

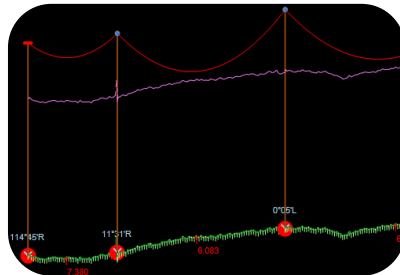
# Southern OHL designers forum



Survey



Tension  
measurement



Line design



Footing design

# Engineering

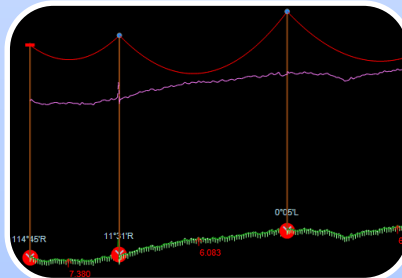
(people and systems)



Survey



Tension  
measurement

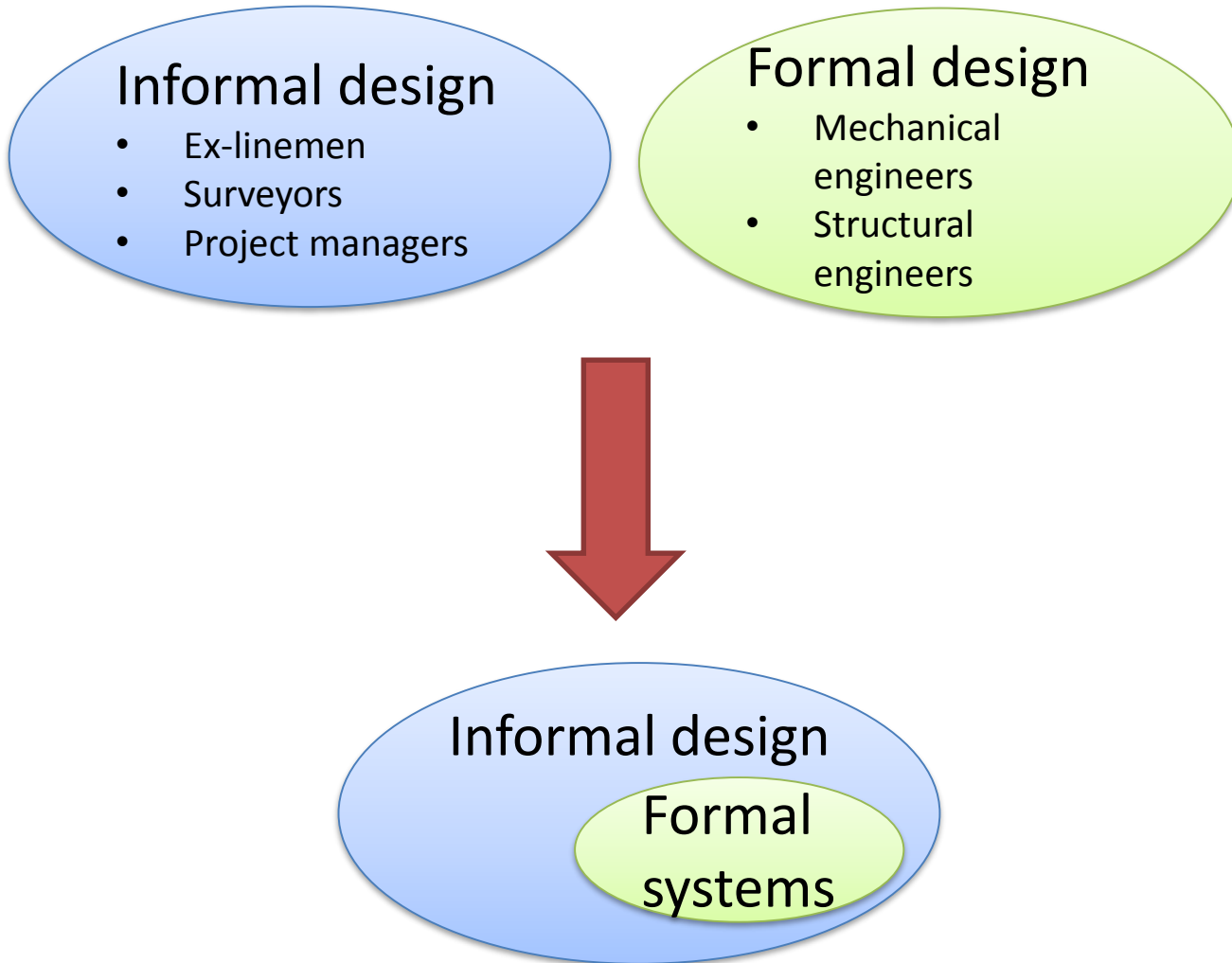


Line design



