



Energy News and ABB

Annual New Zealand Electricity Survey

SURVEY RESULTS 2014

Introduction

Energy News and ABB are pleased to announce the results of the Annual New Zealand Electricity Survey 2014. This document contains some fascinating reading and insight into the current issues facing the industry, and what should be done about them. Twenty thought-provoking questions tested respondents' views on electricity industry matters such as the 'NZ Power' proposal, retail pricing, electricity affordability, changes in demand outlook and future innovations; including electric vehicles and distributed generation.

Key findings include 55 per cent of participants voting 'absolutely not' when asked whether they agreed with 'NZ Power'; a key election issue this year. And amid the lamented demand outlook, some 85 per cent of respondents see New Zealand returning to peak load growth within five years.

The survey, in its third year, ran for four weeks throughout March and April and was completed by over 470 industry participants; up 40 per cent on 2013. A breakdown of the sample by organisation type is available on page 13. Almost all participants rated completing the survey a worthwhile exercise, and many provided valuable feedback for next year.

The survey questions and range of responses were guided by an advisory panel chaired by John Hancock. The panel members are listed on page 14 and we would like to thank them for their input. Please email any feedback to margaret.mccrone@freemanmedia.co.nz. We welcome any and all suggestions for questions and responses for 2015.

Margie McCrone - Research Analyst
Freeman Media (publisher of *Energy News*)

About ABB

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 150,000 people.

ABB has been in New Zealand for over 80 years and employs around 750 people nationwide.

About Energy News

Energy News is New Zealand's online news and information service for the energy sector. The website (www.energynews.co.nz) was launched in 2008 and now boasts over 5,000 readers every month from 285+ subscribing organisations. Its readership consists of New Zealand energy sector organisations and service companies spanning the electricity, oil and gas, petroleum and alternative energy value chain.

The subscription-based site provides executive interviews, news, opinions and commentary on a daily basis. It also hosts a suite of information resources including two large databases of the sector participants and energy resources. Other information tools include 30-minute electricity supply and demand monitoring, petroleum permit deadline summaries and an oil price monitor.

Cover photo: ABB

2014 SURVEY HIGHLIGHTS

470

respondents –

top four categories

Gentailer (19%), Distribution (16%),
Consultant (13%) and
Professional services company (10%)



Respondents
up 43% on 2013



1 in 4

respondents thought
Tiwai will be shut in 2017



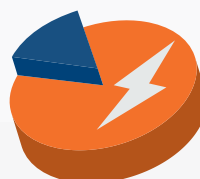
'NZ Power':

6% said yes; 39% said maybe;
55% said absolutely not



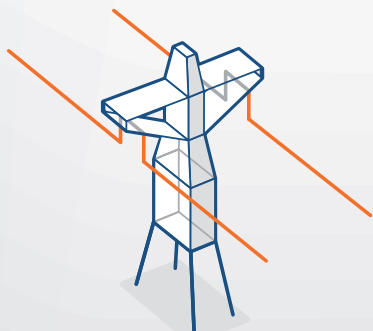
65% of respondents

saw the industry playing some
role in addressing energy poverty



Some 85%

of respondents see
New Zealand returning
to peak demand growth
in five years or less



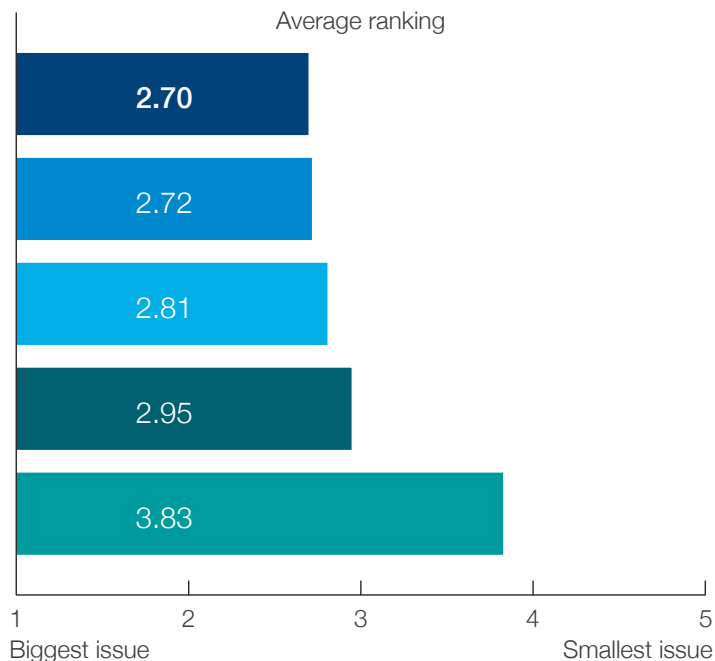
All 'future trends'

hold near-term potential for NZ

Electric vehicles 17%;
Distributed generation 27%;
Dynamic smart grid 17%;
Residential demand response 16%;
In-home energy management 23%

Question 1 – The Big Issues

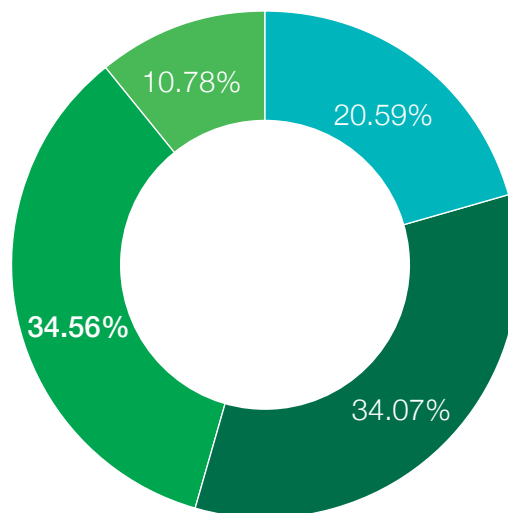
Last year, we started out by asking participants to rank the biggest issues facing the sector. The biggest issue last year was the flat demand outlook – does this remain the case? Please rank the following issues one through five, with one being the biggest issue.



