



NETWORK PRICING PRINCIPLES

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1. INTRODUCTION AND REGULATORY FRAMEWORK

1.1 BACKGROUND

This Pricing Principles paper is presented for the information of current and future users of the network¹ facilities of the Power and Water Corporation (Power and Water Networks). The paper provides a statement of the principles that Power and Water Networks will follow in developing network tariffs in the regulated market for network access and services from 1 July 2006.

Regulated network access tariffs only apply to network users, as opposed to end-users. Whether, and how, network users charge their customers (end-users) for network usage is a matter for the network user.

Power and Water Networks is a ring-fenced electricity distribution business within the Power and Water Corporation (Power and Water). Power and Water is a vertically integrated utility and is owned by the Northern Territory (NT) Government. Power and Water was established by the *Power and Water Corporation Act 2002* and was formed on 1 July 2002.

Power and Water Networks has a significant investment in the electrical network and assets. The business requires that these assets and other resources be efficiently and effectively managed to maximise value to customers, employees, and shareholders. This involves ensuring that risks are managed and that Power and Water Networks delivers network services to meet customer requirements in a safe, reliable and cost-effective manner.

1.2 PURPOSE

The economic regulatory arrangements in the Northern Territory (NT) governed by the Utilities Commission (UC)² require Power and Water Networks to publish a pricing principles and methods statement that discloses pricing information relating to standard network access services.

This Network Pricing Principles document covers:

- information on Power and Water Networks and the environment in which we operate, including regulatory framework;
- network pricing objectives;
- cost drivers;
- cost allocation principles;
- application of network tariffs;

¹ Electricity networks involve the poles and wires that transport electricity between generators and end-use consumers.

² The Utilities Commission, established under the *Utilities Commission Act 2000*.

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- network tariff structures;
 - pricing approaches for non-standard network access services; and
 - medium term pricing strategies.

1.3 NORTHERN TERRITORY ELECTRICITY INDUSTRY

Generation and electricity retailing are open to competition in the contestable electricity sector in the NT. This is supported by the efficient regulation and transparent pricing of monopoly network services.

In April 2000, the NT Government commenced a process of reform of the NT's electricity supply industry, whereby Power and Water's effective monopoly over the supply of electricity to end-users ceased, and competition among generators and retailers was phased in by:

- allowing certain end-users to choose their power supplier;
- licensing new suppliers to enter the market; and
- facilitating third-party access to Power and Water's network infrastructure.

Electricity networks are considered to be 'natural monopolies' in that they involve facilities that cannot be economically duplicated. For this reason, competing generation and retail organisations are able to access Power and Water's networks for the delivery of electricity from generation plants to end-users once they enter into an access agreement and pay the regulated network charge.

Power and Water is obligated to use all reasonable endeavours to accommodate the requirements of those seeking access to the electricity network and to provide access to available spare network capacity and new capacity on a non-discriminatory basis.

The NT's *Electricity Networks (Third Party Access) Act 2000* (the Act), which commenced on 1 April 2000, sets up the framework for access by third parties to electricity networks within the NT. The *Electricity Networks (Third Party Access) Code* (the Code) is set out in the Schedule to the Act.

Power and Water Networks provides network access services in both regulated and non-regulated networks, however the Network Pricing Principles only relate to the provision of services in regulated networks.

1.4 OUR BUSINESS

Power and Water Networks' core business is the distribution of electricity to customers in specified geographical areas of the NT. These include Darwin, Katherine, Tennant Creek and Alice Springs.

Power and Water established a Networks business unit to strategically manage the overall commercial and technical performance of the electricity distribution network assets. The Power and Water Networks business unit has a number of key focus

areas aligned with best practice in electricity network asset management. These areas are network planning and development, project design and management, risk management, reliability management, engineering standards, environmental, safety, network operations and maintenance management.

Power and Water Networks' distribution network and operating environment is vastly different to most other Australian and international electricity distribution businesses.

Some key statistics relating to the electricity distribution network are summarised below:

- ❑ Over 8 000 kilometres of line and in excess of 36 000 poles. Almost 74% of the network is an overhead construction type;
- ❑ Our network has a large number of asset types and operates at various voltage levels of 132 kV, 66 kV, 33 kV, 22 kV, 11 kV and 415/240 V. Customers are connected at voltage levels ranging from 66 000 volts down to low voltage. Most customers are primarily supplied at low voltage;
- ❑ The majority of our rural distribution network is radial in nature, with most areas only able to be supplied from one source. There is little opportunity for interconnection with other circuits for security and continuation of supply when performing maintenance activities or in the event of unplanned outages. Some customers are located over 200 kilometres by line length from the nearest zone substation.

Some of the distinctive characteristics of Power and Water Networks' operating environment are outlined below:

- ❑ We are the only distribution business in the NT with 8 479 network circuit kilometres of line, serving over 68 000 customers;
- ❑ The scale of the regional coverage necessitates extra equipment and investment per customer to ensure that all customers receive a reliable supply of electricity;
- ❑ We operate in a high cost environment. The distribution business has a low density of customers per asset length (on average 8.1 customers per kilometre of distribution line) and average consumption per customer of 23 MWh;
- ❑ Growth in demand varies across the service territory. The northern region is the fastest growing area in the NT. The central and southern regions have moderate to stagnant growth and are exposed to large step load connections and disconnections, which make future network capacity planning difficult;
- ❑ Our region is subject to a variety of climatic conditions. For example, Darwin has the highest incidence of lightning in Australia that results in more frequent interruptions and increased wear and tear on equipment;
- ❑ We supply into areas with significantly high levels of UV radiation, temperature

and humidity. This issue impacts significantly on the life of distribution assets, maintenance and productivity;

- ❑ Materials and stores costs are considerably higher for Power and Water Networks due to higher transport costs associated with its remote location, government purchasing requirements and small order size;
- ❑ Compared to other utilities, Power and Water Networks' vegetation trimming operations are more frequent due to high rates of vegetation growth in the Darwin-Katherine areas;
- ❑ The Darwin area is home to a particularly voracious genus of termite, *Mastotermes Darwiniensis*. This does not occur in southern states, and adds to operational and maintenance costs due to its rapid destructive effects on materials, especially insulation on underground wiring;
- ❑ The northern region is periodically affected by large numbers of bats which cause numerous outages;
- ❑ Periodic cyclonic conditions in the NT cause damage to distribution equipment. The incidence of wind damage in the NT is greater because of the frequency of storms. Storms with 100 kilometre per hour winds are a once-a-year event in southern states but occur on an average of 12 times per year in the NT; and
- ❑ Many areas of Power Networks' northern region are characterised by soil types containing porcelainite that has very high earth resistivity. This results in requirements for additional expense in substation earthing and earth wire runs for transmission lines and additional operation and maintenance costs.

