Capital Contribution Policy

Current as at November 2013

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Regulatory Compliance

This Capital Contributions Policy is written to comply with clauses 2.4.6 of the Electricity Distribution Information Disclosure Determination 2012 from the Commerce Commission ("Commission Determination").

Introduction

In regard to the Commission Determination, a Capital Contribution is an amount payable to an Electricity Distribution Business ("EDB") such as Network Waitaki when new electricity distribution assets need to be constructed to facilitate a supply of electricity to a premises or premises. Examples of circumstances in which new distribution assets need to be constructed are when a new subdivision is developed or when a new building is constructed.

Electricity assets include overhead lines, overhead cables, underground cables, ducts, switches, distribution transformers and ancillary fittings.

Large scale developments and network growth will at some time require network upgrades that extend deep into the core of the distribution and sub-transmission network. Occasionally transmission asset upgrades may also be required. Distribution network and transmission asset upgrades are normally expensive and can also be disruptive for existing consumers. Good governance therefore dictates that when such upgrades are required, a growth factor is included into the design to meet any additional anticipated load that may have to be supplied from the upgraded asset. This "common good" element of the core network needs to be recognised in capital contribution policies otherwise they may present a significant barrier to investment in the economic development of the region.

Efforts to overcome these significant cost hurdles can lead to compromises being made to good industry practice and design standards that are appropriate for core assets. The higher the "user pays" component inherent in a capital contribution policy the less likely prudent provisions for long term network development will be included in planning and designs.

Conversely, there is a need to balance this with normal line charges to ensure existing consumers are not faced with increased costs to subsidise new development, with no benefit in terms of enhanced security or reliability of supply. New development must be sustainable without driving up charges in a "cost plus" fashion, and pricing must reflect the cost structure so as not to encourage inefficient or unsustainable development proposals.

Network Waitaki Limited ("Network Waitaki") is required by its owner, the Waitaki Power Trust, to minimise operating revenues, and as a consequence, retained earnings from line charges are insufficient to provide a contribution towards network development. Consumers requiring additional capacity must therefore meet the capital cost of development.

In short low annual charges have been traded off against an initial high investment hurdle for development. This is a user pays philosophy, and developers can spread this initial funding hurdle via borrowing.

Guidelines

A Capital Contribution Policy that is balanced, fair to all consumers, adequately focused on the long term development objectives and supporting of the application of good practice will demonstrate the following features:

- The same set of rules will apply to every new connection, whether or not a network upgrade is triggered at the connection. All connected loads, irrespective of size, consume capacity and reduce the "common benefit" able to be delivered to other consumers as they:
    - Consume some of the excess capacity provided in the original design for load growth in the existing connected load base. Ultimately Network Waitaki has to fund any subsequent upgrades from line charges.
    - Reduce the contingent capacity provisioned for security and therefore degrade the service levels currently being delivered to existing consumers.
    - Increase the average marginal cost for providing new capacity as there is a shorter period between upgrades over which installation costs are spread.

Policies that only charge new consumers when their capacity need exceeds the existing excess capacity in the network, and then expects others to fund the re-establishment of excess capacity are inherently unfair.

- To ensure consistency and fairness, such that consumers are not disadvantaged by their location relative to the sub-transmission system (i.e. all consumers pay for the sub-transmission system on an average cost basis yet cannot access its benefit equally due to physical location) all sub-transmission and shared 11kV assets should be averaged across the entire network. The issues addressed by this policy are:
    - Existing consumers have no contracted preferential entitlement to existing excess capacity. New consumers have equal right to utilise assets that were provisioned for the "common good".
    - Marginal cost is minimised by the best long term solution. This approach encourages consideration of sub-transmission solutions, where this is a more efficient outcome when the entire network is considered.
- Where assets are truly dedicated to distinct users then they are charged on a "user pays" basis e.g. network extensions and service lines. Dedicated assets on property not owned by the consumer are defined as **Consumer Works** and will remain the property of the consumer, unless otherwise agreed. Ownership demarcation is prescribed in legislation. Transfer to a network company has some compliance issues and is only permitted by mutual agreement. Policy cannot override a consumer's legal entitlements.
- Network Waitaki will contribute and retain ownership of the dedicated transformer required for the installation.