- **The flat demand outlook. – 2.70**
- The 'NZ Power' bombshell and the potential impacts on the market. – 2.72
- Regulation (whether in the form of supposed over-regulation, not enough in specific areas, or what you think to be incorrect regulation of specific areas). – 2.81
- Electricity affordability. – 2.95
- Lack of competition in the retail market. – 3.83

Question 2 – Politics

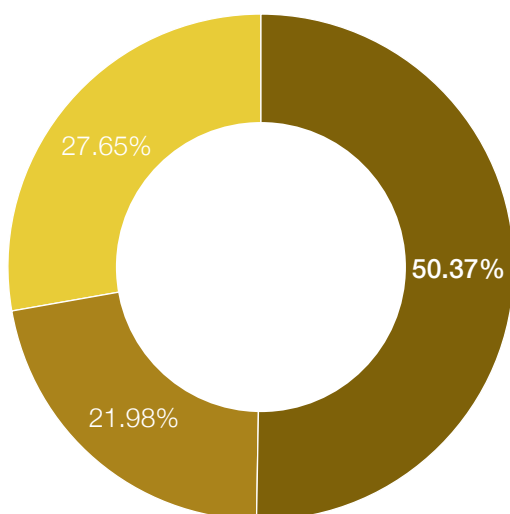
2014 is an election year. Could 2014 be the end for John Key's National Government or will he see off competition again come vote-time? Looking back, what do you think of the performance of the National Government over the past six years – have they done a good job with the electricity industry? Choose one answer that best fits your view.



- It's a shambles. Electricity prices continue to rise despite the market climate and oversupply; there have been no new entrants of note; and the Mighty River Power and Meridian Energy listings were a disaster. – 20.59%
- Just okay. The industry is performing fine, but it has been largely ignored by the Government in favour of oil and gas policy. The light-handed approach has left some wanting, and issues around the affordability of electricity are alarming. – 34.07%
- **Pretty well. Coming up to the second Commerce Commission price re-sets we seem to be heading in the right direction with lines company regulation, so too with transmission pricing - meaningful discussions are being had by the industry and regulators. – 34.56%**
- Very good. The Brownlee reforms balanced the separation between retail/generation in the north and south islands; retail competition has improved as per the Electricity Authority's directive; and dispatchable demand will be available in 2014. – 10.78%

Question 3 – Politics

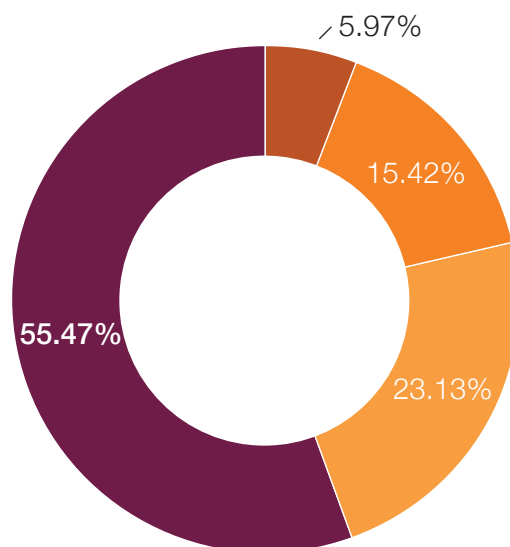
In 2013 the Labour-Greens came out with a proposal that would turn the industry on its head – ‘NZ Power’. If they succeed in the 2014 election then a single buyer model would be introduced to replace New Zealand’s present industry driven marketplace. Labour has said its single buyer for wholesale electricity will set prices based on operating costs and a fair return on capital, which will see ‘consumers finally get a fair go’ (*NZ Power Policy Document*). Consider ‘NZ Power’ as an issue for the 2014 election – will the electricity market be a key battleground this year? Choose one answer that best fits your view.



- Yes, the incumbent National Government will need to respond to the alleged cost-savings of ‘NZ Power’ in order to secure the silent majority’s votes. High power prices are at the forefront of New Zealanders’ minds. – 50.37%**
- No, any key energy policy debates will be around oil and gas prominence and deep-sea drilling. – 21.98%
- No, people don’t care about energy. They are more concerned with the performance of the wider economy; the job market; healthcare and education. – 27.65%

Question 4 – Politics

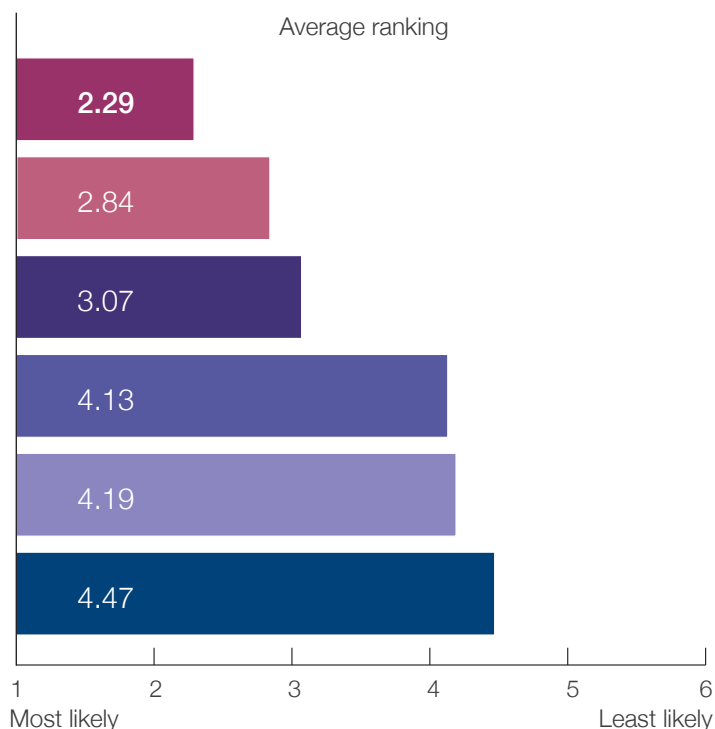
What are your thoughts on the proposed ‘NZ Power’ model; do you agree with what it aims to do? Choose one answer that best fits your view



