



Company Policy

PF-025

Commercial Terms for New and Altered Customer Connections

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1. PURPOSE

This document states the commercial terms PowerNet Limited ("PowerNet") applies for changes to its Networks, for both new connections and for alterations to existing connections.

2. SCOPE

The standard terms apply to the broad categories of connections. More specific consideration applies for other or larger connections which do not fit within these categories. The terms for any particular new connection proposal may be adjusted by PowerNet where it is considered or agreed that economic factors warrant an alternative approach.

3. REFERENCES

PowerNet Installation Connection Standard
PO-70 Work Allocation to Alliance and Independent Contractors
Schedule of Network Contributions for Group ICPs

4. DEFINITIONS

Contract Supply Capacity

The maximum electrical capacity in kVA chosen by the customer to be delivered from the Network to the ICP. Line charges are based on this capacity.

Customer Contribution

An up-front lump-sum payment to cover the uneconomic cost of any Network extension/upgrade for the requested connection, determined by the Economic Calculation.

The Customer Contribution is effectively a one-off line charge covering the Network extension costs that will not be recovered from future line charges.

Economic Calculation

The financial calculation to determine any Customer Contribution, relating to a new connection, or increased capacity on an existing connection. It involves evaluating the estimated costs of Network extensions or upgrades specific to the connection against the Network Contribution for the new Contract Supply Capacity. If the estimated cost exceeds the Network Contribution the customer will be asked to pay the excess, or uneconomic investment – the Customer Contribution.

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Group ICPs

The majority of connections for domestic and smaller commercial customers are classified according to standard Contract Supply Capacity steps, or groups:-

- 1 phase up to 20kVA
- 3 phase up to 100kVA.

The Contract Supply Capacity is controlled by the service (ICP) fuse size.

ICP

Installation Control Point – A formal term in the New Zealand electricity industry for an electrical connection to provide electricity to a customer's premises from the Network.

Every ICP in New Zealand is allocated a nationally unique identifier called the ICP Number.

ICP is the point at which a consumer is supplied with electricity and at which the supply of electricity may flow between the Local Network and an Installation, where the Installation interconnects with an isolation device owned or controlled by the Distributor.

Individual ICPs

Electricity connections, generally with a Contract Supply Capacity in excess of 100kVA, where line charges are individually calculated based on the specific location of the connection and its actual electricity usage.

The Contract Supply Capacity is monitored through metering information indicating the loading actually taken at the ICP.

Network

The system for the conveyance of electricity including all fittings comprising that system owned by Electricity Invercargill Limited (EIL), The Power Company Limited (TPCL), OtagoNet or Electricity Southland Limited (ESL) and managed by PowerNet.

Network Contribution

The dollar figure the Network has determined as being the maximum amount that would give an economic return from future line charges for the given Contract Supply Capacity.

Subdivision

An existing land parcel being split into two or more new land parcels.

5. POLICY

5.1 Management

PowerNet manages the electricity Networks owned by Electricity Invercargill Limited, Electricity Southland Limited, and The Power Company Limited and this policy applies to new and altered connections on all these Networks.

5.1.2 This policy sets out the basis on which the Network owner will contribute towards Network extensions and upgrades of which it subsequently takes full ownership and control.

5.1.3 PowerNet's Networks are constantly growing, due to demand for new connections and increased loads at existing connections. To be equitable to both new and existing customers, it is important that the resulting reinforcement and Network extensions are funded appropriately. This document outlines the economic considerations behind the Network Contribution and the related process used to calculate any Customer Contribution.

5.1.4 PowerNet endeavours to facilitate new connections and increased capacity whenever requested. However, there may be situations where it is imprudent, environmentally unsound or physically impracticable to provide supply or increased capacity, and PowerNet reserves the right to decline, to provide new connections or increased capacity in these situations. If an application is declined on these grounds the reasons will be advised in writing.

5.1.5 In addition to providing the Network owner a return on its investment line charges recover the costs of owning, operating and maintaining the electricity Networks. They are based on the following components of Network costs:

Transmission	Transpower national grid costs
Subtransmission	PowerNet 66kV and 33kV lines and zone substations
Distribution	PowerNet 22kV, 11kV and 400V lines and Distribution Substations
Fixed charge per customer	PowerNet operational costs including the 24/7 Control Room/Call Centre

5.1.6 The Network Contribution will vary depending on the risk of stranded assets or surplus Network capacity. This will be applied as a variation in the term and for most commercial customers will be between three and 10 years. The term for new residential supply is 10 years.

