



meridian

## News Release

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*Stock exchange listings: NZX (MELCA) ASX (MEZCA)*

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# Meridian Energy investor day presentation

30 April, 2015

Attached is an investor presentation Meridian Energy is making in Auckland today.

**ENDS**

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Chief Executive  
Meridian Energy Limited

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Meridian Energy Limited (ARBN 151 800 396) A company incorporated in New Zealand 33 Customhouse Quay, PO Box 10840, Wellington 6143

[www.meridian.co.nz](http://www.meridian.co.nz)

# ***Better energy***



**MERIDIAN  
ENERGY LIMITED**  
INVESTOR DAY  
PRESENTATION

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30 April 2015



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The information contained in this presentation should be considered in conjunction with Meridian's latest financial statements, which are available at:

<http://www.meridianenergy.co.nz/investors/reports-and-presentations/>

All currency amounts are in New Zealand dollars unless stated otherwise.

# **Introduction**

## **Mark Binns**





# Today's Presentation

- Update on market dynamics, regulatory and technology changes
- Key aspects of Meridian's business
- Overview of governance post listing
- Covering:
  - Demand and Supply
  - Transmission Pricing
  - Water Reform
  - New Energy Technology
  - Strategic Asset Management
  - Future Generation Options
  - Retail
  - Remuneration
  - Governance and Role of Majority Shareholder