The very unique and distinctive features of our network and operating environment impact on capital expenditure, operating expenditure and service delivery requirements. These features result in a distribution network with relatively higher capital requirements, higher operating and maintenance costs per customer and per delivered energy, and greater susceptibility to supply interruption and faults. To preserve and improve the performance of the network it is necessary to make significant investments.

Power and Water Networks is committed to continually reviewing the reliability of our network in all parts of our supply area, with a view to utilising available technologies to provide the maximum reliability possible, given these constraints.

1.5 REGULATORY FRAMEWORK

Within the NT, network service providers in declared (regulated) network areas, operate and manage their networks under the *Electricity Reform Act 2000* and *Electricity Networks (Third Party Access) Act 2000* (the Act) and regulations under the Acts, and are subject to the provisions of the Code.

Four separate networks have been prescribed as being subject to regulation under

the Act. These are Darwin, Katherine, Alice Springs and Tennant Creek. Darwin and Katherine are combined as this system is interconnected by the Darwin-Katherine Transmission Line (DKTL).

As electricity distribution is a monopoly service, the UC is the jurisdictional regulator for the approval of prices for network service providers in the NT.

Price control in the second regulatory period has changed from the 'Revenue Cap' approach used in the first regulatory period to a 'Price Cap' approach (based on the calculation of each year's weighted average network access tariffs).

The UC, in accordance with the Code requirements, determines the maximum average price (the Price Cap) that Power and Water Networks can charge during a financial year.³ Power and Water Networks charge network access tariffs approved by the UC to networks users for use by their customers (end-users) of Power and Water's networks.

The UC has also introduced an S Factor that sets a constraint on the annual increase in each individual network user's weighted average network tariff. Any changes to Network prices to be implemented by Power and Water Networks must be within the Price Cap and S Factor constraints. As part of the annual price setting process, Power and Water Networks provides the UC with all supporting calculations and information necessary to demonstrate compliance with all of the regulatory requirements.

Clause 75 of the Code notes that *"the network provider is to be responsible for establishing the pricing structure that best gives effect to the [Code's pricing] principles"* and sets out criteria for establishing price structure and elements.

It is the translation of the determined Price Cap into schedules of tariffs and charges to be paid by each network user that forms the subject of this Pricing Principles paper. The network user can be expected to pass on these charges to its customers (end-users). Whether, and how, network users charge their customers for network usage is a matter for the network user, and not Power and Water Networks.

1.6 CHANGES TO PRICING PRINCIPLES

Since the 2000 Networks Pricing Principles in the first regulatory period, Power and Water Networks has incorporated the following changes into these Pricing Principles:

- separating the Demand Charge into Maximum Demand and Capacity components for network user's customers with consumption above 750 MWh per year;
- combining the Northern Grid and DKTL Schedule of Charges for easier administration; and

³ The *Electricity Networks (Third Party Access) Code* sets out the principles.

- the incorporation of the arrangements relating to non-standard network access services in the NT.

There have been no substantial changes to the previous network tariff structure.

2. DEVELOPING THE STRUCTURE OF NETWORK TARIFFS

2.1 NETWORK PRICING OBJECTIVES

Power and Water Network's intention is to ensure that network users are charged in a manner that is understandable, practical, efficient and equitable, and which reflects their usage and benefit from the network.

To this end, Power and Water Networks is guided by the network pricing objectives laid down in clause 74 of the Code. Power and Water Networks' interpretation of the Code's pricing objectives is as follows:

- ❑ Cost reflective signals - there should be appropriate signalling to network users of their impact on existing and future network capacity and costs. Prices should reflect underlying cost drivers and provide appropriate signals for load management.
- ❑ Revenue recovery - network prices need to provide a commercially sustainable regulated revenue stream to ensure business viability by recovering efficient operating costs and providing an adequate rate of return to encourage ongoing efficient investment in network infrastructure.
- ❑ Simplicity - prices should be straightforward in application and readily understood by network users.
- ❑ Stability - prices should remain stable over time to permit network users to make informed investment decisions. Network users should not be subject to price shocks that distort consumption of network access services.
- ❑ Equity - prices should be equitable for network users. Generally, this means that prices reflect the user's utilisation of the existing network.
- ❑ Subsidy free - prices should be subsidy free.

It is recognised that these objectives may conflict with each other to some extent. The overall aim is to produce a tariff schedule that adequately reflects the above objectives while incorporating a reasonable balance between conflicting objectives.

2.2 NETWORK COST DRIVERS

In principle, costs associated with the provision of electricity networks are driven by factors relating to -

- the existence of an end-user and connection, largely independent of the capacity required or used, and largely independent of the energy consumed;

- the peak or maximum capacity required, and the maximum capacity used by the end-user, largely independent of the duration of the load, and hence largely independent of the energy consumed; and
- the energy consumed.

There can often be a mixture of elements driving the costs of individual assets or services. For example, in the operation of a network, a major zone substation and its connecting higher voltage supply lines become necessary in a location as load or load density increases. Part of this cost will be determined by the magnitude of the load to be serviced, but part of the cost of establishing such a facility is independent of the capacity of the transformers installed, and hence independent of the demand it can service.

Similarly, when high and low voltage mains are built or laid to connect to individual end-users, part of the cost (eg for the poles themselves, or for the trench and pillars etc) is largely independent of the size and hence capacity of the wires or cables. Part of the cost varies according to the capacity of the transformers or cables so that it is difficult to identify a single cost driver.

The considerations outlined above lead to the situation where costs are fixed, or depend on capacity required or used and the effective average rate, on a cents per kWh basis, decreases as greater utilisation is made of the installed equipment. The higher the utilisation "load factor", the lower the effective average rate.

The extent of the network depends on the location of associated connections for the generators and consumers, while the capacity of the network is determined by the load that is to be transmitted through the equipment concerned. Although load changes according to cycles with daily, weekly, seasonal and annual variations, it is the maximum or peak capacity required (the Contract Maximum Demand) and the maximum or peak demand taken, which drives much of the cost of overhead and underground mains and cables, together with the size, capacity and cost of substations and associated transformers.

2.3 COST ALLOCATION PRINCIPLES

A separate issue is how to distribute costs among network users in the most efficient or least distortionary way.

It is the view of Power and Water Networks that network charges should reflect only the costs of the network upstream of any end-user, so that end-users supplied at high voltage into their internal local distribution systems⁴ should not have to bear costs related to the low-voltage system.

Power and Water Networks' preferred cost allocation principle is to use a Fully Distributed Cost model (FDC). This allocates costs and hence revenue requirements

⁴ For example, inside the boundaries of a Defence establishment, dispersed mining operation or Hospital complex.

for different customer classes according to their level of connection in the system, and hence, only reflect their use of the upstream network elements involved in the delivery of electricity to their point of connection.

