspects of this price regulation framework are cited in **Box 1**. The price regulation framework includes certain price regulation ‘principles’ and certain price regulation ‘rules’ that are to be observed by the Commission, and over which neither the Commission nor Code participants (Power and Water Networks and network users) have any discretion. These matters are outside the scope of this Reset.

2.3 In addition, section 6(2) of the *Utilities Commission Act* states that, in performing any of its functions, the Commission must have regard to the need:

- “(a) to promote competitive and fair market conduct;
- (b) to prevent misuse of monopoly or market power;
- (c) to facilitate entry into relevant markets;
- (d) to promote economic efficiency;
- (e) to ensure consumers benefit from competition and efficiency;
- (f) to protect the interests of consumers with respect to reliability and quality of services and supply in regulated industries;
- (g) to facilitate maintenance of the financial viability of regulated industries; and
- (h) to ensure an appropriate rate of return on regulated infrastructure assets.”

2.4 Likewise, clause 2(2) of the Code requires the Commission, when undertaking any of its functions under the Code, to take into account:

- “(a) the network provider’s legitimate business interests and investment in the electricity network;
- (b) the costs to the network provider of providing access, including any costs of extending the electricity network but not costs associated with losses arising from increased competition in upstream or downstream markets;
- (c) the economic value to the network provider of any additional investment that an access applicant or the network provider has agreed to undertake;
- (d) the interests of all persons holding access agreements for use of the electricity network;
- (e) firm and binding contractual obligations of the network provider or other persons (or both) already using the electricity network;
- (f) the operational and technical requirements necessary for the safe and reliable operation of the electricity network;
- (g) the economically efficient operation of the electricity network; and
- (h) the benefit to the public from having competitive markets.”

Box 1: Code Requirements

Clause 63 of the Code requires the Commission to administer access price regulation under the Code in a way that achieves the following outcomes:

- “(a) efficient costs of supply;*
- (aa) expected revenue for a regulated service or services that is at least sufficient to meet the efficient long-run costs of providing that regulated service or services, and includes a return on investment commensurate with the commercial and regulatory risks involved;*
- (b) prevention of monopoly rent extraction by the network provider;*
- (c) promotion of competition in upstream and downstream markets and promotion of competition in the provision of network services where economically feasible;*
- (ca) an efficient and cost-effective regulatory environment;*
- (d) regulatory accountability through transparency and public disclosure of regulatory processes and the basis of regulatory decisions;*
- (e) reasonable certainty and consistency over time of the outcomes of regulatory processes;*
- (f) an acceptable balancing of the interests of the network provider, network users and the public interest; and*
- (g) such other outcomes as the regulator determines are consistent with the underlying principles set out in clause 2.”*

Clause 68 of the Code requires the Commission, in setting a revenue or price cap, to have regard to the following factors:

- “(a) the demand growth that the network provider is expected to service using any appropriate measure including but not limited to –*
 - (i) energy consumption by category of network users or other relevant groups of persons who consume energy;*
 - (ii) demand by category of network users or other relevant groups of persons who consume energy;*
 - (iii) numbers of network users or other relevant groups of persons who consume energy by category of network users; and*
 - (iv) length of the electricity network;*
- (b) the service standards applicable to the network provider under this Code and any other standards imposed on the network provider by any regulatory regime administered by the regulator and by agreement with the relevant network users;*
- (c) the potential for efficiency gains to be realised by the network provider in expected operating, maintenance and capital costs, taking into account the expected demand growth and service standards referred to in paragraphs (a) and (b);*
- (d) 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;*
- (e) the provision of a return on efficient capital investment undertaken by the network provider in order to maintain or extend network capacity that is commensurate with the commercial and regulatory risks involved;*
- (f) the right of the network provider to recover reasonable costs incurred by the network provider in connection with the operation and maintenance of the network, including those arising from but not limited to –*
 - (i) any Territory and Commonwealth taxes or equivalent taxes paid in connection with the operation of its business as a provider of network access services; and*
 - (ii) the tariffs and charges paid to other network providers irrespective of whether these tariffs and charges are regulated under this Code;*
- (g) any increase in the rate of a tax or any new tax, whether it is a tax or tax equivalent imposed by the Territory, a State or the Commonwealth that directly increases the cost of providing the access services that are directly attributable to the increase in the rate or to the new tax;*
- (h) any reduction or increase in network energy losses; and*
- (j) the on-going commercial viability of the network provider.”*

Clause 74 of the Code sets out the objectives of network tariffs to be observed under the Code as follows:

- “The reference tariffs are –*
- (a) to reflect efficient costs of supply;*
- (b) to involve a common approach for all network users, with the actual tariff with respect to a particular network access service only differing between users because of –*
 - (i) the user’s geographical and electrical location;*
 - (ii) the quantities in which the relevant network access service is to be supplied or is supplied;*
 - (iii) the pattern of network usage;*
 - (iv) the technical characteristics or requirements of the user’s load or generation;*
 - (v) the nature of the plant or equipment required to provide the network access service; and*
 - (vi) the periods for which the network access service is expected to be supplied;*
- (c) to be transparent and published in order to provide pricing signals to network users;*
- (d) to promote price stability; and*
- (e) to reflect a balancing of the quest for detail against the administrative costs of doing so which would be passed through to end-use customers.”*

2.5 Other aspects of the price regulation framework over which the Commission has no discretion – and which are therefore outside the scope of this Reset – include the following requirements:

- that Power and Water Networks give minimum advance notice of revised or new network tariffs prior to such changes taking effect (clause 61(1));
- that tariffs contained in Power and Water Networks' pricing schedule with respect to standard network access services are to be the maximum tariffs (hence 'reference tariffs'⁴) applying to those services (clause 61(3));
- that where the network access services required are different to the relevant standard network access services, or where the provision of standard network access services may give rise to cost savings on the part of Power and Water Networks, the tariffs are to be commercially negotiated between the network user and Power and Water Networks (clause 73(4));
- that, prior to commencement of each regulatory period, Power and Water Networks must provide the Commission with a draft *Pricing Principles and Methods Statement* setting out details of principles and methods to be used for establishing the reference tariffs to apply to individual standard network access services (clause 75(5));
- that, at least 60 days prior to the start of each financial year, Power and Water Networks must provide to the Commission a statement setting out its proposed reference tariffs for the standard network access services it will be supplying that will apply in the relevant period with respect to a network (clause 78(1));
- that, prior to commencement of each regulatory period, Power and Water Networks must provide to the Commission a draft statement providing details of principles and methods for establishing capital contributions under Chapter 8 (clause 81(2)); and
- that the length of the third regulatory period is five years (clause 3).

2.6 All these matters are taken as given in the 2009 Regulatory Reset, and are not subject to any consideration.

Matters within the scope of the Reset

2.7 The principal matters within scope of this Reset have to do with the network price regulation 'methodology' to be used during the third regulatory period, namely the practical and technical details concerning the administration of network price regulation over which the Commission as regulator – in consultation with Code participants – has a degree of discretion.

2.8 In the first regulatory period,⁵ the Code specified the network price regulation methodology to be used in some detail. This methodology involved a 'building blocks approach' in which allowed revenue in each year of the regulatory period is built up from a detailed assessment of projected demand, costs and efficiency levels and then capped at a fixed amount determined at the start of the regulatory period (the 'revenue cap approach').