Policy

All new connections, and existing connections requiring additional capacity, will be charged a connection charge to cover the short fall between the capital funding requirements of Network Waitaki's network development and the contribution it realises for that purpose from its annual line charges.

Network Waitaki has determined the incremental cost for the addition of new capacity to be a rolling average of Network Replacement Cost ("RC") divided by a rolling average of Distribution Transformer Capacity, or $761.45 per kVA of **fused connected capacity**. However, due to the fact that not all network capacity is utilised the figure is then scaled down by either the average Distribution Transformer Capacity Utilisation Factor (26.8%) for customers that are not considered to high users of transformer capacity, or the average Zone-substation Transformer Capacity Utilisation Factor (targeted at 42.0%) for consumers that are considered to be high users of transformer capacity (i.e. "High Transformer Utilisation consumers"). Deriving a Capital Contribution based on the fused connected capacity of the new connection encourages the use of efficient technologies that require lower transformer capacities that are less burdensome on existing network users.

The Zone-substation Transformer Utilisation Factor, which is currently targeted at 42.0%, will give an accurate estimate of the greater degree to which High Transformer Utilisation consumers use network capacity. High Transformer Utilisation consumers are typically Irrigation connections and Dairy Sheds, but other consumers may also be in this category so Network Waitaki will assess on a case by case basis the appropriate utilisation factor to use. All other loads will have the Distribution Transformer Capacity Utilisation Factor applied, as this is a better measure of overall network capacity utilisation.

The connection charge is calculated as follows.

Calculation variables

7 year Average (2011 – 2005) RC = $122,702,765 (not including Black Point, and assets classified as Avoided Cost of Transmission Assets).

7 Year Average (2011 – 2005) Distribution Transformer Capacity = 161,143 kVA (Not including Black Point).

7 Year Average (2011 – 2005) Distribution Transformer Capacity Utilisation Factor = 26.8% (Not including Black Point).

7 Year Average (2011-2005) Zone-substation Transformer Capacity Utilisation Factor = 42.0% (Target).

Calculation

Capital Contributions per kVA for general connections:

(RC / Distribution Transformer Capacity) * Distribution Transformer Capacity Utilisation Factor.

⇨ ($122,702,765 / 161,143) * 26.8%

=($761.45) * 26.8% = $204.07 per kVA of fused connected capacity.

Capital Contributions per kVA for High Transformer Utilisation loads (typically Irrigation and Dairy Sheds, but assessed on a case by case basis):

(RC / Distribution Transformer Capacity) * Zone-substation Transformer Capacity Utilisation Factor.

⇨ ($122,702,765 / 161,143) * 42.0%

= ($761.45) * 42.0% = $319.81 per kVA of fused connected capacity.

Fees and Charges

A minimum service fee of $295 is payable for all new standard installations. The fee for street lights without an ICP and for load increments within the existing load group is $150.

The kVA fused connected capacity of individual new connections will be used to determine the Connection Charge.

Streetlights and other unmetered Loads:

- When connected to existing LV or Streetlight circuit Connection Charge = (Load in kW[1] x $204.07) + $150.00 Service Fee. ([1] Load in kW is used as it is not possible to use kVA for this purpose in the NZ Electricity Registry).
- When connected via dedicated transformer Connection Charge = General 15kVA Charge.

Table 1: General Connection Rates

Load Group	Fuse Rating	Fused Capacity	General Connection Charge	High Utilisation Connection Charge
kVA	A	kVA	$204.07	$319.81
	1 phase			
0-15	63	14.5	$2,959.02	
16-30	100	23.0	$4,693.61	
	3 phase			
16-30	40	27.7	$5,652.74	$8,858.74
31-50	63	43.6	$8,897.45	$13,943.72
	80	55.4	$11,305.48	$17,717.47
51-100	100	69.3	$14,142.05	$22,162.83
	125	86.6	$17,672.46	$27,695.55
	160	110.9	$22,631.36	$35,466.93
101-200	200	138.6		$44,325.67
	250	173.2		$55,391.09
	315	218.2		$69,782.54
201-300	315	218.2		$69,782.54
	355	246.0		$78,673.26
	400	277.1		$88,619.35
301-500	500	346.4		$110,782.18
	630	436.5		$139,597.07
	710	491.9		$157,314.54
	800	554.3		$177,270.68
501-750	800	554.3		$177,270.68
	1000	692.8		$221,564.37

Notes:

I. Network Waitaki reserves the right to reassess the Connection Charge within 1 year of livening the capacity requested by the consumer when it has proven to be an understatement of the load actually connected.

