



# **2014-2019 NETWORK PRICE DETERMINATION**

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## **FRAMEWORK AND APPROACH CONSULTATION PAPER**

*June 2012*

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## Call for submissions

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

Submissions should be directed in the first instance:

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The closing date for submissions is **Wednesday 17 August 2012**.

## Confidentiality

In the interests of transparency and to promote informed discussion, the Commission will make submissions publicly available.

Persons wishing to submit confidential information should:

- clearly identify the relevant sections of the submission that are confidential, so that the remainder of the document can be made publicly available; and
- provide a copy of the submission suitable for publication with any confidential material removed.

Confidential information is defined in section 26 of the *Utilities Commission Act* as information that could affect the competitive position of a licensed entity or other person or is commercially sensitive for some other reason.

## Public access to submissions

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](http://www.utilicom.nt.gov.au)).

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.

## Glossary of terms

Term	Definition
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
Commission	Utilities Commission of the Northern Territory established in April 2000 under the <i>Utilities Commission Act</i>
CPI	Consumer Price Index
D-Factor	A demand management incentive which provides for recovery of forgone revenue as a result of successful approved demand management initiatives operated through the network revenue or price regulation framework.
DKTL	Darwin-Katherine Transmission Line
DMIS	Demand Management Incentive Scheme
DMIA	Demand Management Incentive Allowance
DNSP	Distribution network service provider
EBSS	Efficiency Benefits Sharing Scheme
ESS framework	Electricity standards of service framework
ESS Code	Electricity Standards of Service Code
GSL	Guaranteed service level
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules <sup>1</sup>
NT Access Code	Electricity Networks (Third Party Access) Code, which is a schedule to the <i>Electricity Networks (Third Party Access) Act</i>
PTRM	Post-tax revenue model
PWC	Power and Water Corporation
PWC Networks	The networks business division of PWC
PWC Generation	The generation business division of PWC
RAB	Regulatory Asset Base

<sup>1</sup> The version of the National Electricity Rules used by the Commission for the purposes of this Consultation Paper is the National Electricity Rules Version 49 which commenced from 5 April 2012.

Term	Definition
Regulatory bargain	The optimum balance between price and service levels
Regulatory control period	The period between major price reviews during which time the methodology used in setting prices is held constant.
RFM	Roll Forward model
RIN	Regulatory Information Notice, issued under the relevant regulator's powers to request information, sets out the detailed information that is required to be submitted by the regulated entity.
RIT-D	Regulatory investment test for distribution investments
RIT-T	Regulatory investment test for transmission investments
S-Factor	A financial incentive or penalty for network performance against service targets, imposed through the network revenue or price regulation framework.
STPIS	Service Target Performance Incentive Scheme
Tariff basket	Weighted average of network access prices.
TFP	Total Factor Productivity based approaches rely on the estimation of industry wide productivity trends to determine the X-factor under a CPI-X approach as part of price cap incentive regulation.
TNSP	Transmission network service provider
X-Factor	Amount by which a DNSP is allowed to escalate network access tariffs (on average) relative to the rate of consumer price inflation. The X-factor is often referred to as a productivity or efficiency factor.
WACC	Weighted Average Cost of Capital – The rate of return for a [Network Service Provider] for a regulatory control period is the cost of capital as measured by the return required by investors in a commercial enterprise with a similar nature and degree of non-diversifiable risk as that faced by the [network] business of the provider. <sup>2</sup>

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<sup>2</sup> Clauses 6.5.2(b) and 6A.6.2(b) NER.

# CHAPTER 1

## Executive summary

- 1.1 Retail electricity prices currently paid by consumers comprise a number of cost components:
  - electricity generation costs;
  - transmission and distribution costs (the subject of this Consultation Paper);
  - system operation and control costs; and
  - customer retail services.
- 1.2 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 Access Code) which is a schedule to the *Electricity Networks (Third Party Access) Act*.
- 1.3 The Utilities Commission of the Northern Territory (the Commission) is the independent economic regulator responsible for regulating monopoly electricity services, licensing market participants and enforcing regulatory standards for market conduct and service performance.
- 1.4 The Commission has been undertaking network price regulation under the provisions of the NT Access Code since 1 April 2000.
- 1.5 The network service provider in all regulated networks in the Northern Territory is the networks business division (PWC Networks) of the Power and Water Corporation (PWC).
- 1.6 The next regulatory control period, the fourth regulatory control period, is the five-year period commencing 1 July 2014.
- 1.7 In the lead-up to the commencement of the fourth regulatory control period, the NT Access Code requires the Commission, in consultation with interested parties, to review the network price regulation methodology used in the previous regulatory control period, with a view to modifying the methodology as appropriate.
- 1.8 The process of establishing the network price regulation methodology to apply from 1 July 2014 is referred to as the '2014 Network Price Determination'.

## Purpose of this paper

- 1.9 This Paper initiates the 2014 Network Price Determination process. It discusses the possible options underlying the determination process, and provides the Commission's preliminary position with respect to various aspects of the determination.



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- 1.10 The Commission's final Framework and Approach paper (expected to be released by end September 2012) will assist PWC Networks in preparing its regulatory proposal to the Commission.
- 1.11 The NT Access Code requires the Commission to conduct 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.<sup>3</sup>
- 1.12 Submissions are sought from interested parties concerning the issues raised in this paper and related matters. More specifically, the Commission seeks comments relating to the following:
- adoption, where possible, of the approach to network price regulation in the National Electricity Market (NEM) used by the Australian Energy Regulator (AER) as specified in the National Electricity Rules (NER);
  - constraints affecting PWC Networks' capacity to provide information equivalent to that required under the NER;
  - classification of services to be regulated or excluded;
  - the form (or forms) of control mechanism(s) to be applied;
  - the key parameters underlying the form of control mechanism;
  - the Commission's approach to approving various aspects of PWC Networks' regulatory proposal including network pricing principles, tariff structures and capital contributions principles; and
  - the Commission's approach to approving PWC Networks' 2014 pricing proposal and subsequent annual pricing proposals during the regulatory control period.

### **Commission's preliminary position**

- 1.13 The Commission's preliminary position is to adopt, where possible, the approach used by the AER and on the application of those parts of Chapter 6 of the NER in relation to electricity network businesses in the NEM that are consistent with the NT Access Code.
- 1.14 The Commission considers that this framework represents generally accepted regulatory practice at this time.
- 1.15 Benefits of adopting an approach consistent with the AER processes and relevant provisions of Chapter 6 of the NER include:
- the NER is an established regulatory framework which has been developed over time and continues to evolve;

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<sup>3</sup> Clause 62(2) NT Access Code

- the AER processes and NER apply to network service providers in other jurisdictions (excluding Western Australia) and would encourage a level of regulatory reporting consistent with that required of other network service providers;
  - provision of information through a more detailed regulatory proposal would provide a greater discipline on PWC Networks to develop and maintain robust reporting;
  - allowing the Commission and PWC to leverage the knowledge and skills available through the AER to improve network pricing information and analysis; and
  - potential future benchmarking of network service provider costs.
- 1.16 The Commission acknowledges that resourcing constraints and economies of scale mean that full adoption of an approach consistent with the AER processes may not be practical.
- 1.17 The Commission's proposed approach is, in consultation with PWC Networks, for each aspect of the 2014 Network Price Determination:
- a) if a component of the approach used by the AER is not inconsistent with the requirements of the NT Access Code, to consider whether the requirements for that component can currently be met by PWC Networks and if so, then apply it;
  - b) if a component of the approach used by the AER cannot currently be met by PWC Networks, to make the minimum modifications necessary such that the modified requirements can be met by PWC Networks and apply the modified requirements; and
  - c) where a component of the approach used by the AER has been modified, document the reasons for departing from the NER and outline a framework and timeframe for putting in place capabilities to meet the requirement in future.

#### *Scope of the Network Price Determination*

- 1.18 Unlike the NEM, the Territory's regulatory framework makes no specific or statutory distinction between transmission and distribution networks, with the network services regulated under the NT Access Code encompassing both transmission and distribution services.
- 1.19 The Commission's preliminary position is that the 2014 Network Price Determination will comprise a single building block of cost of service covering all network services (both transmission and distribution) provided by PWC Networks, applying where appropriate the provisions of Chapter 6 of the NER for the regulation of distribution networks.
- 1.20 A single cost of service determination will be made for all regulated networks, rather than separate determinations for each network.
- 1.21 Whether the transmission component of tariffs should be distinguished from distribution components and whether tariffs should differ by region will be dealt with in considering PWC Networks' network pricing principles statement and pricing proposal.

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*Classification of services*

- 1.22 The Commission proposes to consider classification of services provided by PWC Networks having regard to the factors set out in the NER. The NER requires that the AER, in classifying services, should not depart from a previous classification unless a different classification is clearly appropriate. The Commission proposes to take a similar approach for the 2014 Network Price Determination.
- 1.23 The Commission proposes to adopt the AER approach of classifying a class of activities, rather than the specific activities, allowing the specific definition or magnitude of services to change whilst maintaining the desired classification.
- 1.24 The Commission's preliminary position is that the service classifications that it adopted in the previous regulatory control period should continue, while further clarifying the service descriptions.

*Form of control mechanism*

- 1.25 The Commission's preferred approach would be to adopt, where possible, the approach used by the AER and the application of relevant provisions of Chapter 6 of the NER.
- 1.26 The Commission's preliminary position is that it will continue to apply a weighted average price cap form of control mechanism for standard control services with a side constraint on the corresponding weighted average tariff for individual end-use customers.
- 1.27 The basis of the control mechanism will be of the prospective CPI minus X form.
- 1.28 However, rather than the Total Factor Productivity (TFP)-based approach applied for the 2009 Network Price Determination, the Commission proposes to determine the X-factor in accordance with a building block approach.
- 1.29 The Commission considered that a TFP-based approach for the 2009 Network Price Determination was acceptable at that time, in terms of both generally accepted regulatory practice and the direction in which the NER might be moving. However, the Commission considers that generally accepted regulatory practice has now moved, with the Australian Energy Market Commission (AEMC) taking the view that the necessary conditions for applying a TFP-based approach were not present and that a sufficiently robust and consistent dataset to support TFP did not yet exist.
- 1.30 The Commission's preliminary view is that the most practical course is to adopt a forward-looking building block approach using similar processes and practices as applied by the AER, but noting that full adoption of the AER processes may not be possible and variations may be required. The Commission is mindful that, in a small jurisdiction, the Commission and PWC have limited resources available (both internally and externally) to undertake a building block approach form of price control. The Commission intends to seek advice from the AER on how similar processes and practices can be applied to the Territory's context.
- 1.31 The Commission will work with PWC Networks to determine the extent to which information provision can be best matched to that required under the AER processes.
- 1.32 The Commission does not propose to apply any price control mechanism for services other than standard control services.

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*Key parameters*

- 1.33 The Commission's preliminary position is that a post-tax revenue model (PTRM), largely modeled on the AER's published PTRM and its accompanying handbook, be adopted for use by the network service provider in the 2014 Network Price Determination.
- 1.34 The Commission's preliminary position is that a roll-forward model (RFM), largely modeled on the AER's published RFM and its accompanying handbook, be adopted for use by the network service provider in the 2014 Network Price Determination to roll forward the regulated asset base (RAB), which was set at \$350 million (excluding gifted assets) as at 1 July 2002 (in July 2002 dollars).<sup>4</sup>
- 1.35 The Commission's preliminary position is that PWC Networks' regulatory proposal should include total forecast capital expenditure which complies to the maximum extent possible with the requirements of the NER, including use of a Regulatory Investment Test (RIT).
- 1.36 The Commission considers the approach adopted in the NER to determine the network service provider's Weighted Average Cost of Capital (WACC) to be applied in the forward building block approach to be appropriate for the 2014 Network Price Determination.
- 1.37 The Commission's preliminary position is that it will adopt a post-tax nominal WACC, consistent with the AER methodology.
- 1.38 The Commission considers that the approach to calculating depreciation set out in clause 6.5.5 of the NER provides an appropriate model for PWC Networks' regulatory proposal.
- 1.39 The Commission considers the approach specified in the NER for forecasting operating expenditure to be appropriate for the 2014 Network Price Determination, and it should provide the network service provider an incentive to undertake a robust assessment of its network expenditure requirements.
- 1.40 Cost Allocation Procedures have been developed by PWC and approved by the Commission under the NT Electricity Ring-fencing Code setting out how to allocate any costs that are shared between a Prescribed Business and a Related Contestable Business. The Commission is of the view that, as they stand, the Cost Allocation Procedures developed under the Ring-fencing Code are too broad to provide guidance to PWC Networks in the development of consistent internal policies to be used as part of the network price determination process.
- 1.41 The Commission's preliminary view is that NER cost allocation principles<sup>5</sup> and the AER guidelines would be an appropriate indicator of generally accepted regulatory practice. In line with this, PWC Networks will be required to submit a Cost Allocation Method, setting out the detailed principles and policies used by PWC Networks to

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<sup>4</sup> Utilities Commission, Networks Pricing: Asset Valuation Off-Ramp Final Decision Statement of Reasons, April 2005

<sup>5</sup> Clause 6.15.2 NER

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allocate costs between different categories of distribution services, consistent with the AER Cost Allocation Guidelines.

- 1.42 The NT Guaranteed Service Level (GSL) Code, developed by the Commission, took effect from 1 January 2012. The Commission will consider if an allowance for GSL payments should be made when assessing the regulated revenue requirement of PWC Networks for the 2014 Network Price Determination.
- 1.43 The Commission is developing a new Standards of Service Code for the Territory. The Commission's preliminary view is that it would be premature for the 2014 Network Price Determination to include financial incentives and penalties for network performance through an S-Factor requirement in the price control (as specified in the NER) if the network service provider has had limited exposure to new service targets. Similarly, the Commission believes it would be premature to adopt a demand management incentive scheme as specified in the NER.
- 1.44 The Commission's preliminary position is that, at the end of the fourth regulatory control period, any efficiency gains or losses achieved in the period will be dealt with consistent with the requirements of the AER's EBSS or with a Territory-specific EBSS if one is in force at that time.

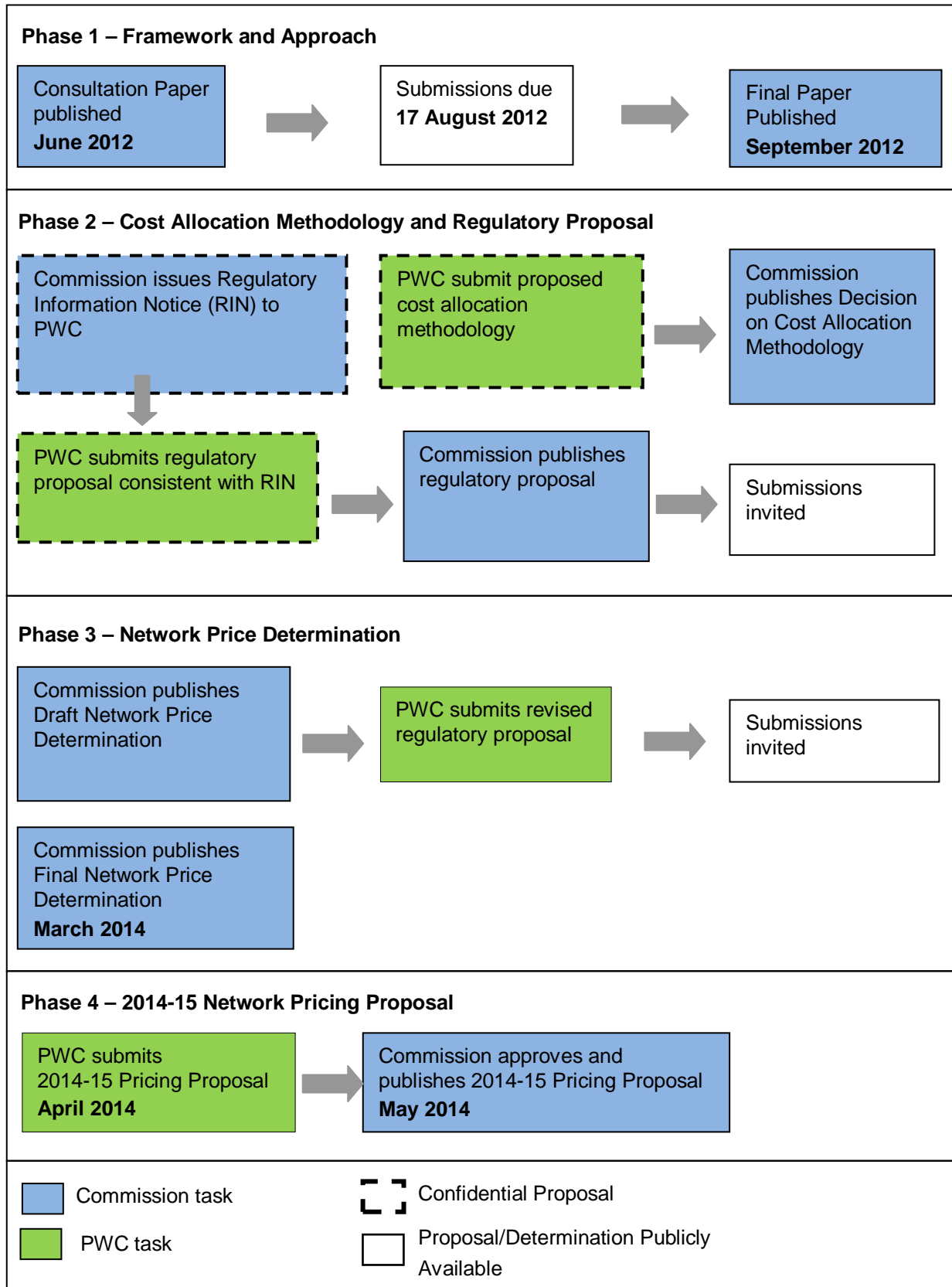
*Pricing principles and tariffs*

- 1.45 The Commission proposes that PWC Networks should include in its regulatory proposal:
- a draft Network Pricing Principles Statement to apply to the setting of individual prices;
  - for the regulatory year commencing 1 July 2014, an indicative Network Pricing Proposal and Tariff Schedules consistent with all other elements of the regulatory proposal; and
  - a draft Capital Contributions Principles and Methods Statement to apply to the setting of capital contributions towards works that would not be commercially viable without that capital contribution.