⁴ Clause 73(2) defines reference tariffs as:

(a) the tariff that the network provider cannot exceed when charging for a standard network access service;

(b) the reference point for use in establishing the tariffs that cannot be exceeded when charging for new or non-standard network access services; and

(c) the tariffs that an arbitrator must apply in making an award in the case of an access dispute relating (wholly or partly) to the tariff that should apply to a standard network access service.

⁵ The period from 1 April 2000 to 30 June 2004.

2.9 The Code is much less prescriptive in relation to the network price regulation methodology to be applied by the Commission during the second (and subsequent) regulatory periods. For example, clause 66(3) states that:

“The revenue or price caps that are to apply during the second and subsequent regulatory control periods are to be determined by the regulator in a manner that:

(a) in the regulator’s opinion, most effectively achieves the desired outcomes set out in clause 63; and

(b) is consistent with generally accepted regulatory practice at the time.” (emphasis added)

2.10 Likewise, Schedule 10 of the Code specifies how the X factor (in the CPI-X annual escalation) is to be determined by the Commission at the commencement of each regulatory period. Most notably, paragraph 2(1A) of Schedule 10 states that:

“The methodology for determining the value of X to apply in the second and subsequent regulatory control periods is to be determined by the regulator in a manner that most effectively achieves the outcomes in subclauses (1) and (3) and is consistent with generally accepted regulatory practice at the time.” (emphasis added)

2.11 For the second regulatory period, the Commission adopted a price cap form of regulation, rather than continue with the revenue cap approach used in the first regulatory period. The main elements of the 2004 network price regulation methodology (“2004 methodology”) are outlined in **Box 2**.

2.12 Essentially, the 2004 methodology involves the weighted average of network access tariffs being escalated year by year during the regulatory period using a CPI-X price path that is based on relative efficiency improvements that are reasonably expected to be achieved by Power and Water Networks rather than on forecasts of Power and Water Networks’ own costs.

2.13 **Box 2** contains a summary of the 2004 methodology. The full 2004 methodology determinations and statement of reasons can be found in the Commission’s *2004 Regulatory Reset Final Determination* and *Final Methodology Decision* (particularly Chapter 3). These documents can be viewed on the Commission’s website.

Box 2: 2004 Methodology

The price cap methodology adopted by the Commission for the second regulatory period has the following fundamental features:

Weighted average price cap (tariff basket approach)

The limit on allowed price increases is set in the form of a weighted average of individual network access tariffs. Each network access tariff in each of the regulated networks is represented within a single basket, weighted according to the actual quantities sold. Power and Water Networks can annually rebalance individual tariffs within the basket as long as the price control constraint is not exceeded, subject to any side constraints and provided that the proposed tariffs are consistent with the approved Pricing Principles Statement.

Cost-based adjustment of base year prices (Z factor adjustment)

Prior to the commencement of the second regulatory period, Power and Water Networks' costs were re-examined to ensure that the opening weighted average tariff at least recovered the forward-looking and efficient costs of supply of regulated network access services. The required cost-based adjustment to opening tariffs was measured by the Z factor. This factor was determined by the Commission as the percentage adjustment indicating the extent to which the base year prices needed to be changed to reflect an updated building blocks analysis of the most recently available actual data.

Escalation arrangements (CPI-X approach)

In each year of the regulatory period, the weighted average of individual network access tariffs (ie. the tariff basket) can not increase by more than CPI minus an efficiency factor. This is the price control constraint. The Commission considered that 'efficiency' is influenced by two factors, X_1 and X_2 , where:

- X_1 involves taking account of the future scope for productivity improvements in the regulated industry as a whole. The Commission derived the X_1 factor in relation to estimates derived and used by larger regulators; and
- X_2 reflects the extent to which additional efficiency gains are required in the Northern Territory to close the gap relative to the efficiency benchmark provided by the sector in general. The Commission derived the X_2 factor from an independent consultant's report that evaluated the operating performance of Power and Water Networks against other relevant electricity networks businesses in Australia.

Individual network access tariffs

Each year within the second regulatory period, the Commission considers approving the annual schedule of individual network access tariffs submitted by Power and Water Networks only if the weighted average of tariffs included in the schedule complies with the price control constraint. Power and Water Networks can modify the structure of network access tariffs, provided that:

- the weighted average of tariffs included in the schedule complies with the price control constraint;
- Power and Water Networks submits a statement of reasons for any modifications proposed to the structure of network access tariffs that is consistent with the approved Pricing Principles Statement; and
- the resultant impact on individual customer bills, for the same level and type of consumption as applied in the previous year, does not breach a CPI+5% side constraint, where 5% is the factor determined by the Commission prior to commencement of the second regulatory period. The intention of the side constraint is to protect each individual 'consumer' from large price increases, while allowing rebalancing to occur.

2.14 An important consideration for the Commission in 2004 was its desire to put in place a methodology that could continue to operate effectively over a number of subsequent regulatory periods and, in particular, provide a basis for an eventual transition towards a 'pure' price cap approach:⁶

*"...the Commission is seeking to build a foundation for an enduring, effective, low cost form of regulation tailored to the circumstances of the Northern Territory electricity market. By establishing a datum at the 2004 reset that includes a cost based review of opening prices and externally-benchmarked indexation combined with a tariff basket form of price control, further movement away from a cost-based approach and towards a pure price cap should be possible at future resets."*⁷

2.15 Reflecting its desire for continuity across periods the Commission also indicated how it proposed to approach various matters in the context of the 2009 Regulatory Reset, assuming that the price cap form of regulation would continue to be applied. Specifically, the Commission foreshadowed that the focus of the 2009 Regulatory Reset would be on the estimation of the X factor⁸ and Z factor (as part of a gains sharing approach)⁹ to apply in the third regulatory period.

2.16 While the Commission recognised that foreshadowing its proposed approach to various matters could not bind the future exercise of statutory powers, the Commission placed its views on the record at the time of the 2004 Regulatory Reset both to provide Power and Water Networks and network users with greater certainty and transparency regarding the long-term operation of the methodology and to strengthen the methodology's incentive properties.

2.17 The Commission considers that both the factors that attracted it to the price cap methodology adopted in 2004 and the value of continuity and consistency across periods remain valid. Accordingly, it does not consider a repeat of the 'zero-based' examination of the form of regulation undertaken in 2004 to be justified.

2.18 The Commission's intention therefore is to place the principal focus of the 2009 Reset on the operation of the price cap methodology adopted in 2004, rather than on the choice of the form of regulation. Hence, the issues that are within the scope of this Reset are the fundamental operational features of the 2004 methodology (as outlined in **Box 2**):

- use of a weighted average price cap (tariff basket approach);
- cost-based adjustment of base year prices;
- escalation arrangements; and
- individual network access tariffs.

Issue:

(1) Is there any disagreement with the Commission's view that the principal focus of the 2009 Regulatory Reset should be on reviewing the operation of the 2004 methodology, rather than the form of regulation more broadly? If so, why?

⁶ A pure price cap assumes that starting prices are efficient and allows price movements according to independent measures of efficiency that are not directly related to Power and Water Networks' own costs.

