

Leading Energy

November 2013



pwc



Welcome to your update on the key issues and challenges facing New Zealand's electricity generation and retail companies in FY13.

In addition to considering the performance of the sector in FY13, we look at how the sector will need to adapt on the back of declining demand, excess generation capacity and lower electricity prices.

Electricity is a key driver of the New Zealand economy. Given our high reliance on it, the sector remains subject to high levels of scrutiny and interest.

Powering up New Zealand

The electricity generation and retail industry will come under pressure due to spare generation capacity. How will the electricity sector maintain profitability?

Global trend to watch
Disruptive technology changes and market transformation in the long term.

Need to know
The Labour and Green parties announce their intention to implement a single buyer model if they win the next election.

Big issues...

Spare generation capacity
In contrast to FY12, more water flowed into the South Island lakes during FY13: this created more lower cost renewable power and led to lower wholesale prices.

Sluggish demand
Consumption dropped as industry demand reduced, and retail customers used less power due to the warmer winter.

High retail competition
Customer churn rates continue to be high as retail customers switch providers.

...need a big response

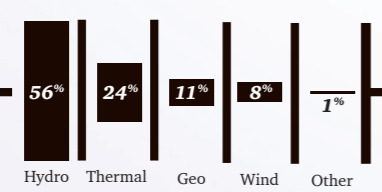
Plant retirements?

Innovation?
More innovative customer retail offerings will be needed to meet changing customer expectations, and maintain and grow market share.

Earnings before interest, tax, depreciation, amortisation and fair value adjustments (EBITDAF) decreased **1.4%**

	Contact Energy	Genesis Energy	Meridian Energy	Mighty River Power	TrustPower
FY13	5.8%	5.4%	3.4%	5.8%	8.2%
FY12	5.3%	5.6%	2.2%	5.5%	9.1%

Return on book value of equity (ROE)



The source of electricity generation

Total generation volume dropped **3.1%**

More than **1.5** in people switched power providers in FY13

Issues and challenges

Since last year's publication, there have been some significant developments in the electricity sector. Our 2012 publication highlighted the deferral of the first of three SOE generation company IPOs. Both Mighty River Power and Meridian Energy IPOs have now been completed. Meanwhile, Genesis Energy is preparing itself for its inevitable IPO.

Other developments include the announcement by Labour and the Greens they will implement a single buyer model if they win next year's election. Whether this comes to fruition will depend on a number of factors, including whether they are able to form a government, as well as the practicalities of implementing such a model.

After a year of negotiations, an electricity supply agreement has also been reached between Meridian Energy and New Zealand Aluminium Smelters (NZAS) for the Tiwai smelter. Amongst other things, the agreement sees a reduction in the smelter's electricity price, with future increases linked to inflation and aluminium price increases. The contract period remains to 2030, but provides the smelter with flexibility to make volume reductions from 1 January 2015, after giving 12 months' notice.

Transmission pricing continues to be a key issue, with views divided across the sector about the necessity of the proposed changes, the complexity of the arrangements, and costs and benefits of implementation.

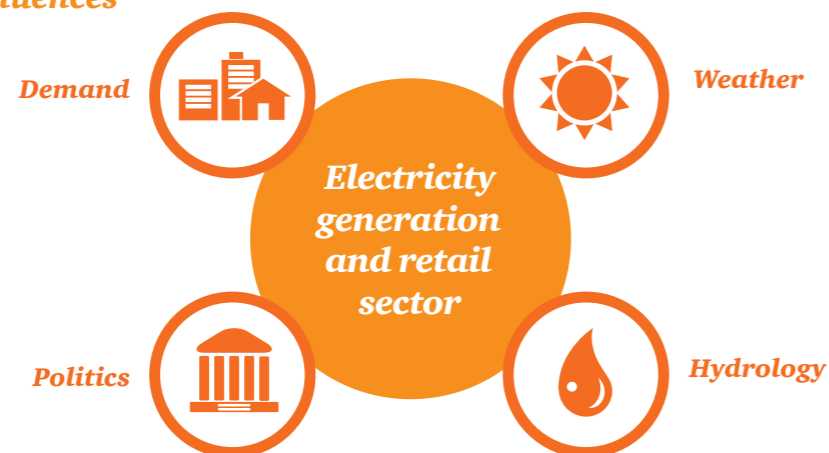
From a generation perspective, we have seen a reversion to average inflows into South Island catchments, while North Island drought conditions impacted inflows into the Waikato River catchment over the November to May 2013 period.

Finally, the electricity market is undergoing a period of changing dynamics. Historical demand growth has stalled, and demand reduced during FY13. With significant capacity in the generation market, current prices have retreated from last year and forward looking prices have also fallen. These dynamics, coupled with increasing retail competition, provide challenging conditions for electricity generation companies.

How they respond to these challenges will be crucial to their profitability in the short to medium term.

Read on to find out more about these issues.

Key influences



Generation

In our FY12 publication, we highlighted the significant impact one of the lowest hydro inflow years in the South Island had on the country's generation portfolio. This led to a significant reduction in the amount of hydro generation, which was covered by higher variable cost generation (thermal gas and coal).

In FY13, there has been a return to average inflows in the southern lakes, while in the North Island, inflows into the Waikato River catchment were lower than average as a result of the drought over the summer and autumn period. As a result, thermal generation reduced, continuing a medium term trend of capacity factors lowering for thermal plants as geothermal and wind start to displace them.

The overall impact of a return to average inflows was increased lower cost hydro generation, with a reduction in average wholesale prices.

Demand has remained sluggish for a number of years – limited growth in FY11 was followed by no demand growth in FY12, while FY13 saw consumption decrease. This was driven by several factors including a decrease in consumption at the Tiwai smelter (New Zealand's largest single electricity consumer), Norske Skog halving production at its Tasman Pulp and Paper Mill, and reduced residential demand in part due to a milder winter.

Generation projects

During FY13 the only significant generation plant commissioned was Nova Energy's McKee peakers. Mighty River Power has recently commissioned its 82MW Ngatamariki station, but given the decreasing demand scenario, coupled with a capacity surplus in the current market, significant new additions to the generation portfolio are unlikely.

Most generators have signalled they are pulling back from pursuing near term development, placing projects in abeyance to maintain future options. In the last three years, our list of major projects under construction or planned for development has shrunk. From last year's list of four major projects, Ngatamairiki has recently been commissioned and the McKee peakers are now operational.

