



## **Information Disclosure 2019**

# **Supporting Information for Related Party Transactions**

August 2019

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## Glossary of terms

AEL	Alpine Energy Limited
NCL	NETcon Limited
EDB	Electricity Distribution Business
GXP	Grid Exit Point
RAB	Regulatory Asset Base
Capex	Capital expenditure
Opex	Operational expenditure
HV	High Voltage
AMP	Asset Management Plan
RMU	Ring Main Unit
kV	Kilovault
O/H	Overhead
FTE	Full Time Equivalent

# Executive Summary

Related party transactions have been given no terms and conditions that would be favourable to transactions conducted at arm's length. This has been standard practice prior to the Information Disclosures and Related Parties Transactions and over the years AEL has continued to enhance pricing and quality outcomes that are fit for purpose, efficient and enduring for the long term benefits of consumers.

# Introduction

## Purpose

This summarises AEL's basis of valuation of its related party transactions, with the purpose of demonstrating that it has complied in all material respects with the related party arm's-length valuation rule (ID clause 2.8.1(1)(d)):

- Capex – see IM clauses 2.2.11(1)(g) and 2.2.11(5)
- Opex and sales – see ID clause 2.3.6 \*

This information provided supports the requirements as outlined in Electricity Distribution Information Disclosure Determination 2012 published on 3 April 2018 (Disclosure) under sections 2.3.8 to 2.3.12.

\* [https://comcom.govt.nz/data/assets/pdf\\_file/0032/78755/Related-parties-requirements-Workshop-slides-21-March-2018.pdf](https://comcom.govt.nz/data/assets/pdf_file/0032/78755/Related-parties-requirements-Workshop-slides-21-March-2018.pdf)

The requirements outlined (in **boldface**) refer to both the "Disclosure" and "Guidance" with the relevant responses from AEL.

For reference these are summarised below:

2.3.8	<i>Within 5 months after the end of each disclosure year, if an EDB has had related party transactions involving a procurement from a related party during that disclosure year, the EDB must publicly disclose a diagram or a description that shows the connection between the EDB and the related parties with which it has had related party transactions in the disclosure year, including for each of those related parties-</i>  <i>(1) the relationship between the EDB and the related party;</i>  <i>(2) the principal activities of the related party; and</i>  <i>(3) The total annual expenditure incurred by the EDB with the related party.</i>
2.3.9	<i>An EDB shall not be required to comply with clauses 2.3.10-2.3.16 and 2.8.2-2.8.5 if-</i>  <i>(1) the sum of its capital expenditure and operational expenditure in the disclosure year is less than \$20 million; or</i>  <i>(2) the proportion of the sum of its capital expenditure and operational expenditure accounted for by related party transactions is less than 10% in the disclosure year.</i>
2.3.10	<i>Subject to clause 2.3.9, within 5 months after the end of each disclosure year, if an EDB has had related party transactions involving a procurement from a related party during that disclosure year, the EDB must publicly disclose –</i>  <i>(1) a summary of its current policy in respect of the procurement of assets or goods or services from any related party; or</i>



	<i>(2) a summary of alternative documentation which is equivalent to a procurement policy in respect of the procurement of assets or goods or services from any related party.</i>
<i>2.3.11</i>	<p><i>Subject to clause 2.3.9, within 5 months after the end of each disclosure year, if an EDB has had related party transactions involving a procurement from a related party during that disclosure year, the EDB must disclose to the Commission-</i></p> <p><i>(1) its current policy in respect of the procurement of assets or goods or services from any related party; or</i></p> <p><i>(2) alternative documentation which is equivalent to a procurement policy in respect of the procurement of assets or goods or services from any related party. Electricity Distribution Information Disclosure Determination 2012 (consolidated April 2018)</i></p>
<i>2.3.12</i>	<p><i>Subject to clause 2.3.9, within 5 months after the end of each disclosure year, if an EDB has had related party transactions involving a procurement from a related party during that disclosure year, the EDB must publicly disclose-</i></p> <p><i>(1) a description of how the EDB applies its current policy for the procurement of assets or goods or services from a related party in practice;</i></p> <p><i>(2) a description of any policies or procedures of the EDB that require or have the effect of requiring a consumer to purchase assets or goods or services from a related party that are related to the supply of the electricity distribution services;</i></p> <p><i>(3) subject to sub clause (5), at least one representative example transaction from the disclosure year of how the current policy for the procurement of assets or goods or services from a related party is applied in practice;</i></p> <p><i>(4) for each representative example transaction specified in accordance with sub clause (3), how and when the EDB last tested the arm's-length terms of those transactions; and</i></p> <p><i>(5) separate representative example transactions where the EDB has applied the current policy for the procurement of assets or goods or services from a related party significantly differently between expenditure categories.</i></p>
<i>2.3.13</i>	<p><i>Subject to clause 2.3.9, within 5 months after the end of each disclosure year, where an EDB has had related party transactions involving a procurement from a related party during that disclosure year, the EDB must publicly disclose a map of its electricity distribution service territory, which includes-</i></p> <p><i>(1) subject to clause 2.3.15, a brief explanatory description of the 10 largest forecast operational expenditure projects in the AMP planning period and the likely timing, value, and location of the projects;</i></p>

	<p>(2) <i>subject to clause 2.3.15, a brief explanatory description of the 10 largest forecast capital expenditure projects in the AMP planning period and the likely timing, value, and location of the projects;</i></p> <p>(3) <i>subject to clause 2.3.16, a brief explanatory description of possible future network or equipment constraints and their location, where the responses to the constraints would involve one of the 10 largest future operational expenditure projects in the AMP planning period; and Electricity Distribution Information Disclosure Determination 2012 (consolidated April 2018)</i></p> <p>(4) <i>subject to clause 2.3.16, a brief explanatory description of possible future network or equipment constraints and their location, where the responses to the constraints would involve one of the 10 largest future capital expenditure projects in the AMP planning period</i></p>
<b>Cost allocations</b>	
2.30	<i>The cost allocation rules split shared costs between regulated and unregulated activities for regulatory purposes. For example, common operating costs (e.g., expenses for a head office) and commonly used assets (e.g. poles which carry both electricity and fibre) have their costs shared between regulated and unregulated services.</i>
2.31	<i>Sharing of services can produce cost efficiencies. A purpose of cost allocation is to ensure these efficiencies are effectively shared with consumers. The cost allocation provisions look at the splitting of shared costs between unregulated and regulated activities</i>