⁷ Utilities Commission, *Networks Pricing: 2004 Regulatory Reset Final Methodology Decision*, November 2003, p.16.

⁸ Utilities Commission, *Networks Pricing: 2004 Regulatory Reset Draft Methodology Decision*, September 2003, p.6.

⁹ Utilities Commission, *Networks Pricing: 2004 Regulatory Reset Final Methodology Decision*, November 2003, p.5.

Assessment criteria for the Reset

2.19 The objectives of network price regulation by the Commission are variously laid out in the *Utilities Commission Act* (section 6(2)) and in the Code itself (clauses 2, 63, 68 and 74). In general, the Commission's task in this Reset is to assess the effectiveness of the operation of the 2004 methodology in terms of these objectives.

Objectives of price regulation

2.20 The objectives of price regulation, and so of any regulatory reset, as set out in the Code were reproduced earlier in **Box 1**. The Commission's view is that there are a number of central themes contained in these legislative requirements that provide guidance for reviewing the operation of the 2004 methodology. In summary, the network price regulation methodology to apply in the third regulatory period should:

- be efficient and cost effective;
- ensure that Power and Water Networks does not exploit its position as a monopoly service provider;
- equitably distribute efficiency gains between stakeholders while providing sustainable commercial returns to Power and Water Networks;
- foster competition in the provision of network services as a means of addressing concerns over monopoly pricing wherever economically efficient and practical to do so;
- foster competition in upstream and downstream markets; and
- foster efficient use of, operation of and investment in the network.

2.21 These objectives consistently emphasise the importance of promoting efficiency, competition, protecting the interests of customers and maintaining the financial viability of Power and Water Networks. They provide a useful basis for evaluating the overall effectiveness of the operation of the price regulation methodology.

Regulatory certainty and regulatory risk¹⁰

2.22 In applying these broad objectives in a manner that is relevant to the NT electricity market and to reflect the circumstances expected in the NT electricity market during the third regulatory period, the Commission proposes placing particular emphasis in the 2009 Regulatory Reset on ensuring *regulatory certainty* and so minimising *regulatory risk*.

2.23 In particular, the Commission plans to avoid making changes to the operation of the 2004 methodology just for the sake of change. Instead, the intention is to promote regulatory certainty and so minimise regulatory risk.

2.24 Clause 63(e) of the Code states that price regulation should be administered to achieve, among other things, "*reasonable certainty and consistency over time of the outcomes of regulatory processes*".

2.25 Reasonable certainty and consistency in approach by a regulator creates a more stable and predictable regulatory environment for both the network service provider and customers. This improves the climate for investment in the network and lowers the cost of regulation.

¹⁰ This section draws upon an analysis of regulatory risk undertaken by the Network Economics Consulting Group in *Regulatory Risk* (A paper prepared for the ACCC Regulation and Investment Conference), March 2001.

2.26 Regulatory risk distorts investment when the interaction of uncertainty and regulation brings about a change in the cost of financing the operations of a regulated firm. Uncertainty arises from the existence of regulatory discretion. A regulator always has some non-trivial decisions to make. As a consequence, the outcomes from the future stream of regulatory decision-making processes cannot be predicted with certainty.

2.27 Consistent decision-making and regulatory commitment reduce regulatory risk. A regulator's actions influence the regulated firm's assessment of the risk it faces from future decisions. In this sense, current regulation has two roles: the first is the immediate realisation of social gains and the second is 'signalling' future regulatory settings to the firm. Because these future settings are key determinants of the return to regulated capital over the medium term, the regulator's signalling activity has a direct effect on investment. Two attributes of the regulator's signalling are particularly important: consistency and credibility.

2.28 Regulatory discretion should be exercised not only where it clearly contributes to better outcomes, but also where the benefits likely to arise exceed the costs of doing so (in terms of regulatory risk).

Commission's preferred approach

2.29 The Commission is reluctant to change methodology elements that have only recently been implemented. Over the last two regulatory periods, there has already been a major change in approach (from revenue cap to price cap).

2.30 For any change to be considered to the 2004 methodology, the Commission considers that it must first be clearly established and demonstrated that the 2004 methodology has given rise to a regulatory error. Moreover, the regulatory error needs to be *significant* and in all likelihood one involving a cost that exceeds the increased regulatory risk arising from the further exercise of regulatory discretion by the Commission.

2.31 The Commission's proposed criteria for reviewing the key issues in scope and for assessing the various options are therefore as follows:

- Is a change in methodology necessary to correct a demonstrable regulatory error?
- If so, is it likely that the cost of the regulatory error exceeds the cost arising (in terms of regulatory risk) of further exercising regulatory discretion?

2.32 If a significant regulatory error can be demonstrated, the Commission will take into consideration the position or proposed approach in the National Electricity Market (i.e., generally accepted regulatory practice) in determining what change should be made.

Issue:

(2) Is there any disagreement with the emphasis being on regulatory certainty and on the minimising of regulatory risk when the Commission is reviewing the 2004 methodology? If so, why?

CHAPTER

3

WEIGHTED AVERAGE OF
NETWORK ACCESS TARIFFS

Measuring the weighted average tariff index

3.1 Under the 2004 methodology, regulatory control is exercised over the weighted average of individual network access tariffs (or “tariff basket”).

3.2 The method used for calculating the associated weighted average of network tariffs under the 2004 methodology is set out in **Box 3**. Effectively, a particular year’s weighted average tariff is expressed in index form as a multiple of the previous year’s average.

Box 3: Weighted Average Tariff Index

Under the 2004 methodology, Power and Water Networks is to calculate the index representing the weighted average of individual network access tariffs for each forthcoming year “t”, as follows:

$$P_t = P_{t-1} * \left[\frac{\sum_{i=1...n} [p^i_t * q^{t-2}_i]}{\sum_{i=1...n} [p^{t-1}_i * q^{t-2}_i]} \right]$$

where:

P_{t-1} = the index value, set a year earlier, of the weighted average of individual network access tariffs approved for the current year;

p^i = the proposed or approved price (or price component) for an individual network access tariff item as the case may be; and

q^i = the quantity weight associated with the price (or price component) for the individual network access tariff item;

and:

the “i” superscript denotes an individual network access tariff item, or a component of an individual network access tariff item where a multi-part tariff is involved; and

the “Σ” symbol denotes the summation of all relevant values across all individual network access tariff items, or components of such items.

What is the issue?

3.3 Under the 2004 methodology:

- a single weighted average is calculated combining the network access tariffs for the regulated networks (Darwin/Katherine, Tennant Creek and Alice Springs); and
- each network access tariff is represented, weighted according to quantities sold to customers in the most recent year for which *actual* figures are available (that is, effectively lagged two years).

3.4 Hence, the use of a tariff basket and how the weights are determined is one of the features of the 2004 methodology to be reviewed as part of the 2009 Regulatory Reset.

3.5 For example, as to the weights used, ideally the quantity data should be for the year in which the price changes would take effect, as older data is less likely to reflect current consumption patterns. However, this would require a forecast of quantities and introduces a forecasting risk, as prices need to be proposed and approved prior to the year in question.

Commission's preferred approach

3.6 Unless undesirable outcomes can be established, the Commission proposes to continue with the tariff basket approach and the use of two years lagged quantity weights in particular, for the 2009 Regulatory Reset. This promotes regulatory certainty and minimises regulatory risk.