## Timetable for review

1.46 The indicative timetable and procedure to be followed by the Commission in making the 2014 Network Price Determination is set out in Figure 1.1 below.

Figure 1.1: Proposed timetable



## CHAPTER 2

### Background

- 2.1 The electricity supply industry in the Northern Territory is regulated by the *Electricity Reform Act*, *Electricity Networks (Third Party Access) Act*, *Utilities Commission Act* and associated legislation. This statutory framework was introduced on 1 April 2000.
- 2.2 The statutory framework is primarily focused on regulating the activities of electricity industry participants and customers in the Darwin-Katherine, Alice Springs and Tennant Creek power systems – referred to as the market systems. Key elements of the statutory framework are:
- third party access to the Darwin-Katherine, Alice Springs and Tennant Creek electricity networks;
  - staged introduction of retail contestability, with all customers becoming contestable from 1 April 2010; and
  - an independent economic regulator, the Utilities Commission, to regulate monopoly electricity services, license market participants and enforce regulatory standards for market conduct and service performance.
- 2.3 Electricity supply in regional and remote centres of the Territory is mainly managed by the Territory Government and the service provider through a contract for service model. Three mining townships (Nhulunbuy, Alyangula and Jabiru) are each provided with electricity by associated mining firms.
- 2.4 In the three market systems, PWC is the network service provider and responsible for system control.<sup>6</sup> The Darwin-Katherine, Alice Springs and Tennant Creek networks are not interconnected, and are separated by long distances. As at 30 June 2011, the networks consisted of 709 kilometres (km) of high voltage transmission lines and 7 650 km of low voltage distribution lines, with about 76 600 customer connections.<sup>7</sup>
- 2.5 The distance between the three networks, the radial construction of the networks, the high incidence of storm activity including lightning strikes, high winds and torrential rain in the Top End, and the behaviour of fruit bats in roosting on power lines, all have adverse implications for network reliability and capital and maintenance expenditure.

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<sup>6</sup> The System Controller has the function of monitoring and controlling the operation of the power system to ensure the system operates reliably, safely and securely in accordance with the System Control Technical Code. The System Control function is undertaken by the PWC System Control unit, subject to a System Control licence granted by the Commission.

<sup>7</sup> Power and Water Corporation, September 2011, 2010-11 Annual Report, page 22. PWC defines high voltage transmission lines as 33 kilovolt (kV) and above, and low voltage distribution lines as 22/11 kV and below.

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## Network price regulation

- 2.6 Network infrastructure for the transportation of electricity displays economies of scale and scope and cannot be economically duplicated. The owner or operator of network infrastructure (network service provider) occupies a strategic position in the supply chain, since a generator or retailer can only supply electricity to its customers if it can transport this electricity via the network. For effective competition in upstream and downstream markets with a transportation requirement, all parties – irrespective of their affiliation with the network service provider – must have access to the network.
- 2.7 Elsewhere in Australia, there is a clear distinction in the operation and ownership of the transmission and distribution elements of an electricity system. Transmission networks transport electricity from generators to distribution networks in metropolitan and regional areas. They operate at high voltages for efficient transport over long distances.
- 2.8 Distribution networks transport electricity from points along the transmission lines to customers. Electricity must be stepped down to lower voltages in a distribution network for safe use by customers. A distribution network consists of the poles, underground channels and wires that carry electricity, as well as substations, transformers, switching equipment, and monitoring and signaling equipment.
- 2.9 Unlike the NEM, the Territory’s regulatory framework makes no specific or statutory distinction between transmission and distribution. While a transmission network<sup>8</sup> overlay exists to connect generation to major load centres, the network services regulated under the NT Access Code include both transmission and distribution services.
- 2.10 The NT Access Code imposes an obligation on the network service provider to use all reasonable endeavours to accommodate the requirements of those seeking access to the prescribed electricity network in the Northern Territory, and regulates the prices paid by network users for the conveyance of electricity through the electricity network.
- 2.11 Part 3 of the NT Access Code specifies the price regulation framework to be observed by the Commission and by the network service provider when setting the prices to be paid by network users. 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.

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<sup>8</sup> The transmission elements of the Territory system comprise about 10 per cent of total line length.



- 2.12 The Commission has been undertaking network price regulation under the provisions of the NT Access Code since 1 April 2000.<sup>9</sup>
- 2.13 The network service provider in all regulated networks in the Northern Territory is PWC Networks.
- 2.14 The current regulatory control period – the third regulatory period – began on 1 July 2009 and ends on 30 June 2014.
- 2.15 In the lead-up to the commencement of the fourth regulatory period (the five-year period commencing 1 July 2014), the NT Access Code requires the Commission as regulator – in consultation with interested parties – to:
- a) with respect to tariffs and charges to be set by the network service provider for the supply of regulated network access services – determine the cap or limit on the total revenue to be raised from, or the average price to be charged for, the supply of those services in a network;
  - b) oversee the application by the network service provider of principles for setting reference tariffs to apply to standard network access services; and
  - c) oversee the application by the network service provider of principles for setting capital contributions and charges.<sup>10</sup>
- 2.16 The Commission is also required to determine excluded network access services (that is those services for which the associated costs and revenue are excluded from the revenue or price cap).<sup>11</sup>

### **Link between network and retail prices in the NT context**

- 2.17 Retail electricity prices paid by customers are made up of a number of components:
- a generation (or wholesale) component, which is the cost of generating the electricity;
  - a network component, which is the cost of transporting the electricity through the system from the generator to the end-use customer;
  - a system control charge, which is the cost of overall management of the system; and
  - a retail margin, which is the cost to the retailer of packaging up the other components to provide a retail price offering to the customer and undertaking billing and account management.
- 2.18 In the Northern Territory context, a retailer purchases wholesale energy from PWC Generation at a cost-reflective price and purchases network services from PWC Networks at the regulated network tariffs. PWC Generation and PWC Networks

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<sup>9</sup> 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 NT Access Code, and are subject to separate processes.

<sup>10</sup> Clause 62(1) NT Access Code

<sup>11</sup> Clause 72(1) NT Access Code

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- required to provide services to all retailers, including PWC Retail, on a non-discriminatory basis.
- 2.19 The maximum retail electricity prices that can be charged by PWC for small and medium size customers with electricity consumption of less than 750MWh per annum are set by the Territory Government through an Electricity Pricing Order.
- 2.20 Retail prices paid by large customers with electricity consumption greater than 750MWh per annum are negotiated between the customer and their electricity supplier.
- 2.21 Customers with electricity consumption between 750MWh and 2GWh per annum supplied by PWC are also subject to an Electricity Pricing Order which provides for a glide path towards cost-reflective tariffs.
- 2.22 Where the Government requires PWC to provide certain customers with services on a non-commercial basis, the Government effectively subsidises these customers by providing a community service obligation payment (CSO) to PWC.
- 2.23 Full retail contestability (FRC) took effect in the Territory from 1 April 2010. While the Government sets the maximum price that can be charged by PWC to small and medium size customers, under FRC all customers, regardless of size, can still negotiate with PWC or obtain supply from another electricity retailer if another retailer is prepared to offer supply. The sole restriction is that a customer must have an interval meter to be able to transfer to a non-PWC retailer. This may involve some additional charge for upgrading the meter for small business and domestic customers.
- 2.24 The Territory Government provides CSO funding to PWC for the provision of electricity services in urban areas for domestic customers, small businesses and other organisations across the Territory at uniform tariffs and to tranche 4 customers (primarily medium-sized businesses and other organisations) at a subsidised tariff. Government also supports the provision of uniform and subsidised tariffs by accepting a lower than commercially acceptable rate of return on its investment (as sole shareholder) in PWC.
- 2.25 The objectives of network pricing set out in the NT Access Code include that the network tariffs be transparent and published in order to provide pricing signals to network users.<sup>12</sup> Government subsidies at the retail level mean that it is more difficult to identify the price signals delivered by the network tariffs.
- 2.26 This is not a matter to be addressed through the 2014 Network Price Determination but rather is an issue of Government policy.

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<sup>12</sup> Clause 74(1)(c) NT Access Code

## Evolution of Price Regulation in the Territory

### First Regulatory Control Period

- 2.27 In the first regulatory control period (from 1 April 2000 to 30 June 2004), the NT Access Code specified the form of price control, and hence prescribed the network price control mechanism to be used in some detail.
- 2.28 The NT Access Code mandated that revenue caps be determined for each financial year during the first regulatory control period<sup>13</sup> using a building block approach in accordance with the provisions set out in Schedule 6 of the Code and the WACC in accordance with the provisions set out in Schedule 8 of the Code.
- 2.29 Four separate revenue caps were determined for Darwin, Katherine, Alice Springs and Tennant Creek, using a limited forward-looking building block approach, with separate tariff schedules approved for each network from 1 July 2000. The Darwin-Katherine transmission line (DKTL) was prescribed as a regulated network in April 2001 and incorporated into the revenue cap from 1 July 2001.
- 2.30 If actual revenue collected differed from the maximum allowable revenue (MAR), the variation was to be monitored in an 'unders and overs' account. The account was cumulative from year to year, and a notional interest charge was applied on the cumulative balance at the end of each financial year.<sup>14</sup>
- 2.31 The Commission developed tolerance margins for variance between the MAR and actual revenue for each financial year during the first regulatory period, triggering certain responses from the network service provider.
- 2.32 PWC consistently over-recovered revenue in the first three years of the regulatory control period, due mainly to higher than predicted energy sales growth. Poor demand forecasting was one of the issues which influenced the Commission in moving from a revenue cap to a price cap approach, so that volume risk is borne by the network service provider, rather than by network users.

### Second Regulatory Control Period

- 2.33 The Code is less prescriptive in relation to the form of price control to be applied by the Commission during the second and subsequent regulatory control periods.
- 2.34 The second regulatory control period (from 1 July 2004 to 30 June 2009), adopted a price cap form of price control, rather than continuing with the revenue cap approach used in the first regulatory period. The price cap was based on a 'tariff basket' approach using weighted average prices.
- 2.35 A single weighted average tariff basket was determined for the whole of the Territory, rather than for each distinct network. The Commission was of the view that, due to the lack of competition in the Territory electricity market, the principle of

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<sup>13</sup> Clause 66(2) NT Access Code

<sup>14</sup> Utilities Commission, June 2000, Revenue Determinations 2000-01 to 2002-03, page 22.

cost reflectivity had to be balanced against the considerable compliance costs associated with the determination of three distinct network price caps.

- 2.36 PWC was given the discretion to adjust tariffs as it felt necessary, subject to:
- the overall CPI-X price constraint on the weighted average tariff basket;
  - tariff structures being consistent with the approved Network Pricing Principles and the principles set out in the NT Access Code; and
  - a side constraint limiting the annual increase faced by an individual customer, thereby preventing price shocks.

*X-Factor component*

- 2.37 Due to doubts about the robustness of PWC data, the Commission determined the X-factor based on an externally benchmarked estimate of the trend annual rate of productivity (or efficiency) performance for the industry.
- 2.38 For the second regulatory control period, the Commission effectively split the conventional notion of X into two components:
- an industry-wide performance benchmark ( $X_1$ ) determined by the Commission prior to commencement of the second regulatory control period which reflected the difference between annual movements in consumer prices on average and in electricity network access prices on average in Australia, based on X factors typically applying to comparable best practice, efficient network service providers in other jurisdictions at that time; and
  - a company-specific 'stretch factor' ( $X_2$ ) determined by the Commission prior to commencement of the second regulatory control period which reflected 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 PWC Networks, on the basis that any remaining operating and maintenance expenditure inefficiencies reasonably assessed to be within the control of management would be eliminated by the end of the third regulatory control period.
- 2.39 The X-factor is determined at the commencement of each regulatory control period to set a smoothed price path for the recovery of the network service provider's efficient costs of supply.
- 2.40 If the network service provider can achieve efficiencies greater than those allowed for in the X-factor, the efficiency gains remain with the business at least to the end of the regulatory control period. Sharing of these efficiency gains with network users can occur in the next regulatory control period.

### **Third Regulatory Control Period**

- 2.41 The third regulatory period is the five-year period from 1 July 2009 to 30 June 2014.
- 2.42 The Commission decided to continue with a single Territory-wide price cap based on a weighted average tariff basket for the third regulatory control period.
- 2.43 In determining regulated revenue for the third regulatory control period, the Commission was not confident that PWC could provide robust data for a full forward-looking building block approach, and therefore did not undertake such an analysis of PWC Networks' costs.

- 2.44 Rather, the Commission decided that PWC Networks' costs at the end of the second regulatory control period would be subjected to a single-year 'cost of service' building block assessment to determine whether a Po adjustment was warranted in order that the weighted average of network access tariffs to apply at the commencement of the third regulatory period was sufficient to recover the efficient costs of supply of regulated network access services.
- 2.45 The CPI-X price path applied during the third regulatory period was based on externally benchmarked expected efficiency improvements derived by applying the total factor productivity (TFP) approach.

*Total Factor Productivity Approach*

- 2.46 The TFP-based regulatory approach was used to determine the rate of change of regulated prices for PWC Networks, with the aim of exposing the business to pressures similar to competitive market forces.
- 2.47 TFP is a measurement of how businesses, industries or regions use all the inputs in their production processes to produce outputs that are valued by customers and can identify the component of the change in outputs that is not explained by changes in inputs.
- 2.48 TFP indices provide a way of comparing how productive businesses or industries use their resources. An industry TFP growth index measures the rate at which the productivity of a group of businesses changes over time and can be used in determining the rate of change of allowed prices for regulated service providers.
- 2.49 Under a TFP approach, prices are set to increase by CPI-X, where X is set with reference to the estimated growth in total factor productivity over an appropriate historical period based on estimates of long-term industry-wide cost, demand and efficiency trends. The TFP sets a revenue allowance for a business based on how it performs in comparison to a measured productivity trend for the industry as whole.
- 2.50 For the third regulatory control period, the Commission decomposed the X factor into three components:
- an  $X_1$  component, being the difference between the industry's TFP growth and that for the economy as a whole;
  - an  $X_2$  component, being the difference between the best observed operating expenditure partial productivity level and the firm's operating expenditure partial productivity level; and
  - an  $X_3$  component, being the difference between the firm's input price growth and that for the economy as whole.
- 2.51 In setting the  $X_1$  component for the third regulatory period, the Commission noted that a larger body of information on electricity distribution productivity performance had become available from other jurisdictions.

- 2.52 To assist in assessing and distilling this information, the Commission engaged GHD Meyrick<sup>15</sup> to advise it on recent productivity growth trends, to update the 2003 Meyrick analysis of PWC Networks' operating and maintenance expenditure productivity gap taking account of operating environment differences and to provide a recommendation on the components that make up the X factor.

*Propose-Respond model*

- 2.53 The Commission also chose to adopt some of the processes of the national market, namely the 'propose-respond' model of the NER, rather than the 'receive-determine' model of the previous regulatory control period.
- 2.54 PWC Networks' regulatory proposal was required to include a services classification proposal showing how the network services to be provided by PWC Networks should be classified in accordance with Part B, Division 1 of the NER. The Commission also required that activity descriptions of the distribution services be clearly and exhaustively stated, so that it was clear to customers what services are not part of the standard network access service and therefore attract additional charges.
- 2.55 The regulatory proposal was also required to include:
- for alternative control services – a proposed control mechanism; and
  - for negotiated network services – a proposed negotiating framework.
- 2.56 In relation to standard control services, the regulatory proposal was required to include:
- a proposed Po adjustment factor calculated using the Po adjustment model developed by the Commission (including details of all the amounts, values and inputs relevant to the calculation and supporting documentation);
  - 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, indicative Network Tariff Schedules consistent with all other elements of the regulatory proposal and using values for CPI and the X-factors applying to the control mechanism for standard control services as determined by the Commission.
- 2.57 The regulatory proposal was required to include a draft statement providing details of principles and methods for establishing capital contributions.
- 2.58 The Commission decided not to apply a demand management scheme or a service target performance incentive scheme (as established under the NER) in the third regulatory control period.

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<sup>15</sup> A consortium of GHD Pty Ltd and Meyrick and Associates was a member of the Commission's advisory panel for the provision of economic, pricing and technical advisory services.

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- 2.59 Key issues addressed in the Commission's determination included:
- The Commission estimated the 2008-09 opening regulatory asset base (RAB) value at \$460.5 million as sufficient (but no more) to ensure the ongoing financial viability of PWC Networks. This was based on a roll-forward of the value of \$350 million struck at 1 July 2002 (also the date of PWC's corporatisation).
  - The Commission assessed PWC Networks' annual operating and maintenance expenditure to be above an immediately achievable efficient level, based on benchmarking against other similar Australian network operators.
  - PWC Networks claimed that its unit costs were set to increase by around 2.5% per annum in real terms, based on a building blocks approach, substantially higher than the Commission's proposed X-factor of -0.85%.
  - The Commission estimated around one-third of PWC Networks' projected capital works program over the regulatory control period was in the nature of remedial capital expenditure. The Commission allowed the spending increases actually evident over the second regulatory control period as amounts that consumers need to fund, but was not prepared at that time to validate the further spending foreshadowed by PWC Networks in the third regulatory control period.
- 2.60 PWC expressed concerns that the regulated revenue determined by the Commission was less than needed to cover PWC's projections of spending over the five years of the third regulatory control period.
- 2.61 The Commission's view at the time was that, while the Commission was prepared to allow the spending increases actually incurred over the second regulatory control period as amounts that consumers needed to fund, the Commission was not prepared to validate the projections of further spending increases.
- 2.62 However, the Commission agreed that a reconciliation would take place at the end of the third regulatory control period once PWC's actual spend during that period was confirmed.
- 2.63 Further information on the Commission's 2009 Network Price Determination is available on the Commission's website.