- Yes, in its entirety. – 5.97%
- Maybe... why should generators capture all the value of the hydro resource? – 15.42%
- Maybe... it could put retailers on a level playing field. – 23.13%
- No, absolutely not. – 55.47%**

Question 5 – Politics

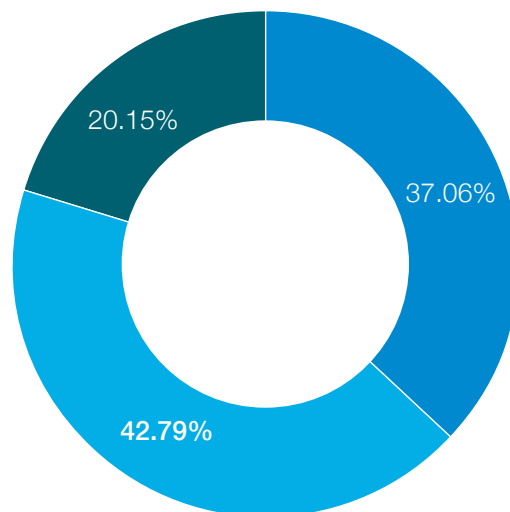
If the 'NZ Power' proposal is implemented, what do you perceive to be the most likely impacts on the industry? Rank the following foreseeable consequences for life-as-we-know-it one through six, with one being the most likely.



- A large decrease in value of the 'big five' gentailers. – 2.29**
- Serious issues when trying to commission new generation later down the track, particularly in a climate where electricity demand is high and rising. – 2.84
- The chilling effect it will have on the local and international investment communities. – 3.07
- A simplified industry structure and the end to years of industry-led market experimentation. – 4.13
- Lower power prices. – 4.19
- Government-guaranteed security of supply. – 4.47

Question 6 – Politics

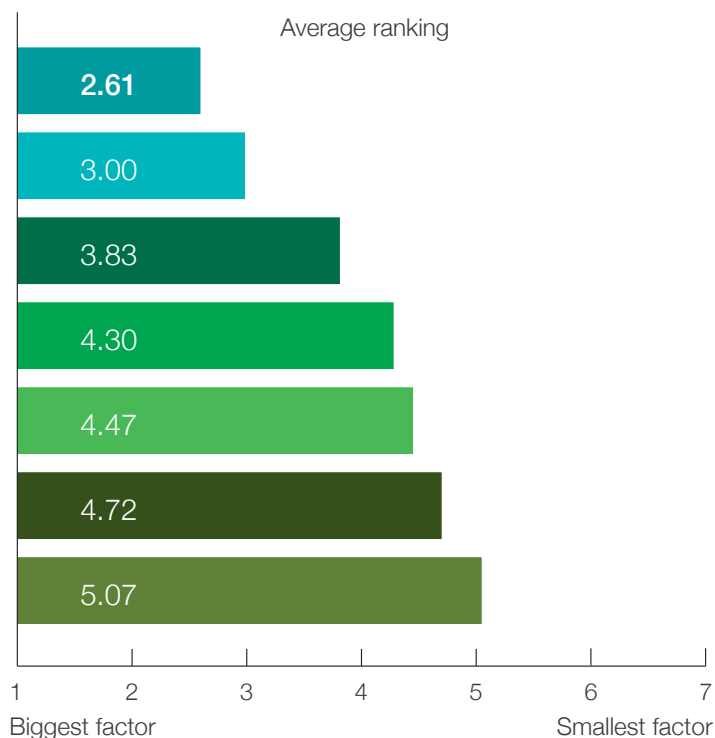
One of the foundations for the 'NZ Power' debate is over what is the best use for the public water resource. Do you think the generation and sale of hydro-electricity is the best use for it? Choose one answer that best fits your view.



- Yes, and so the status-quo should be reserved. – 37.06%
- Maybe, but the use of hydro generation should be regulated/taxed. Otherwise it crosses the line into privatisation of a public resource that should be enjoyed for the benefit of all. – 42.79%**
- No, not necessarily; water should be allocated to the highest bidder. – 20.15%
- Yes, and so the status-quo should be reserved. – 20.15%

Question 7 – Prices

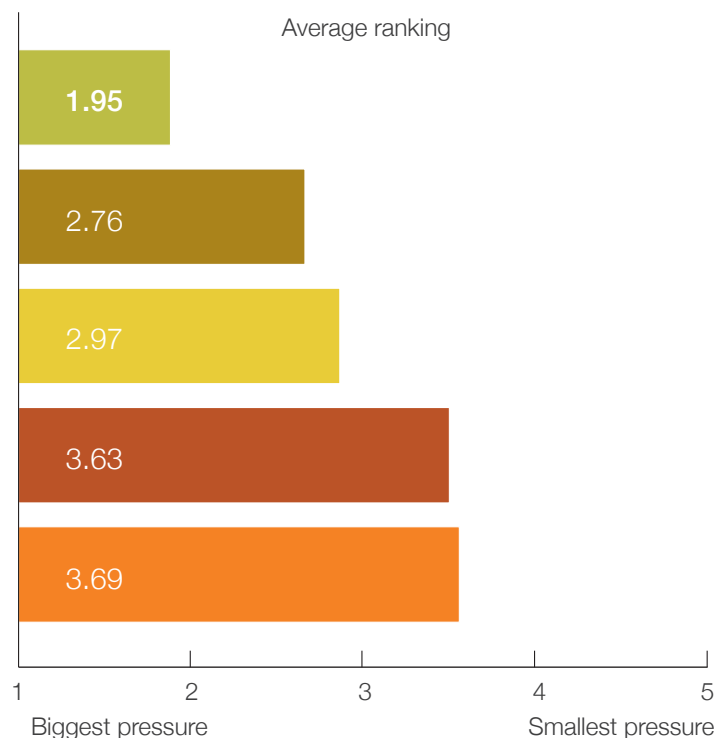
'NZ Power' promises to deliver around \$300 in savings per year to the average household's electricity bill. This assurance could potentially hit home for so-called average New Zealanders, who seem to be increasingly frustrated with the cost of electricity and the industry that delivers it. In fact, the public image of the electricity industry is one of the worst. What are the biggest factors underlying this? Rank your answers one through seven, with one being the biggest.