Name	Organisation	Fuel Source	Capacity	Status
Te Mihi	Contact Energy	Geothermal	166MW	Construction
Mill Creek	Meridian Energy	Wind	60MW	Construction

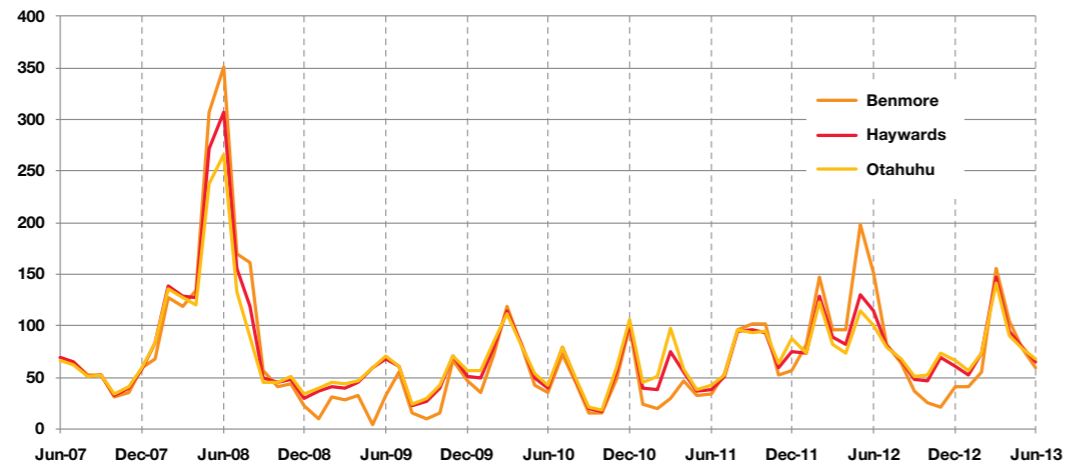
Contact Energy has decided to exit its Hauāuru mā raki wind generation development and not to proceed in the foreseeable future with the Waitahora wind project. Mighty River Power has completed its immediate domestic geothermal development plans. Genesis Energy has no imminent projects, while Meridian Energy has rationalised its development pipeline, with no further development expected for three to five years. TrustPower has decided not to proceed with a proposed small hydro investment at the Arnold Power Scheme.

In addition to the development pipelines being scaled back, plant removals are also on the cards. Thermal providers are being impacted by the increasing penetration of lower cost renewable generation. Genesis Energy announced it will mothball the second of its coal-fired units at Huntly by the end of the year – about a year earlier than previously indicated. Contact Energy has also indicated it doesn't expect to run its gas-fired Taranaki combined cycle plant next winter and may seek to defer a mid-life overhaul due at the plant during the next two years.

Wholesale pricing

Improved hydrological conditions, particularly in the main catchments of the South Island, combined with sluggish demand and excess capacity in the generation market, saw wholesale prices drop in FY13 from their FY12 levels. They did however remain higher on average than wholesale prices in FY10 and FY11.

Mean price in dollars per MWh



The graph highlights the significant pricing disconnects that occurred between May 2012 and February 2013: with limited transmission capacity across the HVDC link between the North and South Island, and poor hydrology in the Southern Lakes resulting in high Benmore prices in May and June 2012. In late 2012, high inflows into the South Island catchments reversed this price differential.

On a forward looking basis, the recent commissioning of geothermal and gas peaking plants will lead to a continued displacement of some traditional coal and gas generation. Furthermore, the upgrade of transmission infrastructure should lead to a reduction in transmission constraints. These investments should further increase the reliability and security of supply, as well as reduce price volatility.

In other market developments, Energy Management Services (a Transpower business unit) was appointed to manage the market in financial transmission rights (FTRs). FTRs are financial hedges designed to help protect purchasers and generators from price uncertainty caused by transmission losses and constraints. Trading in FTRs in relation to the Benmore and Otahuhu nodes commenced in June this year.

The ASX is also looking to introduce new peak load quarterly futures and baseload quarterly options products. These are intended to provide additional tools to help parties better manage their risk. The base load quarterly options are likely to be sold by generators with peak load capacity. The peak load quarterly futures provide parties with peak load profiles and the ability to purchase hedge coverage that more closely matches their physical load profile.

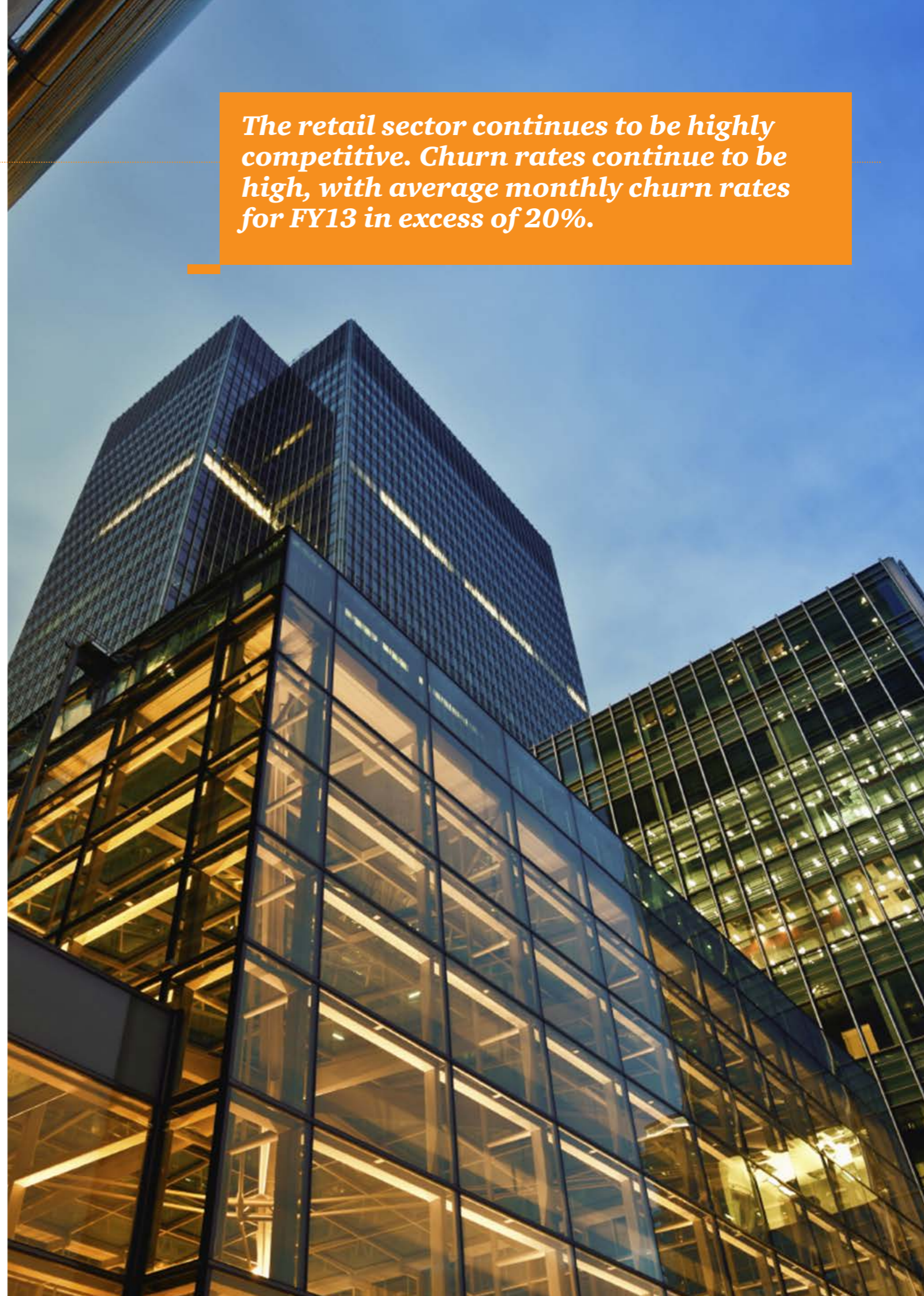
The introduction of FTRs and the success of the ASX futures market should improve the ability for market participants to manage risk and enter new market segments and geographies.

