



MainPower Trust Ownership review Full report

Final

February 2018



Final

Catherine McMillan
Chair
MainPower Trust
PO Box 370
RANGIORA 7440

9 February 2018

Ownership review – full report

Dear Catherine,

We are pleased to provide our report which considers the performance of MainPower New Zealand Limited (MainPower) and VirCom Energy Management Services Limited (VirCom), and a review of the ownership options in respect of MainPower.

This report is provided in accordance with the terms of our engagement letter dated 17 October 2017, and is subject to the restrictions set out in Appendix A. This report supersedes any previous drafts.

Our key findings are contained in the Executive Summary of the report.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Craig Rice'.

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A handwritten signature in black ink, appearing to read 'Lynne Taylor'.

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Section 1

Introduction

Introduction

This report has been prepared for the MainPower Trust (“the Trust”) to support the Trust’s review of its ownership of MainPower New Zealand Limited (“MainPower”) and any other significant assets. The MainPower Trust’s 100% shareholding in MainPower is the only significant asset at this time, with other investments representing approximately 3% of the Trust’s total investment portfolio.

Consistent with Clause 6.2 of the Trust Deed, the review report must include:

- a) an analysis of the performance of and outlook for MainPower and any other significant Trust investments
- b) a summary of the advantages and disadvantages to the beneficiaries of Trust ownership of MainPower’s shares and other significant investments as compared to a distribution of those assets (or their value).

This report has been structured into three parts:

- 1. Review of the MainPower Group’s performance over the last six years.
- 2. Review of MainPower and VirCom Energy Management Services Limited’s (VirCom’s) individual performance over the same period, including benchmarking performance with comparable companies.
- 3. Analysis of ownership options available to the Trust and its beneficiaries, including the current Trust ownership structure.

A summary of our findings is included in the Executive Summary, overleaf.

In conducting this review, PwC has relied on financial information supplied by MainPower, published information disclosure documents for electricity distribution businesses including MainPower, PwC databases and interviews with members of the MainPower Trust, MainPower board and MainPower senior management team.



Section 2

Executive summary

Executive summary

Company overview

MainPower owns and operates the electricity distribution network which provides electricity services in the North Canterbury and Kaikoura regions.

In addition, MainPower owns VirCom, which provides qualified and registered field services capability throughout New Zealand.

MainPower Group performance

- The Group's operating revenue increased over the review period, with revenue from both MainPower and VirCom increasing.
- The Group distributed \$53m of rebates to consumers over the FY12 to FY17 period while responding to the impacts of the major earthquakes experienced within the region during this period.
- MainPower's Rangiora offices moved to new premises in June 2014, and the Group has invested further in the Mt Cass wind farm development.
- In FY17, MainPower increased its ownership of VirCom from 77.4% to 100% following the buy-out of the minority shareholder.

MainPower

- MainPower has undertaken a number of projects to expand network capacity, strengthen security of supply and improve the resilience and reliability of the network.
- Line charge revenue has increased over the review period, resulting in an increase in EBITDA of \$6m over the period.
- MainPower increased its rebate to over \$9m in FY17, after absorbing Transpower's price increase in the year.

VirCom

- VirCom's financial performance has improved with gross margin increasing.
- Revenue has increased since FY12 as a result of increased smart meter volumes and a price renegotiation in FY15.



Executive summary (continued)

Comparative performance

Benchmarked against a peer group of like EDBs (Alpine Energy, EA Networks, Eastland Network, Horizon Energy Distribution, Marlborough Lines, Network Tasman and Top Energy) and industry averages, MainPower's electricity lines business has performed well during the FY13-FY17 period.

Network opex is in line with its peer group first quartile, and below the industry average. Non-network opex has increased since 2013 and is now similar to the peer group third quartile and industry average.

- Total opex per connection has remained relatively flat over the review period and although it exceeds the peer group third quartile, it remains below the industry average.
- Network capex was above the peer group and industry averages between 2013 and 2016, and reduced to below the averages in 2017. This investment has provided MainPower with a network which is well placed to meet its customers' needs for the foreseeable future.
- Power outages occur less often and restoration times are shorter on MainPower's network relative to the other networks in the peer group.
- The regulatory ROI was in line with the peer group third quartile and above the industry average from 2013 to 2016. A reduction in RY17 reflected the decision to absorb Transpower's increased charges in the year.
- Average unit prices (before rebates) are similar to the peer group and industry average. After rebates they fall between the first quartile and peer group and industry averages.

Options assessment

This report evaluates the advantages and disadvantages of the following Trust ownership options, representative of the options available to the Trust:

- 100% Trust ownership
- distribution or sale of 24.9% or 49.9% of shares
- distribution of 100% of shares
- sale of 100% of shares.

Options were evaluated against the following criteria. The criteria reflects MainPower's company objectives and wider sector opportunities and challenges and is appropriate because it captures both the value of Trust ownership for current beneficiaries and – to the extent possible – future beneficiaries. That is, the criteria evaluates both the immediate merits of Trust ownership and the medium-long term or intergenerational merits. The criteria is as follows:

- **operate as a successful business** providing a safe, secure and financially sustainable electricity supply to the North Canterbury and Kaikoura region
- **ability to respond** to the challenges and opportunities arising from the evolution of the electricity sector.

Executive summary (continued)

The sector is facing unprecedented change

This report discusses the challenges and opportunities facing the sector. For instance, new technologies such as more energy efficient appliances, solar, batteries and electric vehicles are impacting the nature of consumer demand. New business models are enabling a local market place where sector participants are able to more directly engage with customers, for example through peer to peer energy lending. Distribution networks are likely to act as the local market place for these activities, and will need to provide for more complex two-way electrical loads. On the other hand, new business models are also generating competition from alternative service providers.

This has prompted consideration of the role of electricity distributors and other industry participants (for example: retailers) or new entrants, in delivering more customer centric energy solutions. Some advocates have suggested that distributors should be precluded from directly entering these contestable markets, given their monopoly status. To date policy makers and regulators have not endorsed this view.

Government policy, regulation and legislation is also impacting the sector. The new Government has announced a retail electricity pricing review. While the terms of reference for this review have yet to be established, it is expected that the review will examine all components of retail prices, including distribution charges, and by inference the underlying costs of supply and effectiveness of the distribution sector. The Commerce Commission has also recently formalised its forward work programme for electricity distribution regulation, which includes particular focus on the asset management and investment practices of the sector.

This month the Electricity Authority committed to a review which considers whether parties wanting to use electricity networks are treated equally and can compete on a level playing field, noting ‘a lack of confidence in existing open or equal access arrangements’.

The Government is also facing pressure from bodies such as the International Energy Agency to consider changes aimed at increasing the effectiveness of the distribution sector such scale economies, extending economic regulation to include exempt trusts, and introducing regulatory incentives for distributor led innovation.

Despite the uncertainty, there are real opportunities for distributors to leverage the relationships they have with their customers, and to maintain and grow value by embracing the opportunities created through innovation and new technology. Actions taken or underway by MainPower demonstrate it is looking to actively embrace these opportunities.



Executive summary (continued)

Summary of options assessment

Operate as a successful business

With **100% Trust ownership**, MainPower has demonstrated sustained growth in revenue, continued customer confidence and an ongoing focus on community needs and health and safety. It has undertaken a substantial programme of network investment funded through external borrowing, and responded to both the Christchurch and North Canterbury/Kaikoura earthquakes, as well as a series of other natural events.

These examples indicate that under the Trust's stewardship MainPower has been able to operate as a successful business for the benefit of the North Canterbury/Kaikoura community.

These outcomes are dependent on strong leadership and direction to encourage performance excellence within the 100% Trust model. While other ownership options may provide more direct incentives for efficiency and innovation, these can also be achieved under the Trust model through collaboration. This may include opportunities to seek scale economies and to access specialist expertise outside the local business footprint.

Retaining 100% control with the Trust is also a simple model, with minimal administrative costs, which also enables the Company to avoid heavy-handed price-quality regulation.

With **partial or full distribution or partial sale** of the Trust's shares, it is possible that MainPower will be encouraged to focus on short-term shareholder returns, potentially at the cost of long-term shareholder value and non-financial measures such as reliability of supply, customer services, health and safety and community contribution. This could reduce the benefit of both current and future qualifying customers and the broader community.

This could be expected to drive both efficiency and innovation into the Company's operations in order to obtain target profit levels.

However partial distribution or sale or full distribution of the shares raises questions about inter-generational equity, as current qualifying customers would benefit at the expense of future generations of customers. This model would also add administrative complexity and cost, as ownership becomes more dispersed. However, the establishment of the MainPower Foundation would ensure some of the funds are retained to support the local community.

It would also bring additional regulatory oversight as the Trust would lose its exempt status under Part 4 of the Commerce Act. The introduction of price-quality regulation would however provide some protection for consumers, as the Commerce Commission would be responsible for regulating the maximum revenues of MainPower and the quality standards it would be required to meet.

In the event that shares are acquired by an interested party ultimately gaining majority control, new capability may be generated to assist the Company to deliver operating excellence. MainPower will also have the ability to raise additional capital through the sale of shares. Both factors may drive heightened business performance relative to 100% Trust ownership.

In the event of a **sale of 100% of shares**, the Trust's beneficiaries crystallise the existing value of MainPower, but this raises intergenerational equity issues. The establishment of the MainPower Foundation and increased regulatory oversight would provide some ongoing benefit and protection for the community.

Executive summary (continued)

Ability to respond

With **100% Trust ownership**, MainPower has adopted a long-term focus as appropriate for a large community utility. While investment required to facilitate business change is limited by MainPower's borrowing ability and the Trust's risk appetite (with no ability to raise capital through equity), the Company's recent significant programme of network investment funded through borrowing indicates that this may not be as restrictive as in other instances.

However, as noted above, strong direction is required from the Trust to assist the Company to establish its strategic objectives and respond to the challenges and opportunities of industry change. A business as usual approach is likely to become increasingly risky as the electricity industry accommodates the impacts of new technologies, evolving regulatory settings and more widespread and active participation in the sector.

The Trust may also consider partnering with or investing in new ventures in order to access new capability, introduce innovation into the business, and expand beyond traditional services. For example, MainPower's initial investment in Vircom was via a joint venture arrangement. These options can be achieved while retaining 100% Trust ownership of the core business.

With **partial distribution or sale or full distribution** of the Trust's shares, implementing change may be harder given the difficulty achieving consensus across a broader shareholder base. There is also the possibility that short-term returns are prioritised over the business evolution required to drive long-term sustainability and growth.