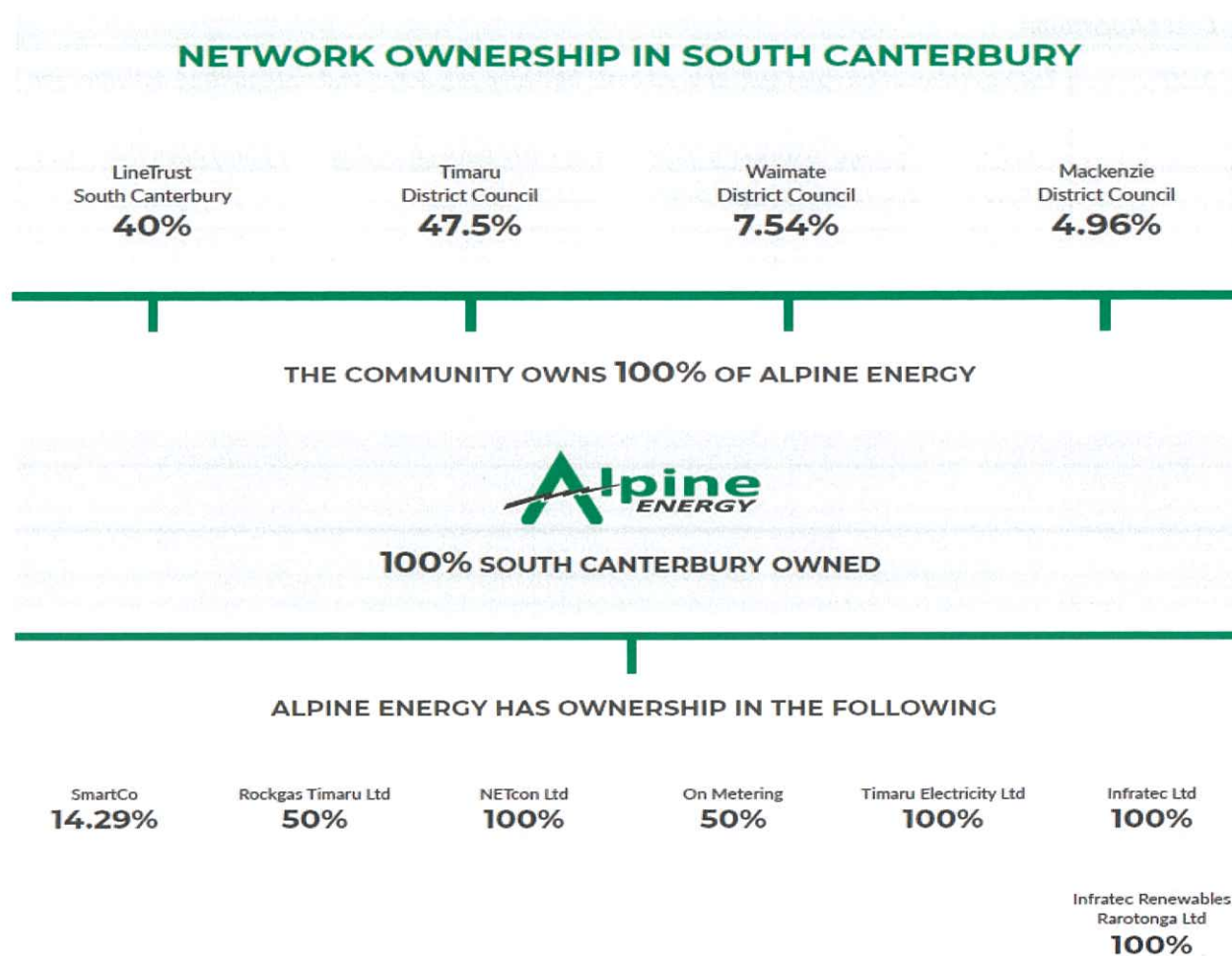
## Disclosure 2.3.8

### Company Structure

*Disclosure 2.3.8: Within 5 months after the end of each disclosure year, if an EDB has had related party transactions involving a procurement from a related party during that disclosure year, the EDB must publicly disclose a diagram or a description that shows the connection between the EDB and the related parties with which it has had related party transactions in the disclosure year, including for each of those related parties-*

### Disclosure 2.3.8 (1)

*(1) the relationship between the EDB and the related party;*



The above diagram is available at <https://www.AEEnergy.co.nz/corporate/about-us/ownership>



## Disclosure 2.3.8 (2)

### (2) the principal activities of the related party; and

	<p>LineTrust South Canterbury was established in 1992, with the resettling of the South Canterbury Power Trust. It holds 40% of the shares in AEL, who owns the electricity lines in the South Canterbury region.</p>
	<p>Timaru District Council is a 47.5% shareholder in AEL. The council provides infrastructure services for ratepayers of the wider Timaru district.</p>
	<p>Waimate District Council is a 7.54% shareholder in AEL. The council provides infrastructure services for the ratepayers of the Waimate district.</p>
	<p>Mackenzie District Council is a 4.96% shareholder in AEL. The council provides infrastructure services for the ratepayers of the Mackenzie District.</p>
	<p>NCL is a wholly-owned subsidiary of AEL. NCL constructs and maintains substations, overhead and underground lines, and associated equipment for AEL. It boasts a modern fleet, fit for purposes facilities and experienced and committed employees.</p>
	<p>Infratec and Infratec Renewables Rarotonga are wholly owned subsidiaries of AEL. Infratec specializes in the design, construction, and maintenance of 'disruptive technologies' in the electrical supply industry, such as, photovoltaic generation and battery storage solutions. The majority of Infratec's work to date has been offshore. Ownership moved to Alpine Energy during the financial year.</p>

	Rockgas provides bottled gas to the South Canterbury region. During the disclosure period, AEL provided limited accounting services to the business.
On Metering Limited	On Metering is an advance metering equipment provider based in North Canterbury. No related party transactions were incurred during the disclosure period.
	SmartCo is a joint venture company which serves more than 250,000 urban and rural consumers across New Zealand. It is owned by six EDBs. SmartCo is the smart metering provider of services to consumers via electricity retailers.

#### Timaru Electricity Limited

This company is currently dormant.

### Disclosure 2.3.8 (3)

#### **(3) The total annual expenditure incurred by the EDB with the related party.**

Details of the annual expenditure is outlined in Schedule 5b of the Information Disclosures 2019.

The annual expenditure with the related parties is summarised below:

	\$'000
NCL	\$ 16,044
Timaru District Council	\$ 28
Waimate District Council	\$ 18
Mackenzie District Council	\$ 17
Total	\$ 16,106

## Disclosure 2.3.9

### Thresholds for disclosure

**Disclosure 2.3.9** An EDB shall not be required to comply with clauses 2.3.10-2.3.16 and 2.8.2-2.8.5 if-

#### Disclosure 2.3.9 (1)

**(1) the sum of its capital expenditure and operational expenditure in the disclosure year is less than \$20 million; or**

A full disclosure is required as AEL's total capital and operational expenditure exceed the \$20 million threshold as follows:

Year	Description	\$'000
2019	Capex as per ID Schedule 6a (i)	14,499
2019	Opex as per ID Schedule 6b (i)	18,296
	Total	32,795
	De-minimus limit ID determination (2.3.9 (1))	20,000

#### Disclosure 2.3.9 (2)

**(2) the proportion of the sum of its capital expenditure and operational expenditure accounted for by related party transactions is less than 10% in the disclosure year.**

The sum of the Capex and Opex is in excess of 10% of the total expenditure. An independent assessors report is required as the percentage thresholds are above 65%.