Issue:

(3) Is there any disagreement with the Commission's proposal to continue with the tariff basket approach and the use of lagged quantity weights? If so, why?

Tariffs included and excluded

3.7 Under the 2004 methodology, the network tariff basket *includes*:

- all the fixed, variable, energy, demand and time of use components of network access tariffs;
- any discounted tariffs separately from standard tariffs;
- streetlighting charges; and
- the access charges to the Darwin to Katherine transmission line ("DKTL").

3.8 Under the 2004 methodology, the network tariff basket *excludes*:

- all capital charges or contributions; and
- charges for services declared by the Commission to be 'excluded services'.

What is the issue?

3.9 Excluded services are the network access services provided by Power and Water Networks that are not included under the price control mechanism. Clause 72 of the Code distinguishes between two types of excluded services:

- those that are subject to effective competition, and the cost of which, in the assessment of the Commission, can be satisfactorily excluded from the cost base used for the purpose of calculating the cap applying to regulated network access services (i.e., non regulated or not subject to any regulation) (subclause (2)); and
- those that are not subject to effective competition, but do not lend themselves to being regulated by the price control mechanism used to regulate network access tariffs (subclause (3)).¹¹

¹¹ Power and Water Networks is to provide any excluded services of this type to network users on fair and reasonable terms. The Commission is to determine what may constitute fair and reasonable terms if Power and Water Networks and network users cannot reach agreement on such terms (subclauses (4) and (5)).

3.10 Clause 72(1) of the Code also states that excluded services are to be determined by the Commission in a manner consistent with clause 6(3) of the Competition Principles Agreement.

3.11 At issue therefore is whether the current range of services declared by the Commission to be 'excluded services' remains appropriate for use in the third regulatory period.

3.12 The Commission's *Excluded Services Determination* from the second regulatory period is in **Box 4**.¹²

Box 4: Excluded Services Determination

(1) For the purposes of clause 72(2) of the Code, excluded services not subject to any price regulation are the following services:

(a) contestable engineering consulting services provided by Power and Water Networks.

(2) For the purposes of clause 72(3) of the Code, excluded services which, in the regulator's opinion, do not lend themselves to being regulated by the price cap form of regulation applying in the second regulatory period are the following services:

(a) services (including metering, electric lines or electric plant) for the specific benefit of any third party (and requested by the third party) and not made available by Power and Water Networks as a normal part of standard services to all customers including –

i. charges for moving mains, services or meters forming part of Power Networks' system to accommodate extension, re-design or re-development of any premises;

ii. the provision of electric plant for the specific purpose of enabling the provision of standby supplies or sales of electricity; and

iii. provision of metering, or metering data, to a standard in excess of that required for billing purposes;

(b) the provision of connection equipment to a standard in excess of a standard associated with the "least overall cost, technically acceptable" assets; and

(c) power system (but not network system) control costs directly associated with the activities of a system controller licensed under the *Electricity Reform Act 2000*.

Commission's preferred approach

3.13 The Commission envisages that the current *Excluded Services Determination* remains appropriate for use in the third regulatory period, unless it can be determined that:

- market conditions for the provision of network access services have changed significantly to merit amendments to the *Excluded Services Determination*; or
- the *Excluded Services Determination* in some way conflicts with the Code's objectives.

3.14 The Commission is unaware of any significant changes to market conditions in relation to the extent of effective or potential competition for the provision of particular network access services during the second regulatory period.

Issue:

(4) Is the current range of excluded services still appropriate for the third regulatory period?

¹² Utilities Commission, *Networks Pricing: 2004 Regulatory Reset Final Determination*, February 2004, p.51.

Allowing for new tariffs, and encouraging tariff flexibility

What is the issue?

3.15 While a tariff basket form of control is in most respects relatively simple to implement and administer compared with other forms of price control, the introduction of new tariffs (and the removal of tariffs) requires procedures for determining the quantity weights that should apply.

3.16 The approach to the introduction of new tariffs or tariff components in the 2004 methodology requires Power and Water Networks to estimate the quantities that would have been sold had the tariff or tariff component been in place in the previous year. In effect, proxy quantities are proposed. The Commission assesses the reasonableness of these estimates and the supporting evidence before determining the weights that will apply.

3.17 **Box 5** outlines the 2004 methodology requirements for the introduction of new tariffs.

Box 5: New Tariff Arrangements

The 2004 methodology requires:

- Power and Water Networks to nominate the 'parent tariff' category associated with the new tariff being introduced. This parent tariff category is the tariff category which currently applies to those customers who are expected to migrate to the new tariff category;
- the value for the 'current' individual price of the new tariff (i.e., $pt-1$) to be set equal to the current parent tariff;
- Power and Water Networks to submit a 'reasonable estimate' of the relevant quantities that would have been sold under the new tariff in year $t-2$, if the proposed new tariffs had been offered in that year. These estimates of q_{t-2} will be used in applying the tariff basket to the proposed new tariff; and
- consistent with the estimate above, Power and Water Networks to also submit a 'reasonable estimate' of the quantities that would have been sold under the existing parent tariff in year $t-2$ if the proposed new tariffs had also been offered in that year. This estimate of q_{t-2} will be used in applying the tariff basket to the parent tariff.

In the very limited situations where there is no existing parent tariff, the Commission considers any evidence presented by Power and Water Networks to support the reasonableness of its estimates, and will take into account any particular difficulties arising in individual cases.

3.18 The 2004 methodology also requires Power and Water Networks to introduce an *explicit tariff category* for any customer being offered a discounted tariff in the same way as any other new tariff. Power and Water Networks' proposed tariffs to other customers on non-discounted tariffs may then be increased to the extent permitted by the tariff basket control. In this way, Power and Water Networks is able to recover part of the cost to it of offering the discounted tariff (subject to the negotiated prices meeting the Commission's discounting guidelines¹³).

3.19 At issue is whether the treatment of new or varied tariffs acts as a disincentive to the introduction of more efficient tariffs or discounted tariffs.

¹³ The Commission's discounting guidelines are outlined in the *Framework for Negotiation of Discounted Network Tariffs*, May 2002.

Commission's preferred approach

3.20 Unless undesirable outcomes can be established, the Commission proposes to continue with the new-tariff arrangements for the 2009 Regulatory Reset. This promotes regulatory certainty and minimises regulatory risk.

Issue:

(5) Do the current new-tariff arrangements remain appropriate for the third regulatory period?

CHAPTER

4

BASE YEAR ADJUSTMENTS

Scope for a cost-based adjustment

4.1 For the 2004 Regulatory Reset, Power and Water Networks' costs were re-examined to ensure that the *opening* weighted average tariff at least recovered the forward-looking and efficient costs of supply of regulated network access services.¹⁴

4.2 The required cost-based adjustment to opening tariffs was measured by what was termed the Z factor. This factor was the percentage adjustment necessary to the weighted average of network access tariffs applying at the end of the first regulatory period in order to form an appropriate basis for network access tariffs at the commencement of the second regulatory period.¹⁵ **Box 6** sets out this aspect of the 2004 methodology in more detail.

