



Policy for determining capital contributions on Vector's electricity distribution networks

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Pursuant to:
Electricity Distribution Information
Disclosure Determination 2012

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1. Introduction

- 1.1 This document describes Vector's policy for determining capital contributions and meets the requirements of clause 2.4.6 of the Electricity Distribution Information Disclosure Determination 2012.
- 1.2 Vector provides electricity lines services to consumers via its electricity distribution network covering the Auckland region. Vector recovers the cost of providing electricity lines services to existing consumers through electricity distribution prices (lines charges), including published standard prices and (in a limited number of circumstances) non-standard prices. Vector's prices are set with reference to the Electricity Authority (EA) Distribution Pricing Principles (see Appendix A).
- 1.3 A key feature of electricity distribution networks is that the assets used to supply consumers are highly interconnected, so many of the assets are used by many consumers. The way the network of assets has been built up over time is something that Vector now has limited ability to change, however Vector is able to determine present and future investment decisions in the electricity distribution network.
- 1.4 Vector's distribution prices are designed in line with Pricing Principles published by the Electricity Authority to efficiently recover the cost of the existing electricity distribution network and send price signals to users when new investments are required.
- 1.5 Vector's distribution prices are set to recover the costs of owning and operating the electricity distribution network as it currently exists. The most significant cost element reflected in Vector's distribution prices relates to physical electricity distribution assets, for example the lines, wires, poles, transformers and cables. These assets are part way through their useful life, meaning their value is also part of that of equivalent new assets. This means that Vector's distribution prices are lower than they would be if the assets were new or, in other words, the distribution prices may be insufficient to recover the full cost of a new investment in the network.
- 1.6 To send the right price signals to consumers and ensure new investments in the network are as efficient as possible, consumers requiring new or enhanced connections or sole use assets, should be charged for the full or proportionate cost of those assets (new and existing) they will be using. However, Vector's distribution prices are only sufficient to recover existing shared assets and their enhancement, so Vector uses capital contributions to cover connections and sole use assets.
- 1.7 Vector directs its capital investment primarily at the enhancement and expansion of the shared assets that benefit all consumers. As Vector's capital resources are limited it must prioritise its expenditure, consequently investing in assets that are for the connection or sole use of new or existing consumers would result in existing consumers helping to fund these connection and sole use assets. Vector therefore requires consumers to fund their connection and sole use assets directly via capital contributions.
- 1.8 Capital contributions take the form of an upfront one-off payment with respect to a new connection or the provision of sole use assets that allow connection to the electricity distribution network.

- 1.9 The Input Methodologies¹ require that capital contributions received are netted off the value of new assets added to the Regulatory Asset Base (RAB). This means that new assets only contribute to future revenue requirements to the extent they have not already been paid for via a capital contribution. This ensures that there is no double payment or cross subsidy between existing and new connections or sole use assets.
- 1.10 This document sets out Vector's policy for determining such capital contributions.

2. Objective of capital contribution policy

- 2.1 Vector's capital contribution policy has been developed with the following objectives:
- (a) The addition of a new connection should not make existing consumers worse off either now or in the future.
 - (b) Ideally, the addition of a new connection should benefit existing consumers as the new connection should contribute towards shared costs and assets via distribution charges.
 - (c) The cost of providing new connection services should be determined using a "but for" or avoidable cost approach that identifies the costs attributable to the new connection.
 - (d) Capital contributions should incentivise improved utilisation of the electricity distribution network and not incentivise inefficient construction (for example: over-sized network assets).
- 2.2 Vector considers that the Capital Contribution Policy and its implementation as detailed in this document achieves these objectives for the following reasons:
- (a) Objective (a) is achieved as existing consumers do not subsidise or contribute to the sole use assets or connection costs of new connections except to the extent that existing consumers derive a benefit from additional assets.
 - (b) Objective (b) is achieved as new connections contribute to and benefit from the overall existing and future shared assets through Vector's distribution pricing, including the ongoing maintenance and enhancement of Vector's interconnected distribution system. This is of benefit to all consumers, both present and future.
 - (c) Objective (c) is achieved as Vector assesses and recovers the cost of sole use assets and new connections directly from the new connection party or asset user; "but for" the new connection or sole use asset, no investment would be required by Vector. From Vector's perspective the investment is avoidable.
 - (d) Objective (d) is achieved as Vector only supplies the connection assets agreed with and required by the connecting party. Vector's capital investment is in assets for the shared use of all consumers. Vector seeks to invest appropriately through time to ensure a reliable and resilient network is provided to existing consumers and is accessible to new connections and consumers.

