Networks Capital Contribution Policy

Consultation Paper

November 2013

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Contents

Call for Submissions

Submissions are invited concerning the issues raised in this Consultation Paper and any related matters. Submissions should be directed in the first instance to:

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Submissions are due by **4.00pm Friday 22 November 2013**.

Confidentiality

In the interest of transparency and to promote informed discussion, the Utilities Commission of the Northern Territory (the Commission) will make all 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).

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

Chapter 1

Executive Summary

Introduction

1.1 The Utilities Commission of the Northern Territory (the Commission) is an independent statutory authority responsible for economic regulation of the electricity supply industry, which is governed by the *Utilities Commission Act* (the Act), the *Electricity Reform Act*, the *Electricity Networks (Third Party Access) Act*, and associated legislation.

1.2 The Northern Territory's network access regime, including regulation of prices, is governed by the Electricity Networks (Third Party Access) Code (NT Access Code).

1.3 In accordance with the NT Access Code, the network service provider may require a network user to make a capital contribution (in the form of assets or a financial payment) where:

- the provision of network access services to the network user requires new or upgraded connection assets or network system assets (involving asset augmentation or extension of connection equipment); and
- the cost of these assets (including design, construction, installation and commissioning) cannot be fully recovered by the network service provider through future tariff revenue.

1.4 The network service provider in all regulated networks in the Territory is the networks business division (PWC Networks) of the Power and Water Corporation (PWC).

1.5 Clause 62.1 (c) of the NT Access Code requires that the regulator (the Commission) oversee the application of principles for setting of capital contributions and charges.

1.6 Clause 81 (2) of the NT Access Code requires that, prior to the commencement of each regulatory control period, the network service provider submit to the Commission a statement providing details of principles and methods for establishing capital contributions to be approved prior to the commencement of each regulatory control period.

1.7 In accordance with clause 81 (3) of the NT Access Code, the Commission must approve the capital contribution principles and methods statement for use by the network provider unless the statement does not comply with the requirements set out in Chapter 8 of the NT Access Code (Capital Contributions) or is inconsistent with the requirements elsewhere in the NT Access Code, in particular the objectives of network pricing set out in clause 74.

1.8 PWC Networks submitted a statement setting out its Network Capital Contributions Policy (NCCP) to be applied during the third regulatory period as part of its regulatory proposal for the 2009 Network Price Determination process. In accordance with clause 81 (3) of the NT Access Code, the Commission approved the NCCP on 31 March 2009 as part of its Final Determination.

1.9 Capital contributions are also applied by PWC Networks under a separate policy, the Distribution System Extension Policy (DSEP) to meet the capital contribution provisions set out in section 86 (2) of the *Electricity Reform Act*.

1.10 In July 2006, the Commission approved PWC Networks' current DSEP as complying with the provisions of section 86 (7) of the *Electricity Reform Act*. The DSEP includes a schedule of financial contribution fee components.[1]

1 Utilities Commission, Electricity Distribution System Extension: Approval, 1 July 2006 (available on the Commission's website: http://www.utilicom.nt.gov.au/Electricity/pricing/NetworkPricing/DNSP/Pages/default.aspx)

Submission by PWC Networks

1.11 The Commission has received PWC Networks' submission, seeking the Commission's approval to replace the existing NCCP and DSEP with a revised NCCP.

1.12 The high level objectives of the revised NCCP are:[2]

- to provide appropriate economic pricing signals to network users that reflect the true cost of connection to PWC Networks' or any new or upgraded network access services;
- to ensure the commercial viability of connections made to PWC Networks' electricity networks, in order to provide a return to the shareholders commensurate with the required investment; and
- to ensure more equitable outcomes for both new and existing network users.

1.13 PWC Networks revised policy to the Commission outlines plans to levy a capital contribution on a network user for any new or upgraded network access service it provides.

1.14 PWC's submission identifies that the changes proposed to the NCCP aim to align the policy with those adopted in other Australian jurisdictions.

1.15 The Commission considered PWC's requests to consider the revised NCCP for application during the remainder of the current 2009 Network Price Determination. However, the NT Access Code does not give the Commission the authority to approve a revised network capital contributions policy outside the network price determination process. The Commission can approve the revised policy only as part of the 2014 Network Price Determination which will take effect on 1 July 2014.The Commission's view, however, is that there is merit in conducting public consultation on PWC's revised NCCP separately from the 2014 Network Price Determination. This will ensure a more targeted consultation with interest groups and will allow the Commission to focus on other elements of the 2014 Network Price Determination at a later stage.

1.16 The Commission notes that, prior to submitting the revised NCCP to the Commission for approval, PWC Networks undertook consultation with stakeholders and interested parties. PWC's submission indicates that it held consultation sessions prior to developing the revised NCCP and PWC invited 26 peak body organisations to provide their input during these sessions.

1.17 PWC advised that a number of questions were raised at the consultation sessions. However, the majority of these were not related to the revised NCCP. PWC did not receive any electronic or hardcopy feedback from those that attended the sessions or from any other members of the public.

1.18 After reviewing the document, the Commission submitted a list of queries to PWC in regards to parts of the revised NCCP. PWC provided responses to those queries which the Commission also reviewed and has incorporated these responses into the Consultation Paper.

1.19 The Commission notes the consultation strategy proposed by PWC, but also notes that the NT Access Code [clause 62 (2)] requires the Commission to undertake consultation as part of the approval process.

1.20 After considering the views in the submissions and having regard to clause 81 (3) of the NT Access Code, the Commission may decide to:

- not approve the revised NCCP;
- request amendments to the revised NCCP prior to approving; or
- approve the revised NCCP.

2 Power and Water Corporation, Revised Power Networks Capital Contributions Policy, page 1.

1.21 The Commission notes that the only basis for not approving the revised NCCP would be if the Commission found the revised NCCP:

- did not meet the requirements of Chapter 8 of the NT Access Code;
- was inconsistent with other requirements of the NT Access Code; or
- was inconsistent with section 86 (2) of the *Electricity Reform Act.*

1.22 The revised NCCP was released as part of PWC's Initial Regulatory Proposal (IRP) on 19 September 2013. The Commission sought submissions on PWC's IRP by 31 October 2013. Any submissions received as part of the IRP consultation process will also be considered as part of submissions on this Consultation Paper.

Who Should Consider the Revised Policy?

1.23 The Commission's view is that the following stakeholders should consider the revised policy and provide comments as required:

- developers (related to new subdivisions, amalgamations and re-zoning);
- small and large customers (related to property service upgrades and extensions to unserviced areas);
- large network users; and
- market participants and potential market participants (including generators).

Key Aspects of the Proposed Amendments

1.24 The key aspects of the revised NCCP are summarised in Table 1.

Table 1: Key Changes Between the Existing DSEP and NCCP, and the Proposed Revised NCCP

User Type	Type of Extension Upgrade	Current DSEP	Current NCCP	Proposed Revised NCCP
		Policy applies to small network users and developers of serviced lots, subdivisions and amalgamations.	Policy applies to: • Mainly large end-use customers (commercial or industrial load); • developers of residential and commercial subdivisions; and • Government departments, local councils or similar authorities acting on behalf of specific end-users or community.	Policy applies to: • developers; • large individual network users; • small individual network users; and • generator users.
Developer	Subdivisions, amalgamations and re-zoning	Developer to contribute the full costs associated with the assets downstream of the connection point to the shared network.		Unchanged.
Developer	Serviced lots	Capacity charge of $50 per kVA increase in demand above the existing supply. $5000 for additional substations required. Full cost of any high voltage line on private property.		Developer to contribute to the full cost.
Small individual network user	Upgrade to serviced property	Capacity charge of $50 per kVA increase in demand above the existing supply. $5000 for additional substations required.		PV (attributed costs of connection) minus PV (expected revenue less shared network costs).