4.3 The intention of a Z factor adjustment was to ensure that the opening weighted average tariff used at least recovered the forward-looking and efficient costs of supply of regulated network access services.

Box 6: Base Period Adjustment

For the first year of the second regulatory period (2004-05), a *revised* weighted average of network access tariffs for the preceding year, 2003-04 (P''_{03-04}), must be calculated as follows:

$$P''_{03-04} = P_{03-04} \times (1 + Z)$$

where:

P_{03-04} = the weighted average of approved individual network access tariffs applying in 2003-04 (based on the first regulatory period revenue cap) expressed in index number form; and

Z = the factor determined by the Commission which indicates the extent to which the weighted average of network access tariffs applying in the first regulatory period requires adjustment in order to form an appropriate basis for network access tariffs in the second regulatory period.

¹⁴ The base year adjustment for the 2004 Regulatory Reset allowed for the closure of one-half of the identified operating cost efficiency gap in the NT context (being the inefficiencies attributed to Government- (i.e., shareholder-) imposed constraints on managerial discretion). The effect of this was to reduce the allowed cost base, thereby lowering the rate of return and providing an equitable sharing of the costs of any remaining inefficiency. The remaining half of the identified operating cost inefficiencies in the NT context (being inefficiencies attributed to Power and Water's board and management) was to be phased out over time via the X₂ factor component of the escalation arrangements (refer to **Box 7**).

¹⁵ For the second regulatory period, the Z factor was in fact determined in two stages. Following an initial Z factor determination at the time of the 2004 Regulatory Reset, a further Z-adjustment took place subsequently as part of an asset valuation exercise (the asset valuation 'off-ramp' review). Utilities Commission, *Networks Pricing: Asset Valuation Off-Ramp Final Decision Statement of Reasons*, April 2005.

What is the issue?

4.4 During the 2004 Regulatory Reset, the Commission noted that
*“...at issue now is whether there is enough information available to enable the Commission to satisfy itself that current prices are ‘about right’, such that it could confidently move away from a building block approach to a more light-handed approach. It may be that one or more additional regulatory control periods are required in order to be fully satisfied that the original objectives of the cost-based approach, such as eliminating monopoly rents, have been met.”*¹⁶

4.5 Therefore, in reviewing the 2004 methodology for use in the third regulatory period, an important issue is whether base year prices should again be adjusted by re-application of the building blocks approach. If not, and the base prices for the third regulatory period remain the price levels at the end of the second regulatory period, year 1 prices in the third period would in effect be de-linked from a re-assessment of costs.

Commission’s preferred approach

4.6 International experience has been that price cap (and benchmark) approaches have been adopted within mature regulatory regimes where the existing price levels and the initial cost base were ‘about right’. This is often labeled a ‘pure’ price cap. In these circumstances, a regulator can be confident that, in rolling forward a price cap, it is not compounding the extraction of monopoly rents or the under-recovery of efficient costs.

4.7 However, where the required level of confidence is lacking about the general equivalence of price levels and the cost base at the time any price cap is introduced, a ‘base year’ cost analysis is required and, if necessary, an opening price level adjustment needs to be made.

4.8 During the 2004 Regulatory Reset, Power and Water Networks provided the Commission with a range of data required to implement the building blocks approach for the purposes of calculating the Z factor to apply at the commencement of the second regulatory period. In some instances, the Commission found it necessary to interpret or extrapolate the data provided in order to complete its Determination.¹⁷

4.9 Given the Commission’s lack of confidence in some of the data provided by Power and Water Networks to measure the Z factor at the 2004 Regulatory Reset, the Commission’s preferred approach for the 2009 Regulatory Reset is to consider further adjusting base year prices only if it can be clearly demonstrated that network tariffs immediately following the Z-based adjustments during the second regulatory period¹⁸ under- or over-recovered forward-looking and efficient costs of supply of regulated network access services. In doing so, the Commission would need to be satisfied that the accuracy and reliability of the financial information provided to the Commission has improved to the extent appropriate for regulatory analysis.

4.10 For example, if the regulatory asset value used to set the second regulatory period’s network tariffs was not sufficient to ensure Power and Water Network’s ongoing financial viability, this could be grounds for considering a further Z-like adjustment as part of the 2009 Reset.¹⁹

¹⁶ Utilities Commission, *Networks Pricing: 2004 Regulatory Reset Issues Paper*, July 2003, p.32.

¹⁷ Utilities Commission, *Networks Pricing: 2004 Regulatory Reset Final Determination*, February 2004, p.23.

¹⁸ That is, immediately following the second Z-adjustment that was undertaken as a result of the asset valuation ‘off-ramp’ review in April 2005.

¹⁹ The Commission interprets the financial viability of an asset-intensive business like Power and Water Networks as involving “a high level of certainty that the business will be able to pay its bills as they fall due, and have sufficiently strong cash flow to raise the finance required to fund its continuing operations (including growth).” Utilities Commission, *Networks Pricing: Asset Valuation Off-Ramp Final Decision Statement of Reasons*, April 2005, p.27.

4.11 The focus must be on prices immediately following the Z-based adjustments in the second period. Any under- or over-performance against the efficiency (X-based) price paths during the second regulatory period is a separate matter to be considered in the context of 'gains sharing' (next section).

Issue:

(6) Is there evidence – involving financial data of a quality appropriate for regulatory analysis – that network access tariffs following the cost-based (Z factor) adjustments at the commencement of the second regulatory period under- or over-recovered forward-looking and efficient costs of supply of regulated network access services?

Scope for a gains-sharing adjustment

4.12 Compared with a possible cost-based adjustment, gains sharing involves allowing customers to share in any benefit of the network service provider's out-performance of the X factor (in the CPI-X price path).

4.13 The X factor represents the percentage real-terms reduction in average network tariffs that the network service provider is deemed capable of achieving, taking account of efficiency improvements, without jeopardising its financial integrity. Unless the network service provider can benefit from realising efficiency gains at a faster rate, it will not have an incentive to out-perform the assumed efficiency improvements.

4.14 The incentive to out-perform is likely to be undermined if the network service provider believes its out-performance will be returned immediately to customers at the end of the period (especially if the period of time until the end of the regulatory period is relatively short). A key feature of incentive regulation therefore involves offering the network service provider an incentive to out-perform the X factor.

4.15 This does not mean, however, that the network service provider should retain the benefit of any out-performance indefinitely. Part of the desirability of incentive regulation stems from the fact that customers should ultimately share in any benefit of the network service provider's out-performance of the X factor.

4.16 Hence, gains-sharing mechanisms permit a network service provider:

- during a regulatory period, to retain in full any returns to the network service provider from the sale of the regulated access service that exceed the level of returns expected during that regulatory period; and
- during the subsequent regulatory period, to retain a percentage share of any returns to the network service provider from the sale of the regulated access service that exceed the level of returns expected during the preceding regulatory period, where the additional returns are attributable (at least in part) to the efforts of the network service provider.

What is the issue?

4.17 There are several possible approaches that may be adopted to share the benefits of out-performance of the X factor with customers, including:

- one-off price reductions – where gains in excess of those represented by the X factor in the previous period are passed on directly and in full to consumers in the setting of prices at the next reset (usually referred to as a "P₀ adjustment"²⁰);

²⁰ This is pronounced "P-nought adjustment".

