



STOCK EXCHANGE LISTINGS: NEW ZEALAND (MCY) / AUSTRALIA (MCY)

## NEWS RELEASE

# Mercury Investor Day 2019

**12 November 2019** – Mercury is hosting its Investor Day 2019 in Auckland today, which includes presentations from the Executive Management Team and other senior managers of the company focusing on the delivery of our long-term strategic goals.

The presentation materials from the Investor Day are attached.

END

### For further information:

Media – Craig Dowling 0272 105 337

Investors – Tim Thompson 0275 173 470

## ABOUT MERCURY NZ LIMITED

Mercury's mission is energy freedom. Our purpose is to inspire New Zealanders to enjoy energy in more wonderful ways and our goal is to be New Zealand's leading energy brand. We focus on our customers, our people, our partners and our country; maintain a long term view of sustainability; and promote wonderful choices. Mercury is energy made wonderful.

Visit us at: [www.mercury.co.nz](http://www.mercury.co.nz)



# MERCURY INVESTOR DAY 2019.

November 2019



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# AGENDA

12:30pm – 1:15pm Welcome

1:15pm – 2:00pm Commercial

2:30pm – 5:30pm Customer / People

Kaitiakitanga / Partnerships

## OUR PEOPLE



**DENNIS RADICH**  
Generation Development  
Manager



**BEN HARVEY-LOVELL**  
Head of Brand & Marketing



**MO ABBAS**  
Head of Mass Market  
Sales



**KATH HARTLEY**  
Head of Organisational  
Development



**SARAH HOLT**  
Workforce Strategy  
Manager



**NICK WILSON**  
Regulatory & Government  
Affairs Manager



**GRAEME HILL**  
Infrastructure Manager



**WU KHOO**  
Geothermal Technical  
Resources Manager





# WELCOME.

**FRASER WHINERAY**

Chief Executive

November 2019



# WHAT SUCCESS LOOKS LIKE

## OUR FIVE PILLARS



## BY 2030 WE WILL BE...

CUSTOMER		New Zealand's leading energy brand
PARTNERSHIPS		Recognised as a leader within our industry, with our industry recognised as a positive contributor to New Zealand; and Mercury's access to fuel and energy storage enduring and enhanced
KAITIAKITANGA		Recognised as a leader in the ultra-long-term management of both physical and natural assets
PEOPLE		A zero harm organisation that has enabled our people to adapt to the changing nature of work to deliver the highest levels of performance and productivity
COMMERCIAL		Leading our sector in terms of financial performance and shareholder returns, earning at least our cost of capital



# COMMERCIAL.

**WILLIAM MEEK**  
Chief Financial Officer

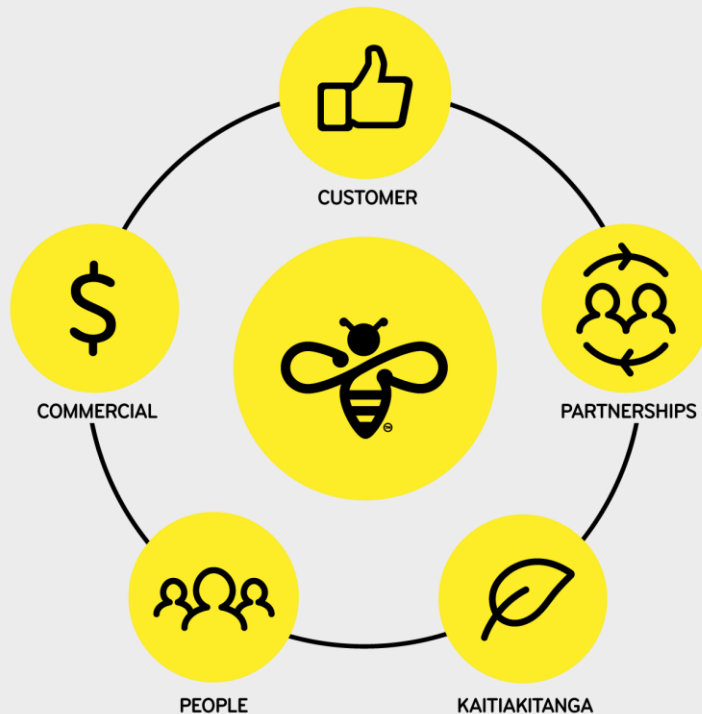
November 2019

**DENNIS RADICH**  
Generation Development Manager



# WHAT SUCCESS LOOKS LIKE

## OUR FIVE PILLARS



## BY 2030 WE WILL BE...



Leading our sector in terms of financial performance and shareholder returns, earning at least our cost of capital

## WE'RE ON TRACK BY FY2022 IF...

We deliver EBITDAF growth and maintain an appropriate average for stay-in-business CAPEX investment, while operating within agreed risk parameters

## WHICH WE WILL MEASURE THROUGH...

- ✓ Progressive ordinary dividends enabled by sustainable earnings growth

## FOCUS AREAS...

Operational Excellence

Generation Development

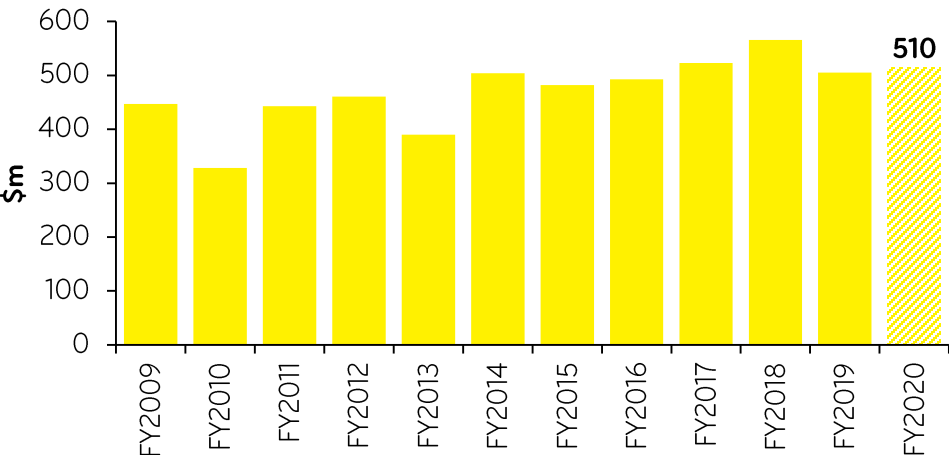
Sustainable Growth



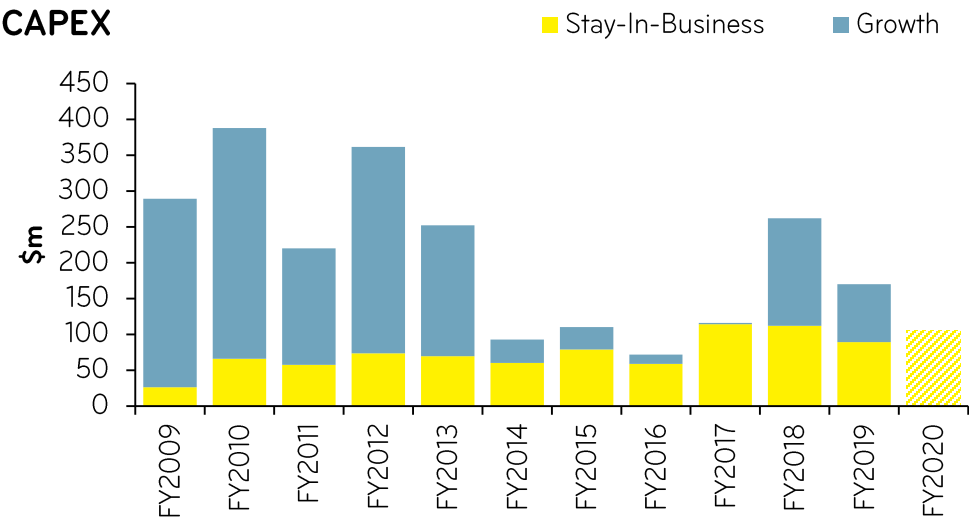


# FINANCIAL TRACK RECORD

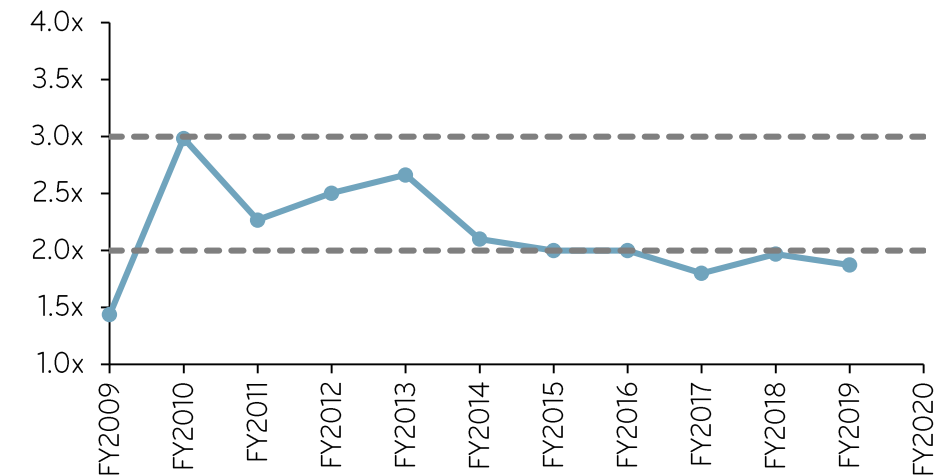
EBITDAF



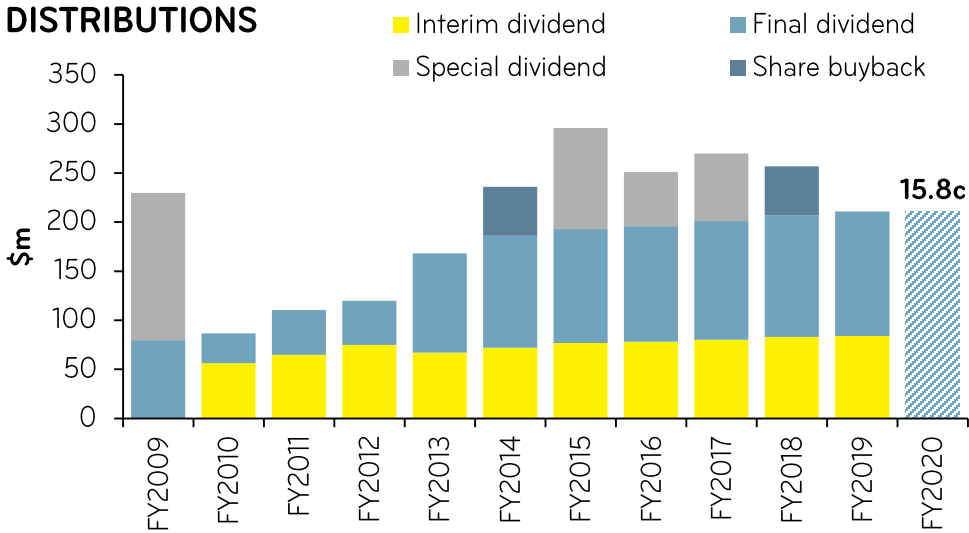
CAPEX



DEBT / EBITDAF



DISTRIBUTIONS



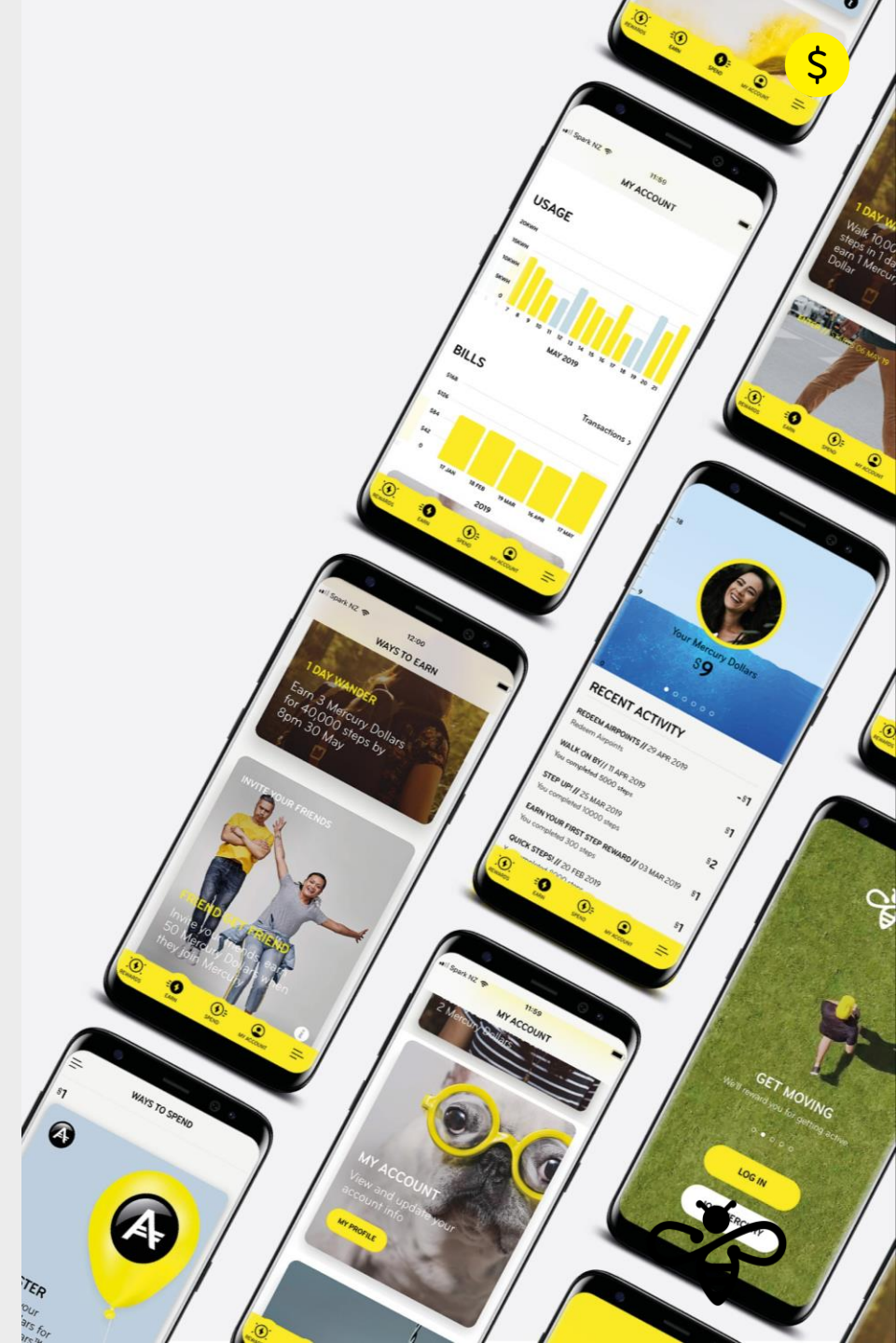


**We will deliver earnings and dividend  
growth through operational  
excellence, portfolio optimisation &  
generation development.**



# FOCUS ON OPERATIONAL EXCELLENCE

- > Opportunities exist to deliver greater productivity, efficiency and portfolio value at Mercury improving energy margin and lowering operating and capital costs. Key themes:
- > **Value optimisation:** Customer Lifetime Value (CLV) and profitability models informing business decisions, increased data analytics and focused management reporting, better network pricing matching, move to more tailored customer pricing, clearer identification of drivers of negative customer profitability and credit management
- > **Lift self-service and inbound customer interactions:** Mercury Go, My Account and easy customer journeys
- > Aligned **High Performance Teams**, management training and induction
- > **Reduce manual tasks:** process simplification, digital assistants, robotics and intelligent automation
- > **Incremental generation improvements:** geothermal fuel rebalancing opportunities at Rotokawa, review of major maintenance scheduling and strategic procurement

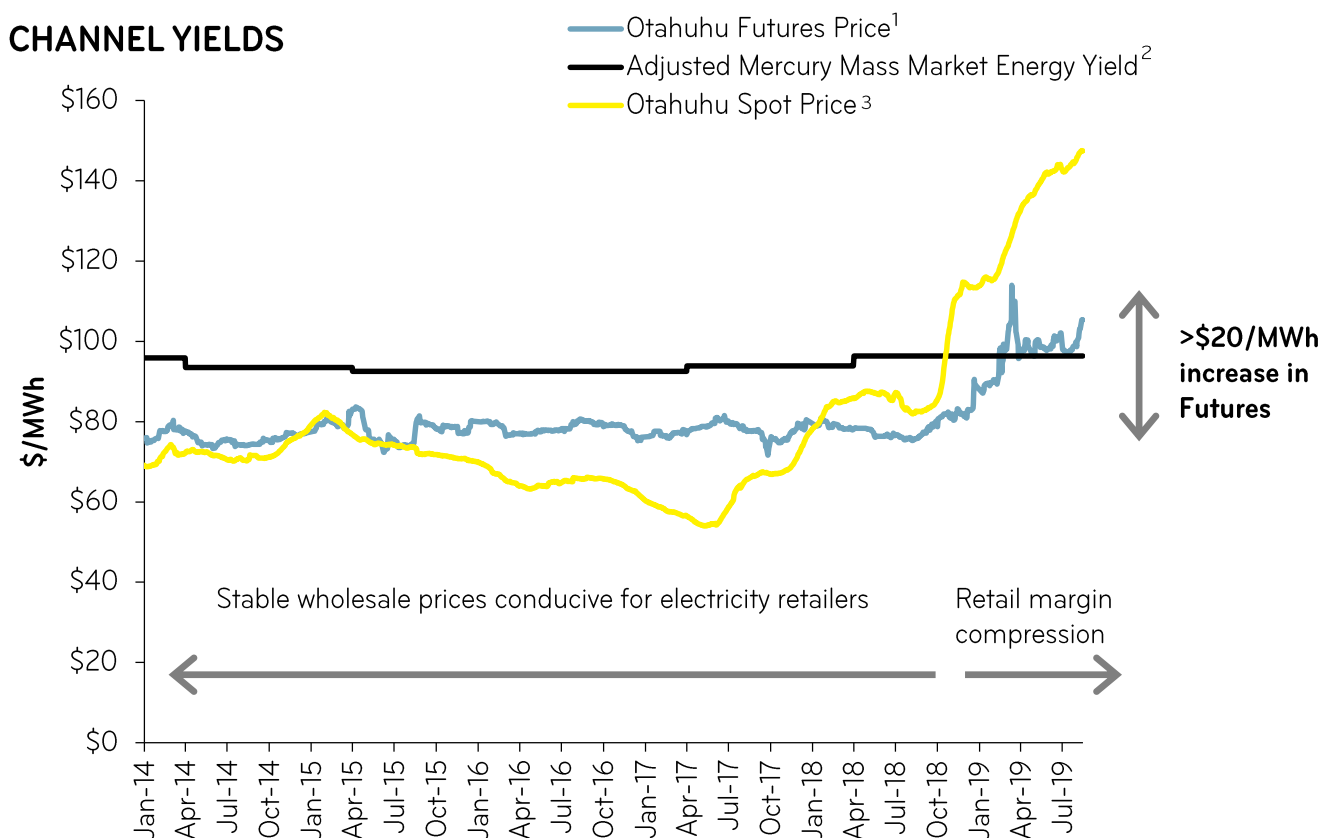


# MERCURY'S THREE-YEAR MARKET THESIS HAPPENING

## ANTICIPATED MARKET OUTCOMES

- > Supply and demand re-balanced ✓
- > Conditions for demand growth ✓
- > Increased spot price volatility ✓
- > Futures price increase ✓
- > Commercial and Industrial (C&I) upwards price pressure ✓
- > Retail churn reduction ?
- > Upward pressure on retail price ?