# Meridian Attendees



**Mark Binns**

Chief Executive



**Neal Barclay**

General Manager,  
Markets and Production



**Paul Chambers**

Chief Financial Officer



**Jacqui Cleland**

General Manager,  
Human Resources



**Alan McCauley**

General Manager, Retail



**Jason Stein**

General Counsel and  
Company Secretary



**Guy Waipara**

General Manager,  
External Relations



**Owen Hackston**

Investor Relations  
Manager



**Chris More**

Markets and  
Production



**Gillian Blythe**

Strategy and Finance



**Grant Telfar**

Strategy and Finance



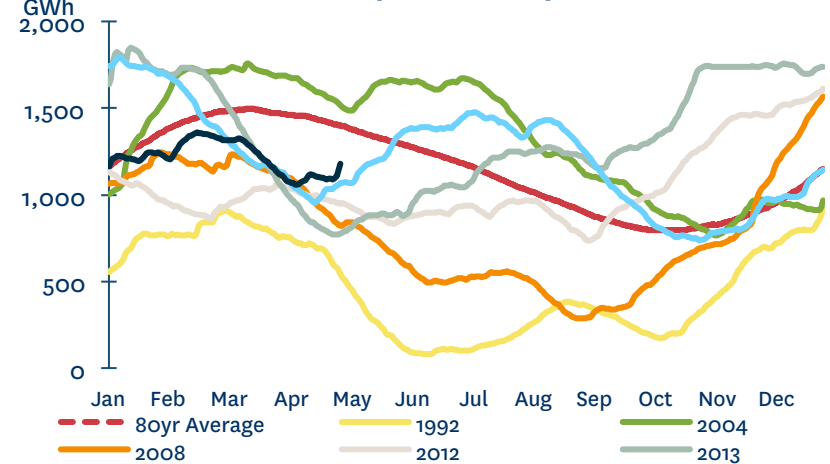
**Janine Crossley**

Treasury Manager

# Topical Subjects

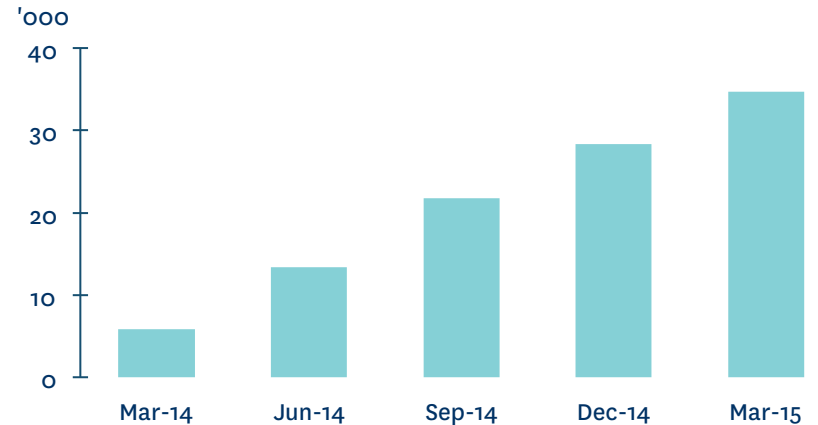
- March 2015 was our fourth consecutive month of below average inflows
  - Sufficient inflows to maintain reasonable generation and stabilise storage
  - Good inflows over the last few days
  - Good supply of thermal generation in the market
- 
- Nothing new to say on the smelter
- 
- Early growth rates and customer feedback on Powershop in NSW are encouraging
  - The distance between the Coalition and Labour positions on the RET has narrowed, now separated by just 1.5TWh pa

**PUKAKI HYDRO STORAGE (29 APR 2015)**



Source: COMIT Hydro (NIWA)

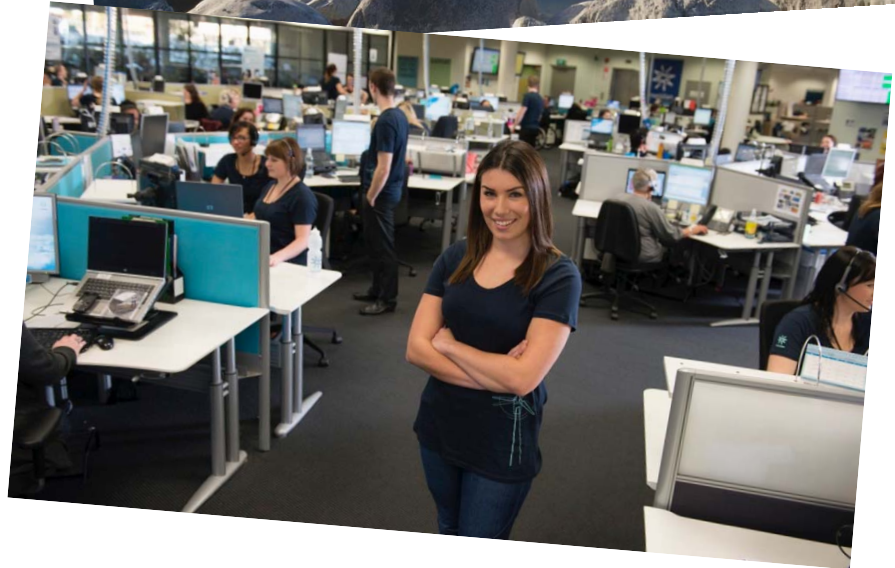
**POWERSHOP AUSTRALIA CUSTOMERS**



Source: Meridian

# Observations on the Market

- New Zealand market is performing well by international standards
- More rational cross-party political views
- Highly competitive environment is unlikely to change
- Market is getting its mind around the implications of possible Tiwai Point decisions