- a glide path – where gains are passed on to customers either entirely (full glide path) or partially (partial glide path) over time, thereby allowing the network service provider to realise profit benefits of efficiency gains for a period beyond the regulatory period (for example the out-performance may be spread over the next regulatory period); and
- gains maintenance – where the full gains for each year are retained by the network service provider for a pre-specified time (for example, five to ten years) unconnected to any regulatory reset whereupon gains are passed onto customers in a one-off or phased reduction.

4.18 The Code favours a glide path approach rather than a P_0 adjustment.

“(a) the network provider is to retain all profits earned within each regulatory control period by outperforming the relevant benchmarks (underlying the X factor), and to bear all profit shortfalls associated with any under-performance, except where –

(i) the revenue or price cap was set on the basis of false or materially misleading information;

(ii) there was a material error in setting the revenue or price cap and written consent of the parties affected by any amendment to the revenue or price cap has been obtained; or

(iii) extraordinary developments occur during a regulatory control period that, in the opinion of the regulator, were outside the network provider’s control (including a change in ownership);

(b) any excess profits (or unanticipated losses) arising during a regulatory control period on account of the actual values of the parameters used to estimate a revenue or price cap departing from forecast values are to be eliminated in full from the commencement of the following regulatory control period; and

(c) any efficiency gains achieved during a regulatory control period which are beyond those foreshadowed in the X factor are to be phased out progressively over the course of the following regulatory control period, with such a glide path approach being achieved by building an explicit efficiency carryover component into the revenue or price cap for the following regulatory control period (which translates into an increase in the allowed rate of return over and above the rate that would otherwise be applied).”²¹

4.19 However, the ideal nature of any gains-sharing mechanism depends in part on the form of regulation. It may be that gains-sharing mechanisms suitable under a revenue cap approach need to be modified significantly for application under the price cap approach.

Commission’s preferred approach

4.20 In the Commission’s 2004 Regulatory Reset, the Commission foreshadowed its approach to gains sharing in the 2009 Regulatory Reset:

“While the Commission cannot bind the future exercise of statutory powers, it wishes to place clearly on the record that:

- *it considers that only a long-term approach to determining the future sharing of the out-performance of efficiency targets is consistent with the Commission’s statutory objectives;*
- *it is important that the regulatory arrangements do not influence the timing of any efficiency initiatives on the part of the network service provider; and*
- *its preferred approach is to allow the sharing of out-performance beyond the regulatory control period during which such out-performance occurs.*

The Commission therefore believes that out-performance in the second regulatory control period should be carried forward in accordance with a gains sharing approach during the third regulatory control period. In particular, any Z-like base period adjustment at the commencement of the third regulatory control period should be implemented in a manner

²¹ Paragraph 3(2) of Schedule 10.

that preserves a reasonable share of the benefits of out-performance observed during the second regulatory control period throughout the third regulatory control period.”²²

4.21 The Commission’s reference to a “Z-like base period adjustment at the commencement of the third regulatory control period” did not imply that only a P_0 adjustment was warranted.

4.22 Moreover, the approach adopted will impact on Power and Water Networks’ incentive to pursue efficiency gains. For example, where out-performance is passed on to customers as a P_0 adjustment, Power and Water Networks would have little incentive to invest in efficiency enhancements towards the end of any regulatory period. The glide path and gains maintenance approaches offer Power and Water Networks the opportunity to retain some if not all of the benefits of any out-performance achieved in one regulatory period during a subsequent regulatory period.

4.23 Implementation of a gains sharing approach also requires that the accuracy and reliability of the financial information available to the Commission is of a quality appropriate for regulatory analysis. In this respect, any decision on a gains sharing approach may need to be taken in conjunction with a decision on a cost-based adjustment. Such a joint decision is necessary to ensure that the approaches taken can be symmetrical in effect.

Issue:

(7) Should a gains sharing approach be considered for adoption during the third regulatory period? If so, why and what form should it take?

²² Utilities Commission, *Networks Pricing: 2004 Regulatory Reset Final Methodology Decision*, November 2003, p.26.

CHAPTER

5

ANNUAL ESCALATION ARRANGEMENTS

Value of the X factor in CPI-X price path

5.1 Revenue cap and price cap approaches both escalate prices from one year to the next using a CPI-X price path.

5.2 Under the revenue cap approach, the value of the X factor is determined so that the present value of tariff revenues equals the present value of required revenues – with required revenue being determined using forecasts of costs and the building blocks approach. By contrast, the price cap approach avoids detailed analysis of projected demand and costs specific to the network being regulated. Instead, the X factor is based on a benchmark estimate of the trend annual rate of productivity (or efficiency) performance for the industry. This then becomes the performance target that Power and Water Networks must equal to maintain its profitability. Performance which betters this target increases profit during the regulatory period and provides the key incentive properties of the CPI-X form of regulation.

What is the issue?

5.3 At issue is the methodology to be used for determining the X factor.

5.4 The X factor is the amount by which Power and Water Networks is allowed to escalate network access tariffs (on average) relative to the rate of consumer price inflation. The X factor therefore determines the maximum amount by which network tariffs are permitted to change in real terms. Because productivity (or cost per unit of output) is a primary driver of real price movements, the X factor is often referred to as a productivity or efficiency factor.

5.5 Assuming that the price cap approach continues, the key issue regarding the X factor in the 2009 Regulatory Reset is the appropriateness of continuing with the distinction between the two efficiency factors (X_1 and X_2) adopted for the 2004 methodology and the basis of their calculation.

5.6 The X_1 factor was a factor determined by the Commission to reflect the difference between annual movements in consumer prices on average and in electricity network access prices *on average in Australia*. The X_1 factor involves taking account of the future scope for productivity improvements in the regulated industry as a whole. The Commission derived the X_1 factor in relation to estimates derived and used by other regulators.

5.7 The X_2 factor was a factor determined by the Commission to reflect the additional efficiency gains required in the Northern Territory to close the gap relative to the efficiency benchmark provided by the sector in general. The Commission derived the X_2 factor from an independent consultant's report that evaluated the operating

performance of Power and Water Networks against other relevant electricity networks businesses in Australia.²³

5.8 The escalation arrangements applying during the second regulatory period are set out in **Box 7**.

Box 7: Escalation Arrangements

During the second regulatory period, Power and Water Networks must annually develop tariff schedules that conform with the following constraint on weighted average tariffs (denoted as P):

$$P_t \leq [P_{t-1} \cdot (\frac{CPI_{t-1}}{CPI_{t-2}}) \cdot (1 - (X_1 + X_2))]$$

where:

the t-based subscripts denote a particular financial year, with t denoting the forthcoming year, t-1 the current year and t-2 the previous year;

and:

CPI = a 100 based index, being the all capital cities headline CPI index published by the Australian Bureau of Statistics ("ABS");

X₁ = the factor determined by the Commission which reflects the difference between annual movements in consumer prices on average and in electricity network access prices on average in Australia; and

X₂ = the factor determined by the Commission which reflects the difference between annual movements in electricity network access prices applied on average by comparable best practice network service providers in other jurisdictions in Australia and by Power and Water Networks in the Northern Territory.