## **Context of the 2014 Network Price Determination**

- 2.64 In August 2009, the Territory Government requested that the Commission undertake a priority work program intended to:
- identify options to increase the efficiency of the electricity industry;
  - improve customer standards of service and reliability; and
  - align electricity industry regulatory arrangements with those of the NEM where possible (although noting that transition to a NEM-like framework over a period of time does not necessarily mean that the Territory will adopt the National Electricity Law and Rules).

- 2.65 The priority work program involved eight reviews. The last of the reviews were completed in December 2011. The reviews provide a framework for change to the regulatory and institutional arrangements governing the Territory electricity industry, covering:
- retail contestability and customer protection;
  - customer service and reliability standards;
  - retail price oversight;
  - wholesale electricity market operation;
  - industry governance structures; and
  - system planning requirements, compliance, and performance monitoring and reporting.
- 2.66 Key recommendations from the reviews which are relevant to the 2014 Network Price Determination include:<sup>16</sup>
- Regulatory Investment Tests for transmission (RIT-T) and distribution (RIT-D) should be introduced to ensure that network developments are subject to a cost-effectiveness evaluation;<sup>17</sup>
  - distribution network businesses should develop distribution network planning instruments that are consistent with the purpose and characteristics of the annual planning instruments required in the NEM, including credible and dependable forecasts of future electricity demand and supply, and authoritative data on the current and future capability and condition of infrastructure;<sup>18</sup>
  - development of a framework for the reporting of comprehensive distribution network information;<sup>19</sup>
  - clearly defined distribution network reliability standards and performance targets should support network planning;<sup>20</sup>
  - development of a guaranteed service level scheme aligning the GSL payment criteria with the network price determination cycle to ensure that the GSL allowance approved by the regulator as part of the network price determination reflects the expected financial impact resulting from the changes to the GSL criteria;<sup>21</sup>

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<sup>16</sup> It can be noted that a number of recommendations have been or are currently being implemented.

<sup>17</sup> Utilities Commission, December 2011, Review of Electricity System Planning, Monitoring, and Reporting – Final Report.

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

<sup>20</sup> Utilities Commission, November 2010, Review of Electricity Standards of Service for the Northern Territory – Final Report.

<sup>21</sup> Utilities Commission, July 2010, Review of Options for Implementation of a Customer Service Incentive Scheme for Electricity Customers – Final Report; Utilities Commission, December 2011, Guaranteed Service Level Code – Statement of Reasons, page 11



- a mechanism should be developed to monitor and investigate distribution network incidents;<sup>22</sup> and
  - periodic detailed investigation of PWC's costs, prices and revenues (at each point of the electricity chain) disaggregated by customer class to ensure that customer charges are cost-reflective, and that the costs involved represent no more than the reasonable long-run cost of supplying electricity.<sup>23</sup>
- 2.67 At the time of the 2009 Network Price Determination, the Commission expressed the view that PWC's projections of increasingly higher levels of capital expenditure and operating and maintenance expenditure represented a 'worst case' scenario.
- 2.68 A reconciliation of the actual expenditure that PWC Networks has incurred during in the third regulatory control period will form part of the Commission's assessment of required revenue for the 2014 Network Price Determination. In undertaking this reconciliation, the Commission intends to subject that expenditure to detailed scrutiny to evaluate its efficiency. The Commission intends to consider:
- whether the expenditure forecast in 2009 actually eventuated;
  - if the expenditure was incurred, whether it has achieved, or is expected to achieve, the desired outcomes; and
  - whether the expenditure required at that time or could have been reasonably deferred.

## **Service standards and the regulatory bargain**

- 2.69 The 'regulatory bargain' is the balancing of the interests of the regulated business and its customers. Jurisdictional regulators have devoted some attention to ensuring that the network service providers meet their part of the regulatory bargain – that the reliability and quality of the service provided by the regulated business matches that provided for in the network price determination.
- 2.70 As part of the priority work program requested by the Territory Government, the Commission undertook a review of the electricity standards of service (ESS) framework in the Northern Territory to report on the adequacy and effectiveness of the current ESS Code and advise on options to ensure electricity generation, network and retail standards of service are appropriate in the Territory.
- 2.71 The Commission's Final Report on the Review of Electricity Standards of Service for the Northern Territory was published in November 2010. The Commission identified deficiencies in the existing ESS arrangements and made a number of recommendations to improve the ESS framework.

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<sup>22</sup> Utilities Commission, December 2011, Review of Electricity System Planning, Monitoring and Reporting – Final Report.

<sup>23</sup> Utilities Commission, September 2010, Review of Options for the Development of a Retail Price Monitoring Regime for Contestable Electricity Customers – Final Report.

- 2.72 In line with these recommendations, the Commission is currently developing a new ESS Code. A draft ESS Code was released for consultation on 15 May 2012 and submissions closed 8 June 2012.
- 2.73 In setting the network reliability target standards, the Commission will consider what it deems to be acceptable levels of service performance. The network service provider will be required to use best endeavours to achieve these target standards.
- 2.74 The Commission will consider the network service provider's service standards when assessing its revenue proposal as part of the network determination. It is the Commission's intention to align the setting of network reliability target levels with the network price (or revenue) determination cycle.

## CHAPTER 3

### Commission's proposed approach to the 2014 Network Price Determination

#### Introduction

- 3.1 Clause 66(3) of the NT Access Code requires the Commission to determine the revenue or price caps that are to apply during each regulatory control period in a manner that, in the Commission's opinion, most effectively achieves the desired outcomes set out in clause 63 and is consistent with generally accepted regulatory practice at the time.
- 3.2 In applying regulatory objectives and criteria to the Territory, the Commission's preference is for regulatory consistency, continuing with current arrangements unless there are good reasons to change.
- 3.3 The Commission's view is that generally accepted regulatory practice for electricity networks price determinations is the process undertaken by the AER in accordance with the NER, and that working towards alignment with national arrangements is in the long-term interest of Territory electricity consumers.
- 3.4 The Commission acknowledges that adopting a different framework for the 2014 Network Price Determination could impose administrative costs on the network service provider in the short term and create some level of uncertainty. The Commission's objective is to minimise the impact of any changes to its regulatory approach.
- 3.5 The Commission is mindful of the changing character of the Territory's electricity market, in particular the implementation of recommendations arising from reviews undertaken by the Commission over the last two years and the consequences of the entry of new retailers, QEnergy and ERM Power Retail, into the retail market.

#### Requirements of the NT Access Code

- 3.6 Part 3 of the NT Access Code specifies the price regulation framework to be observed by the Commission and by the network service provider when setting the prices to be paid by network users for the conveyance of electricity through the electricity network.
- 3.7 The Territory's regulatory framework makes no specific or statutory distinction between transmission and distribution, with the network services regulated under the NT Access Code including both transmission and distribution services.

- 3.8 The price regulation framework comprises:
- price regulation principles and structures which must be observed by the Commission, essentially involving the policy framework set by the NT Government within which the Commission and participants (network service providers and network users) operate, and over which neither the Commission nor participants have any discretion; and
  - the price regulation methodology which involves the practical and technical detail concerning the administration of price regulation, over which the Commission, in consultation with participants, has a degree of discretion.
- 3.9 The NT Access Code requires the Commission to administer access price regulation in a way that achieves:
- efficient costs of supply (including expected revenue for a regulated service or services that is at least sufficient to meet the efficient long-run costs of providing that service, and includes a return on investment commensurate with the commercial and regulatory risks involved);
  - prevention of monopoly rent extraction by the network service provider;
  - promotion of competition in upstream and downstream markets and promotion of competition in the provision of network services where economically feasible;
  - an efficient and cost-effective regulatory environment;
  - regulatory accountability through transparency and public disclosure of regulatory processes and the basis of regulatory decisions;
  - reasonable certainty and consistency over time of the outcomes of regulatory processes;
  - an acceptable balancing of the interests of the network service provider, network users and the public interest; and
  - such other outcomes as the Commission determines are consistent with the underlying principles set out in the NT Access Code.<sup>24</sup>
- 3.10 The NT Access Code requires the Commission, in setting a revenue or price cap, to have regard to:
- demand growth the network service provider is expected to service using measures such as energy consumption by category of network users, numbers of network users and length of the electricity network;
  - service standards applicable to the network service provider;
  - potential for efficiency gains to be realised by the network service provider in expected operating, maintenance and capital costs;
  - network service provider's cost of capital, having regard to the risk-adjusted rate of return required by investors in commercial enterprises;

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<sup>24</sup> Clause 63 NT Access Code

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- provision of a return on efficient capital investment undertaken by the network service provider in order to maintain or extend network capacity;
  - right of the network service provider to recover reasonable costs incurred by the network service provider in connection with the operation and maintenance of the network;
  - any increase in the rate of a tax or any new tax;
  - any reduction or increase in network energy losses; and
  - the on-going commercial viability of the network service provider.<sup>25</sup>
- 3.11 The revenue or price caps to be applied during the second and subsequent regulatory control periods are to be determined by the Commission in a manner that most effectively achieves the desired outcomes of price regulation and is consistent with generally accepted regulatory practice at the time.<sup>26</sup>
- 3.12 In the first regulatory control period, schedules to the NT Access Code also set out formulae and components for:
- determining the network service provider's annual revenue cap;<sup>27</sup>
  - establishing the WACC,<sup>28</sup> and
  - how the X factor (in the CPI-X annual escalation)<sup>29</sup> is to be determined.
- 3.13 The NT Access Code is less prescriptive in relation to these matters during subsequent regulatory control periods, requiring the Commission to determine the methodology to be applied in a manner that most effectively achieves the desired outcomes of the price regulation and is consistent with generally accepted regulatory practice at the time.
- 3.14 It should be noted that the Commission has no discretion over some aspects of the price regulation framework and these are therefore outside the scope of the 2014 Network Price Determination. These aspects include:
- legislative requirement on PWC Networks to give notice of revised or new network tariffs at least 30 days before the commencement of each financial year, or prior to such changes taking effect (clause 61(1) of the NT Access Code);
  - tariffs contained in PWC Networks' pricing schedule with respect to standard network access services are to be the maximum tariffs applying to those services (clause 61(3) of the NT Access Code);
  - 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 PWC Networks, the tariffs are to be commercially negotiated between the network user and PWC Networks (clause 73(4) of the NT Access Code);

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<sup>25</sup> Clause 63 NT Access Code

<sup>26</sup> Clause 66(3) NT Access Code

<sup>27</sup> Schedule 6 NT Access Code

<sup>28</sup> Schedule 8 NT Access Code

<sup>29</sup> Schedule 10 NT Access Code

- prior to commencement of each regulatory period, PWC 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) of the NT Access Code);
- that, at least 60 days prior to the start of each financial year, PWC 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) of the NT Access Code);
- that, prior to commencement of each regulatory period, PWC Networks must provide to the Commission a draft statement providing details of principles and methods for establishing capital contributions (clause 81(2) of the NT Access Code); and
- that the length of the fourth regulatory period is five years (clause 3 of the NT Access Code).

## Requirements of the National Electricity Rules

- 3.15 On 1 January 2008, the AER assumed responsibility for the economic regulation of distribution network service providers (DNSPs) in the NEM.
- 3.16 The AER must make a distribution determination for each DNSP. If a DNSP operates more than one distribution system, the AER may determine whether or not a separate distribution determination is to be made for each distribution system.
- 3.17 Part B of Chapter 6 of the NER deals with the classification and forms of control for the economic regulation of distribution services and the processes for making distribution determinations.
- 3.18 The NER sets out the types of control mechanisms that may be applied for different classes of distribution services, but mandates that, for services classified as standard control services, the control mechanism must be of the prospective CPI minus X form, or some incentive-based variant of the prospective CPI minus X form.
- 3.19 It further mandates that a forward-looking building block approach be used, prepared in accordance with the post-tax revenue model developed by the AER.
- 3.20 Following extensive public consultation, the AER has published a number of guidelines, models and schemes to assist DNSPs and their customers to understand the AER's approach to the regulation of electricity distribution businesses under the NER.
- 3.21 A number of guidelines are particularly relevant and will be considered by the Commission for the 2014 Networks Price Determination. These guidelines include:
- **Regulatory Investment Test** for transmission and distribution (guidelines issued in November 2007 and July 2010).
  - **Cost allocation guidelines** (issued in June 2008) set out arrangements to manage the attribution of direct costs and the allocation of shared costs by DNSPs between different categories of distribution services.
  - **Roll forward model (RFM)** (published in June 2008) and used to determine the closing regulatory asset base (RAB) for each DNSP for each regulatory control period. This closing RAB value becomes the opening RAB to be used for the

purposes of making a distribution determination for the next regulatory control period.

- **Post-tax revenue model (PTRM)** (published in June 2008 with an amended version released in June 2009) is used to determine the annual revenue requirement (ARR), using the building block approach, to be used in setting the X factor for each regulatory year of the regulatory control period.
- **Weighted average cost of capital (WACC)** (published in May 2009 and reviewed every five years) sets the WACC parameters to be adopted in determinations for electricity transmission and distribution businesses. For distribution determinations, a departure from the outcomes of this review is allowed for individual determinations if there is persuasive evidence to do so.
- **Service target performance incentive scheme (STPIS)** (published in June 2008 with an amended version released in November 2009) is designed to ensure that any increase in efficiency is not at the expense of a deterioration in service performance for customers. STPIS is intended to encourage a business to improve its service performance where customers are willing to pay for these improvements.
- **Efficiency benefit sharing scheme (EBSS)** (published in June 2008) provides for a fair sharing of efficiency gains and losses between DNSPs and distribution network users, including efficiency gains and losses related to capital expenditure and distribution losses.
- **Demand management incentive scheme (DMIS)** provides incentives for DNSPs to implement efficient non-network alternatives or to manage expected demand for standard control services in some other way for application in distribution determinations.

### Regulatory Information Notice

- 3.22 The AER requires DNSPs to provide it with the information necessary to make a distribution determination by issuing a Regulatory Information Notice (RIN) under Division 4 of Part 3 of the National Electricity Law (NEL).
- 3.23 A RIN is a notice prepared and served by the AER that requires the regulated network service provider, or a related provider, named in the notice to do either or both of the following:
- (a) Provide to the AER the information specified in the notice.
  - (b) Prepare, maintain or keep information specified in the notice in a manner and form specified in the notice.
- 3.24 The AER is empowered to issue a RIN if it considers it reasonably necessary for the performance or exercise of its functions or powers under the NEL or the NER. This is broadly equivalent to the powers of the Commission to request information under section 25 of the *Utilities Commission Act*.
- 3.25 The RIN deals with the detailed data and supporting documentation that the AER needs to be satisfied that only reasonable and efficient costs are returned to the DNSP under its network price determination. While the PTRM contains high level data suitable for publication, the information requested and provided under the RIN is dealt with on a confidential basis between the AER and the DNSP.
- 3.26 Financial information is provided on a disaggregated basis across appropriate categories such as individual work categories and asset classes. Extensive supporting data is also required, including identifying relevant policies, strategies

and planning standards, explaining relevant cost drivers and methodologies, and providing comprehensive analysis on how the proposed spending achieves the objectives of price regulation.

## **Applicability of the NER to the 2014 Network Price Determination**

- 3.27 The Commission acknowledges that the NEM is an established regulatory framework which has been developed over a decade and includes optimised consumer protections. The Commission considers that the NEM arrangements and the NER represent generally accepted regulatory practice in Australia and that the Territory could benefit from adopting a similar market framework and mechanisms.
- 3.28 The NT Access Code does not prescribe the manner in which the regulator is to determine the revenue or price caps for the second and subsequent regulatory control periods as long as the outcomes of the determination are consistent with the objectives of price regulation<sup>30</sup> and the revenue and price cap principles<sup>31</sup> are adhered to.

### **Transmission network versus distribution network services**

- 3.29 Unlike the NEM, the Territory's regulatory framework makes no specific or statutory distinction between transmission and distribution in the Territory with the network services regulated under the NT Access Code encompassing both transmission and distribution services.
- 3.30 While the economic regulation of distribution networks is covered by Chapter 6 of the NER and the economic regulation of transmission networks by Chapter 6A, a high priority has been placed on maintaining consistency across the regulatory framework, particularly in relation to the guidelines, schemes and models underlying the determination of revenue requirements for TNSPs and DNSPs.
- 3.31 In the NEM, assets operating between 66kV and 220kV that do not operate in parallel to and provide support to the higher voltage transmission network may be deemed by the network service provider to be part of the distribution system by agreement with the AER and the jurisdictional regulator.
- 3.32 Transmission elements in the Territory networks consist of the Channel Island, Weddell and Berrimah power stations' connection to primary load centres via two 132kV transmission lines and seven 66kV zone substations and the connection of power stations and loads at Katherine and Pine Creek via a single 132kV line from Channel Island power station.
- 3.33 Consistent with NEM definitions, PWC's networks in the Northern Territory have been regulated as distribution networks.