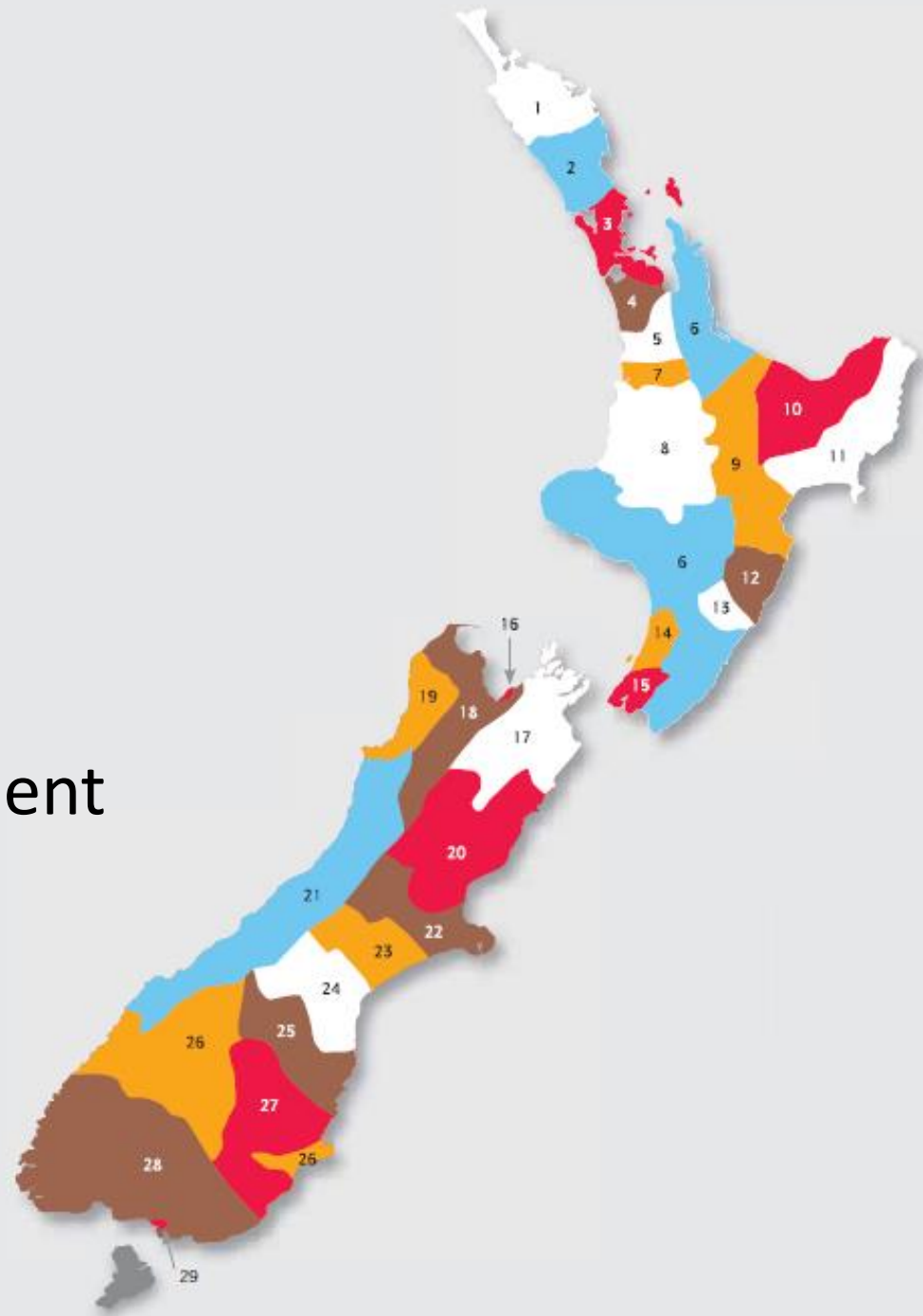
Footing design

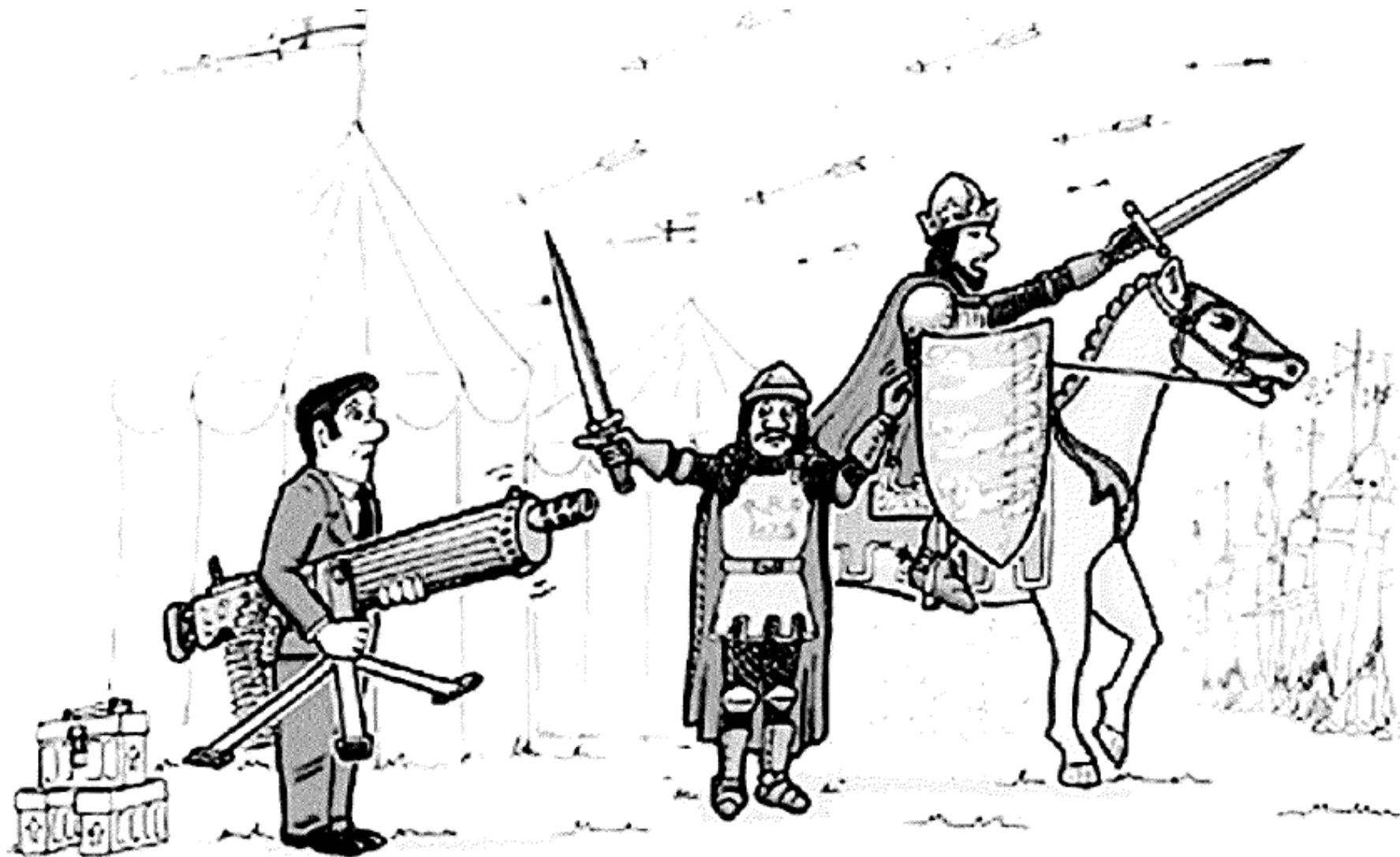
# Engineering expertise



# Advantages of scale

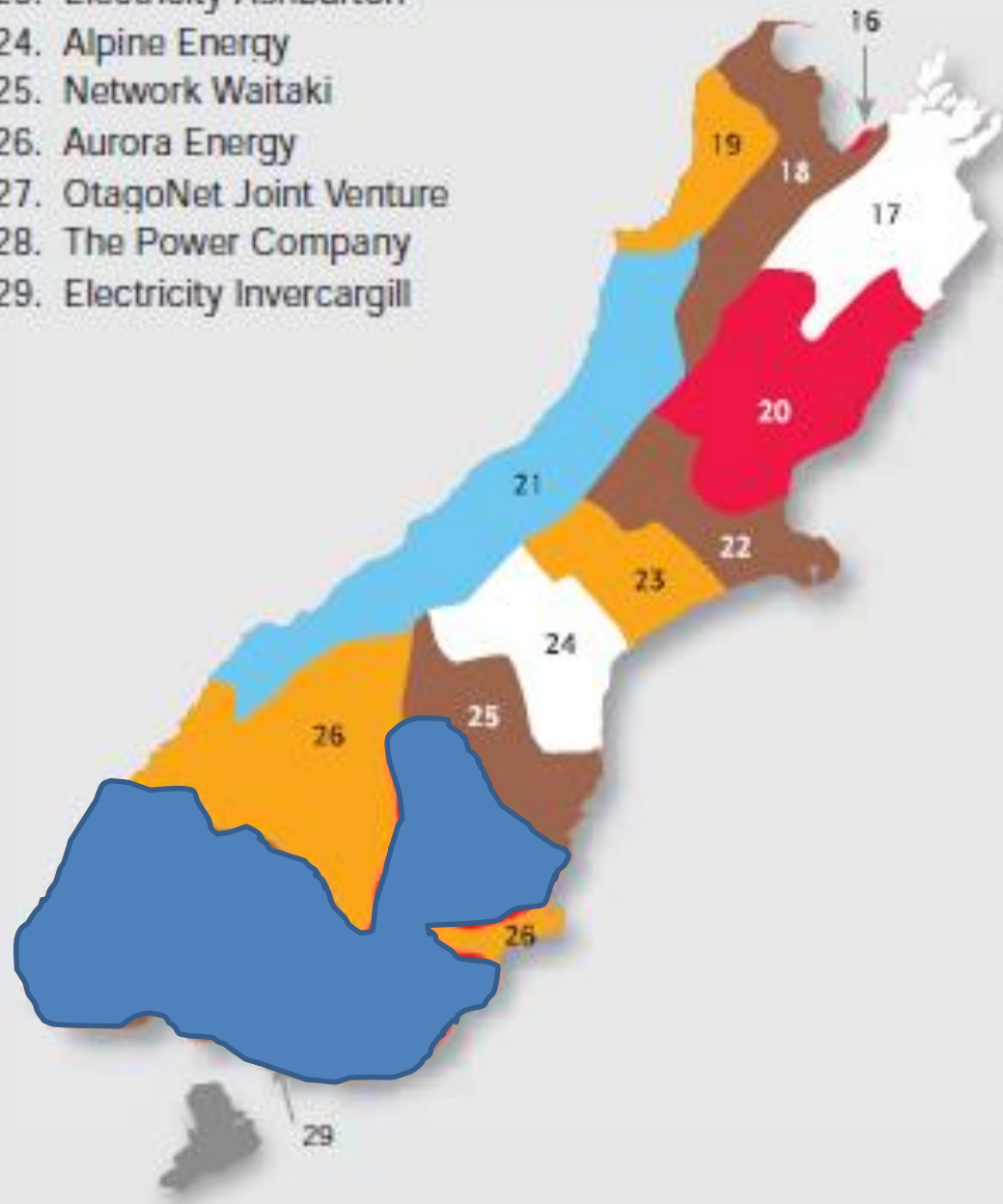
- Resources
- Standardisation
- Systems
- Rationalisation
- Specialisation
- Professional development
- Representation
- Influence
- Best practice