Year	Description	Related party expenditure \$'000	Total \$'000	%	Requirement for independent report
2019	Capex as per ID Schedule 5b(1) and 6a(i)	10,952	14,499	76%	65%
2019	Opex as per ID Schedule 5b(1) and 6b(i)	5,093	18,296	28%	65%
	Total	16,045	32,795	49%	65%

Refer to [https://comcom.govt.nz/data/assets/pdf\\_file/0025/78703/Electricity-distribution-information-disclosure-determination-2012-consolidated-3-April-2018.pdf](https://comcom.govt.nz/data/assets/pdf_file/0025/78703/Electricity-distribution-information-disclosure-determination-2012-consolidated-3-April-2018.pdf)

## Disclosure 2.3.10

### Procurement Practices

*Disclosure 2.3.10 Subject to clause 2.3.9, within 5 months after the end of each disclosure year, if an EDB has had related party transactions involving a procurement from a related party during that disclosure year, the EDB must publicly disclose:*

#### Disclosure 2.3.10 (1)

**(1) a summary of its current policy in respect of the procurement of assets or goods or services from any related party; or**

AEL procured goods and services on the following base:

- 1) Alliance Agreement with regards to network related Capex and Opex
- 2) Alliance Agreement and large value assets are acquired directly from suppliers
- 3) A mix of the Alliance Agreement and external contractors used by both AEL and NCL.
- 4) Goods and services are procured directly from external suppliers.

For the period under review procurement of services from NETcon was on the basis of provisions within the Alliance Agreement. During 2017, Alpine commenced drafting a new procurement policy and service agreement in preparation for retiring the Alliance engagement model in favour of a more orthodox contestable engagement model.

Provisions for procurement are detailed in section 16<sup>1</sup> and schedule 8<sup>2</sup>, within the Alliance Agreement. Our Alliance Agreement was based on the Alliancing model formulated by Mr Jim Ross<sup>3</sup>

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<sup>1</sup> Section 16 - Policies, Procedures and Management & Control Systems); clause 16.6

<sup>2</sup> Services

<sup>3</sup> Mr Jim Ross, Project Control International Pty Ltd; [Alliancing](#)



## Disclosure 2.3.10 (2)

**(2) a summary of alternative documentation which is equivalent to a procurement policy in respect of the procurement of assets or goods or services from any related party.**

Work was issued to NCL under the Alliance Agreement which was in place for the year under review. There are a number of reasons for using the Alliance Agreement, the central reason being that there are a limited number of alternative contractors in South Canterbury, with the closest in comparison to NCL, being approximately 100km away in Ashburton. Certain Information Disclosure classifications of work, require 24/7 response, such as corrective maintenance, asset replacements (Opex) and service interruptions and emergencies.

When sourcing materials for major projects, large equipment is purchased from suppliers based on standardised specifications, which are specific to AEL's network requirements. There are a limited number of suppliers who provide this type of equipment (e.g. ETEL, transformers). These are held in stock and issued when required.

### Current practice summary

Category of work	Alliance Agreement	Large value assets procured directly from suppliers	Additional procurement practices (FY18/19)
Expenditure on Network Assets:			
Consumer connection	✓	✓	Note two contractor tender quotes are obtained and the customer awards contract.
System growth	✓	✓	
Asset replacement and renewal (Capex)	✓	✓	
Asset relocations	✓	✓	
Quality of supply	✓	✓	
Other reliability, safety and environment	✓		External contractors utilised by both AEL and NCL
Expenditure on non-regulated assets		✓	Majority of services are sourced directly from external suppliers



Category of work	Alliance Agreement	Large value assets procured directly from suppliers	Additional procurement practices (FY18/19)
Operational expenditure:			
Asset replacement and renewal (Opex)	✓		
Routine and corrective maintenance and inspection	✓		
Vegetation management	✓		External contractors utilised by both AEL and NCL.
Service interruptions and emergencies	✓		
Business support			Internal to AEL
System operations and network support			Internal to AEL

## DISCLOSURE 2.3.12

*Subject to clause 2.3.9, within 5 months after the end of each disclosure year, if an EDB has had related party transactions involving a procurement from a related party during that disclosure year, the EDB must publicly disclose-*

### Disclosure 2.3.12 (1)

*(1) a description of how the EDB applies its current policy for the procurement of assets or goods or services from a related party in practice;*

Refer to 2.3.10.

### Disclosure 2.3.12 (2)

*(2) a description of any policies or procedures of the EDB that require or have the effect of requiring a consumer to purchase assets or goods or services from a related party that are related to the supply of the electricity distribution services;*

Note that there are no **requirements** for a consumer to purchase assets or goods or services from a related party that are related to the supply of electricity distribution services. Consumer purchased assets or good or services are defined in the following categories of work:

- Consumer Connections
- Ongoing vegetation management

In both of the above circumstances, the consumer **elects** which contractor to appoint.

The only exception to the above is where the consumer declares a “No Interest” in ongoing vegetation management. In these circumstances the procurement process for a First Trim applies.

### Disclosure 2.3.12 (3)

*(3) subject to sub clause (5), at least one representative example transaction from the disclosure year of how the current policy for the procurement of assets or goods or services from a related party is applied in practice;*

The following representative example transactions from NCL have been provided:

Category of work	Alliance Agreement	Large value assets procured directly from suppliers	Example provided	Reference
Expenditure on Network Assets:				
Consumer connection	✓	✓	Ohau Road high voltage from Four Lakes subdivision	2.3.12 (3) – A
Asset relocations	✓	✓	Please refer to example above, process is equivalent	
Quality of supply	✓	✓	High Street Waimate - Defective equipment replacement of pole mounted HV fuses, links, airbrake switches	2.3.12 (3) – B
Asset replacement and renewal (Capex)	✓	✓	Project code A100397. Bradshaw's Road Conductor Replacement. Fault job – Transformer B929	2.3.12 (3) – C 2.3.12 (3) - D
System growth	✓	✓	Please refer to examples above, process is equivalent	