Retail

The retail sector continues to be highly competitive. Churn rates continue to be high, with average monthly churn rates for FY13 in excess of 20%.

With limited ability to achieve growth through asset development, delivering value to customers becomes a high, if not the top priority for generators/retailers. Retail transformation programmes are in vogue. We expect to see new products, solutions and offerings developed by retailers with a customer centric focus, in the medium term.

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Global trends and issues – are they relevant to New Zealand’s electricity businesses?

Annually, PwC undertake a Global Power and Utilities Survey. Historically, many of the emerging trends and issues were not of direct relevance to local New Zealand electricity businesses.

For example, the 2012 survey themes focused on the huge electricity demand challenge and the shortage of capital; security of supply; cleaner energy (including a possible future where renewable energy would compete without the need for subsidy); energy efficiency; and the move towards gas as the investment priority for new generation. In New Zealand, funding has not been an impediment to new generation projects; excess generation capacity and transmission grid upgrades have increased security of supply; clean energy dominates our electricity generation; and gas, while it has a role in the market, is unlikely to be the dominant choice for future generation.

This year, however, the themes from the survey resonate more with our domestic market; albeit to a lesser degree than may be the case globally. The big issues this year relate to industry transformation and disruption, and new technologies.

Transformation

Globally, many in the industry expect the existing electricity utility business model to transform or even be unrecognisable in the period between now and 2030.

At the heart of the traditional electricity industry model, companies deliver profit from a mix of generation, distribution and retailing activities across centralised grids. High investment credit ratings enable companies to develop capital-intensive asset bases with predictable long-term cost recovery from a mix of regulated and unregulated returns. This paradigm has been well established at the heart of many markets worldwide for several decades. Underpinning its success has been greater reliance on electricity by more devices, leading to an expanding electricity requirement even in mature markets. Global demand for electricity is set to continue to grow faster than demand for any other final form of energy in the coming decades. The electrification of vehicles and greater use of electricity for heating could add significantly to already growing demand from the ever-increasing volume of electronic devices, machinery, communications and data uses for electricity.

Business model change

In most contexts, this demand growth would present a rosy picture for companies. But the industry is increasingly coming to recognise that to stay profitable, companies will need to adapt their business models to respond to an electricity environment that could be transformed by changes such as decentralised generation, technological changes and a very different customer outlook.

Given the changes in industries such as telecommunications, retailing, airlines and many other sectors, it could be construed as surprising if the electricity utility business model wasn't transformed over the next two decades. On the other hand, the current electricity utility business model is deeply entrenched and the geopolitical context of the industry means the environment for change is less dynamic than sectors more exposed to pure market forces.

Disruption

The prospect of transformation of the industry business model arises from a number of potentially disruptive changes. Decentralised generation is already eating into revenues and partly marginalising conventional generation internationally. Ultimately, it could shrink the role of electricity utility companies to operators of back-up infrastructure. It's a dramatic scenario and one that may seem remote. But the threat to the business model doesn't depend on its wholesale realisation. As already demonstrated in parts of Europe, if the impact of decentralised generation shaves peak demand then much conventional generation is rendered unprofitable.

The impact of distributed power generation

A variety of disruptive technologies are emerging that may one day compete with utility-provided services, including solar photovoltaics (PV), wind, micro turbines, geothermal energy systems, battery storage, fuel cells and electric vehicle (EV) enhanced storage. They will directly threaten the centralised utility model, as the cost curve for these technologies improves. Demand growth is likely to be met by a mixture of centralised and distributed generation. In certain jurisdictions, some in the industry go as far as expecting distributed generation to replace centralised generation in meeting future growth. In New Zealand, EECA estimates distributed generation already provides about 5% of New Zealand's electricity. Yet, distributed generation, in turn, poses significant wider system challenges on a technical and revenue level.

Physical and revenue impacts

On a technical level, the intermittent nature of distributed generation increases the difficulty of physically balancing the system and ensuring adequate electricity supply. On a revenue level, managing these extra challenges pushes more costs back onto the system. There is the danger of increased centralised costs being borne by those customers who are more grid dependent, which opens up a potentially destructive scenario. As well as the decline in revenues to decentralised sources, there is the impact of cost pressures on the centralised system which, in turn, reinforces the movement to decentralisation. The increased difficulty and expense of balancing may have a high impact on their market.

On the revenue side, distributed generation may push up the price consumers pay for transmission and distribution. It will increase the proportion of fixed costs in the price of electricity.

Technology

The growth of distributed generation and its threat to the electricity utility business model depends on technological developments and cost. Its rise in Europe has been subsidy-driven but this is not the case in New Zealand. Cost barriers remain in the way of it being truly market-driven but if these barriers can be overcome they could set the scene for widespread industry transformation. Many believe we are close to that point. Decreasing costs for solar panels and batteries, combined with rising electricity tariffs, make solar viable without explicit subsidies in certain markets.

Fast-changing economics

The view that renewables are ready to compete without subsidies in some global markets is reinforced by a study by Citi Research, which found: "Residential solar PV has already reached 'grid parity' in regions of high solar insolation, with much of the world set to follow by 2020. Our view is that utility scale renewables will be competitive with gas-fired power in the short to medium term, with the exact 'crossover' points varying from country to country. In many regions, we believe competitiveness will be achieved by 2020."¹

In New Zealand, large hydro and wind already compete or even underpin the wholesale market. In remote areas, PV and smaller wind and micro turbines are already viable alternatives to grid connections.

A technology-driven future

The impact of the changing economics of solar and wind power are reflected in the electricity industry's view of what technological developments are likely to affect electricity markets. Energy efficiency, falling solar prices, demand-side management and smart grid technology head the impact list.

And, interestingly, the crucial breakthroughs needed in stationary battery storage, to enable self-generation customers to break free from dependence on the grid, appear too far off for most survey participants. We do not foresee any significant market impact for the time being.

Barriers

The growth in distributed generation in New Zealand will depend on a number of factors, including a reduction in the costs of the underlying generation technology. There are several other barriers that are cited by those looking to undertake distributed generation projects, including:

- the prices they may receive for generation exported, and any technical issues such as the need for a two-way meter
- connecting to the local lines company's network (including connection costs, operating and technical standards, conveyance, and possibly access to avoided transmission benefits)
- participating in the electricity market (depending on the capacity of the generation)
- advising/interacting with other parties in certain circumstances, such as the system operator, the clearing manager, market administrator, reconciliation manager, and complying with the requirements of the Code for trading electricity.

In addition to meeting their own demand requirements, there are initiatives underway in the market that would more easily allow distributed generators to sell the energy generated to their retailer, or provide access to the stored electricity to their lines company. With the expected growth in distributed generation, this trend is likely to increase and provide an opportunity for retailers and lines companies alike.

