Policy for determining capital contributions on Vector's gas distribution network

From 1 April 2015

Pursuant to:
Gas Distribution Information Disclosure Determination 2012

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2 Introduction

2.1 Vector provides gas distribution services to consumers via its gas distribution network covering areas of the North Island. Vector generally recovers the cost of providing gas distribution services to existing consumers through gas distribution prices, including published standard prices and (in a limited number of cases) non-standard prices.

2.2 A key feature of a gas distribution network is that many of the assets used to convey gas 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 gas distribution network. Vector's distribution prices are designed, in line with pricing principles published by the Commerce Commission, to efficiently recover the cost of the existing gas distribution network and send efficient signals to users when new investments are required.

2.3 Vector's distribution prices are set to recover the costs of owning and operating the gas distribution network as it currently exists. The most significant cost element reflected in Vector's distribution prices relates to physical gas distribution assets, for example the pipes, valves and pressure reducing stations. These assets are about half way through their useful life, meaning their value is also about half 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.

2.4 In simple terms, to send the right signals to consumers to ensure new investments in the network are as efficient as possible, those consumers need to 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 a portion of that cost (particularly in relation to any new assets). Vector may use capital contributions to fill the gap.

2.5 Capital contributions may take the form of an upfront one-off payment with respect to a new connection to the gas distribution network where augmentation of the system is required. This document sets out Vector's policy for determining such capital contributions.

2.6 The Input Methodologies require that capital contributions received are netted off the value of new assets added to the 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.

3 Objective of capital contribution policy

3.1 Vector's capital contribution policy has been developed with the following in mind:

(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 to shared costs and assets.
(c) The cost of providing new connection services should be determined using a "but for" approach that identifies the costs attributable to the new connection.
(d) Capital contributions should incentivise improved utilisation of the gas distribution network and not incentivise inefficient construction (for example: over-sized network assets).

4 Circumstances for requiring a capital contribution

4.1 Vector may require a connection applicant to pay a capital contribution when any augmentation of the gas distribution network is required to provide new connection services.

5 Methodology for determining the amount of a capital contribution

5.1 Vector has developed its capital contribution policy in order to meet the objectives outlined in section 3. Vector has achieved this by:

(a) Adopting an approach to determine individual capital contributions so that the revenue from new connections is sufficient on average to recover the costs of new connections. This avoids cross subsidies between new and existing connections;
(b) Adopting minimum contribution limits which on average provide that new connections contribute towards shared costs and assets;
(c) Developing approaches to identify the costs relevant to the new connection and include these costs in the determination of capital contributions; and
(d) Ensuring connection applicants have financial incentives (through capital contributions) to assess the technical requirements of their new connection carefully so that efficiently sized connection assets are provided.

5.2 The amount of any capital contribution is the difference between the incremental revenue and incremental cost of the new connection service subject to minimum and maximum capital contribution limits. Capital contributions are determined in accordance with an incremental profitability assessment described in Equation 1.

Equation 1: Capital contribution formula

$$CC = IC - IR$$

where:

CC capital contribution (in dollars) where $MIN \leq CC \leq MAX$;

IC	incremental cost are the consumer specific costs arising from the new connection service determined in accordance with section 6;
IR	incremental revenue is the revenue expected from the new connection service determined in accordance with section 10;
MIN	is the minimum capital contribution determined in accordance with section 8; and
MAX	is the maximum capital contribution determined in accordance with section 9.

6 Determining incremental cost

6.1 Incremental costs are the costs incurred by Vector from augmenting the gas distribution network which Vector would not otherwise face but for the new connection. Incremental cost may relate to:

(a) assets for use only by the connection applicant or consumer and the associated costs (sole use costs); and
(b) wider system assets used by the connection applicant as well as other consumers and the associated costs (shared costs).

6.2 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;
(e) The estimated (or actual) maintenance and operating costs associated with (c) above; and
(f) Augmentation of existing assets to provide the new connection.

6.3 Where incremental cost relates to sole use costs, these are attributed directly to the new connection in the incremental profitability assessment referred to in 5.2.