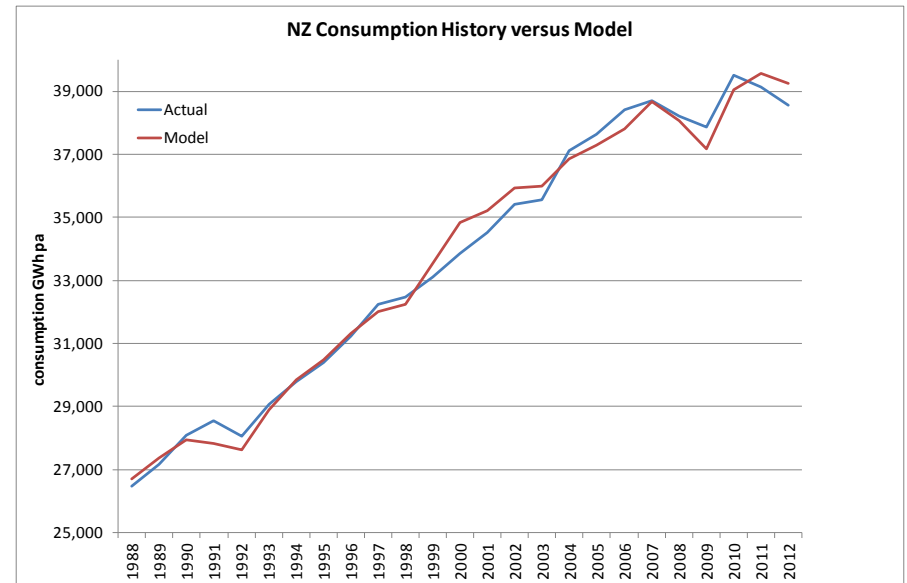
# **Demand and Supply**

## **Paul Chambers**



# Modelling National Demand for Electricity

- Meridian maintains its own demand model
- This model uses GDP, population, households, retail price as its key variables
- It shows a very close fit to the last 10 years of history (including recent flat demand)

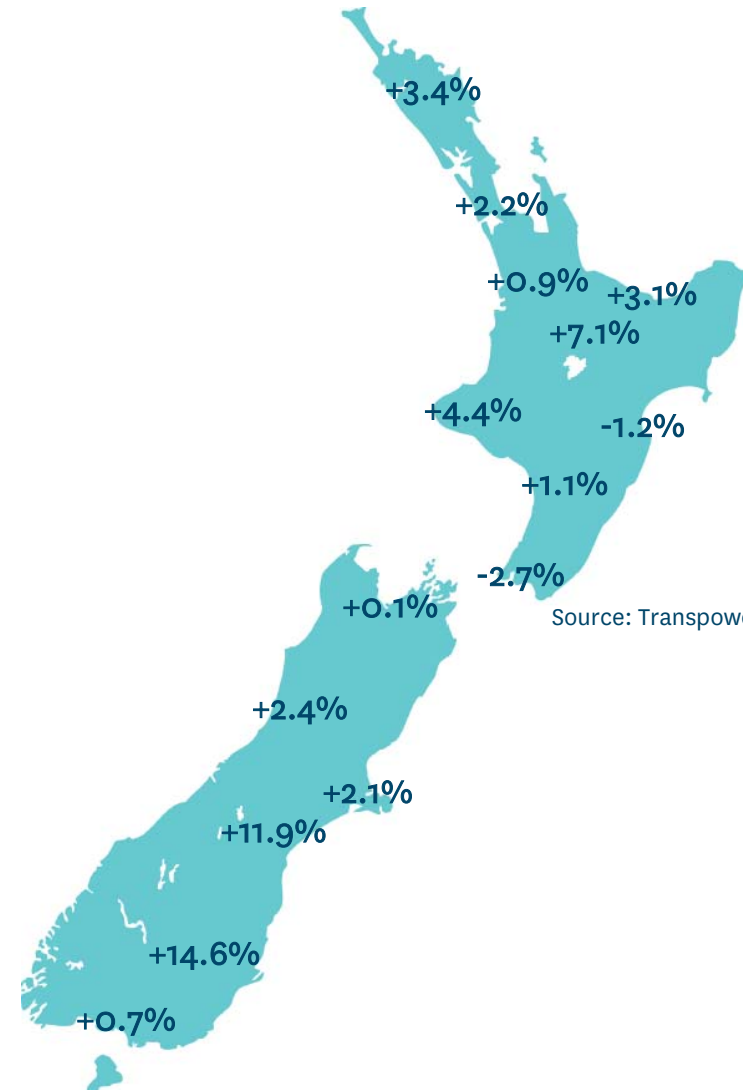


Source: Meridian

# New Zealand Electricity Demand

- Demand in the last 12 months is 2.1% higher than the preceding 12 months
- We have seen growth in nearly all regions
- Provincial New Zealand has led this growth