However, partial distribution or sale or full distribution which in turn leads to an interested party gaining majority control may generate new capability and/or capital sources which help MainPower innovate and respond to the changes in the sector relative to 100% Trust ownership.

Under the **100% sale of shares** option, this objective is no longer relevant as the Trust has no direct interest in the sector.



Executive summary (continued)

Conclusion

MainPower has demonstrated sound performance through utilisation of the trust model. Notable achievements over the period evaluated include:

- an increase in operating revenue from \$25.9m to \$85.5m in FY17, representing a compound growth rate of 7% p.a.
- an increase in equity from \$191.5m to \$221.4m in FY17
- \$53m in rebates to consumers
- reliability of supply and restoration times which outperform other networks in the MainPower peer group
- a gearing ratio of 13% (low for an infrastructure company).

The Company can be expected to continue to perform well by the Trust:

- setting clear direction for the Company
- encouraging the Company to seek opportunities for operational excellence, including access to economies of scale through collaboration
- establishing a culture of innovation
- encouraging the Company to seek out new business ventures which maximise the opportunities, and hence value, which are expected to arise as the industry embraces new technology.

Given current performance and the current absence of significant drivers for change (such as new investment opportunities unable to be financed from borrowing or an erosion of core business prospects), we consider that the Trust ownership model represents value for

beneficiaries (both present and future) and should, therefore, be continued.

Section 3

MainPower Group

Group overview

MainPower Group consists of MainPower New Zealand Limited and VirCom Energy Management Services Limited

MainPower New Zealand Limited (MainPower)

MainPower owns and operates the electricity distribution network which services the North Canterbury and Kaikoura regions located in the upper South Island.

MainPower's network spans 11,180 square kilometres, supplies over 37,000 connections and covers a population base of approximately 65,000.

MainPower owns the 0.9 MW Cleardale hydro power station, located at Rakaia Gorge. Cleardale was developed in 2010 and generates 4 GWh of electricity a year. MainPower also holds resource consents (valid until 2019) for the Mt Cass Wind Farm in North Canterbury near Waipara.

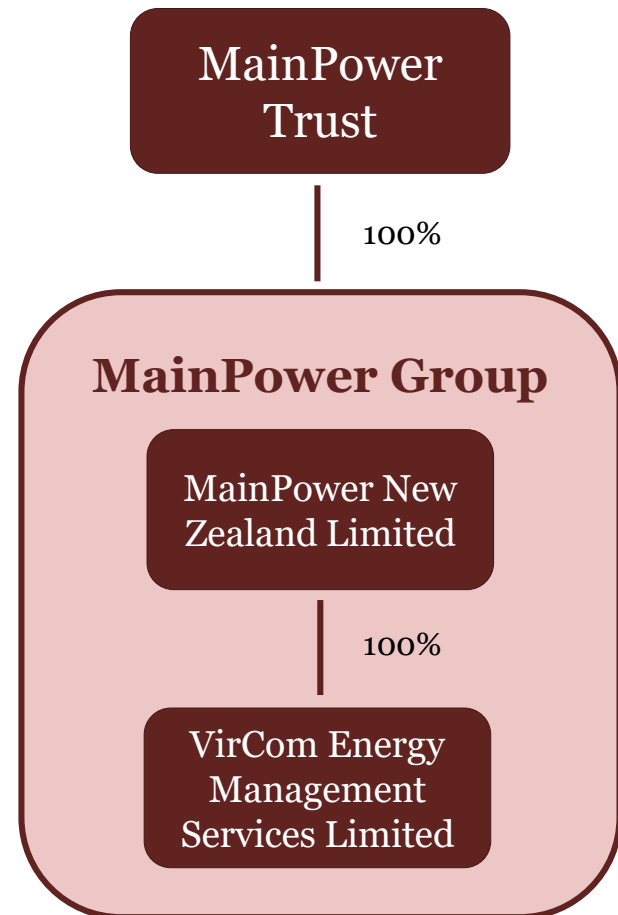
MainPower has \$294m of property, plant and equipment (as at 31 March 2017) and earned \$53m in line charge revenue in FY17.

VirCom Energy Management Services Limited (VirCom)

VirCom is a wholly owned subsidiary of MainPower, that provides qualified and registered field services capability throughout New Zealand.

VirCom's key services include metering, solar, battery and electrical installation and maintenance services.

VirCom uses a combination of permanent technicians and subcontractors, which are supported by in-house developed training, systems and auditing programs.



Business contribution to the Group

MainPower contributed 94% of Group EBITDA in FY17 and holds 98% of Group assets

MainPower is the larger of the two businesses based on financial measures (revenue, expenditure, assets etc), and managing the electricity distribution network is the Group's core business.

Observations

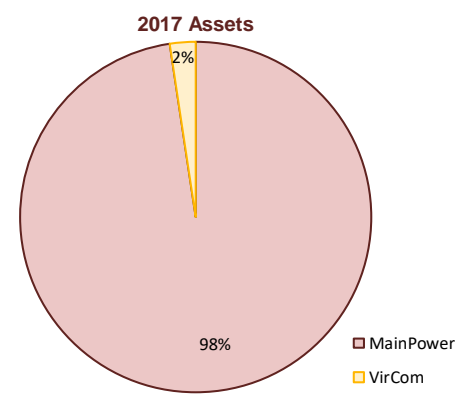
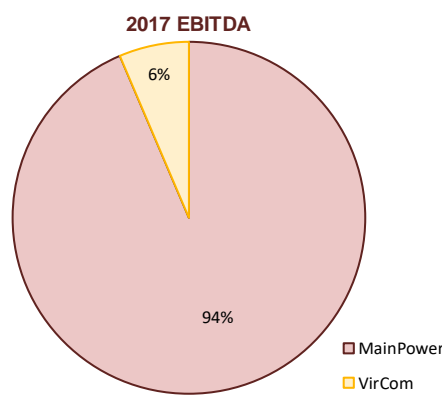
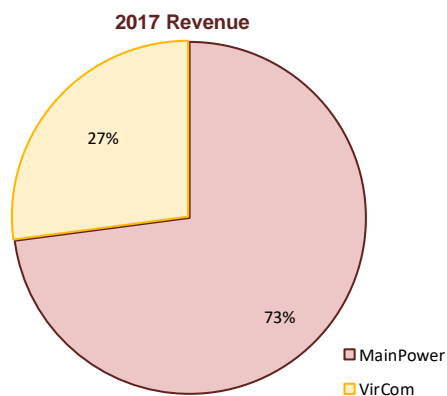
- VirCom contributed 27% of Group revenue and 6% of Group EBITDA in 2017.
- MainPower's assets made up 98% of Group assets in 2017.
- VirCom's revenue and EBITDA contribution has increased since the start of the review period. In 2012, VirCom contributed 24% of revenue, 3% of EBITDA and 2% of assets.

The contrast between the contribution of each business to revenue and EBITDA reflects the difference in the underlying business models of MainPower and VirCom.

MainPower is an infrastructure business with a large asset base that recovers its costs over time, whereas VirCom is a contracting business that earns a margin on each contract.

Consequently, VirCom's share of total revenue is significantly larger than its share of total EBITDA.

Note: The information presented below reflects values reported by each business. The totals do not equal the total Group values as intercompany eliminations are not included.



Financial performance – Group

Over the review period, the Group has demonstrated sustained growth in revenue while EBITDA has fluctuated

This section focuses on the performance of the MainPower Group for the period from FY12-FY17.

The Group's operating revenue increased over the review period, with revenue from both MainPower and VirCom increasing.

VirCom's revenue and EBITDA contribution to the Group increased between FY12 and FY17 resulting from increased smart meter installations.

Following recent growth in the irrigation sector, irrigation electricity consumption makes up a large share of MainPower's total electricity consumption (18% in FY16). Volumetric charging exposes MainPower to variations in weather conditions and customer demand, which impacts the Group's revenue and cash flow. For example, line charge revenue was lower in FY12 and FY17 due to lower irrigation use following wetter summers.

Observations

- Over the review period, operating revenue increased \$25.9m to \$85.5m in FY17, representing a compound growth rate of 7% p.a.
- Since 2013, EBITDA has been between \$29m and \$33m.
- Depreciation and interest costs have both increased, reflecting MainPower's investment in reinforcing the network which was partially debt funded.

\$ 000	31 March 2012	31 March 2013	31 March 2014	31 March 2015	31 March 2016	31 March 2017
Operating revenue	59,573	73,651	79,514	84,750	91,218	85,522
Operating expenses	(37,199)	(43,146)	(50,654)	(54,627)	(57,797)	(55,917)
EBITDA	22,374	30,505	28,860	30,123	33,421	29,605
Margin %	38%	41%	36%	36%	37%	35%
Depreciation	(10,623)	(10,525)	(10,805)	(11,434)	(11,890)	(13,201)
EBIT	11,751	19,980	18,055	18,689	21,531	16,404
Margin %	20%	27%	23%	22%	24%	19%
Interest costs	(4)	(277)	(341)	(3,179)	(3,420)	(1,288)
NPBT	11,747	19,703	17,714	15,510	18,111	15,116
Margin %	20%	27%	22%	18%	20%	18%
Rebate	(7,579)	(8,251)	(8,447)	(9,257)	(9,827)	(9,206)
Tax	(1,488)	(3,111)	(1,891)	(1,899)	(2,304)	(1,788)
NPAT	2,680	8,341	7,376	4,354	5,980	4,122
Margin %	4%	11%	9%	5%	7%	5%

Source: MainPower's annual reports

Financial position – Group

The Group's equity increased \$30m over the review period, after providing \$53m in rebates to consumers

The Group's financial position has improved, ending the review period with positive working capital, increased assets and \$221m of equity.

MainPower's Rangiora offices moved to new premises in June 2014 and during the review period the Group invested further in the Mt Cass wind farm development.

Fixed assets also increased reflecting MainPower's investment in the electricity network to support growth and reinforce the network. This investment was partially funded by debt.

During the review period, the Group shifted from using overdraft facilities (shown in the table below as a negative cash balance) to term loans.

The Group's balance sheet closely resembles MainPower's balance sheet as VirCom holds minimal assets.

Observations

- Total assets increased from \$245.1m in FY12 to \$310.9m in FY17. 83% of the increase in total assets is due to increases in property, plant and equipment reflecting MainPower's investment in the electricity network over the last six years.
- Group net debt increased from \$4.2m in FY12 to \$35.7m in FY16. Group net debt was \$34.0m at the end of FY17.
- The Group's equity increased at a compound growth rate of 3% p.a. over the review period. We note this is after providing \$53m in rebates to consumers.