Network system provision is capital intensive, with much of the cost related to prior investment in system capacity, while the cost directly related to energy throughput is relatively small. Power and Water Networks recognises that, in order to create a fair and equitable tariff, there must be a method of recovering the costs relating to existing assets by taking into account demand on these assets, bearing in mind equity considerations for all users, and at the same time, signalling the cost associated with future system augmentation.

Therefore, the results deriving directly from the FDC model will be modified:

- where necessary to prevent price shocks between regulatory and pricing periods;
- to achieve some graduation through and between end-user size ranges; and
- to reflect network users' desire for a tariff structure reflecting electricity usage rather than a formulation with large fixed charges.

Power and Water Network's allocation of shared costs prescribed to network access services are based on Power and Water's *Accounting and Cost Allocation Procedures*, as approved by the UC and published on their website.

2.4 APPLICATION OF NETWORK TARIFFS

Tariffs which reflect the requirements of customers (end-users) and their characteristic demand behaviour associated with network utilisation will give the appropriate cost of supply signals to users of the network. This assists Power and Water Networks in matching end-user requirements and in maximising the use of its infrastructure assets.

Declining scale demand and energy charges will be applied in reflection of the lesser dependence of large users on the low voltage network infrastructure.

The structured network price will be applied to network users' (Retailers) as their customers (end-users) progressively become contestable. The contestable customers, who are generally large and sophisticated organisations, represent a significant proportion of the total electricity market, and the demand and consumption characteristics outlined above are observable through sophisticated metering systems. Network tariffs will be charged directly to Retailers, and may be re-bundled in the tariff actually negotiated between the Retailers and their customers' (end-users) .

The proposed structured tariffs require measurement of end-users' time and demand pattern elements. These elements are not measured or recorded in the vast majority of non-contestable customer installations. As this information is not available for these smaller end-users, the network tariffs will reflect the consumption information available, and may require pricing for these end-users to

be less directly formulated. The Network tariff for these end-users may reflect their demand by use of energy consumption as a surrogate for direct demand measurement.

As **Table 1** below briefly shows, there is a relationship between the characteristics or behaviour of end-users, which determines the types of service required, the effect it has on infrastructure and cost of supply, and how these are reflected in the pricing components of network tariffs.

Table 1 – Impacts on infrastructure requirements and the cost of supply to end-user

End-user characteristics/ Behaviour	What this implies for infrastructure and cost of supply	Network Response - price signalling mechanism
End-user connection to system – end-users connection to Network	Administrative, metering and connection assets (fuses, switchgear etc)	Daily fixed Charge
Demand – end-users require a level of capacity for use.	Leads to increase in Capacity – some impact on O&M costs as more assets added to the network.	Monthly Demand Charge and recovered partly through Daily Fixed Charge
Demand Pattern/Profile – each end-user has their own specific profile over periods of time reflecting levels of demand.	Impacts on Capacity: <ul style="list-style-type: none"> - Maximum rate of usage provided for in facilities - Under-utilisation - Partly utilised 	Monthly Demand Charge to recover cost of installing sufficient capacity to meet the peak demand.
Power Factor – each end-user imposes power factor requirements on Network Systems	Leads to increase/ decrease in Capacity provided – depending on how 'good' a end-users' power factor is.	Demand charge expressed in \$/kVA/month rather than \$/kW/month
Energy – end-users measurable usage	No direct impact on infrastructure cost – energy charge mainly used to 'soften' fixed capacity charges and recovering some O&M	Energy Charge ¢/kWh – delivered through the meter at end-users premises.
Small End-users – domestic & commercial	Connection assets, assets to provide capacity, O&M	For smaller end-users – Daily Fixed Charge plus Energy Charge – to replace Demand charge where demand is unmetered.

2.5 NETWORK TARIFF STRUCTURE

There are two forms of network tariffs and charges, as defined by the Code⁵:

- those applying to **standard** network access services (network access services for which tariffs are published in the schedule of approved tariffs); and
- those that are instead negotiated between the network provider and an access seeker for new or **non-standard** network access services (“negotiated tariffs”).

2.5.1 STANDARD NETWORK ACCESS SERVICES

Any pricing regime that aims to be “cost reflective” should contain elements that relate to the capacity required or demand taken. It should also exhibit a declining average cost per unit as both size and utilisation increases.

Power and Water Networks considers that a tariff for network services, should explicitly reflect and signal costs of capacity required for supply, particularly for large and sophisticated end-users.

These costs are best reflected into tariffs through:

1. A System Availability Charge (Fixed Charge) per connection point, generally on a cents per day or dollars per month basis;
2. A charge related to capacity required or used, generally based on contracted or measured maximum kilo-Watts (kW) or, more properly kilo-Volt-Amperes (kVA), generally on a monthly or annual basis; and
3. A charge related to energy used, generally based on kilo-Watt-hours, as explained below.

1. SYSTEM AVAILABILITY CHARGE (FIXED CHARGE)

The System Availability Charge recognises the end-user connection and metering requirements provided by a network system, and can reflect the cost of supply through the network. The System Availability Charge signals allocative efficiency to network users by providing the means of recognising common benefits to all users as a result of a network system’s existence, and the associated costs of making this supply “available”. By providing the investment in supply availability, a network is telling network users there is a cost associated with connecting to a power source.

⁵ *Electricity Networks (Third Party Access) Code* - clause 73.

2. DEMAND CHARGE

A demand charge signals the cost of supplying a particular level of demand. The demand charge reflects the cost of capacity utilisation as well as to distinguish differences in demand for various peak periods. Therefore, the demand charge recovers the cost of installing a certain level of system capacity to meet demand whilst also recovering some operational and maintenance component related to the upkeep of this system. Charging with a 'demand' component recognises that different end-users impact differently on the system and therefore, large end-users whose supply would be at High Voltage (HV) will not contribute to the cost of providing for Low Voltage (LV) end-users.

Power and Water Networks is able to levy two separate charges to recover demand-related costs: a Maximum Demand Charge and a Capacity Charge. The Maximum Demand Charge is the primary method used to recover the system capacity related costs required to meet demand. However, a Capacity Charge may be levied in cases where load factor is insufficient to provide a reasonable return on system assets.

The **Maximum Demand Charge** is calculated using the actual demand that is recorded each month. The charge is levied on the basis that users who place greater pressure on the system should incur higher charges. Network expansion becomes necessary where there is a likelihood of demand exceeding available capacity.

While this demand fluctuates over time, the critical supply level to be provided is the aggregated network usage during peak times. Co-incident peak demand is therefore the driving factor behind system augmentation. In this context, network users should be charged according to their customers' contribution to this threshold demand level. In a practical sense, while there are limitations associated with determining an individual end-user's contribution to co-incident peak demand, the maximum demands of those end-users are an appropriate proxy. Accordingly, the demand charge levied is determined by the relevant end-user's peak demand recorded in any half-hour period during the month.