- Lack of public awareness around the costs to generate and reliably deliver power, and the fine balance that needs to be struck between price and quality. – 2.61
- Distrust, and a misperception that the industry is ripping off consumers. – 3.00
- The industry's slow place in delivering the innovative products they now have available. – 3.83
- Absence of an independent body that confirms the price signals from the industry are appropriate (perhaps think of the role of the AA in the motor industry). – 4.30
- Lack of corporate social responsibility; not being seen to be the 'good guys' in the community. – 4.47
- Inflexibility when it comes to billing and payment of retail electricity bills. – 4.72
- The fact that the industry is actually ripping off customers – power prices are simply too high. – 5.07

Question 8 – Prices

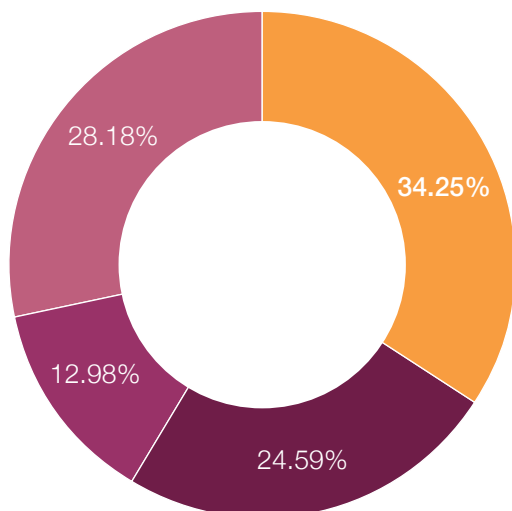
Bottom-line, what consumers pay for electricity has increased in recent years – despite the current demand outlook; despite increased competition among retailers. The industry claims that price increases are driven by rising costs. Which of the following costs do you see to be the biggest pressures underlying the latest round of retail price increases? Rank your answers one through five, with one being the biggest.



- Increased transmission costs. – 1.95
- Increased distribution costs. – 2.76
- Increased retail margins. – 2.97
- Increased generation costs. – 3.63
- Higher administration costs for retailers due to disconnections/reconnections and increased customer churn. – 3.69

Question 9 – Prices

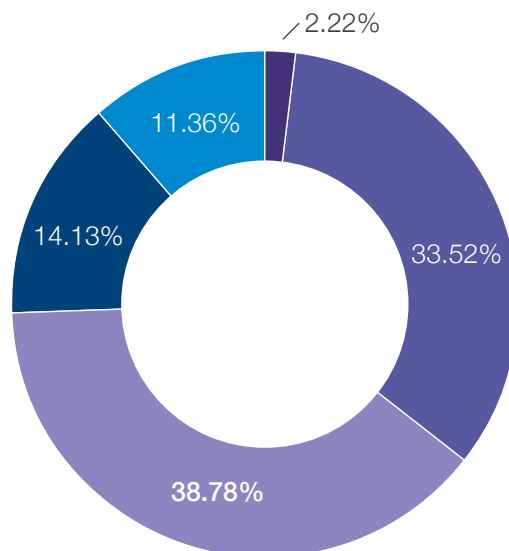
As suggested above, there is a fine balance to be struck between price and quality when it comes to generating and delivering power. Consumer costs are set so as to compensate for the reliable supply of their electricity. If prices were dropped, would security of supply be placed in jeopardy? Choose one answer that best fits your view.



- No, as transmission and distribution investment can be contained within acceptable costs that allow for both reliable supply and lower costs for customers. – 34.25%**
- Yes, and customers should expect to experience more blackouts as a result. If they are not willing to take this risk, then they must pay a higher price for guaranteed supply. – 24.59%
- No, even if prices fell, that is likely to be offset by declining network loads and a flatter capital expenditure programme. – 28.18%
- Yes, the complexity of future networks, requiring integrated coordination of household demand response and increased distributed generation, is likely to impose higher costs. – 12.98%

Question 10 – Prices

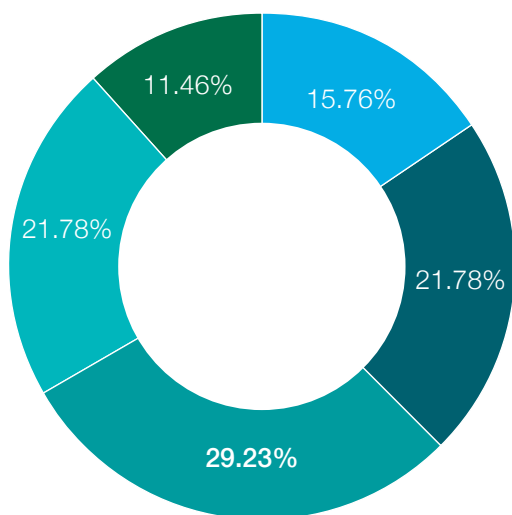
Whether or not the price charged for electricity can be justified, electricity affordability in low income households seems to be an increasingly visible issue. Do you agree with this, and how do you think the industry should address the issue? Choose one answer that best fits your view.