¹ https://comcom.govt.nz/__data/assets/pdf_file/0017/60542/Electricity-distribution-services-input-methodologies-determination-2012-consolidated-January-2019-31-January-2019.pdf

3. Circumstances for requiring a capital contribution

- 3.1 Vector requires a connection applicant to pay a capital contribution when any additions to the electricity distribution network are required to provide new connection services or sole use assets. The additions considered are specifically a dedicated connection, sole use assets and in some instances other costs that would be avoidable from Vector's perspective, but for the customers' requirements.

4. Methodology for determining the amount of a capital contribution

- 4.1 Vector has developed its capital contribution policy to meet the objectives outlined in section 2. Vector has achieved this by:
- (a) Adopting an approach to determine individual capital contributions so that the contribution from new connections is either sufficient on average to recover the costs of new connections in the case of standard connections or are equal to Vector's costs in the case of non-standard connections. This avoids cross subsidies between new and existing connections for the connection assets and allows existing and new connections access to the shared network assets on an equivalent basis;
 - (b) Developing approaches to identify the costs relevant to the new connection and sole use assets and include these costs in the determination of capital contributions; and
 - (c) Ensuring connection applicants have financial incentives (through capital contributions) to assess the technical requirements of their new connection or sole use assets carefully so that efficiently sized assets are provided.

5. Determining costs

- 5.1 Avoidable costs are the costs that would be incurred by Vector from augmenting the electricity distribution network that Vector would not otherwise face 'but for' the new connection or sole use assets. Avoidable costs may relate to:
- (a) assets for use only by the connection applicant or consumer and the associated costs (connection and sole use costs); and
 - (b) wider system assets used by the connection applicant as well as other consumers, and the associated costs (shared costs).
- 5.2 Sole use costs relating to the new connection may include but are not limited to the following:
- (a) Design and certification costs;
 - (b) Any costs for conducting a tender process for the connection applicant;
 - (c) The costs of procuring materials and services, building, constructing and commissioning assets;
 - (d) Any legal or administrative costs, including procuring appropriate easements, statutory consents and negotiating suitable contractual arrangements; and
 - (e) Augmentation of existing assets to provide the new connection.

- 5.3 Where avoidable costs relate to sole use costs, these are fully attributed to the new connection.
- 5.4 Shared costs relating to a new connection may include but are not limited to the portion of costs applicable to the new connection for the following:
- (a) Design and certification costs;
 - (b) Any costs for conducting a tender process for the connection applicant;
 - (c) The costs of procuring materials and services, building, constructing and commissioning assets;
 - (d) Any legal or administrative costs, including procuring appropriate easements, statutory consents and negotiating suitable contractual arrangements;
 - (e) Augmentation of existing assets to provide the new connection; and
 - (f) The financial cost of bringing forward planned shared electricity distribution network investment in order to facilitate the new connection.
- 5.5 Where the avoidable cost relates to shared costs, Vector determines the avoidable cost with reference to:
- (a) changes in the timing of capital expenditure compared with its asset management plan on a 'but for' the new connection' basis;
 - (b) the connection applicant's allocated share of actual capital expenditure in shared assets required to provide new connection services; and/or
 - (c) the connection applicant's allocated share of upstream augmentation.

6. Extent of consumer connection, sole use cost and non-consumer related augmentation

- 6.1 Vector may elect to augment the electricity distribution network to a greater extent than required by the new connection or sole use asset. This may arise due to the economies of scale of installing new electricity distribution network infrastructure and the provision of capacity to support further load growth in the future.
- 6.2 Subject to 6.4 the consumer connection or sole use asset cost will only include those costs necessary to provide the electricity distribution services requested by the connection applicant at the least cost and technically acceptable standard (as determined by Vector). Consumer connection cost does not include the costs referred to in 6.1.
- 6.3 If the connection applicant requests assets of a higher standard or more costly nature than Vector considers necessary, then the avoidable cost may include the greater costs (if any) that may result.
- 6.4 Where a connection applicant's requirements fall between the capacity of two standard size network elements capable of meeting such requirements and Vector installs the larger of the two, this does not constitute Vector electing to perform the work to a higher standard or capacity.

Example 1: A connection applicant requires a new dedicated transformer, with a connection capacity of 602kVA. The nearest standard transformer sizes are 500kVA and 750kVA. Vector installs a 750kVA transformer as this is the smallest standard size capable of meeting the connection applicant's requirements. The use of a 750kVA transformer as opposed to a 500kVA transformer does not constitute a higher standard for the purposes of determining avoidable cost.

7. Different types and treatments of new connections

- 7.1 Vector has identified two different types of new connection: standard and non-standard connections. Vector has a different approach to determining the capital contributions that apply. In each case Vector utilises the same underlying approach as specified in section 5.