12 MONTH GEOGRAPHIC DEMAND GROWTH

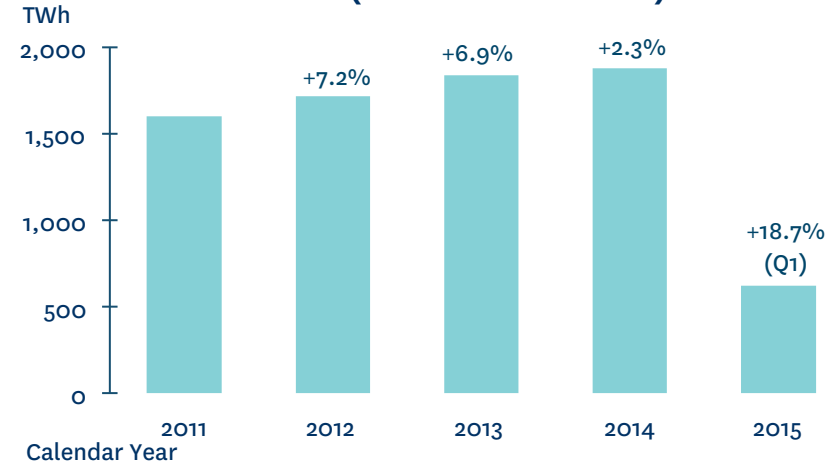


Source: Transpower, Meridian

# Provincial New Zealand

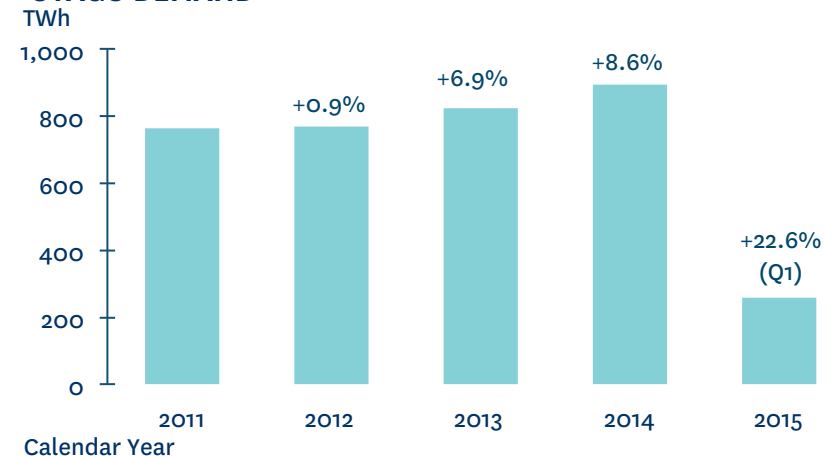
- Agricultural demand has grown most strongly
- The dairy value chain is a more intensive user of electricity
- Some growth is weather driven
- We are seeing a genuine underlying increase in demand