- No, and the industry should do nothing. – 2.22%
- Yes, but it's not an industry problem – energy poverty is rooted in poverty that is experienced in a wider sense, which should be addressed by the Government through social welfare. – 33.52%
- Yes, and the industry should work with the Government to come up with dynamic, targeted, integrated policies that reach those most in need, and supports them long-term - perhaps a social tariff of sorts, budgeting advice, and energy efficiency education. – 38.78%**
- Yes, and the industry should introduce more innovation into its customer offerings – retail packages along the lines of dual-fuel discounts; special group rates; and multi-rate tariffs are some options. – 14.13%
- Yes, but the industry and government need to recognise that solid fuels and gas are better heating options for many families and work to get those installed in more homes. – 11.36%

Question 11 – Retail

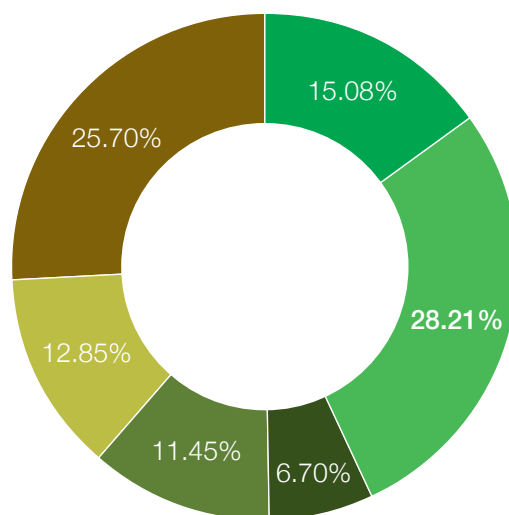
Thinking of innovation in customer offerings, which of the following retailer promotions do you think has made the most significant impact? Choose one answer that best fits your view.



- Trustpower's rebrand that has seen it emerge a retailer in multiple senses: it can now provide bundled packages for its customers that include electricity, gas, and telecommunications. – 15.76%
- Pulse Energy's GreyPower partnership, which sees members of GreyPower offered plans with no fixed-term contract, no prompt payment discount, and a cap on prices. – 21.78%
- Mighty River Power's Good Energy Monitor (GEM), which enables customers to track their own energy use against past bills and the consumption of households nearby, and warns them when they are heading for a high bill. – 29.23%**
- Contact Energy and Meridian Energy both coming to the party supporting solar PVs – putting in place plans that pay customers for the electricity they inject into the grid. – 21.78%
- Genesis Energy's dual-fuel discounts that reward the combined use of gas and electricity in homes, and make the most of its access to LPG from its Kupe gas field stakeholding. – 11.46%

Question 12 – Retail

The retail space has changed in recent times, with the entry of several smaller, niche retailers. The Electricity Authority has said it is in talks with a further nine potential newcomers. What role do you see the new entrants playing in the market composition in the next five years? Choose one answer that best fits your view.

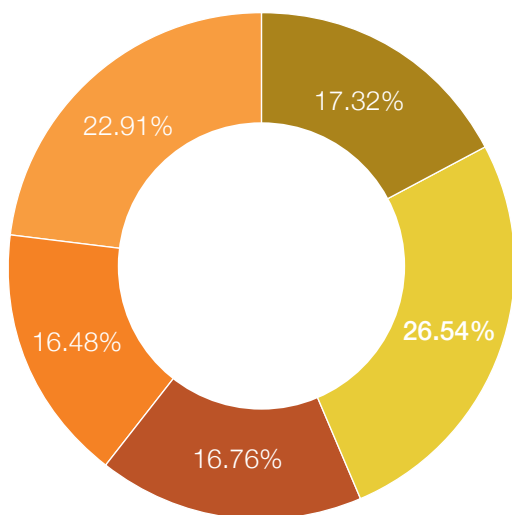


- They will continue to grow and fragment the incumbent market. – 15.08%
- They will drive competition and innovation. – 28.21%**
- They will fade away as quickly as they appeared. – 6.70%
- One will collapse in the next dry winter. – 11.45%
- One will be acquired as soon as it gets to a reasonable scale. – 12.85%
- They will all eventually be acquired by a large gentailer. – 25.70%

Question 13 – Future Innovations

Looking forward, which of the following ‘future trends’ holds the best potential for New Zealand in the near-term?

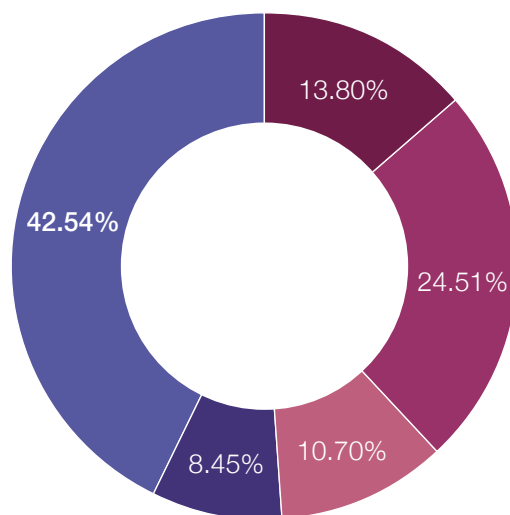
Choose one answer that best fits your view.



- Mass-market electric/hybrid vehicles. – 17.32%
- Distributed generation, such as solar PVs; micro wind generation. – 26.54%
- A dynamic smart-grid. – 16.76%
- Aggregated residential demand response. – 16.48%
- Smart home energy management systems. – 22.91%

Question 14 – Future Innovations

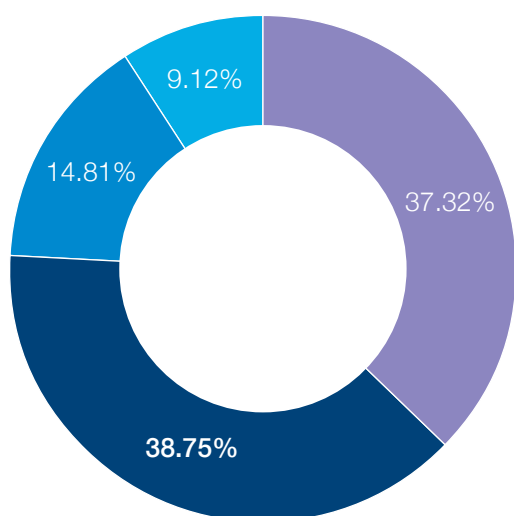
Numerous global surveys in the utilities space (including the 12th annual PwC Global Power & Utilities Survey, and the ABB Energy Survey 2013) have suggested that electric vehicles (EVs) are the way of the future. How do you see New Zealand best capitalising on this gamechanger? Choose one answer that best fits your view.