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<sup>30</sup> Clause 63 NT Access Code

<sup>31</sup> Clause 68 NT Access Code



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## Regional determinations versus a single NT-wide determination

- 3.34 While the NER explicitly addresses the circumstance where a DNSP operates more than one distribution system, allowing the AER to determine whether or not a separate distribution determination is to be made for each distribution system, the NT Access Code is silent in this regard.
- 3.35 At the commencement of the regulatory regime on 1 April 2000, four distinct networks were prescribed by the Minister (Darwin, Katherine, Tennant Creek and Alice Springs) with the Darwin-Katherine Transmission Line (DKTL) being prescribed separately about 12 months later.
- 3.36 In 2004, the Commission determined a single weighted average tariff basket for the whole of the Territory, rather than for each distinct network, balancing the principle of cost reflectivity against the considerable compliance costs associated with the determination of three distinct network price caps – the Northern Grid comprising the Darwin-Katherine interconnected system, the Tennant Creek network and the Alice Springs network.
- 3.37 Subject to some constraints, including tariff structures being consistent with principles set out in the NT Access Code, PWC Networks was given the discretion to adjust tariffs as it felt necessary. Over the third regulatory control period, PWC Networks has converged the three regional tariff schedules into a single Territory-wide tariff schedule on the basis that the benefits of administrative simplicity outweigh the costs of the loss of some degree of cost reflectivity.
- 3.38 Interested parties have raised concerns about the removal of locational price signals. These can be delivered by a separate distribution determination for each regional network or through a detailed examination of the structure of PWC Networks' proposed tariffs including modelling to demonstrate compliance with network pricing principles,
- 3.39 The Commission places particular emphasis on making regulation cost effective, and the scope for giving increased weight to regulatory stability and predictability. This approach reflects the Commission's concern at the cost and complexity of regulation in a small market.
- 3.40 For a small system, the cost-effectiveness of regulation is a key consideration in assessing 'best practice'. However, cost-effectiveness does not mean minimum cost, but a balancing of costs and benefits.
- 3.41 In considering whether a separate distribution determination is to be made for each distribution system, the Commission will consider its options according to:
- impact on the network service provider's incentives for efficient behaviour;
  - effective measures to ensure that total revenue tracks total cost;
  - implications for risk allocation; and
  - transparency and complexity.

## Commission's preliminary position

3.42 The Commission's preferred approach for the 2014 Network Price Determination is to adopt those parts of Chapter 6 of the NER as applied by the AER that are not inconsistent with the NT Access Code.

Table 3.1: Applicable provisions of Chapter 6 of the NER

NER	Recommendation
Part A – Introduction	
Part B – Classification of Distribution Services and Distribution Determinations	Partially apply for the NT 2014 Determination for classification of services and for the form of control mechanism to apply to standard control services  Not applicable for the form of control mechanism to apply to alternative control services - NT Access Code does not authorise the Commission to regulate the prices for these services except in case of dispute or disagreement.
Part C – Building Block Determinations for standard control services	Apply for the NT 2014 Determination, modified to the extent required to be within PWC's capabilities
Part D – Negotiated distribution services	Not applicable - NT Access Code does not authorise the Commission to enforce compliance with a negotiation framework
Part E – Regulatory proposal	Apply for the NT 2014 Determination, modified to the extent required to be within PWC's capabilities
Part F – Cost Allocation	Apply for the NT 2014 Determination, modified to the extent required to be within PWC's capabilities
Part G – Distribution consultation procedures	Not applicable – sets out consultation AER must follow when making guidelines, models or schemes (eg PTRM, STPIS etc)
Part H – Ring-fencing Arrangements for Distribution Network Service Providers	Not applicable – NT has own Ring-fencing Code
Part I – Distribution Pricing Rules	Apply for the NT 2014 Determination, modified to the extent required to be within PWC's capabilities
Part J – Billing and Settlements	Not applicable – NT has own Retail Supply Code under which interim B2B arrangements have been approved.
Part K – Prudential requirements, capital contributions and prepayments	Partially apply for the NT 2014 Determination for treatment of capital contributions, prepayments and financial guarantees in applying building block.  Not applicable for prudential requirements - NT has own Retail Supply Code which sets out prudential arrangements.
Part L – Dispute resolution	Not applicable – dispute resolution is not part of Determination and is dealt with in a separate section of the NT Access Code.
Part M – Separate disclosure of transmission and distribution charges	Not applicable
Part N – Dual Function Assets	Not applicable – NT Access Code does not distinguish between transmission and distribution

- 3.43 Benefits of adopting an approach consistent with the AER processes and relevant provisions of Chapter 6 of the NER include:
- that the NER is an established regulatory practice framework which has been developed over time and continues to evolve;
  - that the AER processes and NER apply to network service providers in other jurisdictions (excluding Western Australia) and would encourage a level of regulatory reporting consistent with that required of other network service providers;
  - provision of information through a more detailed regulatory proposal would provide a greater discipline on PWC to develop and maintain robust reporting;
  - allowing the Commission and PWC to leverage the knowledge and skills available through the AER to improve network pricing information and analysis; and
  - potential future benchmarking of network provider costs.

### **Scope of the Network Price Determination**

- 3.44 The Commission's preliminary position is that the 2014 Network Price Determination will comprise a single building block of cost of service covering all network services (both transmission and distribution) provided by PWC Networks, applying where appropriate the provisions of Chapter 6 of the NER.
- 3.45 A single cost of service determination will be made for all regulated networks, rather than separate determinations for each network.
- 3.46 Whether the transmission charges should be distinguished from distribution charges and the case for location price signals (that is separate tariff schedules for each regulated network) will be dealt with in considering PWC Networks' network pricing principles statement and pricing proposal.

### **PWC capabilities to deliver information**

- 3.47 For the 2009 Network Price Determination, practical considerations led the Commission to determine the X factor based on an externally benchmarked estimate of the trend annual rate of productivity (or efficiency) performance for the industry, due in part to doubts about the robustness of PWC data necessary to support a forward-looking building block approach as specified in the NER.
- 3.48 The Commission considered that due to concerns with unreliable data collection systems, there was little value in subjecting the data to interrogation by independent experts.
- 3.49 The Commission is aware that, since 2009, PWC has undertaken substantial work to improve its data collection systems. However, the Commission also appreciates that PWC's capabilities to deliver information suitable to be applied to an approach consistent with the NER methodology may depend on a number of initiatives being sufficiently developed and mature when the work on the 2014 Network Price Determination commences.

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- 3.50 These initiatives include:
- full implementation of the Asset Management Capability (AMC) Project including implementing off-the-shelf and integrated systems supported by process redesign, change management and training, data improvement, and technical and service infrastructure;
  - further development of network asset management plans;
  - implementation of recommendations resulting from the various reviews undertaken in the Territory Government's priority work program; and
  - implementation of initiatives to further align PWC's processes and practices with good industry practice.
- 3.51 While further development is required, the Commission's preliminary view is that sufficient progress has been made to apply a firm-specific building block approach for the 2014 Network Price Determination.
- 3.52 In line with this, the Commission proposes to issue a request for information under section 25 of the *Utilities Commission Act* that will be largely modeled on the RIN issued by the AER to DNSPs in the NEM.
- 3.53 The Commission's proposed approach is, in consultation with PWC Networks, for each aspect of the 2014 Network Price Determination:
- a) if a component of the approach used by the AER is not inconsistent with the requirements of the NT Access Code, to consider whether the requirements for that component can currently be met by PWC Networks and if so, then apply it;
  - b) if a component of the approach used by the AER cannot currently be met by PWC Networks, to make the minimum modifications necessary such that the modified requirements can be met by PWC Networks and apply the modified requirements; and
  - c) where a component of the approach used by the AER has been modified, document the reasons for departing from the NER and outline a framework and timeframe for putting in place capabilities to meet the requirement in future.

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## CHAPTER 4

### Classification of services

- 4.1 A key requirement of network regulation is to clearly define the services subject to regulation. Different classes of services may be regulated in different ways.
- 4.2 This chapter sets out the Commission's preliminary position on the classification of network access services<sup>32</sup>.

### Requirements of the NT Access Code

#### Regulated Network Access Services

- 4.3 Regulated network access services mean all network access services supplied by a network service provider other than those specified by the Commission.<sup>33</sup>
- 4.4 Standard network access services are the network access services for which reference tariffs are published in respect of a financial year, through a process overseen by the Commission.
- 4.5 The maximum tariffs for new or non-standard network access services are a matter for commercial negotiation between the network user and the network service provider, but are to be approved by the Commission in the case of an access dispute where the dispute relates (wholly or partly) to the tariff applying to those services.<sup>34</sup>
- 4.6 The NT Access Code does not distinguish between transmission and distribution services, but includes both as network services.

#### Excluded Services

- 4.7 Clause 72 of the NT Access Code requires the Commission to determine excluded network access services, that is those services which, in the Commission's assessment, can be excluded from the cost base used for the purpose of calculating the revenue or price cap.

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<sup>32</sup> Includes combined transmission and distribution services.

<sup>33</sup> Clause 73(5) NT Access Code

<sup>34</sup> *ibid* Clause 72 NT Access Code

- 4.8 The two distinct types of excluded service are:
- services which, in the assessment of the Commission, are subject to effective competition (contestable excluded services); and
  - services which, in the assessment of the Commission, are not subject to effective competition (non-contestable excluded services) but do not lend themselves to being regulated by the price control mechanism for regulated network access services.
- 4.9 The NT Access Code requires that the network service provider should provide any non-contestable excluded network access service to network users on fair and reasonable terms, with the Commission to determine what may constitute fair and reasonable if the network service provider and affected network user are unable to reach agreement.<sup>35</sup>
- 4.10 Prior to 2009, standard network access services and excluded network access services were only described in broad terms, with detailed application in specific instances left to PWC Networks to determine.
- 4.11 The Excluded Services Determination that formed part of the 2004 Network Price Determination, determined the following to be excluded services:
- contestable engineering consulting services provided by PWC Networks;
  - 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 PWC Networks as a normal part of standard services to all customers, such as:
    - charges for moving mains, services or meters forming part of PWC Networks' system to accommodate extension, re-design or re-development of any premises;
    - provision of electric plant for the specific purpose of enabling the provision of standby supplies or sales of electricity; and
    - provision of metering, or metering data, to a standard in excess of that required for billing purposes ;
  - the provision of connection equipment to a standard in excess of a standard associated with the 'least overall cost, technically acceptable assets; and
  - power system (but not network system) control costs directly associated with the activities of a system controller licensed under the *Electricity Reform Act*.
- 4.12 In the 2009 Network Price Determination, the Commission re-expressed its Determination of Excluded Services in the terminology of the services classification used by the NER.

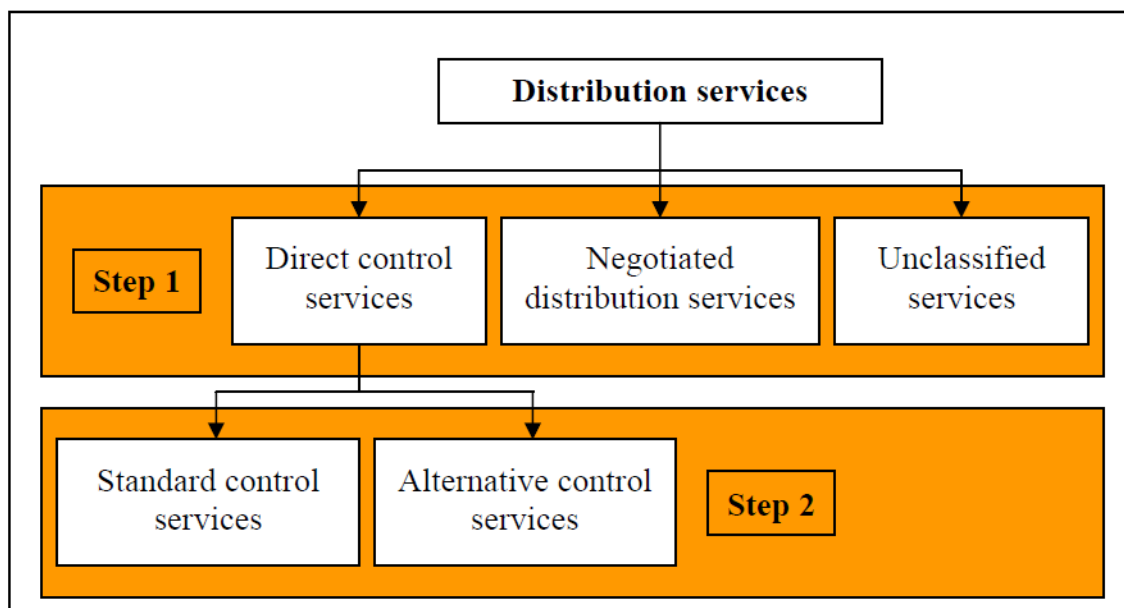
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<sup>35</sup> Clause 72 NT Access Code

## Requirements of the National Electricity Rules

- 4.13 In classifying distribution services under Chapter 6 of the NER, the AER considers two key aspects which are:
- the form of control that will apply to the service (i.e. a direct price or revenue control, a 'negotiate-arbitrate' framework, or no price or revenue control); and
  - whether the costs of providing the service should be recovered through tariffs paid by all customers (standard control service) or by a specific charge paid by the individual customer requesting the service (alternative control service).
- 4.14 The distribution service classification process is illustrated in figure 4.1 below:

Figure 4.1: AER classification of network access services



Source: NER

- 4.15 When classifying services, the AER must have regard to various factors including the form of regulation previously applied and the desirability for consistency. These factors are set out in clauses 6.2.1(c) and 6.2.2(c) of the NER.
- 4.16 The AER is required to undertake the classification process with a presumption in favour of the existing classification. That is, the AER makes an assessment of whether a different classification is more appropriate, rather than an assessment of the appropriateness of the existing classification.

## Variation between NT Access Code and NER

- 4.17 Under the NT Access Code, any network access service that is not classified as an excluded network access service is, by default, included as a regulated network access service under the price cap. By contrast, under the NER any service that is not classified as either a direct control service or a negotiated distribution service defaults to an unregulated service.
- 4.18 Clause 6.1.4 of the NER also specifically prohibits a DNSP from charging a Distribution Network User distribution use of system charges for the export of electricity generated by the user into the distribution network. This does not, however, preclude charges for the provision of connection services.

- 4.19 The NT Access Code does not specifically prohibit use of system charges for the export of electricity into the network but, consistent with practice nationally, no such charges have been proposed or approved to date.

## Summary of current arrangements

- 4.20 In the 2009 Network Price Determination, the Commission re-expressed its Determination of Excluded Services in the terminology of the services classification used by the NER. The requirements of the NT Access Code were aligned with the classifications of the NER as set out in Table 3.1 below.

Table 4.1: Network access services

NT Access Code	National Electricity Rules equivalent
standard network access services – which are regulated via a revenue or price cap	direct control services – standard control services
excluded network access services – the supply of which, in the opinion of the regulator, is not subject to effective competition but which do not lend themselves to being regulated by the revenue or price cap (clause 72(3))	negotiated distribution service (for above standard connection services), or direct control services – alternative control services (for various miscellaneous services specific to a particular customer)
excluded network access services – the supply of which, in the opinion of the regulator, is subject to effective competition (clause 72(2))	unregulated services

- 4.21 PWC Networks was required to submit a 'services classification proposal' to the Commission:
- proposing how the network services provided by PWC Networks should be distinguished according to the classification in Part B, Division 1 of the NER; and
  - setting out the reasons for any difference, if the proposed classification of PWC Networks' network services differed from the proposed classification as set out by the Commission.



- 4.22 PWC Networks classified services having regard to the form of regulation factors referred to in clause 6.2.1(c)(1) of the NER and set out in section 2F of the National Electricity Law. These factors are:
- (a) presence and extent of any barriers to entry in a market for electricity network services;*
  - (b) presence and extent of any network externalities (that is, interdependencies) between an electricity network service provided by a network service provider and any other electricity network service provided by the network service provider;*
  - (c) presence and extent of any network externalities (that is, interdependencies) between an electricity network service provided by a network service provider and any other service provided by the network service provider in any other market;*
  - (d) extent to which any market power possessed by a network service provider is, or is likely to be, mitigated by any countervailing market power possessed by a network service user or prospective network service user;*
  - (e) presence and extent of any substitute, and the elasticity of demand, in a market for an electricity network service in which a network service provider provides that service;*
  - (f) presence and extent of any substitute for, and the elasticity of demand in a market for, electricity or gas (as the case may be); and*
  - (g) extent to which there is information available to a prospective network service user or network service user, and whether that information is adequate, to enable the prospective network service user or network service user to negotiate on an informed basis with a network service provider for the provision of an electricity network service to them by the network service provider.*
- 4.23 For the 2009 Determination, PWC Networks broadly agreed with the Commission's initial classifications with the exception that above-standard connection services should be classified as alternative control services, given the market characteristics of the Territory.
- 4.24 PWC Networks proposed that two categories of alternative control services be identified. The first category was those services (miscellaneous services) for which the cost of providing the service is known and for which a schedule of fees can be published. The second category was those services where the scale and scope of each individual service is initially unknown and for which an assessment must be made of the work involved to determine the cost of delivery and a quote provided.
- 4.25 The Commission approved PWC Networks' proposed classification of services with two amendments:
- the classification of high load escort services as an alternative control service; and
  - the classification of disconnections and reconnections as a standard control service.