5.2 Application

Where a new connection, or increased capacity on an existing connection, requires an extension or upgrade to the Network, an assessment will be made to determine whether the work is solely for that customer's benefit or there is any shared benefit to the Network. If there is a shared benefit, the estimated costs for the work will be apportioned between the customer and the Network on a pro rata basis relating to the benefits. This will establish a Network cost assigned to the customer to go into the Economics Calculation.

- 5.2.1 The cost of any Network extension within the customer's private property solely for the supply of the customer is fully chargeable to the customer, and will not be offset by any Network Contribution.

An example is the 11kV line/cable from the roadside to the location of the transformer within the customer's property.

A customer is entitled to engage an independent contractor to construct a Network extension within their private property. The details of this process are contained in PowerNet Policy – PO-70 Work Allocation to Alliance and Independent Contractors.

- 5.2.2 The Network Contribution towards any Network extension/upgrade for a new or upgraded connection is conditional on the customer meeting their obligations for retention of the supply capacity, as per clause 7.6 or 8.2.

- 5.2.3 Where a new connection is initially taken as a builders supply at a Contract Supply Capacity lower than that for the final connection, and a firm application is lodged for the final connection Contract Supply Capacity, the Economic Calculation will be based the construction costs and Network Contribution for the final connection.

All work relating to changing from the initial to the final connection arrangements and Contract Supply Capacity will be at the customers cost.

- 5.2.4 A connection that is taken for less than 12 months then ceased, eg temporary construction supply, will not attract any Network Contribution. The customer will charged the full cost of establishing the connection and removing it. Recoverable and reusable materials will be charged at a portion of their value.

- 5.2.5 All Customer Contributions and any other charges will be invoiced and must be paid as follows:

- 50% deposit with acceptance of quote, prior to commencement of construction of any Network assets;
- For individual connections the remaining 50% on completion;
- For Subdivisions the remaining 50% prior to livening.

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5.3 Group ICPs

5.3.1 To standardise and simplify the application of line charges, they are generally applied equivalently to groups of connections according to their Contract Supply Capacity. Therefore the Network Contributions are also standardised for Group ICPs.

5.3.2 Transmission and subtransmission charges are averaged across the Network are not taken into account with respect to any Network Contribution.

5.3.3 For new connections and upgrades, the Network Contribution relates to the future income from the distribution component of the line charges.

5.3.4 The cost of all Network extensions on road reserve and transformer capacity required to provide the new or increased supply are included in the Economic Calculation.

If an existing transformer is to be removed for replacement with another, a credit value equal to the replacement (new) cost of the out-going transformer will be allowed. If the out-going transformer is a non-standard size the credit value will be for the next largest standard size; eg if removing a 10kVA transformer the credit will be based on a new 15kVA.

5.3.5 The Network Contributions for new capacities for Group ICPs are reviewed each year.

5.3.6 The customer must remain on the Contract Supply Capacity for at least 12 months.

If any change is requested within that period the original Economic Calculation will be reviewed, as follows:

- For a downgrade the Network Contribution for the new Contract Supply Capacity will be used and is likely to result in Customer Contribution. If the downgrade results in under-utilised Network equipment such that it is appropriate to remove or replace it this work will generate another Economic Calculation, but with no further Network Contribution;
- For an up-grade a specific Economic Calculation will be used to determine any new Customer Contribution. The Network Contribution applied will be the difference between that for the original application and that for the newly requested Contract Supply Capacity.

5.3.7 The schedule of Network Contributions is available from PowerNet.

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5.4 Individual ICPs

5.4.1 Individual line charges have separate components covering transmission, sub-transmission and distribution.

- The Transmission Component is based on the Transpower charges to PowerNet. A Customer Contribution may be required if extra capital investment by Transpower is required.
- The Sub-Transmission Component of the line charge is based on the costs associated with PowerNet's substation normally supplying the connection and the sub-transmission Network costs relating to supply to that zone substation.

If the projected coincident demand of the new connection is more than 10% of the available subtransmission capacity at the zone substation and the existing demand at the zone substation prior to the connection of the new load is in excess of 80% of the firm capacity at that zone substation, then a Customer Contribution may be required towards the expansion of the subtransmission Network. The Network will refund this contribution at an agreed rate per kVA of demand increase on that zone substation to the limit of the original Customer Contribution as additional new installations are connected to the zone substation. No refunds will take place after a period of 10 years from when the initial Customer Contribution is received.