8. Capital contributions for standard new connections

- 8.1 Certain new connections to Vector's network require a low level of technical input in order to connect each new consumer, as they are generally of the same technical requirements. Based on this, Vector has standardised new connection prices for eligible consumers into a schedule of standard prices. These prices have been determined based on a review of the costs of connecting a significant number of historical new connections that meet the technical criteria.
- 8.2 The schedule of prices and eligibility criteria Vector applies to standard new connections are published on Vector's website.

9. Capital contributions for non-standard new connections

- 9.1 Non-standard connections are all connections and sole use assets that don't meet the eligibility criteria for standard prices. For non-standard new connections Vector applies the specific cost to determine the required capital contribution.

10. Capital contributions for projects by other infrastructure owners

- 10.1 Vector may apply different methodologies for determining capital contributions for projects involving other infrastructure owners such as territorial authorities or government-owned entities. This reflects the potential for cost reductions which arise due to coordination of works by the different infrastructure owners.

11. Adherence to pricing principles

- 11.1 Vector's capital contribution policy is consistent with the Distribution Pricing Principles published by the Electricity Authority in June 2019. These are included in Appendix A.
- 11.2 Charging connecting consumers dedicated connection or sole use costs equal to the avoidable costs ensures that any capital contribution falls within the subsidy free range.
- 11.3 Vector's distribution prices recover the costs of the existing electricity distribution network and a portion of investment and enhancement of shared assets that are to the benefit of all consumers. Vector's capital contribution policy means that capital contributions recover avoidable costs. These two mechanisms combined ensure that allowed revenues are fully recovered. As a consequence, Vector has not considered revenue under-recoveries in this contribution policy.

12. Use of independent contractors

- 12.1 In some circumstances the connection applicant may undertake some of the work that would otherwise be covered by the capital contribution. Vector may allow consumers or the connection applicant to undertake the preparatory work using appropriately trained and qualified personnel familiar with Vector's standards and requirements prior to Vector installing the new electricity infrastructure. Preparatory work includes by way of example, trenching and or civil work, reinstatement and laying of duct. Depending on the circumstances Vector may allow consumers or the connection applicant to install the new electricity distribution infrastructure also.
- 12.2 If the consumer or connection applicant performs some of the work or installs new assets that Vector will then own, then the costs associated with this work will be excluded from the costs used to determine the capital contribution. They will also be excluded from the RAB and the determination of distribution prices.

13. Definitions

Augmentation means the expansion, upgrade, increase, addition to, removal, relocation or enhancement of any part of the electricity distribution network which would not otherwise be required but for the requirements of a new connection service. Augmentation may include the allocation of extant spare capacity (i.e. prior augmentation) to a new connection service.

Capital contribution means the money or monetary value or other consideration charged to or received from a connection applicant, consumer or other party to fund augmentation that is in addition to, and separate from any ongoing revenue through distribution prices.

Connection applicant means a local authority and any association of persons whether incorporated or not applying for a new connection service and may include a consumer.

Consumer means a local authority and any association of persons whether incorporated or not who is supplied with electricity from the electricity distribution network.

Distribution price means Vector's standard published prices and non-standard prices.

Electricity distribution network means the Vector owned works that are used or intended to be used by Vector to provide electricity lines services.

Electricity lines services means the provision of electricity lines services as defined in s54C of the Commerce Act 1986.

Avoidable cost means the costs determined in accordance with section 5.

Input Methodologies means the Electricity Distribution Services Input Methodology Determination 2012.

New connection means a new point on the electricity distribution network or an existing point, either of which requires augmentation in order for Vector to provide electricity distribution services to a consumer or connection applicant.

New connection service means the provision of electricity lines services on the electricity distribution network to a new connection.

RAB means Vector's regulatory asset base, in respect of the electricity distribution network.

Shared asset means a network asset used by more than one consumer in order to receive electricity lines services.

Sole use assets means assets connected to the network for use by only one connecting consumer in order to receive electricity lines services.

Vector means Vector Limited and its related companies (as defined in the Companies Act 1993).

Appendix A The 2019 EA Distribution Pricing Principles

- (a) Prices are to signal the economic costs of service provision, including by:
 - i. being subsidy free (equal to or greater than avoidable costs, and less than or equal to standalone costs);
 - ii. reflecting the impacts of network use on economic costs;
 - iii. reflecting differences in network service provided to (or by) consumers; and
 - iv. encouraging efficient network alternatives.
- (b) Where prices that signal economic costs would under-recover target revenues, the shortfall should be made up by prices that least distort network use.
- (c) Prices should be responsive to the requirements and circumstances of end users by allowing negotiation to:
 - i. reflect the economic value of services; and
 - ii. enable price/quality trade-offs.
- (d) Development of prices should be transparent and have regard to transaction costs, consumer impacts, and uptake incentives.