II. Installations will be fused at the connected capacity level rather than the full transformer capacity.

III. Pricing assumes compliance with Network Waitaki's Connection Standard, including Power Factor Correction and Motor Starting. Non-compliance may attract reassessment of charges.

IV. Where installations have no load control capability Network Waitaki reserves the right to reassess charges.

V. This charge is applicable to any new or upgraded connection with the exception of subdivisions and applies whether or not the physical service connection assets exist.

VI. Developers are required to pay the connection charge for all serviced residential sections within any subdivision development.

VII. Industrial subdivisions do not know the connected load at the time of development. For industrial subdivisions Capital Contributions will be payable at the time of connection

VIII. It is recognised that new large installations may be constructed in locations where the network is constrained. In this situation Network Waitaki will discuss alternative options with the consumer and charge the actual cost to connect the supply.

Economic Bypass

In very rare circumstances, due to favourable location of large loads with respect to the GXP's, it may be possible for a consumer to achieve a viable supply at lower cost than the above policy derives. In such circumstances, to prevent economically inefficient duplication of distribution capability through the bypass of its network, Network Waitaki will consider a case by case reduction in its standard pricing.

The consumer will be required to present a viable, costed design that demonstrates compliance with Network Waitaki's connection and design standards. Network Waitaki will then consider whether or not it is able to match those costs. If so then there is room for it to revise charges downwards, otherwise it will accept the outcome of being bypassed.

Network Extensions, Service Lines & Dedicated Transformers

Network Waitaki aims to facilitate access to its network and to connect new loads that present themselves. However, it has no obligation to fund the connection at the point of

connection. Network extensions are fully chargeable to the consumer irrespective of who retains ownership.

There is no restriction on the consumer and the network company coming to a mutual agreement on who will own assets even though the consumer has paid for the assets. The compliance issue is that a network company cannot unilaterally insist that ownership be transferred to itself. If by mutual agreement asset ownership transfers from the consumer to the network company, the extent of the network will increase, and the legal **Point of Connection** will change. Legislation requires that a formal transfer process be implemented and Network Waitaki has standard documentation in place to record such transactions.

In this scenario the extended network is now subject to the obligation to supply. A consumer transferring ownership to Network Waitaki will be required to accept that Network Waitaki may connect new consumers without capital reapportionment to the original consumers from the new consumer. Network Waitaki will specify the construction standards to ensure they are adequate for the future.

Mutual agreement of transfer of asset ownership is not restricted to network extensions. It can, if agreed, include the service line and any dedicated transformer that is not already owned by Network Waitaki. However, whatever agreement is in place, the fuses/isolation devices are required to be located at the ownership **Point of Connection**. This defines the point to which Network Waitaki is obligated to provide Line Function Services such as maintenance, and fault response.

It is Network Waitaki's policy that any development beyond the extent of its network including single phase to three phase upgrades be charged to the consumer at 100% of their cost. Assets constructed on the consumer's property or property over which the consumer has legal right of access, excluding the transformer, will not form part of Network Waitaki's asset register.

Network Waitaki will assume default operating and fault response duties where a formal agreement to transfer ownership to Network Waitaki has been implemented.

Network Waitaki will supply the transformer at no charge but will retain ownership of the transformer.

Reapportionment of Connection Charge

At Network Waitaki's discretion, a reapportionment of the connection charge may apply where a new connection will utilise assets for which other customers have made a capital contribution within the previous five years, but does not apply to assets funded by subdividers, including multi-tenanted buildings and apartments.

Where reapportionment applies, the historic cost of the assets, depreciated at 20% p.a. straight line, will be reapportioned between the affected Customers based on their share of assets used. The additional customers shall pay a reapportionment charge to Network Waitaki which in turn may reimburse the present owners of the premises that contributed toward the assets. All customers affected by a reapportionment will be sent a copy of the calculations.