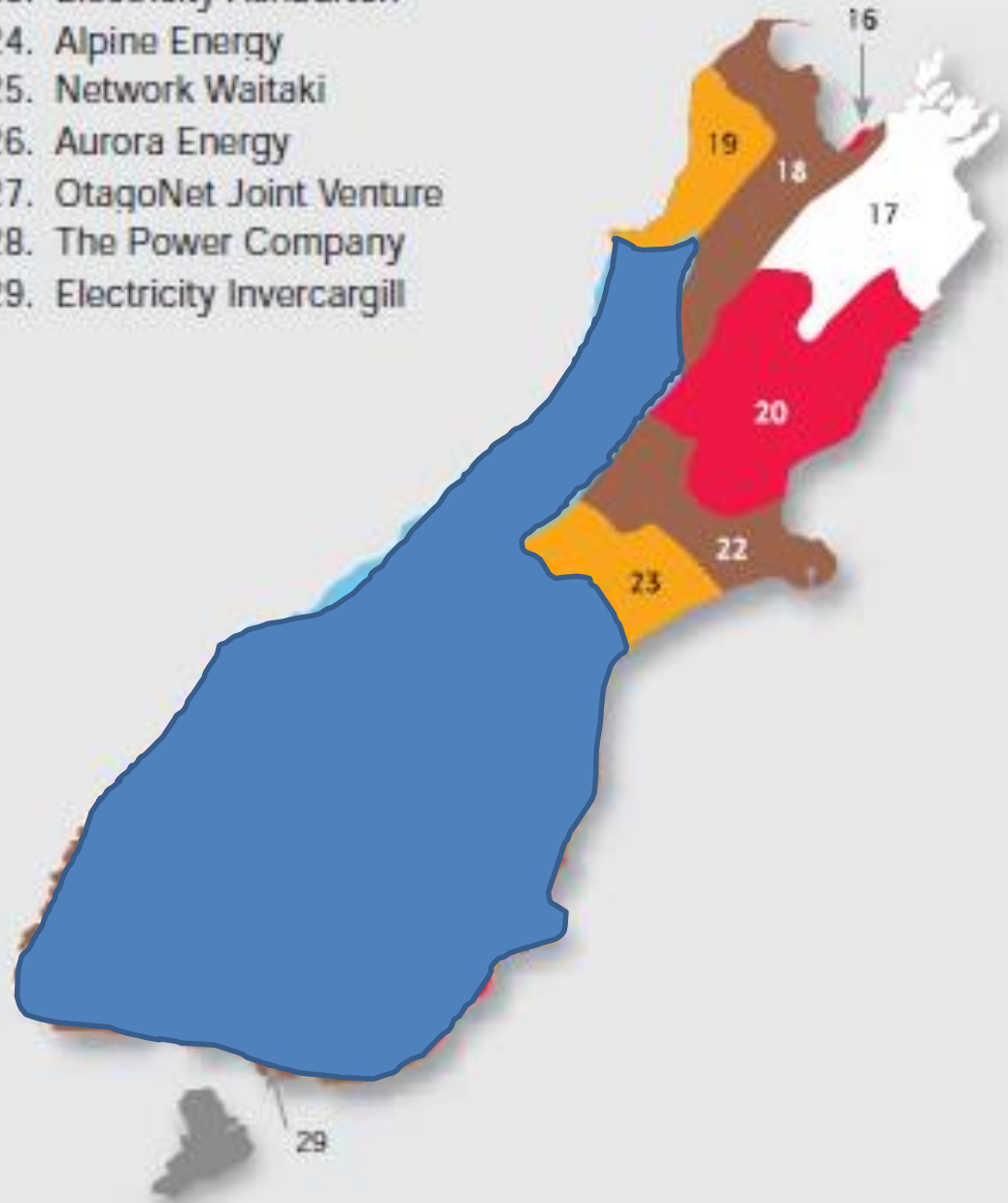
" I'm far too busy to make any changes..."

- 21. Westpower
- 22. Orion New Zealand
- 23. Electricity Ashburton
- 24. Alpine Energy
- 25. Network Waitaki
- 26. Aurora Energy
- 27. OtagoNet Joint Venture
- 28. The Power Company
- 29. Electricity Invercargill





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- Over 55% of OHLs in the South island
- Over 20% of OHLs in New Zealand