\$ 000	31 March 2012	31 March 2013	31 March 2014	31 March 2015	31 March 2016	31 March 2017
Current assets	4,172	326	22,271	18,213	17,707	16,090
Property, plant & equipment	235,471	244,805	259,948	274,375	286,477	290,139
Other non-current assets	5,425	9,011	11,435	10,543	7,685	4,690
Total assets	245,068	254,142	293,654	303,131	311,869	310,919
Current liabilities	8,670	9,078	12,646	12,457	9,106	8,406
Non-current liabilities	44,848	45,173	72,951	78,263	84,485	81,113
Total liabilities	53,518	54,251	85,597	90,720	93,591	89,519
Net assets	191,550	199,891	208,057	212,411	218,278	221,400
Total equity	191,550	199,891	208,057	212,411	218,278	221,400

Source: MainPower's annual reports

Net debt – Group

The Group's gearing ratio is low relative to other infrastructure businesses and the Commerce Commission's efficient leverage benchmark

The adjacent chart shows the Group's cash movements from the start of FY12 to the end of FY17. Since the start of FY12, the Group has used more cash than it generated.

Cash was primarily used to fund rebates and capital expenditure which make up 24% and 66% of cash outflows (excluding operating expenses) respectively.

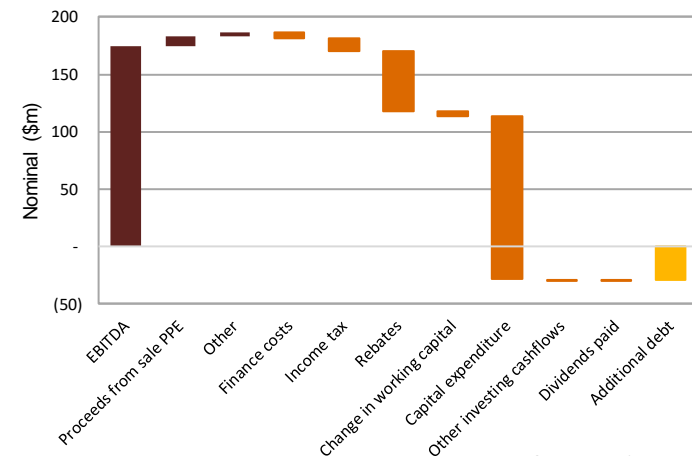
Accordingly Group net debt has increased by \$29.4m since the start of FY12. This largely reflects investment in MainPower's relocation and new head office building, network reinforcement and connections to support growth. In addition, MainPower increased expenditure following the Canterbury earthquakes to replace damaged assets in Kaiapoi and connect replacement housing developments. MainPower was also impacted by the November 2016 Kaikoura earthquake.

As these costs are recovered over time from customers who use the network, it is appropriate to fund the initial investment through some external borrowing.

As a result, the Group's gearing ratio (net debt to net debt plus equity) has increased to 13%.

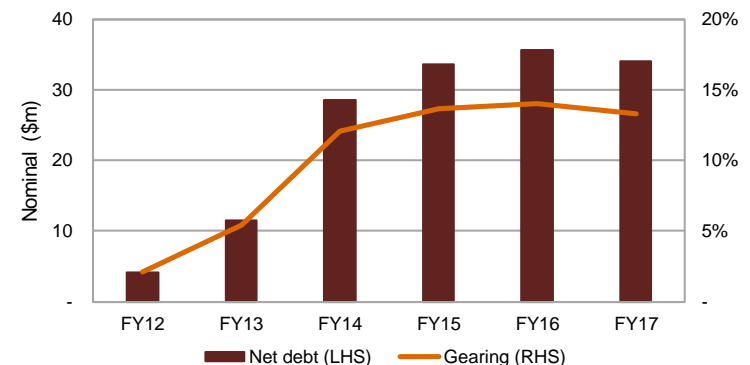
Overall, the Group's gearing is low given that it is primarily an infrastructure company. The Commerce Commission uses 42% as its efficient benchmark for the gearing ration of EDBs.

Cash flow and debt bridge



Source: PwC analysis

Group net debt and gearing



Source: PwC analysis

Performance against SCI targets

The Group achieved fewer than half of its SCI targets during the review period

MainPower's Statement of Corporate Intent (SCI) outlines the Group's aims for the following year. The adjacent table shows how MainPower has performed against its SCI targets over the review period.

Over the FY12-FY17 period, the Group achieved one third of its targets as illustrated below. This is partially due to below budgeted performance in FY12 and FY17 as well as work related injuries and lost days.

We note that the Company experienced unprecedented activity within the region during the review period. This combined with the impact of seasonal variances such as warm/cold winters and dry/wet summers impact on MainPower's electricity sales and hence revenues which are largely recovered through variable charges.

In addition, network reliability performance (SAIDI and SAIFI) is adversely impacted by extreme events such as the earthquakes and major wind or snow storms

While MainPower has invested heavily in improving its work practices and establishing a strong health and safety culture, it has been unable to meet its target of nil work related injuries or lost days during the review period.

A more detailed analysis of the targets and performance against them, and the current forecast targets is included in Appendix B.

	FY12	FY13	FY14	FY15	FY16	FY17
Group						
Financial Performance						
Operating revenue (\$m)	●	●	●	●	●	●
Profit before tax and rebates (\$m)	●	●	●	●	●	●
Rebates (\$m)	●	●	●	●	●	●
Profit before tax as a percentage of net assets (%)	●	●	●	●	●	●
Other						
Number of work related injuries resulting in lost time	●	●	●	●	●	●
Total number of lost days as a result of work related accidents	●	●	●	●	●	●
Lines Business						
Quality of supply						
SAIDI - System Average Interruption Duration Index	●	●	●	●	●	●
SAIFI - System Average Interruption Frequency Index	●	●	●	●	●	●
Network statistics						
Total line service customers (ICPs)	●	●	●	●	●	●
Gigawatthours delivered to customers (GWh)	●	●	●	●	●	●
Total transformer capacity (MW)	●	●	●	●	●	●
Circuit length lines (km)	●	●	●	●	●	●

Key: ● Exceeds target
● Within 10% of Target
● Does not meet target

Section 4

MainPower New Zealand Limited

Overview – MainPower

MainPower has invested in the network to support growth and strengthen network resilience

MainPower provides electricity network services in the North Canterbury and Kaikoura regions. The network is predominantly rural without a major urban centre. However, MainPower's southern network is becoming more urbanised as a result of population migration to Rangiora and Kaiapoi following the Canterbury earthquakes.

MainPower's network has grown over the review period with increased connections (8%), capacity (22%) and asset values (29%).

MainPower's customer mix has also changed over the review period with irrigation consuming 14% of all electricity in FY17 (18% in FY16).

To meet these challenges, MainPower has undertaken a number of projects to reinforce the network. The most significant of these is the \$23m Waimakiriri West project, which is an upgrade project to expand network capacity, strengthen security of supply and improve the resilience and reliability of the network.

Other projects include:

- MainPower's Rangiora offices and contracting yard moved to new premises in June 2014
- the Ashley GXP, load plant and feeder cabling work
- further investment in the Mt Cass wind farm development.

Connected customers

% of electricity consumed, FY17

Residential	43% (41% FY16)	Large users	20% (20% FY16)
Non-residential users	20% (19% FY16)	Irrigation	14% (18% FY16)
Other	2% (2% FY16)		

Network growth

(FY12 – FY17)

Connections	8% (37,442 ICPs FY17)	Consumption	10% (595 GWh FY17)
Capacity	22% (540 MVA FY17)	Network length	7% (4,987 km FY17)
RAB	29% (\$254m FY17)		

Source: MainPower's information disclosures

FY17 connected customer percentages do not sum to 100% due to rounding.

Financial performance – MainPower

MainPower's revenue has increased over the review period, but remains sensitive to weather conditions and irrigation

Over the review period, MainPower's financial performance has improved with EBITDA increasing by \$6m. This has allowed MainPower to increase its rebate to over \$9m in FY17.

MainPower's large irrigation customer base (18% of electricity consumption in FY16) continues to present challenges. In particular, the combination of volumetric charging and unpredictable weather conditions creates uncertainty for line revenue and cash flows. For example, the \$3.2m drop in line revenue in FY17 was primarily due to a 24% drop in irrigation electricity use as the droughts receded.

MainPower's costs have also increased since FY12. Some of this expenditure is outside MainPower's control (eg transmission charges) and some of it reflects MainPower's recent changes to its corporate structure. This is aimed at the delivery of a more customer centric focused organisation. In FY17 transmission charges increased \$1.2m, which was absorbed by the Company and not passed onto customers.

Observations

- EBITDA was highest in FY16 (\$31.3m), reflecting strong irrigation revenues.
- MainPower's rebate increased from \$7.6m in FY12 to \$9.2m in FY17, with the largest rebate in FY16 (\$9.8m). Over the period, MainPower has returned \$52.6m to customers (18% of total line charges and 24% of distribution charges).

\$ 000	31 March 2012	31 March 2013	31 March 2014	31 March 2015	31 March 2016	31 March 2017
Operating revenue	45,061	56,533	56,136	61,901	66,156	62,531
Operating expenditure	(23,656)	(27,428)	(29,256)	(33,317)	(34,883)	(35,078)
EBITDA	21,404	29,105	26,880	28,585	31,273	27,453
Margin %	52%	59%	53%	51%	52%	48%
Depreciation	(9,646)	(10,135)	(10,358)	(10,814)	(11,299)	(12,650)
EBIT	11,759	18,971	16,523	17,771	19,975	14,803
Margin %	29%	39%	33%	32%	33%	26%
Interest costs	(204)	(194)	(101)	(1,714)	(3,222)	(1,157)
NPBT	11,555	18,777	16,422	16,057	16,753	13,646
Margin %	28%	38%	32%	29%	28%	24%
Rebate	(7,579)	(8,251)	(8,447)	(9,257)	(9,827)	(9,206)
Tax	(1,413)	(2,868)	(1,513)	(2,061)	(1,897)	(1,254)
NPAT	2,562	7,658	6,462	4,739	5,029	3,186
Margin %	6%	16%	13%	8%	8%	6%

Source: MainPower

Financial position – MainPower

The value of MainPower's fixed assets and debt has increased reflecting network investments

As discussed above, MainPower has invested in network reinforcement and connections to support growth. This is reflected in the growth in MainPower's fixed assets. This expenditure has been partially funded through debt.

In June 2014, MainPower moved its Rangiora operations to a new purpose built facility in the Southbrook Business Park. This was partially funded through the sale of the Rangiora High Street and Keir Street sites and insurance payouts.