In applying the above equation, the CPI_{t-1} term is to be measured by reference to the most recently published four quarter average index at the time. The CPI_{t-2} term involves the published four quarter index value in the corresponding period in the previous year.

Commission's preferred approach

5.9 Unless undesirable outcomes can be established, the Commission proposes to continue *in principle* with the distinction made in the 2004 methodology between the X₁ and X₂ factors and the general method for measuring each of these factors. This promotes regulatory certainty and minimises regulatory risk.

5.10 In practice, however, consideration of the X₂ factor is dependent on decisions to be made regarding the scope and nature of any cost-based Z factor adjustment and gains sharing approach.

Issue:

(8) Is any change warranted to the definition and measurement of the composite X factor as used in the 2004 methodology, notably involving the separate consideration of the X₁ and X₂ factors? If so, why?

²³ Meyrick and Associates Pty Ltd, *Benchmarking Power and Water Corporation's Power Networks O&M Costs*, January 2003. The Executive Summary of this report can be viewed on the Commission's website.

Scope for a service-performance adjustment

What is the issue?

5.11 During the second regulatory period, the Commission established a standards of service framework that includes average and minimum standards to be met by Power and Water Networks.²⁴ Among other things, this framework aims to discourage deterioration in service standards that can result under price controls whereby the network service provider reduces expenditure (and thus increases profits) at the expense of service quality.

5.12 This framework currently does not include any incentive or penalty mechanisms, such as a price control adjustment in response to service performance or a guaranteed service level (GSL) scheme. When establishing the framework, the Commission considered its first priority was to ensure that Power and Water's reporting mechanisms were effective and the minimum standards used were valid (over the second regulatory period).

5.13 The 2009 Regulatory Reset provides an opportunity to examine the scope for the introduction of incentive or penalty mechanisms in support of the NT Electricity Standards of Service framework.

5.14 The usual form of incentive scheme is a price control adjustment in response to service levels. This sees prices reduced below levels otherwise permitted when performance falls below benchmark levels, and conversely prices increase above levels otherwise permitted when performance exceeds benchmark service levels. The size of the adjustment is generally proportional to the difference between actual and benchmark levels, but could be capped at particular intervals. With this type of incentive, a regulator attempts to limit or avoid 'gaming' behaviour by the network service provider and thus seeks to ensure that price adjustments reflect the different levels of service actually received by individual consumers, or the value placed by different customer segments on that service.

5.15 Such minimum standards and incentive schemes are based around average performance for customers. Under some circumstances, it may be appropriate to supplement such an approach with a scheme of payments to individual customers for whom certain guaranteed minimum service levels are not met. Under such an approach, the network service provider is required to make payments directly to customers that receive service below a certain benchmark.

5.16 Most (but not all) other jurisdictions in Australia currently have both a price control adjustment scheme and a GSL payments scheme. By adding another factor (usually termed an S factor) to the permitted CPI-X price path, the price control adjustment schemes reward (or penalise) the network service provider for improvements (or deteriorations) in average standards of service, with the reward (or penalty) being given effect through average tariff levels. Broadly, the value of the S factor is determined by the difference between a network service provider's target standard of service and its actual performance.

Commission's preferred approach

5.17 From the Commission's perspective, the issue is *when* rather than *if* such performance incentive arrangements will be introduced into the Northern Territory's network price regulation methodology.

²⁴ The Commission published a *Standards of Service Code* that took effect from 1 January 2006. This Code establishes minimum standards of reliability, quality and customer service with respect to Power and Water's service provision.

5.18 Whether via jurisdictional consistency or by eventual adoption of national arrangements, such arrangements look set to be adopted in due course. Notably, the draft National Electricity Distribution Rule amendments require the Australian Energy Regulator (AER) to develop and publish a service target performance incentive scheme and the parameters for the scheme to provide incentives for network service providers to maintain and improve services. The AER must consider any jurisdictional incentive scheme in place at the time when responsibility for economic regulation is transitioned. Further, service performance must be assessed against standards set by the individual jurisdiction.²⁵

5.19 Essentially, the Commission is faced with two choices at the 2009 Regulatory Reset:

- either the adoption of performance incentives arrangements in the Northern Territory could be deferred until the 2014 Regulatory Reset, on the basis that more time is needed to develop confidence in the measurement and monitoring of service performance in the Northern Territory;
- or an initial performance incentive arrangement could be put in place as part of the 2009 Regulatory Reset.

5.20 The Commission's preference is for the second course of action, on the basis that the intention to introduce an incentive arrangement has been flagged for some time and, until such a scheme is introduced, the incentives for improving the measurement and monitoring of service performance in the Northern Territory will remain weak. Nevertheless, the Commission envisages that the initial performance incentive arrangement would need to be tailored to the circumstances in the Northern Territory including to ensure that it is appropriate to smaller and more dispersed networks, and to recognise the developing standard of measurement of service performance.

Issue:

(9) Is there any disagreement with the Commission's intention to introduce an incentive mechanism into the price regulation methodology in support of the NT Electricity Standards of Service framework? If so, why?

²⁵ SCO MCE, *Changes to the National Electricity Rules to establish a national regulatory framework for the economic regulation of electricity distribution, Explanatory Material*, April 2007, p.15.

CHAPTER

6

INDIVIDUAL NETWORK ACCESS TARIFFS

6.1 Substantial economies of scale and scope in the provision of network services mean that such services are usually most efficiently provided by a monopoly network service provider.

6.2 From a regulatory perspective, the Commission's **primary control** involves rules governing revenue or average prices that restrain the ability of a monopoly network service provider to set network tariffs above efficient levels. Issues surrounding the primary control arrangements for the next regulatory period have been addressed in previous chapters.

6.3 A further regulatory function involves setting out requirements in relation to individual tariff setting, within any limit on aggregate revenues or average prices. Such **secondary controls** involve rules that define how a network service provider recovers its regulated revenue or sets its individual prices. These controls regulate who should pay for network services and what the structure of charges should be. Essentially, the focus of secondary controls is on network tariff *structures*.

6.4 **Box 8** sets out the secondary price controls in place in regulated networks in the Northern Territory during the second regulatory period.

Box 8: Individual Network Access Tariffs

Prior to the commencement of the second regulatory period, the Commission will approve the draft Pricing Principles Statement submitted by Power and Water Networks setting out details of principles and methods to be used for defining the individual standard network access services to be supplied and for establishing the reference tariffs to apply to those services unless the statement is not consistent with the principles in clause 74 of the Code (see **Box 1**).

The Commission will approve the annual schedule of individual network access tariffs submitted by Power and Water Networks each year within the second regulatory period, unless:

- the weighted average of tariffs included in the schedule, expressed in index number form, does not comply with the CPI-X constraint; or
- in conjunction with the submission of the schedule of annual network access tariffs for approval, Power and Water Networks fails to submit to the Commission a statement of reasons for any modifications proposed to the structure of network access tariffs that is consistent with the approved Pricing Principles Statement and capable of publication (with the Commission intervening only if it considers the proposed change in structure to be inconsistent with the approved Pricing Principles Statement); or
- the resultant impact on the weighted average tariff *for each individual end-use customer* does not comply with a CPI+5% side constraint (additional to any allowed Z factor adjustment), where 5% is a factor determined by the Commission.

Side-constraint arrangements

What is the issue?