Reporting Lines Company	Circuit Length (km)		Total
	Overhead	Underground	
Centralines Limited	1,647	81	1,728
Counties Power	2,420	613	3,033
Eastland Network	3,273	381	3,654
Electra Limited	1,628	953	2,580
Horizon Energy Distribution	1,919	445	2,364
Northpower Limited	4,970	856	5,826
Powerco Limited	22,322	7,598	29,920
Scanpower Limited	968	71	1,039
The Lines Company	4,707	294	5,001
Top Energy Limited	3,051	798	3,849
Unison Networks	5,493	2,489	7,982
Vector Lines Limited	8,461	9,259	17,720
Waipa Networks Limited	1,735	349	2,084
WEL Networks	3,161	1,892	5,053
Wellington Electricity Limited	1,759	2,845	4,604
Alpine Energy Limited	3,454	666	4,120
Aurora Energy	3,891	1,730	5,621
Buller Electricity	586	37	623
Electricity Ashburton	2,540	420	2,961
Electricity Invercargill	54	600	654
Mainpower New Zealand	3,836	747	4,583
Marlborough Lines Limited	2,877	472	3,349
Nelson Electricity Limited	39	216	255
Network Tasman Limited	2,549	807	3,356
Network Waitaki Limited	1,645	85	1,730
Orion New Zealand	5,823	4,885	10,708
OtagoNet Joint Venture	4,350	42	4,392
The Power Company	8,306	324	8,630
Westpower Limited	1,972	179	2,151
<b>South Island Total</b>	<b>41,924</b>	<b>11,209</b>	<b>53,133</b>
<b>North Island Total</b>	<b>67,513</b>	<b>28,924</b>	<b>96,437</b>
<b>National Total</b>	<b>109,437</b>	<b>40,133</b>	<b>149,570</b>

[http://www.electricity.org.nz/Site/Consumer/industry\\_companies.aspx](http://www.electricity.org.nz/Site/Consumer/industry_companies.aspx)

# Why?



- Avoid reinventing wheels (share, collaborate, rationalise, communicate good ideas)
- Identify and advance good design practice
- Professional growth and development
- Compatibility between utilities
- Influence and representation
- Develop a design culture
- Fun

# Value



- Contacts/relationships – speaking with people who have similar issues
- Information

# The talks

- Loosely based on OHL design (inevitable surveying, electrical equipment, asset management, inspection, materials)
- Topics of personal interest
- Problems solved or unsolved
- What you have been working on
- Talks last 2-20 minutes
- Lots of pictures

## Programme

Time	Presenter	Organisation	Topic
8:30	Introductions & Housekeeping		
8:40	Juliet Clendon	EEA	EEA guides for 2017
	Rob Douglas	Delta	Collaboration with DOC to protect falcons
	Wayne Vile	Downers	The challenges of using CATAN for the design of fibre on poles
	Ian Dyson	LineTech	Overview of Line Design Issues
	Rob Lake	Groundline Engineering	Recent CIGRE activity relevant to distribution
	David Stevens	Transpower	Underclearance Violation Management
10:30	Morning tea (20 minutes)		
10:50	Brian Campbell	Delta	Experience using Platipus ground anchors
	Juliet Clendon	EEA	New working group on overhead line conductor condition assessment
	Juliet Clendon	EEA	Safety in Design - Improving industry practice
	Carl Rathbone	PowerNet	Proposed work to validate or develop pole footing design method
	David Stevens	Transpower	Volumetric Pole Replacement Design Process
12:50	Lunch (40 minutes)		
13:30	Gerard Quinn	Otago Polytechnic	Mechanical test facilities in Dunedin
	Samantha Howard	Alpine Energy	Civil engineering education applied to distribution design
	James Mathieson	Electronet	Drone surveying the Waipori 33kV line
	Mark Hastie	PowerNet	PowerNet's line design method
	Brian Campbell	Delta	Using drones to collect survey information for line profiling
	Jerram Hill	GroundVu	Aerial and terrestrial OHL surveying solutions
	Josh Arthur	PowerNet	PowerNet pole inspection process
	William Harris	Busck	Concrete product handling developments
	Rob Douglas	Delta	Earthing of Pole top switches
15:30	Session end		

# Format

- Dinner the night before
- Informal setting, questions during but generally held till afterwards
- Loose agenda giving space to discussion as it arises
- Generous breaks

# Who attends

- Utilities
- Consultants (max 2) – non commercial talk
- Suppliers (max 2) – non commercial talk
- Transpower (1)
- EEA (1)
- External expert (max 2)
- Cap at around 30 people

# Costs

- Hosting costs
  - Room ≈ \$400
  - Catering ≈ \$1,200
- Participant costs
  - Travel
  - Accommodation
  - Time away from work

(cost effective training/professional development)





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