User Type	Type of Extension Upgrade	Current DSEP	Current NCCP	Proposed Revised NCCP
Small individual network user	Extension to unserviced areas	$15 000/km for single phase extension, and $21 000/km for three-phase. Shared equally between applicants, less the total of all $2000 Overriding Statutory Charge placed on blocks not participating to a maximum of 50 per cent of the extension charge. Network connection charge of $5000 for single phase, and $8000 for three-phase.		PV (attributed costs of connection) minus PV (expected revenue less shared network costs).
Large individual network user	New or upgraded connection or system assets.		PV (attributed costs of connection) minus PV (expected revenue).	PV (attributed costs of connection) minus PV (expected revenue less shared network costs).
Generator	Connection and augmentation of upstream shared assets.		Generator to contribute to full cost of connection and augmentation.	Unchanged.

Purpose of this Paper and Process for Consultation

1.25 The purpose of this Consultation Paper is to facilitate discussion with industry participants and stakeholders on the matters raised in the revised NCCP submitted by PWC Networks.

1.26 Chapter 2 of this Consultation Paper outlines the features of the revised Statement, the Commission's initial assessment of the proposed submission against the requirements of the NT Access Code and other legislative requirements, and any issues that the Commission considers require further consideration.

1.27 The Commission invites submissions on this Consultation Paper by 4.00pm Friday 22 November 2013.

1.28 Below is the table which outlines the proposed timeframe for consultation.

Table 2: Timeframe for Consultation

Action	Timeframe
Release of Consultation Paper	Friday 1 November 2013
Submissions due	Friday 22 November 2013
Release of Draft Determination	December 2013
Implementation of new NCCP, if approved	Tuesday 1 July 2014

1.29 The Commission will release its Draft Network Price Determination in December 2013, after consideration of submissions on PWC's Initial Regulatory Proposal and submissions received from this Consultation Paper.

1.30 To assist stakeholders in making their submission, the Commission has published PWC Networks':

- submission (Attachment A);
- proposed NCCP (Attachment B); and
- proposed Principles and Method (Attachment C).

1.31 Copies of these documents are available on the Commission's website or by contacting the Commission office.

1.32 The Commission particularly seeks views from stakeholders on whether the revised NCCP does not meet the requirements of Chapter 8 of the NT Access Code, is inconsistent with other requirements of the NT Access Code or is inconsistent with section 86 (2) of the *Electricity Reform Act*.

Chapter 2

Application to amend the Networks Capital Contribution Policy

Capital Contribution Regulatory Framework

2.1 Capital contributions are currently applied by PWC Networks using two distinct policies:

- the Networks Capital Contributions Policy (NCCP) developed in accordance with the capital contribution principles set out in clause 80 of the Electricity Networks (Third Party Access) Code (NT Access Code); and
- the Distribution System Extension Policy (DSEP) developed in accordance with section 86 (2) of the *Electricity Reform Act*.

Distribution System Extension Policy

2.2 The *Electricity Reform Act* includes capital contribution provisions. Section 86 (2) stipulates that when the Minister declares an area to be a distribution system extension area, owners of all parcels of land within that area become liable to pay a financial contribution towards the cost of extension of electricity supply to the licensed electricity retailer selling electricity to non-contestable customers.[3]

2.3 This financial contribution is the amount approved by the Commission as the owner's reasonable share of the capital contribution required of the electricity entity, with the capital contribution determined in accordance with the capital contribution principles set out in Part 3 of the NT Access Code [clause 86 (7)].

2.4 Rather than approve each individual owner contribution, the Commission has approved the use of the schedule of financial contributions set out in the PWC Networks DSEP as satisfying the requirements of the *Electricity Reform Act*. The Commission's assessment of a 'reasonable share' of the capital contribution required by the distribution network provider has been defined as being between 50 per cent and 100 per cent of the estimated average capital contribution.[4]

2.5 The DSEP was last updated and approved by the Commission in 2006.

Distribution Network Capital Contribution Policy

2.6 In accordance with clause 80 (2) of the NT Access Code, an access applicant or network user may be required to make a capital contribution towards the extension of connection equipment or network system assets only if the network provider can demonstrate that the extension is not commercially viable without that capital contribution.

2.7 An extension is not commercially viable if the cost of these assets (including the costs associated with the design, construction, installation and commissioning, and a reasonable rate of return) cannot be fully recovered by the network service provider within a reasonable time through revenue derived from future tariffs and charges payable by existing network users [clause 80 (3)(a)].

2.8 The NT Access Code stipulates that the value of the capital contribution should be equal to no more than the amount that would be required to make the extension viable [clause 80 (4)].

3 From 1 April 2010 all electricity customers became contestable with the implementation of full retail contestability in the Territory.
4 Utilities Commission, Electricity Distribution System Extension: Approval of Owner Contributions,1 July 2006 (http://www.utilicom.nt.gov.au/PMS/Publications/Approval%20Instrument%20DSEP%20AT.pdf)

Scope of the Commission's Approval Function

2.9 In accordance with clause 81 (3) of the NT Access Code, the Commission, as the regulator, must approve the draft capital contributions principles and methods statement for use by the network provider unless in its opinion, the statement does not comply with the requirements set out in Chapter 8 (Capital Contributions) or is inconsistent with the requirements elsewhere in the NT Access Code.

2.10 In assessing a network provider's NCCP, the Commission considers the following provisions to be relevant:

- Section 6 of the *Utilities Commission Act* as it defines the functions of the Commission and the matters the commission must have regard to, including the promotion of competitive and fair market conduct, the prevention of misuse of market power, the facilitation of entry into the market by other players, the promotion of economic efficiency and to ensure and protect the interests of consumers of electricity.
- Clause 74 of the NT Access Code as it sets out the objectives of network pricing, in particular the need for network tariffs to reflect efficient costs of supply, the need to involve a common approach for all network users and to be transparent in order to provide pricing signals to network users.

2.11 PWC Networks satisfies the capital contributions obligations set out in the NT Access Code through its NCCP which is approved by the Commission.

2.12 In merging the NCCP and DSEP in a single document, the Commission notes that the revised NCCP attempts to satisfy the capital contributions requirements outlined in section 86 (2) of the *Electricity Reform Act*. However, the 'non-contestable' customer class is no longer applicable as a result of the implementation of Full Retail Contestability (FRC) in the Territory, making the policy intent underpinning section 86 (2) of the *Electricity Reform Act* ineffective. As a result, the Commission's approval of the NCCP can only extend to those matters which are related to the capital contribution provisions set out in the NT Access Code but does not cover the capital contributions obligations set out in the *Electricity Reform Act*.

PWC Networks' Proposed Revised Network Capital Contribution Policy

2.13 This section of the Consultation Paper details the key elements of the newly revised NCCP compared with the existing network capital contribution policies (the NCCP and the DSEP), and sets out the Commission's preliminary views.

Merging of Capital Contribution Policies

Current Situation

2.14 The capital contributions framework is currently applied by PWC Networks under two distinct policies: the NCCP and the DSEP.

2.15 Both NCCP and DSEP were approved by the Commission in so far as they are consistent with the capital contribution principles set out in clause 80 of the NT Access Code, the requirements elsewhere in the Code and the capital contribution requirements outlined in the *Electricity Reform Act* [section 86 (2)].

2.16 While the application of the NT Access Code is limited to network users in regulated areas, the current NCCP applies in both regulated and unregulated areas.