Category of work	Alliance Agreement	Large value assets procured directly from suppliers	Example provided	Reference
Operational expenditure:				
Asset replacement and renewal (Opex)	✓		Chorus pole replacement program	2.3.12 (3) - E
Routine and corrective maintenance and inspection	✓		Please refer to example above, process is equivalent	
Vegetation management	✓		First Trim Second Trim	2.3.12 (3) – F 2.3.12 (3) – G
Service interruptions and emergencies	✓		Bird strike – Totara Valley	2.3.12 (3) - H



## Disclosure 2.3.12 (4)

**(4) for each representative example transaction specified in accordance with sub clause (3), how and when the EDB last tested the arm's-length terms of those transactions; and**

AEL formalised its procurement policy in late March 2019 and replaced the Alliance Agreement with a Master Services Agreement, which will also be used for prospective contractors who wish to apply to work on AEL's Network. In addition to the above, the labour rates charged by NCL were benchmarked against similar contracting companies in

**Daily Rates Comparison - Distribution Network Contractors**

	NETcon		Contractor A		Contractor B		Contractor C		Contractor D	
	Hour	Unit	Hour	Unit	Hour	Unit	Hour	Unit	Hour	Unit
Project Manager	\$102.50		\$105.00							
Project Supervision	\$102.50		\$100.00							
Project Engineer										
Line Mechanic	\$74.00		\$75.00		\$92.00		\$76.00		\$85.00	
Cable Joints	\$74.00									
Live Line Mechanic	\$80.00		\$80.00		\$95.00					
Electrician	\$85.00									
Electrical Fitter	\$85.00									
Technician/Protection/Comms	\$95.00									
Trainee	\$80.00									
Trainee Line Mechanic	\$80.00				\$85.00					
Labourer/Utility Worker	\$74.00									
Arborist	\$76.00									
Planner/Estimator	\$74.00									
Overnight/Stay away allowance (per night)		\$35.70		\$51.25		\$60.00				
Meals and Allowances (per day)							\$130.00			
Meal Allowance (per day)				\$66.63						
<b>Description - Plant</b>										
Van/Ute (per km)		\$1.30					\$1.30		\$1.30	
Van/Ute (per hr)	\$21.01		\$21.01							
EWV / Bucket Truck	\$44.53		\$60.28		\$71.00		\$2.30	\$40.00	\$2.80	
Line Truck - HIAB	\$65.09		\$59.18		\$71.00			\$30.00	\$2.80	
Specialist Test Equipment										
EWV / Bucket Truck - Electronet daily							\$120.00			

New Zealand. The comparison is detailed below.

The results indicated that the labour rates levied by NCL to AEL are competitive.

For each example supplied, where specific commentary is relevant, it is provided.

## Disclosure 2.3.12 (5)

**(5) separate representative example transactions where the EDB has applied the current policy for the procurement of assets or goods or services from a related party significantly differently between expenditure categories.**

Please refer to Disclosure 2.3.12 (3).



### Example – 2.3.12(3) - A

Category of work	New connections
Procurement practice	Two quotes are obtained on the customer's behalf. Quotes are typically obtained from NCL and an external contractor. Quotes are presented to the customer. Customer will select supplier (can be based on price or expected lead times).
Project Code	A00003416
Scope	Ohau Road high voltage from Four Lakes subdivision
Date	Process
28/08/2018 21/11/2018	<ol style="list-style-type: none"> <li>1. Tenders requested from NCL and an external contractor.</li> <li>2. Tender evaluation performed by Project Engineer.</li> <li>3. Recommendation to customer to accept lower quotation.</li> <li>4. Customer accepted AEL recommendation and Contract for Electrical Work submitted to NCL.</li> <li>5. Signed contract received from customer.</li> </ol>
2.3.12 (4)	Due to two quotes being obtained for all projects, benchmarking occurs in ordinary course of business.

### Example – 2.3.12(3) - B

Category of work	Quality of supply
Procurement practice	NCL awarded work the Alliance Agreement. Materials and equipment are purchased competitively.
Project Code	A00004989
Scope	High Street Waimate - Defective equipment replacement of pole mounted HV fuses, links, airbrake switches. Generated to cover emergency defective asset repairs and maintenance
Date	Process
11/03/2019	1. Purchase order issued to NCL under Alliance Agreement to above identified quality of supply work. Note identified as emergency status.
12/03/2019	2. Work conducted by NCL.
	3. Invoice received and settled.

### Example – 2.3.12(3) - C

Category of work	Asset replacement and renewal (Capex)	
Procurement practice	Alliance agreement	
Project Code	A100397	
Scope	Replace the existing Thrush 11kV conductor alongside Bradshaw's Road with Gopher; reuse existing poles where possible, and complete general maintenance (heading north towards transformer A817)	
Date	<div>Process</div> <div> <ol style="list-style-type: none"> <li>1. Site visited and designed by AEL Project Engineer (PM) and plans prepared by AEL Drawing Office.</li> <li>2. Drawings and scope issued to NCL for pricing</li> <li>3. Quotation received</li> <li>4. Reviewed by AEL and rejected by PE</li> <li>5. Revised quotation received</li> <li>6. Scope of works Purchase Order raised in Tech One and signed off by Senior Project Engineer in line with Delegated level of Authorities</li> <li>7. Job pack prepared and delivered to NCL</li> <li>8. NCL undertook required work</li> <li>9. AEL PM visited site to audit for design/specification compliance and safety. Site safety audit completed</li> <li>10. PM received invoice for total job and signed off for payment</li> <li>11. Job Pack received and processed AEL Drawing Office and GIS Teams</li> <li>12. Project capitalised</li> </ol> </div>	

Above demonstrates the robust nature of review, of any work tendered by NCL under the Alliance Agreement. In addition the formality of process is highlighted above.

### Example – 2.3.12(3) - D

Category of work	Asset replacement and renewal (Capex)
Procurement practice	Alliance agreement and large value assets procured directly by AEL from suppliers
Project Code	A00005676
Scope	Fault job – Transformer B929, Essex Street, Timaru – Failure.
Date	Process
12/08/2019	<ol style="list-style-type: none"> <li>1. It came to AEL's attention that customers feeding from Transformer B929 were experiencing voltage issues.</li> <li>2. Operations department dispatched NCL Faults to investigate. Voltage readings were taken and phase imbalances were detected.</li> <li>3. Through collaboration between Operations and Maintenance, an AEL task (A00005676) was created for the replacement of the faulty transformer. A Priority 5, Urgent/Immediate (within 5 days) priority is usually assigned to tasks like these.</li> <li>4. PO (P1010428) was issued to NCL for the labour, plant and sundry materials (estimate based on past experience from work of similar nature).</li> <li>5. PO (P1010427) was issued for the purchase of AEL owned stock for a replacement 200kVA, 11kV/415V transformer. NCL store and manage AEL owned transformers for which they charge a 15% handling fee. This Purchase Order was to purchase a replacement transformer. (Serial # 19326-45).</li> <li>6. This transformer was successfully replaced</li> </ol>
12/08/2019	