- The Government should manage the rollout of EVs by designing and implementing a centralised, nation-wide policy. – 13.80%
- The electricity industry should take the lead, and the lines businesses in particular should see this as an opportunity. – 24.51%
- The car manufacturing industry should champion it, including offering to manage electricity contracts for EV purchasers. – 10.70%
- The car leasing industry (which is huge in the United States) could use this to expand into New Zealand and lease EVs to New Zealand customers. – 8.45%
- New Zealand should take a wait-and-see approach, and hold back on rushing into any mass-market solutions until there is an established demand for EVs. – 42.54%

Question 15 – Future Innovations

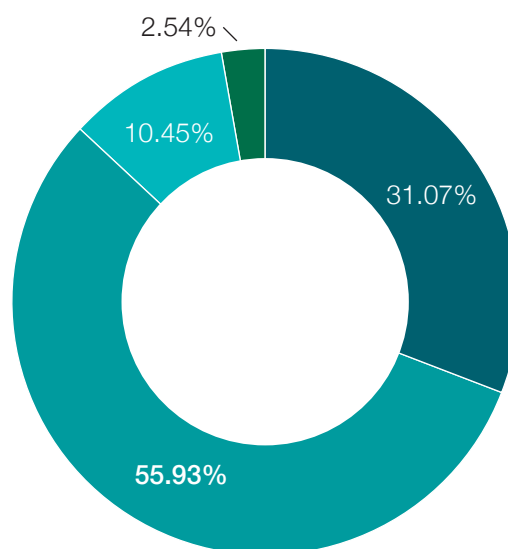
Electric vehicles could have a considerable role to play in reducing local – and global – carbon emissions, as transport is currently understood to be one of the largest contributors to man-made climate change. With this topic in mind, what role could the electricity industry have in reducing carbon emissions in New Zealand? Choose one answer that best fits your view.



- The industry could take the lead in rolling out EVs by providing the necessary infrastructure for charging cars. – 37.32%
- We could continue to step away from fossil-fuel fired thermal generation, in favour of renewable energy such as geothermal. – 38.75%
- The industry does not need to do anything – this is an 'other' sector (i.e. farming) problem. – 14.81%
- Support the introduction of a carbon tax. – 9.12%

Question 16 – Future Innovations

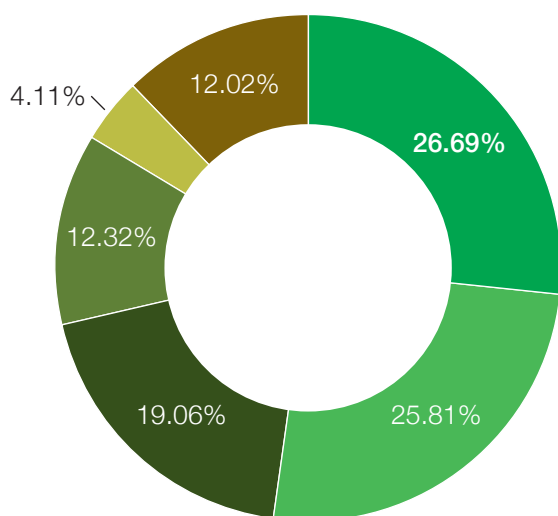
Smart meters have now been deployed to over half the country's households. The half-hourly consumption data can be used by retailers to offer innovative new products and by lines companies for network management. Twoway communication also has the potential to allow consumers to respond to high electricity prices and subsequently flatten peak system demand. How well do you think the market-based roll-out of smart meters is delivering value to consumers? Choose one answer that best fits your view.



- It's a shambles. Customers have paid for the deployment through higher bills. Retailers and lines companies don't look like they'll ever be able to deliver the suite of benefits. – 31.07%
- Just okay. Online billing and automated meter reads are good, but the real benefits have been slower than expected. Retailers are being too cautious in offering new products. – 55.93%
- Pretty good. Consumers are benefitting from lower cost-to-serve and more initiatives are just around the corner. – 10.45%
- Very well. Consumers with the meters are starting to see some real innovation and engagement from both retailers and lines companies; and some customers are now benefitting from multi-tariff rates. – 2.54%

Question 17 – Demand Outlook

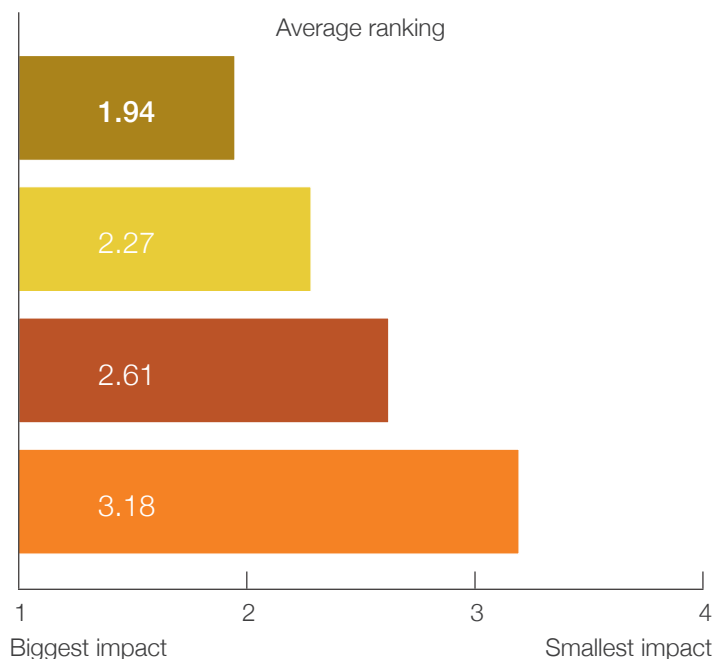
Since Rio Tinto signed its revised contract with Meridian Energy in August 2013, there has been much talk about the potential impacts of the deal which allows the Tiwai Point aluminium smelter to reduce its demand from 2015, and potentially shut altogether in 2017. At what demand capacity will Tiwai be operating at from January 2017? Choose one answer that best fits your view.