2.17 Under the current NCCP, the network users which may be required to make a capital contribution include:

- end-use customers (mainly commercial and industrial load);
- developers of residential and commercial subdivisions; and
- Government Departments, Local Councils or similar authorities acting on behalf of specific end-users or the community more broadly.

2.18 PWC Networks may require a network user to make a capital contribution under the NCCP where:

- the provision of network access services to the user requires new or upgraded connection assets or network system assets (involving asset augmentation or extension of connection equipment); and
- the cost of these assets (including design, construction, installation and commission) cannot be fully recovered by PWC Networks through future tariff revenue over a period of time to be determined by PWC Networks in accordance with the NCCP.

2.19 In contrast, the current DSEP applies to 'non-contestable' customers[5] connected to, or intending to connect to, an electricity network owned by PWC in relation to the following circumstances:

- Development of services lots including, load increases, and conversion of single phase to three phase supply.
- Extensions to unserviced areas including, extensions along gazetted public roads, extensions on private property, and connection charge.

Proposed Amendment

2.20 With a view to ensure greater transparency and equity in relation to the application of the NCCP, PWC proposes to have a single policy applying to all network users. The revised NCCP will group network users into four classes of network connection:

- developers;
- large individual network users who are individual network users that satisfy either of the below criteria:
  - a high voltage connection and a projected (or actual) demand of 4MVA or greater; or
  - connection to (or seeking connection to) a dedicated supply that is different or remote or separate from the remainder of the supply network;
- small individual network users who are individual network users with a low voltage connection and/or a projected (or actual) demand less than 4MVA; and
- generator users.

2.21 PWC's submission advises that the revised NCCP will apply to all customer categories, if they are classified as new connections.

2.22 A key objective for PWC Networks in this process has been to ensure that its capital contributions policies (also applying to water and sewerage) are as consistent as possible, particularly with regards to the high level objectives of cost recovery, simplicity, transparency and equity.

Commission's Preliminary View

2.23 It can be noted that the Commission's approval will not extend to the matters included in the policies which extend beyond the capital contributions provisions set out in the NT Access Code.

5 The class of non-contestable customers is no longer relevant to the Territory's electricity supply market following the introduction of full retail contestability on 1 April 2010.

2.24 The Commission's preliminary view is that, from a practical perspective, there does not appear to be any persuasive rationale to maintain two separate policies in so far as the single network capital contribution policy is not inconsistent with the requirements set out in Chapter 8 of the NT Access Code.

2.25 The Commission's preliminary view that the amalgamation of the NCCP and DSEP reduces the overlaps and degree of confusion which might emerge through the application of two separate policies. The Commission also agrees with PWC that having a single network capital contribution policy will ensure more equitable outcomes for all network users.

2.26 The Commission also notes that a single policy will apply to both NCCP and DSEP customers and will replace the terms 'contestable customers' and 'non-contestable customers' (now obsolete as a result of the implementation of FRC since April 2010) contained in the current DSEP, by more relevant customer classes, such as:

- small individual network users;
- large individual network users;
- developers; and
- generator users.

2.27 The Commission's preliminary view is that the amalgamation of capital contribution policies is consistent with the network pricing objectives set out in clause 74 of the NT Access Code, in particular the need:

- to have a common approach for all network users [clause 74 (1) (b)]; and
- to be more transparent and to provide pricing signals to network users [clause 74 (1) (c)].

2.28 The Commission notes that most distribution network providers in other jurisdictions have adopted a single capital contributions policy (see Appendix) and PWC's proposal is therefore considered to be consistent with generally accepted industry practice.

Full Cost Recovery

Current Networks Capital Contribution Policy:

2.29 Under the current NCCP, a capital contribution can be made by a network user in the form of:

a) a financial payment to PWC Networks, where PWC Networks undertakes works required to provide new or upgrade network access services to a network user;

b) the transfer of ownership of connection assets or network system asset to PWC Networks from a network user that has procured and funded the installation or construction of the assets by an accredited services provider[6]; or

c) a combination of (a) and (b).

2.30 The maximum amount of a financial capital contribution under the NCCP is the shortfall in the viability of the required works, based on the present value of the costs associated with the connection less the present value of the projected future tariff revenues earned from the connection. The formula used to calculate the maximum capital contribution amount is as follows:

Capital contribution = PV (actual and attributed costs of connection) – PV (customer tariff x volume).

Where:

6 In accordance with good regulatory practice, PWC Networks' regulatory asset base excludes gifted assets.

The 'actual and attributed costs of connection' is calculated on an incremental actual basis, based on:

- the full capital cost of the (optimal) connection assets and the network system assets dedicated to an individual customer; and
- an apportionment of the incremental costs of any new shared (optimal) connection assets and network system assets that are designated to that particular connection and would not have been incurred within the ordinary planning horizon but for that connection having occurred.

The 'customer tariff' which is actually charged to the network user, which may be different to the general tariff schedule in circumstances where a discount for that particular customer has been negotiated.

The 'volume' is determined based on the projected incremental future electricity demand by the network user attributable to the new works.

2.31 The existing NCCP provides that the present value used to calculate the capital contribution is based on different investment timeframes depending on the type of customer:

- 30 years for residential customers; and
- 15 years for all other customers.

2.32 PWC reserves the right to reduce those timeframes if it considers that the project is characterised by a short asset life or risk of asset stranding, or there is high risk of default in relation to an otherwise economic connection.

Current Distribution System Extension Policy:

2.33 The DSEP was last updated in 2006. However, the associated charges have not been updated since 1987.

2.34 The capital charges under the DSEP are summarised in Table 3 below.

Table 3: Charges Under the DSEP

User Type	Type of extension	Contribution under current capital DSEP
Developer	Subdivisions, amalgamations and re-zoning	Developer to contribute the full costs associated with the assets downstream of the connection point to the shared network.
Developer	Serviced lots	Capacity charge of $50 per kVA increase in demand above the existing supply. $5000 for additional substations required. Full cost of any high voltage line on private property.
Small individual network user	Upgrade to serviced property	Capacity charge of $50 per kVA increase in demand above the existing supply. $5000 for additional substations required.
Small individual network user	Extension to unserviced areas	$15 000/km for single phase extension, and $21 000/km for three-phase. Shared equally between applicants, less the total of all $2000 Overriding Statutory Charge placed on blocks not participating to a maximum of 50 per cent of the extension charge. Network connection charge of $5000 for single phase, and $8000 for three-phase.

Proposed Amendments

2.35 PWC identifies the following major issues with its existing capital contributions framework is that the application of DSEP results in non-commercial outcomes for PWC Networks and inequitable outcome for customers.

2.36 The revised NCCP seeks to recover capital contributions to the full amount of the expenses incurred by PWC Networks, whereas under the existing NCCP and DSEP there is a shortfall in cost recovery.

2.37 Under the revised NCCP, all network users will be required to pay the capital contribution in full prior to PWC Networks commencing the works.

2.38 The elements of the capital contributions policy remaining unchanged under the revised NCCP are:

- For subdivisions, amalgamations and re-zoning, developers continue to contribute to the full costs associated with assets downstream of the connection point to the shared network.
- Generators continue to contribute to the full costs associated with the dedicated connection assets and the costs to augment upstream shared assets.