### Example – 2.3.12 (3) - E

Category of work	Asset replacement and renewal (Opex)	
Procurement practice	NCL awarded work under the Alliance Agreement. Materials and equipment are purchased competitively.	
Project Code	A00003232	
Scope	Customer pole replacement program. Note this requires assisting commercial customer in their own replacement program through the handle AEL distribution cables/wires.	
Date	Process	
28/11/2018	<ol style="list-style-type: none"> <li>1. Applications received from customer for various pole replacements.</li> <li>2. Assessed application to ensure pole replacement meets AEL standards.</li> <li>3. Purchase order raised to NCL.</li> <li>4. Work completed and new applications received throughout the current period.</li> <li>5. The work is labour based only, no materials required.</li> </ol>	

2.3.12 (4)	Note during this specific project, management's continuous monitoring of costs highlighted increasing costs. On investigation it was evident that the time taken by the customer's service team to conduct a pole replacement was longer than AEL's contractor. This was highlighted to the customer. In addition, due to Health and Safety regulations, two staff members were required at any one time.
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### Example – 2.3.12 (3) - F

Category of work	Vegetation Management
Procurement practice	External contractors utilised by both AEL and NCL. First trim work at Alpine's expense split between NCL and external contractors. Contractors are published on website. Trim notice sent to land owners includes a number of third-party contractors. Information published on website under tree management details third-party contractors.
Project Code	A4759
Scope	First Trim Notice
Date	Process
23/07/2019 25/07/2019	1. First Trim Notice issued for Silver Birches trimming required on Main North Road, Geraldine, affecting Pole 07851. 2. Accepted by customer, work commenced. 3. Work conducted by a external contractor.
2.3.12 (4)	Currently AEL uses an external contractor and NCL carrying out vegetation work. The external contractor is based in Geraldine, all the vegetation work given to them is within Geraldine and surroundings, which is inclusive of Pleasant Point and Temuka. Management assessment of pricing between NCL and the external contractor is monitored on a continuous basis.

### Example – 2.3.12 (3) - G

Category of work	Vegetation Management
Procurement practice	<p>External contractors utilised by both AEL and NCL.</p> <p>Where vegetation management is required and AEL has previously conducted the first trim, a trim notice is sent to the landowner. The customer will return the notice with their selected AEL approved contractor, and provide a date that the work may be completed by. The customer liaises with the contractor directly and is billed accordingly. A list of contractors approved to work on the network is available on AEL's website.</p> <p>AEL pays for the costs of any outage(s) and work authority that may be needed to complete the job. The only exception to this would be, if the customer selects "No Interest" and it is approved by AEL. In this case AEL will maintain the vegetation at its cost. This work is conducted on the same principles as a First Trim.</p>
Project Code	A2656
Scope	Subsequent Trim Notice
Date	Process
23/07/2019 01/08/2019	<ol style="list-style-type: none"> <li>1. Subsequent Trim Notice issued for various tree trimming on Arundel Belfield Road, Poles 10560-10563</li> <li>2. Responsibility accepted by customer, work commenced.</li> <li>3. Work conducted by third party contractor.</li> </ol>
2.3.12 (4)	As per example, AEL provides consumers with choice of 10 approved contractors in this category of work, allowing natural benchmarking.

### Example – 2.3.12 (3) - H

Category of work	Vegetation Management
Procurement practice	This category of work requires first response on standby 24/7 to attend to network outage emergencies. NCL only suitable contractor within reasonable proximity for these events. In addition, there is an additional overhead cost for contractors, who need staff to be on the required level of standby. NCL was appointed for such services.
Project Code	Form number 4903
Scope	Bird strike 4.54am 03/07/2019 – Totara Valley
Date	Process
All occurred on 03/07/2019	<ol style="list-style-type: none"> <li>1. SCADA system alarm sent to Control Room</li> <li>2. Customers called in on Alpine Energy fault number, fault man dispatched from NCL.</li> <li>3. Fault identified, liaised with Control Room and processed agreed on to rectify fault.</li> <li>4. NCL time is allocated against monthly retainer for faults response.</li> </ol>

## Disclosure 2.3.13

Subject to clause 2.3.9, within 5 months after the end of each disclosure year, where an EDB has had related party transactions involving a procurement from a related party during that disclosure year, the EDB must publicly disclose a map of its electricity distribution service territory, which includes-

### DISCLOSURE 2.3.13 (1)

(1) subject to clause 2.3.15, a brief explanatory description of the 10 largest forecast operational expenditure projects in the AMP planning period and the likely timing, value, and location of the projects;

#### *Future OPEX over the planning period*

##### **Vegetation management**

This is a program consisting of numerous individual jobs or projects to remove and maintain vegetation away from our overhead lines. These projects span the whole of our network footprint and is valued at \$800k per annum. Most of these projects are awarded to a related party who makes use of several sub-contractors to complete the work.

##### **RMU maintenance program**

This program addresses the maintenance of all our ring main units across our network. We endeavour to maintain around 76 RMU's every year, with a high concentration at Fonterra's Clandeboyne plant over the dairy offseason. The value of this program is approximately \$600k per annum. The work for the 2019/20 financial year has been awarded to a related party.

##### **RMU and transformer inspections**

This program details the inspection of all our ground-mounted distribution transformers and RMUs (i.e. distribution substations) at a cost of approximately \$300k per annum. The work for the 2019/20 financial year has been awarded to a related party.