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## Commission's considerations

- 4.26 At the time of the Commission's 2009 Network Price Determination, the AER was also undertaking its first determinations under the NER. There was little guidance available to the Commission in interpreting provisions of the NER.
- 4.27 Since that time, the AER has undertaken distribution determinations for all DNSPs in the NEM. Clearer interpretations of the NER are now available, as well as additional information and experience in the Northern Territory since the 2009 Network Price Determination.
- 4.28 While regulated network access services (also referred to as standard network access services or prescribed services) can be directly aligned with direct control, standard control services, the classification of excluded services is less clear.
- 4.29 In classifying distribution services, the AER first considers the form of regulation (if any) previously applicable to the relevant service or services. Further, the classification should be consistent with the previously applicable regulatory approach.
- 4.30 The NT Access Code gives the Commission authority to determine which services are excluded services, but leaves pricing of these services to the network service provider in the first instance. Under clauses 6.2.1(c) and (d) of the NER, this would imply that non-contestable excluded services be classified as either unclassified services or, given that the Commission has a role in the case of disagreement or dispute, negotiated distribution services.
- 4.31 On the other hand, when the form of regulation factors set out in section 2F of the NEL are considered, the types of services previously classified as non-contestable excluded services in the Territory more closely align with alternative control services. There are significant barriers to entry (PWC holding the only network licence and a legislative restriction on any other party interfering with PWC's network), substantial market power is held by PWC, there are no substitutes and low elasticity of demand, and significant information asymmetries exist between the network service provider and the network user.

## Commission's preliminary position

- 4.32 The Commission proposes to consider the classification of services provided by PWC Networks having regard to the form of regulation factors set out in section 2F of the National Electricity Law, without reference to the price control mechanism (or absence of price control) implied by the NT Access Code, consistent with the approach taken for the 2009 Network Price Determination.
- 4.33 For excluded services, the Commission proposes to continue with the 2009 service classification of alternative control services, but the Commission does not propose to apply any price control mechanism for these services. The Commission will provide guidance on whether or not a control mechanism submitted by PWC in its pricing proposal is consistent with the principles set out in the NT Access Code.
- 4.34 The Commission proposes to adopt the AER approach of classifying a class of activities, rather than the specific activities, allowing the specific definition or magnitude of services to change while maintaining the desired classification. The

intention is to allow flexibility to PWC Networks to alter the exact specification (but not the nature) of a service during the regulatory control period.

- 4.35 The Commission proposes to continue with the service classifications that it adopted in the previous regulatory control period, while further clarifying the service descriptions. The Commission's preliminary position is that network services should be classified as set out in Table 4.2 below.

Table 4.2: Commission's preliminary position – 2014 Network Price Determination Classification of services

<b>Service grouping</b>	<b>Negotiated distribution services</b>	<b>Direct control services – standard control services</b>	<b>Direct control services – alternative control services</b>
Network services	Nil	Network services at mandated standard Energy-only service for public lighting	Above standard or non-standard network services
Connection services	Nil	Connection services at mandated standard	Above standard or non-standard connection services New or upgraded connection services (to the extent the user is required to make a financial contribution)
Metering services	Nil	Metering services at the mandated standard	Above standard or non-standard metering services
Fee-based services	Nil	Nil	Disconnection and reconnection Temporary supply services – low voltage Fault response – not service provider's fault Wasted attendance Provision, construction and maintenance of street lighting assets Non-standard data services Installation of minor equipment to network assets (eg Tiger Tails) Cable location services Unscheduled metering services – chargeable
Quoted services	Nil	Nil	High load escorts Covering of low voltage mains Rearrangement of network assets Ancillary metering services Supply enhancement Metering enhancement Emergency recoverable works Supply abolishment Temporary supply services – high voltage Rectifying illegal connections Unmetered supply services

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## Network Services

- 4.36 Network services are services provided over the shared network to all customers connected to the network. These include network planning, design, construction, maintenance and operation in accordance with good industry practice and to a mandated standard, as well as emergency response and administrative support.
- 4.37 The mandated standard is the standard required to meet the safety, quality and reliability of supply set by the Commission or by the NT Government either by licence conditions, codes or rules made from time to time, or any other relevant legislation.
- 4.38 Network services include controlling and ensuring that the characteristics (such as voltage and harmonics) of the electricity being transferred are suitable and within legislative limits, and undertaking associated activities to ensure the shared distribution network is fit for purpose, secure from interference, reliable in function and safe in operation.

## Connection services

- 4.39 Connection services are services required to establish and maintain a connection point at which electricity is transferred to (entry) or from (exit) an electricity network, and include the commissioning of connection assets, service connection, installation inspection, and operating and maintaining connection assets.
- 4.40 Connection assets are all of the electrical equipment that is used to transfer electricity to or from the electricity network at the relevant connection point and includes any transformers or switchgear at the relevant point or which is installed to support or provide backup to such electrical equipment as is necessary for the transfer.
- 4.41 The mandated standard for connection services is the 'least overall cost, technically acceptable' service provided to a customer drawing all its normal energy requirements through the network at a standard of operation and maintenance of the network such as might be expected of a prudent operator in the industry.

## Metering services

- 4.42 Metering services comprise meter provision services and metering data services. Metering provision services include the commissioning, provision and installation of metering and load control equipment and routine inspection, maintenance and repair meters and control equipment. Metering data services included metering reading and collation of data, processing and storage of energy data in a database and provision of data to those parties that have rights to access that data.
- 4.43 Metering provision, ownership and installation is a monopoly service provided by PWC Networks under the provisions of the Network Connection Technical Code. There is no separate accreditation of metering service providers in the Territory.
- 4.44 A customer who has an accumulation meter installed can opt to upgrade to an interval meter to allow them to transfer to a non-PWC retailer, but will need to pay the cost of the upgrade.
- 4.45 For the purposes of the service classification, the Commission proposes that PWC Networks publish on its website the type of metering installation that is

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standard for each customer class and the timetable, once known, for any changes to the standard classification for each customer class.

### **Fee-based services**

- 4.46 PWC provides a number of fee-for-service functions in the event of a specific query from a customer or retailer. These services are provided to users for a fixed fee which is set out in a published price list.
- 4.47 Fee-based services include disconnection and reconnection, temporary supply services (low voltage), non-standard data services and unscheduled metering (chargeable). The full list of existing service fee-based services is included in the 2009 Regulatory Reset Final Determination.<sup>36</sup>
- 4.48 A fixed fee can be set in advance for these services as they are homogenous in nature and scope, and specific prices for specific services can be calculated based on the estimated costs of delivering those services plus a margin.

### **Quoted services**

- 4.49 In addition to the fee-based services described above, a network service provider also provides a range of services to retailers and customers for which the nature and scope cannot be known in advance irrespective of whether it is customer requested or the need is triggered by an external event (for example, price on application).
- 4.50 Quoted services include high load escorts, covering of low voltage mains, rearrangement of network assets, ancillary metering services and temporary supply services (high voltage). The full list of existing service quoted services is included in the 2009 Regulatory Reset Final Determination.<sup>37</sup>

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<sup>36</sup> Utilities Commission of the Northern Territory 2009 Regulatory Reset: Final Determination March 2009 page 119

<sup>37</sup> Ibid page 118

## CHAPTER 5

### Form of control mechanism

- 5.1 This chapter sets out the Commission's preliminary position on the form of control to be applied to the network service provider's regulated network access services (that is those services which would be classified as direct control, standard control services under the NER). For simplicity, the NEM terminology 'standard control services' has been adopted when referring to these services in this chapter.

### Requirements of the NT Access Code

- 5.2 The NT Access Code provides that the regulator is responsible for determining the revenue or price caps to apply to the network service provider.<sup>38</sup>
- 5.3 However, the NT Access Code is less prescriptive regarding the methodology by which the revenue or price caps that are to apply during the second and subsequent regulatory control periods are to be determined.
- 5.4 More specifically, the methodology is to be determined by the Commission in a manner that most effectively achieves the outcomes of the NT Access Code and is consistent with generally accepted regulatory practice.<sup>39</sup>
- 5.5 The Commission is of the view that 'generally accepted regulatory practice' at this time is represented by the provisions of the NER and associated processes administered by the AER.
- 5.6 A revenue or price cap applies only to tariffs and charges for regulated network access services.<sup>40</sup> 'Regulated network access services' means all the network access services supplied by a network service provider other than those specified by the regulator as excluded services under clause 72 of the NT Access Code.
- 5.7 The NT Access Code requires that the network service provider should provide any non-contestable excluded services to network users on fair and reasonable terms, with the Commission to determine what may constitute 'fair and reasonable' if the network provider and affected network user are unable to reach agreement.<sup>41</sup>
- 5.8 The Commission is of the view that the NT Access Code does not authorise it to regulate prices for the services other than regulated network access services, but rather to determine what is fair and reasonable if the network service provider and affected network users are unable to reach agreement on such terms.

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<sup>38</sup> Clause 66(1) NT Access Code

<sup>39</sup> Clause 66(3) NT Access Code

<sup>40</sup> Clause 67 NT Access Code

<sup>41</sup> Clause 72 NT Access Code

- 5.9 The NT Access Code further provides that, where the network access services required differ in some regard to the relevant standard network access services or where the circumstances associated with the provision of standard network access services may give rise to cost savings on the part of the network service provider, the tariffs to apply in those circumstances are to be matters for commercial negotiation between the network user and the network service provider.<sup>42</sup>
- 5.10 The NT Access Code provides a role for the Commission in the case of an access dispute where the dispute relates (wholly or partly) to the tariff to apply to those services where the maximum tariffs to apply to new or non-standard network access services can be approved by the regulator.<sup>43</sup>

## Requirements of the National Electricity Rules

- 5.11 Control mechanisms in the NER comprise two parts:
- the form of control mechanism; and
  - the basis of the control mechanism.
- 5.12 Clause 6.2.5(b) of the NER lists the available options for the **form** of control, which are:
- a schedule of fixed prices;
  - caps on the prices of individual services;
  - caps on the revenue to be derived from a particular combination of services;
  - tariff basket price control;
  - revenue yield control; or
  - a combination of any of the above.
- 5.13 The forms of control mechanism available for standard and alternative control services are the same. The **basis** for the control mechanism, however, can differ depending on which class of services it is to apply to.

### Standard control services

- 5.14 For standard control services, the control mechanism must be of the prospective CPI minus X form, or some incentive-based variant of the prospective CPI minus X form, in accordance with Part C of the NER, which sets out the building block approach to the regulation of services.
- 5.15 A building block determination is to include the X factor for each control mechanism for each regulatory year of the regulatory control period.<sup>44</sup>

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<sup>42</sup> Clause 73(4) NT Access Code

<sup>43</sup> Clause 73(5) NT Access Code

<sup>44</sup> Clause 6.5.9(a) NER

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- 5.16 A building block determination for a DNSP is to specify:
- the annual revenue requirement for each regulatory year of the regulatory control period;
  - appropriate methods for the indexation of the regulatory asset base;
  - how any applicable EBSS, STPIS, or DMIS are to apply to the DNSP;
  - the commencement and length of the regulatory control period; and
  - any other amounts, values or inputs on which the building block determination is based.<sup>45</sup>
- 5.17 The X factor must be set by the AER with regard to the DNSP's total revenue requirement for the regulatory control period and must be such as to minimise, as far as reasonably possible, variance between expected revenue for the last regulatory year of the regulatory control period and the annual revenue requirement for that last regulatory year.
- 5.18 For standard control services, the X factor must be designed to equalise (in terms of net present value) the revenue to be earned by the DNSP from the provision of standard control services over the regulatory control period with the provider's total revenue requirement for the regulatory control period.<sup>46</sup>
- 5.19 There may be different X-factors for different regulatory years of the regulatory control period.<sup>47</sup>
- 5.20 The AER must prepare and publish a post-tax revenue model.<sup>48</sup>
- 5.21 The annual revenue requirement for a DNSP for each year of the regulatory control period must be determined using a building block approach, where the building blocks are:
- indexation of the RAB;
  - a return on and return of capital for that year;
  - estimated cost of corporate income tax of the provider for that year;
  - the revenue increment or decrements (if any) for that year arising from the application of any EBSS, STPIS and DMIS;
  - the other revenue increments or decrements (if any) for that year arising from the application of a control mechanism in the previous regulatory period; and
  - the forecast operating expenditure for that year.<sup>49</sup>
- 5.22 Under a building block approach, costs (made up of return on capital, return of capital or depreciation, and efficient operating expenditure) and demand are

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<sup>45</sup> Clause 6.3.2(a) NER

<sup>46</sup> Clause 6.5.9(b) NER

<sup>47</sup> Clause 6.5.9(c) NER

<sup>48</sup> Clause 6.4.1(a) NER

<sup>49</sup> Clause 6.4.3(a) NER



forecast to determine the service provider's costs of supply, and prices are set such that forecast revenues equate to forecast costs.

- 5.23 The NER requires that a DNSP's building block proposal includes the total forecast capital expenditure for the relevant regulatory control period which the DNSP considers necessary to:
- meet or manage the expected demand;
  - comply with all applicable regulatory obligations or requirements;
  - maintain the quality, reliability and security of supply; and
  - maintain the reliability, safety and security of the distribution system.<sup>50</sup>
- 5.24 The AER is required to accept the forecast of capital expenditure of a DNSP if it is satisfied that the total of the forecast capital expenditure for the required control period meets certain criteria defined in Chapter 6 of the NER, that is:
- it reasonably reflects the efficient costs of achieving the capital expenditure objectives;
  - the costs are prudent; and
  - it reflects a realistic expectation of the demand forecast and cost input required to achieve the capital expenditure objectives.

### **Alternative control services**

- 5.25 While for standard control services the AER must have regard to the need for efficient tariff structures, for alternative control services the AER must instead have regard to the potential for development of competition in the relevant market, and how the control mechanism might influence that potential.
- 5.26 The control mechanism must have a basis specified in the distribution determination which may, but need not, utilise a prospective CPI minus X form, or some incentive-based variant thereof, or be based on a forward looking building block approach.

### **Summary of current arrangements**

- 5.27 For the 2009 Network Price Determination, the Commission continued the price cap form of price control for standard control services that had been applied in the second regulatory control period.
- 5.28 The Commission took the view that, by placing the management of volume risk with the network service provider, the tariff basket approach promotes network service provider management autonomy and accountability, and provides the flexibility, within the overall price cap, to respond to market developments.

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<sup>50</sup> Clause 6.5.7(a) NER

- 5.29 The 'tariff basket' index form of the price control is a mechanism which represents the weighted average of each year's network prices and involves the use of two years' lagged quantity weights.
- 5.30 The 2009 Network Price Determination required that during the third regulatory period, PWC Networks annually develop network tariff schedules for standard control services such that the tariff basket index calculated conforms with a determined constraint equation.<sup>51</sup>
- 5.31 In addition to complying with a constraint equation, the weighted average tariff for each individual end-use customer is also required to comply with a  $CPI - X + Y$  side constraint, where Y is:
- in relation to 2009/10:  $P_o + 2\%$ ; and
  - in relation to each of the four years after 2009/10: 2%.
- 5.32 The 2009 Network Price Determination also required that the proposed structure of network access tariffs be consistent with the Commission's approved Pricing Principles and Methods Statement.
- 5.33 Under clause 6.2.6(a) of the NER, the control mechanism to be used for standard control services must be of the CPI minus X form or some incentive-based variant. The Commission considered this requirement and applied a price constraint equation consistent with this requirement. However, the NER requires that the X-factor must be determined by a forward-looking, multi-year 'cost of service' building block analysis.
- 5.34 In 2009, the Commission was not confident that PWC could provide robust data for a full forward looking building block approach and determined:
- a cost-based 'base year' adjustment ( $P_o$ ) of the weighted average of network access tariffs at the end of the previous regulatory control period reflecting an updated single year building block analysis of the most recently available actual data; and
  - an X-factor based on externally-benchmarked expected efficiency improvements derived by applying the TFP approach, with the same value of X being applied for each year of the regulatory control period.

## Commission considerations

- 5.35 The NT Access 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*".<sup>52</sup> 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.

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<sup>51</sup> Utilities Commission of the Northern Territory 2009 Regulatory Reset: Final Determination March 2009 page 36

<sup>52</sup> Clause 63 NT Access Code

- 5.36 While the Commission considers that there is value in regulatory consistency for a weighted average price cap form of price control to be applied in the 2014 Networks Price Determination, it also needs to consider what is deemed to be generally accepted regulatory practice in the form of price control adopted by the AER (including an annual revenue requirement determined by a forward building block approach).

### **Form of Price Control**

- 5.37 In the first regulatory control period, the NT Access Code mandated the use of a fixed revenue cap form of price control. In the second and third regulatory control periods, the Commission has used a weighted average price cap form of price control.

#### *Fixed revenue cap*

- 5.38 Under a fixed revenue cap, the network service provider's income is fixed regardless of how much electricity it distributes. While the network service provider faces an incentive to reduce total costs (lower total costs increases total profits), a possible means of achieving lower costs is to restrict output which could result in an inefficient utilisation of the network service provider's existing asset base.
- 5.39 A fixed revenue cap may also be more conducive to the development of demand management options, and there are positive environmental aspects to the absence of volume incentives.

#### *Weighted average price cap*

- 5.40 There are advantages and risks associated with the use of a weighted average price cap. Advantages of a weighted average price cap form of price control include:
- a direct link between the revenue earned and the tariff structure, creating an incentive to set tariff structures to reflect the underlying cost structure in order to minimise profit risk;
  - placing the management of volume risk with the network service provider and promoting network service provider management autonomy and accountability, and providing the flexibility, within the overall price cap, to respond to market developments; and
  - providing a basis for price movements over time that is readily understandable to end users.
- 5.41 Risks of a weighted average price cap include:
- exposing the network service provider to volume risks if electricity sales fall below forecasts; and
  - creating incentives for the network service provider to set prices to encourage an increase in electricity usage or to favour high volume users over low volume users.