6.4 Shared costs relating to the 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) The estimated (or the actual) maintenance and operating costs associated with (c) above;
(f) Augmentation of existing assets to provide the new connection; and
(g) The financial cost of bringing forward planned shared gas distribution network investment in order to facilitate the new connection.

6.5 Where the incremental cost relates to shared costs, Vector determines the incremental 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; and
(b) the connection applicant's allocated share of the actual capital expenditure in shared costs required to provide new connection services.

6.6 Where a new connection requires the removal of assets with a useful remaining life and Vector determines such assets can be redeployed elsewhere on the gas distribution network, Vector will include an appropriate consideration in its determination of the incremental cost. This will generally be a credit equal to the replacement cost of the recovered asset.

6.7 The incremental cost will be calculated as the net present value of sole use and shared costs (described above) over the life of the investment using the weighted average cost of capital as the discount rate.

7 Extent of incremental cost and non consumer related augmentation

7.1 Vector may elect to augment the gas distribution network to a greater extent than required by the new connection. This may arise due to the economies of scale of installing new gas distribution network infrastructure and the provision of spare capacity to support further load growth in the future.

7.2 Subject to 7.4 the incremental cost will only include those costs necessary to provide the gas distribution services requested by the connection applicant at the least cost and technically acceptable standard (as determined by Vector). Incremental cost will not include the costs referred to in 7.1.

7.3 If the connection applicant requests augmentation of a higher standard or more costly nature than Vector considers necessary, then the incremental cost may include the greater costs (if any) that may result.

7.4 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.

8 Minimum capital contribution

8.1 Vector incorporates a minimum capital contribution in its incremental profitability assessment. This discourages "inefficient" investment by exposing new connections to a portion of the financial cost of the augmentation and incentivises new connections to size their connection appropriately in order to minimise the cost of the augmentation.

8.2 For residential new connections (explained further in section 11), the minimum contribution is determined by the scheduled prices.

8.3 For commercial and sub-division new connections (explained further in section 11), the minimum capital contribution is set equal to the greater of 10% of the incremental cost or $350.

9 Maximum capital contribution

9.1 Vector incorporates a maximum capital contribution in its incremental profitability assessment. This ensures that the capital contribution will be no greater than the incremental cost of a new connection.

9.2 For residential new connections, the maximum contribution is determined by the scheduled prices.

9.3 For commercial and sub-division new connections the maximum capital contribution is equal to the incremental cost.

10 Incremental revenues under the incremental profitability assessment

10.1 Incremental revenue is forecast by Vector based on the expected life of the new connection assets, typically 50 years. Vector's revenue forecasts are based on Vector's distribution prices, future price adjustments including CPI, regulatory resets and any other price restructuring and the estimated consumption for the consumer.

10.2 Vector will determine the consumption or capacity for a proposed new connection having regard to the consumption or capacity requirements both of similar consumers currently supplied on the gas distribution network as well as information provided by the connection applicant in relation to the new connection. Vector will also take into account whether the new connection has different technical or commercial requirements.

10.3 The incremental revenue will be calculated as the net present value of the expected revenue over the life of the investment using the weighted average cost of capital as the discount rate.

11 Different types and treatments of new connections

11.1 Vector has identified four different types of new connection including: residential, commercial, sub-division and non-standard new connections. Each type has unique characteristics and Vector has a slightly different approach to determining the capital contributions that applies. In each case Vector utilises the same underlying methodology: an incremental profitability assessment with minimum and maximum capital contribution limits.

11.2 The approach to determining the capital contributions for each type of new connection is summarised in table 1 below and explained further in sections 12 to 14.