However, one drawback of the maximum demand charge is that it fails to assign an adequate share of costs associated with system augmentations to end-users with low load factors who impose maximum demands on the system at infrequent intervals. The load factor is the ratio of the average consumption to peak demand, and measures the variability of an end-user's consumption. A low ratio, for example less than 0.4, suggests a variable consumption pattern while those closer to unity (1.0) identify more constant energy usage.

The **Capacity Charge** is calculated using either the contracted maximum demand, the annual maximum demand in the most recent 12-month period prior to the setting of prices or a demand agreed between Power and Water

Networks and the network user. A Capacity Charge is similar to a Maximum Demand Charge but more effectively takes into account the impact that low load factor end-users have on system augmentation. It sends signals that reducing consumption variability can reduce network charges and also signals that network users should not demand more capacity than required. In this way, a Capacity Charge also recovers costs relating to 'standby' connections. The Capacity Charge, like the Maximum Demand Charge, applies to network users customers (end-user) with consumption above 750 000 kWhs per annum only.

Smaller end-users do not have either a Capacity Charge or a Maximum Demand Charge applied, as metering for these end-users does not provide for the measurement of demand.

3. ENERGY CHARGE

The Energy Charge attempts to reflect system utilisation and usage. To a large extent however, energy does not have a bearing on the infrastructure costs of supplying a particular load, because system infrastructure is largely driven by demand. Energy output is the direct "result" of having a particular demand requirement. Hence, the energy charge attempts to recover a part of the cost of supplying capacity as well as the O&M associated with that. The energy charge is a way of approximating demand for lower-end end-users where sophisticated metering is not installed. This gives network users equitable pricing signals because they respond to the "user pays" concept intrinsic in such a charge.

These charges should distinguish between usage during peak periods, where load requirements are more likely to drive network augmentation, compared with usage during off-peak periods, where network capacity may be less utilised.

Power and Water Networks will determine the balance between amounts recovered from the System Availability Charge, the Maximum Demand Charge, the Capacity Charge and the Energy Charge on a reasonable basis that is consistent with the relevant pricing objectives provided in the Code.

2.5.2 NON-STANDARD NETWORK ACCESS SERVICES

Where services or circumstances differ from the standard network access services, clause 75 of the Code allows for commercial negotiations between the network user and the network provider to occur.

Non-standard network access services offered by Power and Water Networks include:

□ **Embedded Generation**

An Embedded Generator is a generator or co-generator that is connected to the distribution network instead of the transmission network. These connections are site-specific and often require additional embedded generator protection system upgrades. Due to the specific nature of embedded generator connections it is difficult to implement a standard pricing structure for embedded generation. As such, it is Power and Water Network's policy to negotiate embedded generation agreements on a case-by-case basis. Refer to Attachment A for Power and Water Network's Framework for Negotiating Embedded Generation Agreements, as approved by the UC.

□ **Discounted Network Tariffs**

Network tariffs may be negotiated below the approved reference tariffs in the following limited number of situations:

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

Refer to Attachment B for the Utilities Commission's Framework for Negotiating Discounted Network Tariffs.

□ **Capital Contributions**

Where the granting of access to the network requires the provision of connection or system extension, a network access applicant or network user may be required to make a capital contribution in respect of the capital investment associated with the designing, constructing, installing and commissioning of connection or system equipment where the network provider can demonstrate that the extension would not be commercially viable without that contribution. Refer to Attachment C for Power and Water Network's Capital Contributions Policy, as approved by the UC.

3. MEDIUM TERM STRATEGIES FOR NETWORK TARIFFS

The medium term network pricing strategy outlined below sets out in very broad terms the direction for network prices for the current regulatory period. The pricing strategy may be subject to change.

For the remainder of the second regulatory control period, the UC has approved the weighted average of network access tariffs (price cap) to be escalated year by year using a CPI-X price path (based on relative efficiency improvements that are reasonably expected to be achieved).

The network price structure will be reviewed from time to time to determine if different price structures are able to promote a more efficient use of the network and to send the appropriate demand signals. This review may include:

- a re-balance of the proportion of charges between the fixed, demand and energy components; and
- a re-balance of the proportion of charges between the capacity and maximum demand components.

Currently retail contestability has been introduced for Tranche 1 to 4 customers (contestable customers with a minimum annual electricity consumption of 750,000 kWh per site). Contestability for Tranche 5 customers (customers with annual electricity consumption of between 750,00 and 160,000 kWh per site) is scheduled to commence from 1 April 2008, with full retail contestability (customers with annual electricity consumption below 160,000 kWh per site) expected by 1 April 2010.

If Tranche 5 contestability is introduced during this regulatory period and metering options are changed to allow for greater detail about customer usage, prices applying to these currently non-contestable customers will be reviewed. The review will be undertaken to determine if a different price structure is more appropriate to send additional signals on the costs associated with the provision of these network services.

4. GLOSSARY

Access Agreement	A contract or agreement for the provision of network access services entered into between a network provider and a network user under the Code.
Capital Contributions	A non-refundable financial contribution made – or the equivalent in the form of contributed assets – by a Network User to Power and Water (Networks) towards the cost of designing, constructing, installing and commissioning connection equipment or network system assets to provide new or upgraded Network Access Services to a Network User.
Code	The <i>Electricity Networks (Third Party Access) Code</i> . The Code regulates third party access to electricity networks.
Co-incident Peak Demand	The demand on an electrical system as a result of the summation of each individual end-user's demand, at a specific point in time. This is different from the numerical sum of all end-users' maximum demand because of diversity in the times at which each end-user reaches their maximum demand.
Contestable Customer	Customers who can choose their electricity retail supplier are called contestable customers. Qualification depends on the annual electricity consumption at a single site during a consecutive 12-month period after July 1998.
Contracted Maximum Demand	In respect of a connection point, the maximum level at which electricity may be transferred from the electricity network at the connection point (expressed in kW or kVA) specified in the access agreement in respect of the connection point (if any).
CPI	Consumer Price Index
Demand	Measurement of end-user peak load taken as the average load over a half-hour period measured in kW or kVA.
DKTL	Darwin to Katherine Transmission Line
End-user	A person who is a final consumer of the electricity from the electricity network; usually a Retailer's customer.