Strategic response

How companies respond to these changes will determine whether they will be part of the future or join the ranks of companies from other industries whose business models have been eclipsed by technological and market change. They will need to be clear-sighted about where their best revenue opportunities lie, act fast to reduce costs or exit unprofitable areas, improve customer service and appeal to a new type of actively engaged customer.

Strategy

Efficiency savings and performance improvements can buy electricity utility companies considerable defensive headroom in responding to the changing industry environment. But defence needs to be accompanied by offense. Strategies are needed that identify the best revenue opportunities in a changed and potentially, transformed future market landscape.

Customers

Companies are likely to face stiff competition with each other as they seek to ensure distributed power generation becomes an opportunity rather than a threat. Becoming a provider of distributed generation services to customers tops the list of strategies that our survey participants identify as most likely to succeed in a more decentralised power landscape.

Regulators

Policy-makers have the difficult task of grappling with the big issues of supply availability, affordability and environmental impact. The tensions between these goals are coming to the fore more and more.

The full report 'Energy transformation - the impact on the power sector business model' is available from pwc.co.nz.

¹ Citi Research, *Shale & renewable: a symbiotic relationship*, 12 September 2012

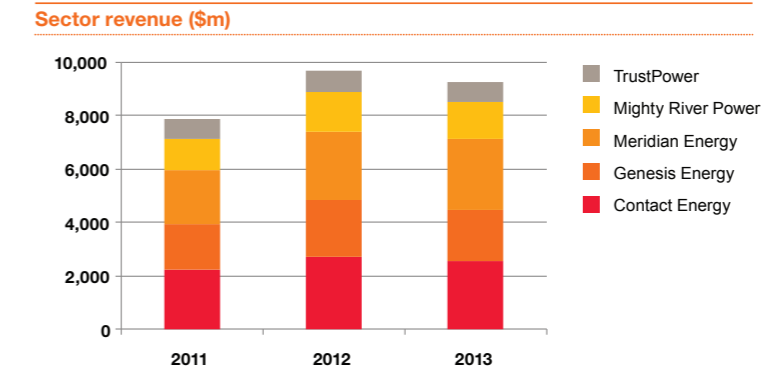
Sector performance

In this section we provide an overview of the most recent financial performance of the five largest electricity generation and retail companies.² While this analysis is high level, it provides a sufficient level of detail to allow some key observations on the sector to be made.

Revenues

The chart below summarises the total revenues³ for the five companies comprising our analysis.

Total electricity sector revenues have decreased by 4% in FY13. Last year's unfavorable hydrology has not been repeated in FY13, resulting in a decrease in wholesale electricity prices, translating into lower sector revenues.



Source: Companies' annual results announcements and reports

Other than Meridian Energy (whose revenues were depressed on lower volume in FY12), all of the companies experienced a decline in revenue in FY13. However, overall electricity earnings have increased in FY13.

Lower wholesale prices due to improved hydrology reduced headline revenues.

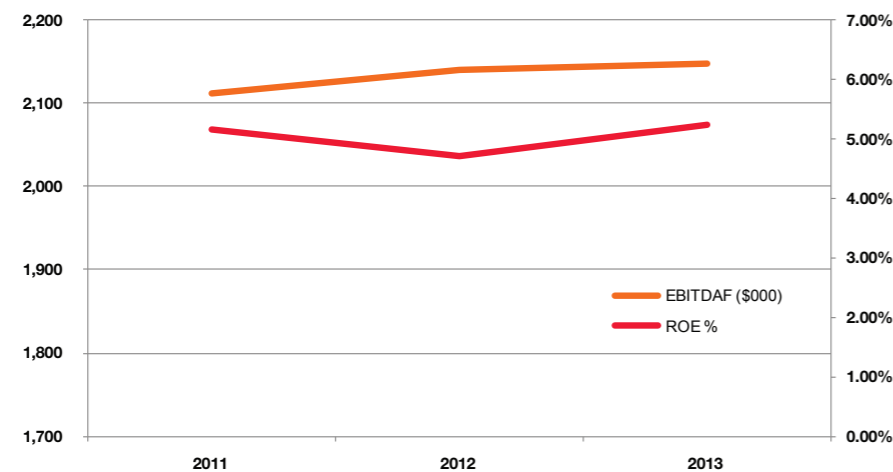
² Results for the year ended 30 June 2013 (or 31 March 2013 in the case of TrustPower)

³ For the purposes of this analysis we have excluded Genesis Energy's Kupe revenues and TrustPower's and Meridian Energy's Australian generation activities.

Sector returns

In considering the financial returns of these companies, we have focused on three key indicators. The first of these is earnings before interest, tax, depreciation, amortisation and fair value adjustments (EBITDAF)⁴, which is commonly used as a surrogate for the cash earnings of a company. Return on equity (ROE) is used to compare the underlying earnings of each business to the reported equity of the business. EBITDAF/MWh provides an indication of the cash earnings generated for each MWh of electricity generated.

Sector returns



Source: Companies' annual results announcements and reports

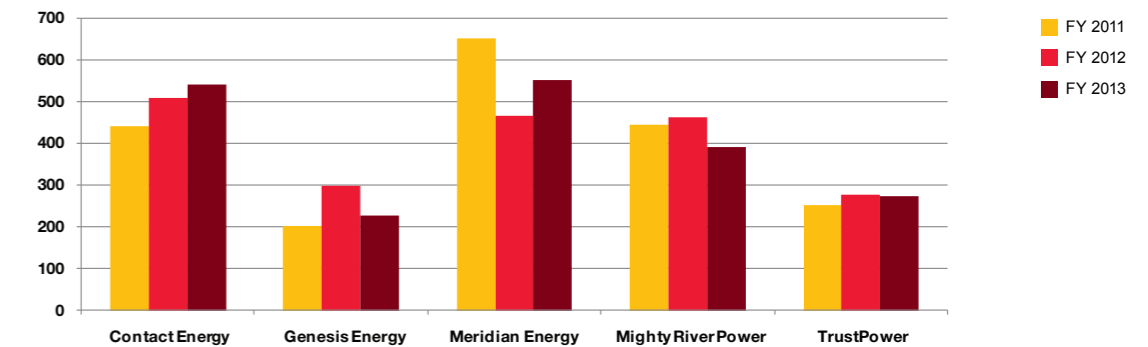
Group EBITDAF for the five companies has continued to grow, albeit at a reduced rate in FY13. FY13 has also seen an increase in ROE.

In the remainder of this publication, we focus primarily on the electricity segment of these companies' operations.

Earnings before interest, tax, depreciation, amortisation and fair value adjustments (EBITDAF)

The combined EBITDAF⁵ for the five companies decreased slightly from \$2,009m in FY12 to \$1,981m (1.4% decrease).

EBITDAF (\$m)



Source: Companies' annual results announcements and reports

The changing hydrological conditions during the year had contrasting impacts on the relative EBITDAF performances.

Contact Energy has continued to grow its electricity EBITDAF, on the back of increased generation plant flexibility (including higher, low cost hydro generation volumes), as well as tighter operational discipline.