Although MainPower's debt level has increased, it remains low relative to the Commerce Commission's efficient leverage benchmark for electricity distribution businesses (42%).

Observations

- MainPower's equity increased by 15% between FY12 and FY17, after providing \$53m in rebates to beneficiaries.
- The value of MainPower's fixed assets increased from \$235.9m in FY12 to \$293.6m in FY17, representing a compound growth rate of 4% p.a.
- Net debt increased from \$4.4m in FY12 to \$37.1m in FY16 before decreasing to \$34.6m in FY17.

\$ 000	31 March 2012	31 March 2013	31 March 2014	31 March 2015	31 March 2016	31 March 2017
Current assets	3,507	(2,308)	9,819	12,300	10,418	10,210
Property, plant & equipment	235,903	249,564	276,629	283,355	292,861	293,643
Other non-current assets	5,636	6,136	4,926	5,426	5,926	5,976
Total assets	245,047	253,392	291,374	301,081	309,205	309,829
Current liabilities	7,293	7,428	10,278	9,843	8,895	7,950
Non-current liabilities	44,728	45,281	72,911	78,313	81,969	79,353
Total liabilities	52,022	52,709	83,188	88,156	90,864	87,303
Net assets	193,025	200,683	208,186	212,925	218,341	222,527
Total equity	193,025	200,683	208,186	212,925	218,341	222,527

Source: MainPower

Benchmarking – Introduction

MainPower's relative performance has been evaluated in comparison to the data of EDBs, retrieved from regulatory information disclosures and other sources of information. This benchmarking covers only the regulated electricity lines business activities of MainPower.

We have placed MainPower in a group with seven comparable network businesses. Profits, price, expenditure levels and network reliability have been considered in our performance evaluation. Key performance indicators are expanded upon in the following commentary.

It is important to note that electricity networks are complex and these complexities cannot be fully represented by the information and indicators available through the data published in accordance with the information disclosure framework. Topography, climate, growth rates (past and current), historical design practices and network configuration are all factors which can significantly impact network performance. This analysis therefore provides a high level indication of performance that should be subject to further consideration and investigation.

We have undertaken many exercises comparing the performance of EDBs using disclosure data. It is our experience that when comparing the performance of the EDBs in New Zealand, it is appropriate to group networks for the purpose of assessing relative performance, on the basis of the following indicators:

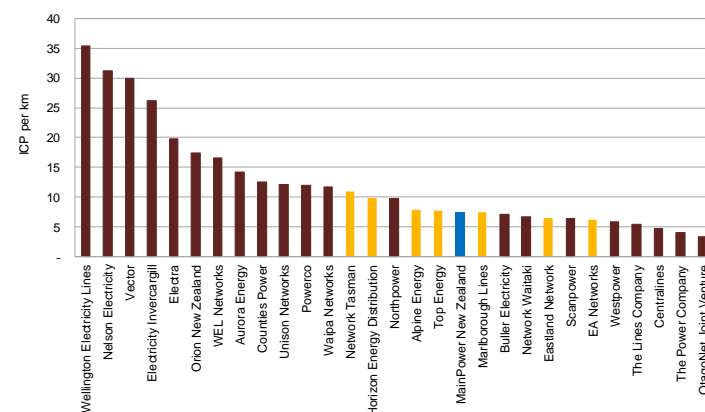
- network density (indicated by the ratio of customer connections per circuit kilometre)
- total size of the network (indicated by the total number of customer connections served).

For the purpose of this report we have selected the peer group for MainPower set out in the top table opposite.

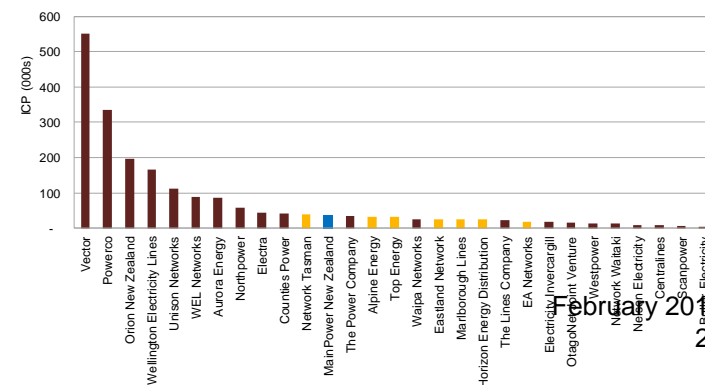
	ICP/km	ICP
Network Tasman	10.9	39,028
Horizon Energy Distribution	9.9	24,913
Alpine Energy	7.8	32,829
Top Energy	7.8	31,365
MainPower New Zealand	7.5	37,442
Marlborough Lines	7.4	25,133
Eastland Network	6.4	25,407
EA Networks	6.2	18,986
Median	7.6	28,386

Number of connections per km, 2017

Source: PwC analysis



Number of connections, 2017



Benchmarking – Operating expenditure

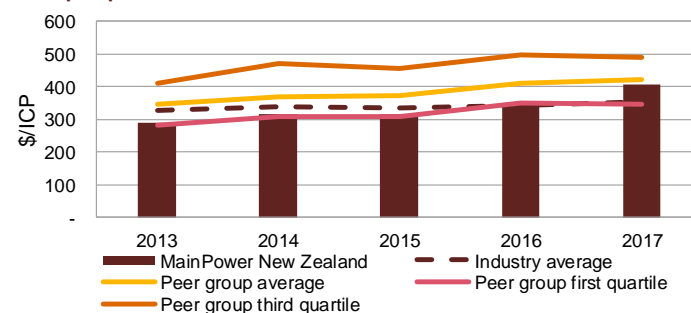
Although non-network operating expenditure per ICP has increased recently, total operating expenditure per ICP remains below the peer group average

As illustrated in the adjacent figure, MainPower's opex per ICP has increased since 2013 but was in line with the peer group first quartile until 2017 when it moved closer to the peer group average. MainPower's opex now exceeds the industry average opex on an ICP basis. The industry average is lower than the peer group which is expected given the economies of scale associated with the largest networks which influence the industry average.

On a more disaggregated basis, MainPower's network and non-network opex show contrasting trends:

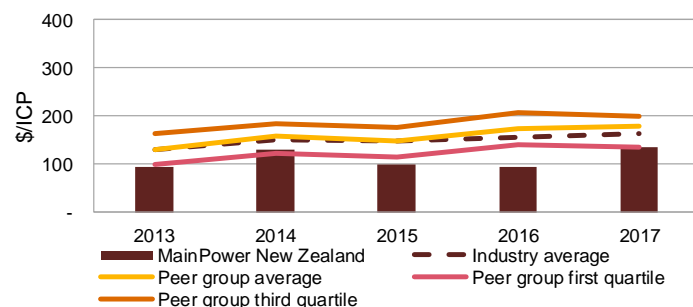
- Network opex, which includes planned and unplanned network maintenance and fault response, is in line with its peer group first quartile, and below the industry average.
- Non-network opex which includes corporate and business support and asset management planning and operations, has increased since 2013 and is now similar to the peer group third quartile and industry average.

Total opex per ICP



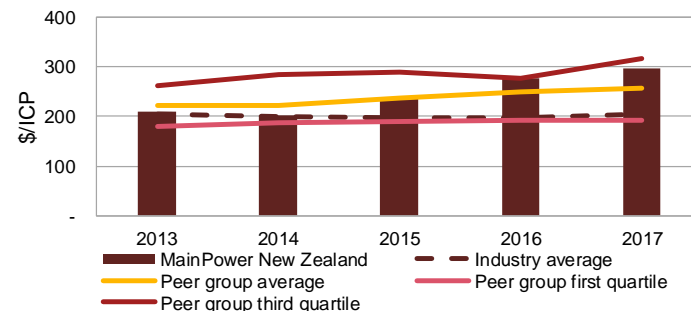
Source: PwC analysis

Network opex per ICP



Source: PwC analysis

Non-network opex per ICP



Source: PwC analysis

Benchmarking – Capital expenditure

MainPower's growth capital expenditure was above the peer group and industry averages during the review period, highlighting MainPower's investment in expanding and reinforcing the network

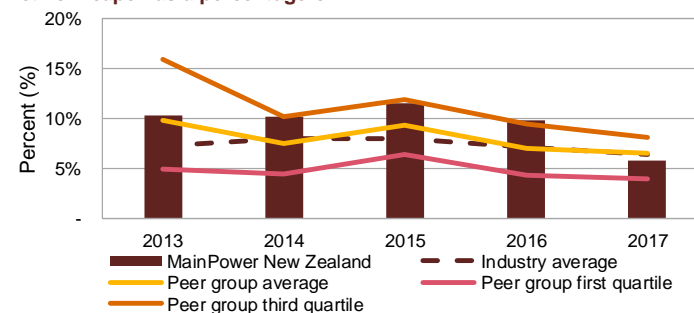
Network capital expenditure includes growth capex (connections, system growth and asset relocations) and renewal capex (replacement and reliability) expenditure.

When compared to the peer group:

- Network capex was above the peer group and industry averages between 2013 and 2016, and reduced to below average in 2017.
- Growth capex has been similar to the peer group third quartile and above the industry average whereas renewal capex has been well below the peer group first quartile throughout the review period.

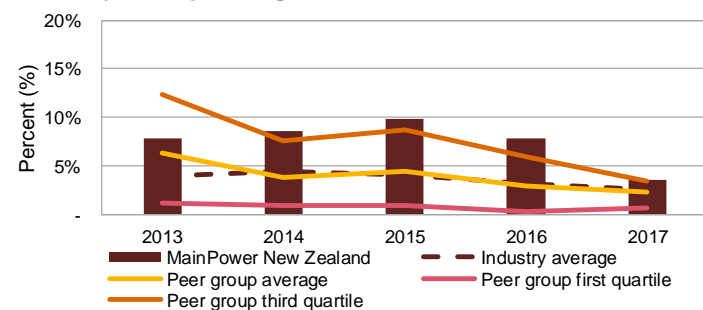
This investment has provided MainPower with a network which is well placed to meet its customers' needs for the foreseeable future. The reduction in 2017 reflects the opportunity to reassess investment priorities given this outcome.