## CHANNEL YIELDS



<sup>1</sup> 2 year forward price starting 3 quarters ahead

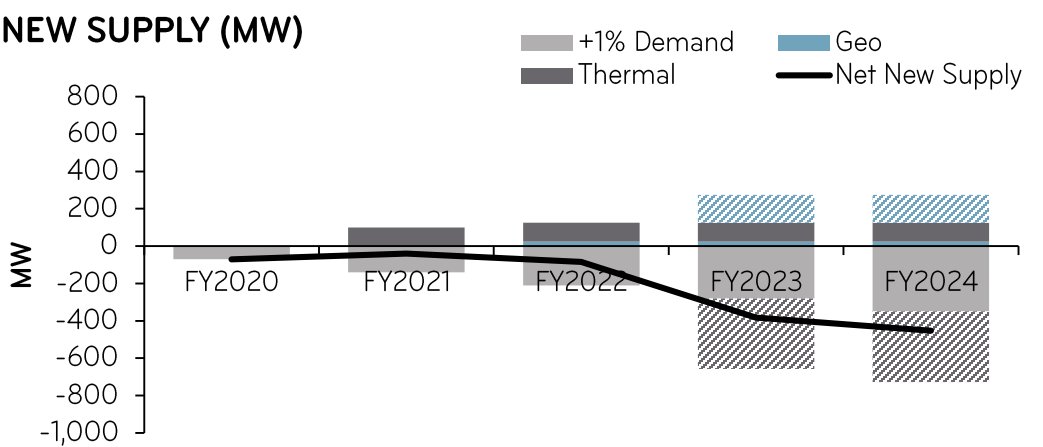
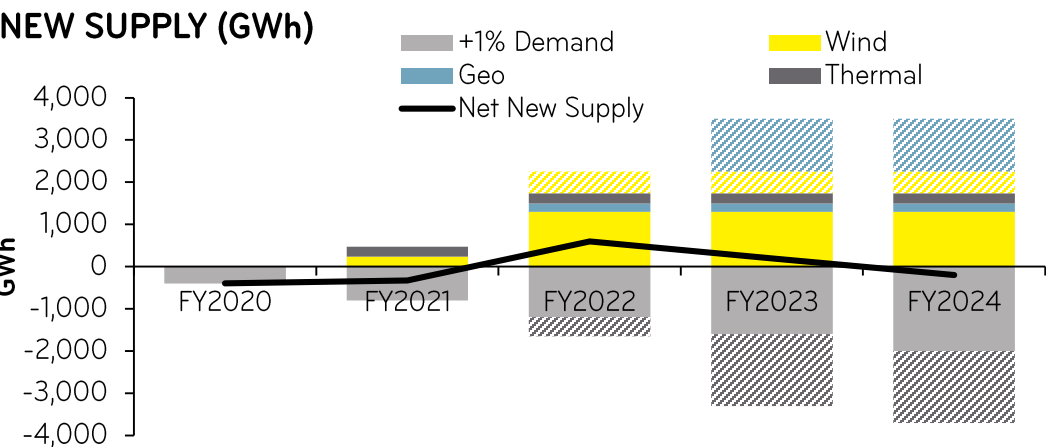
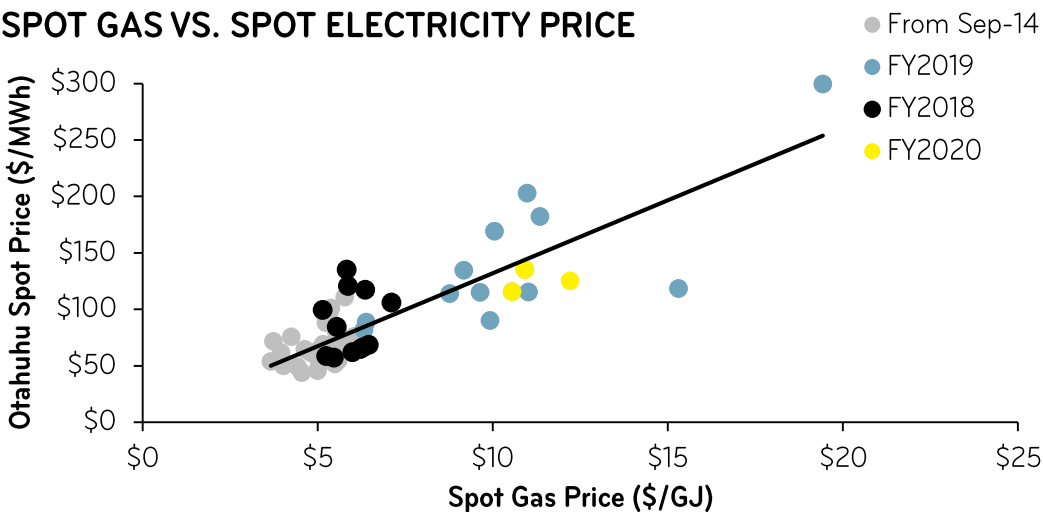
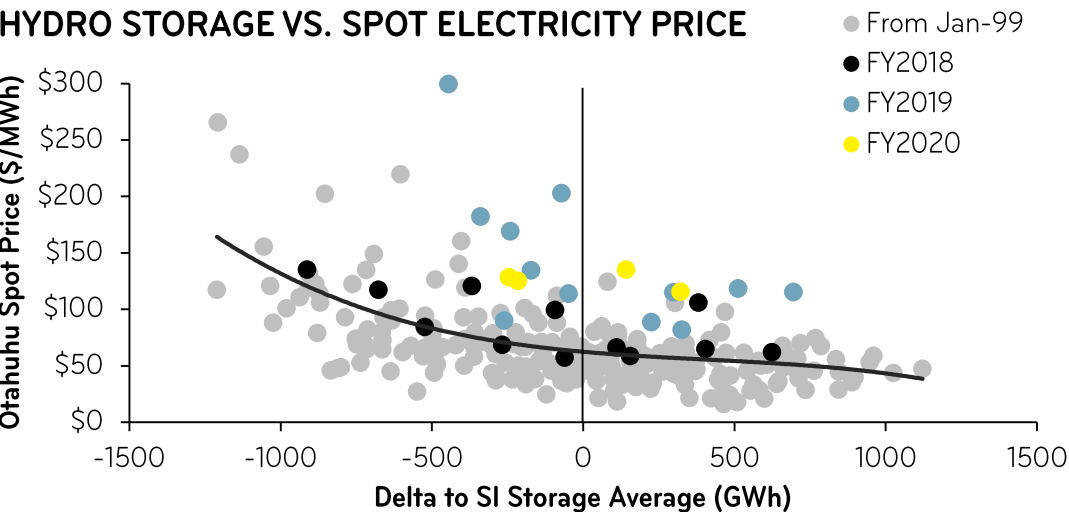
<sup>2</sup> Adjusted for indicative average losses, profile and average cost to operate

<sup>3</sup> Rolling 12 month average





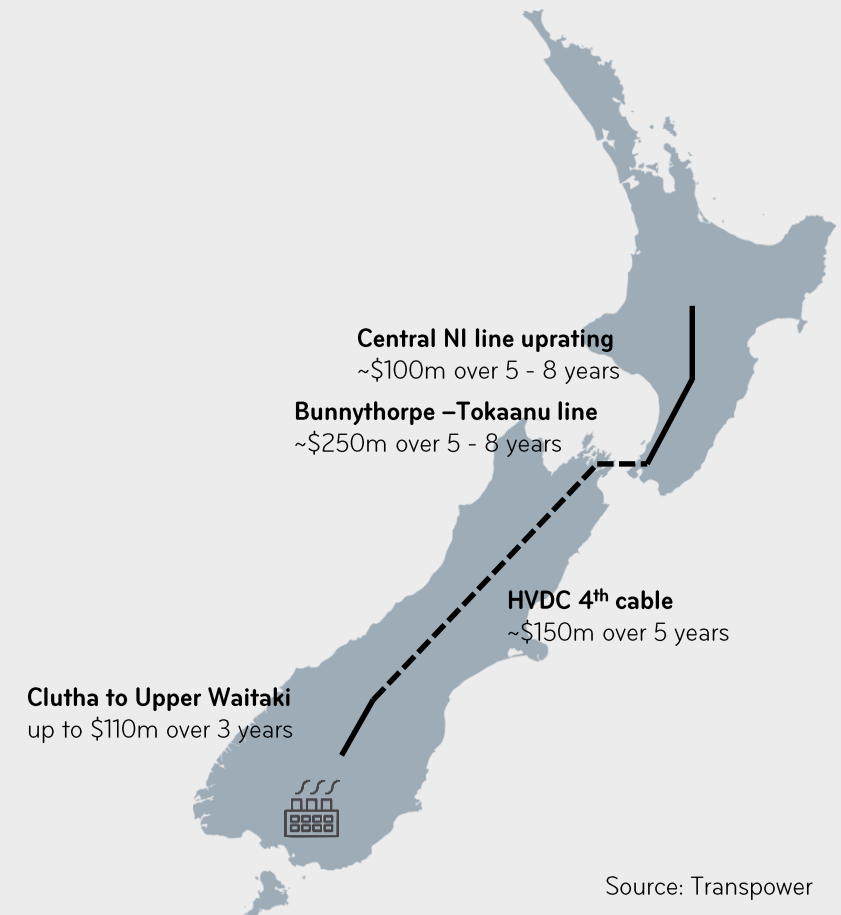
# NO CLEAR CATALYST FOR WHOLESALE PRICE REVERSION IN THE NEAR TERM



# NZAS REMAINS A RISK FOR THE SECTOR BUT MERCURY BEST PLACED

- > Rio Tinto (79% owner) has announced a strategic review of its interest in New Zealand Aluminium Smelters (NZAS)
  - > NZAS produces high-grade aluminium marketed under Rio's RenewAL™ brand – certified low CO<sub>2</sub> aluminium
  - > Review follows an increase in production capacity (resumption of Potline 4) in December 2018
- > Thermal rationalisation in the North Island likely when NZAS closes
  - > NZAS has the right to terminate financial contract with Meridian<sup>1</sup> with 12 months' notice
  - > Industry has demonstrated ability to quickly respond to changes in supply and demand
- > Mercury best placed in the event of NZAS closure, with generation:
  - > 100% low variable cost renewables
  - > 100% North Island, close to major load centres
  - > A major supplier of NI reserves which support high north HVDC transfer
  - > Free of major transmission constraints as a consequence of closure

## POTENTIAL TRANSMISSION UPGRADES

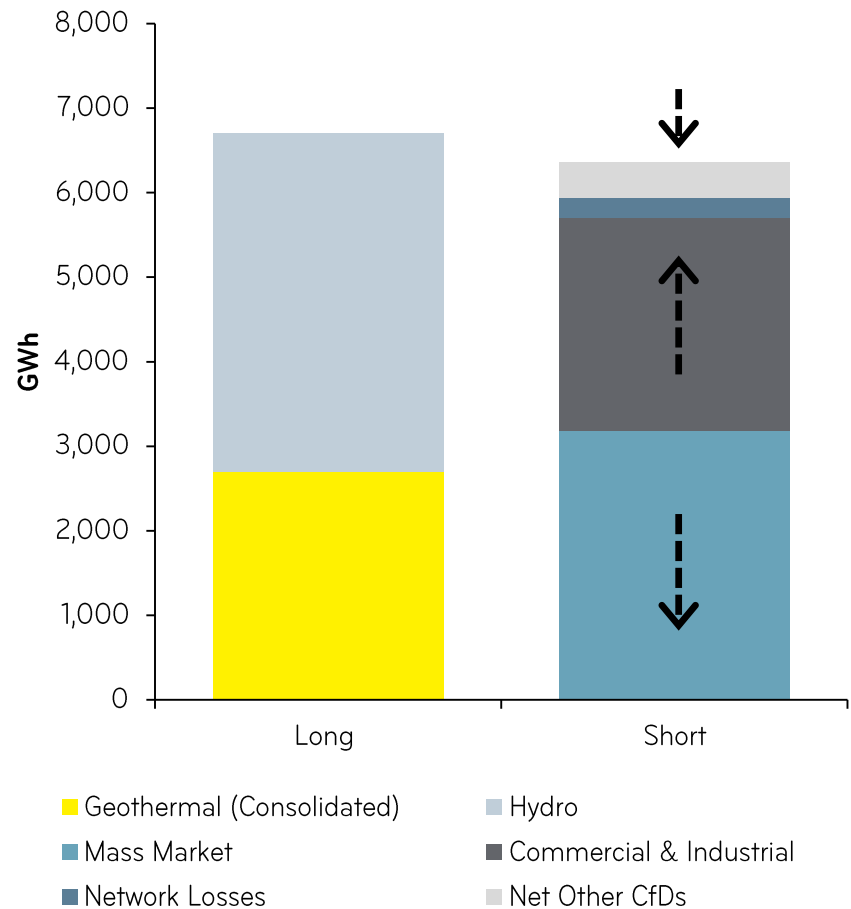


<sup>1</sup> With contract maturity of 2030



# PORTFOLIO OPTIMISATION FOR CURRENT MARKET CONDITIONS

## FY2019 NET POSITION BREAKDOWN

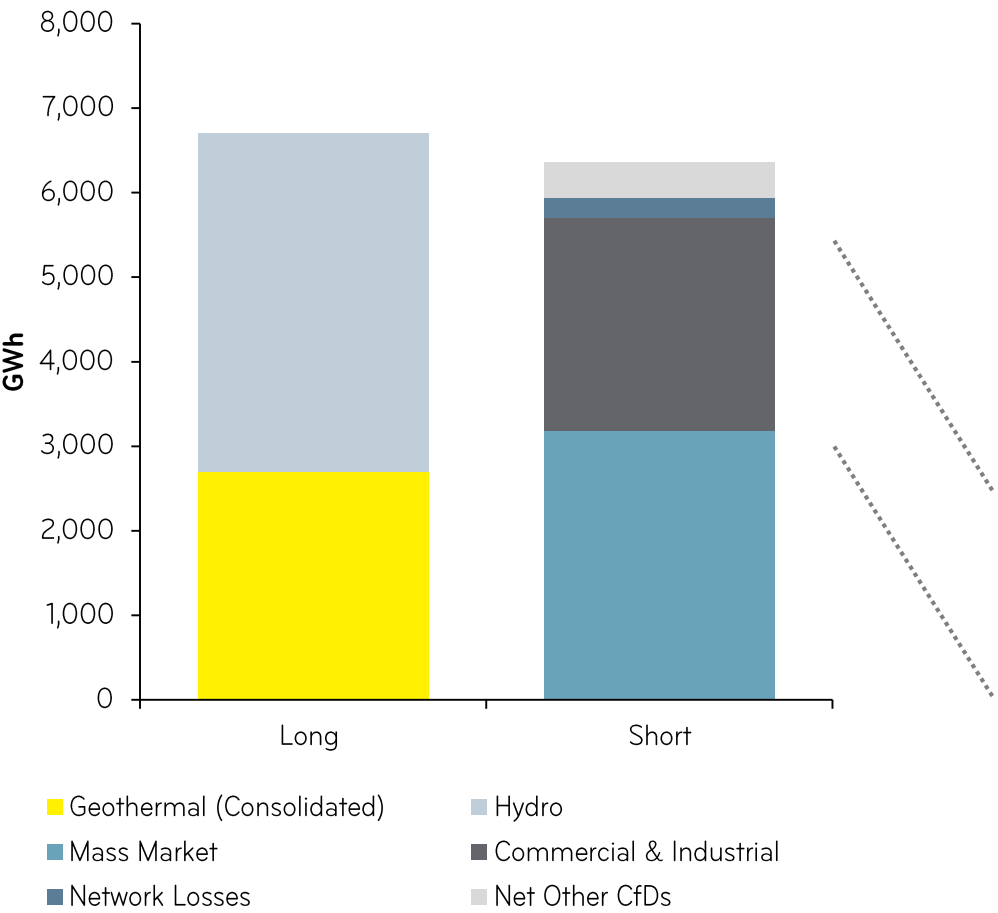


- > Mercury is reacting to the change in market conditions of higher and more volatile wholesale prices by:
  1. Increasing generation exposed to wholesale prices
  2. A preference for increasing sales to higher profit channels e.g. C&I
  3. Continuing to focus on rewarding existing customer loyalty
- > Higher spot prices - portfolio positioned at least 500GWh long under mean hydro conditions for risk and value
- > C&I prices up - reference electricity futures and can contract with higher yield and fixed term (typically 3 years)
- > Mass market customer growth reduced with focus on inbound, self service and headline pricing
- > Mass Market sales and market share is expected to fall further during FY2020 (being down 12k from 30 June 2019<sup>1</sup>, accelerated by exiting an arrangement with Farm Source)



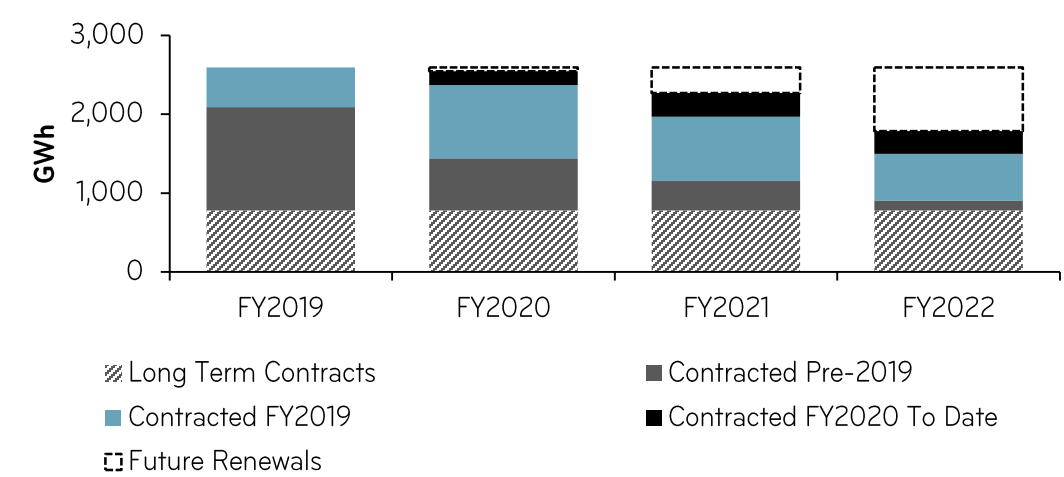
# COMMERCIAL & INDUSTRIAL PRICING RE-RATING

FY2019 NET POSITION BREAKDOWN



- > Commercial & Industrial (C&I) sales re-rating in line with ASX prices as contracts mature
- > Typical C&I contract has 3 – 5 year tenure
- > Mercury has ~800GWh of long-term contracts expiring in 2023, with PPI inflator<sup>1</sup>
- > Further C&I sales likely from Turitea generation and change in sales mix