- The Distribution Component of line charges provides return against the Network's maintenance and capital costs. The Network Contribution is based on only the capital portion of the Distribution Component of the line charge.

All Network distribution line or cable extensions on road reserve are included in the Economics Calculation but the distribution transformer is excluded. The transformer is fully recovered within the distribution component of the line charges, or if the supply is discontinued the transformer is recoverable.

Each component will have its own Economic Calculation and a Network Contribution relating to the Network costs for any extensions/upgrades of that component.

5.4.2 Customers are also required to enter into a Capacity Guarantee Agreement which provides some assurance to PowerNet that it will recover its investment and costs for at least ten years.

Further explanation of Capacity Guarantee Agreements is contained in Appendix A.

5.5 Altered Connections and Downgrades

5.5.1 When a customer initiates an alteration to a connection arrangement for their own reasons, eg relocation or change of mains, at the same or downgraded Contract Supply Capacity, the work will be fully at the customer's cost.

5.5.2 For downgraded Contract Supply Capacity with no other connection alteration:

- Simply replacing fuse links in existing fuse carriers will be carried out at Network cost;
- If the existing fusing equipment must be changed to accommodate the new fuse size the work will be fully at the customer's cost.

5.6 Subdivisions

5.6.1 A standard Economic Calculation will be used to determine any Customer Contribution payable by the developer relating to Network extensions/upgrades for providing connection points for a Subdivision

Network design costs relating to reticulating the Subdivision will be included in the Economic Calculation.

5.6.2 Residential Subdivisions:-

The Network Contribution per section will be 50% of the standard residential Network Contribution per section.

5.6.3 Commercial Subdivisions:-

The Network Contribution per section will be 50% of the Network Contribution for a non-domestic Contract Supply Capacity, as agreed with the developer.

5.6.4 Final ICP connections to infrastructure installed by the developer:-

- Connection of ICP mains for a Contract Supply Capacity consistent with the original design level for the Subdivision will be carried out with no further Economic Calculation.
- Any alteration to the Network already installed required for a specific connection at, or below, original design level Contract Supply Capacity will be fully at the customers cost.
- For a connection at a Contract Supply Capacity greater than the original design level, where extension or enhancement to the Network already installed is required, a specific Economic Calculation will be used to determine any Customer Contribution. The Network Contribution applied will be the difference between that for the original design level and that for the requested Contract Supply Capacity.

5.6 Embedded Networks

5.6.1 In general all conditions and arrangements for embedded Networks will be similar to Individual ICPs.

This includes:-

- Contract Supply Capacity in steps equivalent to the PowerNet standard transformer sizing;
- Requirement for a Capacity Guarantee.

5.7 Monitoring, Reassessments and Refunds

5.7.1 Any Network extension or upgrade that has been subject to a Customer Contribution will be monitored for a period of 10 years. If a new customer connection will gain benefit from that extension/upgrade then the original Customer Contribution will be reassessed.

5.7.2 Reassessments will be based on a 10 year straight-line depreciation of the original Customer Contribution, from the date of completion. There will be no reassessments after a period of 10 years.

5.7.3 Reassessments will be based on a 10 year straight-line depreciation of the original Customer Contribution, from the date of completion. There will be no reassessments after a period of 10 years.

5.7.4 Any refund resulting from a reassessment of the original Customer Contribution will only be paid to the original customer providing they are still taking supply at the ICP relating to the original Customer Contribution.

5.7.5 The new customer may be charged a Customer Contribution towards the original extension/upgrade, plus a Customer Contribution towards any further extension/upgrade for their own connection.

5.7.6 An outline of the formula used to calculate reassessments is contained in Appendix B.

6. RECORDS

Nil

7. APPENDICIES

Appendix A – Capacity Guarantee Agreements

Appendix B – Reassessment of Customer Contribution – Calculation Guide

Appendix A – Capacity Guarantee Agreements

1. Introduction

When a consumer requests a new connection or an upgrade to an existing connection on a PowerNet Network there may be a need to invest capital on Network reinforcement or extension now or in the future. The amount of this capital investment relating to the Network Contribution towards the connection will be recovered through on-going annual line charges. The average life of the Network assets is 40 years therefore the recovery of the capital investment is also calculated to take place over a similar period.

There is a risk that if the customer ceased the connection or requests a downgrade in Contract Supply Capacity PowerNet might not recover its original investment. Therefore PowerNet has a policy of asking the customer to provide a shareholder guarantee covering the Network investment due to the connection for a period of 10 years – called a Capacity Guarantee Agreement.