Network capex as a percentage of RAB



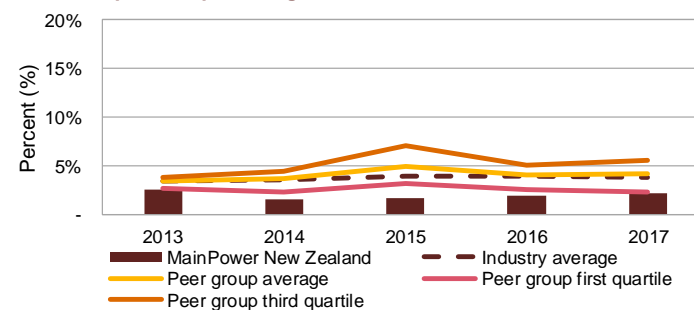
Source: PwC analysis

Growth capex as a percentage of RAB



Source: PwC analysis

Renewal capex as a percentage of RAB



Source: PwC analysis

Benchmarking – Reliability

SAIDI and SAIFI are similar to the peer group first quartile, and SAIFI is below the industry average

The figures below show MainPower's comparable reliability performance, using the industry standard SAIDI and SAIFI measures.

SAIDI (System Average Interruption Duration Index): measures the average duration, in minutes, of power outages on the network.

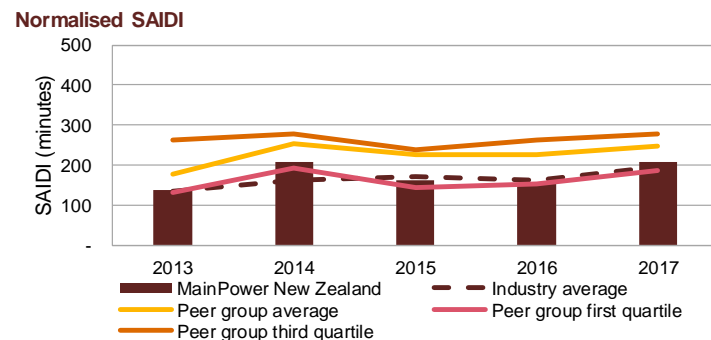
SAIFI (System Average Interruption Frequency Index): measures the average frequency of power outages on the network.

This data is normalised for the impact of extreme events, which assists with comparisons between EDBs, and over time.

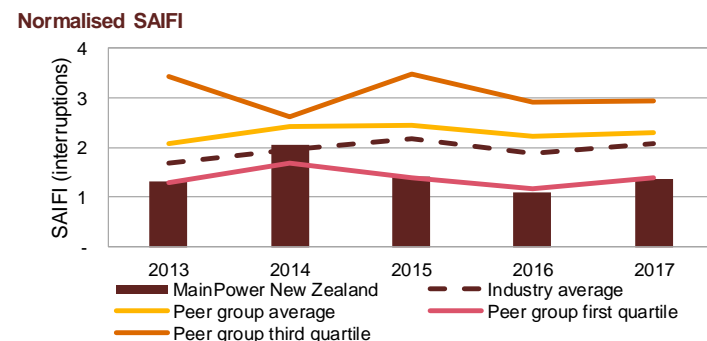
When compared to the peer group:

- Normalised SAIDI has been similar to the first quartile of the peer group and the industry average over the review period.
- Normalised SAIFI is also similar to the peer group first quartile and is below the industry average.
- Both SAIDI and SAIFI were higher in 2014 due to outages caused by the significant September 2013 windstorm. High winds caused trees to make contact with power lines causing widespread outages across the North Canterbury region.

This data suggests that outages occur less often and restoration times are shorter on MainPower's network relative to the other networks in the peer group, delivering better customer service overall.



Source: PwC analysis



Source: PwC analysis

Benchmarking – Profitability

Pre rebate, MainPower's profitability was similar to the peer group third quartile between 2013 and 2016

The most common indicator of profit within the electricity network sector is return on investment (ROI). The 'ROI comparable to a vanilla WACC' measure is used by the Commerce Commission when setting regulated price caps.

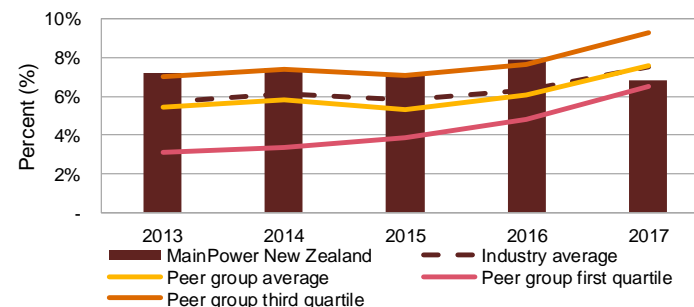
- MainPower's ROI was in line with the peer group third quartile and above the industry average from 2013 to 2016. During this period, MainPower's ROI averaged 7.4%.
- The regulatory benchmark for the FY13 to FY15 period was 8.7% and for the FY16 to FY20 period is 7.2%.
- In 2017, MainPower's ROI decreased to 6.8% reflecting lower line charge revenue and the increase in transmission costs which was not passed on to consumers.

The industry average results are typically lower than the regulatory benchmark, as some networks choose to price below the regulatory target, particularly those which are exempt from price-quality regulation due to their 100% consumer ownership models.

Our adjusted ROI measure deducts discretionary discounts and rebates, and adjusts for the tax effect of these. On this measure, the industry average adjusted ROI is 6.3% in 2017.

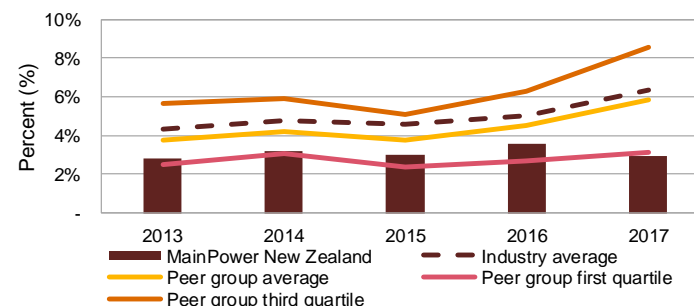
MainPower's adjusted ROI (3.0% in 2017) is similar to the peer group first quartile. This reflects MainPower's rebate which was \$9.2m in FY17 (17.2% of total line charge revenue).

ROI - Comparable to vanilla WACC



Source: PwC analysis

Adjusted ROI - Comparable to vanilla WACC



Source: PwC analysis

Benchmarking – Prices

After rebate, MainPower's distribution prices are below the industry and peer group averages

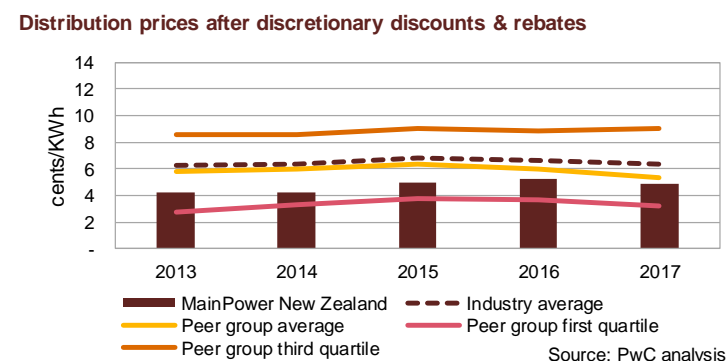
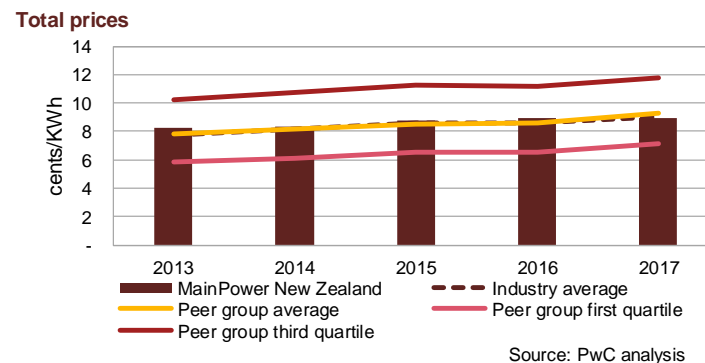
Average unit revenues are a useful benchmark for comparing electricity network prices. However, this does not fully represent the different ways in which networks collect their revenue (eg through different combinations of fixed, capacity and volume charges) or the underlying demand characteristics of a network's customer base.

- MainPower's average unit price (before rebates) for electricity network services has been similar to the peer group and industry averages since 2013.

Note that this price information reflects the prices that MainPower charges, via retailers, for its services, not the full cost of electricity charged to consumers.

MainPower's distribution prices, after accounting for its rebates, reflects the component of electricity prices that results from MainPower's costs.

- MainPower's average distribution prices after rebates has been below the peer group and industry averages since 2013, but above the peer group first quartile.
- The comparable data also excludes discounts and rebates paid by other trust owned electricity distribution businesses.



Section 5

Ownership options

Introduction

This section evaluates continued Trust ownership of MainPower shares relative to alternatives

Overview

This section evaluates the advantages and disadvantages to beneficiaries of continued Trust ownership of MainPower shares, relative to the distribution of these shares. This evaluation is required under Clause 6 of the MainPower Trust Deed. The approach to the evaluation is as follows:

- present the ownership options
- specify key considerations in evaluating MainPower's ownership options, namely:
 - (1) company objectives
 - (2) sector opportunities and challenges.
- develop evaluation criteria to assess ownership options, drawing on insights from (1) and (2)
- evaluate ownership options using evaluation criteria
- make recommendation on the appropriate ownership option.

Each of the above steps is considered through the remainder of this section.

Ownership options

Ownership options available to the Trust range from continued 100% Trust ownership through to full distribution of shares.

This report examines the following options, which comprise the range of alternatives available to MainPower:

- 100% Trust ownership

- distribution or sale of 24.9% or 49.9% of shares
- distribution of 100% of shares
- sale of 100% of shares.

These options are described further below.

Option	Description
100% Trust ownership of shares (status quo)	Trust ownership is common practice with over 70% of EDBs in New Zealand operating under it to some degree.
Sale or distribution of 24.9% or 49.9% of shares	Distribution or sale of 24.9% allows the Trust to retain control over MainPower's constitution, and distribution or sale of 49.9% allows the Trust to retain outright control.
Distribution of 100% of shares	Where a 100% share distribution occurs, shares are typically sold within a short period, making it possible for an interested party to gain majority control.
Sale of 100% of shares	A sale of 100% of shares would enable the Trust to test the market for interest in the Company and pass the proceeds to beneficiaries.

Key considerations

Company objectives focus on operating successfully & embracing future opportunities

In assessing the advantages and disadvantages of retaining 100% Trust ownership relative to alternative options, we have considered MainPower's objectives, as set out in the SCI and agreed with the Trust. The SCI covers the activities of MainPower and its subsidiaries. The most recent SCI covers the financial year commencing 1 April 2017 and the two succeeding financial years. The figure below summarises the key objectives from the SCI.