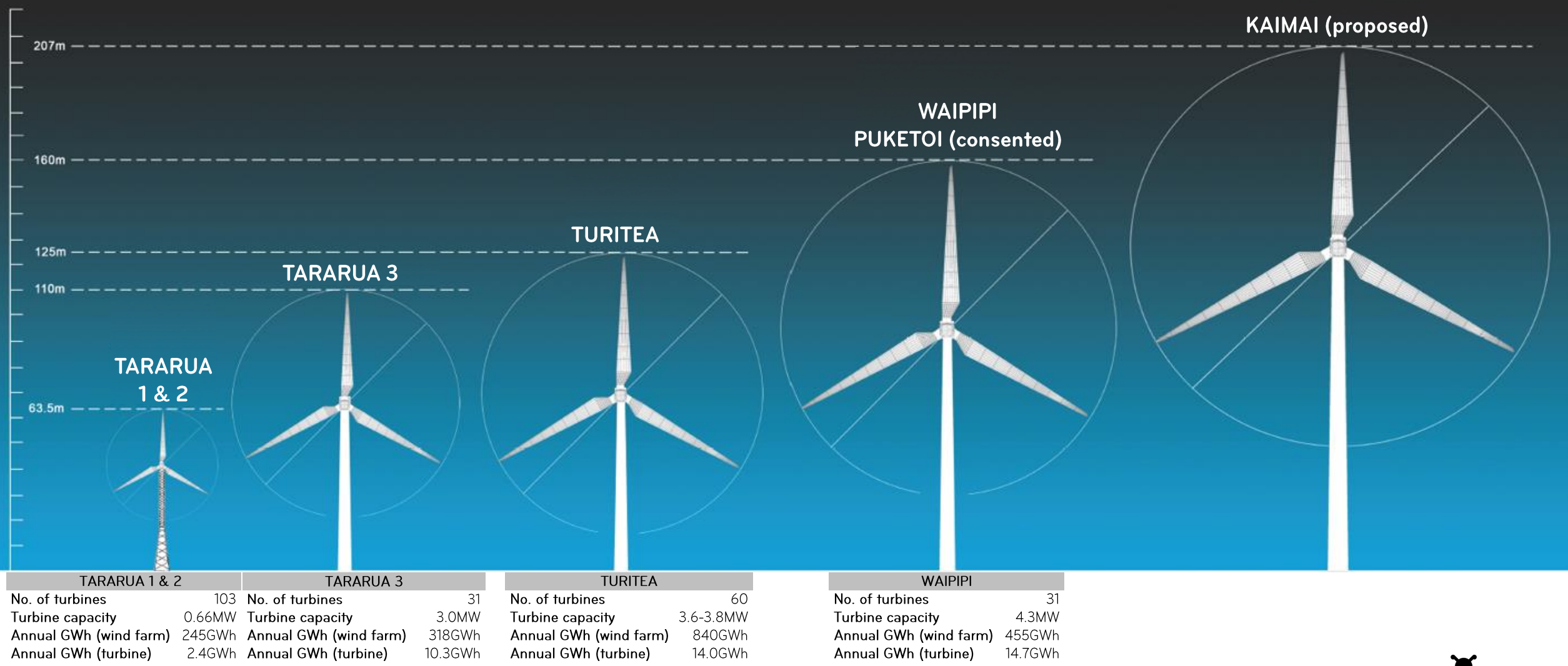
COMMERCIAL & INDUSTRIAL RECONTRACTING



<sup>1</sup> Contracts include land rights for geothermal access




# THE OPPORTUNITY IN WIND










# \$1B OPPORTUNITY IN WIND

 National Grid

 Committed 220kV Transmission

 Consented future 220kV Transmission

 Turbine Zone

PALMERSTON NORTH

**NORTH**

119MW / 470GWh  
Committed



**TURITEA  
WIND FARM**

**SOUTH**

103MW / 370GWh  
Committed

PAHIATUA



**PUKETOI  
WIND FARM**  
53 turbines consented



10KM

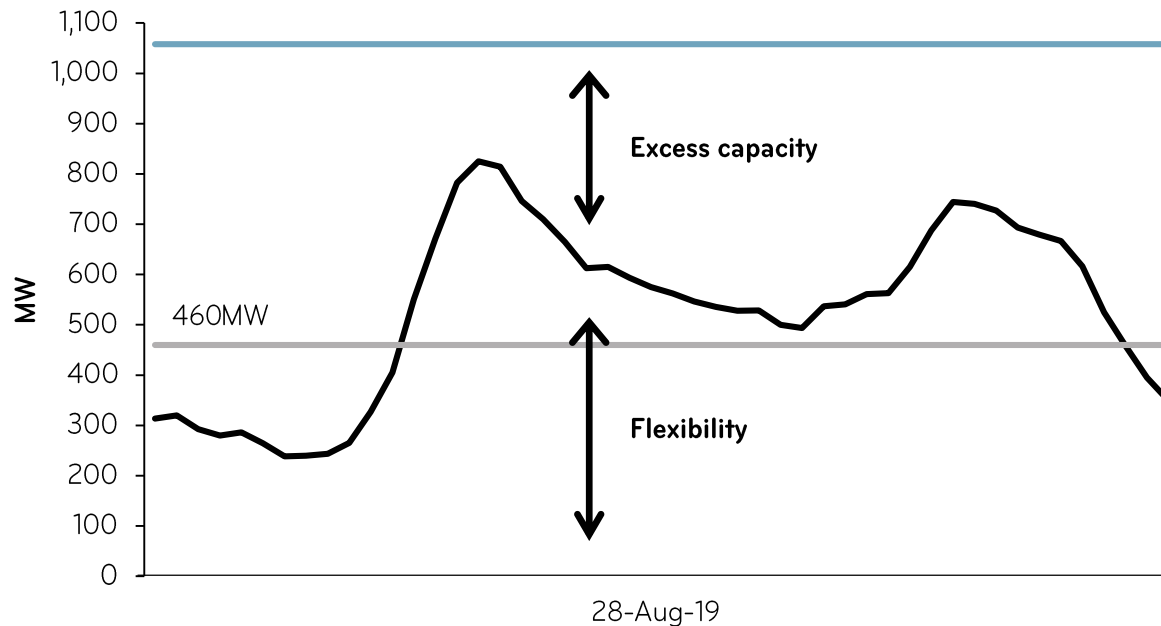




# WIND COMPLEMENTARY TO EXISTING GENERATION ASSETS

- > Additional value realised through flexible generation fleet
- > Waikato hydro capacity rich / energy poor
- > Flexibility of hydro assets can internally firm the variability of Turitea production

## WAIKATO GENERATION



# FY2022 DRIVERS OF GROWTH

- > Foundations in place to leverage market conditions for growth
- > Sustainable earnings growth expected to translate to growth in distributions to shareholders

Indicative FY2022 EBITDAF Scenarios	\$80/MWh	\$100/MWh
<b>Turitea<sup>1</sup></b> (840GWh per annum)	\$55m	\$70m
<b>C&amp;I Renewals</b> (~400GWh per annum)	Nil	~ \$8m per year of renewals
<b>Portfolio Optimisation</b> (Change in sales mix favouring spot and C&I)	Nil to modestly negative	Accretive
<b>Operational Excellence</b>	Targeting \$20m	





# CUSTOMER.

**KEVIN ANGLAND**  
GM Retail & Digital

November 2019

**JULIA JACK**  
Chief Marketing Officer

**MOHAMMED ABBAS**  
Head of Mass Market Sales

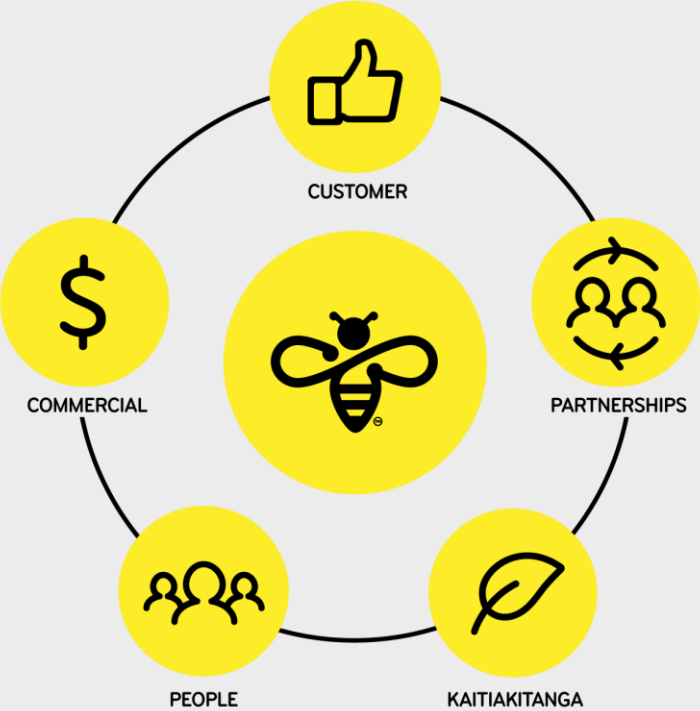
**BEN HARVEY-LOVELL**  
Head of Brand and Marketing





# WHAT SUCCESS LOOKS LIKE

## OUR FIVE PILLARS



## BY 2030 WE WILL BE...



New Zealand's leading energy brand

## WE'RE ON TRACK BY FY2022 IF...

We are inspiring, rewarding and making it easy for customers in our target segments

## WHICH WE WILL MEASURE THROUGH...

- ✓ Brand strength
- ✓ Churn
- ✓ Customer Satisfaction/Net Promoter Score

## FOCUS AREAS...

Brand

Loyalty

Experience





# INSPIRING NEW ZEALANDERS WITH OUR E.TRANSPORT STORY

## BILLBOARDS



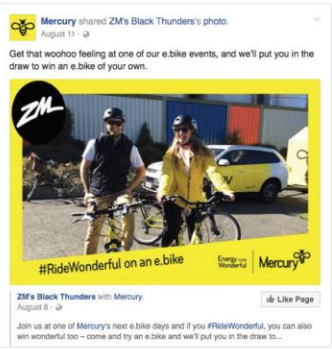
## E.BIKE DISCOUNTS



## BIG STREET BIKERS RECHARGERY - ELECTRIFIED BY MERCURY



## RIDE DAY ACTIVATIONS





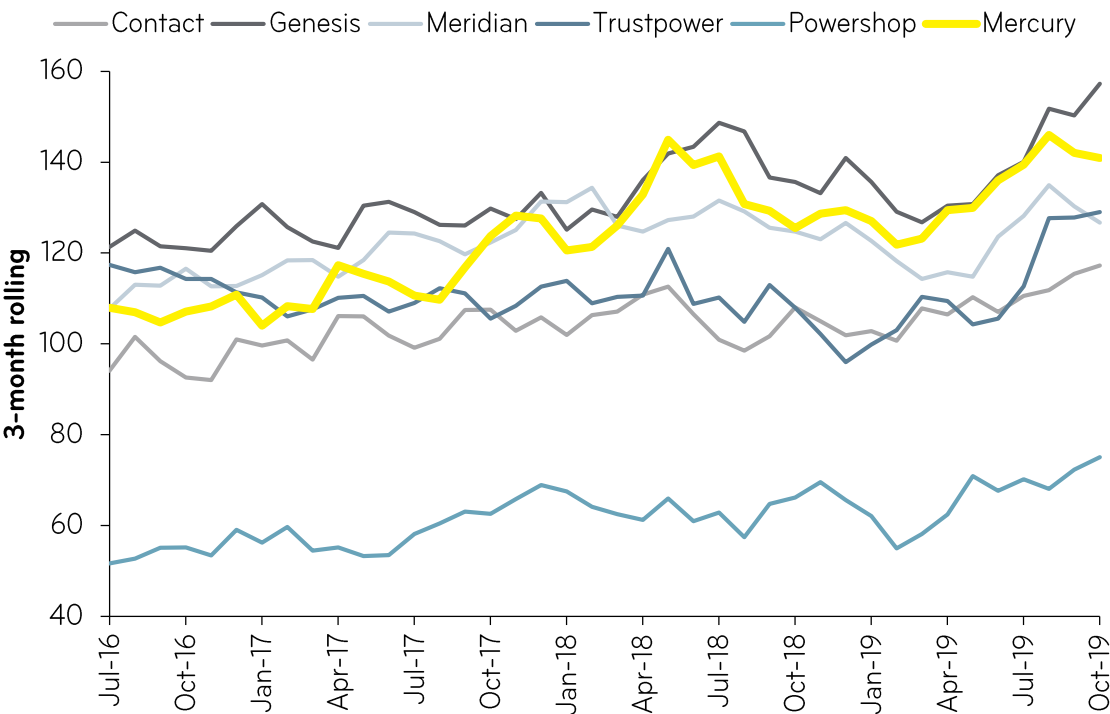




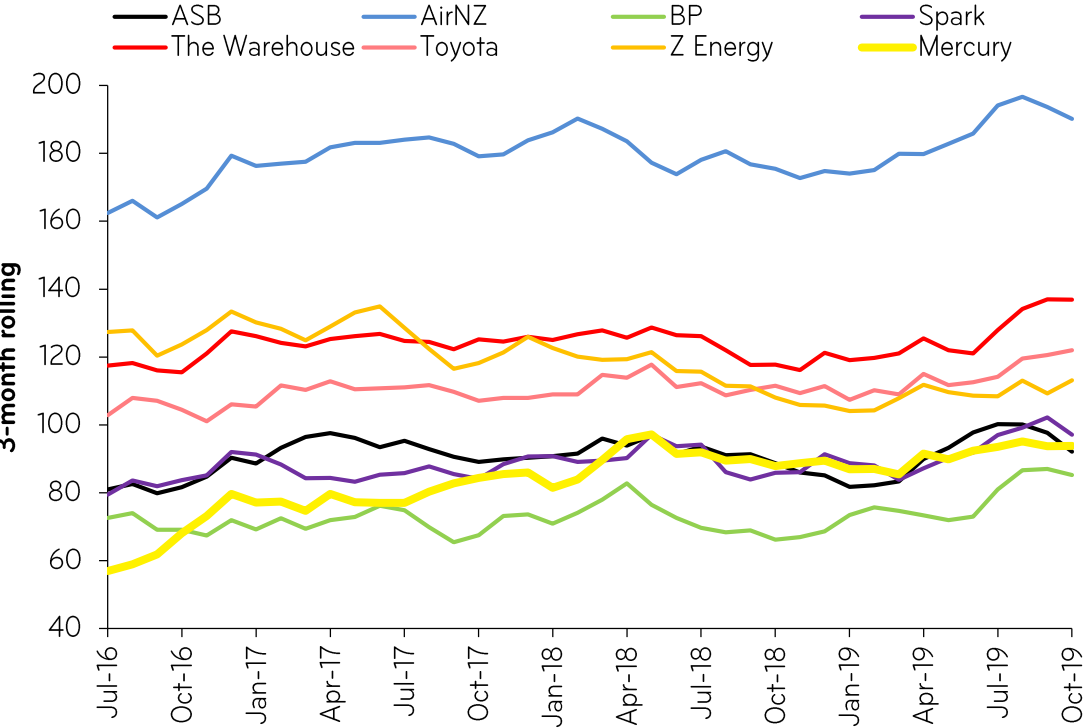
# OUR BRAND HAS STRENGTHENED AGAINST OUR COMPETITORS AND COMPARED TO THE WIDER MARKET

- > We have the second strongest brand in the electricity sector despite having the third largest customer base
- > We are reducing the gap to New Zealand's leading energy brand

BRAND STRENGTH – ENERGY CATEGORY COMPETITOR SET



BRAND STRENGTH – CROSS CATEGORY COMPARISON



Source: Quarterly Brand Tracker – The Research Agency





**We are leading in loyalty and experience because we inspire, reward and make it easy for our customers every day.**





## INSPIRE



SEE AN EVIE BILLBOARD



SEE AN EVIE TV AD



DONATE TO STARSHIP  
ON THEIR BILL



EXPERIENCE EVIE VR  
AT BIG BOYS TOYS



RIDE AN E.BIKE AT  
BIG BOYS TOYS TOO

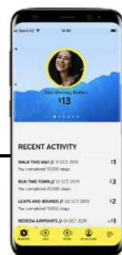


SEE ANOTHER  
EVIE TV AD

## REWARD



ENTER MERCURY GO  
STEP CHALLENGE



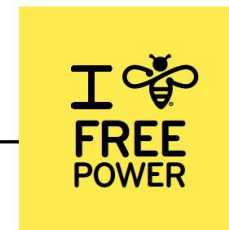
COMPLETE STEP CHALLENGE -  
EARN REWARD



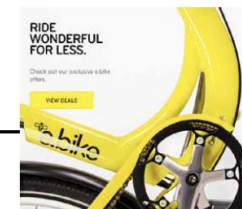
RECEIVE LITTLE BIT OF  
WONDERFUL EMAIL



ENTER NEXT MERCURY  
GO STEP CHALLENGE



GET A FREE POWER  
DAY REMINDER

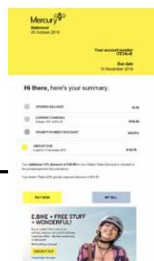


CHECK OUT  
E.BIKE DISCOUNTS



REDEEM MERCURY  
GO REWARDS

## MAKE IT EASY



RECEIVE ONLINE BILL



VIEW WEEKLY  
USAGE EMAIL



PAY BILL IN MY  
ACCOUNT



VIEW WEEKLY  
USAGE EMAIL



CHECK DAILY USAGE IN  
MERCURY GO



VIEW WEEKLY  
USAGE EMAIL



VIEW WEEKLY  
USAGE EMAIL





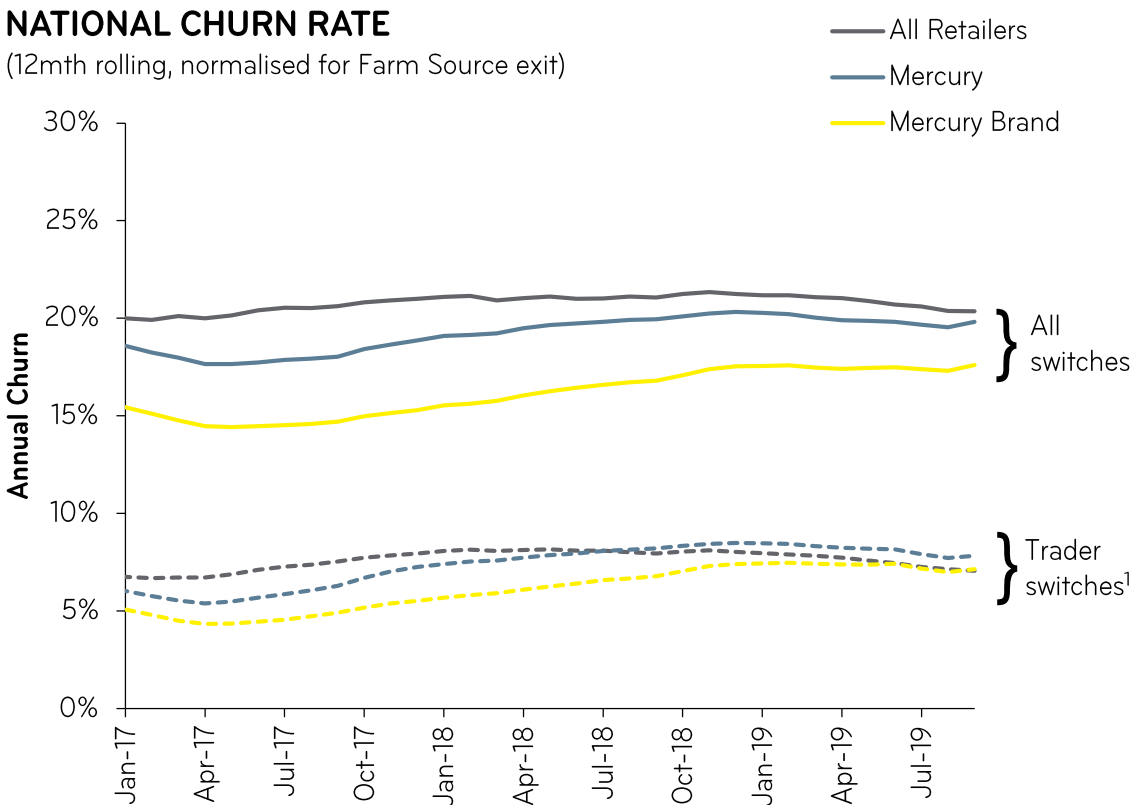


# OUR CUSTOMERS ARE MORE LOYAL AND SATISFIED

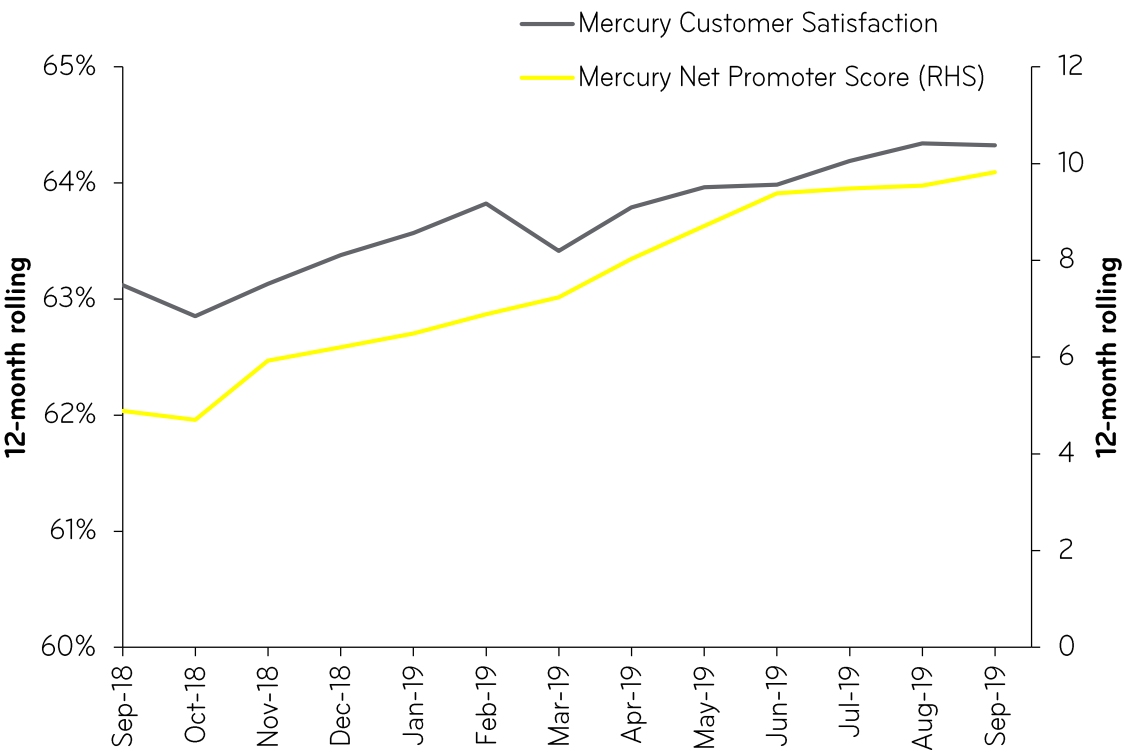
- > Mercury has enjoyed industry leading churn performance. This position has only recently come under stress because of high levels of competition and strategic decisions such as shedding Farm Source volume
- > Customer Satisfaction and NPS have reached record levels

## NATIONAL CHURN RATE

(12mth rolling, normalised for Farm Source exit)