## Basis of Price Control

- 5.42 Clause 6.2.6 of the NER requires that, for standard control services, the control mechanism must be of the prospective CPI minus X form, or some incentive-based variant of the prospective CPI minus X form.
- 5.43 The price constraint equation used by the Commission is consistent with this requirement. At issue however, is the manner in which the X-factor is determined.
- 5.44 The NER mandates that the X-factor must be determined by a forward-looking, multi-year 'cost of service' building block analysis. Alternatively, an X-factor based on externally benchmarked expected efficiency improvements can be derived by applying the TFP approach.
- 5.45 A full forward building block would require PWC Networks to specify the annual revenue requirement for each regulatory year of the regulatory control period. In contrast, a less data-intensive TFP-based approach to determining the X-factor would provide continuity and consistency across the next regulatory control period.

### *Forward Building Block Approach*

- 5.46 The Commission notes that the building block approach currently used elsewhere in Australia has been well tested and sets a precedent for best practice network price regulation. It also provides transparency and certainty for network users.
- 5.47 It provides a comprehensive assessment of costs that can be tailored to the circumstances of individual service providers, while allowing the regulator to rigorously test the costs submitted. The cost-based framework provides certainty for the service provider and can be aligned with the service provider's internal planning decisions, as well as having the flexibility to include provisions related to any incentive schemes.
- 5.48 A building block approach can also include both current and future development needs and caters for the 'lumpy' nature of capital investment in network infrastructure.
- 5.49 A concern with the building block approach is the inefficiency, uncertainty and administrative cost of regulatory processes due to the need to develop forecasts of firm-specific efficient operating and capital costs, corporations tax, and forecast demand, since these cannot be based on 'known and measurable' information.
- 5.50 The Commission acknowledges that implementation of a complete forward building block approach requires a significant level of resources for the Commission and PWC Networks.
- 5.51 The Commission also notes that PWC has made progress in developing its data systems, and considers that PWC Network's capability to deliver reliable information has significantly improved. However, the Commission is also aware that PWC is implementing a number of initiatives which could affect its data provision capabilities (for example the Asset Management Capability project, further development of network asset management plans, implementation of recommendations from the Government's work program reviews) and that these may not be in place or be sufficiently advanced when the work on the 2014 Network Price Determination commences.

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*TFP-based approach*

- 5.52 The Commission notes that a TFP methodology has the potential to create stronger incentives for service providers to pursue cost efficiencies compared to a building block approach. Efficiencies could be achieved when a network service provider makes investments and improves operating practices which deliver productivity improvements.<sup>53</sup>
- 5.53 The main benefit of a TFP-based approach is regulatory consistency with the current regulatory period. It also reduces the need for the Commission and the network service provider to undertake a resource intensive process of considering the firm-specific costs and revenues, but would nevertheless require considerable review of benchmarking techniques.

### **Commission's preliminary position**

- 5.54 In line with its general approach to align the Territory's regulatory framework with the NEM arrangements, the Commission's preliminary view is to adopt, where possible, the approach used by the AER and on the application of Chapter 6 of the NER. This would include a weighted average price cap form of price control with a side constraint on the corresponding weighted average tariff for individual end-use customers and a forward looking building block approach basis for the price control.
- 5.55 The Commission is mindful that, as a small jurisdiction, the Commission and PWC have limited resources available (both internally and externally) to undertake a forward-looking building block approach as applied by the AER.
- 5.56 At the time of the 2009 Network Price Determination when the Commission adopted a TFP-based approach, the AEMC had scheduled a review of the use of TFP-based methods as an alternative to the cost of service building block approach, and Victoria was in the process of finalising a rule change application to include TFP approaches in the NER. The Commission considered that, in terms of both generally accepted regulatory practice and the direction in which the NER might be moving, a TFP-based approach was acceptable.
- 5.57 Subsequently, in December 2011, the AEMC decided not to make a draft rule in response to the Victorian rule change request. The AEMC took the view that the necessary conditions for applying a TFP approach were not present and considered a sufficiently robust and consistent dataset to support TFP did not yet exist.
- 5.58 The Commission considers that regulatory practice has now moved on, and that a TFP approach cannot be considered to represent generally accepted regulatory practice in Australia at this time. The Commission's view is that the most practical course is to adopt a forward building block approach using similar processes and practices as those applied by the AER, but noting that full adoption of the AER processes may not be possible and variations may be required.

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<sup>53</sup> Australian Energy Market Commission, Final Report, Review into the use of total factor productivity for the determination of prices and revenues, 30 June 2011

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- 5.59 The Commission intends to seek advice from the AER on how similar processes and practices can be applied to the Territory's context.
- 5.60 In its Final Methodology Decision for the 2009 Network Price Determination,<sup>54</sup> the Commission foreshadowed that, before the end of the third regulatory control period, it would undertake a further assessment of actual operating and capital costs incurred by PWC Networks in supplying standard control services and a comparison of those costs with the relevant revenues received in that same period (or part thereof) in order to assess whether a further adjustment was required.
- 5.61 A reconciliation of the actual expenditure that PWC Networks has incurred during in the third regulatory control period will form part of the Commission's assessment of required revenue for the 2014 Network Price Determination.
- 5.62 The adoption of a forward building block approach removes the need to apply a 'base year' adjustment (Po) of the weighted average of network access tariffs at the end of the third regulatory control period. Rather, a different initial year X-factor in the fourth regulatory control period, if necessary, will serve to equalise (in terms of net present value) the network revenue to be earned by PWC Networks from the provision of standard control services over the regulatory control period with the total revenue requirement for the regulatory control period, with the use of the forward building block approach taking account of projected future costs in subsequent years.

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<sup>54</sup> Utilities Commission of the Northern Territory 2009 Regulatory Reset: Price Control Mechanism Final Decision May 2008 page 11

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## CHAPTER 6

### Key parameters

- 6.1 This chapter considers the key parameters and issues which are integral parts of the network price or revenue determination for the regulatory control period, including:
- the treatment of the regulatory asset base (RAB) and the roll-forward model (RFM);
  - forecast capital expenditure and the regulatory investment test (RIT);
  - weighted average cost of capital (WACC) and the treatment of corporate tax;
  - application of the post-tax revenue model (PTRM);
  - depreciation;
  - forecast operating expenditure;
  - cost allocation;
  - driving improvements in reliability (STPIS);
  - providing incentives for demand management (DMIS);
  - sharing the benefits of efficiency gains (EBSS); and
  - treatment of pass-through costs.
- 6.2 The approach taken by the AER for each of the above is well developed with guidelines, models and schemes in place to assist network service providers and their customers to understand the AER's approach to the regulation of electricity distribution businesses under the NER.
- 6.3 In developing these guidelines, models and schemes, the AER undertook extensive consultation. Unless significant concerns arise, the Commission's preliminary approach would be to adopt the approaches and models established by the AER, modified to the minimum extent necessary to accommodate Territory circumstances.

### Post-tax revenue model (PTRM)

- 6.4 The Commission's preliminary position is that a post-tax revenue model (PTRM), largely modeled on the AER's published PTRM and its accompanying handbook, be adopted for use by the network service provider in the 2014 Network Price Determination.
- 6.5 Any modifications of the AER's PTRM will be based on PWC Networks' capacity to provide information equivalent to that required under the NER. The Commission proposes to make only the minimum modifications necessary such that the modified requirements can be met by PWC Networks.

- 6.6 The AER published its post-tax revenue model (PTRM) for distribution and accompanying handbook in June 2008, in accordance with clause 6.4.1(c) of the NER. An amended version was released in June 2009.
- 6.7 The PTRM is used to propose and determine the annual revenue requirement (ARR) to be used in setting the X factor for each regulatory year of the regulatory control period.
- 6.8 The PTRM calculates the ARR for each regulatory year of a regulatory control period using the building block approach. Under clause 6.4.3 of the NER, these building blocks are:
- indexation of the regulatory asset base (RAB);
  - the return on capital;
  - the return of capital (depreciation);
  - the estimated amount of corporate income tax payable;
  - any revenue increments or decrements arising from the application of the EBSS, STPIS and DMIS;
  - any revenue increments or decrements arising from the application of a control mechanism in the previous regulatory control period; and
  - forecast operating expenditure.

## Regulatory Asset Base

- 6.9 Consistent with the approach applied for the 2009 Network Price Determination, the Commission does not intend to reconsider the opening regulatory asset base, set at \$350 million (excluding gifted assets) as at 1 July 2002 (in July 2002 dollars).
- 6.10 It is common practice in other jurisdictions for an opening RAB value to be set at a point in time (sometimes in legislation) and not revisited. The 2004 Network Price Determination included provision for what was termed an asset valuation 'off-ramp' which allowed for a one-off adjustment to the value of the network price cap were the Commission to find that there had been a material error in the asset values underlying its 2004 decision.
- 6.11 In early 2005, the Commission undertook a review which found that both PWC and the Commission had erred in the approach adopted to regulatory asset values and valuation during the 2004 Network Price Determination. Following an extensive consultation process, the Commission concluded that the most appropriate regulatory asset value from the plausible range is the asset value that would be sufficient (but no more) to ensure the ongoing financial viability of PWC Networks (the Off-ramp Decision).<sup>55</sup>

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<sup>55</sup> Utilities Commission, Networks Pricing: Asset Valuation Off-ramp Final Decision Statement of Reasons, April 2005 page 3



- 6.12 The Commission's final decision<sup>56</sup> was the adoption of a regulatory asset valuation methodology for PWC's electricity network assets that for:
- sunk assets (in practice, assets in place at 1 July 2002), valued such assets at an amount that at least ensures cashflows that are sufficient to comfortably meet certain debt and equity return benchmarks; and
  - assets acquired after 1 July 2002, valued all such assets at depreciated current cost.

### **Recognition of capital expenditure incurred in the current regulatory control period**

- 6.13 PWC Networks is undertaking a large capital expenditure program in the current regulatory control period. A key issue is whether the full amount of this capital expenditure should be rolled into the RAB regardless of efficiency, or whether some level of optimisation should be undertaken.
- 6.14 To address concerns that the write-down of sunk assets engenders a significant degree of regulatory uncertainty and risk, with the potential for adverse implications for future investment in regulated infrastructure, the Commission's Off-ramp Decision in 2005 provided that all investments made in network assets since 1 July 2002 would be recognised at cost under the Commission's roll forward approach, thereby providing appropriate incentives for future investment by PWC Networks.
- 6.15 This is consistent with the current requirements of the NER, with all actual capital expenditure incurred within a regulatory control period being automatically rolled into the asset base at the start of the next period, regardless of whether the expenditure is greater than the amount allowed for in the regulatory determination and whether it is efficient.
- 6.16 However, the Commission notes that the AEMC is currently considering a rule change proposal<sup>57</sup> to amend rules for the economic regulation of network services, including whether all actual capital expenditure should be recognised regardless of efficiency.
- 6.17 Once a capital expenditure allowance is set as part of a revenue determination, network service providers are not prevented from undertaking capital expenditure beyond such allowance. After a period of time, any such 'overspend' is automatically factored into overall revenues and prices for the network service provider. The AER is concerned that this creates incentives for network service providers to incur more than efficient levels of capital expenditure. It has proposed a mechanism by which only 60 per cent of such overspend could be included in the asset base.
- 6.18 The Commission's preliminary position is that, consistent with the Commission's Off-ramp Decision in 2005 and the NER as they stand at this time (and which the

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<sup>56</sup> Utilities Commission, Networks Pricing: Asset Valuation Off-ramp Final Decision Statement of Reasons, April 2005 page 3

<sup>57</sup> AEMC reference: ERC0134 – Economic Regulation of Network Service Providers

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Commission has accepted as representing generally accepted regulatory practice), the Commission will roll the full amount of capital expenditure incurred in the third regulatory control period into the opening RAB for the fourth regulatory control period.

- 6.19 However, the Commission intends to subject this capital expenditure to detailed scrutiny, with a reconciliation of the actual capital expenditure that PWC Networks has incurred during in the third regulatory control period forming part of the Commission's assessment of required revenue for the 2014 Network Price Determination.
- 6.20 If unacceptably high levels of inefficiency are revealed in assessing PWC Networks' regulatory proposal, the Commission may propose some optimisation of the RAB in its draft determination.

### **Rolling forward of the RAB**

- 6.21 The Commission's preliminary position is that a roll forward model (RFM) largely modeled on the AER's published RFM and its accompanying handbook be adopted for use by PWC Networks in the 2014 Network Determination to roll forward the RAB.
- 6.22 As with the AER's PTRM, modifications to the RFM will be based on PWC Networks' capacity to provide information.
- 6.23 The RFM is used by the AER to determine the closing RAB for each DNSP for each regulatory control period. This closing RAB value (broken into asset classes) becomes the opening RAB to be used for the purposes of making a distribution determination for the next regulatory control period.
- 6.24 The RAB values from the RFM form inputs into the PTRM, where they are rolled forward from year to year using forecast data. The RFM performs calculations predominantly using actual data.
- 6.25 Key features of the RFM are:
- an incentive framework that uses 'actual' depreciation in rolling forward RAB values which also provided the flexibility for a DNSP to propose a 'forecast' depreciation approach depending on the circumstances;
  - a roll forward calculation over a six regulatory year period, which provides for adjustments for forecast capital expenditure used in the final regulatory year of the previous regulatory control period and the five years of the current regulatory control period (while the length of a regulatory control period in all NEM jurisdictions is five years, the model can accommodate up to 11 regulatory years);
  - calculations for up to 20 asset classes;
  - a full as-incurred approach to recognising capital expenditure;
  - the use of straight-line depreciation as a default method, which could be amended depending on whether alternative methods formed part of the distribution determination for the relevant regulatory control period; and
  - an adjustment to the RAB (indexation) by the rate of actual (observed) inflation over the period. The value of this increase, and thus satisfaction of the

respective NER requirement, is separate to the adjustments for actual capital expenditure and actual depreciation over the period.

- 6.26 For the building block assessment with respect to the final year of the second regulatory period (2008-09), undertaken as part of the 2009 Network Price Determination in order to align efficient costs and revenues for standard control services, PWC rolled forward the RAB as a whole, rather than broken into asset classes.
- 6.27 The Commission's preliminary position is that PWC Networks' regulatory proposal should roll forward the RAB value broken into relevant asset classes, consistent with practice in NEM jurisdictions.

### **Forecast capital expenditure and the regulatory investment test**

- 6.28 The Commission's preliminary position is that PWC Networks' regulatory proposal should include total forecast capital expenditure which complies to the maximum extent possible with the requirements of clause 6.5.7 of the NER.
- 6.29 The NER identifies that a building block proposal must include the total forecast capital expenditure for the relevant regulatory control period which the DNSP considers is required in order to:
- meet or manage the expected demand for standard control services over that period;
  - allow compliance with all applicable regulatory obligations or requirements associated with the provision of standard control services;
  - maintain the quality, reliability and security of supply of standard control services; and
  - maintain the reliability, safety and security of the distribution system through the supply of standard control services.<sup>58</sup>
- 6.30 The Commission's view is that the regulatory proposal should also include the most efficient costs associated with achieving the objectives identified in the NER above.
- 6.31 As indicated in its review of Electricity System Planning, Monitoring and Reporting, the Commission supports the introduction and use of a regulatory investment test (RIT) as part of the network planning process to ensure that network developments are subject to a cost-effectiveness evaluation.<sup>59</sup>
- 6.32 The Commission considers that the use of RIT is appropriate in the Territory, ensuring rigour and transparency. The RIT process should ensure that the network provider conducts a robust economic assessment of significant augmentation projects relative to alternative options, including non-network outcomes.

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<sup>58</sup> Clause 6.5.7(a) NER

<sup>59</sup> Utilities Commission, December 2011, Review of Electricity System Planning, Monitoring and Reporting – Final Report.

- 6.33 The AER issued its regulatory test version 3 and regulatory test application guidelines in November 2007, under clause 5.6.5A of the NER. Regulatory test dispute resolution guidelines were also released.
- 6.34 Subsequently, in July 2010, the AER published its regulatory investment test for transmission (RIT-T) under clause 5.6.5B of the NER, which replaced the regulatory test for transmission investments. However, the regulatory test continues to apply to projects which address a need on the distribution network until such time as a regulatory investment test for distribution (RIT-D) is developed in accordance with the NER.
- 6.35 While transmission and distribution are separated in the NER in Chapter 6A and Chapter 6 respectively, the Commission's preliminary position is that a combined regulatory investment test (that is the AER's regulatory test version 3) for the transmission and distribution network be applied by PWC Networks to the determination of efficient capital expenditure for the purpose of the 2014 Network Price Determination.

### **Weighted Average Cost of Capital (WACC)**

- 6.36 The WACC determines the network service provider's expected rate of return on capital for the regulatory control period.
- 6.37 The WACC can be specified in any combination of real/nominal or pre/post tax so long as appropriate modelling is undertaken. Increasingly, a post tax nominal framework is used by regulators as this is considered consistent with (and directly comparable to) actual stock market equity returns.
- 6.38 In the first regulatory control period, the NT Access Code required that the WACC be calculated pre-tax on a real, rather than nominal, basis. For the second and subsequent regulatory control periods, the methodology for determining the WACC is required to be set by the Commission in such a way as to achieve the pricing objectives of the NT Access Code.<sup>60</sup>
- 6.39 The Commission did not apply a forward building block assessment of PWC Networks' costs in the second and third regulatory control periods. However, the single year assessment of actual costs and revenues undertaken for each determination used a pre-tax real WACC.
- 6.40 The AER uses a post tax nominal framework.
- 6.41 In the 2009 Network Price Determination, the Commission adopted the WACC methodology and parameters prescribed under the transitional arrangements in the NER for the NSW and ACT determinations.<sup>61</sup> The Commission considered that the AER's review of the WACC in 2009 would constitute an appropriate forum for review

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<sup>60</sup> Clause 63 NT Access Code.