Table 1, Summary of capital contribution approach for new connection types

<table>
<tr><th>Type</th><th>Minimum capital contribution</th><th>Incremental profitability assessment</th><th>Maximum capital contribution</th><th>Incremental revenue pricing approach</th></tr>
<tr><td>Residential</td><td>Scheduled prices</td><td>Not applicable</td><td>Scheduled prices</td><td rowspan="3">Standard</td></tr>
<tr><td>Commercial</td><td rowspan="2">Greater of 10% of IC or $350</td><td rowspan="2">IC-IR</td><td rowspan="2">IC</td></tr>
<tr><td>Sub-division</td></tr>
<tr><td>Non-standard</td><td>Nil</td><td></td><td></td><td>Non-standard</td></tr>
</table>

12 Capital contributions for residential new connections

12.1 Residential new connections are individual new connections, where the connection is for a private dwelling (intended for occupation mainly as a place of residence) not normally used for any business activity.

12.2 Most residential new connections to Vector's network require a low level of technical input in order to connect each new consumer. Based on this, Vector has standardised new connection prices for residential consumers into a schedule of standard prices. These prices have been determined with consideration of:

(a) A review of the costs of connecting a significant number of historical residential new connections;
(b) The stand alone costs of new connections including gas distribution network alternatives;
(c) The lifetime value of incremental new connections including different installation and usage types;
(d) Consumer demand responsiveness with respect to gas connection costs.

12.3 The schedule standard prices Vector applies to residential new connections are summarised in Table 2.

Table 2, Summary of residential standard schedule new connection prices

Type of residential connection	Price to property boundary	Price from boundary to meter
Vector provides trench in soil	$299	$28/metre
Vector provides trench in rock		$299/metre
Consumer provides trench		Free[1]

13 Capital contributions for commercial new connections

13.1 Commercial new connections are individual new connections that are not residential new connection.

13.2 For commercial new connections, Vector applies the incremental profitability assessment to determine the required capital contribution, subject to the minimum and maximum capital contribution limits.

14 Capital contributions for sub-division new connections

14.1 Sub-division new connections are where the new connection is to connect more than a single new connection. Sub-division new connections are split into two types; small and large.

14.2 Small sub-division new connections are sub-divisions new connections with an incremental cost less than $50k and a total number of new connections less than 10. Large sub-division new connections are sub-division new connections with an incremental cost greater than $50k or a total number of new connections greater than 10.

14.3 For small sub-division new connections, Vector applies the incremental profitability assessment to determine the required capital contribution, subject to the minimum and maximum capital contribution limits.

14.4 For large sub-division new connections Vector requires the connection applicant to pay the maximum capital contribution. Vector then uses the incremental profitability assessment to determine a schedule of rebates that apply as each future new connection within the sub-division connects to Vector's gas distribution network. The rebate schedule typically applies for up to 5 years and provides for an equivalent outcome to an upfront capital contribution except that uncertainty on the completion of the sub-division and the consequent connection of revenue generating consumers sits with the connection applicant. Rebates are subject to the minimum capital contribution limits.

[1] Free for first 50 metres, $20/metre after 50 metres.

15 Capital contributions for non-standard new connections

15.1 The incremental profitability assessment determines capital contributions based on expected future revenues. For non-standard new connections future revenues are not restricted to Vector's published standard prices as Vector is able to determine bespoke non-standard prices for each new non-standard connection.

15.2 The capital contribution for each non-standard consumer is circumstance specific and, depending on the negotiated non-standard price agreed with the consumer the contribution may be nil.

15.3 Vector's determines whether to offer a consumer non-standard pricing using the assessment criteria included as Appendix 2.

16 Adherence to pricing principles

16.1 Vector's capital contribution policy is consistent with the pricing principles published by the Commerce Commission in December 2010. These are included in Appendix 1. In summary the pricing principles require Vector to:

(a) set prices within the subsidy free range (greater than incremental cost and less than stand alone cost);
(b) have regard to the level of available service capacity;
(c) signal the impact of additional usage on future investment costs; and
(d) have regard to consumers' demand responsiveness.

16.2 The incremental profitability assessment coupled with a cap on the minimum and maximum capital contribution ensures that any capital contribution falls within the subsidy free range.

16.3 The attribution of incremental cost in relation to the capacity requirements of the new connection ensures that the capital contribution will have regard to the available service capacity.

16.4 Vector's distribution prices recover the costs of the existing gas distribution network. Vector's incremental profitability assessment means that capital contributions at a minimum recover incremental 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.