1. Principal objective

MainPower will provide a safe, secure, reliable and financially sustainable electricity supply to the North Canterbury and Kaikoura region. In keeping with broader objectives outlined in the statement of expectations from the MainPower Trust, and recognising the role of the regulator, MainPower will operate as a successful business in accordance with the requirements of Section 36 of the Energy Companies Act 1992.

2. Ambition

Partnering in our customers' energy future.

3. Values

Safety first: on purpose not by accident.

Progress: best people, best training, best technology.

Attitude: do the right thing even when no one is looking.

Respect: play together, stay together.

Communication: communication is key.

Service: our customers, our community, our commitment.

4. Strategic direction

HSEQ Performance: delivering value without compromising on health, safety, environment and quality.

Customers at the Core: developing our customer vision and aligning with our organisation with the opportunities ahead.

Fighting fit: building organisational strength, productivity and strategic focus.

Operational excellence: driving efficiency and effectiveness; ensuring the right skills and capabilities are in the business.

Embracing innovation: considering the opportunities of emerging technologies and challenging our business model.

Key considerations (continued)

The sector is facing unprecedented change

Though uncertainty has been a constant feature of the electricity distribution sector, the sector now faces this uncertainty on an unprecedented scale. This is due in large part to the following interrelated factors.

New technologies impacting consumer demand

New technologies such as energy efficient homes and businesses, solar photovoltaics (PV), battery storage, electric vehicles (EVs) and energy home automation management systems are expected to have a significant and enduring impact on the market.

While uptake of these technologies in New Zealand is still relatively low, costs are declining and will likely soon reach parity with commonly used alternatives. Improved cost efficiency paired with environmental and energy-independent social preferences means that the uptake of these technologies is growing quickly.

The importance of electricity distribution prevails with these new technologies, but the nature of use is expected to change. For instance, distributors are likely to find additional demand added to peak periods as consumers plug in EVs, offset with lower demand off-peak, when consumers may turn to solar PV. Uptake of batteries will eventually allow consumers to store electricity generated during the day by solar and release this at night. This will act to flatten peak demand. Distributors are also likely to see greater demand responsiveness to pricing enabled by smart meter technologies.

New business models

The network is rapidly evolving to a distributed and digital micro-network that more directly engages customers, for example through schemes such as peer to peer energy trading and distributed generation, as well as demand management policies such as load pricing.

Distribution networks are likely to act as the local market place for these activities, and will need to provide for more complex two-way electrical loads.

This has prompted consideration of the role of electricity distributors and other industry participants (for example: retailers) or new entrants, in delivering more customer centric energy solutions. Some advocates have suggested that distributors should be precluded from directly entering these contestable markets, given their monopoly status. To date policy makers and regulators have not endorsed this view.



Key considerations (continued)

The sector is facing unprecedented change

Government policy, regulation and legislation

The structure, scope and nature of the electricity sector is being considered by lawmakers. For instance, the Labour-New Zealand First-Green coalition government has announced a full-scale review of retail power pricing. NZ First has suggested that the retail prices are too high and that recent studies in Australia and UK, which have similar market structures, support this view. It is expected that the review will examine all components of retail prices, including distribution charges and by inference the underlying costs of supply and effectiveness of the distribution sector.

The Commerce Commission has also recently formalised its forward work programme for electricity distribution regulation, which includes particular focus on the asset management and investment practices of the sector.

Further, this month the Electricity Authority committed to a review which considers whether parties wanting to use electricity networks are treated equally and can compete on a level playing field, noting ‘a lack of confidence in existing open or equal access arrangements’. The review will consider:

- whether the operation of the existing arrangements to use transmission and distribution networks to provide electricity and electricity related services, including network support services, is promoting competition, efficiency and reliability for the long term benefit of consumers
- options to strengthen confidence in the existing arrangements to use transmission and distribution networks to provide electricity and electricity related services, including network support services, for the long term benefit of consumers
- the costs and benefits of each option.

The Government is also facing pressure from bodies such as the International Energy Agency to consider changes that include:

- achieving scale economies through amalgamation of distributors or the use of joint ventures and/or regional service and management agreements
- extending economic regulation to include exempt community trust distributors
- introducing regulatory incentives for innovation, and allowing the use of benchmarking to drive distributor-led innovation.

Further detail on government policy and its potential impact on the electricity sector is set out in Appendix C.

Implications for MainPower

Despite the uncertainty, there are real opportunities for distributors to leverage the relationships they have with their customers, and to maintain and grow value by embracing the opportunities created through innovation and new technology. Actions taken or underway by MainPower demonstrate it is looking to actively embrace these opportunities.

Though not explicitly provided for in the Trust Deed, alternatives such as joint ventures may also allow MainPower to take advantage of the opportunities and/or mitigate the challenges present in the sector currently. As evidenced through MainPower’s initial joint venture with VirCom (now a wholly owned subsidiary), a joint venture provides a mechanism to expand into new business areas without requiring significant capital. This option may provide access to potentially valuable external capabilities and expertise, and may deliver economies of scale while accommodating local objectives and retaining 100% ownership of the core business.

Options analysis

Options are assessed against criteria that captures company priorities and sector insights

Evaluation criteria

To assess ownership options, we have developed the following evaluation criteria. The criteria draw on insights from analysis into MainPower's company objectives and wider sector opportunities and challenges, as discussed in the preceding commentary. The criteria captures both the value of Trust ownership for current beneficiaries and – to the extent possible - future beneficiaries. That is, the criteria evaluates both the immediate merits of Trust ownership and the medium-long term or intergenerational merits.

1. Operate as a successful business

Providing a safe, secure, reliable and financially sustainable electricity supply to the North Canterbury and Kaikoura region.

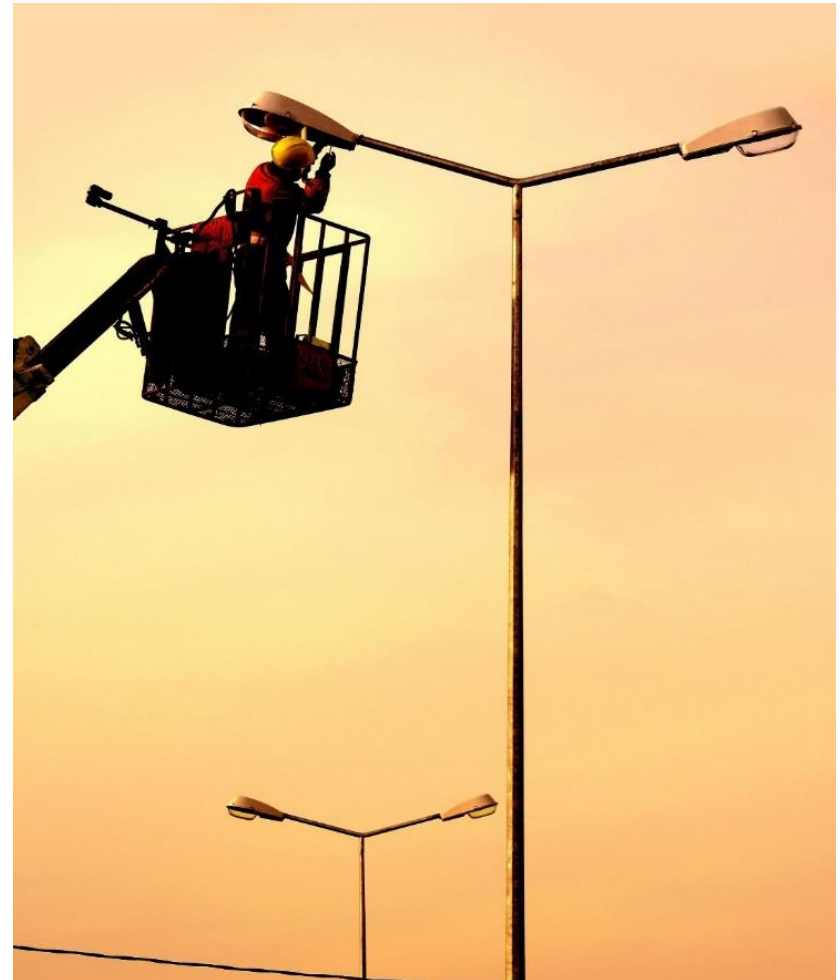
In order to achieve its strategic objectives and to remain resilient in a rapidly evolving sector, it will be important that MainPower continues to deliver a strong network performance and uncompromising focus on health and safety, underpinned by robust fiscal management.

2. Ability to respond

Responding to the challenges and opportunities arising from the evolution of the electricity sector.

It will be important that MainPower is able to proactively respond to the evolution in consumer demand, technology and business models occurring in the sector.

The table on the following page provides a summary of the advantages and disadvantages of each ownership option relative to the above criteria.



Options analysis (continued)

		Operate as a successful business	Ability to respond
100% Trust ownership of shares	Advantages	<ul style="list-style-type: none"> The Trust supports MainPower as it seeks to operate as a successful business across a range of measures, in addition to fiscal management and in turn shareholder returns. For example, the Trust supports the provision of safe, secure and reliable electricity supply, sound customer service, an unrelenting focus on health and safety and strong community partnerships. This is likely to enhance long term shareholder value for the benefit of both current and future qualifying customers as well as the wider community. The Trust, and qualifying customers via Trust representatives, have maximum ability to directly influence the direction and consequently performance of MainPower. A relatively simple and low cost model. 	<ul style="list-style-type: none"> The Trust supports MainPower as it seeks to respond to the opportunities and challenges in the sector, including through a long-term focus as appropriate for a large community utility in a sector facing significant disruption. The Trust retains maximum flexibility for future opportunities.
	Disadvantages	<ul style="list-style-type: none"> MainPower's operational success may be restricted with limited access to external capability and influence both in terms of fiscal management and broader network performance (for example rebates, reliability of supply, community contributions and health and safety). MainPower's operational success may be restricted without commercial incentives to innovate and drive excellence. Disruption and regulatory and policy responses could erode MainPower's value over time without an appropriate strategic response. Dependent on ability to attract Trustees with necessary skills, and vulnerable to instability as a result of election cycles. 	<ul style="list-style-type: none"> MainPower's ability to respond may be restricted with limited access to external capability and influence. Investment is limited by MainPower's borrowing capacity and the Trust's risk appetite.