The EBITDAF of Genesis Energy dropped on lower generation volumes, due to the outage of the Tekapo power stations for canal repairs, lower North Island hydro generation and lower wholesale electricity prices.

As hydrology returned to average levels, Meridian Energy's generation volumes increased, which in addition to higher NZAS contracted revenue, and lower acquired generation costs, led to an increase in its EBITDAF.

While Mighty River Power's generation volumes decreased in the period, the decline in EBITDAF was primarily due to one off expenses of \$68.7 million related to international geothermal and IPO costs.

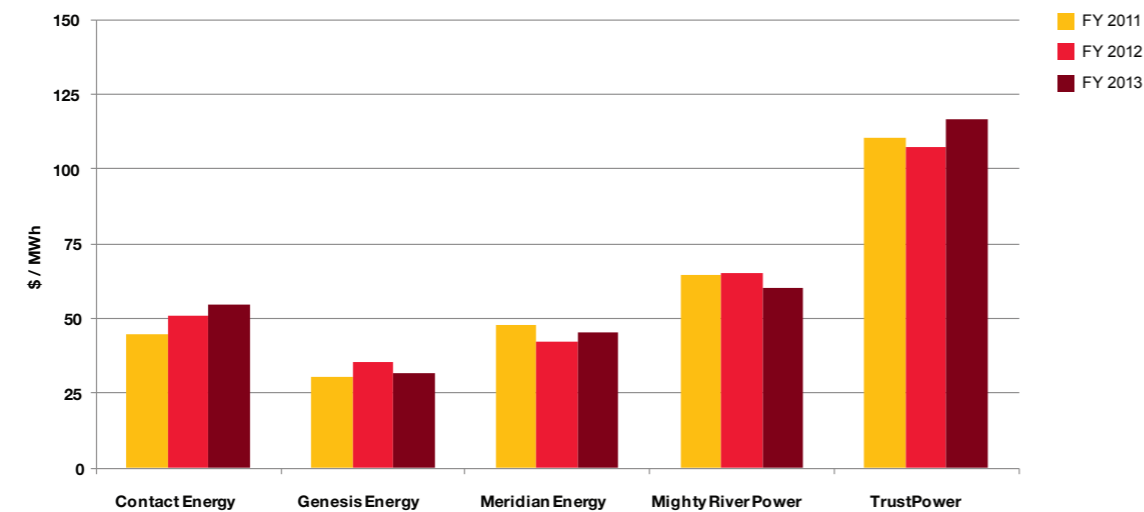
TrustPower's EBITDAF reduced slightly, due to lower generation volumes and the challenging retail environment.

⁴ EBITDAF for the consolidated business has been used in this analysis to ensure comparability with the company-wide ROE figures.

⁵ For comparability, we have excluded EBITDAF attributed to Genesis Energy's Kupe and TrustPower's and Meridian Energy's Australian generation activities.

EBITDAF/MWh

EBITDAF per MWh



Source: Companies' annual results announcements and reports

This chart demonstrates each business' ability to earn 'cash' from its generation activities. It effectively represents a measure of the profitability of each business' electricity generation activities. Factors that influence returns include the nature of the generation assets (ie. the extent to which generation revenues are offset by an associated 'fuel' cost) and the relationship between the scale of a company's retail load compared to its generation portfolio.

TrustPower continues to be the standout performer on this measure. As highlighted in previous years, its relatively high performance on this criterion is driven by several factors including its low level of generation production relative to its retail load and its largely renewable generation portfolio (ie. direct operating costs such as fuel are limited).

It is also recognised across the sector that TrustPower's average cost to serve its retail customer base is lower than most of its competitors, while it continues to be able to charge some of those customers premium prices (in part due to benefits arising from its partial trust ownership structure).

Contact Energy's generation volumes were down slightly, which coupled with a higher proportion of generation in FY13 from renewable sources, resulted in an increase on this measure.

The reduction in Genesis Energy's EBITDAF/MWh measure is less pronounced than its reduction in EBITDAF due to its lower generation volumes.

Meridian Energy has a similar (albeit significantly larger) renewable based generation portfolio to TrustPower and is also not encumbered by fuel costs. The EBITDAF/MWh earned by Meridian Energy is generally expected to be lower than TrustPower as a result of the legacy contract that exists between Meridian Energy and NZAS. This year Meridian Energy's measure has benefited from an increase in EBITDAF, which outweighs the growth in its underlying generation volumes.

Mighty River Power's portfolio is predominantly renewable but its geothermal activities and its Southdown thermal generation assets incur higher levels of direct operating costs than Meridian Energy and TrustPower's generation assets. Mighty River Power has seen a decline in EBITDAF/MWh in FY13 – its reduction in EBITDAF being higher than its reduction in generation volumes.

Return on book value of equity (ROE)

We have analysed each business' ROE using Du Pont analysis. This analysis provides a deeper insight into the ROE, by deconstructing the ROE measure into three parts:

1. Profitability, defined as Underlying Earnings⁶/Sales
2. Operating efficiency, defined as Sales/Total Assets
3. Financial leverage (or the equity multiplier), defined as Total Assets/Equity

These equations simplify to Underlying Earnings/Equity (or ROE).

This analysis has been undertaken at the group level for each business, given the difficulties associated with determining ROE on a segmental basis, and therefore includes activities other than just electricity operations.

1. Profitability	Contact Energy	Genesis Energy	Meridian Energy	Mighty River Power	TrustPower
FY13	8.0%	5.2%	6.1%	13.0%	16.6%
FY12	6.5%	4.3%	4.1%	10.7%	16.8%
FY11	6.8%	3.5%	10.7%	13.9%	15.2%
FY10	6.9%	4.6%	12.2%	12.6%	15.4%
FY10 - FY12 average	6.7%	4.1%	9.0%	12.4%	15.8%

This measure indicates the extent to which businesses convert revenue into net profits (in this case defined as underlying earnings). Our historical analysis suggests those businesses with largely renewable generation assets (ie. high capital costs but lower operating costs such as fuel) perform better on this measure.

Historically, Meridian Energy, Mighty River Power and TrustPower have outperformed Contact Energy and Genesis Energy, as the latter have a larger proportion of their revenues generated through higher variable cost generation, such as gas and coal.

Yet, this year, on the back of continued growth in its earnings that were generated on lower revenues, Contact Energy has outperformed Meridian Energy. While Meridian Energy's earnings also grew significantly, this was achieved on slightly higher revenues, improving its performance from FY12, but relatively not as strongly as Contact Energy.

Other than TrustPower, the generators all increased their underlying earnings over the prior year, while revenues were lower than in FY12 on the back of lower wholesale prices.

⁶ As supplied by each of the companies. Genesis Energy did not report an Underlying Earnings figure. PwC has estimated this after adjusting for certain one-off items.

2. Operating efficiency	Contact Energy	Genesis Energy	Meridian Energy	Mighty River Power	TrustPower
FY13	0.41	0.52	0.32	0.24	0.27
FY12	0.46	0.62	0.30	0.27	0.30
FY11	0.41	0.59	0.24	0.23	0.30
FY10	0.43	0.74	0.26	0.24	0.30
FY10 - FY12 average	0.43	0.65	0.27	0.24	0.30

This measure provides an indication of operating efficiency, or the extent to which revenues are generated by business assets.