2.39 The main changes in the revised NCCP are:

- Developers' contribution for upgrades work to serviced lots will cover the full capital costs. In contrast, under the existing DSEP, the capital contribution is based on a capacity charge of $50 per kVA increase above the existing supply, and $5000 for an additional substation required.
- The maximum capital contributions for large users is based upon the present value of the costs associated with the connection, less the present value of the project future tariff revenues earned from the connection offset by the shared network costs (see details on the revised NPV approach below). In contrast, under the existing NCCP, the NPV approach does not include an offset for shared network costs.
- The upgrade to serviced properties by small individual network users will be based on the revised NPV approach to determine the maximum capital contributions (see details below). In contrast, under the existing DSEP, the capital contribution is based on a capacity charge of $50 per kVA increase above the existing supply and $5000 for an additional substation.
- Extension to unserviced areas by small individual network users will be based on the revised NPV approach to determine the maximum capital contributions (see details below). In contrast, under the existing DSEP, a network extension is charged $15 000 per km for a single phase and $21 000 for three-phase. This is shared equally between applicants, less the total of all $2000 overriding statutory charge placed on blocks not participating to a maximum 50 per cent of the network extension charge. A network connection charge of $5000 for a single phase and $8000 for three-phase also applies.

2.40 The revised NPV approach used to set the maximum amount of a capital contribution which calculates the shortfall in the viability of the required works has been modified in the revised NCCP to offset the shared network costs from the projected future tariff revenues earned from the connection. The revised formula is as follows:

Capital Contribution = PV (attributed costs of connection) –
PV (expected revenue **less shared network costs**)

2.41 In calculating the present value of the maximum capital contribution, PWC proposes that:

- the discounting factor be based on the weighted average cost of capital set by the Commission for the relevant regulatory control period;
- the value of the assets which will determine the level of payment or nature of the works required from a network user through a capital contribution is unchanged in the revised NCCP and remains based on the closest available standard size which is at or greater than the optimally sized asset that is needed to meet the network user's requirements; and
- an investment timeframe of 15 years or less if PWC Networks reasonably considers that the project is characterised by a short asset life, risk of asset stranding or a high risk of default.

2.42 The capital contribution calculation has been modified from the approach set out in the existing NCCP to allow for projected future tariff revenues earned from the connection to be offset by shared network costs, in recognition of the attribution of incremental network tariff revenue to the costs of the existing networks.

2.43 The shared network costs are the attribution of incremental network tariff revenue from the network user to the costs of the existing shared network, estimated to be, on average, 50 per cent of the expected revenue.

2.44 Finally, the proposed revised NCCP also provides that PWC Networks reserves the right to add to the capital contribution calculation the projected operating and maintenance expenses attributed to a connection if:

- they are significant; and
- they have not been allowed for within the current regulatory control period.

2.45 PWC has previously provided the Commission an indication of the estimated impact changes to the NCCP will have based on specific customer examples established in 2011:

- developer upgrades from 10kVA to 330kVA and a new dedicated substation required – current costs of $21 000 estimated to increase to $121 000;
- small individual network user increases demand from 100kVA to 200kVA and a new dedicated substation required – current costs of $10 000 estimated to increase to $26 700 (or $86 700 if underground substation required);
- sole domestic resident requires 0.5 km extension and 25kVA substation – current costs of $16 500 estimated to increase to $51 300.

Commission's Preliminary Views

2.46 The Commission agrees with PWC that the charges approved under the DSEP have not changed since 1987. The Commission notes that the proposed NCCP is more consistent with the general principle of 'users pay' and that charges need to become cost reflective so that:

- more efficient price signals are sent to connecting customers; and
- the network provider is able to recover the costs (including a reasonable rate of return on the capital investment) associated with the provision of network access services.

2.47 The Commission notes that the proposed NCCP will see a significant rise in capital contributions that will impact on small and (to a lesser extent) large individual network users through the removal of outdated extension charges under the existing DSEP and the implementation of a revised NPV approach which, among other things, will recognise the incremental costs associated with shared network assets and will reduce to 15 years the investment timeframes for residential customers.

2.48 The Commission notes that the PWC submission identifies that 50 per cent of revenue attributable to shared network costs is based on the assessment undertaken by PWC Networks of the attribution of incremental network tariff revenue from the network user to the cost of the existing shared network. The submission identifies that the overall approach of reducing expected revenue by shared network costs is consistent with that applied by other network providers (for example Ergon and Energex).

2.49 While the approach appears reasonable, the Commission notes that the attribution of the incremental revenue to the costs of the existing shared assets for Energex is estimated to be 10 per cent and for Ergon ranges from 2 per cent (Mt Isa) to 80 per cent (West Zone).

2.50 In its response to the Commission's queries on aspects of the proposed revised NCCP, PWC provided that shared network costs vary across the network.[7] As a result, PWC Networks used the proportion of upstream assets to the total value of the 2008-09 Regulatory Asset Base ($460 million). To determine the value of the upstream assets, PWC Networks separates from the Regulatory Asset Base the value of the downstream classes of assets normally subject to the NCCP:

- Distribution Substation;
- LV Reticulation – Overhead;
- LV Reticulation – Underground;
- HV Reticulation – Overhead; and
- HV Reticulation – Underground.

2.51 The value of the upstream assets being estimated at $248 million, the proportion of network costs represents 54 per cent (rounded down to 50 per cent).

2.52 The Commission seeks comments on the reasonableness of PWC's approach to assuming all the downstream assets identified are subject to a capital contribution policy.

2.53 The Commission notes that an alternative view is to calculate the portion of shared network costs associated by simply using the value of the assets specifically identified as being subject to the NCCP, rather than using generic classes of assets as a proxy for the assets under capital contribution policy. This might provide a more accurate and realistic value of those assets which are under a capital contribution policy.

2.54 The Commission considers that the reference to 'optimally sized assets' as a basis for the valuation of the customer capital contribution in section 5.6 of the revised NCCP (Sizing of Assets) may lack clarity about the cost aspect of the assets included in the capital contribution.

2.55 The Commission notes that Aurora Energy's Customer Capital Contributions Policy spells out its approach:

The value of the customer capital contribution should be calculated based on the optimally sized assets (least cost and technically acceptable assets) required by the new or modified connection.[8]

2.56 The Commission also notes that the Capital Contributions Policy developed by Western Power stipulates that a contribution 'must not exceed the amount that would be required by a prudent service provider acting efficiently, in accordance with good electricity practice seeking to achieve the lowest sustainable cost of providing the covered services'[9] (see Appendix).

7 PWC's response to the Commission's Queries on Revised Networks Capital Contribution Policy, dated 12 March 2013.
8 Aurora Energy, Customer Capital Contributions Policy – Effective 1 July 2012, page 8.
9 Western Power, Contributions Policy, ABN: 18 540 492 861, page 10.

2.57 The Commission's preliminary view is that similar wording would provide greater clarity and would better meet the network pricing objectives set out in clause 74 of the NT Access Code, in particular the need for network pricing to:

- reflect efficient costs of supply [clause 74 (1) (a)]; and
- be transparent in order to provide pricing signals [clause 74 (1) (c)].

2.58 The Commission's preliminary view is that a 15 year discounting timeframe (or less under certain circumstances) to calculate capital contributions is not inappropriate but on the lower side of the spectrum compared to a number of network providers such as Ergon and Energex in other jurisdictions (see Appendix).

2.59 PWC Networks provides that the rationale underpinning its decision to adopt a shorter investment timeframe is that the discounting of future tariffs revenues reduces the impact of the outer years substantially. Further, long term forecasts are accompanied by significant uncertainty and the risk of their inaccuracy would be borne by PWC Networks.

2.60 Comparing PWC Networks' proposed NCCP with other Australian jurisdictions, it is noted that in Victoria the discounting timeframes are 30 years for domestic customers and 15 years for all other customers[10] (similar to PWC Networks' current capital contribution policy); in Western Australia, Western Power calculates all capital contributions based on a 15 year timeframe[11]; in Queensland, Ergon and Energex use a 20 year timeframe for both domestic and commercial customers[12].