6.5 For the second regulatory period, the Commission set a constraint (“the side constraint”) on the annual increase in each individual network user’s weighted average network access tariff to protect each individual ‘consumer’ from large price increases, while providing Power and Water Networks with the flexibility necessary to align its network tariff structures with the structure of its costs (by re-balancing tariffs).

6.6 However, Power and Water Networks did not undertake any material restructuring of its network tariffs during the second regulatory period. This meant that the side-constraint arrangements did not come into play. At issue is whether aspects of the side-constraint contributed in any way to the rigidity in the structure of network tariffs observed during the second regulatory period.

Commission’s preferred approach

6.7 The Commission does not consider that the side-constraint arrangements themselves provided any discouragement to the restructuring of network tariffs or the introduction of new tariffs during the second regulatory period, and would be unlikely to do so during the third regulatory period.

6.8 Moreover, protecting individual customers from large network tariff increases remains an important regulatory objective.

6.9 For these reasons, the Commission considers that continuing with a rebalancing constraint is appropriate to avoid price volatility and to provide a measure of certainty for customers.

Issue:

(10) Is there any disagreement with the Commission’s intention to leave unchanged the side-constraint feature of the 2004 methodology? If so, why?

Tailoring secondary price controls to the form of the primary control

What is the issue?

6.10 In its 2004 Regulatory Reset, the Commission identified one of the principal attractions of adopting the price cap approach to be that:

“...it greatly increases incentives on the network service provider to structure individual tariffs in line with costs (thereby managing the associated risks)”²⁶.

6.11 In general, all forms of ‘primary control’ create some incentives for a network service provider to structure its network tariffs in particular ways, at least in the short term.

6.12 Under a price cap form of control, where prices – rather than revenue – are capped and any revenues earned in excess of what a regulator originally allowed do not have to be returned, a network service provider has an incentive to set the structure of its charges in line with the structure of its (future) costs, other things being equal.

²⁶ Utilities Commission, *Networks Pricing: 2004 Regulatory Reset Final Methodology Decision*, November 2003, p.46.

6.13 However, if network costs are not expected to vary significantly with demand or energy over the length of the regulatory period, a network service provider may attempt to maximise revenues by maximising utilisation of the network. More specifically, left to choose its own pricing arrangements, a network service provider could charge:

- lower prices to customers whose consumption could decline in the face of higher prices; and
- higher prices to customers whose consumption would not decline in the face of higher prices.

6.14 In the longer run, this pricing approach could encourage greater consumption, resulting in long-term costs being higher than otherwise. This may also result in some longer term inefficiencies.

6.15 However, if a network service provider has its revenue regulated, it may simply put in place a pricing system that is cheap and easy for it to administer, with uncertain effects upon economic efficiency.

6.16 Primary and secondary controls can therefore have strong linkages. The more the primary price control reflects firm-specific forecasts of costs, especially capital expenditures, the more likely are network enhancements and expansions – rather than active network management and demand management activities – to be validated by the regulatory regime and the associated costs passed through to end-users.

6.17 The 2004 methodology allows Power and Water Networks to readjust individual network tariffs within an overall tariff basket constraint. Changes to the design of each network tariff may be effected through changes in – including the introduction or withdrawal of – the components, elements or variables comprising each network tariff (such as a change in the base charge or fixed charge within the network tariff or a change in the steps, or the level of the steps, within the network tariff).

6.18 At issue is whether the individual tariff approval arrangements currently in place (the secondary controls) give sufficient recognition to the primary control (price cap) which is in place in the Territory. Specifically, the Commission has the capacity to intervene if it considers any proposed change in tariff structures to be inconsistent with the approved Pricing Principles Statement – even if it is within the rebalancing constraint.

6.19 The Code's requirements regarding the regulation of individual network tariffs are set out in **Box 9**.

Commission's preferred approach

6.20 The Commission considers the tariff basket form of price control underlying the 2004 methodology to have a number of incentive properties that constitute advantages over the other forms of primary control. Among the efficiency arguments in favour of a tariff basket approach are:

- **Risk.** A network service provider faces significant risk in forecasting volumes, with issues such as weather and competition from other energy sources meaning that outcomes may vary considerably from those forecast. Given that revenues are a function of volume and tariffs, this creates a commercial risk. The tariff basket approach allows this risk to be managed in the most efficient way, by allowing revenues to shift between tariff components, subject to an overall cap to ensure that the network service provider is not earning more than its allowable revenue as a result.
- **Variations in Costs.** The cost of providing network services may also vary within a regulatory period. The tariff basket approach allows for tariff variation to meet these cost changes so that the cost of providing services continues to track the revenues from those services. The network service provider has an incentive to keep its tariff structure aligned with the structure of its costs. A scenario where costs and revenue structures diverge is a recipe for inefficiency.

Box 9: The Code on Individual Network Tariffs

Chapter 7 regulates the reference tariffs to be published annually by Power and Water Networks with respect to standard network access services.

The Commission's role with regard to network tariffs under the Code is limited to the Commission approving:

- Power and Water Networks' Pricing Principles Statement unless, *in the opinion of the Commission*, the statement is not consistent with the requirements/principles to be met by the reference tariffs (network pricing objectives) in clause 74 of the Code (clause 75(6)); and
- the tariffs and charges, or individual tariffs and charges, proposed by Power and Water Networks unless, *in the opinion of the Commission*, the tariffs and charges would result in Power and Water Networks not complying with the principles laid down in Chapter 7 or is inconsistent with requirements elsewhere in the Code (clause 78(3)).

Hence, as far as Chapter 7 of the Code is concerned, the issues that must be addressed by the Commission for implementation in the third regulatory period are whether, *in its opinion*:

- Power and Water Networks' Pricing Principles Statement is consistent with the network pricing objectives in clause 74; and
- Power and Water Networks' proposed individual tariffs and charges comply with the principles laid down in Chapter 7 and are consistent with requirements elsewhere in the Code.

6.21 Nevertheless, there are limits to the extent to which the primary control choice obviates the need for secondary controls. By and large, the advantage of a price cap approach is limited to the pursuit of the static efficiency objective behind eliminating monopoly rents. Pricing structures also need to have regard to demand management considerations and the level of available network capacity and so signal the impact of additional usage on future investment costs.

6.22 Therefore, additional regulatory encouragement may be required to ensure that network tariff structures are based on forward-looking long run costs and the main objectives that price structures should be designed to achieve (e.g., certain locational, consumption or production outcomes).

6.23 The Commission's preference is therefore to increase scrutiny of Power and Water Networks' proposed Pricing Principles Statement for the third regulatory period, including by considering the implications of any price signals not being directly passed on to end-users. Power and Water Networks' tariffs are 'bundled' with energy charges and retail margins by the retailer.

6.24 Once the Pricing Principles Statement is approved, however, the Commission envisages a stream-lined approval process for each year's individual network tariffs. This would put the onus on network users when it comes to flagging whether tariffs applying to individual customers are consistent with Power and Water Networks' own pricing principles.

Issue:

(11) Is there any disagreement with the Commission's intention to increase scrutiny of Power and Water Networks' proposed Pricing Principles Statement prior to the commencement of the third regulatory period and subsequently simplify the basis for approval of the proposed annual tariff schedules? If so, why?