Again, there is an interesting clustering here of the largely renewable portfolio companies Meridian Energy, Mighty River Power and TrustPower, and the more diversified Contact Energy and Genesis Energy.

On this measure, Contact Energy and Genesis Energy appear to be ‘more efficient’ in generating revenues from their assets. This is primarily again due to the nature of the fixed assets of these businesses. Renewable generation assets tend to exhibit higher upfront capital costs and lower operating costs. In contrast, thermal assets have lower capital costs but tend to incur a higher proportion of variable costs, such as fuel. In addition, renewable generation assets (particularly hydro) tend to have longer lives and maintain their value over time, as a result of low levels of depreciation and an environment where these assets are carried in the financial statements at market value.

Genesis Energy’s reduction on this measure is primarily due to lower revenues – the contra to this is the commensurate movement in profitability in table 1 above, where lower revenues improved its profitability measure.

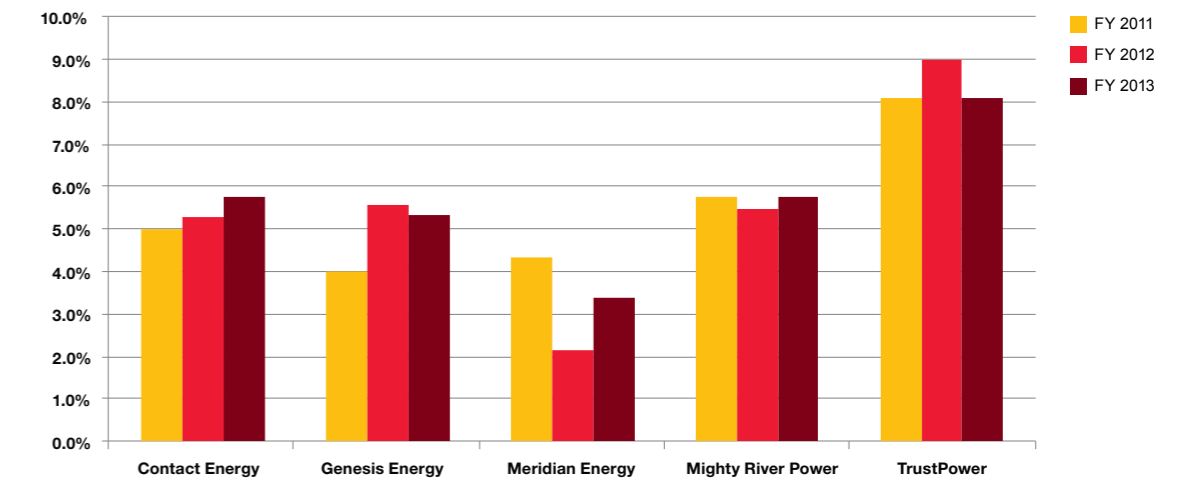
3. Financial leverage	Contact Energy	Genesis Energy	Meridian Energy	Mighty River Power	TrustPower
FY13	1.8	2.0	1.7	1.9	1.9
FY12	1.8	2.1	1.8	1.9	1.8
FY11	1.8	2.0	1.7	1.8	1.8
FY10	1.9	1.8	1.7	1.8	1.8
FY10 - FY12 average	1.8	2.0	1.7	1.8	1.8

The equity multiplier captures the degree of financial leverage in each of the businesses, defined as total assets/equity. The five businesses have relatively similar financial leverage, which are largely consistent with prior years.

The overall ROE from combining these measures is summarised in the following table, with historical three year returns provided in the accompanying chart.

ROE	Contact Energy	Genesis Energy	Meridian Energy	Mighty River Power	TrustPower
FY13	5.8%	5.4%	3.4%	5.8%	8.2%

Return on equity



Source: Companies’ annual results announcements and reports.

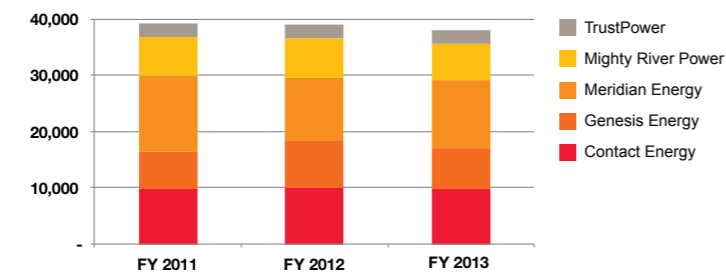
Contact Energy, Meridian Energy and Mighty River Power’s underlying ROE have all improved over FY12 on the back of improved underlying earnings, while Genesis Energy’s underlying ROE has reduced marginally.

TrustPower’s overall ROE reflects the lower underlying earnings of the company, achieved on a higher average equity.

Generation

As highlighted earlier, electricity demand has reduced, leading to a reduction in generation volumes.

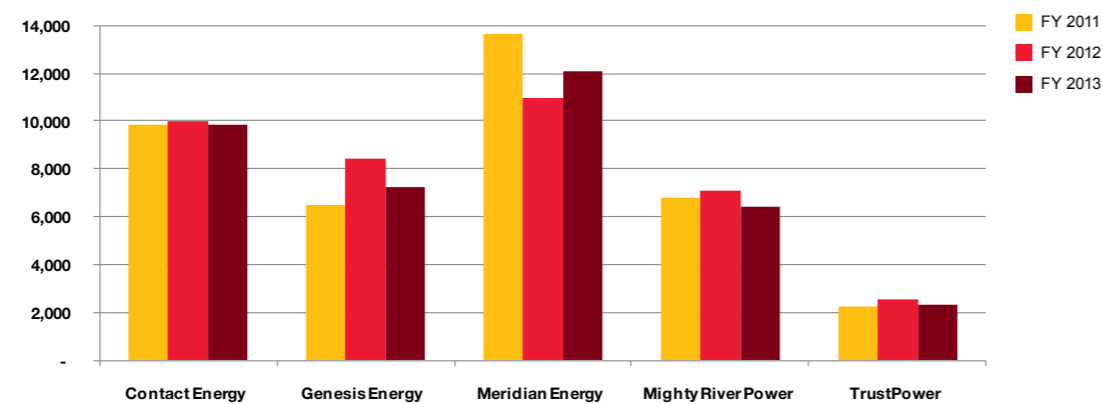
Generation volume (GWh)



Source: Companies' annual results announcements and reports.

The composition of the generation by company highlights the volatility that arises between years as a result of hydrological conditions.

Generation volume (GWh)



Source: Companies' annual results announcements and reports.

Contact Energy's generation volumes are broadly similar to FY12, but the makeup of its generation has changed. Given improved hydrological conditions, generation from Contact Energy's hydro assets have increased by 23%, displacing more expensive thermal generation and covering outages at Te Mihi during its commissioning.

Genesis Energy, like Contact Energy, has a more diverse portfolio. Yet, its generation output decreased by 15%, with thermal decreasing by 12% (due to planned maintenance on Huntly Unit 5) and its renewable portfolio by 21% (due to canal works at Tekapo A & B stations).