2.61 The Commission notes PWC Networks' intention to include in the capital contributions amount operating and maintenance expenses attributed to the connection if they are significant and have not been allowed for within the current regulatory control period. The Commission considers that what constitutes a 'significant' operating and maintenance expense should be more specifically defined or quantified in terms of, for example, percentage above a standard level of operating and maintenance expenditure. The Commission's preliminary view is that a more transparent approach would provide network users with greater certainty.

2.62 Subject to the issues identified above being addressed or further clarified and any other submissions, the Commission's preliminary view is that proposed full cost recovery approach proposed is not inconsistent with the capital contributions principles set out in clause 80 of the NT Access Code.

Capital Contribution Payments

Current Situation

Current NCCP:

2.63 The current NCCP sets out the timing of capital contribution payments. Financial payment of capital contributions will be required to be paid in full prior to the connection work being conducted, unless otherwise negotiated by PWC Networks and the network user.

2.64 In the case where assets are installed with excess capacity at PWC Networks' request, payment for the cost of the excess capacity will take place at a time agreed between PWC Networks and the party undertaking the works. In the case where capital contributions are made through contributed assets, ownership will transfer to PWC Networks after completion.

10 Essential Services Commission, Electricity Industry Guideline No.14, Provision of Services by Electricity Distributors, Issue 1, April 2004.

11 Western Power, Capital Contributions Policy, ABN: 18 540 492 861.

12 Energex, Capital Contributions Policy, May 2010; Ergon, Capital Contributions (associated with network connections), QCA approved, 20 April 2005.

2.65 PWC Networks may agree to a network user paying a capital contribution over time, including after the related works have been commenced, depending on matters such as the amount of the capital contribution and the expected timing for completion of the required works. In the case of capital contributions made through contributed assets, ownership is transferred to PWC Networks once the new assets have been completed and commissioned, and the necessary inspections and testing have been completed.

Current DSEP:

2.66 Under the existing DSEP, residential and rural/residential customers can make a payment of a capital contribution up to $10 000 either by making a lump sum payment attracting a discount of five per cent, or by entering an interest free loan agreement for payment of the full amount over a period of up to three years in installments. For amounts up to $7500 a two year repayment period applies. The amount in excess of $10 000 is to be paid in full by lump sum.

2.67 Under the current DSEP, commercial and industrial customers are required to make a minimum lump sum payment of 50 per cent prior to the work commencing. The balance is to be paid prior to final connection.

Proposed Amendments

2.68 Under the revised NCCP, the timing for making capital contributions payments is broadly similar to the existing NCCP, with:

- financial payment being paid in full prior to the connection works being conducted, unless otherwise negotiated by PWC Networks and the network user;
- works in excess to the network user's requirements and contributing to PWC Networks being paid at a time agreed to by PWC Networks and the party undertaking the works; and
- ownership of contributed assets being transferred to PWC Networks once the new assets have been completed and commissioned.

2.69 The option to repay the capital contribution over time through interest free loan repayments under the DSEP will no longer be available. Existing DSEP loans will continue to be administered until all outstanding loans are finalised.

2.70 Another key change to the revised NCCP is that a cost sharing scheme will apply in order to address equity considerations. Under the new policy, distribution system extension costs will be divided between all the beneficiaries of the system extension. If there is only one original land owner needing a system extension, PWC Networks will pay a rebate if, within five years of the original network user making the capital contribution, another landowner benefits from this extension. The rebate will be based on the proportion of utilisation of the original network user's works. Rebates for distribution network extensions will be calculated on distribution line lengths and network users' loads.

2.71 PWC Networks considers that the five-year timeframe for the cost sharing rebate is consistent with interstate utilities such as Ergon Energy and Western Power, and that a longer timeframe would be complex and costly to administer.

Commission's Preliminary Views

2.72 The Commission's preliminary view about the removal of the interest free loan previously proposed under the DSEP is not inconsistent with the NT Access Code, and in particular the right of the network provider to recover the value of the capital contribution equal to no more than the amount required to make the extension commercially viable [clause 80 (40)].

2.73 The Commission notes that the option of proposing interest free loans to customers is not a practice used by network providers in other jurisdictions. The Commission considers PWC Networks' decision to remove interest free loans from its revised NCCP aligns its capital contributions framework with good industry practice.

2.74 The Commission notes that PWC Networks has removed the provision in the proposed revised NCCP allowing a network user to progressively pay its capital contribution over time, including during the construction phase.

2.75 The Commission welcomes PWC Networks' initiative to include a cost sharing scheme to its proposed NCCP, aligning it with the distribution networks' capital contribution policies in other jurisdictions. PWC Networks' cost sharing approach sets a sharing time period of five years, placing it out of line with most network providers which have a seven year limit. The Commission notes that one network provider (Western Power) has a 10 year limit on the sharing time period for contributions with a value less than or equal to $200 000[13] (see Appendix).

2.76 PWC submits that the rate of demand growth and expansion of the PWC Networks is high relative to other jurisdictions. As a result, the number of instances for which the cost sharing scheme is expected to exceed other jurisdictions. PWC Networks notes that the rate of expansion in Queensland is similarly high, and therefore aligning PWC Networks' eligibility to that of Energex and Ergon is reasonable. PWC Networks considers that the administrative costs associated the scheme by another two years would be expected to be equivalent to one or two full-time administration staff.[14]

2.77 The Commission's preliminary view is that there may be merits in extending the timeframe of the proposed cost sharing scheme as it will offset some of the cost increases faced by customers as a result of the proposed changes to the NCCP. The Commission considers that extending the timeframe by two years, the financial benefits to network users would outweigh the costs associated with the administration of the scheme.

2.78 Subject to the issues identified above being addressed or further clarified, the Commission's preliminary view is that the inclusion of a cost sharing scheme is not inconsistent with the NT Access Code.

Other Matters

Easements

2.79 The revised NCCP includes a requirement for a network user seeking the provision of network access services to create registered electricity easements in favour of PWC Networks, as required, for the accommodation of the necessary network assets, in accordance with PWC Networks *Guidelines for Developers of Subdivisions and Electricity Infrastructure* (NP 020). The costs associated with establishing registered easements will be met by the network user.

Prudential Requirements

2.80 Under the existing NCCP, PWC Networks may impose a prudential requirement on a network user. This is consistent with clause 79 (3) (a) of the NT Access Code which enables the network provider to seek prudential requirements to minimise financial risk associated with investment in network assets. Clause 79 (4) sets out the forms of prudential requirements the network provider may seek, including:

- financial contributions;
- non-cash asset contributions;

13 Western Power does not have a time limit when the value of the contribution is greater than $200 000 (see Western Power 's Contributions Policy).

14 PWC's response to the Commission's Queries on Revised Networks Capital Contribution Policy, dated 12 March 2013.

- service charge pre-payments;
- minimum service charges or quantities for an agreed period; and/or
- financial guarantees.

2.81 The NT Access Code does not stipulate the criteria a network provider will use when determining if prudential requirements are required, nor does it provide any guidance as to the approach used to determine the maximum prudential requirements. The NT Access Code leaves the nature and levels of prudential requirements to the parties to negotiate [clause 79 (5)].

2.82 The proposed revised NCCP [section 5.11] provides greater details than the current capital contribution framework. It requires that, if an extension or upgrade is considered to be reasonably risky, PWC Networks may require the network user to enter into an Early Works Agreement and to provide an unconditional, irrevocable bank guarantee (or equivalent financial instrument) in terms acceptable to PWC Networks to cover the cost incurred by PWC Networks during the design phase of the project. The revised NCCP also requires that the network user procure an acceptable level of security before the commencement of works.