Electrical Energy	The ability of the electric current to do work. Measured in kilowatt-hours.
Embedded Generation	Generator or co-generator that is connected to the distribution network instead of the transmission network.
Generator User	A person who has been granted access to the electricity network by the network provider and who supplies electricity into the electricity network at an entry point.
kV	kV = 1,000 Volts.
kVA	kVA = 1,000 Volt-Ampere - a measure of the apparent power flow that determines the amount of capacity required to supply an end-user's load
kW	kW = 1,000 Watts - a measure of the real power being consumed as opposed to kVA.
Load Factor	Measure of the percentage of time a load is used in any given period. Loads used 24 hours per day, 7 days a week have a load factor of 1 or 100%.
Load User	A person who has been granted access to the electricity network by the network provider and who takes electricity from the electricity network at an exit point.
LRMC	Long Run Marginal Cost
Marginal Cost	The cost of increasing the quantity produced by one unit.
Maximum Demand	The greatest of all demands of the load that has occurred within a specified period of time.
Network Access Services	The services provided to network users by a network provider, whether in the form of connection services or use of network services.
Network Charges	The charges applied by the network business for the use of the distribution and transmission system in the supply of electricity.
Network Provider	The person who provides or is in a position to provide the network access services in respect of a particular electricity network.

Network User	A person, whether a load user or a generator user, who has been granted access to the electricity network by the network provider in order to transport electrical energy to or from a particular point.
Non Contestable	Any customer other than a contestable customer.
Non Regulated Networks	An area within the Northern Territory that is not Regulated but where the electricity assets are owned and operated by Power and Water.
Power Factor	A measure of the real power in kW divided by the apparent power in kVA. The real power corresponds to the work done or heat generated. Optimum power factor is unity ie 1.0.
Price Cap	The maximum average price determined by the regulator to be charged during a financial year, for all regulated network access services by the network provider.
Regulated Networks	An area within the NT that is subject to regulation under the Code.
Regulatory Control Period	The period between major price reviews during which time the methodology used in setting prices is held constant; the first regulatory control period is the period between commencement of the Code and 30 June 2004 and the second and subsequent regulatory control periods are the five yearly periods commencing 1 July 2004.
Ring-Fenced	The network provider must keep the business of operating the electricity network separate from any other business conducted by the network provider or any associate or related body corporate of the network provider.
SRMC	Short Run Marginal Cost
Standard Network Access Services	The network access services for which network tariffs are published in respect of a financial year.
Standby	Support service that is available, as needed, to supplement a consumer, a utility system, or to another utility if a schedule or an agreement authorises the transaction. The service is not regularly used.

UC	Utilities Commission – the NT’s independent industry regulator, established to oversee those industries declared to be regulated industries.
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FRAMEWORK FOR NEGOTIATING EMBEDDED GENERATION AGREEMENTS

OCTOBER 2005

Power and Water Corporation
GPO Box 1921, Darwin Northern Territory 0801

Preamble

An Embedded Generator is a generator or co-generator that is connected to the distribution network instead of the transmission network.

This framework for negotiating Embedded Generation Agreements draws upon the Power and Water Corporation's Network Pricing Principles, which have been approved under the *Electricity Networks (Third Party Access) Code* (the Code) by the Utilities Commission (UC). The Code has identified cost reflective signals, revenue recovery, simplicity, stability, equity, and subsidy free prices as the key objectives in network pricing.

These principles ensure that the price cap is recovered from users in a manner that is understandable, practical, efficient and equitable, and which reflects their usage and benefit from the network.

The Network Pricing Principles have been used to set the approved tariff and schedule for standard network access services where the network capacity, pattern and level of customer demand, and security of service are of appropriate standard, well known, and easily measured.

The standard tariffs are not directly applicable to a customer where their energy carriage differs markedly from transporting its full requirements through the network.

Framework for Negotiating Agreements

This Framework provides guidelines for applying the existing Network Pricing Principles to non-standard site-specific network service situations.

The negotiations for agreements for network services will be between Power and Water Networks and the party(s) seeking network access and service (the embedded generator and/or its customer's retailer). Negotiations will be undertaken on a case-by-case basis.

If there is a connection to the network, network service charges will be necessary to recover the cost of providing the service. There will only be no network service charges in cases where there is no connection to the network.

Power and Water Networks seeks to recover a share of the network price cap determined by the regulator from such non-standard site-specific network service situations that is efficient and equitable and which reflects the usage of and benefit from the network.

In particular, the parties to the negotiations will take into account the following:

1. the required type of network services, including the duration, timing and immediacy of those services, import capacity and/or export capacity;
2. the network costs associated with the provision of these network access services, including capital, operating and maintenance costs;
3. the network extension and/or augmentation that may be necessary as a result; and
4. the future costs of network augmentation that may be avoided, reduced, or deferred by virtue of the existing network service assets no longer being fully required for embedded customers and therefore available for other purposes.



UTILITIES COMMISSION'S FRAMEWORK FOR NEGOTIATING DISCOUNTED NETWORK TARIFFS

OCTOBER 2005

Power and Water Corporation
GPO Box 1921, Darwin Northern Territory 0801

Background

1. The Framework set out in this document is the Commission's elaboration of principles and processes broadly agreed at a round-table of interested parties chaired by the Commission on Friday, 17 May 2002.
2. The Framework is drafted on the basis that the access applicant will be a retailer. In cases where the access applicant is a generator or an end-use customer rather than a retailer, the Framework's references to a retailer should be read where applicable as references to the generator or the end-use customer.

Principles

3. The Framework is based on the following principles:
 - (a) the nature of the negotiation process – and the respective rights of the various parties in that process – should be known to all parties in advance of any negotiations (transparency principle);
 - (b) any discount negotiated below the approved reference tariffs should be based on a common approach for all network users consistent with clause 74(b) of the *Electricity Networks (Third Party Access) Code* (non-discrimination principle);
 - (c) any discount negotiated below the approved reference tariffs – and the negotiation process involved – should not discriminate between competitors in upstream and downstream markets (competitive neutrality principle);
 - (d) no other network user should be worse off as a result of any discount negotiated below the approved reference tariffs than would be the case were the discount not given (ACCC Guideline 2¹); and

¹ ACCC, *Guidelines for the Negotiation of Discounted Transmission Charges*, May 2002.

- (e) the Framework should discourage excessive or frivolous applications for discounts.

Eligibility for discounts

4. Network tariffs may be negotiated below the approved reference tariffs in the following limited number of situations:
 - (a) where below-standard network access services sought by a particular end-use customer may result in cost savings to the network provider; or
 - (b) where there is a genuine threat of network "by-pass" by a particular end-use customer – either in whole or in part.
5. The network provider will advise retailers of the eligibility criteria to be met by end-use customers seeking a discount against the network reference tariffs. These criteria will elaborate on (a) and (b) in paragraph 4 above. The Commission's requirements of the network provider are that:
 - (a) in respect of 4(a), the network provider is to publish a general indication of the service-level basis of the network provider's costs factored into the regulated network revenue cap; and
 - (b) in respect of 4(b) above, the threat of bypass is to be independently verifiable, with the bypass scenario being shown to be technically and commercially credible.
6. The retailer is to document an end-use customer's claim of eligibility against the criteria nominated by the network provider under paragraph 5. The retailer will be responsible for the accuracy and completeness of the documentation so provided.
7. The network provider will be ultimately responsible for establishing a particular end-use customer's eligibility for a discount in terms of paragraph 4 above.