<sup>61</sup> Utilities Commission, May 2008, Network Pricing 2009 Regulatory Reset Price Control Mechanism Final Decision Paper, page 38

of the WACC (as opposed to the Commission calculating the WACC separately).<sup>62</sup> However, the Commission continued to calculate the WACC on a pre-tax, rather than post-tax, basis.

- 6.42 In May 2009, the AER completed its review of the WACC parameters for electricity transmission and distribution network service providers.<sup>63</sup> This review focused on the WACC parameters and not the methodology.

Table 6.1: AER Final Decision - WACC parameters

Set parameters	AER Final Decision
Gearing	60%
Nominal risk-free rate	10-year Commonwealth Government Security (CGS) <sup>1</sup>
Market risk premium (MRP)	6.5%
Equity beta <sup>2</sup>	0.8
Credit rating	BBB+
Gamma	0.65
<b>Return on equity</b>	<b>10.88%</b>
Cost of debt	7.45% <sup>3</sup>
<b>Nominal 'vanilla' WACC</b>	<b>8.82%</b>

1 Calculated as the yield on 10 year CGS calculated over the five year period 1 April 2004 to 1 April 2009 (ie. 5.68 per cent).

2 Beta is a measure of the standardised correlation between the returns on an individual risky asset with that of the overall market.

3 Calculated as the yield on 10 year BBB rated bonds calculated over the five year period 1 April 2004 to 1 April 2009 (ie 7.45 per cent).

- 6.43 The WACC methodology in the NER<sup>64</sup> is a lock-in framework. However, setting the WACC parameters permits the formulation of a forward-looking WACC that is commensurate with prevailing market conditions.
- 6.44 The Commission considers the approach in the NER to be appropriate for the 2014 Network Price Determination, as it is well defined and sufficiently flexible to enable formulation of a forward-looking WACC that reflects prevailing market conditions.
- 6.45 The Commission's preliminary position is that it will adopt a post-tax nominal WACC, consistent with the AER methodology.

<sup>62</sup> The NER required the AER to review the WACC parameters in 2009.

<sup>63</sup> Australian Energy Regulator, May 2009, Electricity transmission and distribution network service providers – Review of the weighted average cost of capital (WACC) parameters

<sup>64</sup> Clause 6.5.4 NER

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## Treatment of corporate tax – transition from pre-tax to post-tax

- 6.46 The NER requires the WACC to be calculated post-tax (that is a nominal ‘vanilla’ WACC). This approach is consistent with the NER PTRM which is used to calculate the maximum allowed revenue under the building blocks approach.<sup>65</sup> The AER had no discretion to consider a pre-tax WACC as part of the 2009 WACC review.
- 6.47 A pre-tax WACC provides for an allowance in the WACC to account for a regulated entity’s tax liability. The corporate tax rate is one of the parameters in the WACC equation.
- 6.48 Under a post-tax WACC approach, an allowance for tax liability is included as a separate building block and forms part of the cash flows that make up the building block components – tax is not included in the return on capital or WACC building block component. This gives rise to issues relating to the estimation of the tax asset base and (economic and tax) depreciation, treatment of capital contributions, timing assumptions for capital expenditure and depreciation, and carried-forward tax losses.
- 6.49 In terms of modelling, a post-tax nominal framework requires that all factors impacting on a particular business are reflected in their cash flows. While a pre-tax approach is considered to be less information intensive, a post-tax approach aids transparency and avoids the scope for error that can arise in dealing with the implications of taxation (and franking credits) in the WACC.
- 6.50 The Commission’s preliminary position is that for the 2014 Network Price Determination a post-tax approach should be adopted, consistent with the AER methodology. The Commission recognises that this may create difficulties for PWC as PWC Networks is not a tax entity and PWC’s tax liability is calculated at the Corporation level. This may require further consideration.

## Depreciation

- 6.51 Depreciation is the mechanism by which invested capital is returned to the owners of the network business over the anticipated economic life of depreciable assets. The central issue is not whether capital should be returned to investors, but rather the pattern of, and period over which, the invested capital should be returned.
- 6.52 Clause 6.5.5 of the NER sets out the manner in which depreciation for each regulatory year must be calculated and the requirements with which depreciation schedules included in the DNSP’s regulatory proposal must conform. Where the depreciation schedules nominated by the DNSP do not conform with the requirements of the NER, the AER is required to determine the depreciation schedules to be applied.
- 6.53 The Commission’s preliminary position is that PWC Networks’ regulatory proposal should calculate depreciation for each regulatory year consistent with the requirements of the NER.

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<sup>65</sup> Clause 6A.5.1 NER.

## Forecast operating expenditure

- 6.54 Under a building block approach, the network service provider's proposal will require forecasts of its operating expenditure for each financial year during the regulatory control period.
- 6.55 In the NER, the operating expenditure objectives, criteria and factors set out in clause 6.5.6 are essentially the same as the capital expenditure objectives, criteria and factors used for the determination of capital expenditure.
- 6.56 The NER identifies that a building block proposal must include the total forecast operating expenditure for the relevant regulatory control period which the DNSP considers is required in order to achieve each of the following operating expenditure objectives:<sup>66</sup>
- to meet or manage the expected demand for standard control services over that period;
  - to comply with all applicable regulatory obligations or requirements associated with the provision of standard control services;
  - to maintain the quality, reliability and security of supply of standard control services; and
  - to maintain the reliability, safety and security of the distribution system through the supply of standard control services.
- 6.57 The Commission's view is that the regulatory proposal should also include the most efficient costs associated with achieving the objectives identified in the NER above.
- 6.58 The Commission considers the approach specified in the NER for determining forecast operating expenditure to be appropriate for the 2014 Network Price Determination, and that it should provide PWC Networks with an incentive to undertake a robust assessment of its network expenditure requirements.

## Cost Allocation

- 6.59 Cost allocations are the manner in which direct costs are attributed, and shared costs are allocated, across different categories within a business.
- 6.60 For regulated monopoly businesses, such as electricity networks, which receive a regulated revenue stream based on the costs of providing services, cost allocations are important to ensure that all relevant costs, but only relevant costs, are included when determining the revenue requirements of the business.
- 6.61 Under the NT Electricity Ring-fencing Code, PWC is required to establish and maintain a separate set of financial accounts and reports for Networks, System Control, Generation and Retail business units (non-contestable customer activities only<sup>67</sup>), and the electricity business as a whole in accordance with the Cost

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<sup>66</sup> Clause 6.5.6 NER

<sup>67</sup> On 1 April 2010, all customers became contestable.

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Allocation Procedures approved by the Commission under the Ring-fencing Code [clause 3.1 and Section 4].

- 6.62 While the NT Access Code does not explicitly require the network service provider to submit a cost allocation methodology to the Commission, the network service provider is implicitly required to allocate costs between different categories of distribution services.<sup>68</sup>
- 6.63 The Commission approved the initial cost allocation procedures in November 2001 under the Ring-fencing Code.
- 6.64 The Commission is of the view that, as they stand, the Cost Allocation Procedures developed under the Ring-fencing Code are too broad to provide guidance to PWC Networks in the development of consistent internal policies to be used as part of the 2014 Network Price Determination.
- 6.65 The Commission's preliminary view is that the Cost Allocation Procedures require review, and that the NER cost allocation principles<sup>69</sup> and the AER Cost Allocation Guidelines would be appropriate indicators of generally accepted regulatory practice.
- 6.66 In line with this, PWC Networks will be required to submit a Cost Allocation Method, setting out the detailed principles and policies used by PWC Networks to allocate costs between different categories of distribution services, consistent with the AER Cost Allocation Guidelines, prior to finalising its regulatory proposal.

### **Driving improvements in reliability**

- 6.67 Under a price or revenue cap form of price regulation, network service providers may seek to reduce costs in order to increase their return on investment. Reducing costs at the expense of quality and reliability may not be a desirable outcome.
- 6.68 The AER published its Service Target Performance Incentive Scheme (STPIS) in June 2008, in accordance with clause 6.6.2 of the NER. An amended version was released in November 2009.
- 6.69 While the regulatory regime as a whole encourages a business to improve its operating and capital efficiency, the STPIS is designed to ensure that this increase in efficiency is not at the expense of a deterioration in service performance for customers. Further, the STPIS is intended to encourage a business to improve its service performance where customers are willing to pay for these improvements.

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<sup>68</sup> Refer to clause 7 (Segregation of network provider's accounts and records) and clause 7A (Ring-fencing requirements) of the Electricity Networks (Third Party Access) Code, which is a schedule of the *Northern Territory Electricity Networks (Third Party Access) Act 2003*.

<sup>69</sup> Clause 6.15.2 NER



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- 6.70 The AER's STPIS comprises four components being:
- the 'reliability of supply' component;
  - the 'quality of supply' component;
  - the 'customer service' component; and
  - the guaranteed service level (GSL) component.
- 6.71 Under the reliability of supply, quality of supply and customer service components of this scheme, a DNSP's revenue is increased (or decreased) based on changes in service performance, as assessed by the AER in accordance with this scheme.
- 6.72 This is achieved by including an S-Factor component in the price control mechanism, so that network service providers are penalised (or rewarded) for diminished (or improved) service compared to predetermined targets.
- 6.73 Under the GSL component, payments are made directly to customers where the service performance received by those customers is worse than a specified threshold.
- 6.74 As part of a distribution determination, the AER will determine whether one or more components of this scheme may apply to a DNSP. Jurisdictional schemes take precedence, and the AER will only consider applying components of the STPIS where there is no jurisdictional scheme. For example, for those jurisdictions which have a GSL scheme in place, the AER does not include that component in the STPIS arrangements for that jurisdiction.
- 6.75 The AER's STPIS also includes information and reporting requirements for annual reporting by DNSPs of actual performance against the parameters applicable to it as set out in the relevant distribution determination.
- 6.76 The NT Guaranteed Service Level (GSL) Code took effect from 1 January 2012, with a staged approach to the implementation of payments for various service performance measures. The Code will be fully implemented from 1 July 2012.
- 6.77 GSL schemes in place elsewhere in Australia are generally funded as an operating cost of the DNSP. This is done for NEM jurisdictions through an ex ante assessment of likely costs by the AER when setting the revenue or price cap. Accordingly, the Commission will consider if an allowance for GSL payments should be made when assessing the regulated revenue requirement of PWC Networks for the 2014 Network Price Determination.
- 6.78 The Commission expects to introduce a new Standards of Service Code for the Territory with effect from 1 July 2012. The standards specified for PWC Networks in that Code will provide the basic service standards framework against which the expenditure proposals for the regulatory control period will need to be evaluated. Any STPIS arrangements for the Territory would need to be framed with reference to the requirements of the new Standards of Service Code.
- 6.79 The Commission's preliminary view is that it would be premature for the 2014 Network Price Determination to include STPIS arrangements in the price control mechanism, since PWC Networks will have had only limited exposure to the new service standards. Rather, the Commission will rely on the GSL Code to drive reliability improvements in poorly performing areas of the network and on the targets
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and reporting framework to be established under the Standards of Service Code to encourage reliability improvements across the network as a whole. The Commission may consider including incentive scheme arrangements based on the STPIS for future regulatory periods.

## Providing incentives for demand management

- 6.80 Clause 6.6.3 of the NER requires the AER to prepare a Demand Management Incentive Scheme (DMIS) to provide incentives for DNSPs to implement efficient non-network alternatives or to manage expected demand for standard control services in some other way for application in distribution determinations.
- 6.81 The DMIS is designed to supplement a DNSP's approved capital and operating expenditure, allowing the DNSP to investigate, develop and implement strategies to manage demand for standard network services by means other than network augmentation.
- 6.82 The DMIS is not intended to be the sole, or even the primary, source of recovery of demand management expenditure. The primary source of funding for demand management initiatives in a regulatory control period should be the forecast capital and operating expenditure approved by the regulator in the DNSP's distribution determination. The DMIS complements the existing approved capital and operating expenditure incentives for demand management, by facilitating further investigation into efficient and viable non-network strategies so that DNSPs can improve their demand management capabilities in the longer term.
- 6.83 DMIS established by the AER comprise two components:
- An ex-ante demand management innovation allowance (DMIA) may be provided as a fixed amount of revenue at the commencement of each regulatory year in the regulatory control period. The DMIA is provided in addition to any opex and capex allowances for demand management projects approved in the AER's distribution determination for a DNSP. While these amounts are allocated annually through the building block mechanism, the DNSP can use these funds at any point in the regulatory control period to pursue initiatives under the DMIS. The proposed DMIS required that the DMIA be provided on a use-it-or-lose-it basis.
  - A forgone revenue component may be provided in the form of a D-factor in the annual CPI-X escalation formula. This allows a DNSP to recover forgone revenue as a result of successful, approved demand management initiatives under the DMIA, where these result in lower energy throughput (and hence, lost revenue) for the DNSP. .
- 6.84 The Commission is aware that both the Territory Government and PWC have implemented demand management initiatives and the Commission will consider if an allowance should be made for any associated costs when assessing the regulated revenue requirement of PWC Networks for the 2014 Network Price Determination.
- 6.85 However, the Commission's preliminary view is that it may be premature to adopt a formal DMIS for the 2014 Network Price Determination, particularly given the limited experience of such arrangements in NEM jurisdictions at the present time. The

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Commission may consider demand management incentives for future regulatory periods.

## **Sharing the benefits of efficiency gains**

- 6.86 At the commencement of each regulatory control period, the regulator determines the revenue that a network service provider requires to recover its efficient costs of supply over the regulatory control period. The price path set for regulated prices remains unchanged over the regulatory control period, introducing a lag between the time the network service provider improves efficiency and the time those new efficiencies are reflected in regulated prices.
- 6.87 This provides an incentive for the network service provider to achieve efficiencies greater than those allowed for in the network price determination, as the efficiency gains remain with the business, at least to the end of the regulatory control period.
- 6.88 However, the power of this incentive reduces as the regulatory control period progresses. Expenditure reductions near the beginning of the regulatory control period are retained for longer than if the network service provider were to reduce expenditure closer to the end of the regulatory control period.
- 6.89 At the end of the regulatory control period, a new price path will be set for the next regulatory control period based on the new efficient costs of supply, passing through the reward for increased efficiency to customers.
- 6.90 To address this, regulators may make provision for a sharing of these efficiency gains between the network service provider and network users by allowing the network service provider to retain some or all of the efficiency gains for a period of time after the regulatory year in which the gain is made. The incentive for a network service provider to achieve greater efficiencies is maintained by having formal arrangements in place at the commencement of the regulatory control period, setting out the manner in which efficiency gains achieved during the period will be identified and shared.
- 6.91 The AER published its Efficiency Benefits Sharing Scheme (EBSS) in June 2008. The EBSS provides for a fair sharing between the DNSP and network users of the efficiency gains or losses over future regulatory control periods.
- 6.92 The Commission's preliminary position is that, at the end of the fourth regulatory control period, any efficiency gains or losses achieved during the period will be dealt with consistent with the requirements of the AER's EBSS or with a Territory-specific EBSS if one is in force at that time.

## **Pass-through cost arrangements**

- 6.93 The Commission considers that, in some circumstances, it would be more appropriate for certain risks to be borne by customers rather than by the network service provider. If not passed through, certain events could put PWC's financial sustainability at risk.

- 6.94 Clause 71 of the NT Access Code provides that:
- The regulator may only revoke or reset a revenue or price cap with respect to a particular financial year or years if it appears to the regulator that –*
- (c) *there were extraordinary developments with respect to any one of the key factors identified in clause 68 which, in the opinion of the regulator, were outside the network provider's control.*
- 6.95 In line with the 2009 Network Price Determination, the Commission will allow PWC Networks to pass through the costs of certain pre-agreed events.<sup>70</sup> In particular, the Commission acknowledges that mandated obligations from Government or the implementation of recommendations arising from the reviews undertaken by the Commission in 2009 and 2010 (for example, system improvements to facilitate competition following the introduction of FRC) may result in a pass-through event.
- 6.96 The Commission notes that, in the NEM, a DNSP may seek the approval of the AER to pass through positive events to distribution network users. Conversely the AER may require the DNSP to pass through to their customers a negative pass-through amount.<sup>71</sup>
- 6.97 Clause 6.6.1 of the NER sets out the details that the DNSP must provide in a statement to the AER when the DNSP considers that a pass-through event may have occurred, requirements for consultation and the factors the AER must take into account when making a determination on whether a pass-through event has occurred.
- 6.98 The NER specifies certain pass through events that are applicable to all distribution determinations:
- a regulatory change event;
  - a service standard event;
  - a tax change event;
  - a terrorism event; or
  - an event nominated in a distribution determination as a pass-through event for the determination.
- 6.99 The NER does not provide any specific criteria that the AER is to have regard to in assessing proposed additional pass through events, giving the AER a broad discretion in respect of its decision on the additional pass through events that are to apply in a regulatory control period.

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<sup>70</sup> Utilities Commission, March 2009, Network Pricing: 2009 Regulatory Reset-Final Determination, pages 110-114.

<sup>71</sup> Clause 6.6.1 NER

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- 6.100 In the 2009 Determination, the Commission decided that it would only consider cost pass through applications if they are the consequence of:
- change in tax or insurance events;
  - force majeure events;
  - regulatory compliance events;
  - service standard events; or
  - such other events that satisfy the following requirements:
    - the occurrence was not anticipated at the time of the preceding determination or was, while allowable, explicitly excluded from affecting the outcome of that determination on the grounds that the likely impact on PWC Networks was unknown or too difficult to quantify at the time, or
    - the occurrence is not a result of actions of PWC's board or management or of decisions of the Government in its capacity as owner or shareholder or guarantor of PWC.
- 6.101 The Commission also applied a materiality test, requiring that a cost pass-application must at least satisfy a materiality threshold of 1 per cent of the annual revenue from standard control services in the financial year in which the event occurs.
- 6.102 The Commission's preliminary view is that it will adopt the same list of allowable pass through events as that applied to the 2009 Network Price Determination but will follow the processes and have regard to the factors set out in clause 6.6.1 of the NER when determining whether a particular cost pass through event has occurred.