## MERCURY BRAND CUSTOMER SATISFACTION



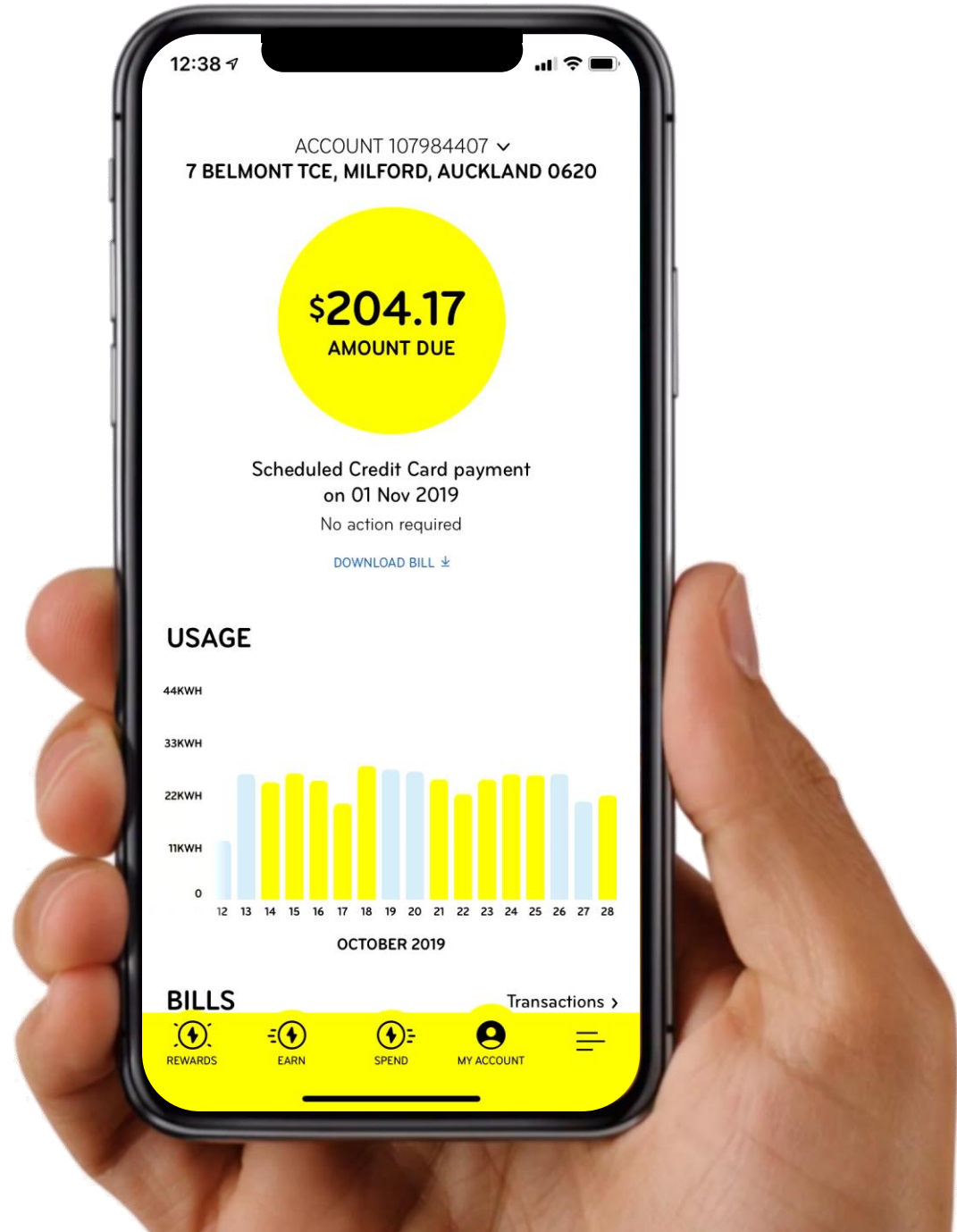
Source: Electricity Authority, EMI – Market share trends and switching breakdown  
¹A trader switch is where a customer changes retailer without changing house





# MERCURY GO

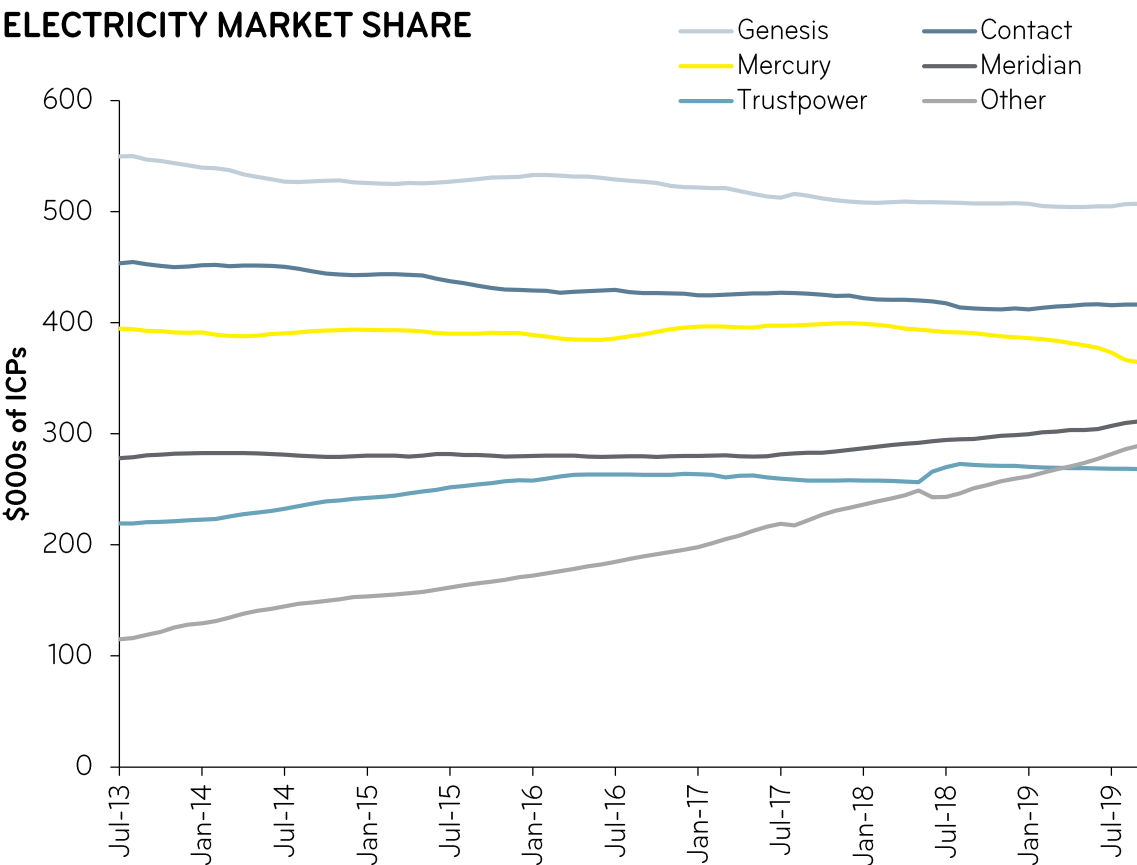
OUR NEWEST LOYALTY INITIATIVE  
INSPIRES, REWARDS AND  
MAKES IT EASY  
FOR OUR CUSTOMERS ALL IN ONE APP.





# FOCUS ON LOYALTY DRIVES VALUE FOR EXISTING CUSTOMERS, NOT ICP VOLUME

ELECTRICITY MARKET SHARE



- > Deliberate portfolio management to ensure the optimal value for Mercury at any given time with a current bias towards Commercial & Industrial
- > We continue to optimise value for Mercury and our existing customers:
  - > Our focus on loyalty resulted in removing acquisition offers which disadvantage loyal customers

Source: Electricity Authority, EMI – Market share trends





# OUR STRATEGY DELIVERS LONG-TERM VALUE FROM DATA-DRIVEN DECISIONS

**Strengthened Our Understanding of Value Drivers**

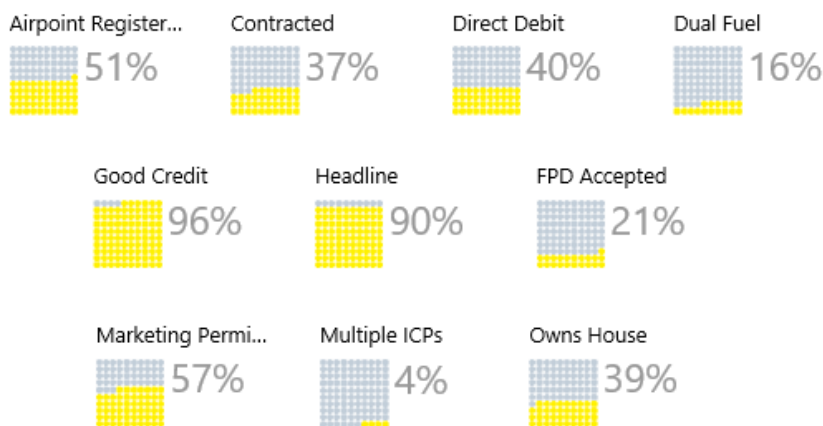
**Identified Value Optimisation Levers**

**Ongoing Delivery of Value Optimisation Initiatives**

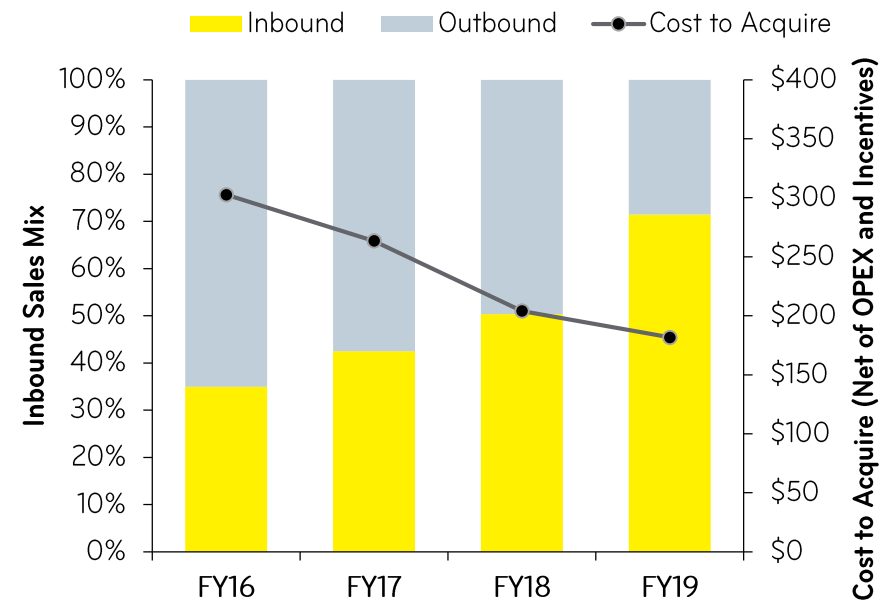
- > Established Customer Lifetime Value Model resulting in better view of key value drivers
- > Every customer has a unique set of value drivers, differentiation is key
- > Mercury is focused on optimising value within the existing customer base (nurturing)

## Example Customer Segment Profile

### Key Parameters



## Value Optimisation by Making Inbound Preferred

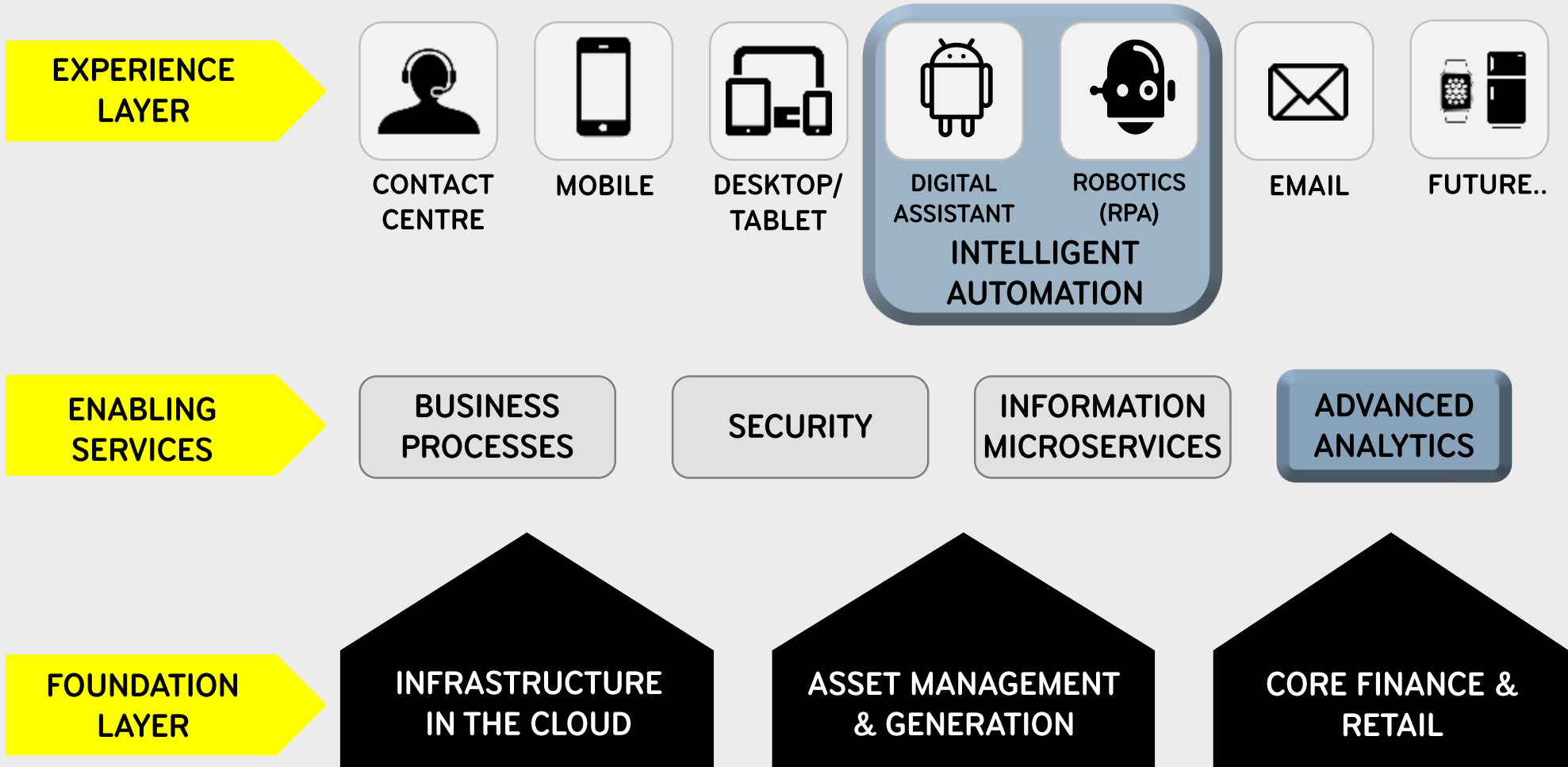




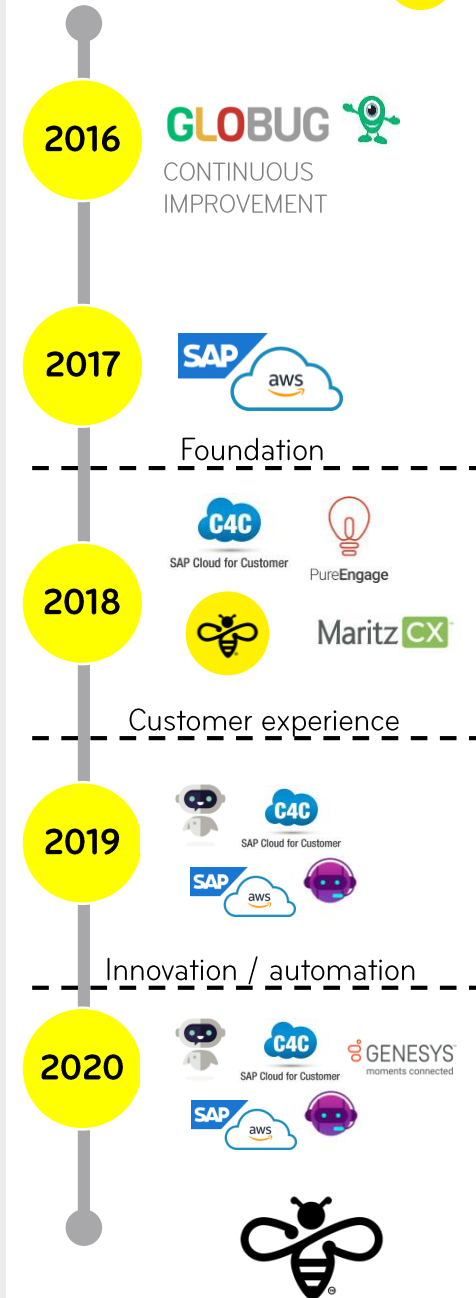
**Our three year platform journey is delivering the capability we need to successfully execute this strategy.**



# DIGITAL PLATFORM DELIVERS CAPABILITY TO EXECUTE STRATEGY



## OUR INVESTMENTS



# WE HAVE BUILT CORE CAPABILITIES TO ENSURE SUSTAINABLE DELIVERY

Performance infrastructure  
*The Brain*



- > Performance management tool to consolidate initiatives and ensure transparency
- > Test-and learn **experimentation** framework for campaigns
- > **Weekly** cadence with progress **demonstrations**

Mindset & behaviour  
*The Heart*



- > Introduction to **organisational health**
- > **Training** on **change management** to business leaders

Execution ability  
*The Muscle*



- > Technical in-depth training on Data Analytics
- > Set-up Analytics platform and support delivery team
- > Training on **problem solving** to initiative owners



# PEOPLE.

**MARLENE STRAWSON**  
GM People & Performance

November 2019

**KATH HARTLEY**  
Head of Organisational Development

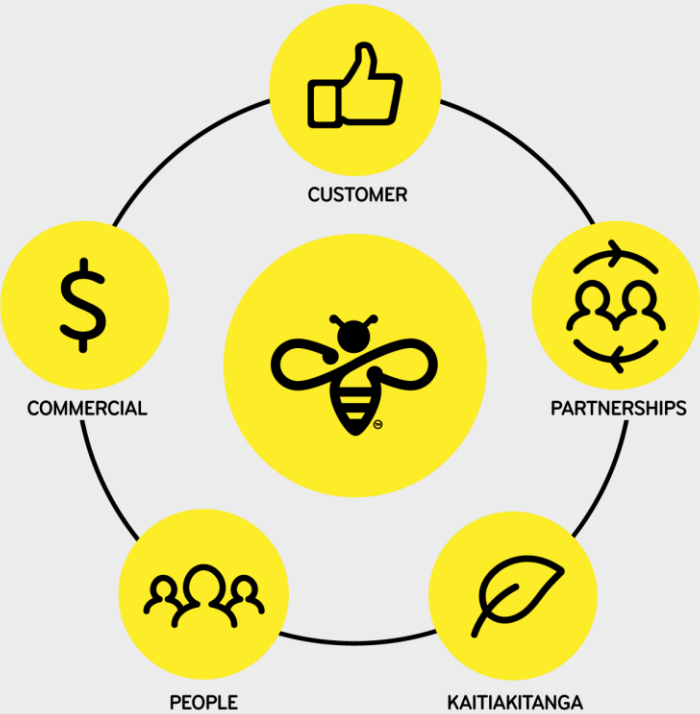
**SARAH HOLT**  
Workforce Strategy Manager





# WHAT SUCCESS LOOKS LIKE

## OUR FIVE PILLARS



## BY 2030 WE WILL BE...



A Zero Harm organisation that has enabled our people to adapt to the changing nature of work to deliver the highest levels of performance and productivity

## WE'RE ON TRACK BY FY2022 IF...

We have enabled our people to understand and respond to the changing nature of work in order to deliver the highest levels of productivity and performance and are viewed as an attractive place to work

We are a Zero Harm organisation that continues to focus on the physical and mental wellbeing of all the people who are important to the business