2.83 PWC Networks advises that it requests a prudential guarantee to cover its investments unless it is evident that the future revenue stream holds no risk of not being received. Under the revised NCCP a prudential guarantee is required where:

- Power Networks assesses there is a reasonable risk that it may not earn the incremental revenue on which the application for the provision of Network Access Services was based; or
- Power Networks assesses there is reasonable risk that an extension or upgrade will not proceed.

2.84 PWC Networks also advises that the amount of the prudential guarantee will equate to the sum that PWC Networks is willing to invest in the network in order to receive future revenue.[15]

2.85 The Commission's view is that the nature and levels of prudential guarantees are matters for parties to negotiate. However, the proposed NCCP could benefit from more specific details as to the criteria PWC Networks uses to determine whether an investment is risky or not, and how it determines acceptable levels of guarantee.

2.86 Subject to the issues identified above being addressed or further clarified, the Commission's preliminary view is that the prudential requirements of the NCCP are not inconsistent with the NT Access Code.

Dispute Resolution

2.87 The revised NCCP proposes that where the works form part of an Access Application or Access Agreement in accordance with clause 31 of the NT Access Code, unresolved disputes over the amount of the capital contributions will be dealt with under the dispute resolution procedures contained in Chapter 4 of the NT Access Code. PWC Networks provides that it also intends to apply the dispute resolution procedures set out in Chapter 4 to disputes that arise where there is no Access Application or Access Agreement between the parties.

Commission's Preliminary Views

2.88 The Commission considers that the easement principle and the prudential requirements included in the revised NCCP are broadly consistent with the NT Access Code.

2.89 The Commission's preliminary view is that, with respect to the prudential requirement provision, the proposed changes are not inconsistent with the NT Access Code, but further details on the assessment criteria would be useful.

15 PWC's response to the Commission's Queries on Revised Networks Capital Contribution Policy, dated 12 March 2013.

2.90 The Commission notes that prudential requirements referred to in the revised NCCP include unconditional, irrevocable bank (or equivalent financial instrument) in terms acceptable to PWC Networks.[16]

2.91 The Commission also notes that the Victorian Essential Services Commission allows distributors to require customers to pay a security fee if there is a risk that the distributor may not earn the incremental revenue associated with a connection offer. The amount of the security fee is set to the estimated incremental revenue at risk. The distributor must pay to a customer interest on the amount of a security fee at rate approved by the regulator. The distributor must rebate to the customer the amount of the security fee together with interest earned once the connection works are provided.[17]

2.92 The Commission is of the view that the forms of credit support should be negotiated and agreed between parties through good faith negotiations and not be left to the sole discretion of PWC Networks. The Commission suggests that the revised NCCP be amended, stipulating that PWC Networks may require a network user to procure an unconditional guarantee or other form of credit support that is acceptable to both PWC Networks and the network user, through 'honest, fair and good faith negotiation'. This amendment would make the policy more consistent with the NT Access Code, in particular clause 12 in Chapter 2 (Negotiation of Access).

2.93 Furthermore, the Commission would suggest that PWC Networks incorporate negotiations over capital contributions as part of the negotiation framework relating to network access agreement. The Commission notes that clause 6A of the NT Access Code requires that the network provider develop and maintain a package of information containing all matters of interest to access applicants, including information on the negotiation process (clause 6A (2) (b)). The Commission's preliminary view is that such an approach would address the (perceived or actual) unequal bargaining position between PWC Networks and network users, and would also reduce the risk of negotiations between PWC Networks and network users resulting in a dispute. This is particularly relevant in light of significant increases in the levels of capital contributions resulting from the amendments to the NCCP.

2.94 The Commission is also of the view that the dispute process in Chapter 4 of the NT Access Code is cumbersome. Parties should therefore enter into negotiations with a view to reaching an agreement and the dispute resolution process set out in the NT Access Code should only be sought as a last resort.

2.95 The revised NCCP proposes that for works forming part of an access application or access agreement in accordance with clause 31 of the NT Access Code, disputes over the amount of the capital contribution will be dealt with under the dispute resolution procedures contained in Chapter 4 of the NT Access Code. The Commission notes that its role in the dispute resolution process is limited to conciliation only. Section 37 (2) of the NT Access Code prevents the regulator referring a dispute to arbitration if the dispute relates to matters that are determined or approved by the regulator under the NT Access Code. The revised NCCP falls into this category.

2.96 The Commission also notes PWC Networks' intention to apply the procedures of Chapter 4 of the NT Access Code to disputes over capital contributions even if they do not arise from an access application or access agreement between the parties. The Commission considers that this provision in the revised NCCP is inconsistent with the requirements of the NT Access Code. The NT Access Code limits the applicability of the dispute resolution process and the role of the regulator in dealing with disputes to access applications. Section 5.9 of the revised NCCP should therefore be amended.

16 Power Networks, Capital Contributions Policy, February 2012, Section 5.11, page 10.

17 Essential Services Commission of Victoria, Electricity Industry Guideline No. 14, Provision of Services by Electricity Distributors – Issue 1, April 2004, page 8.

2.97 Subject to the issues identified above being addressed or further clarified, the Commission's preliminary view is that the inclusion of a cost sharing scheme is in line with equity considerations and consistent with the objectives of the NT Access Code.

2.98 Subject to the issues identified above being addressed or further clarified, the Commission's preliminary view is that the dispute resolution provisions of the NCCP are not inconsistent with the NT Access Code.

Appendix

Jurisdictional Comparison of Capital Contributions Frameworks

Jurisdiction	NSW	VIC	SA	WA	QLD	TAS	ACT	NT (PWC's revised NCCP)
Regulatory/ legislative framework	Section 25 of the *Electricity Supply Act* (NSW) requires contributions from new customers who require extending the distribution system or increasing the capacity of its distribution system. The price in force is determined by *Independent Pricing and Regulatory Tribunal Act* 1992 relating to the proportion of contributions that may be required from customers.	Section 15D(1)(a) of the *Electricity Industry Act* 2000 provides the regulator with the power to specify the charging principles applicable to the connection of generation facilities to distribution systems. Under clause 5.7.3(h) of the Victorian Electricity Supply Industry Tariff Order, a distributor may levy an excluded service charge as 'capital contributions for new works and augmentation'. Electricity Industry Guideline 14 (Provision of Services by Electricity Distributors) states that customers must contribute to the capital cost of new works and augmentation.	Chapter 3 of the Electricity Distribution Code (EDC) is concerned with connections requiring network extension and/or augmentation. Clause 8.2 of the Standard Connection and Supply Contract in the Electricity Distribution Code stipulates that the distribution network may require a customer contribute towards the cost of the electrical installation or extending or increasing the capacity of the network, in circumstances and on terms set out in the Electricity Distribution Determination. From January 1 2008, SA electricity distribution transferred to the AER with standing and market contracts in existence.	Capital contributions policy requirements are set out in the Electricity Networks Access Code 2004, Section 5.12 to 5.17	Section 41 of the *Electricity Act* defines connection and supply of electricity to areas outside the distribution, but is silent on financial contributions from customers. The NER, Chapter 6 Part K outlines a cost reflective payment options to DSNP's for modifications or new connections. Chapter 11, clause 11.16.10 of the NER requests that Energex and Ergon publish a capital contributions policy based on their Network Pricing Principles Statements approved by QCA prior to 1 July 2009.	Levying customer capital contribution is done in accordance with Part K of Chapter 6 of the NER, and takes into account the National Energy Customer Framework principles (connection charges be reasonable, provide a user pays signal and limit cross-subsidies). Tasmanian Electricity Code, Chapter 6, Part E sets out capital contribution principles. Section 41(2) of the *Electricity Supply Industry Act* provides for Aurora Energy to submit to the Regulator a draft tariff or charge amendment. Under section 41(3) the regulator may approve, seek amendment or deny the application.	Section 101 of the *Utilities Act* provides that a utility may impose a charge by customers for the development or augmentation of its network which should be determined in accordance with the Electricity Network Capital Contribution Code (July 2012). As a consequence of the introduction of the NECF on 1 July 2012, section 101 of the *Utilities Act* will no longer apply from 1 July 2014 and the Electricity Network Capital Contribution Code will be revoked.	Section 86(7) of the *Electricity Reform Act* provides for the owner of a parcel of land to pay a reasonable share of the capital contribution required of the electrical entity to operate the electricity network in the area. Clause 80(2) of the NT Access Code requires an cess applicant or network user to make capital contribution towards the extension of connection equipment or network system assets only if the extension is not commercially viable without that capital contribution.