- Zero – it will be shut. – 26.69%
- 400 MW. – 25.81%
- 510 MW. – 19.06%
- 572 MW. – 12.32%
- 610 MW. – 4.11%
- 625 MW – its rated capacity. – 12.02%

Question 18 – Demand Outlook

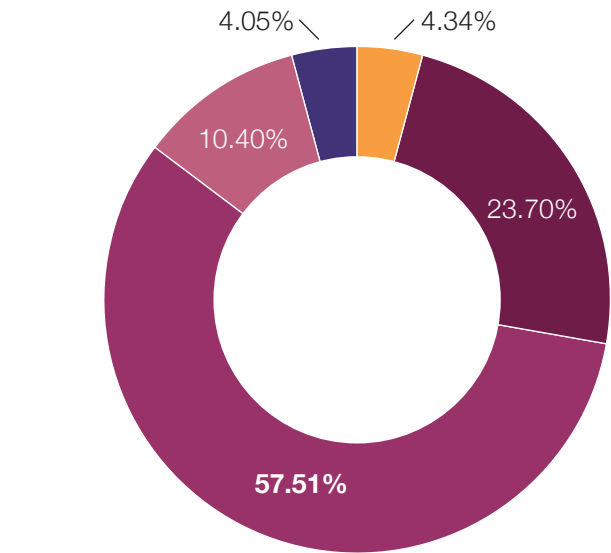
Imagine it is shut, what would be the biggest impact on the industry? Rank your choices one through four, with four being the biggest.



- Nothing much will change, as the industry will protect itself from prices collapsing by withdrawing generation capacity from the market accordingly. – 1.94
- This is an opportunity for other energy-intensive industries. Dairy farmers, data centres and fertiliser manufacturers are just a few that could stand to capitalise on the excess energy available. – 2.27
- Prices will collapse and generators will let a string of consented development options lapse. – 2.61
- Prices will collapse and there will be a retail bloodbath as Meridian puts that supply into the market. – 3.18

Question 19 – Demand Outlook

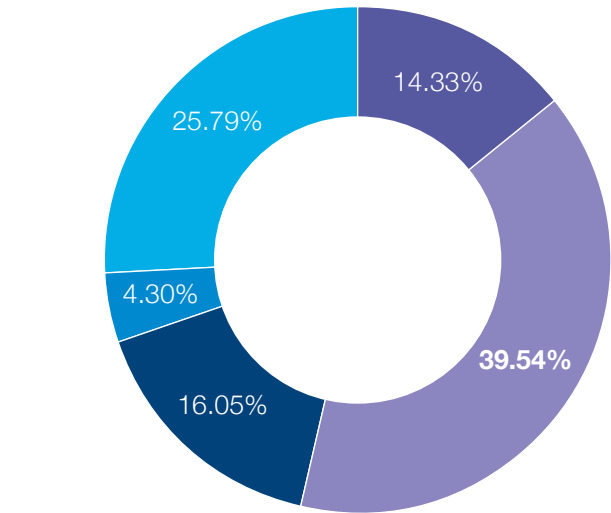
In the past three years, New Zealand’s peak electricity demand has remained flat. Putting the Tiwai issue to one side for a moment, and excluding it from your thoughts when answering this question, when will New Zealand return to peak demand growth of more than one per cent? Choose one answer that best fits your view.



- This year (2014). – 4.34%
- Next year (2015). – 23.70%
- In five years (2019). – 57.51%
- In ten years (2024). – 10.40%
- In 20 years (2034). – 4.05%

Question 20 – Demand Outlook

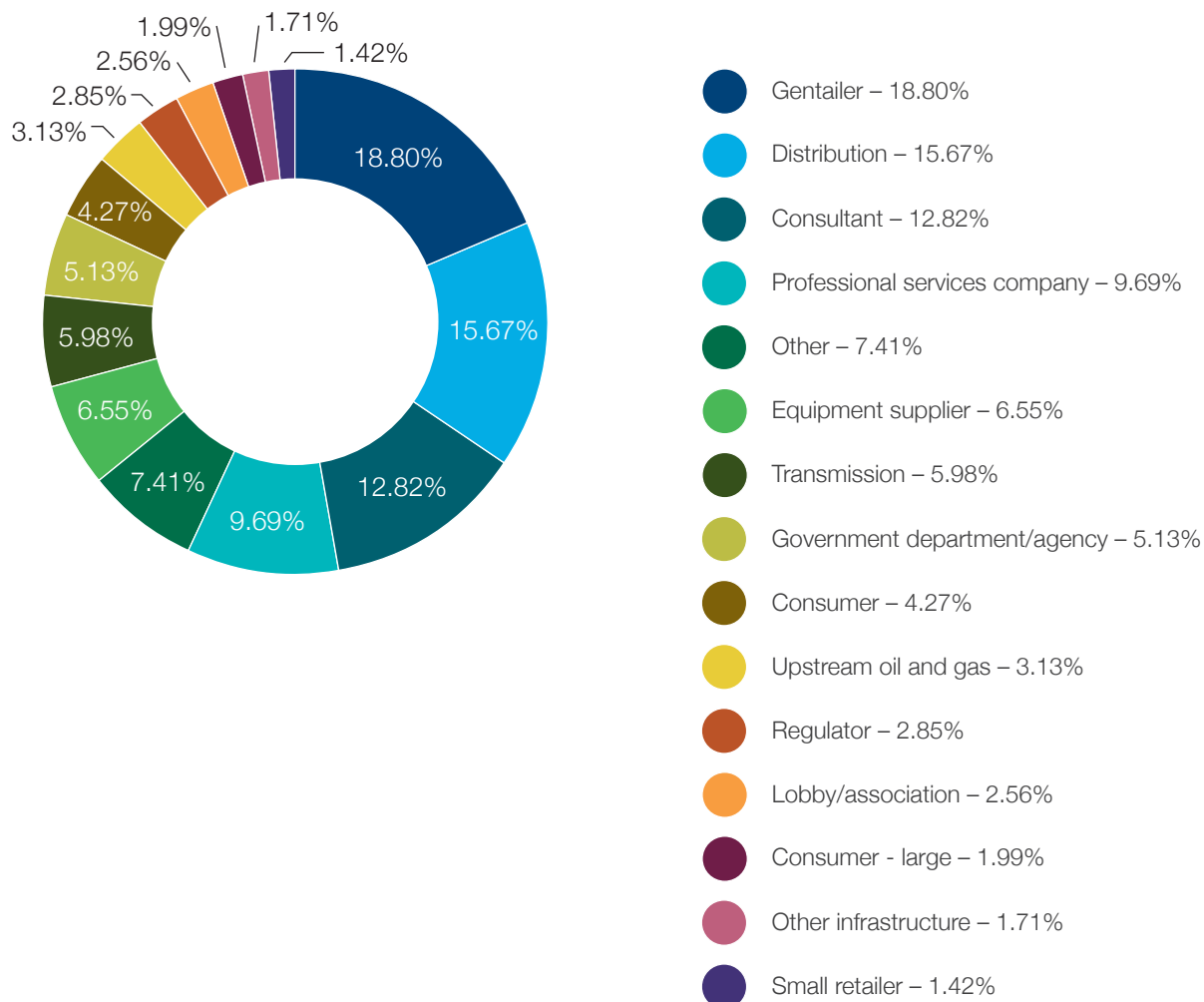
If demand were to rise again in the near-term, what would be the most likely large generation build to be the next cab-off-the-rank? Choose one answer that best fits your view.