##### **Zone substation maintenance**

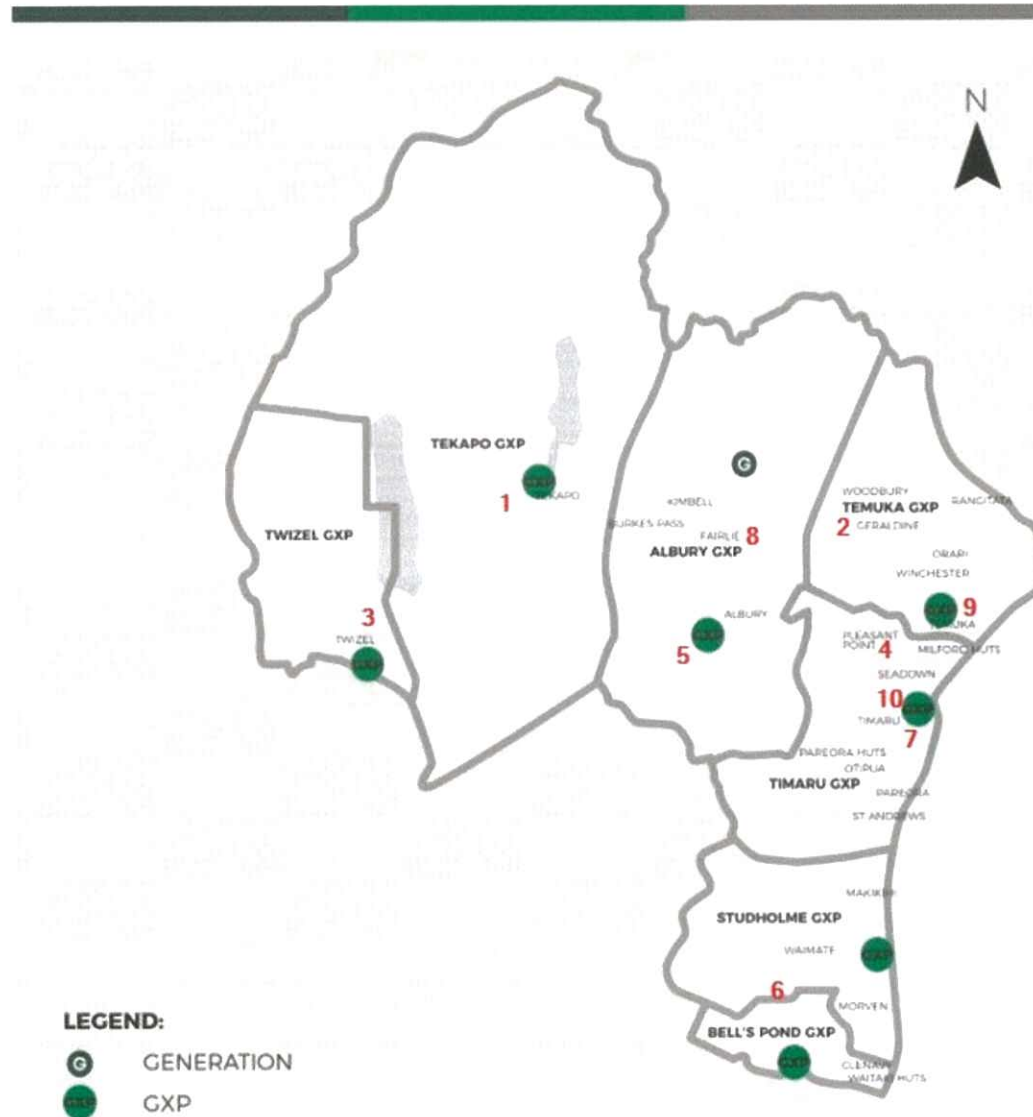
This program is the four-yearly maintenance program of our zone substations and the individual projects for 2019 to 2024 is detailed in the table below. Zone substation location can be found on the above map.



## DISCLOSURE 2.3.13 (2)

(2) subject to clause 2.3.15, a brief explanatory description of the 10 largest forecast capital expenditure projects in the AMP planning period and the likely timing, value, and location of the projects;

### *Future CAPEX over the planning period*



### **Tekapo transformer upgrade**

Tekapo zone substation transformer upgrade between 2020 and 2022 at an estimated cost of \$2.50 M. This relieves the constraint on the current transformer due to load growth. This project is not subject to a contract with a related party or other yet.



### **Geraldine transformer upgrade**

Geraldine zone substation transformer upgrade in 2020 at an estimated cost of \$2.00 M. This transformer is at the end of its life span and capacity eroded due to load growth. Upgrading this transformer will also relieve future supply constraint. This project is not subject to a contract with a related party or other yet.

### **Twizel switchboard replacement**

Twizel township zone substation switchgear and transformer replacement between 2021 and 2023 at an estimated cost of \$3.15 M. The switchgear and protection is at the end of its life span. The transformer is 46 years old. This project is not subject to a contract with a related party or other yet and does not relieve any constraint.

### **Pleasant Point transformer upgrade**

Pleasant Point zone substation transformer upgrade in 2024 at an estimated cost of \$2.20 M. This transformer's capacity has been eroded due to load growth and this upgrade will relieve a future supply constraint. This project is not subject to a contract with a related party or other yet. Demand-side solutions will be evaluated to postpone or negate the requirement for this upgrade.

### **Mt Nessing Road Albury O/H re-conductor**

Seven kilometres of overhead line rebuild in Mink conductor at an estimated cost of \$ 525k in 2019/20. This project replaces the copper conductor that is at end of its life span and improves the fault level performance of the conductor after Transpower's recent upgrade of the GXP transformer. This project does not relieve any constraint. The project will be tendered in the open market for construction.

### **Tara Hill O/H replacement and renewal**

This project will renew 33 km of the overhead line at an estimated cost of \$ 492k in 2019/20 and has been awarded to a related party.

### **Timaru CBD Underground substation replacement**

This project is one in a program to replace and renew 31 underground substations in the Timaru Township, mainly the CBD area. This project does not relieve any constraints and is driven by the replacement of end of life span assets and to improve safety. The estimated costs of this project is \$500k. The program will continue throughout the AMP planning period. This project is not subject to a contract with a related party or other yet.

### **School Road Fairlie O/H replacement and renewal**

Five kilometres of overhead line rebuild in Mink conductor at an estimated cost of \$502k in 2019/20 and has been awarded to a related party.

### Temuka GXP Upgrade

This project comprises the AEL portion of the Temuka GXP Upgrade by Transpower. It involves the cut-over of several feeder cables from the existing 33 kV switchboard to the proposed new 33 kV switchboard. The estimated cost for this projects is \$400k, based on Transpower's program it is scheduled for 2021/22.

### Timaru substation 33 kV switchgear replacement

The switchgear, protection, and controls of the 33 kV switchyard at the existing Timaru zone substation is nearing the end of its life span. This project will replace the equipment with modern circuit breakers and protection relays, with suitable ratings and functionality. The estimated cost of the project is \$3.80 M and is scheduled for 2020/2022 and has been awarded to a related party.

No.	\$ value	Timing	Constraint relieved?	Under contract?	Related party involved?
#1	2.50 M	2020/22	Yes	No	Not awarded yet
#2	2.00 M	2020	Yes	No	Not awarded yet
#3	3.15 M	2021/23	No	No	Not awarded yet
#4	2.20 M	2024	Yes	No	Not awarded yet
#5	525 k	2019/20	No	Yes	Yes
#6	492 k	2019/20	No	Yes	Yes
#7	500 k	2019/20	No	No	Not awarded yet
#8	502 k	2019/20	No	Yes	Yes
#9	400 k	2021/22	Yes	No	Not awarded yet
#10	3.80 M	2020/22	No	No	Yes

### DISCLOSURE 2.3.13 (3)

**(3) subject to clause 2.3.16, a brief explanatory description of possible future network or equipment constraints and their location, where the responses to the constraints would involve one of the 10 largest future operational expenditure projects in the AMP planning period; and Electricity Distribution Information Disclosure Determination 2012 (consolidated April 2018)**

The network constraints identified in the recent Asset Management Plan 2019 are as follows:

#### Bells Pond and Studholme:

The Bells Pond rural area has back up supply from adjacent 11 kV feeders from Studholme. Studholme zone substation can presently take the majority of the 11 kV load if both Studholme transformers are in service. This spare capacity at Studholme will be eroded should Fonterra build a dryer at their Studholme dairy factory (they have resource consent, but we have not received a network application for the additional demand).