Options analysis (continued)

		Operate as a successful business	Ability to respond
Sale or distribution of 24.9% or 49.9% of shares	Advantages	<ul style="list-style-type: none"> To a certain degree, the Trust can continue to support MainPower and the interests of beneficiaries and the community as it seeks to operate as a successful business across the range of aforementioned financial and non-financial measures (for example fiscal management, rebates, reliability of supply, community contributions and health and safety). MainPower's operational success may be enhanced with commercial incentives to innovate and drive excellence. Triggers the establishment of the MainPower Foundation to support community interests. 	<ul style="list-style-type: none"> To a certain degree, the Trust can continue to support the evolution of MainPower as it seeks to respond to the opportunities and challenges in the sector. May provide access to additional capital if shares are on-sold to active investors. Potentially provide access to new opportunities if shares are sold to third parties.
	Disadvantages	<ul style="list-style-type: none"> Raises inter-generational equity issues, with future generations not benefiting from the entire shareholding. A dividend would likely need to replace the rebate mechanism with associated tax consequences. Any impact on consumer prices is likely to be minimal due to the resulting oversight by the regulator. The Trust's priorities will need to be balanced against the needs of other shareholders, who are likely to have a heightened focus on shareholder returns. MainPower's operational success may continue to be limited without access to external capability and influence. A more complex structure, with additional costs. 	<ul style="list-style-type: none"> The needs of new shareholders may not support the nature of change required to a community utility in a sector facing significant disruption (eg short-term returns may be prioritised over investment for long-term gain). While the Trust retains some flexibility for future options or changes, this is more limited than under 100% ownership (given a broad shareholder base and difficulty in achieving consensus). Investment continues to be limited to MainPower's borrowing capacity and the new shareholders' risk appetite.

Options analysis (continued)

		Operate as a successful business	Ability to respond
Distribution of 100% of shares	Advantages	<ul style="list-style-type: none"> Over the longer term, on the basis that qualifying customers shares are on-sold to an interested party who gains majority control, MainPower may gain access to external capability and influence which supports it operating as a successful business. The Trust's capital beneficiaries could crystallise the existing value of MainPower before any potential negative impacts from disruption. MainPower's operational success may be enhanced with commercial incentives to innovate and drive excellence. Any impact on consumer prices is likely to be minimal due to the resulting oversight by the regulator. Triggers the establishment of the MainPower Foundation to support community interests. 	<ul style="list-style-type: none"> Over the longer term, on the basis that qualifying customers' shares are on-sold to an interested party who gains majority control, MainPower may gain access to external capability and influence which supports it to respond to challenges and opportunities in the sector. Over the longer term, on the basis that qualifying customers shares are on-sold to an interested party who gains majority control, MainPower may be able to raise additional capital.
	Disadvantages	<ul style="list-style-type: none"> Shareholders are likely to have a heightened focus on returns relative to other performance metrics, quality of electricity supply, customer service, health and safety and community contributions potentially affecting community benefit. Raises inter-generational equity issues, with future generations not benefiting from the shareholding. A more complex structure, with additional costs. 	<ul style="list-style-type: none"> The needs of new shareholders may not support community interests in a sector facing significant disruption (eg short-term returns may be prioritised over investment for long-term consumer benefit).

Options analysis (continued)

		Operate as a successful business	Ability to respond
Sale of 100% of shares	Advantages	<ul style="list-style-type: none"> The Trust's capital beneficiaries could crystallise the existing value of MainPower before any potential negative impacts from disruption. Any impact on consumer prices is likely to be minimal due to the resulting oversight by the regulator. Triggers the establishment of the MainPower Foundation to support community interests. 	
	Disadvantages	<ul style="list-style-type: none"> Shareholders are likely to have a heightened focus on returns relative to other performance metrics such as quality of electricity supply, customer service, health and safety and community contributions, potentially affecting community benefit. Raises inter-generational equity issues, with future generations not benefiting from the shareholding. 	

Summary of options assessment

Summary of options assessment

Operate as a successful business

With **100% Trust ownership**, MainPower has demonstrated sustained growth in revenue, continued customer confidence and an ongoing focus on community needs and health and safety. It has undertaken a substantial programme of network investment funded through external borrowing, and responded to both the Christchurch and North Canterbury/Kaikoura earthquakes, as well as a series of other natural events.

These examples indicate that under the Trust's stewardship MainPower has been able to operate as a successful business for the benefit of the North Canterbury/Kaikoura community.

These outcomes are dependent on strong leadership and direction to encourage performance excellence within the 100% Trust model. While other ownership options may provide more direct incentives for efficiency and innovation, these can also be achieved under the Trust model through collaboration. This may include opportunities to seek scale economies and to access specialist expertise outside the local business footprint.

Retaining 100% control with the Trust is also a simple model, with minimal administrative costs, which also enables the Company to avoid heavy-handed price-quality regulation.

With **partial or full distribution or partial sale** of the Trust's shares, it is possible that MainPower will be encouraged to focus on short-term shareholder returns, potentially at the cost of long-term shareholder value and non-financial measures such as reliability of supply, customer services, health and safety and community contributions. This could reduce for the benefit of both current and

future qualifying customers and the broader community. This could be expected to drive both efficiency and innovation into the Company's operations in order to obtain target profit levels.

However, partial distribution or sale or full distribution of the shares raises questions about inter-generational equity, as current qualifying customers would benefit at the expense of future generations of customers. This model would also add administrative complexity and cost, as ownership becomes more dispersed. However, the establishment of the MainPower Foundation would ensure some of the funds are retained to support the local community.

It would also bring additional regulatory oversight as the Trust would lose its exempt status under Part 4 of the Commerce Act. The introduction of price-quality regulation would however provide some protection for consumers, as the Commerce Commission would be responsible for regulating the maximum revenues of MainPower and the quality standards it would be required to meet.

In the event that shares are acquired by an interested party ultimately gaining majority control, new capability may be generated to assist the Company to deliver operating excellence. MainPower will also have the ability to raise additional capital through the sale of shares. Both factors may drive heightened business performance relative to 100% Trust ownership.

In the event of a **sale of 100% of shares**, the Trust's beneficiaries crystallise the existing value of MainPower, but this raises intergenerational equity issues. The establishment of the MainPower Foundation and increased regulatory oversight would provide some ongoing benefit and protection for the community.

Summary of options assessment (continued)

Ability to respond

With **100% Trust ownership**, MainPower has been supported to respond to the opportunities and challenges in the sector, including through a long-term focus as appropriate for a large community utility in a sector facing significant disruption. While investment required to facilitate business change is limited by MainPower's borrowing ability and the Trust's risk appetite (with no ability to raise capital through equity), the Company's recent significant programme of network investment funded through borrowing indicates that this may not be as restrictive as in other instances.

However, as noted above, strong direction is required from the Trust to assist the Company to establish its strategic direction and respond to the challenges and opportunities of industry change. A business as usual approach is likely to become increasingly risky as the electricity industry accommodates the impacts of new technologies, evolving regulatory settings and more widespread and active participation in the sector.

The Trust may also consider partnering with or investing in new ventures in order to access new capability, introduce innovation into the business, and expand beyond traditional services. For example, MainPower's initial investment in Vircom was via a joint venture arrangement. These options can be achieved while retaining 100% Trust ownership of the core business.

With **partial distribution or sale or full distribution** of the Trust's shares, implementing change may be harder given the difficulty achieving consensus across a broader shareholder base. There is also the possibility that short-term returns are prioritised over the business evolution required to drive long-term sustainability and growth.

However, partial distribution or sale or full distribution which in turn leads to an interested party gaining majority control may generate new capability and/or capital sources which help MainPower innovate and respond to the changes in the sector relative to 100% Trust ownership.

Under the **100% sale of shares** option, this objective is no longer relevant as the Trust has no direct interest in the sector.

Impact of drivers for significant change

The options assessment is based on current performance and the current absence of drivers for significant change.

Drivers for change may include:

- where investment opportunities exist but borrowing constraints have been reached
- where there has been an erosion of core business prospects.

Under these circumstances, the Trust may wish to sell or distribute part or all of its shareholding in order to allow the Company to access new capital and/or expertise. This would trigger the establishment of the MainPower Foundation, and additional regulatory oversight by the Commerce Commission.

There is extensive market evidence that the sale of a minority shareholding will attract a discount to the price that could be achieved by selling 100% of the shares. The quantum of discount will reflect the prevailing circumstances, including:

- governance rights (board representation)
- voting and pre-emptive rights
- degree of influence (which may manifest in a shareholders' agreement)

Summary of options assessment (continued)

- liquidity
- the nature and strategic objectives of the controlling shareholder.

In our experience, the discount for a minority shareholding is typically between 10% and 25%.

The Trust is therefore likely to maximise value by selling 100% of the business and distributing cash to beneficiaries, rather than selling part of the business or distributing shares, some of which are likely to be acquired by third parties seeking majority control.



Conclusion

MainPower has demonstrated sound performance through utilisation of the Trust model. Notable achievements over the period evaluated include:

- an increase in operating revenue from \$25.9m to \$85.5m in FY17, representing a compound growth rate of 7% p.a.
- an increase in equity from \$191.5m to \$221.4m in FY17
- \$53m in rebates to consumers
- reliability of supply and restoration times which outperform other networks in the MainPower peer group
- a gearing ratio of 13% (low for an infrastructure company).

The Company can be expected to continue to perform by the Trust:

- setting clear direction for the Company
- encouraging the Company to seek opportunities for operational excellence, including access to economies of scale through collaboration
- establishing a culture of innovation
- encouraging the Company to seek out new business ventures which maximise the opportunities, and hence value, which are expected to arise as the industry embraces new technology.

Given current performance and the current absence of drivers for significant change, we consider that the Trust ownership model represents value for beneficiaries (both present and future) and should, therefore, be continued.



Appendices

Appendix A – Important notice

This report has been prepared for MainPower Trust to support the Trust's requirements to carry out an ownership review every six years, consistent with its Trust Deed. This report has been prepared solely for this purpose and should not be relied upon for any other purpose. We accept no liability to any party should it used for any purpose other than that for which it was prepared.

This report can be made available for public inspection in accordance with the requirements of the MainPower Trust Deed. Apart from this noted exception, our report is not intended for general circulation, distribution or publication nor is it to be reproduced or used for any purpose without our written permission in each specific instance.

To the fullest extent permitted by law, PwC accepts no duty of care to any third party in connection with the provision of this report and/or any related information or explanation (together, the "Information"). Accordingly, regardless of the form of action, whether in contract, tort (including without limitation, negligence) or otherwise, and to the extent permitted by applicable law, PwC accepts no liability of any kind to any third party and disclaims all responsibility for the consequences of any third party acting or refraining to act in reliance on the Information.

We have not independently verified the accuracy of information provided to us, and have not conducted any form of audit in respect of the MainPower Trust or MainPower New Zealand Limited. Accordingly, we express no opinion on the reliability, accuracy, or completeness of the information provided to us and upon which we have relied.