## WHICH WE WILL MEASURE THROUGH...

- ✓ Employee engagement
- ✓ No serious injuries

## FOCUS AREAS...

High Performance Teams      Safety & Wellbeing      Capability & Development





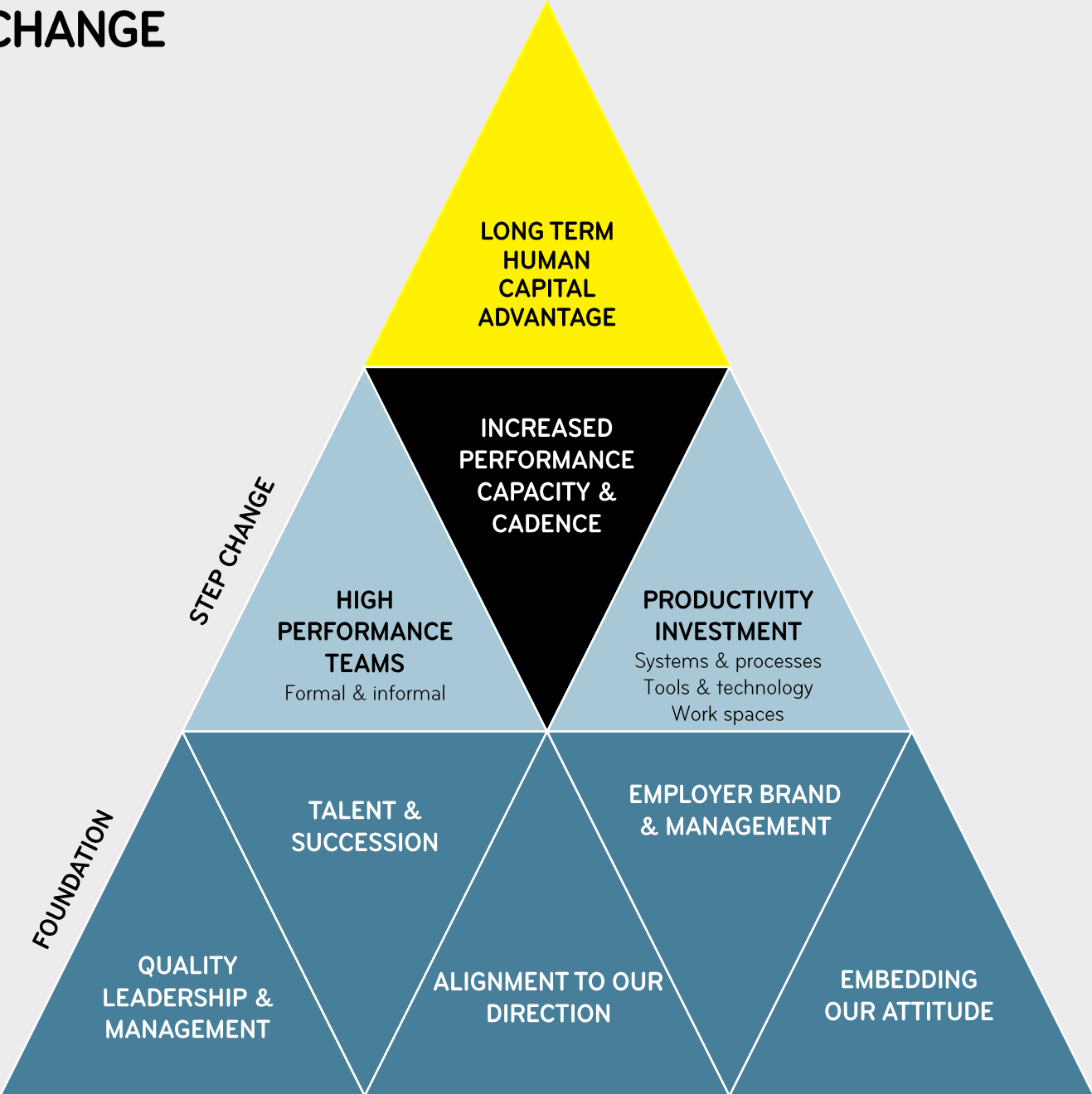


**We are enabling our people to do their best work as they are our true long-term competitive advantage.**





# CREATING A STEP CHANGE





# HIGH PERFORMANCE TEAMS SUSTAIN EXCEPTIONAL PERFORMANCE

TEAM COMPOSITION			TEAM DYNAMICS			TEAM ENVIRONMENT
ALIGNED PURPOSE	TEAM FIT	FUTURE PROOF THE TEAM	LEADING & MANAGING	TEAM MEMBERSHIP	TEAM WELLBEING	FLEXIBLE WORK ENVIRONMENT
<p>We confirm the purpose of the team and the shared goals and outcomes that we need to achieve.</p> <p>We confirm and commit to our key priorities.</p>	<p>We confirm the skills, experience and attributes we need in the team to get the best outcomes.</p> <p>We seek diverse views and input from the team, customers and stakeholders.</p>	<p>We share learning and expertise to stay ahead of the game.</p> <p>We plan and prepare for team transitions to maintain momentum.</p>	<p>We manage team dynamics no matter what our role or team setting.</p> <p>We confront and resolve issues early.</p>	<p>We are all accountable for results.</p> <p>We create and maintain an inclusive, productive team culture.</p>	<p>We all contribute to a safe and healthy team environment.</p> <p>We support each other's wellbeing.</p>	<p>We make use of different work spaces, tools and technology, processes and systems to improve individual and team productivity and performance.</p>



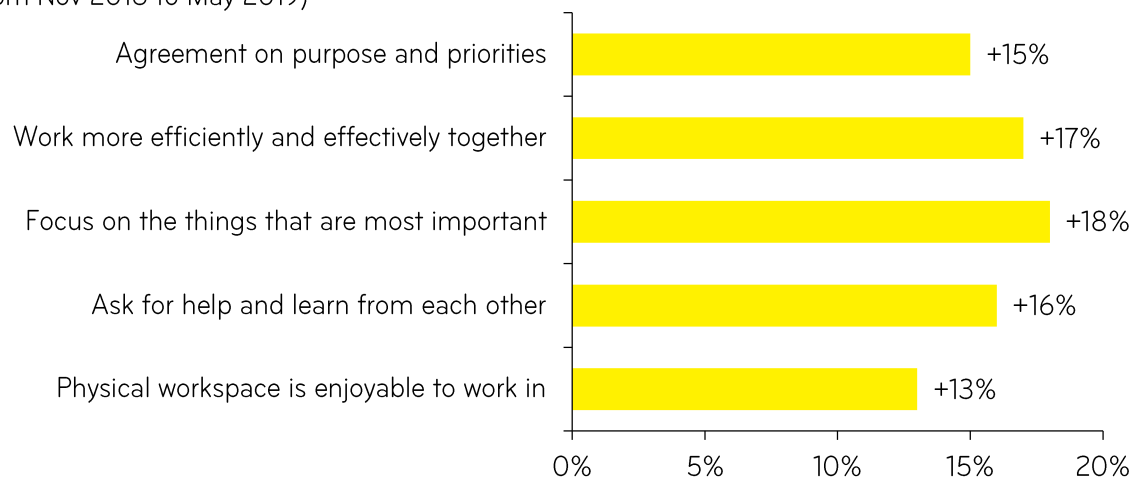


# HPT IS HELPING OUR PEOPLE TO SUCCEED

- > Internal high performance team (HPT) coaches trained and working with cross-functional teams
- > Significant improvement in team behaviours:

## IMPROVED HPT BEHAVIOURS

(from Nov 2018 to May 2019)



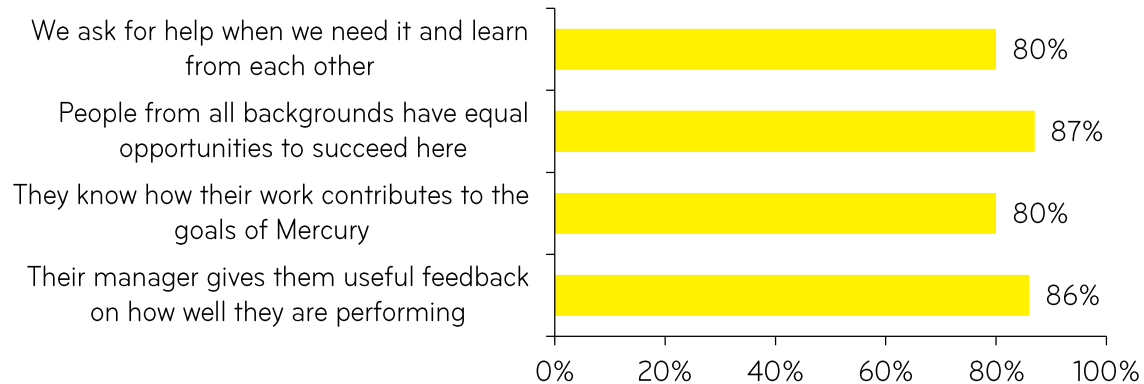
Source: Mercury Employee Engagement Survey May 2019



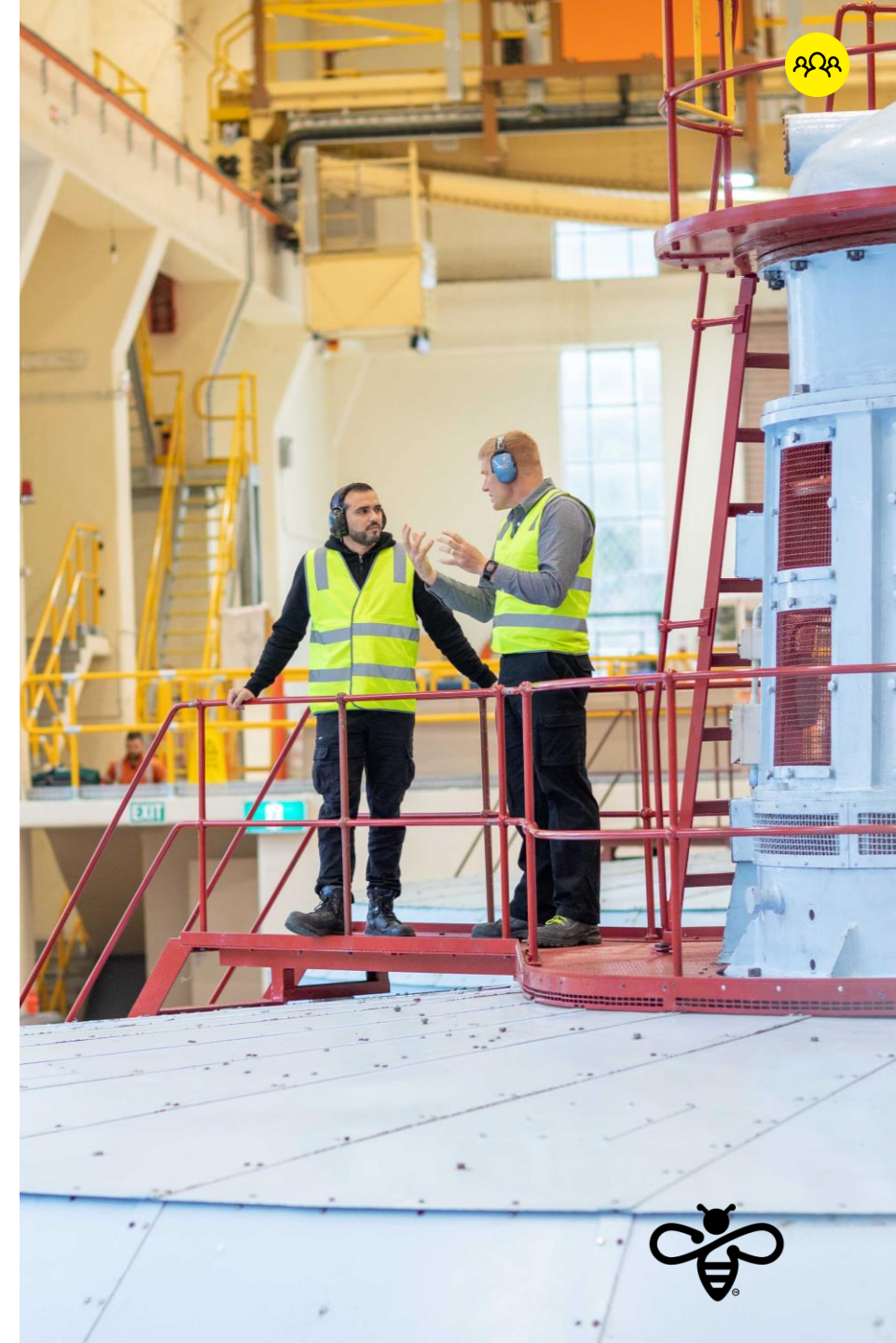
# HELPING OUR PEOPLE GROW & DEVELOP

- > Reporting to lift people leaders' performance
- > Development programmes that strengthen diverse leadership
- > Flexible ways for our people to learn, upskill and reskill
  - > 2,664 employees and contractors completed on-line learning
  - > 405 employees completed at least one of 57 face-to-face training events

## OUR PEOPLE SAY...



Source: Mercury Employee Engagement Survey May 2019





# HELPING OUR PEOPLE STAY SAFE & WELL

- > Process safety in specific areas
- > Targeted training and resources:

## WELLBEING

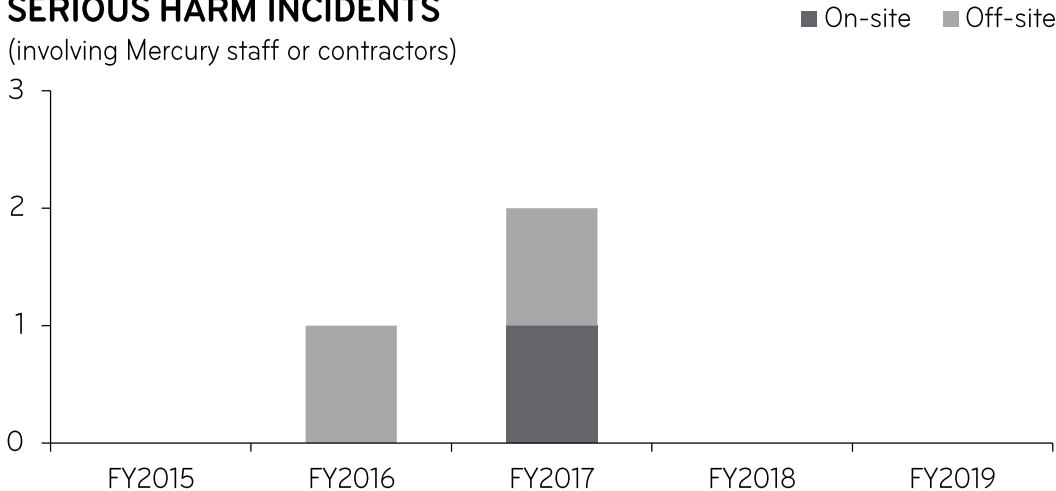
- > Life, Income Protection & Health Insurances
- > My Days – five additional paid leave days for all employees
- > Wellbeing Warrants of Fitness & Employee Assistance Programme services available for all employees
- > 75% increase in flexible working since 2017

## SAFETY

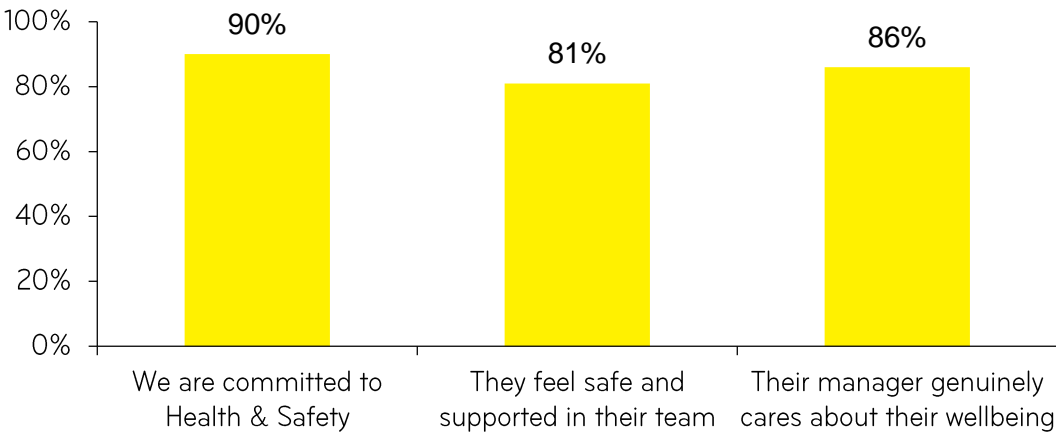
- > Synergi Life and Staylive industry reporting
- > 1,101 Health & Safety training events
- > 186 Health & Safety audits
- > 384 safety observations
- > GPS in Mercury cars

## SERIOUS HARM INCIDENTS

(involving Mercury staff or contractors)



## OUR PEOPLE SAY...



Source: Mercury Employee Engagement Survey May 2019





# TEAM ENVIRONMENT DRIVES COLLABORATION

- > Freedom to do our best work together
  - > Consolidation of 3 Auckland offices to 33 Broadway, Newmarket
  - > **Duration:** 32 months, 4 years from start to finish
  - > **Aspirations:** Collaboration, Flexibility, Openness and Wellbeing
  - > Also refurbished Maraetai and Rotorua offices in FY2019

## OUR PEOPLE SAY...

- > 94% satisfied with the move against a target of 85%
- > 98% said it met or exceeded expectations
- > 99% of any technology issues were resolved within Service Level Agreements

Source: Employee Broadway Pulse Survey March 2019







# ACHIEVING LONG TERM HUMAN CAPITAL ADVANTAGE

- > Retaining and attracting key capability
- > Sustaining exceptional execution through HPT
- > Helping our people to understand and respond to the changing nature of work

## EMPLOYER BRAND RECOGNITION:

- > Employee turnover stable at 14% in FY2018 and FY2019
- > Winner of Best Enterprise Workplace IBM Awards in FY2018
- > 88% of our job advertisements perform above market with regard to searches and views<sup>1</sup>
- > Attractiveness score increased by 6% to 32%<sup>2</sup> moving up to 3<sup>rd</sup> place in our industry sector
- > Reduced time to hire from 52 days<sup>3</sup> in FY2018 to 41 days<sup>3</sup> in FY2019

<sup>1</sup> From SEEK May 2019

<sup>2</sup> From 2019 Randstad Employer Brand Research Report. Attractiveness score is an average measurement taken from ranking 10 key drivers of attractiveness

<sup>3</sup> Days from approval of vacancy to role acceptance, 12 month average



# KAITIAKITANGA.

**PHIL GIBSON**

GM Hydro / Wholesale

November 2019

**NICK CLARKE**

GM Geothermal &  
Safety

**GRAEME HILL**

Infrastructure Asset  
Manager

**WU KHOO**

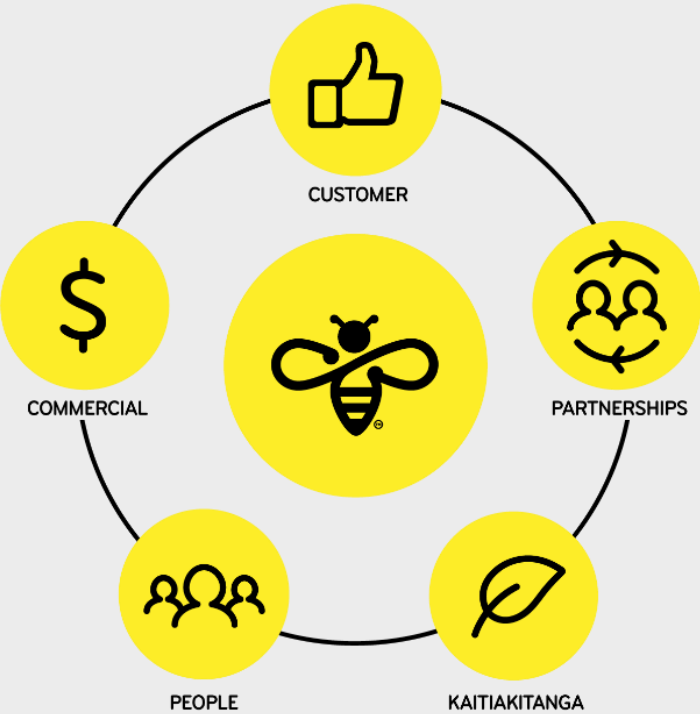
Geothermal Technical  
Resources Manager






# WHAT SUCCESS LOOKS LIKE

## OUR FIVE PILLARS



## BY 2030 WE WILL BE...

-  Recognised as a leader in the ultra-long-term management of both physical and natural resources

## WE'RE ON TRACK BY FY2022 IF...

We understand and are managing the long-term sustainability of the natural resources and assets that we rely on

## WHICH WE WILL MEASURE THROUGH...

- ✓ Integrated Management Plans are in place facilitating our long-term approach

## FOCUS AREAS...

Natural Resources      Climate Change      Assets





**We manage for the long-term  
sustainability of the natural  
resources and assets that we rely on.**







# COMPLEMENTARY PORTFOLIO OF ASSETS – THE AWESOME FOURSOME

10x HYDRO ASSETS: 1,109MW<sup>1</sup> – ~4,020GWh p.a



**Taupo Gates**  
(1941)



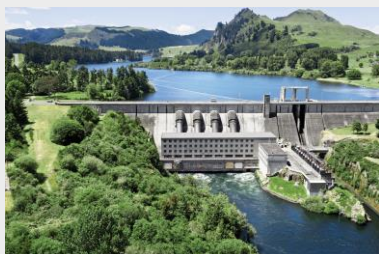
**Aratiatia**  
90MW  
(1964)



**Ohakuri**  
112MW  
(1961)



**Atiamuri**  
84MW  
(1958)



**Whakamaru**  
118MW  
(1956)



**Maraetai I & II**  
360MW  
(1950 & 1970)



**Waipapa**  
51MW  
(1961)



**Arapuni**  
198MW  
(1929)



**Karapiro**  
96MW  
(1946)

4X GEOTHERMAL ASSETS: 311MW<sup>1</sup> – ~2,600GWh p.a.