Jurisdiction	NSW	VIC	SA	WA	QLD	TAS	ACT	NT (PWC's revised NCCP)
Principles	Independent Pricing and Regulatory Tribunal (IPART) considers that the principles for capital contributions are consistent with the approach to regulating network prices: 1) Reflect economic costs by: • being subsidy free; • signaling future investment costs; • discouraging uneconomic bypass; • allowing negotiations. 2) Return the allowed revenue stream. 3) Promote equity, stability and consistency of outcomes.			Contribution must not exceed the amount that would be required by a prudent service provider acting efficiently, in accordance with good electricity industry practice seeking to achieve the lowest sustainable cost of providing the service.	Economic efficiency test: existing customers will be no worse-off following the introduction of a new user. No cross-subsidisation from other customers. Signal to customers about efficient costs of network connection. Equity – new customer should contribute to the costs of the existing shared network.	Equity, transparency, consistency, user pay signal, reasonable costs.	The capital contribution charge payable by the customer may be an amount no more than the additional costs incurred by the distributor in providing that infrastructure.	Appropriate economic, cost reflective pricing signals to network users, Commercial viability of connections to the network. Equitable outcomes. Simplicity.
Document developed by network providers	Ausgrid has developed Capital Contributions and Asset Relocation Works Guidelines (December 2008).	SP Ausnet has developed a Customer Connection Guide (2008) which includes information on customer contributions	SA Power Networks has a Connection Policy 2013-2015 (developed in January 2013) which includes a number of provisions relating to capital contributions.	Western Power has a Contributions Policy.	Energex has a Capital Contributions Policy (May 2010). Ergon Energy Corporation has developed a Capital Contributions (Associated with Network Connections) Policy (April 2005).	Aurora Energy has developed a Customer Capital Contributions Policy (effective 1 July 2012).	ActewAGL has not introduced a capital contributions policy.	PWC Networks is proposing to amalgamate 2 capital contributions policies (DSEP and NCCP) into a single document.

Jurisdiction	NSW	VIC	SA	WA	QLD	TAS	ACT	NT (PWC's revised NCCP)
Application of the policy	The IPART determination requires the following: Applies to any person who applies to a distribution network service provider for the provision of customer connection services (direct costs associated with the provision of lines and equipment dedicated to the customer). Customers in rural areas and large load customers, as well as paying connection costs, may be required to contribute to the costs of upgrading network assets (augmentation). For a multi-occupant development, the developer pays for: • all low voltage assets dedicated to the development; • any high voltage assets required to connect that development unless those assets are likely to be shared with other customers outside the development, or are capable of being relocated to service another customer if they were no longer needed.	Guideline 14 provides that: • a customer is not to contribute towards the capital cost of new works and augmentation unless the incremental cost in relation to the connection offer is greater than the incremental revenue; and • the amount of any such customer capital contribution is not to be greater than the amount of the excess of the incremental cost in relation to the connection offer over the incremental revenue.	Customers who require upgrades or extensions to the elec. distribution networks exclusively for their benefit may be required to contribute the capital costs of upgrades. Once calculated, any required contributions to capital works will be discounted by an allowance based on customer potential use averaged over three years.	A contribution for works is required where capital costs cannot be recovered by the anticipated incremental revenue. Works include: • developing, constructing and acquiring a new facility; • alternative options (for example network enhancements). The applicants include: • network users; • network customers; or • developers.	Energex: A capital contribution from the new customer towards the cost of connection will generally be required as a prepayment where project costs exceed the PV of expected future charges for connection and supply. Developers are responsible for 100 per cent cost of providing electricity infrastructure for development. Ergon: Reasons why capital contributions may be required: • uneconomic connections if customer were to pay only the standard franchise tariff; • term of asset life shorter than usual; • customer seeking to pay a lump sum pre-connection amount; • above standard connections; • risk of asset stranding. Policy applicable to individual customers and developers of subdivisions.	All large customers will make a capital contribution for all connection works including network extensions and dedicated connection assets, and will contribute a pro-rata amount towards any upstream network augmentation costs. Where a customer requests a standard of service that is higher than the basic connection service, the customer is required to pay all additional costs. Irrigators are treated similarly to all other customers requiring load connections but receive a range of allowances to be netted off their capital contribution for new connection, as per State Government policy. Developers requesting a new connection is to pay the direct costs associated with the subdivision for: • the provision of connection assets; • any network extension of the distribution network required to service the subdivision; and • any network augmentation of the shared distribution network.	A distributor will install on land being developed the 'basic standard infrastructure' applicable to that land at no charge to the customer. A capital contribution may be required from the following customers: • customers requiring infrastructure of a higher standard; • rural customers; • uneconomic loads; • customers requiring installation of a substation on their premises; • customer requiring to be supplied a high voltage rate; • customer with a parcel of land already connected necessitates re-development or augmentation in order to vary the capacity or connection; • customer requesting an electricity distributor to remove or relocate network assets	Access applicant or network user may be required to make a capital contributions towards the extension of connection equipment, or network system assets only if the network provider can demonstrate that the extension is not commercially viable without that capital contribution. The applicants include: • small individual network users; • large individual network users; • developers; and • generator users.

Jurisdiction	NSW	VIC	SA	WA	QLD	TAS	ACT	NT (PWC's revised NCCP)
Application of the policy *(continued)*	Where two or more new customers apply to a DNSP at the same time, or within close proximity of each other, for customer connection services and require some connection work in common with each other, the DNSP may: a) require that each of those new customers procure and fund so many of the those common works specified by the DNSP, or b) require that all of those new customers together procure and fund so many of those common works specified by the DNSP. All customers and DNSPs have access to a dispute resolution process to resolve any disputes. concerning capital contributions.							

Jurisdiction	NSW	VIC	SA	WA	QLD	TAS	ACT	NT (PWC's revised NCCP)
Payment			Customer can be asked for a maximum of 50 per cent contribution up front.	Customer is to pay the full forecast costs of any works to provide connection assets. Non-capital costs (costs incurred in providing the covered services including operating, maintenance and administrative costs) must be paid in full to the network provider. A contribution may be made: • upfront; or • by period financial payments (for contributions exceeding \$50 000) within a five year period and interest based on commercial rate to be negotiated. Augmentations of the network undertaken by the customer will transfer the ownership of the augmentation to Western Power without any payment being made to the customer.	If a customer/developer has the requirement to carry out works on the shared network or bring forward network works within the 'planning horizon' then the new customer/developer is required to fund all, or a share, of the cost. If the works is outside the 'planning horizon' the customer/developer will be required to fully fund the cost of the works. If the works fall within the 'planning horizon' then customer/developer will be required to pay the cost of advancement of the works. The cost of subdivision electrical reticulation is: • payable as a cash capital contribution if Ergon performs the work; or • if the developers organise for the work to be carried out subject to Ergon's technical and design requirements, then it is treated as a non-cash capital contribution.	All financial components of a customer capital contribution should be paid as a single up-front amount (or bank guarantee) prior to any works commencing with the exception of basic connection services (for which an invoice will be raised on completion of assessing the application.		Full payment required prior to connection (except for a limited number of circumstances for example gifted assets).