## CHAPTER 7

### Pricing principles and tariffs

- 7.1 In the leadup to the commencement of each regulatory control period, the Commission is required to oversee:
- the application by the network service provider of principles for setting reference tariffs to apply to standard network access services,<sup>72</sup> and
  - the application by the network service provider of principles for setting of capital contributions and charges.<sup>73</sup>
- 7.2 While the network service provider is responsible for establishing the pricing structure that best gives effect to the principles set out in the NT Access Code,<sup>74</sup> the network service provider's proposed reference tariffs must be provided to the Commission for approval.<sup>75</sup>
- 7.3 This chapter sets out the Commission's proposed approach to approving pricing principles and reference tariffs for the fourth regulatory control period.

### Network pricing principles and approval of reference tariffs

#### Requirements of the NT Access Code

- 7.4 The NT Access Code stipulates that the network service provider is to be responsible for establishing the pricing structure that best gives effect to the pricing principles.<sup>76</sup>
- 7.5 However, prior to the commencement of each regulatory control period, the network service provider is required to provide to the Commission for approval a statement setting out the details of the principles and methods to be used for defining the individual standard network access services to be supplied by the network service provider and for establishing the reference tariffs to apply to those services.<sup>77</sup> This is referred to as the Network Pricing Principles Statement (NPPS).
- 7.6 At least 60 days prior to the start of each financial year, the network service provider must provide to the Commission a statement setting out its proposed reference tariffs for the standard network access services for that year, with the statement

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<sup>72</sup> Clause 62(1)(b) NT Access Code

<sup>73</sup> Clause 62(1)(c) NT Access Code

<sup>74</sup> Clause 75(1) NT Access Code

<sup>75</sup> Clause 78(1) NT Access Code

<sup>76</sup> Clause 75(1) NT Access Code

<sup>77</sup> Clause 75(6) NT Access Code

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detailing how the tariffs and charges have been calculated by application of the principles in the NT Access Code.<sup>78</sup>

- 7.7 The Commission must approve the tariffs and charges, or individual tariffs and charges unless, in the opinion of the Commission, the tariffs and charges would result in the network service provider not complying with the principles laid down in Chapter 7 of the NT Access Code or are inconsistent with requirements elsewhere in the NT Access Code.<sup>79</sup>
- 7.8 The reference tariff is the maximum tariff to apply with respect to an individual standard network access tariff.
- 7.9 The NT Access Code sets out the network pricing principles underpinning reference tariffs.<sup>80</sup> The network tariffs are to:
- reflect efficient costs of supply;
  - 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 geographical and electrical location, quantities supplied, pattern of network usage, technical characteristics or requirements of the user's load or generation, nature of the plant or equipment or periods for which the network access service is expected to be supplied;
  - be transparent and published in order to provide pricing signals to network users;
  - promote price stability; and
  - reflect a balancing of the quest for detail against the administrative costs of doing so.
- 7.10 In addition to these objectives, clause 63 of the NT Access Code specifies that network regulation must be administered to achieve:
- an efficient and cost-effective regulatory environment;
  - prevention of monopoly rent extraction by the network provider;
  - promotion of competition in upstream and downstream markets and promotion of competition in the provision of network services where economically feasible;
  - regulatory accountability through transparency and public disclosure of regulatory processes and the basis of regulatory decisions;
  - reasonable certainty and consistency over time of the outcomes of regulatory processes; and
  - an acceptable balancing of the interests of the network provider, network users and the public interest.

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<sup>78</sup> Clause 78(1) & (2) NT Access Code

<sup>79</sup> Clause 78(3) NT Access Code

<sup>80</sup> Clause 74(1) NT Access Code

- 7.11 In the event that the Commission considers there to be a conflict between the requirements of clause 74(1) and those set out in clause 63, the requirements of clause 63 are to take precedence.<sup>81</sup>

### **Requirements of the National Electricity Rules**

- 7.12 The NER do not require DNSPs to provide a stand-alone document setting out the principles and methods for defining individual network access services.
- 7.13 Rather, the principles to be applied for assigning customers to a particular tariff class<sup>82</sup> and the pricing principles underlying the manner in which revenue is to be recovered from each tariff class<sup>83</sup> are set out in the Rules themselves. A tariff class is constituted with regard to the need to group customers together on an economically efficient basis and the need to avoid unnecessary transaction costs.<sup>84</sup>
- 7.14 The DNSP is required to submit a comprehensive pricing proposal each year which includes definitions of the tariffs and tariff classes into which customers for direct control services are divided and their charging parameters, and which demonstrates that prices comply with the NER pricing principles. The range of matters that must be included in the pricing proposal is listed in clause 6.18.2 of the NER.
- 7.15 The pricing proposals provided by DNSPs in the NEM effectively combine in a single document, updated annually, the information that a network service provider in the Territory would provide in two parts – the Network Pricing Principles Statement provided at the commencement of the regulatory control period and the annual tariff proposals provided for each year of the regulatory control period.

### **Summary of current arrangements**

- 7.16 The tariff structures for standard network access services were established by PWC Networks in 2000 prior to the first regulatory control period and, other than to remove the DKTL tariff from 2009-10, PWC Networks has not modified these.
- 7.17 Prior to the commencement of the first regulatory control period, PWC Networks provided a detailed submission to the Commission setting out its proposed pricing principles, and details of PWC Networks' proposed approach for establishing network reference tariffs.
- 7.18 PWC Networks' submission provided a qualitative discussion of its proposed tariff structure, relevant cost drivers and the allocation of costs, as well as an assessment of compliance with the principles set out in the NT Access Code. In essence, PWC Networks proposed that the costs of owning and operating the network would be recovered from users on a Fully Distributed Cost (FDC) basis, with contributions from each customer commensurate with the quantity and value of assets required to deliver the service to them.

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<sup>81</sup> Clause 74(2) NT Access Code

<sup>82</sup> Clause 6.18.4 NER

<sup>83</sup> Clause 6.18.5 NER

<sup>84</sup> Clause 6.18.3 NER



- 7.19 Following public consultation, the Commission approved PWC Networks' NPPS for the first regulatory control period.
- 7.20 Subsequently, for the second and third regulatory control periods the Commission has accepted a high-level statement of pricing principles as sufficient, focusing on the effects of proposed changes in tariff levels.
- 7.21 The NPPS approved by the Commission for use in the third regulatory control period (2009-14) provided:
- a summary of the proposed changes to network tariffs over the regulatory control period;
  - a high-level assessment of compliance with clause 74 of the NT Access Code;
  - a high-level assessment against the principles set out in the NER with which a pricing proposal must comply;
  - a description of the principles and methods used in establishing tariffs for alternative control services; and
  - a framework for negotiating discounted network tariffs for standard control services.
- 7.22 PWC Networks assigns customers to one of two tariff classes:
- Customers using greater than 750MWh of electricity per annum are charged a multipart tariff comprising a system availability charge, peak and off-peak energy charges in declining block form and peak and off-peak demand charges in a declining block form.
  - Customers using less than 750MWh of electricity per annum are charged a simple tariff comprising a daily system availability charge and a cents per kilowatt hour energy charge (with the cents per kilowatt charge differing between domestic and commercial customers).
- 7.23 In the third regulatory control period, PWC Networks converged the three separate regional tariff schedules (Darwin-Katherine, Alice Springs and Tennant Creek) into a single NT-wide tariff schedule on the basis that:
- The decision to move away from regional tariffs reflects a number of key considerations by Power and Water. Firstly, the imposition of Territory wide tariffs is not economically inefficient. While network tariffs in Tennant Creek have reduced relative to the Po as a consequence of the decision to create the new tariffs, this reduction is not material and is unlikely to signal behaviour to any extent. Moreover, the decision will impact on transaction costs for Power and Water, specifically the ongoing maintenance of multiple tariff schedules. Establishing NT wide network tariffs will eventually reduce the administrative costs for Power and Water.<sup>85</sup>*

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<sup>85</sup> Power and Water Corporation, *Pricing Principles and Methods Statement 1 July 2009 to 30 June 2014*, January 2009, page 7.

## Commission's considerations

- 7.24 The NT Access Code provides that the responsibility for determining the structure of its network prices lies primarily with the network service provider. The network service provider has a greater understanding of:
- its cost structures;
  - users' needs as reflected in demand patterns and the sensitivity of those demands to price signals; and
  - network utilisation and the likelihood of the emergence of congestion.
- 7.25 However, the process is overseen by the Commission with the Commission required to assess whether the proposals are consistent with the objectives stated in the Code.
- 7.26 In previous network price determinations, the Commission has focused on establishing an efficient opening level for required revenue (determining  $P_0$ ) and setting an efficient price path (determining the X factor), leaving limited time and resources to give detailed scrutiny to PWC Networks' NPPS and the structure of tariffs.
- 7.27 The current tariff classes and tariff structure have been in place with minimal change since the commencement of the current regulatory regime. While a high-level statement of pricing principles was sufficient in previous regulatory control periods, changes in the Territory electricity market, including the introduction of full retail contestability and the emergence of competition in the retail sector, suggest a more comprehensive review of network tariff classes and tariff structures is warranted.
- 7.28 The Commission is also aware of concerns expressed by some customers and market participants that, in seeking to balance the quest for detail against the administrative costs of doing so, PWC Networks may have assigned too little weight to the objectives of efficiency and cost reflectivity.
- 7.29 Further, developments nationally over the last decade have led to more comprehensive documentation and justification of the methodologies underlying the structure of regulated network tariffs.
- 7.30 The NPPS will, when approved, provide a basis for establishing network reference tariffs. While the tariffs themselves will be reviewed annually, the principles and methodology on which they are based will apply for the full term of the five-year regulatory control period.
- 7.31 Accordingly, for the principles and methodology to remain relevant and appropriate, they must allow both for known market developments and the uncertainties that naturally exist over a timeframe of this length. This requires careful balancing of appropriate quantitative analysis to support the choices made while minimising prescribing specific formulae or values that may constrain the network service provider in later years of the regulatory control period.

## Commission's preliminary position

- 7.32 The Commission's preliminary position is that PWC Networks' regulatory proposal should include:
- a draft NPPS to apply to the setting of individual prices; and
  - for the regulatory year commencing 1 July 2014, an indicative Network Pricing Proposal and Tariff Schedules consistent with all other elements of the regulatory proposal.
- 7.33 The NPPS should set out the details of principles and methods to be used for defining the individual standard network access services to be supplied by the network provider and for establishing the reference tariffs to apply to those services.
- 7.34 It should define the tariff classes into which network users are divided and provide modelling, where appropriate, and qualitative analysis to support the constitution of those tariff classes. This should include discussion of the options considered and reasons for the choices made in relation to differentiating tariffs because of:
- the user's geographical and electrical location;
  - the quantities in which the relevant network access service is to be supplied or is supplied;
  - the pattern of network usage;
  - the technical characteristics or requirements of the user's load or generation;
  - the nature of the plant or equipment required to provide the network access service; and
  - the periods for which the network access service is expected to be supplied.<sup>86</sup>
- 7.35 The NPPS should also demonstrate compliance with:
- the objectives of network pricing set out in clause 74 of the NT Access Code;
  - the objectives of price regulation set out in clause 63 of the NT Access Code; and
  - the pricing principles set out in clause 6.18.5 of the NER, where these are not inconsistent with the requirements of the NT Access Code.
- 7.36 The indicative Network Pricing Proposal and tariff schedules for the year commencing 1 July 2014 should be consistent with the requirements of clause 6.18.2(b) of the NER.

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<sup>86</sup> Clause 74(1)(b) NT Access Code

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## Capital contributions principles and methods

### Requirements of the NT Access Code

- 7.37 Clause 81 of the NT Access Code requires that, prior to commencement of each regulatory control period, the network service provider must provide to the Commission a draft statement providing details of principles and methods for establishing capital contributions.
- 7.38 The capital contributions and charges must be established in accordance with the principles set out in clause 80 of the NT Access Code.

### Requirements of the National Electricity Rules

- 7.39 Clause 6.21.1 provides that a DNSP may require an embedded generator or distribution customer that requires a new connection or a modification in service for an existing connection to establish prudential requirements for connection service and/or distribution use of system service.
- 7.40 Arrangements for prudential requirements may include, among other things, financial capital contributions and are a matter for negotiation between the DNSP and the embedded generator or distribution customer.

### Summary of current arrangements

- 7.41 PWC Networks satisfies the NT Access Code obligation through its Networks Capital Contributions Policy (NCCP).
- 7.42 As well as meeting PWC Networks' obligations under the NT Access Code, which only applies to the regulated networks, PWC also applies the NCCP in unregulated areas and has developed the NCCP with regard to its obligations under the *Planning Act* as it relates to developer contributions.
- 7.43 Approval of the NCCP by the Commission relates only to PWC Networks' obligations under the NT Access Code and should not be construed as validating the NCCP for any other purposes.
- 7.44 The NCCP approved by the Commission as part of the 2009 Network Price Determination for use in the third regulatory control period covers:
- the types of works for which a capital contribution may be required;
  - matters relevant to the sizing and standards of works;
  - how the capital contribution is calculated; and
  - various prudential and administrative matters.
- 7.45 The Commission notes that, in April 2012, PWC submitted a revised NCCP for use for the remainder of the third regulatory control period for the Commission's consideration and approval. The Commission is in the process of reviewing the revised NCCP and will undertake a consultation process as part of its assessment.

**Commission's preliminary position**

- 7.46 The Commission's preliminary position is that PWC Networks should include in its regulatory proposal a draft Capital Contributions Principles and Methods Statement to apply to the setting of capital contributions towards works that would not be commercially viable without that capital contribution.
- 7.47 The Commission expects that the draft Capital Contributions Principles and Methods Statement submitted as part of PWC Networks regulatory proposal for the 2014 Network Price Determination will be substantially the same as the final version of the revised NCCP currently under consideration.
- 7.48 As such, any issues will be dealt with as part of this consultation process and should not need to be revisited.

## CHAPTER 8

### Next steps

- 8.1 The NT Access Code is not prescriptive with respect to the timeframes for the consultation processes leading up to a network price determination. The Commission will adopt the timeframes outlined in the NER where these are not inconsistent with the requirements of the NT Access Code.
- 8.2 To align to timeframes required under the NER, the Commission must commence consultation on its Framework and Approach at least 24 months before the end of the current regulatory control period (30 June 2012) and complete the process at least 19 months before the end of the current regulatory control period;
- 8.3 Interested parties are invited to comment on the Commission's proposed Framework and Approach for the 2014 Network Price Determination as set out in this paper. The consultation period is six weeks and closes on 17 August 2012.
- 8.4 Prior to releasing its final Framework and Approach, the Commission will engage with PWC to determine the extent to which PWC Networks can provide data equivalent to that provided by DNSPs in the NEM.
- 8.5 In consultation with PWC and the AER, the Commission will develop the RIN<sup>87</sup> and associated financial models that set a high but achievable level of data provision to be required from PWC.
- 8.6 PWC Networks will be required to submit a Regulatory Proposal which must include (but is not limited to):
  - a services classification proposal;
  - information required by the Commission in order to make the distribution determination to apply to PWC Networks for the regulatory control period and approve the pricing proposals to apply to PWC Networks during the regulatory control period, as detailed in the RIN;
  - a draft statement setting out details of the principles and methods to be used for defining the individual standard network access services to be supplied by the network provider and for establishing the reference tariffs to apply to those services as required under clause 74(5) of the NT Access Code;

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<sup>87</sup> The RIN will be issued pursuant to the Commission's power to require information under section 25 of the *Utilities Commission Act*

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- a draft statement providing details of principles and methods for establishing capital contributions as required under clause 81(2) of the NT Access Code; and
  - for the regulatory year commencing 1 July 2014, an indicative Network Pricing Proposal and Tariff Schedules consistent with all other elements of the regulatory proposal.
- 8.7 To further align with the process and timeframes of the NER, the Commission proposes to adopt the following in relation to the 2014 Network Price Determination.
- PWC Networks is to submit its regulatory proposal at least 13 months before the end of the current regulatory control period (31 May 2013).
  - If the regulatory proposal is non-compliant with a requirement of the NT Access Code or any other requirement set out in the Commission's final Framework and Approach paper (including compliance with relevant provisions of the NER) in any respect, the Commission will advise PWC Networks as soon as practical, stating why, and in what respects, the regulatory proposal is deemed to be non-compliant.
  - PWC Networks will have 20 business days to resubmit its regulatory proposal, but can only amend those parts of the proposal that have been identified as non-compliant.
  - The Commission will publish the (re)submitted regulatory proposal and allow at least 30 business days for interested parties to make submissions. The Commission may publish an issues paper examining issues related to the regulatory proposal.
- 8.8 The Commission will issue a draft Determination and allow at least 30 business days for submissions. After publication of the draft Determination, PWC Networks may submit a revised regulatory proposal. The Commission will decide whether or not to call for submissions on the revised regulatory proposal.
- 8.9 The NT Access Code specifies timeframes for the Commission's final determination and for the submission and approval of network tariffs.
- 8.10 At least 90 days before the commencement of the regulatory control period (1 April 2014),<sup>88</sup> the Commission will publish its final determination.
- 8.11 At least 60 days prior to the start of the first financial year of the regulatory control period (1 May 2014),<sup>89</sup> PWC Networks will be required to submit its initial Pricing Proposal for the first year of the regulatory control period.

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<sup>88</sup> Clause 70(4) NT Access Code

<sup>89</sup> Clause 78(1) NT Access Code