**Kawerau**  
103MW  
(2008)



**Rotokawa**  
38MW  
(1997)



**Nga Awa Purua\***  
135MW  
(2010)



**Ngatamariki**  
82MW  
(2013)

2X WIND ASSETS: 222MW – ~840GWh p.a.



**Turitea North**  
119MW  
(2020)



**Turitea South**  
103MW  
(2021)

SOLAR & BATTERY



**Hugo Johnson Drive - Solar**  
0.08MW  
(2017)



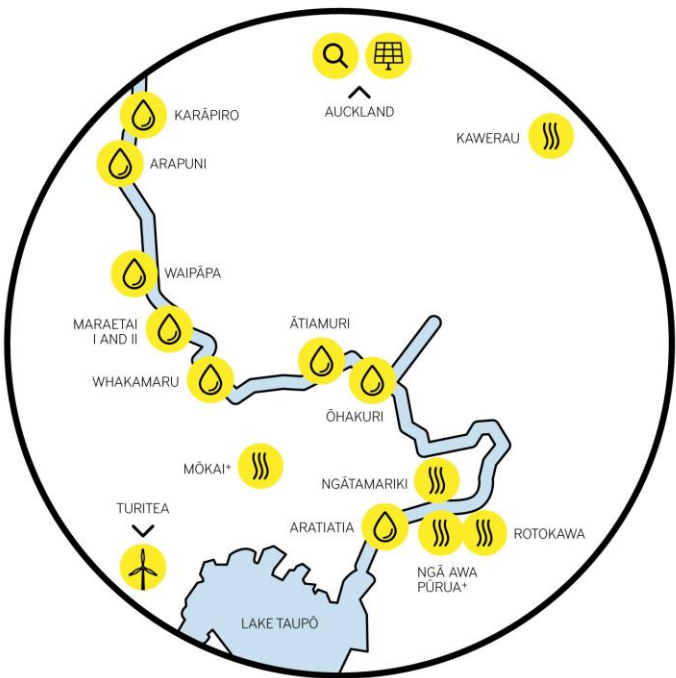
**Hugo Johnson Drive - Battery**  
1MW / 2MWh  
(2018)







# A COMPLEMENTARY PORTFOLIO OF ASSETS



 HYDRO STATIONS
  GEOTHERMAL STATIONS
  SOLAR
  WIND FARM
  R&D CENTRE

+ Not 100% owned by Mercury.

(under construction)

	Hydro	Geothermal	Wind
Location	Central North Island	Central North Island	Central North Island
Operating role	Peaking, firming, frequency, reserves	Baseload (24/7)	Intermittent
Capacity factor	On average 50-60% but ranges from 30-65%	94-97%	~43%
Strengths	Flexible, fast start, large capacity, comparatively slower machines, more gradual decline of asset condition	Weather independent, high availability	Complementary to hydro, comparably high capacity factor
Variables	Hydrology dependent but inflows positively correlated with winter demand, ~580GWh of storage	Dynamic fuel, single shaft risk, faster machines with potential for more rapid decline of asset condition	Wind dependent
Maintenance cycles	Continuous but targeting high availability in winter	Minimum two-yearly due to baseload, single shafts	Long-term maintenance agreement with availability guarantees



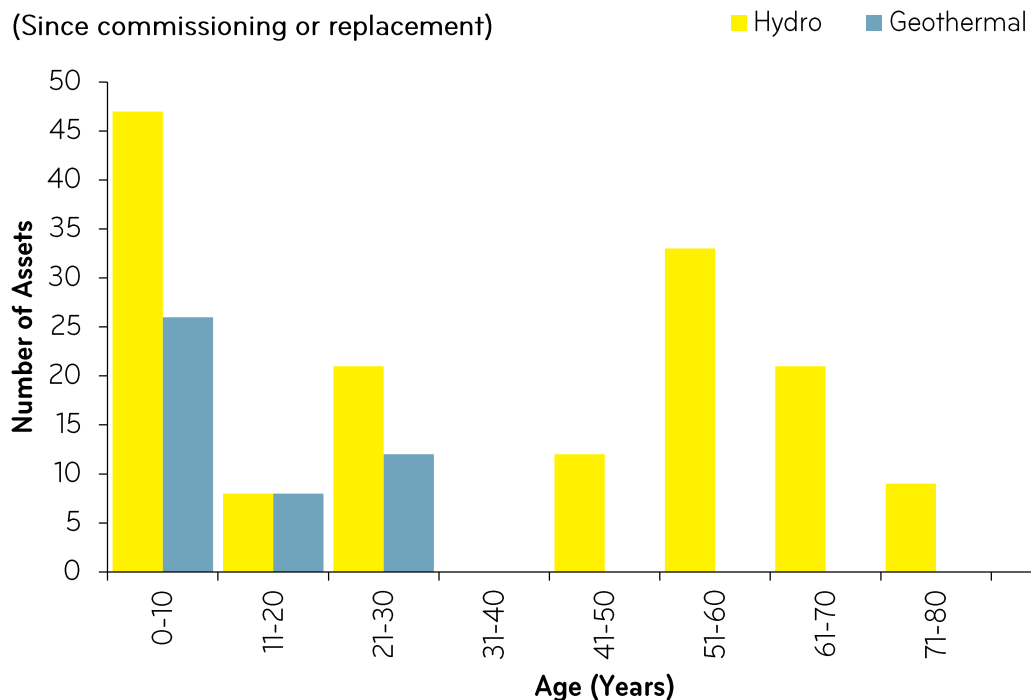


# PORTFOLIO OF GENERATION ASSETS

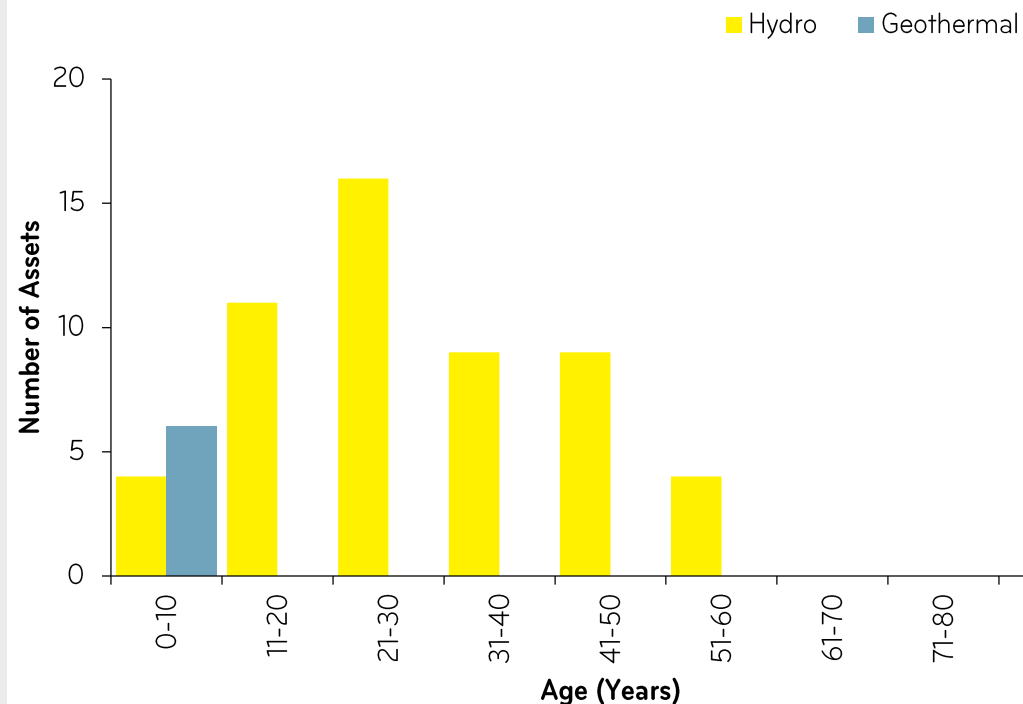
> Our generating assets are diverse in terms of age, technologies, lifecycle, operation and maintenance requirements. Different asset risks require adaptive asset management

## ASSET AGE PROFILE<sup>1</sup>

(Since commissioning or replacement)

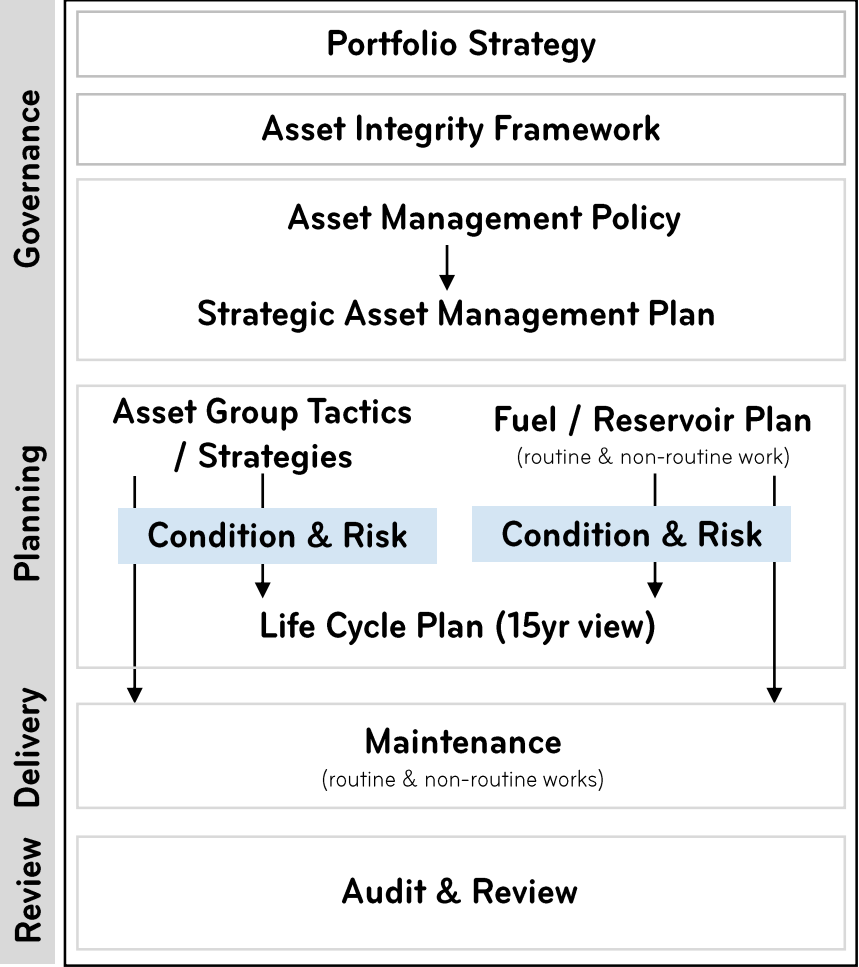


## MAJOR REFURBISHMENT ACTIVITY<sup>1</sup>

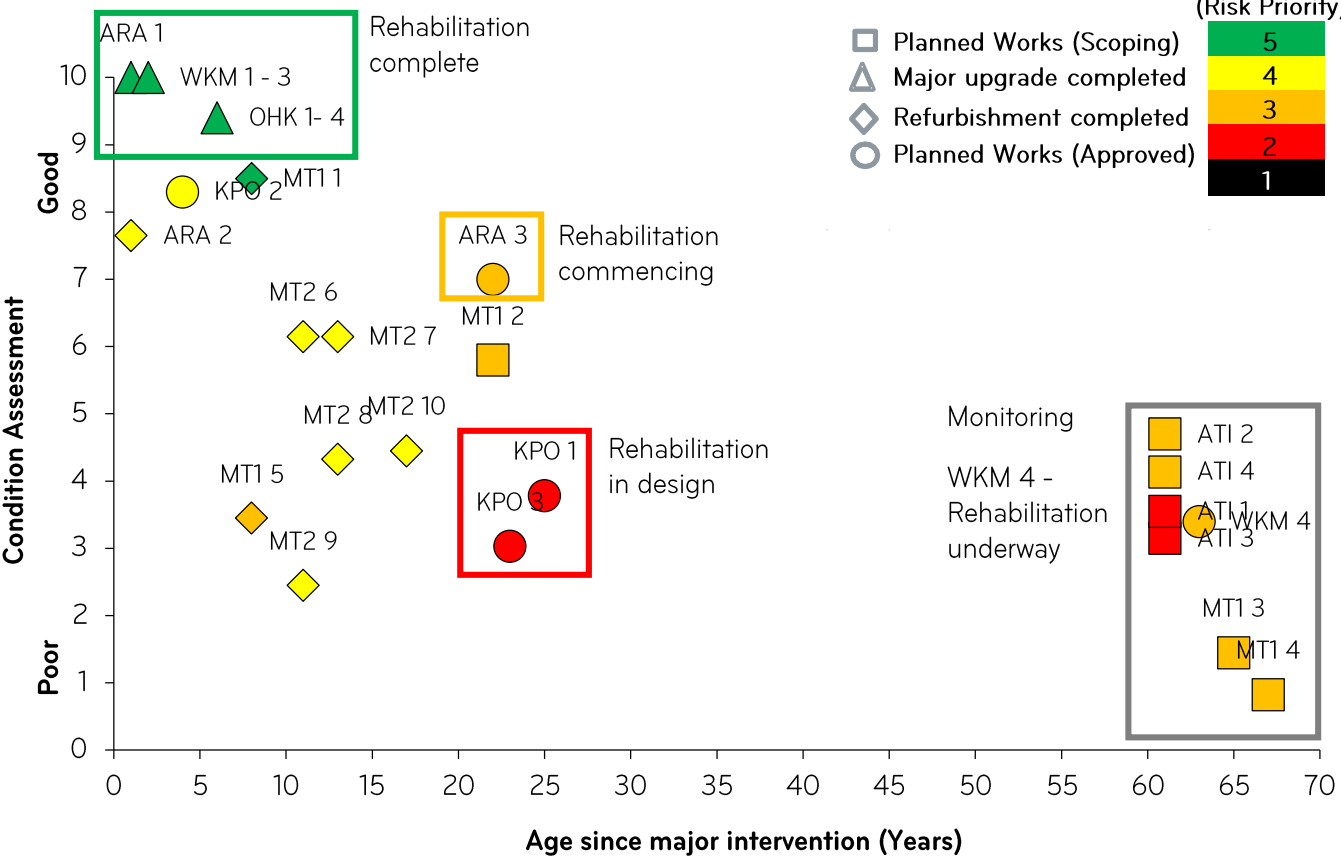




# ASSET MANAGEMENT – A CONTINUOUS APPROACH & CORE STRENGTH

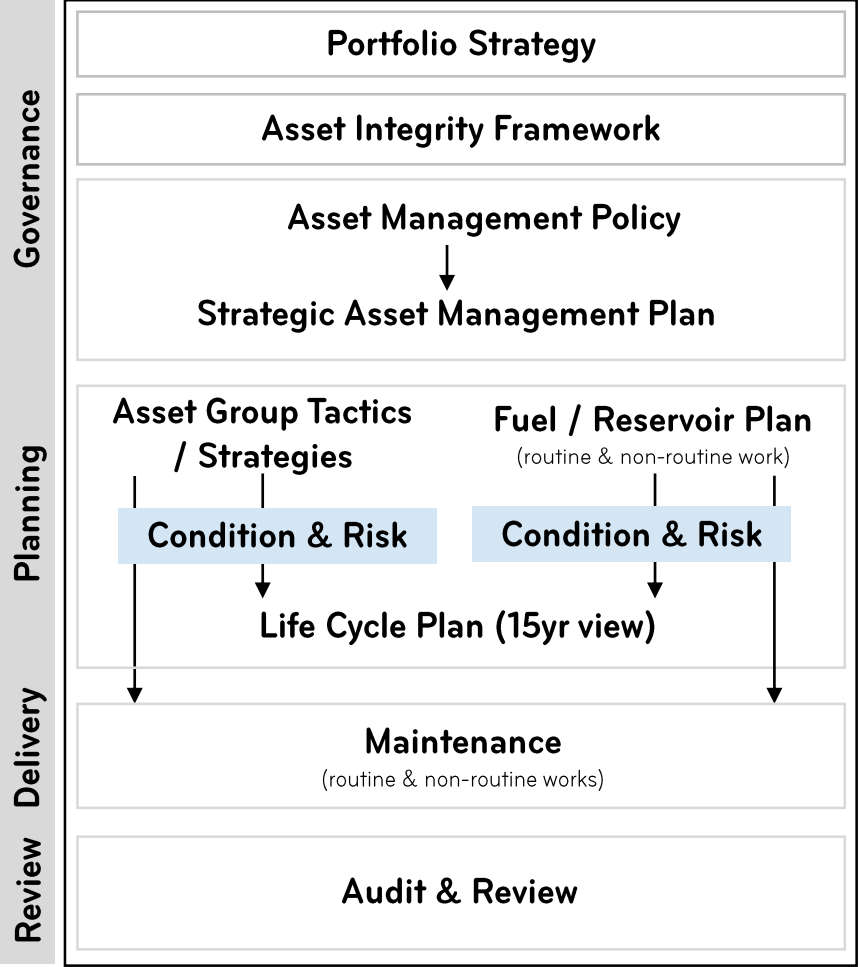


## HYDRO TURBINES

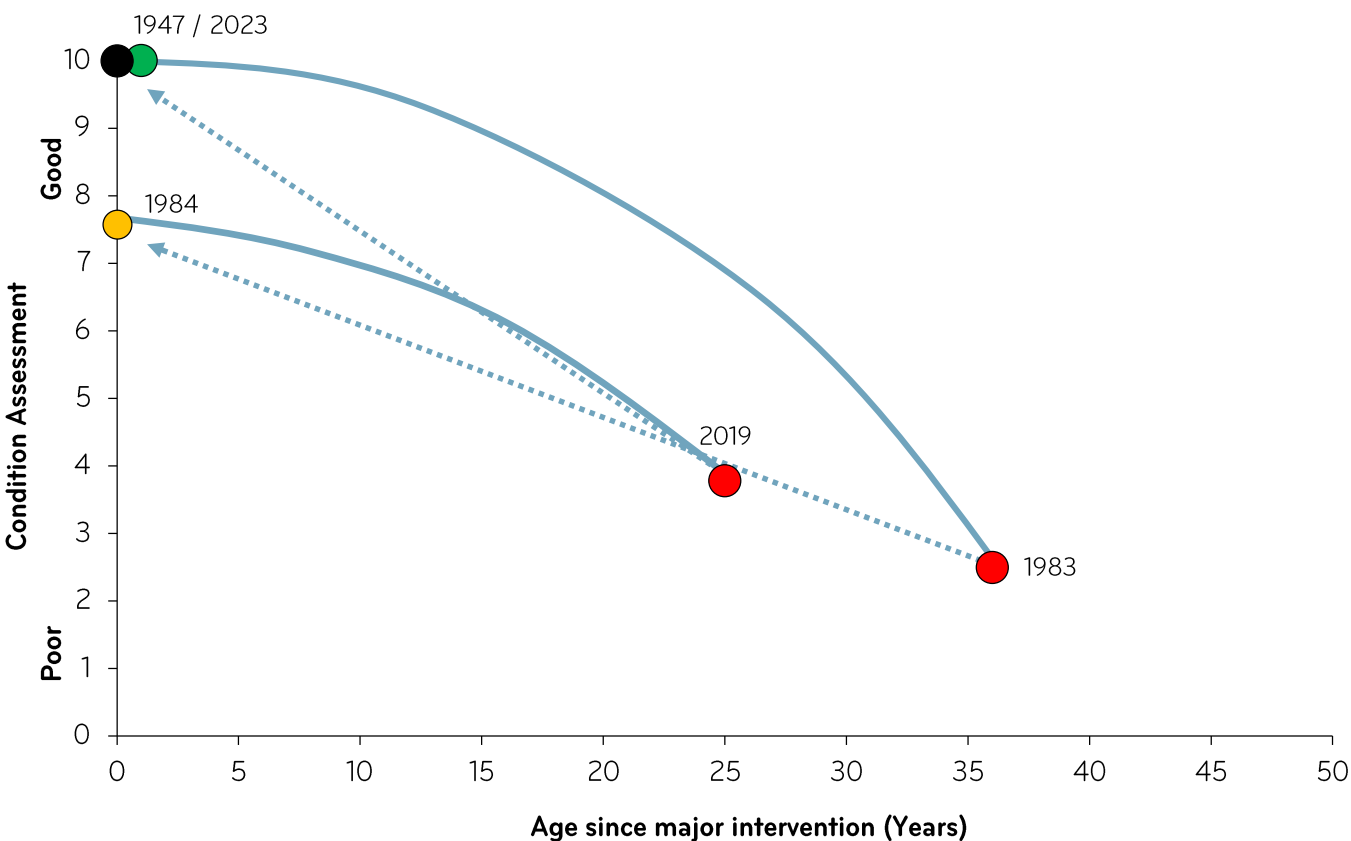




# ASSET MANAGEMENT – A CONTINUOUS APPROACH & CORE STRENGTH



KARAPIRO UNIT 1 TURBINE LIFECYCLE





# HYDRO REINVESTMENT PLANNING – LONG TERM & STRATEGIC APPROACH

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
<b>Aratiatia</b> (3 units)							Rehab												Lead in		Turbines				
<b>Ohakuri</b> (4 units)	Turbines									Lead in		Generators													
<b>Atiamuri</b> (4 units)										Lead in		Rehab													
<b>Whakamaru</b> (4 units)						Rehab																			
<b>Maraetai 1</b> (5 units)											Lead in		Rehab												
<b>Maraetai 2</b> (5 units)																Lead in		Rehab							
<b>Waipapa</b> (3 units)												Lead in		Rehab											
<b>Arapuni</b> (8 units)	Generators (5-8)																								
<b>Karapiro</b> (3 units)				Class 4			Lead in				Rehab														