Negotiating process

8. Where a retailer applies to the network provider for a discount on an end-use customer's behalf, the network provider is to treat such an application as commercial-in-confidence.
9. Where more than one retailer applies for a discount on a particular end-use customer's behalf, the network provider is to negotiate with each retailer separately. Different retailers may seek different standards of service on the

end-use customer's behalf. The network provider must negotiate with each retailer on a non-discriminatory basis.

Quantum and period of discount

10. If an end-use customer meets the eligibility criteria set by the network provider (under paragraph 5 above), the network provider is ultimately responsible for establishing the quantum of any discount in view of the end-use customer's circumstances *and* the standards of service being sought on the end-use customer's behalf.
11. In negotiating the quantum and period of a discount, the network provider is to negotiate with the retailer in terms of the underlying/inherent merits of the case for a discount given the end-use customer's circumstances and the standards of service being sought on the end-use customer's behalf, and not on the basis of the bargaining strength of – or the circumstances of – the retailer.
12. In respect of 4(a) situations, the discount to apply is to be no more than the cost savings to the network provider as a direct result of the below-standard level of network access services as measured against the network provider's costs factored into the regulated network revenue cap.
13. In respect of 4(b) situations, the discount to apply is to be no larger, nor for longer, than necessary to prevent the resultant network access charge altering the end-use customer's behaviour to the point of adopting the (complete or partial) bypass alternative (ACCC Guideline 1). The retailer should, as part of the documentation provided, nominate the minimum discount required for this purpose.

Role of the regulator

14. After the end of the regulatory year, the network provider must supply details of all discounts negotiated in that year.
15. If, in the opinion of the Commission, the requirements on the network provider under this Framework have not been met in full or in part (especially in relation, but not limited, to paragraphs 5(a) and (b), 12 and 13), the network will ensure that the network provider – rather than other network users – absorbs in full, the costs of any discounts that were in the opinion of the Commission unwarranted. The network provider may, however, seek to recover these costs from the retailer or end-use customer concerned where the network provider has acted in good faith on information provided by

these other parties when determining a discount that is later disallowed by the Commission.



CAPITAL CONTRIBUTIONS POLICY

29 APRIL 2004

Power and Water Corporation
GPO Box 1921, Darwin Northern Territory 0801

PowerWater

Capital Contributions

Ref No: Network Policy NP 036 **File Number:**
Date of Issue: **New/Updated:** New

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2. Scope

This Capital Contributions Policy applies to any new or upgraded Network Access Service required by Network Users.

3. Introduction

This Policy sets out the principles Power and Water (Networks) will apply in levying a Capital Contribution on a Network User for any new or upgraded Network Access Service.

This Policy is developed in accordance with the Code and the Act and is intended to be referred to in all Access Agreements entered into between Power and Water (Networks) and a Network User.

The Code only applies in Regulated Areas. While this Policy applies in both Regulated Areas and Unregulated Areas and extends definitions of terms used in the Code to Unregulated Areas, nothing in this Policy requires Power and Water (Networks) to comply with the requirements of the Code in Unregulated Areas.

This Policy has also been developed with regard for the Planning Act as it relates to developer contributions.

4. Relationship to Access Agreements

This Policy should be referenced in all future Access Agreements entered into between Power and Water (Networks) and a Network User in order to set out the standard terms and conditions for Power and Water (Networks) providing new, or upgrading existing, Network Access Services to Network Users from its Connection Assets and Network System Assets.

The Policy will also apply to Network Users that do not have an Access Agreement with Power and Water (Networks).

5. Further Information

For further information about this Policy, please contact:

General Manager Power Networks
Power and Water Corporation
PO Box 37471
Winnellie NT 0821
(08) 8924 5400 (08) 8924 5406

6. Definitions

Access Agreement has the meaning set out in the Code.

Access Application has the meaning set out in the Code.

Access Offer has the meaning set out in the Code.

Accredited Service Provider is a service provider who has been accredited by Power and Water (Networks) in accordance with its relevant policies to design, construct, install and commission Connection Assets and Network System Assets.

Act is the *Electricity Networks (Third Party Access) Act*.

Capital Contribution is a non-refundable financial contribution made – or the equivalent in the form of contributed assets – by a Network User to Power and Water (Networks) towards the cost of designing, constructing, installing and commissioning Connection Assets or Network System Assets to provide new or upgraded Network Access Services to a Network User.

Code means the Electricity Networks (Third Party Access) Code contained in the Schedule to the Act.

Connection Equipment or Connection Assets has the meaning set out in the Code.

Connection Point has the meaning set out in the Code.

Connection Service has the meaning set out in the Code.

Contribution Plan has the meaning set out in the Planning Act.

Electricity Network has the meaning set out in the Code.

Network Access Services has the meaning set out in the Code.

Network System Assets has the meaning set out in the Code.

Network User has the meaning set out in the Code and includes, for the purposes of this policy, any of:

- a) Power and Water (Retail);
- b) A licensed electricity retailer that has, or is seeking to establish, an Access Agreement with Power and Water (Networks);
- c) An existing or potential end load user that seeks a new or upgraded Connection Service at a Connection Point;
- d) An existing or potential developer that seeks a new or upgraded Connection Service at a Connection Point; and
- e) An existing or potential generator user that seeks a new or upgraded Connection Service at a Connection Point.

For the purposes of this policy, a Network User may be in either a Regulated Area or an Unregulated Area.

Planning Act is the Northern Territory *Planning Act*.

Power and Water (Networks) has the same meaning given to the term “PAWA Networks” in the Code.

Power and Water (Retail) has the same meaning given to the term “PAWA Retail” in the Code.

Regulated Area means an area within the Northern Territory that is subject to regulation under the Code.

Regulator has the meaning set out in the Code.

Technical Code means the Network Connection Technical Code developed by Power and Water (Networks) in accordance with the requirements of section 9(2) of the Code.

Unregulated Area means an area within the Northern Territory that is not a Regulated Area but where the electricity assets are owned and operated by Power and Water.

7. General Principles

This section of the policy sets out general principles that apply to determining and levying Capital Contributions.

7.1. Types of Capital Contributions

A Capital Contribution can be made by a Network User in the form of:

- a) A financial payment to Power and Water (Networks) where it subsequently undertakes the works required to provide new or upgraded Network Access Services to a Network User; or
- b) The transfer of ownership of Connection Assets or Network System Assets to Power and Water (Networks) from a Network User that has procured and funded the installation or construction of the assets by an Accredited Service Provider; or
- c) A combination of a) and b) above.

7.2. Parties to a Capital Contribution

A Capital Contribution is made by a Network User to Power and Water (Networks).