Jurisdiction	NSW	VIC	SA	WA	QLD	TAS	ACT	NT (PWC's revised NCCP)
Method of calculating capital contribution	Each electricity distributor has their own connection policy requirements.	CC = (IC – IR) + SF Where: • CC is the maximum amount of the customer's capital contribution; • IC is the amount of incremental cost in relation to the connection offer; • IR is the amount of incremental revenue in relation to the connection offer; • SF is the amount of any security fee under the connection offer as defined in clause 3.5 of Guideline 14 (see Prudential Requirement section below). The term over which the connection services will be provided is: • 30 years for domestic customers; and • 15 years for all other customers (unless the distributor fairly and reasonably determines that some other term is appropriate). New works and augmentation is to be provided to more than one customer (group extension) the distributor must offer a price to each of the customers using the same approach as specified above but adapted, having regard to equitable considerations.		The amount to include in the contribution is the full amount of the forecast costs. The contribution is based on the anticipated commercial life of the works up to a maximum of 15 years and using a rate of return most recently approved by the regulator for use in price control for the network. The network provider will determine the amount of the forecast costs to be allocated to the applicant for works in excess of the minimum practical works sought by an applicant. Headworks (enhancement required to the existing HV 3-phase distribution system that provides for an increase in capacity of that system) contribution, the value of which is based on a 25 year timeframe, the length between the relevant zone substation and the connection point, and the nominated capacity. The revenue from the covered services over a reasonable timeframe is deducted.	Energex: PV approach = PV (attributed costs of connection) minus PV (expected revenue less shared network costs). Calculation of capital contributions based on: • forecast regulated network tariffs applicable to relevant tariff class; • discount using regulated WACC converted to pre-tax; • 20 years discount period for both domestic and commercial customers; • 10 per cent reduction in the discounted network charges to account for the contribution to the shared network. Ergon: Similar approach to that of Energex (for example 20 years discount period). The main difference being that the contribution towards shared network costs varies as a percentage of the network charges in each zone: East Zone: 25%; West Zone: 80%; Mt Isa Zone: 2%.	Value of capital contribution to be calculated based on the optimally sized assets (least cost and technically acceptable assets).	Method for calculating the capital contribution depends to the circumstances. Rural connection: capital contribution calculated by subtracting from the costs incurred an amount equivalent to the average costs of connecting a residential customer in the Canberra urban area to the electricity network. Uneconomic loads: capital contribution charge payable may be an amount up to the full cost of the work. Substations on a customer's premises: space within the customer premises must provide space free of charge to allow installation of the substation. If the installation of the substation equipment is not necessary, calculation of the capital contribution will be done in accordance with the uneconomic installation approach above. Supply at a high voltage rate: capital contribution calculated by subtracting from the costs of installing the substation equipment the costs of installing any metering equipment which would otherwise have been provided as part of the basic 'standard' infrastructure.	PV approach = PV (attributed costs of connection) minus PV (expected revenue less shared network costs). Calculation of capital contributions based on: • discount using regulated WACC; • 15 years timeframe (or shorter under certain circumstances); • shared network costs calculated as 50 per cent of the expected revenue.

Jurisdiction	NSW	VIC	SA	WA	QLD	TAS	ACT	NT (PWC's revised NCCP)
Method of calculating capital contribution *(continued)*							Redevelopment of land: capital contribution charge equal to the full costs of that re-development or augmentation plus a reasonable profit margin. Removal or relocations: capital contribution based on the full costs plus a reasonable profit margin incurred in removing or relocating such assets.	
Cost sharing scheme	The IPART determinations sets out the following: Reimbursement schemes will be applicable to all rural customers and customers with large loads requesting new connections or augmentations and customers connecting at a later date who will use some or all of those assets. Reimbursing the original customer according to the extent to which new customers will utilise those assets. Total reimbursements are limited to the amount of the original capital contribution adjusted for inflation. The period is limited to 7 years. The amount of the reimbursement is to be calculated on the utilisation of the contributed assets. Endeavour Energy – 7 years	Cost sharing arrangements apply to domestic and small business customers who use less than 50 kVA. Sp Ausnet – 7.5 years Power Cor – 7 years.	ETSA Utilities 7 years. No charge for minor connections. Up to installation of a 1000KVa pad mounted transformer, costs of $252 200. 50 per cent upfront. Balance on completion. Contributions made by existing customers. New customers make contributions to offset costs borne by the existing customer. Contribution returned to current upstream customer within the 7 year period.	Customer and Westen Power may negotiate a rebate where a subsequent applicant associated with a different connection point benefits from the original works. Applies within 10 years of the original network user making the capital contribution if the contribution is less than or equal to $200 000. Where value of contribution is above $200 000 there is no time limit. If Western Power receives more than one application requiring the same works, then it may negotiate with the applicants to apportion the forecast costs of works between the applicants based on the relative use of the works sought be each applicant.	Energex: • 5 years and amounts less than $100 are not refundable. Ergon Energy: • 5 years; Allocation of individual customer share based on the extent of the customer's use of the network system: • residential and business LV<50kVA – all subsequent customers will make a cost sharing contribution; • businesses LV>50kVA, similar or larger size subsequent customers may be required to make a cost sharing contribution when existing HV line assets can be utilised. Subsequent residential and business LV<50kVA customers and subdivisions will not be required to contribute; • business HV or large business – cost sharing may apply in certain circumstances;	A customer that has made a customer capital contribution may be eligible for a refund of a portion of that contribution should another customer subsequently connect to the original connection.	If uneconomic, to the electricity distributor, then capital contribution costs would be payable the customer which may be an amount up to the full cost of the work.	Cost sharing will only apply to subsequent new Large Individual Network Users.

Jurisdiction	NSW	VIC	SA	WA	QLD	TAS	ACT	NT (PWC's revised NCCP)
Cost sharing scheme *(continued)*					• subdivision – cost sharing does not apply; • short term supplies – cost sharing may apply one certain circumstances. Individual shares are calculated as if the subsequent customer was part of the original group.			
Prudential requirement		Clause 3.5 of Guideline 14 specifies that if a distributor reasonably assesses that there is a risk that it may not earn the incremental revenue in relation to a connection, the network provider may request a 'security fee'. The security fee must not be greater than so much of that estimated incremental revenue for which the distributor fairly and reasonably assesses that risk as high and in no case may exceed the PV of the incremental costs the distributor will incur in undertaking any relevant new works and augmentation. The distributor must pay to a customer interest on the amount of a security at a rate and on terms and conditions as approved by the Commission. The distributor must rebate to the customer the amount of any security fee together with the interest earned on the amount of the security fee.	Clause 1.8.1(a)(iii) of the Electricity Distribution Code provides that a distributor may request a security deposit for the purpose of securing the costs for connection assets, extensions or augmentation in accordance with the Electricity Distribution Determination on terms agreed with that customer.			Prudential requirements may be required.		