Shifting Connected Capacity

In the event that a consumer has an ICP removed there will be no refund of the connection charge.

Consumers will be allowed to shift the connected capacity to a location provided:

- The new ICP is on the same property provided from the same **Point of Connection** or the same feeder but closer to the zone substation.
- That all costs of establishing the ICP at the new location will be met by the consumer.

Compliance with EA Pricing Principles

Network Waitaki considers that the Electricity Authority's ("EA") Pricing Principles (a), (c) and (d) are relevant to capital contributions. Pricing Principles (b) and (e) are applicable only to line charges and are therefore not relevant to Capital Contributions. The relevant principles and Network Waitaki's compliance with them are noted in Table 2 below.

Table 2: Relevant EA Pricing Principles:

Relevant EA Pricing Principle	Network Waitaki's Compliance
(a) Prices are to signal the economic costs of service provision, by:	
i. being subsidy free (equal to or greater than incremental costs, and less than or equal to standalone costs), except where subsidies arise from compliance with legislation and/or other regulation;	The Capital Contributions policy derives an incremental price for connecting additional load by dividing the 7 year average of Network RC by the 7 year average of Distribution Transformer Capacity. RC was chosen as the base for this calculation because of its lower variability and because 50% of the RC approximates the Long Run Average Cost of the network. Further, any efficiently run distribution network should be able to easily provide an incremental connection for substantially less than the standalone of costs of supplying additional load from distributed generation or other alternative means. It is therefore likely that this principle of being subsidy

	free, equal to or greater than incremental costs, and less than or equal to standalone costs is met.
ii. having regard, to the extent practicable, to the level of available service capacity; and	The Capital Contributions policy allocates charges based on required transformer capacity, thus meeting this principle.
iii. signalling, to the extent practicable, the impact of additional usage on future investment costs.	Again as the Capital Contributions policy will allocate charges based on required transformer capacity it will send a direct signal of the impact of additional usage on future investment costs. Thus meeting the principle.
(c) Provided that prices satisfy (a) above, prices should be responsive to the requirements and circumstances of stakeholders in order to:	
i. discourage uneconomic bypass;	Network Waitaki's current policy of considering on a case by case basis a reduction in its standard pricing in circumstances where it may be possible for a consumer to achieve a viable supply at a lower cost than that provided for by the Capital Contributions policy meets the requirements of this principle.
ii. allow for negotiation to better reflect the economic value of services and enable stakeholders to make price/quality trade-offs or non-standard arrangement for services; and	Network Waitaki is always willing to negotiate with customers on price/quality trade-offs, thus meeting the principle.
iii. where network economics warrant, and to the extent practicable, encourage investment in transmission and distribution alternatives (e.g. distributed generation or demand response) and technology innovation.	Network Waitaki, driven partly by the ongoing Electricity Act obligation to provide line services to all consumers connected prior to 1993, is likely to investigate alternative renewable energy options and technological innovations around demand management with the use of smart meters, thus complying with this principle.
(d) Development of prices should be transparent, promote price stability and certainty for stakeholders, and changes to prices should have regard to the impact on stakeholders.	Using 7 year averages for its calculations will promote stability. Further using a simple and easy to understand policy such as this will promote transparency. Thus complying with the principle.

Independent Contractor Statement

Network Waitaki generally engages its internal staff to connect customers and extend its network. However, customers may use suitably quality external contractors to undertake some aspects of new connections on a case-by-case basis. Further information on this is available by phoning or emailing Network Waitaki's customer connection team on (03) 433 0065 or service@networkwaitaki.co.nz.

Definitions

Consumer: means any person who is supplied, or who applies to be supplied, with electricity.

Consumers Works: means the privately owned portion of service line between the Point of Connection (POC) to the network line and the Point of Supply (POS) at the end users property boundary.

Point of Connection: means the point of demarcation where the private owned line connects to the network owned line (POC). The point of connection will be the location of the network owned isolation device which could be either LV or HV. If the (POC) is on or near the consumer's property boundary, that point is then the (POS)

Point of Supply: means the point at which the service line crosses the property boundary as defined in the Electricity Act 1992. The line then becomes part of the electrical installation.