The Oceania Dairies Limited (ODL) dairy factory supply is presently N security. Further investment will be needed, if and when ODL want to increase security to N-1.

With both Bells Pond and Studholme GXPs connected to the Waitaki-Oamaru-Timaru circuit 2, we are constrained, in terms of our offtake at these two GXPs. This constraint, will limit the amount of load growth we can accommodate. Transpower has implemented a special protection scheme (SPS), to curtail load, if one of the two Waitaki 110 kV circuits is lost. The SPS will in certain instances, allow us enough time, to run our ripple injection plant, with a view to shedding irrigation load, thereby, maintaining supply to dairy processing plants and milking sheds, to prevent the scheme, from turning off all load indiscriminately.

In addition, Transpower will offload the Studholme GXP onto the Timaru GXP, with Bells Pond remaining on the Transpower 100kV existing Waitaki feed.

### Tekapo

There is considerable load growth occurring in and around the Tekapo Township. This includes subdivisions, addition to the commercial central business district, and hotels.

The Tekapo Springs complex is also increasing its demand. The increasing demand leads to increased load on the feeders into the township, because these feeders also continue through the township, into the rural area east of the township, they are becoming voltage constrained. With no voltage control capability at the Haldon-Lilybank zone substations, network investment will be required when voltage constraints develop.

The Balmoral zone substation will be replaced in 2019. Voltage regulation functionality forms part of the new substation. Between our Tekapo zone substation and the township, the 11 kV distribution feeders are overhead lines. There is a request by a landowner to underground or relocate these feeders to make way for a residential subdivision. There is additional irrigation and dairy conversion load growth occurring at the end of our Simons Pass 22 kV distribution feeder. The existing ripple injection plant is a 500 Hz rotary plant.

### Clandeboyne

The additional load at the Fonterra Clandeboyne dairy factory will further erode the N-1 security at the Temuka GXP. Work is continuing with Transpower to fully reinstate the N-1 security. Engineering investigations are underway, to establish the impact of the new load on the N-1 security on the 33 kV sub-transmission feeders from the Temuka GXP to the Clandeboyne zone substations.

For the Temuka rural area, there is limited backup from Geraldine, Rangitata, Pleasant Point, and Timaru zone substations. Backup capacity is being eroded, because of steady load growth. A detailed engineering investigation will be undertaken next year to establish options, to ensure we will continue to meet our security standards.

There is no N-1 security due to the 11 kV bus coupler operated normally open. Also, there is only N-1 security on the 33 kV sub-transmission feeders to Rangitata zone substation for loads less than 10 MW. A detailed engineering investigation will be undertaken next year to establish options, to ensure we will continue to meet our security standards. The low voltage (230/400 V) reticulation in urban areas of Temuka and Geraldine are starting to show challenges in regard to voltage levels.

Information is starting to surface that the voltage levels are on the high side. This may cause problems for distributed generation, in particular, solar panels. This is also a challenge for the many hut communities in the area. A project has been initiated, to establish the extent of the challenges and then determine options to resolve any identified challenges. In the meantime, the Hut community reticulation has been added as a congested area for distributed generation and published on our website in accordance with part 6 of the Electricity Industry Participation Code 24.

### Timaru

Our network is comprised of two historical line businesses which were merged in 1993, the Timaru Municipal Electricity Department (MED) and the South Canterbury Electric Power Board (SCEPB). The existing asset configuration comprises lines through a corridor in a SCEPB area to supply an encircled MED area (similar to cities like Invercargill, Palmerston North, Hamilton, and Nelson), and has three key characteristics:

- The compact MED is supplied at 11 kV from TIM GXP mainly via underground assets.
- Due to a difference in phase angle between the then MED (Timaru metro area) and the surrounding SCEPB areas, (Temuka and Geraldine), the networks cannot be easily meshed to improve the security of supply. These networks must first be turned off before they can be connected to restore supply.
- There are areas of supply at the boundary of the historical areas, which can be improved by greater integration of the assets of the two legacy networks (e.g. by upgrading 11 kV lines and cables, and introducing additional, or upgraded, points of connection between the two networks).

The sub-transmission circuits to Pareora zone substation are voltage constrained if the total load exceeds 20 MW, or 10 MW in a contingent event (e.g. one of the circuits or a Pareora power transformer is out of service).

Part of the 11 kV feeders into the port area requires undergrounding to provide improved safety around loading areas. In conjunction with this undergrounding, a reconfiguration of the 11 kV system in the port area is to be undertaken to improve security and maintainability. In the Western area of Timaru, there are 11 kV distribution feeders that are run through the back of residential sections. This is becoming a maintainability issue in relation to access. Projects are underway to replace these feeders with underground cables on public roads.



## Twizel

The Twizel zone substation has a transformer rated at 5/6.25 MVA. The transformer is fitted with an on-load tap changer (OLTC) which is important as the Twizel GXP 33 kV bus voltage changes with differing generation patterns; this keeps the 11 kV voltages stable.

Transpower's TWZ 33 kV GXP bus is run split and is fed from two 20 MVA 220/33 kV OLTC transformers. The 33 kV bus was originally split as the 33/11 kV transformers are not able to withstand the full fault level. There is no 33 kV bus coupler or bus bar protection so running the bus tied would be problematic during a fault. Our supply is not as secure as a tied bus arrangement, but this has been of little concern, as the outage rate is very low. If a supply transformer is lost or released, Transpower can easily tie the two bus halves to the remaining transformer.

The ripple injection plant at the Twizel GXP is used by Network Waitaki. Currently, all ripple relays in the area are controlled via its time clock function. Future ripple injection plant developments, will be based on economic analysis. With the introduction of smart meters, there may be alternative ways to provide demand-side management.

**(4) subject to clause 2.3.16, a brief explanatory description of possible future network or equipment constraints and their location, where the responses to the constraints would involve one of the 10 largest future capital expenditure projects in the AMP planning period.**

The following projects, which are included in the 10 largest future Capex project will relieve constraints on AEL's network

- Tekapo transformer upgrade
- Temuka GXP Upgrade
- Geraldine transformer upgrade

# Supplementary information

## Competition into the region

The contractual basis between AEL and NCL has evolved over the last 10 years. This initial started as a simple quote/tender process for network Capex and some Opex projects; leading to a Service Level Agreement engagement model; followed by an Alliance Agreement model introduced in February 2015.