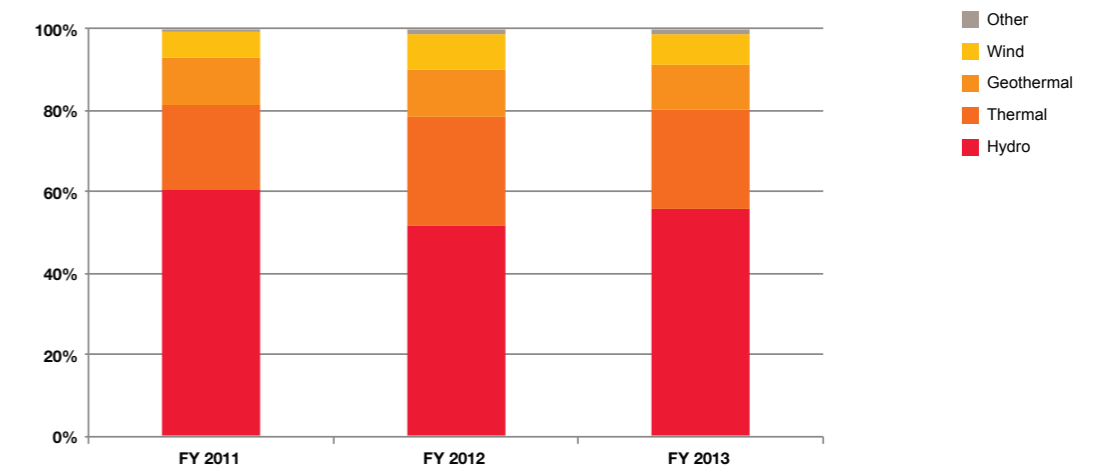
Meridian Energy's generation volumes increased 10% after record low hydrological conditions in FY12. This was offset to some extent by a decrease in wind generation of 4%.

Mighty River Power's generation volumes decreased 9% from FY12. Hydro generation decreased by 8% as drought conditions hit the Waikato River. Geothermal volumes decreased, primarily due to the impact of the sale of a minority interest in one of its geothermal stations, while thermal volumes decreased by 28% due to lower wholesale prices.

TrustPower's generation volumes decreased 13% across its hydro assets (due to lower inflows in its catchment areas) and its wind generation increased by 2%.

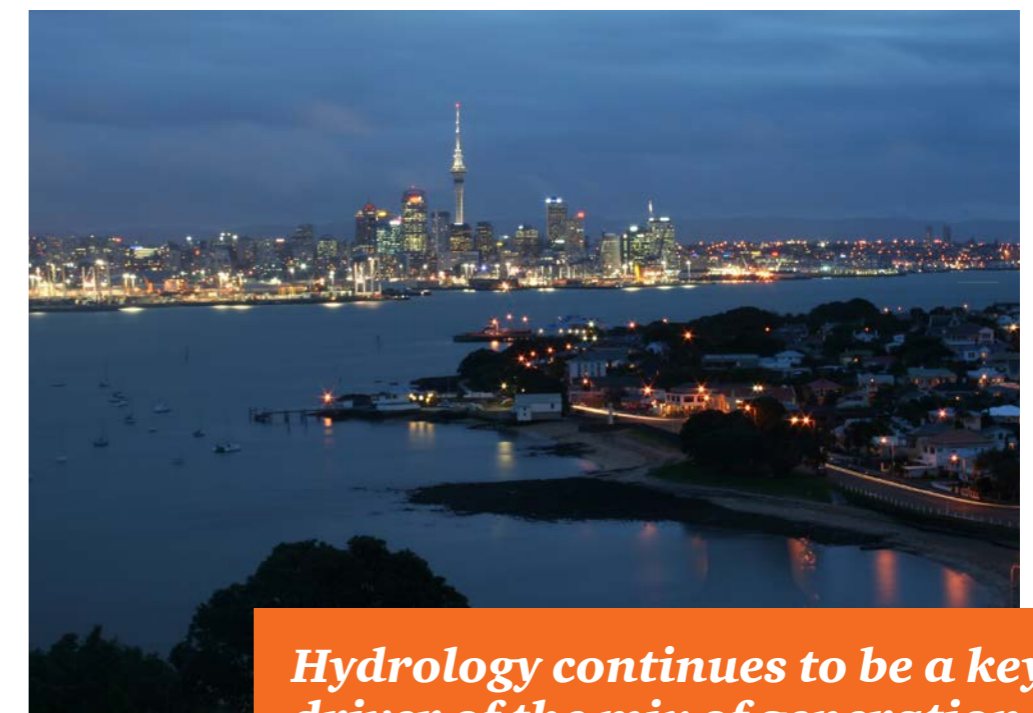
The following chart highlights the impact of the improved hydrological conditions on the overall generation mix, after thermal generation sources were required to meet shortfalls in hydro generation in FY12.

Generation type



Source: Companies' annual results announcements and reports.

This graph highlights the volatility that arises in generation volumes as a result of hydrological conditions. Increasing levels of geothermal generation (given recent and imminent commissioning) will increase the level of baseload generation, allowing more flexibility around hydro utilisation and placing further pressure on thermal generation assets.

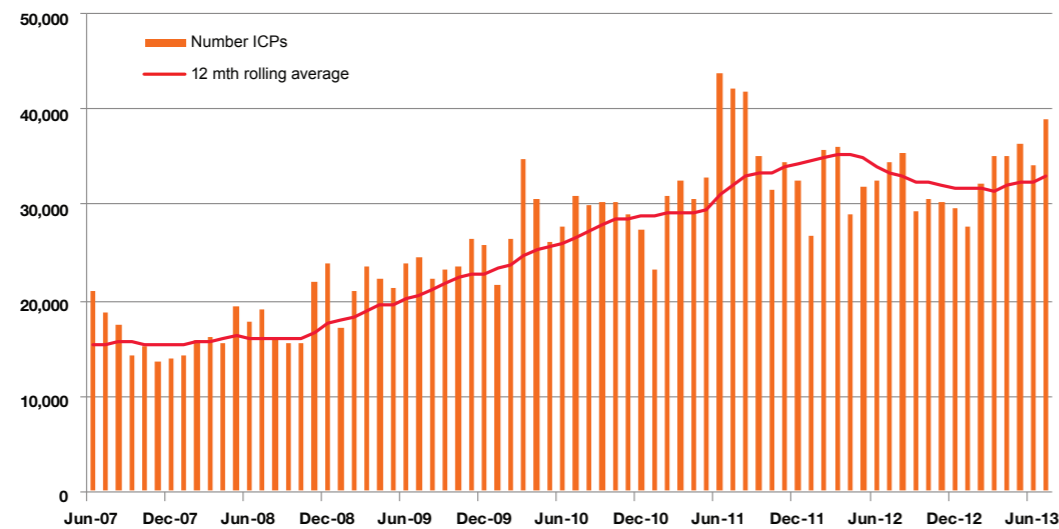


Hydrology continues to be a key driver of the mix of generation sources - increasing baseload geothermal allows further flexibility in hydro utilisation.