# HYDRO REINVESTMENT DELIVERING VALUE BEYOND REHABILITATION

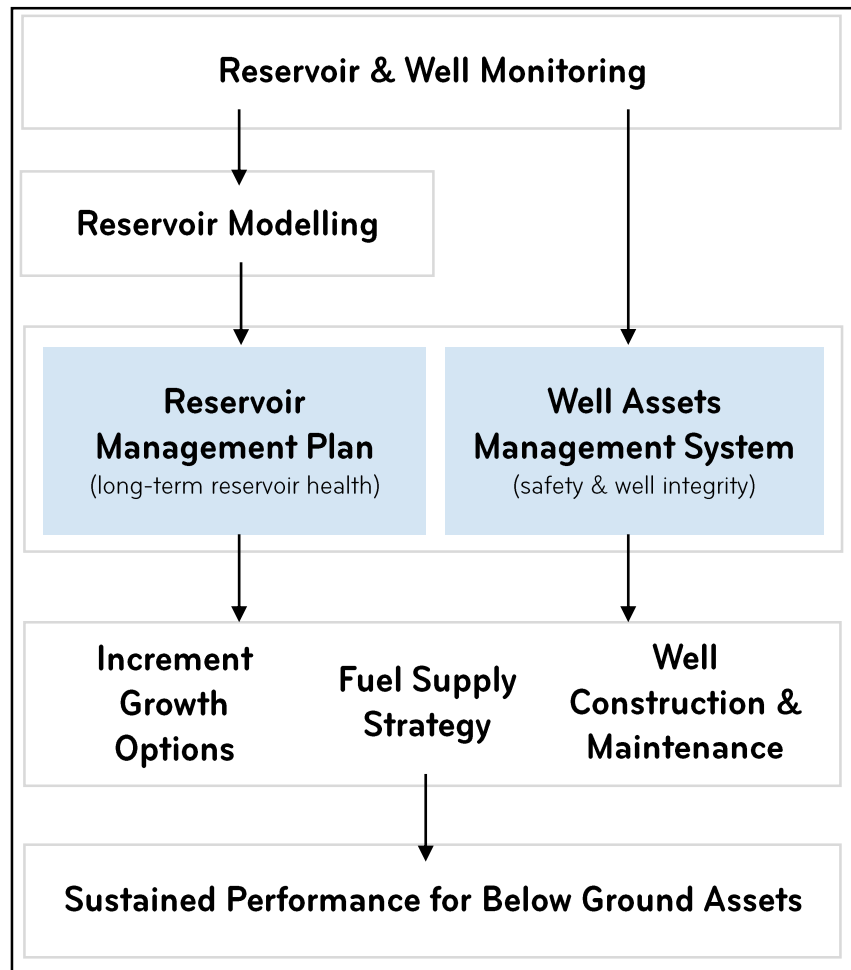
	Station Age	Capacity	Generation Upgrade	Scope	Cost
<b>Whakamaru</b> (4 units) Underway	63	+ 6MW per unit to 4 x 31MW	~ 28GWh p.a.	All turbines, generators, governors	\$76M*
<b>Aratiatia</b> (3 units) Underway	55	1 unit sized for low flows, 28MW 2 x 30MW	~ 15GWh p.a.	All generators, governors, 1x turbine (2x turbine refurb)	\$49M*
<b>Karapiro</b> (3 units) Design	72	+ 5MW per unit to 3 x 37MW	~ 32GWh p.a.	All turbines, generators, governors and gates	\$75M*
<b>Ohakuri</b> (4 units) Planning	58	+ 1-2MW per unit	~ 25GWh p.a.	All generators	~ \$30M*
<b>Atiamuri</b> (4 units) Planning	61	+ 1-4MW per unit	tbc	All turbines, generators, governors	~ \$60M*

\*Includes generating equipment and other major site works





# EFFECTIVE MANAGEMENT SYSTEMS FOR BELOW GROUND ASSETS



In-Service Assets 2019	Kawerau	Ngatamariki	Nga Awa Purua	Rotokawa
Production Wells	8	5	8	5
Injection Wells	7	5	5	3
Monitoring Wells	7	26	18	
Drilling (km)	40	45	60	
Capacity (MW)	103	82	140	38

**Reliable Assets**



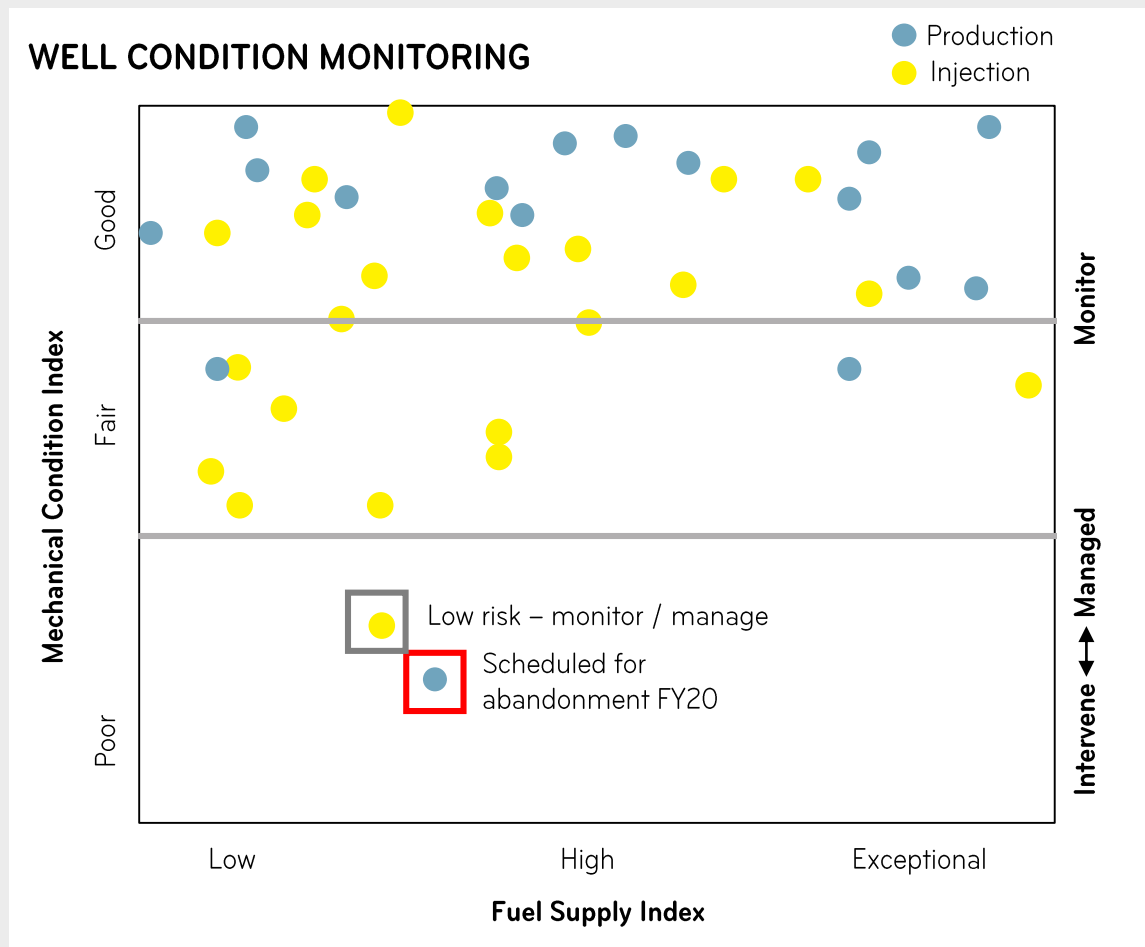
**FY19 Generation Availability: 97.7%**

**2,697GWh**  
(previous best 2,595GWh – FY2016)





# WELL CONDITIONS ARE UNDERSTOOD AND MANAGED



- > The Well Asset Management System is a condition based approach to manage asset performance and safety
- > Consistent with Code of Practice for Deep Geothermal Wells; externally audited
- > Well conditions are categorised by Mechanical Conditions<sup>1</sup> and Fuel Supply<sup>2</sup> Indices

<sup>1</sup> Mechanical Conditions Index describes the physical condition of a well (casing and cement)

<sup>2</sup> Fuel Index describes well productivity, which is influenced by reservoir factors





## FUEL SUPPLY IS SECURED THROUGH LONG TERM PLAN

Actual and expected well drilling	Type	2014-2018 (5 years)	2019-2023 (5 years)	2024-2030 (7 years)
Kawerau	Production	1	2	2
	Injection	1	2	2
Ngatamariki	Production	2	0	1
	Injection	0	1	0
Rotokawa Joint Venture (Mercury share)	Production	2	1.3	2
	Injection	0	0	0.7
Average number of wells per annum <sup>1</sup>		1.2 (~ \$16m)	1.3 (~ \$17m)	1.1 (~\$15m)

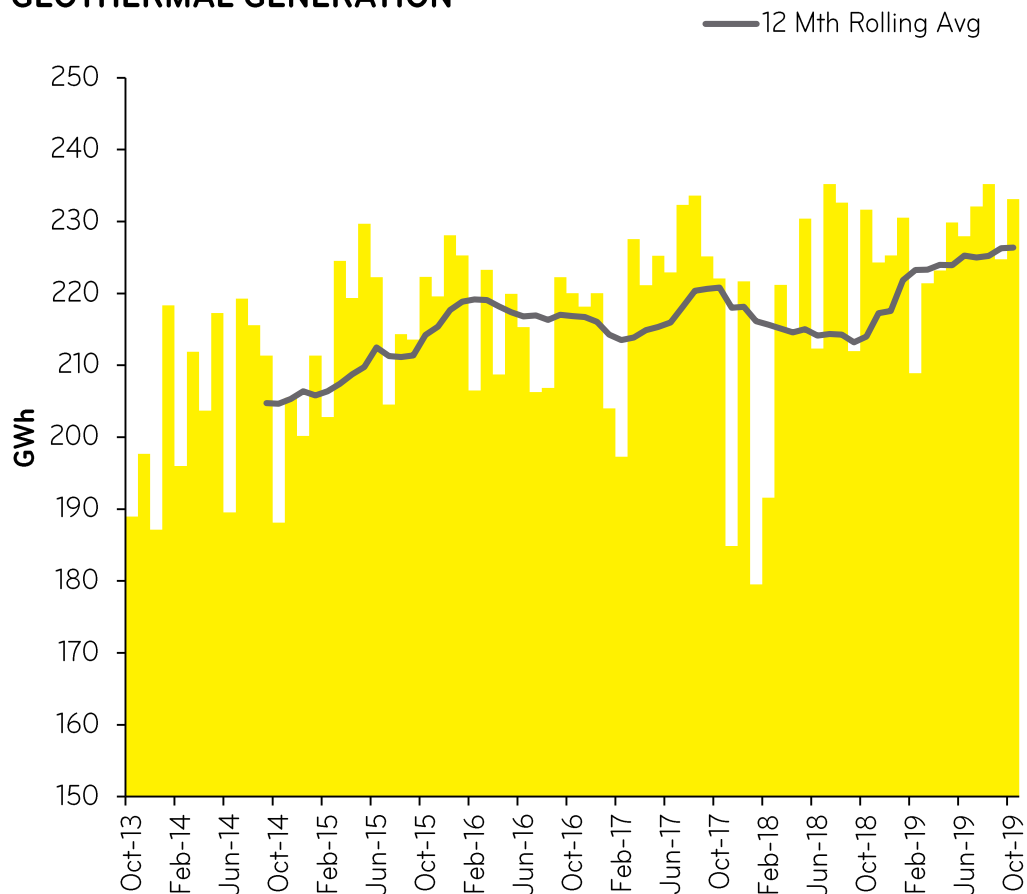
- > Sophisticated reservoir modelling tools are used to support the drilling of “make up” wells to optimise fuel supply (production and injection)
- > Timing of “make up” wells is a function of asset conditions, well productivity and changes in demand
- > The indicative average forward well drilling rate is circa 1.1 wells pa over the next 13 years





# ASSET MANAGEMENT ENABLES INCREMENTAL GEO IMPROVEMENTS

## GEOHERMAL GENERATION\*



- > Effective asset management framework (reservoir health and plant assets condition) enables Mercury to deliver incremental generation
- > **Kawerau** – delivered additional 17MW opportunity from the original 90MW (net) project without major capex by systematically “hunting down” the next available MW
- > **Rotokawa** – opportunity identified to uplift 5.7MW (net) across Nga Awa Purua and Rotokawa Generation by efficient use of fuel (matching of enthalpy); project in process design review stage targeting commercial assessment at the end of FY20
- > **Ngatamariki** – recent reservoir model update and fuel supply performance review have identified additional 15MW - 20MW capacity at this field; conceptual study underway

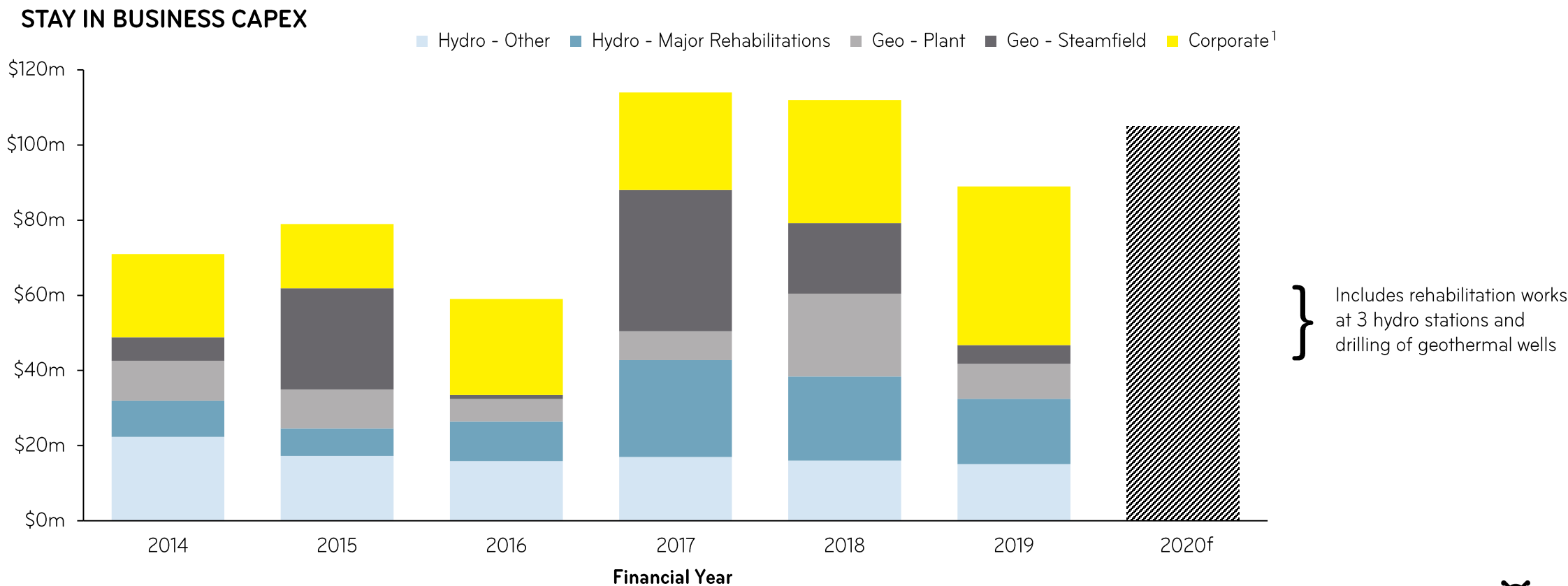






# SIB CAPEX REFLECTS HYDRO RE-INVESTMENT AND GEO DRILLING ACTIVITIES

- > Group Stay In Business CAPEX \$90m over last 5 years
- > Varies year-on-year due to geothermal drilling, hydro re-investment activities and corporate expense (primarily ICT)



# PARTNERSHIPS.

**TONY NAGEL**  
GM Corporate Affairs

November 2019

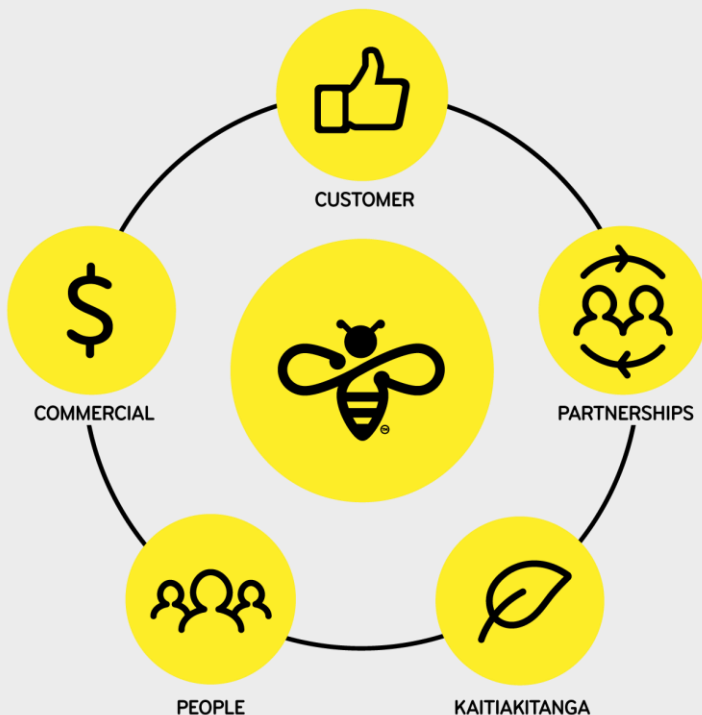
**NICK WILSON**  
Regulatory & Government Affairs Manager





# WHAT SUCCESS LOOKS LIKE

## OUR FIVE PILLARS



## BY 2030 WE WILL BE...



Recognised as a leader within our industry, with our industry recognised as a positive contributor to New Zealand; and Mercury's access to fuel and energy storage enduring and enhanced

## WE'RE ON TRACK BY FY2022 IF...

There is bipartisan national, regional and community support for renewable electricity  
Existing stakeholder relationships are maintained and strengthened, and new relationships are created, consistent with our purpose and strategy

## WHICH WE WILL MEASURE THROUGH...

- ✓ Electricity is viewed as an enabler of the transition to a low carbon economy
- ✓ Key stakeholder relationship plans are in place and are in effect

## FOCUS AREAS...

Industry & Research

Iwi

Government





**Renewable electricity is a key enabler in transitioning to a low carbon economy.**





# NEW ZEALAND'S COMPETITIVE ADVANTAGE IN ELECTRICITY

“It is a **world leading example** of a well-functioning energy market, which continues to work effectively.”<sup>1</sup>

“New Zealand is the **only Asia-Pacific country** in the overall top ten and has been there consistently since 2000, demonstrating **longstanding sound energy policies**.”<sup>2</sup>