The statements and opinions expressed herein have been made in good faith, and on the basis that all information relied upon is true and accurate in all material respects, and not misleading by reason of omission or otherwise.

The statements and opinions expressed in this report are based on information available as at the date of the report.

We reserve the right, but will be under no obligation, to review or amend our report, if any additional information, which was in existence on the date of this report, was not brought to our attention, or subsequently comes to light.

We have relied on forecasts and assumptions prepared by MainPower Trust and MainPower New Zealand Limited about future events which, by their nature, are not able to be independently verified. Inevitably, some assumptions may not materialise and unanticipated events and circumstances are likely to occur. Therefore, actual results in the future will vary from the forecasts upon which we have relied. These variations may be material.

This report is issued pursuant to the terms and conditions set out in our engagement letter dated 17 October 2017.

Appendix B – Performance against SCI targets

Group	FY12		FY13		FY14		FY15		FY16		FY17		FY18B	FY19B
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Target
Financial Performance														
Operating revenue (\$m)	64.0	59.6	72.0	73.7	81.5	79.5	92.9	84.7	85.5	91.2	86.6	85.5	82.9	88.0
Profit before tax and rebates (\$m)			16.3	19.7	21.6	17.7	18.3	15.5	19.7	18.1	24.4	15.1	15.9	18.1
Rebates (\$m)	8.4	7.6	8.6	8.3	8.3	8.4	8.4	9.3	9.0	9.8	10.2	9.2	9.2	9.7
Profit before tax as a percentage of net assets (%)	3.2%	2.2%	4.0%	5.9%	6.6%	4.5%	4.7%	3.0%	4.9%	3.9%	6.3%	2.7%	3.0%	3.6%
Health and safety														
Number of employees	150	224	224	251	258	272	289	248	268	244	274	266	266	266
Number of work related injuries resulting in lost time	-	3	-	10	-	3	-	10	-	5	-	2	-	-
Total number of lost days as a result of work related accidents	-	13	-	17	-	55	-	74	-	47	-	2	-	-
Lines Business														
Quality of supply														
SAIDI - System Average Interruption Duration Index	130.0	116.4	125.0	137.4	124.0	206.3	124.0	192.0	123.0	264.0	123.0	213.4	170.0	170.0
SAIFI - System Average Interruption Frequency Index	1.50	1.12	1.60	1.32	1.59	2.05	1.58	1.47	1.58	2.09	1.57	1.44	1.74	1.73
Network statistics														
Total line service customers (ICPs)	34,800	34,746	35,946	35,994	36,836	36,892	37,900	37,891	38,771	38,389	39,130	39,346	40,098	40,807
Gigawatthours delivered to customers (GWh)	551	518	568	552	553	560	594	604	629	630	643	601	602	617
Total transformer capacity (MW)	441	447	465	464	475	483	496	514	535	526	555	540	566	586
Circuit length lines (km)	4,960	4,707	4,767	4,786	4,812	4,873	4,905	4,931	5,011	4,996	5,081	5,017	5,126	5,176

Key: ● Exceeds target ● Within 10% of Target ● Does not meet target

Appendix C – Labour-NZ First-Green coalition government proposed policies impacting sector

Summary of key policies and impacts on MainPower

Policy	Impact on Prices	Materiality
Ban on thermal baseload electricity generation and 100% renewables target	Policy doesn't directly impact MainPower but it does accelerate the impact of disruption (eg solar uptake, higher EV uptake).	Low
Ban / restriction / royalties on oil and gas exploration	Policy doesn't directly impact MainPower but it does accelerate the impact of disruption (eg solar uptake, higher EV uptake).	Medium
Agriculture being included in ETS	Policy doesn't directly impact MainPower but it does accelerate the impact of disruption (eg solar uptake, higher EV uptake).	Low
Supporting forestry industry	Policy doesn't directly impact MainPower but it does accelerate the impact of disruption (eg solar uptake, higher EV uptake).	Low
Electrification of government vehicle fleet and new light rail	Building a light rail network and conversion of the government fleet will have a limited impact on demand. However, such policies may accelerate the impacts of disruption.	Low
Insulation and heating in rental homes	Improvements in energy efficiency could limit demand growth in the medium term. This could flatten prices. However, impact may be low as these policies are currently already in place.	Low
Building 100,000 new homes	This could increase electricity demand but would be offset by a more energy efficient housing stock. Impact on North Canterbury likely to be negligible.	Low
Immigration cuts	Lower population growth could reduce electricity demand and thereby wholesale electricity prices. Impact on North Canterbury likely to be low.	Low

Policy	Impact on Prices	Materiality
Winter fuel payments to households	Providing a winter fuel subsidy to low income households could increase winter peak demand and volumes. May replace low user fixed charge regulations allowing more innovative pricing structures. The impact on prices as well as potential funding mechanism is not known, but may be recycled through the sector.	Unknown
Review of retail electricity prices	The scope of the review is unknown but may extend to wholesale inputs.	Unknown
Climate impact analysis on all new regulation	Introducing climate impact analysis on all new legislation could impact energy policies going forward. This move is likely to impact thermal generation.	Unknown

We have examined the proposed policies of the new Labour-NZ First-Green coalition government to determine implications for the electricity sector. The commentary overleaf focuses on policies which may have a direct or indirect impact on electricity distribution.

Appendix C – Labour-NZ First-Green coalition government proposed policies impacting sector

Energy

The new government has stated it wants to increase electricity generation from renewable sources to 90% by 2025, mirroring the previous government's aspirational target¹. Electricity generated from renewable sources in the year to June 2017 was 85%². Labour and the Greens have also signalled an intent to adopt a target of 100% electricity generation from renewable sources by the year 2035 (in a normal hydrological year)³. While not directly impacting MainPower, these policies may accelerate uptake of solar bringing forward the effects of disruption.

NZ First and Labour have agreed to conduct a full-scale review of retail electricity prices which could include consideration of distribution network inputs. NZ First has suggested that retail prices are too high and that recent studies in Australia and UK, which have similar market structures, support this view. MainPower could face more onerous regulations or pressure to reduce prices.

The coalition has discussed providing winter fuel payments to households during the peak winter months. Without other supporting levers, this policy could increase winter peak demand and volumes. The coalition has also supported the removal of low-fixed user charges in the electricity sector. This could be replaced by the proposed winter fuel payments subsidy. These changes could impact electricity demand and distribution policy.

Climate Change

The new government plans to move towards zero greenhouse gas emissions (net) by 2050, and establish a Climate Commission⁴. It is unclear what the role and agenda of the Climate Commission will be. New Zealand's Paris Agreement commitments, target emissions reduction of 30% below 2005 levels by 2030. New Zealand's current long-term target, set in 2011 under section 224 of the Climate Change Response Act 2002, aims to reduce emissions to 50% below 1990 levels by 2050. The new net zero target would require an additional reduction of approximately 18 Mt CO₂ equivalent, which is approximately 20% of total gross emissions.

Nearly half of total emissions (48%) comes from agriculture with sheep and cattle farming responsible for nearly all these emissions⁵. Labour and the Greens plan to "provide assistance to the agricultural sector to reduce biological emissions". NZ First and the Labour party have also agreed that if the Climate Commission determines that agriculture is to be included in the ETS then upon entry, the free allocation to agriculture will be 95%. Furthermore, any funds recovered from agriculture would be recycled back into the sector to encourage innovation, mitigation and planting of forestry.

The Greens and Labour have formalised plans to stimulate up to \$1 billion of new investment in low carbon industries by 2020. They have also agreed to include a climate impact assessment analysis on all new legislation. This could impact energy policies going forward.

These climate change policies may not impact MainPower directly but could, as a second effect, accelerate disruption from solar, batteries and EVs.

¹New Zealand Energy Efficiency and Conservation Strategy – MBIE June 2017

² Supra n1

³ Labour Party and Green Party – Confidence & Supply Agreement, Extracted 29/10/2017

⁴ Climate Commission in mandate of new Government – Energy News 20/10/2016

⁵ Low Emissions Economy August 2017 – NZ Productivity Commission

Appendix C – Labour-NZ First-Green coalition government proposed policies impacting sector

Housing

As part of the coalition agreement the government plans to enforce minimum standards for heating and insulation in every rental home. The agreement between Labour and the Green's includes a budget provision to substantially increase the number of homes insulated. Labour's Healthy Homes Bill that is in parliament will set minimum standards on landlords for heating and insulation in every rental home if enacted.

The current Warm Up New Zealand: Healthy Homes programme pays 50% of the insulation costs for houses built before the year 2000. This will come to an end in 2019 at which point it will become mandatory to meet insulation requirements set out by current regulations. The programme exceeded its original target of 46,000 rental homes with 53,600 insulated by June 2016⁶. In the 2016 budget, this program was extended another two years to insulate 20,000 homes. As of May 2017, there were 3,700 homes insulated under this programme. It is unclear as to how much additional impact the new government policy will have given the existing policies.

Energy efficiency initiatives, particularly in the residential sector have suppressed electricity demand and growth in recent years. If the government is successful in significantly improving energy efficiency, it would contribute to lower electricity demand growth in the medium term. As part of its KiwiBuild programme, Labour also aims to build 100,000 homes across the country.

⁶ Annual Review of Energy Efficiency and Conservation Authority 2015/16 – Local Government and Environmental Committee https://www.parliament.nz/resource/en-NZ/SCR_72655/4f21207e24eaf68593c9fc3938ba15e1ae4197ca

⁷Government to take part in electric vehicle initiative – NZ Herald 14/08/2017

Immigration

The government plans to cut immigration from its current levels. Labour's manifesto aimed to reduce migration by 20,000-30,000 per year. Most of these reductions will come through limiting student visas and work visas to incentivise employers to hire New Zealanders. Population growth has been an important driver for New Zealand's strong economic growth in the recent past. Restrictions in immigration could reduce population growth which in turn could impact electricity demand. However, the impact on MainPower is likely to be low given North Canterbury is not a primary destination for migrants.

Transport

The government plans to build an electric light rail to connect Auckland's central suburbs to Auckland airport, West Auckland, and later, the North Shore. Other projects in Hamilton, Palmerston North, Wellington and Christchurch have also been mentioned as projects that could use light rail.

Labour and NZ First have agreed to adopt an emissions free government vehicle fleet by 2025. The previous National government set a target of 64,000 EVs with one in three cars in the Government fleet to be electric by 2021. The Government fleet is relatively small at approximately 15,500 cars⁷. The impact of these policies on MainPower is likely to be low, however the electrification of transportation is expected to drive a material increase in electricity demand which may support prices going forward.