7.3. Network User's Choices

A Network User may choose the form in which it will make a Capital Contribution to Power and Water (Networks).

7.4. Types of Works

Power and Water (Networks) may require a Network User to make a Capital Contribution where the provision of Network Access Services to the user requires new or upgraded Connection Assets or Network System Assets, and where the cost of these assets (including design, construction, installation, commissioning and maintenance) cannot be recovered through future tariff revenue.

Power and Water (Networks) may levy such a Capital Contribution under the provisions:

- a) Clause 80(2) of the Code, which states that "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 the capital contribution"; and

- b) Part 6 of the Planning Act, under which Power and Water (Networks) may prepare a Contribution Plan that requires the owner of land to make a Capital Contribution for the provision of works. In accordance with section 69(4) of the Planning Act, a Contribution Plan must include:
- A description of the required infrastructure;
 - A statement of the order in which the infrastructure works must occur;
 - An estimate of, and method for calculating, the capital cost of the infrastructure works; and
 - A formula for calculating the Capital Contribution.

Examples of where Power and Water (Networks) may levy a Capital Contribution on a Network User include:

- a) *Developer Works within a Development* - This involves a developer procuring and funding the installation and construction of Connection Assets or Network System Assets that connect to the Power and Water (Networks) network. In this situation, the Capital Contribution would therefore involve transferring ownership of the new assets to Power and Water (Networks) – no financial payment would be made.
- b) *Increase in Capacity of a Connection Asset* – This involves an increase in a Network User's kVA capacity. In this situation, a Capital Contribution will be levied either in the form of:
- A financial contribution calculated in accordance with the principles set out in section 7.9 of this Policy; or
 - A contributed asset where the Network User chooses to procure and fund the installation and construction of the assets and transfer ownership to Power and Water (Networks).
- c) *Conversion from a Single to Three Phase Supply* – This involves increasing the connection from an existing single phase supply to a three phase supply. In this situation, a Capital Contribution will be levied either in the form of:
- A financial contribution calculated in accordance with the principles set out in section 7.9 of this Policy; or
 - A contributed asset where the Network User chooses to procure and fund the installation and construction of the assets and transfer ownership to Power and Water (Networks).
- d) *Network Augmentation* - This involves extending or augmenting the existing network along either a public road or within private property and making a new connection to the Network User's premises as a consequence of a new or

augmented connection requirement. In this situation, a Capital Contribution will be levied either in the form of:

- A financial contribution calculated in accordance with the principles set out in section 7.9 of this Policy; or
 - A contributed asset where the Network User chooses to procure and fund the installation and construction of the assets and transfer ownership to Power and Water (Networks).
- e) *Additional Connection Works for Reliability* – This would occur when an existing Network User requires an alternative supply arrangement in order to increase its reliability beyond the standard provided by Power and Water (Networks) under the security criteria provisions of its design and construction policy. This may arise, for example, if a Network User wants an emergency low voltage supply to a dedicated substation, an alternative high voltage supply from a different substation or feeder or an additional transformer and associated recoverable equipment. In this situation, a Capital Contribution will be levied either in the form of:
- A financial contribution calculated in accordance with the principles set out in section 7.9 of this Policy; or
 - A contributed asset where the Network User chooses to procure and fund the installation and construction of the assets and transfer ownership to Power and Water (Networks).
- f) *Recoverable works* - These works would arise if, for example, a Network User requires assets to be relocated, assets to be reinstated following other works or assets to be repaired following damage. In this situation, a Capital Contribution will be levied either in the form of:
- A financial contribution calculated in accordance with the principles set out in section 7.9 of this Policy; or
 - A contributed asset where the Network User chooses to procure and fund the installation and construction of the assets and transfer ownership to Power and Water (Networks).

This list is not intended to be exhaustive and this Policy may cover other types of works. Power and Water (Networks) encourages Network Users to contact it to discuss other types of works that may be covered by this Policy.

7.5. Contestability of Works

Power and Water (Networks) or any Accredited Service Provider may design, construct, install or commission Connection Assets or Network System Assets to service a new or upgraded connection point provided that they do so in compliance with the Technical Code.

Power and Water (Networks) encourages Network Users to contact it to obtain a list of Accredited Service Providers, or to obtain information about becoming an Accredited Service Provider.

7.6. Ownership of Assets

Power and Water (Networks) will own all of the Connection Assets and Network Service Assets that have been funded by Capital Contributions, regardless of whether the Capital Contribution is made by the Network User as a financial payment, a contributed asset or both.

7.7. Sizing of Assets

Power and Water (Networks) will determine the level of the payment or nature of the works required from a Network User through a Capital Contribution 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 for Network Access Services. That is, the Capital Contribution will be based on:

- a) The optimally sized asset required by the Network User if it corresponds to a standard size asset that can be installed and commissioned; or, where it is not the case
- b) The closest higher standard size to the optimally sized asset required to service the Network User.

A Network User will transfer ownership of any contributed assets to Power and Water (Networks) at no cost to Power and Water (Networks) except if it has agreed in writing that the Network User will build assets with greater capacity than it needs for its own purposes in order to service the future needs of Power and Water (Networks) or its customers. Power and Water (Networks) will fund the incremental costs of any greater capacity on a basis agreed in writing with the Network User.

7.8. Standards of Works

All works to Connection Assets and Network System Assets that are required to provide new or improved Network Access Services to a Network User must be undertaken in accordance with the Technical Code, relevant network planning criteria and other requirements reasonably required by Power and Water (Networks).

Power and Water (Networks) may grant derogations from the above requirements if it considers it reasonable to do so.

7.9. Calculating the Capital Contribution

In accordance with the requirements of clause 80(4) of the Code, Power and Water (Networks) will limit the amount of any Capital Contribution to that required to make a new or upgraded connection commercially viable. The general test of commercial viability will be whether the cost of the Connection Assets can be recovered through regulated tariffs that apply to existing network users or to the network user in question.

The maximum amount of a Capital Contribution will be the shortfall in the viability of the required works, based on the present value of the allocated capital, operations and maintenance costs of the required works less the present value of the projected future tariff revenues earned from the connection and any residual value of the works. That is:

$$\text{Capital Contribution} = \text{PV (capital cost of connection + operating and maintenance expense)} - \text{PV (customer tariff x volume, + residual value of works)}$$

Where:

- a) The “capital cost of connection” is calculated on an incremental actual cost 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.

where the optimisation is determined subject to clause 7.7 above.