Retail market share

Last year, we undertook an analysis of the retail market, given the high levels of churn being experienced and the retailer portfolio balancing that was taking place. We have updated that analysis below. However, it is useful to note that while the residential market accounts for the majority of connections (as approximated by the number of installation control points or ICPs), on a volume of electricity consumed basis, residential consumers account for only one third of the volume.

ICPs changing electricity supplier

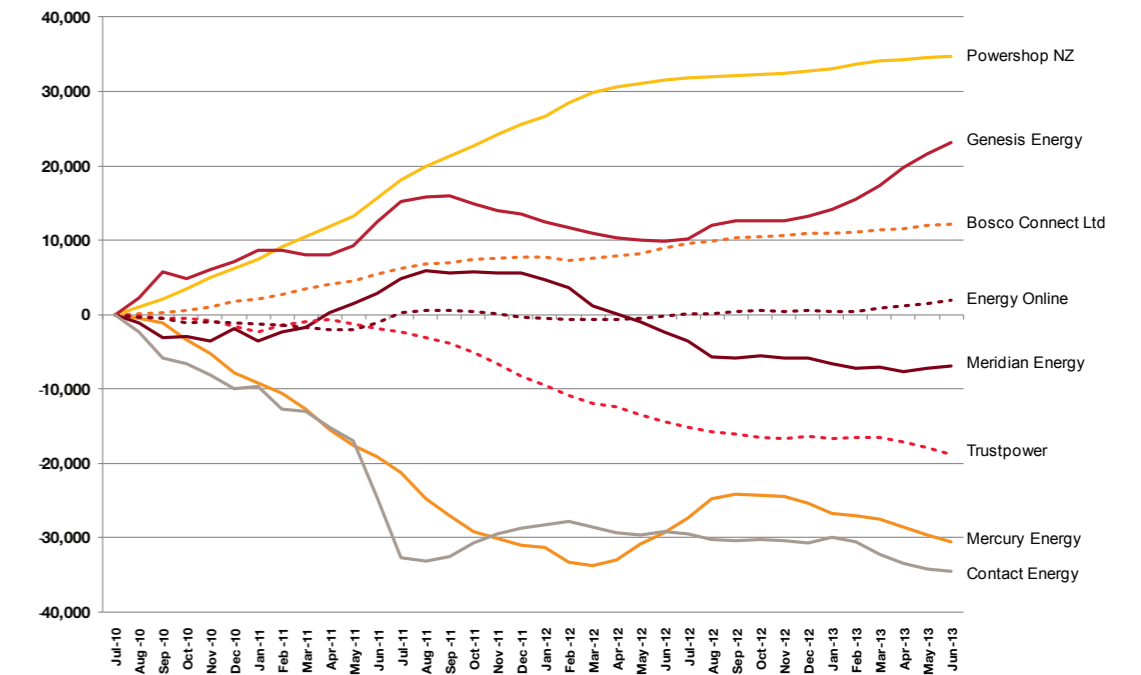


Source: Electricity Commission

The intensity of retail competition is often measured by the level of customer churn (ie. the number of customers changing supplier). High levels of customer churn continued through FY13. At current levels of between 30,000 to 35,000 per month, this equates to around 21% of all ICPs changing supplier over the course of FY13 (excluding the impact of large customer transfers between retailers).

As highlighted last year, increasing levels of churn continue to squeeze tight retail margins. Marketing costs to attract new customers, the retention costs (such as loyalty programs), attrition costs (administration as customers join/leave) and bad debts have all come under increased pressure.

Cumulative ICP change by retailer (July 2010 base year)



Source: Electricity Commission (excludes impact of large inter-retailer customer transfers)

Since June FY10, Powershop has continued its strong growth adding a further 35,000 ICPs, growing its total ICPs to approximately 52,000. While significantly smaller than the 'big five' retailers, it has a clearly defined niche market.

Genesis Energy has added a further 23,000 ICPs over the same period, while its Energy Online subsidiary has maintained a stable level of ICPs. Genesis Energy's growth has largely been delivered on the back of its South Island customer base and its dual fuel offerings. The addition of the Tekapo A&B generation stations provided Genesis Energy with the generation to develop its South Island customer base.

Bosco Connect has grown its ICP base by approximately 12,000 ICPs, which also includes growth coming from the Tiny Mighty brand.

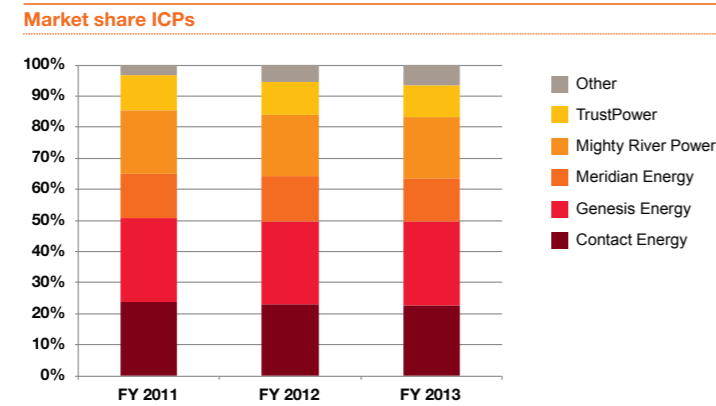
Meridian Energy's number of ICPs has reduced across the three years by approximately 8,000, although it has increased its North Island customer base over the same period.

TrustPower's slow decline in ICPs continued in FY13 in a tight retail market, although its customer churn is at lower levels than the market overall.

Over the last three years, Contact Energy's ICPs reduced by approximately 35,000. This was predominantly due to significant reductions in the number of South Island customers in FY11 and FY12 as it targeted North Island growth to better align its generation and retail location.

Mercury Energy's customer numbers have stabilised over FY13, having decreased by some 30,000 ICPs in the previous two years as Mercury's focus on higher consumption customers south of Auckland continues.

The chart below illustrates the relative market share of each of the five major generators. Subsidiary retail companies have been incorporated with their parent for this analysis: Bosco Connect with Mighty River Power, Powershop with Meridian Energy, Energy Online with Genesis Energy and Empower with Contact Energy.



Source: Electricity Commission

The market share of ICPs has remained broadly stable between years. The reduction in Meridian Energy's ICPs during FY13, and the growth in the Other category was impacted by the transfer of EDNZ customers, between these categories.

In conclusion

While there may have been a reversion to average hydro inflows in the South Island this year, there was little else normal about FY13.

Demand reversed its long term trend of year-on-year growth. Generation developments were shelved or at least put in abeyance pending an upturn in demand. The possible introduction of the Labour Greens backed single buyer model created ripples through the sector.

What hasn't changed is the high level of mass market customer churn, which continued recent trends on the back of a very competitive retail market and government funded switching campaigns.

The limited opportunities to grow these businesses' generation bases, coupled with tight retail margins, means that the focus has now turned to extracting value from existing assets, both physical generation assets, as well as customers.

How they respond to these challenges will be crucial to their profitability in the short to medium term.



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