A Capacity Guarantee is a formal contractual agreement signed by PowerNet and the customer/shareholder and enables PowerNet to recover the balance of its investment if the Installation Owner wishes to reduce the Contract Supply Capacity before 10 years has elapsed.

2. Application

A Capacity Guarantee Agreement will be required in the following situations:

- A new connection requiring a Contract Supply Capacity of greater than 100kVA;
- An existing installation increasing Contract Supply Capacity by greater than 100kVA.

The Capacity Guarantee Agreement will be applied in addition to any Customer Contribution if the distribution system has to be significantly extended beyond the economic value of the connection and there is an unacceptable risk to PowerNet of stranded assets.

The term of the Capacity Guarantee Agreement will be 10 years.

The customer has a choice of two options for how a Capacity Guarantee may be applied.

Lump Sum

In this case if the connection is disconnected or the Contract Supply Capacity is downgraded a lump sum payment may be requested to offset the return on the investment not yet recovered through the line charge. The agreement document will contain a table of figures which are the maximum lump sum figures that could be charged in each year of the 10 year life of the agreement.

If the agreement is invoked the actual level of charge will be calculated based on specific investment on the Network specifically relating to the particular connection. PowerNet will assess the relevant capital expenditure and determine how much remains unrecovered by the ceased or downgraded connection. If no unrecovered expenditure had been incurred no payment will be required.

If the connection remains at its Contract Supply Capacity for at least 10 years the agreement will expire, ie no payments will be required.

10% Premium

The alternative option is to pay a premium on top of the standard line charge each year for 10 years. That payment is 10% of the lump sum figure for the same year. This is effectively a buy-out of the guarantee by the customer. If the connection were to cease or the Contract Supply Capacity downgrade at any time no further payment would be required and the Capacity Guarantee will terminate.

3. Process

Once a firm application for supply is received by PowerNet the scope of the required Network extensions will be determined and costed. Any initial contribution towards the Network costs will be calculated, as well as the figures for the Capacity Guarantee, and presented to the consumer. Construction of Network may begin once the consumer has given written acceptance of the initial contribution. Once they make their choice of Lump Sum or 10% Premium the guarantee documents are prepared and sent to the consumer for signing. Network construction may be carried out while these signatures are being finalised, but the final connection will only take place once the capacity guarantee documents have been signed.

4. Example

An example of how these options work is shown in the following table. In this example, if the Lump Sum Guarantee option is chosen and the capacity is reduced after 3 years, a lump sum payment of up to a maximum of \$12,024.00 may be required (to offset our lost return on any investment that would normally have been recovered through the line charges for the remaining 7 years).

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If the 10% premium option is chosen the initial payment of \$1,612.00 is required at the date the new supply is taken. On the following 1 October the second payment of \$1,463.00 will be required, with the subsequent annual payments due on 1 October for the following years. If the capacity is subsequently reduced, or the supply point disestablished there will be no further payments required under this agreement.

Capacity Guarantee Example		
Years	Lump Sum Guarantee	10% Premium
0	\$16,125	\$1,612
1	\$14,626	\$1,463
2	\$13,263	\$1,326
3	\$12,024	\$1,202
4	\$10,898	\$1,090
5	\$9,874	\$987
6	\$8,943	\$894
7	\$8,097	\$810
8	\$7,328	\$733
9	\$6,629	\$663
10	\$5,993	\$599

Appendix B – Reassessment of Customer Contribution – Calculation Guide

The calculation below is based on one original customer having previously paid a Customer Contribution towards a Network extension and one more customers now taking supply, or needing to extend, from it.

Inputs:

Co is Customer Contribution paid by the Original Customer
Yn is Number of years since Original Customer took supply
(If 10 or greater there will be no reassessment)
Nc is Network Contribution to the New Supply
Ce is Chargeable Capital Cost of Extra Work for New Connection

Calculation Steps:

1 Cd = Depreciated Contribution Value
= $Co \times [(10 - Yn) / 10]$

2 Cp = New Contribution to Original Supply Point Required per
Customer
= $Cd / 2$

3 Ro = Refund to Original Customer
= Cp

Cn = Contribution required from the New Customer
= $Cp + Ce - Nc$

The situation is more complex when there are multiple customers who took the original supply on a Network extension at different times or when a customer wants to take supply part way along a Network extension. These same principles apply, but proportions and/or ratios are used to spread across the number of customers or to split off the portion of the extension being reused.