- b) The “operating and maintenance expense” is calculated based on the projected efficient operating and maintenance expense of the Connection Assets and Network System Assets dedicated to the applicant Network User and an apportionment of the expenses relating to any shared assets;
- c) The “customer tariff” is that which is actually charged to the Network User, which may be different to the general network tariff schedule;
- d) The “volume” is determined based on the projected incremental future electricity demand by the Network User attributable to the new works, as estimated by Power and Water (Networks) and assumed constant over the relevant investment timeframe;
- e) The “residual value of works” is the value of the assets (if any) at the end of the relevant investment timeframe;
- f) The “PV”, present value, is calculated using:
- A weighted average cost of capital calculated in a manner consistent with the methodology applied by the Regulator in setting the price cap for the second regulatory period, updated parameter values since the time of the regulator’s second regulatory period decision and the provisions of clause 80(6) of the Code; and
 - An investment timeframe relevant to the circumstances of the particular user and connection, up to a maximum of fifteen years.

A Capital Contribution will only be levied if the outcome of the application of the above formula is a negative value (ie where a revenue shortfall is expected). In such a case, the value of the contribution charge will not exceed this amount.

7.10. Disputes over contribution calculation

For the purposes of calculating a capital contribution under section 7.9, for works undertaken by Power and Water (Networks), the capital and maintenance costs will be valued at their actual cost to Power and Water (Networks), subject to sizing variations applying under section 7.7.

Power and Water encourages Network Users to obtain comparative price quotes for the construction, installation and maintenance of connection assets. Power and Water will only recognise a Network User's complaint regarding the cost of works where it has no alternative provider to Power and Water (Networks). Where the works form part of an Access Application or Access Agreement as per clause 31 of the Code, unresolved disputes over the amount of the contribution will be dealt with under the resolution procedures contained in Chapter 4 of the Code. Similarly, it is Power and Water's intention to apply the procedures of Chapter 4 to disputes that arise where there is no Access Application or Access Agreement between the parties.

7.11. Timing of Payments

For works undertaken by Power and Water (Networks), the financial Capital Contribution will be recovered through a single up-front payment from the Network User to Power and Water (Networks) before it commences the related works.

In the case of works that are physically contributed to Power and Water (Networks), and that are installed with excess capacity at Power and Water's request, payment for the cost of the excess capacity will take place at a time agreed to by Power and Water and the party undertaking the works.

Power and Water (Networks) may agree to a Network User progressively paying its Capital Contribution over time, including after the related works have been commenced, having regard for matters including:

- a) The amount of the Capital Contribution; and
- b) The expected timing for completion of the required works.

In the case of Capital Contributions made through contributed assets, ownership will transfer to Power and Water (Networks) once the new assets have been completed and commissioned and all of the necessary inspections and testings have been completed.

In accordance with the relevant provisions of the Access Agreement and section 71(3) of the Planning Act, Power and Water (Networks) may make a demand against a Network User for any Capital Contribution that is due and payable. Any such amount would be an "overriding statutory charge" within the meaning of the Land Title Act on the related land. Power and Water may take proceedings to recover any such amount.

7.12. Prudential Requirements

In accordance with clause 79(4) of the Code, Power and Water (Networks) may impose a prudential requirement on a Network User in addition to a Capital Contribution in relation to a new or upgraded connection, which may take (but is not restricted to) one or more of the following forms:

- a) Financial contributions;
- b) Non-cash asset contributions;
- c) Service charge pre-payments;
- d) Minimum service charges or quantities for an agreed period; and / or
- e) Financial guarantees.

The value of a prudential requirement will be in addition to the amount of the capital contribution.

7.13. Early or late payment

In accordance with section 73 of the Planning Act, Power and Water (Networks) may:

- a) Declare a discount for early or prompt payment of a Capital Contribution;
- b) Levy interest for the late payment of a Capital Contribution; and
- c) Refund some or all of a Capital Contribution in special circumstances.

8. Information required from a Network User

This section considers the information that a Network User must provide to Power and Water (Networks) in order to receive a new or upgraded Network Access Service.

8.1. Nature of the Information to be Provided

A Network User seeking access to the network under an Access Agreement must lodge an Access Application containing the information set out in Schedule 2 of the Code.

Power and Water (Networks)'s Access Offer to a Network User must contain, where appropriate, the information set out in Schedule 3 of the Code, including the amount of any Capital Contribution payable by the Network User. Schedule 4 of the Code sets out the indicative terms and conditions of an Access Agreement.

A Network User seeking new or upgraded Network Access Services through an Access Agreement will therefore provide in its Access Application the information Power and Water (Networks) requires to determine the amount of any Capital Contribution.

Power and Water (Networks) may require a Network User that is seeking new or upgraded Network Access Services, but which has not lodged an Access Application, to provide any of the information provided for in Schedule 2 of the Code, or any other relevant information, in order to determine the amount of any Capital Contribution that the Network User must pay.

8.2. Provision of Accurate Information

A Network User seeking new or upgraded Network Access Services must provide accurate information to Power and Water (Networks) to enable Power and Water (Networks) to determine the appropriate level of payment or nature of works required from the Network User through a Capital Contribution.

Any failure by the Network User to provide accurate information may be a breach of the Act, the Code and the Network User's Access Agreement and may attract the penalties and sanctions provided for under those documents.

9. Contracting for Capital Contributions

In accordance with Schedules 3 and 4 of the Code, any Access Offer made to a Network User and, if this is accepted, any Access Agreement agreed between the parties, will detail the terms and conditions on which:

- a) Power and Water (Networks) will provide new or upgraded Network Access Services; and
- b) The Network User will make a Capital Contribution to Power and Water (Networks).

Power and Water (Networks) will contract with any Network User that connects to the network but does not enter into an Access Agreement. This contract will set out the terms and conditions for the connection and detail the nature and terms of any Capital Contribution required.

10. Regulatory Approval of this Policy

In accordance with clauses 62(1) and 81 of the Code, Power and Water (Networks) will submit this Policy to the Regulator for approval prior to the commencement of each regulatory control period. Power and Water (Networks) may amend this policy from time to time during a regulatory period, with amendments being subject to the Regulator's approval in each case.

11. Compliance with this Policy

Power and Water (Networks) will complete a "Capital Contributions Return Form" of the kind set out in Appendix A for each new Capital Contribution levied in accordance with this Policy.

Power and Water (Networks) will periodically submit these forms for review by the Regulator to enable it to oversee the application of this Policy in accordance with clause 62(1) of the Code.

Submitted by:

Mick Clifford
Manager Economic Services

Approved by:

Richard Earl
General Manager Power Networks
[DATE] 2004

Appendix A – Capital Contributions Return Form

Name of project	
Region	
Applicant for new / up-graded connection - Customer ID - Invoice Number	
Nature of new / up-graded connection required	
Location of works	
Type of Capital Contribution to be made	
Party undertaking new / up-graded connection	
Expected investment timeframe (years)	
Justification for investment timeframe, residual asset value	
Inputs to Capital Contribution calculation: - Present value of capital, O&M costs - Present value tariff revenue, residual asset value Maximum allowable Capital Contribution charge	