- Combined-cycle gas – i.e. Otahuhu C or Rodney. – 14.33%
- Large-scale geothermal – i.e. Tauhara II. – 39.54%
- Large-scale wind – i.e. Central Wind. – 16.05%
- Big hydro – i.e. North Bank Tunnel. – 4.30%
- None – demand response and distributed generation will fill the gap. – 25.79%

Question 21

Please choose one option below to describe where you work or your connection to this survey.



The survey panel



Neil Wembridge

Neil Wembridge is the General Manager (Energy) at Freeman Media, which sees him take responsibility for the commercial side of the energy sector products of Freeman Media, including all events, map products, surveys, stakeholder management and business development.

Neil came to Freeman Media from a role as a strategic consultant to the New Zealand energy sector based in Wellington. He previously worked for Total and Oracle in the UK.



Ken Mulcock

Ken Mulcock is ABB's Chief Financial Officer for their operations in New Zealand and is responsible for overseeing and reporting the company's local finance, treasury and insurance requirements as well as managing the IT and systems infrastructure in New Zealand. Ken is also ABB's Integrity Officer in New Zealand.

Ken has worked in ABB for over 20 years, 10 of which in New Zealand, and is a chartered accountant (CA) and a member of the NZICA.



Fraser Clark

Fraser Clark is General Manager Market Services at the Electricity Authority, and the team he leads is responsible for the overall operation of the electricity system and market.

Previously Fraser was Chief Executive of the New Zealand Wind Energy Association. He also has industry experience in generation development, cogeneration plant operations, electricity and natural gas contracting, and energy efficiency projects for manufacturing plants.



Jeremy Cain

Jeremy Cain has been Transpower's Chief Regulatory Advisor since 2012. He is a policy and regulatory specialist having joined Transpower from Telecom NZ. Prior to working at Telecom NZ Jeremy worked in London for 7 years, most recently as a principal advisor with Ofcom, the UK's media and communications sector regulator

John Hancock
– Chair

John Hancock consults to utility companies and their suppliers, and has a 20 year career in the utilities industry including 14 years with Ernst & Young, Capgemini and Hewlett Packard (HP) in the Asia Pacific. He is currently the independent Chair of the Electricity Authority's Wholesale Advisory Group and Secretariat to the New Zealand Smart Grid Forum.



Nick Russ

Nick is currently a Chief Adviser at the Commerce Commission working across a range of regulatory issues. Before that Nick spent a number of years working for energy regulators in the UK and Australia. Nick has a degree in electrical engineering and is a chartered member of the IET.



Tracey Paver

Tracey Paver is ABB's Corporate Communications Manager and is responsible for coordinating internal and external communications and PR for ABB in New Zealand. Tracey has worked in ABB for seven years, and previously in the rail and construction industries, and has a Bachelor of Communications studies.



Nicholas Robinson

Nicholas is the General Manager Customer Insight, Marketing and Communications at Contact Energy. In this role he oversees customer strategy and its implementation for marketing, brand, customer insight, pricing and communications. He has a background in reputation, sustainability, stakeholder engagement and transparency.

Prior to joining Contact in 2012, Nicholas was based in London, working for several years for BP in the global communications and external affairs function, as well as working with the international consultancy SustainAbility advising companies on non-financial risks and transparency.



Patrick Smellie

Patrick Smellie is a founder of the BusinessDesk business news service, supplying most New Zealand media with daily business news. Patrick is a former editor of the weekly Energy and Environment Business Alert newsletter and worked in corporate communications and brand at Contact Energy between 2001 and 2008.



Simon Coates

Simon Coates, a Director at Concept Consulting, has over 20 years' experience in the energy sector. Prior to joining Concept, a specialist energy consultancy, Simon held a senior management position for a major New Zealand energy company, and worked in the UK as a consultant on energy and emissions markets in the UK and Europe.

Simon holds a BSc Hons (First Class) in Physics, and an MSc in Environmental Technology.



Electric cars: 15 minutes charging, 200 km driving?

Having to wait eight hours to fully recharge an electric car is the main reason for not buying one. But things have changed: With ABB's direct current (DC) chargers charging time has been slashed to as little as 15 to 30 minutes. No wonder the Estonian government is relying on ABB to build Europe's largest electric vehicle fast-charging network. By the end of the year the Estonian main roads will have fast chargers every 50 km. Once accomplished the goal to significantly reduce CO₂ emissions by 2020 moves a lot closer.
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Certainly.

Power and productivity
for a better world™