17 Use of independent contractors

17.1 In some circumstances the connection applicant may undertake some of the preparatory 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 new gas distribution infrastructure. Preparatory work includes by way of example, trenching and or civil work, reinstatement and laying of duct.

17.2 If the consumer or connection applicant performs some of the preparatory work, then the costs of that work will be excluded from the costs used to determine the capital contribution. Likewise they will be excluded from the RAB and hence the determination of distribution prices.

18 Definitions

Augmentation means the expansion, upgrade, increase, addition to, removal, relocation or enhancement of any part of the gas distribution network which would not otherwise be required but for the 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 gas from the gas distribution network.

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

Gas distribution network means the Vector owned works that are used or intended to be used by Vector to provide gas distribution services.

Gas distribution services means the provision of gas distribution services as defined in the Commerce Act (Gas Distribution Services Input Methodologies) Determination 2010.

Incremental cost (IC) means the costs determined in accordance with section 6.

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

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

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

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

Weighted average cost of capital (WACC) means the Vanilla WACC (75th Percentile) of 7.44% determined by the Commerce Commission in their Cost of capital determination for default price-quality paths for suppliers of gas distribution and gas transmission services, and customised price-quality path proposals made

by Vector Limited and GasNet Limited [2012] NZCC 38, on 20 December 2012, applying to Vector's gas distribution network for the first DPP regulatory period.

Appendix 1 Pricing principles

1) Prices are to signal the economic costs of service provision, by-
   a) being subsidy free, that is, 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;
   b) having regard, to the extent practicable, to the level of available service capacity; and
   c) signalling, to the extent practicable, the effect of additional usage on future investment costs.
2) Where prices based on 'efficient' incremental costs would under-recover allowed revenues, the shortfall is made up by prices being set in a manner that has regard to consumers' demand responsiveness, to the extent practicable.
3) Provided that prices satisfy (1) above, prices are responsive to the requirements and circumstances of consumers in order to-
   a) discourage uneconomic bypass; and
   b) allow negotiation to better reflect the economic value of services and enable consumers to make price/quality trade-offs or non-standard arrangements for services.
4) Development of prices is transparent, promotes price stability and certainty for consumers, and changes to prices have regard to the effect on consumers.

Appendix 2 Non-standard assessment criteria

This appendix describes the policy and guidelines Vector uses on its gas distribution networks to determine whether a consumer is subject to published standard prices or non-standard prices.

In certain circumstances Vector's published standard prices may not adequately reflect the actual costs of supplying a consumer or address the commercial risks associated with supplying that consumer.

In these circumstances Vector uses either a non-standard Network Connection Agreement (NCA) or other similar commercial arrangements. The NCA allows for tailored pricing and commercial arrangements to be established between Vector, retailers and consumers. This ensures that customised or unusual circumstances are addressed only for those consumers that they affect. Non-standard connection agreements are generally only applied to commercial consumers.

Guidelines

Generally if a consumer does not meet at least one of the assessment criteria, they will be subject to published standard distribution prices. Meeting one or more of the assessment criteria does not mean that a non-standard arrangement will apply, merely that the consumer may be further reviewed to determine whether standard pricing and standard contractual terms are suitable given the consumer's individual circumstances.

Whilst the assessment criteria provide a useful guideline on whether non-standard prices are likely to apply, Vector reserves the right to use discretion at any time on whether to apply non-standard pricing and or commercial arrangements on a case by case basis.

Gas non-standard assessment criteria

Consumers may be assessed for non standard terms or pricing if they meet one of the following criteria:

(a) The total annual quantity of gas consumed or forecast to be consumed per annum (AQ) is greater than 20TJ; or
(b) The AQ is between 10TJ to 20TJ and the consumer's point of connection to Vector's gas distribution network is within 2km of a gas transmission delivery point or a gas distribution network not owned or operated by Vector; or
(c) It can be demonstrated that alternative sources of energy (including but not limited to wood, coal or electricity) that meet the consumer's requirements are technically, operationally and commercially viable and have a reasonable prospect of being able to be successfully implemented.