During 2017 we commenced discussions with service providers from outside of South Canterbury to seek their interest in setting up a permanent presence within, or close to, AEL's operations. Whilst all were interested it was subject to being able to secure a level of guaranteed annual work from AEL, in the order of \$9m to \$10m. A further condition was their ability to recruit the relevant workforce to support AEL's work. Whilst the former was possible in terms of having the level of work available on a contestable basis, the latter was determined to be more difficult given the strong demand for trade skilled workers across the industry.

During 2017, we decided it would be appropriate to retire the Alliance Agreement earlier than anticipated, and begin introducing a greater level of contestability, where by year four, AEL's network capex may reach up to 50%, and network Opex 33% contestability.

We continue our discussions with interested service providers, and while none have set up base in South Canterbury, we have been able to draw from their workforce pool for specific projects from time to time.

We also continue our journey for greater contestability and choice, which will increasingly be on the basis of NZS3910 and/or NZS3917.



## Barriers to Entry for New Contractors

Whilst AEL endeavours to pursue contestability and choice in its contractors, the following barriers to entry have been identified:

### **Local Knowledge**

The detailed local knowledge of an incumbent, such as NCL, provides an immediate cost and performance advantage, especially for faults work. This competitive advantage, for the incumbent, may discourage third-party contractors from bidding.

### **Distances**

Travel distance (and by implication, time and accommodation) increases a contractor's costs. Local contractors, therefore, have a known advantage, which may discourage non-local contractors from bidding.

The largest barrier to entry is proximity to work and local knowledge, which would require a substantial initial investment. Furthermore, households are placing larger emphasis on mental health and work life balance, restricting the ability of contractors to deploy employees away from home on a continued basis.



## Benchmarking Capex and Opex spend to other EDB's

Information Disclosure Information 2018

Row Labels	Line charge revenue	Average no. of ICPs in disclosure	% Urban Overhead Km	Total Overhead Length Km	Capital Expenditure	Related Party Capex	% Related Party Capex	Operational Expenditure	Related Party Opex	% Related Party Opex
Buller Electricity	\$7,711	4,624	16%	589 Km	\$3,121	\$5	0%	\$2,855	\$589	21%
Scanpower	\$9,609	6,665	5%	959 Km	\$6,615	\$655	10%	\$3,585	\$0	0%
Nelson Electricity	\$10,138	9,210	93%	31 Km	\$1,882		0%	\$1,916	\$204	11%
Centralines	\$14,232	8,561	8%	1,692 Km	\$4,253		0%	\$3,578	\$2,326	65%
Network Waitaki	\$17,329	12,814	21%	1,712 Km	\$16,238	\$0	0%	\$5,355	\$0	0%
Electricity Invercargill	\$20,384	17,404	93%	55 Km	\$11,508	\$5,768	50%	\$4,587	\$3,433	75%
Westpower	\$20,743	13,526	7%	2,026 Km	\$3,181	\$1,575	50%	\$8,575	\$6,750	79%
Waipa Networks	\$26,994	26,077	12%	1,771 Km	\$12,388	\$4,741	38%	\$6,550	\$3,396	52%
Horizon Energy	\$33,964	25,000	11%	1,954 Km	\$13,616	\$5,384	40%	\$10,331	\$3,946	38%
Marlborough Lines	\$35,902	25,374	11%	2,837 Km	\$21,572	\$146	1%	\$14,956	\$52	0%
Eastland Network	\$36,850	25,512	5%	7,096 Km	\$15,288	\$656	4%	\$9,922	\$4,902	49%
OtagoNet	\$37,062	16,000	7%	4,432 Km	\$28,612	\$14,162	49%	\$7,276	\$6,611	91%
The Lines Company	\$42,323	23,768	12%	4,106 Km	\$28,419	\$10,250	36%	\$12,200	\$1,785	15%
Electra	\$43,048	44,396	29%	1,525 Km	\$22,319	\$8,768	39%	\$12,071	\$6,088	50%
Network Tasman	\$45,046	39,578	7%	2,678 Km	\$11,662		0%	\$10,945		0%
EA Networks	\$48,524	19,217	4%	2,505 Km	\$31,876	\$4,724	15%	\$12,062	\$3,943	33%
Top Energy	\$51,150	31,641	5%	3,174 Km	\$41,813	\$4,407	11%	\$16,012	\$7,107	44%
Counties Power	\$52,255	41,704	4%	2,343 Km	\$46,947	\$10,722	23%	\$12,890	\$2,865	22%
MainPower NZ	\$58,793	38,232	1%	4,033 Km	\$19,234		0%	\$14,728	\$38	0%
The Power Company	\$60,003	35,698	5%	8,458 Km	\$57,352	\$28,676	50%	\$14,897	\$13,688	92%
Alpine Energy	\$60,481	32,975	9%	3,522 Km	\$40,856	\$12,928	32%	\$17,171	\$5,209	30%
Northpower	\$73,367	58,430	13%	5,013 Km	\$32,051	\$10,592	33%	\$21,962	\$9,268	42%
Aurora Energy	\$96,272	88,588	37%	8,800 Km	\$137,638	\$26,512	19%	\$35,344	\$18,799	53%
WEL Networks	\$109,095	90,601	17%	3,162 Km	\$69,971	\$12,437	18%	\$24,956	\$8,565	34%
Unison Networks	\$152,768	112,781	25%	11,141 Km	\$75,449	\$24,169	32%	\$38,486	\$15,306	40%
Wellington Electricity	\$174,966	166,910	77%	1,733 Km	\$77,677	\$2,490	3%	\$33,311	\$10,764	32%
Orion NZ	\$251,787	199,838	31%	5,488 Km	\$135,441	\$21,028	16%	\$54,207	\$17,309	32%
Powerco	\$390,821	337,135	11%	43,404 Km	\$328,035	\$0	0%	\$70,422	\$0	0%
Vector Lines	\$631,706	557,490	51%	16,689 Km	\$442,697	\$2,312	1%	\$113,415	\$10,606	9%

\* The grey highlighted EDBs are assessed to be comparable to AEL. The analysis indicates that there are no outlying ratios when comparing Opex and Capex spend with comparable EDBs.



## Proactive Measures

AEL revised the way in which it transacts with contractors in response to the Commerce Commissions' related party transaction decision. These include:

- Master Services Agreement and Statements of Work
- Procurement Policy
- Timesheets

## Conclusion

AEL makes use of services of its related party contractor for network Opex and Capex to ensure demand response and continuity of supply of electricity to our consumers. Where possible, work is tendered to external contractors.

Related party transactions have not given rise to terms and conditions that favour those transactions conducted at arm's length. It continues in its endeavours to create greater contestability and choice.