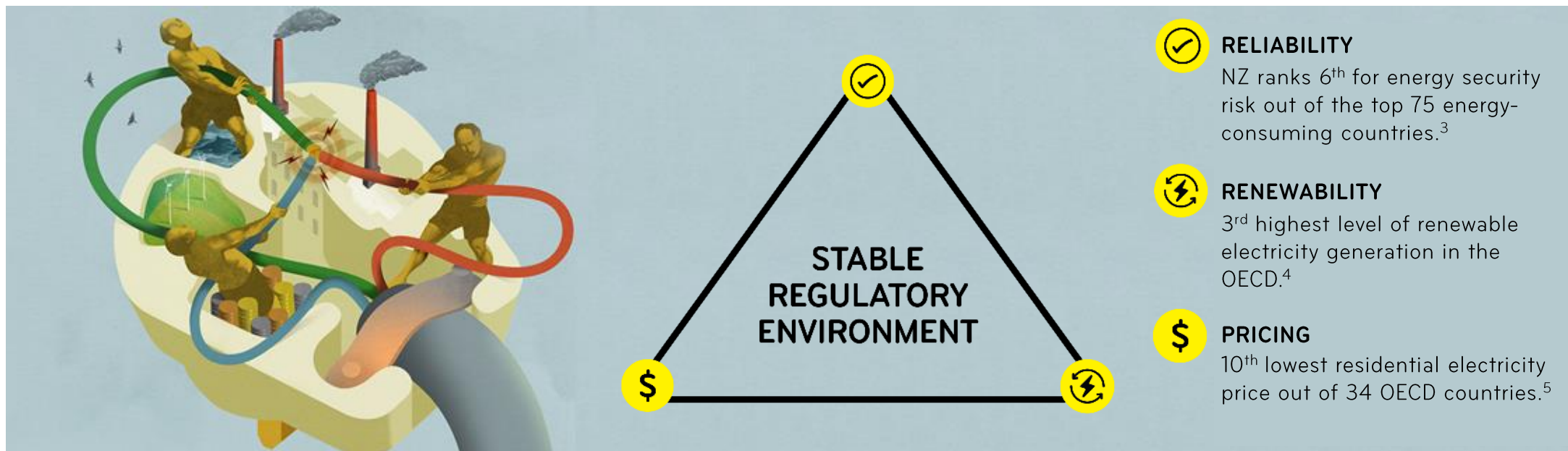


Image Source: Accenture

<sup>1</sup> IEA Publications (2017), *Energy Policies of IEA Countries: New Zealand 2017 Review*, International Energy Agency, p. 13

<sup>2</sup> World Energy Council (2019), *World Energy Trilemma Index 2019*, p. 39

<sup>3</sup> U.S. Chamber of Commerce, *International Energy Security Risk Index*

<sup>4</sup> IEA Publications, *Renewables Information (2019 edition)*, p. 54, *Share of electricity production from renewable sources*

<sup>5</sup> IEA Publications, *Electricity Information (2019 edition)*, p. 692, *Electricity prices for households in US dollars/MWh, converted with purchasing power parities*



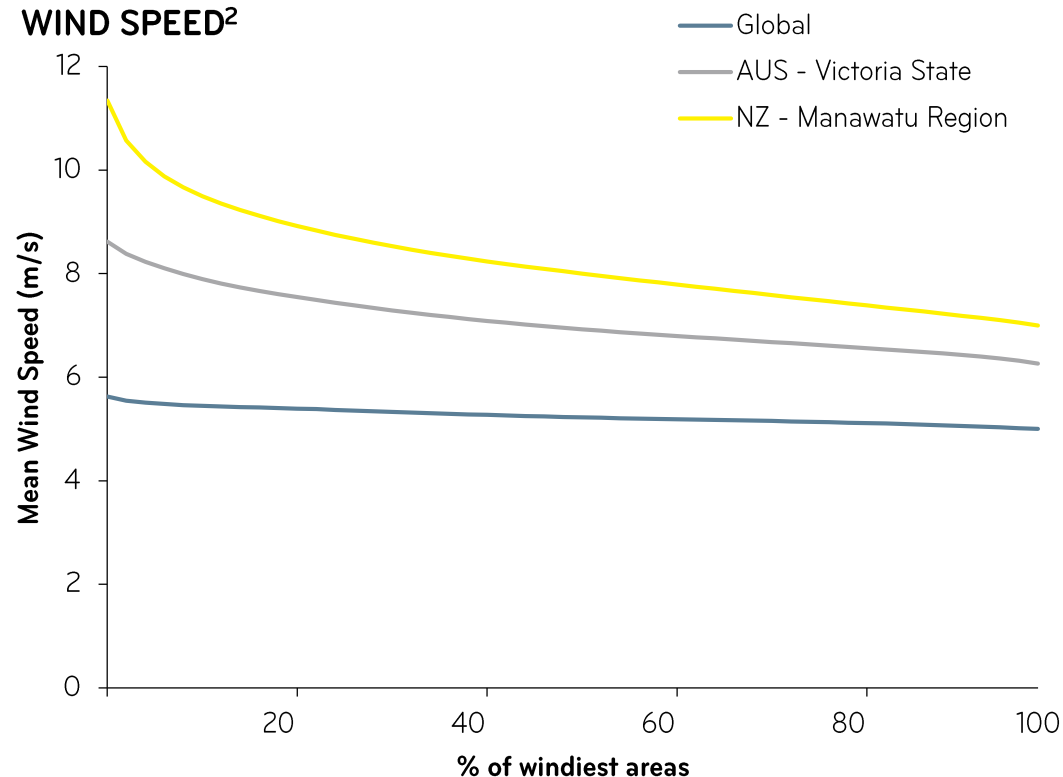




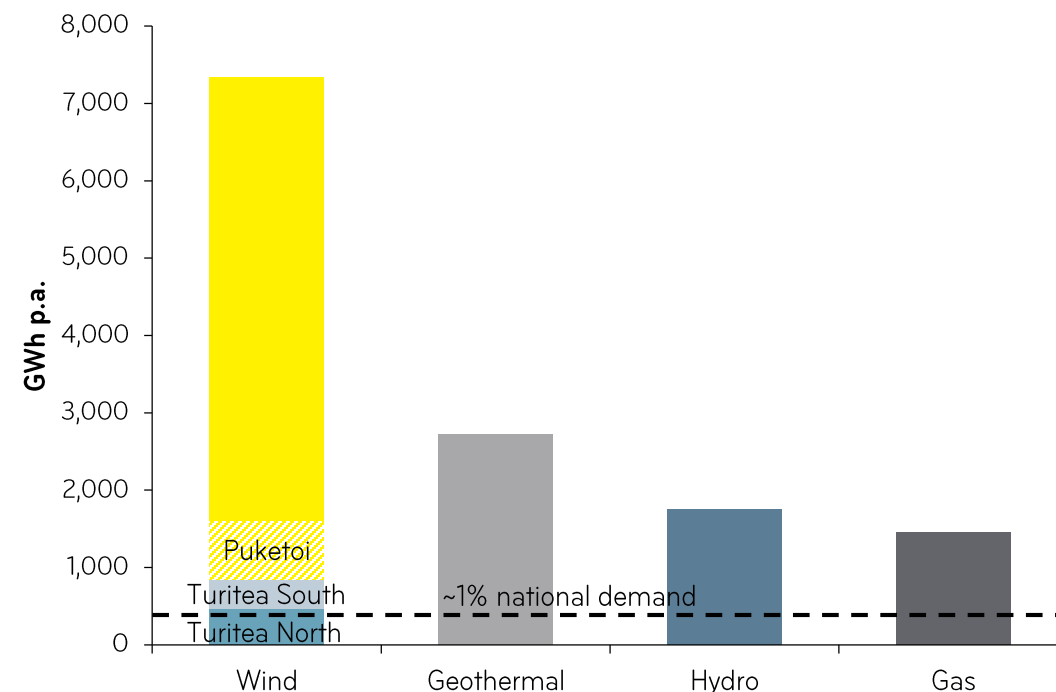
# NEW ZEALAND'S RENEWABLE RESOURCES ARE WORLD-CLASS

“ Without any direct subsidies or public support, their share in electricity and heat supply has grown in recent years, as a result of cost-competitive geothermal and hydro and **very good conditions for wind power**. This performance is a **world-class success story** among IEA member countries.”<sup>1</sup>

## WIND SPEED<sup>2</sup>



## CONSENTED GENERATION<sup>3</sup>



<sup>1</sup> IEA Publications (2017), *Energy Policies of IEA Countries: New Zealand 2017 Review*, International Energy Agency

<sup>2</sup> Wind data obtained from the "Global Wind Atlas 2.0, a free, web-based application developed, owned and operated by the Technical University of Denmark (DTU) in partnership with the World Bank Group, utilizing data provided by Vortex, with funding provided by the Energy Sector Management Assistance Program (ESMAP).

<sup>3</sup> Includes projects where consent has been applied for but not yet granted. Source: Electricity Authority – Electricity Market Information, Mercury

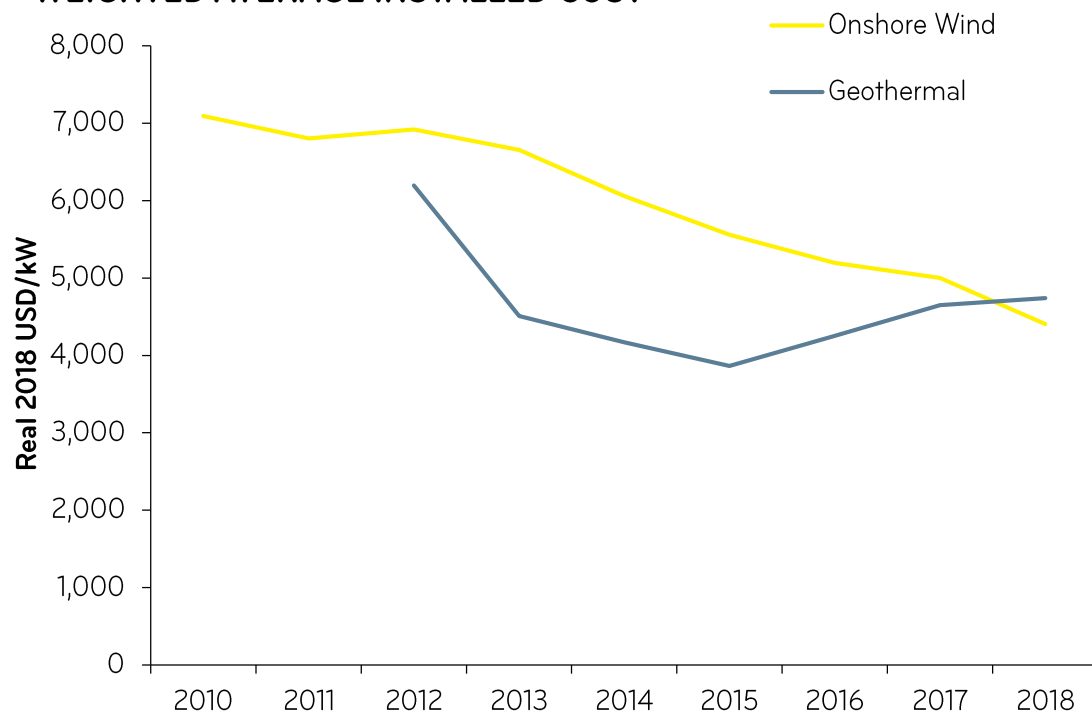




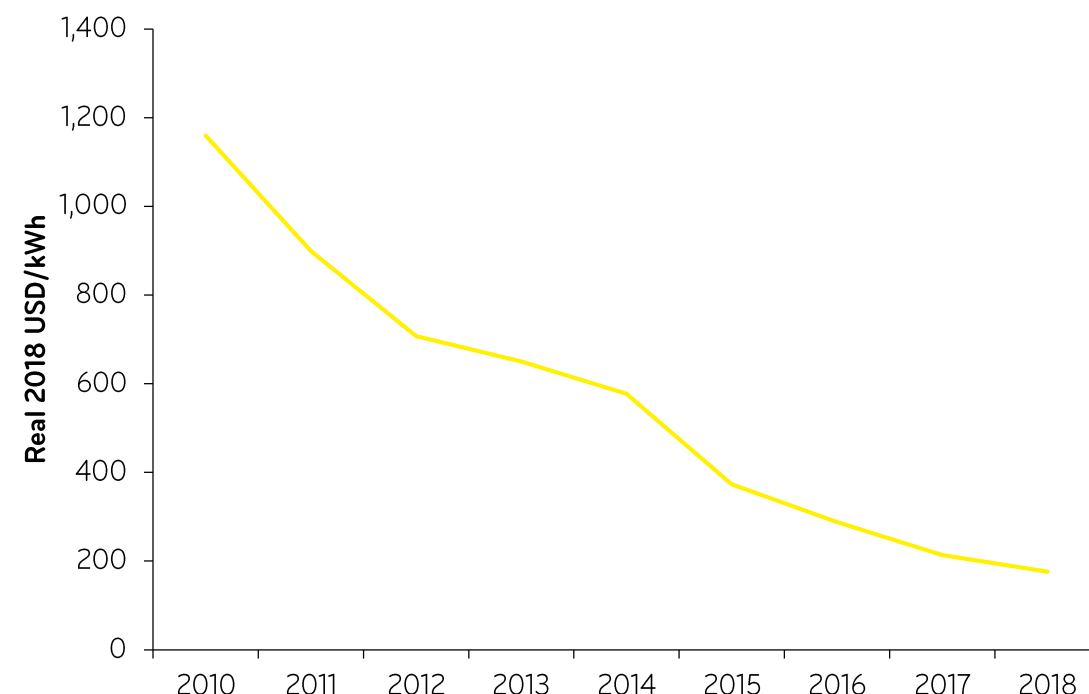
# DECARBONISATION ENABLED BY DECREASING TECHNOLOGY COSTS

“ The simple truth is that the oil industry has never before faced the kind of threat that renewable electricity and EVs pose to its business model.”<sup>1</sup>

**WEIGHTED AVERAGE INSTALLED COST<sup>2</sup>**



**ELECTRIC VEHICLE BATTERY PACK PRICES<sup>3</sup>**



<sup>1</sup> BNP Paribas: Renewable Energy: Good For The Environment – and Good Economics (21 August 2019)

<sup>2</sup> Figures adjusted for relative capacity factors. Source: Onshore Wind and Geothermal Installed Costs and Capacity Factors - IRENA (2019), Renewable Power Generation Costs in 2018, International Renewable Energy Agency, Abu Dhabi

<sup>3</sup> Battery Pack Prices – BloombergNEF

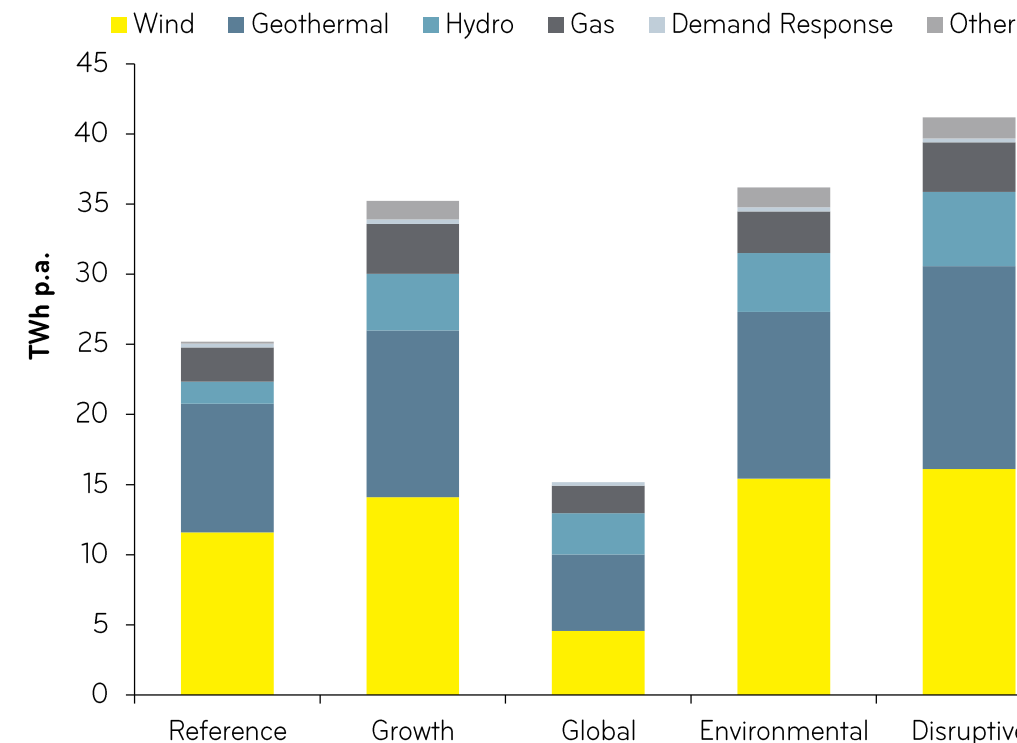




# TRANSPORT ELECTRIFICATION IS THE OPPORTUNITY FOR NEW ZEALAND

- “ The ICCC... recommends that the Government prioritises the accelerated electrification of transport and process heat over pursuing 100% renewable electricity... ”<sup>1</sup>
- “ Transport is a major driver of emissions reductions in the energy sector... The expansion of EVs increases demand... most cost effectively met through additional renewable generation.”<sup>2</sup>
- “ New Zealand is well placed for the future, with a high proportion of renewable power. Electrification of the economy will require significant investment in extra generation.”<sup>3</sup>

## MBIE SCENARIOS - NEW GENERATION 2050



Source: Ministry of Business, Innovation and Employment – Electricity Demand and Generation Scenarios, Mercury

<sup>1</sup> Interim Climate Change Committee (2019). Accelerated Electrification. Available from [www.iccc.mfe.govt.nz](http://www.iccc.mfe.govt.nz).

<sup>2</sup> New Zealand Productivity Commission. (2018). Low-emissions economy: Final report.

<sup>3</sup> Electricity Pricing Review Final Report (2019)





# STABLE REGULATORY ENVIRONMENT CRITICAL FOR INVESTMENT

## **The Guardian**

**Clean energy investment falls back to 2016 levels amid policy uncertainty**

The recent record investment in renewable energy is showing signs of slowing dramatically, the Clean Energy Council warns

## **THE AGE**

**'Chaotic' energy policies threaten vital investment: report**

## **FINANCIAL REVIEW**

**Gas plant delay ramps up energy uncertainty**

**Big-stick energy rules hamper 'firm' investment**

## **THE AUSTRALIAN**

**Power companies 'need a price signal'**

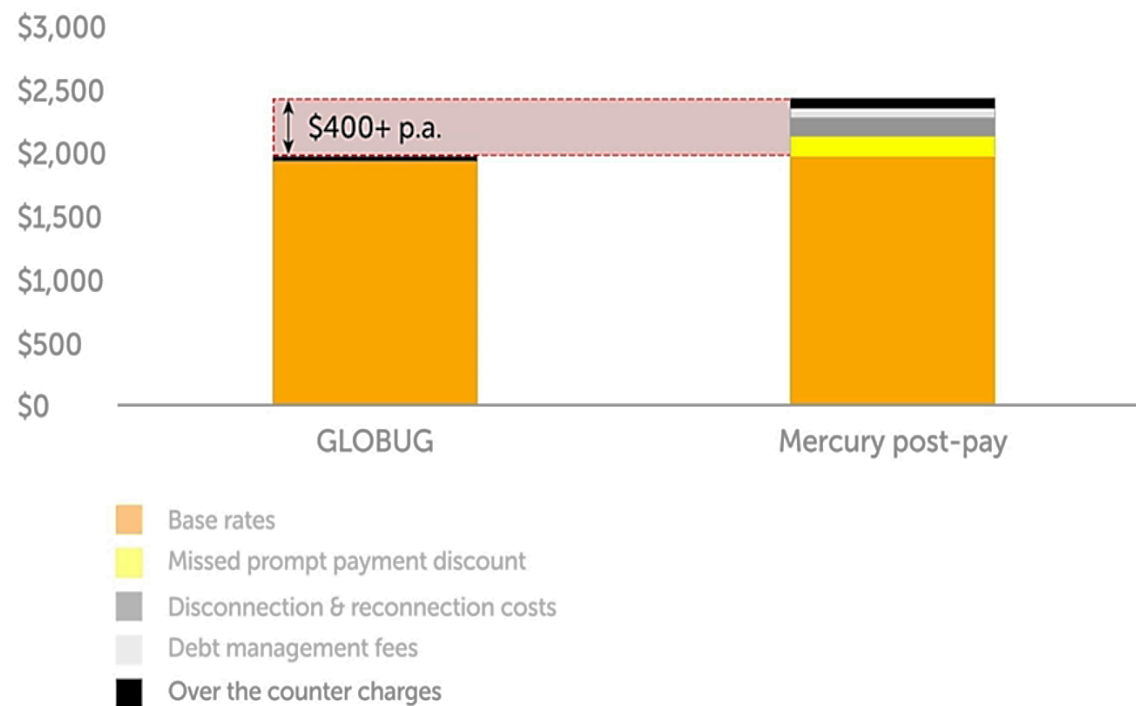




# ADDRESSING VULNERABILITY THROUGH PARTNERSHIPS AND INNOVATION

- > Mercury launched pre-pay product GLOBUG in 2010
- > Innovative and unique platform providing payment flexibility to avoid unsustainable debt
- > Base rates aligned with post-pay but significant savings possible by avoiding other standard costs
- > Partnered with budgeting agencies through unique Community Relationship Manager role

**GLOBUG customers can save up to \$400 per annum**







FOR FURTHER INFORMATION > TIM THOMPSON | HEAD OF TREASURY & INVESTOR RELATIONS T. +64 275 173 470 E. [INVESTOR@MERCURY.CO.NZ](mailto:INVESTOR@MERCURY.CO.NZ)