## CANTERBURY DEMAND (EXCL CHRISTCHURCH)



Source: Transpower, Meridian

## OTAGO DEMAND



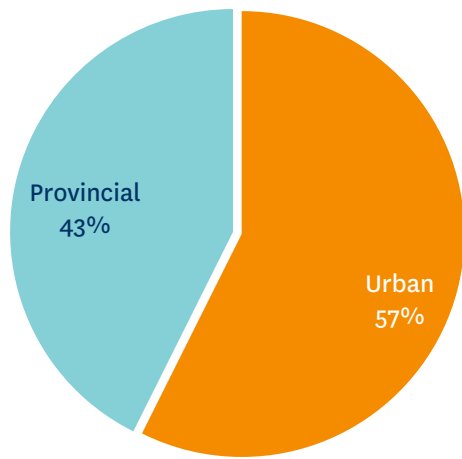
Source: Transpower, Meridian



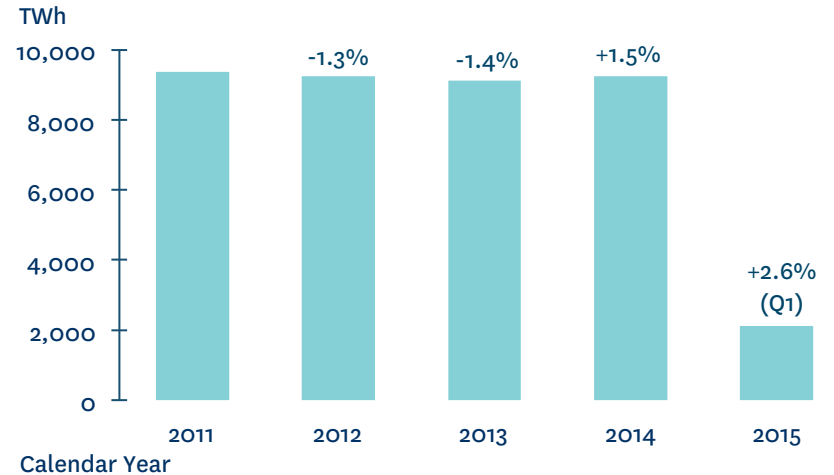
# Urban New Zealand

- Low housing growth combined with increasing energy efficiency has depressed urban regional growth in recent years
- With positive net migration and GDP growth we are seeing renewed growth in all urban areas
- Except Wellington!

**Demand Split 2014 Calendar Year**

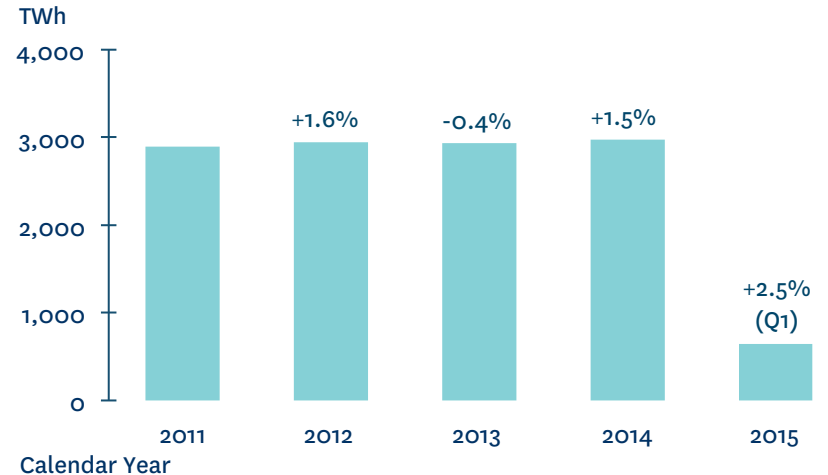


**AUCKLAND DEMAND**



Source: Transpower, Meridian

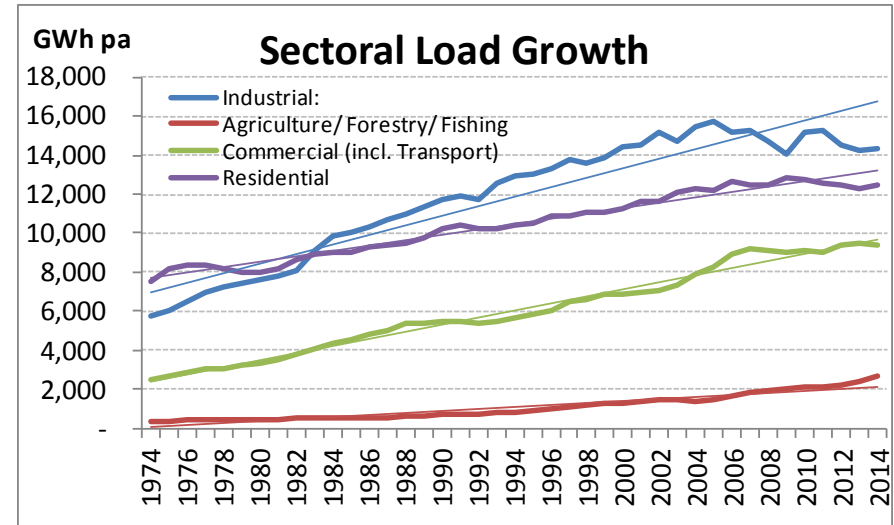
**CHRISTCHURCH DEMAND**



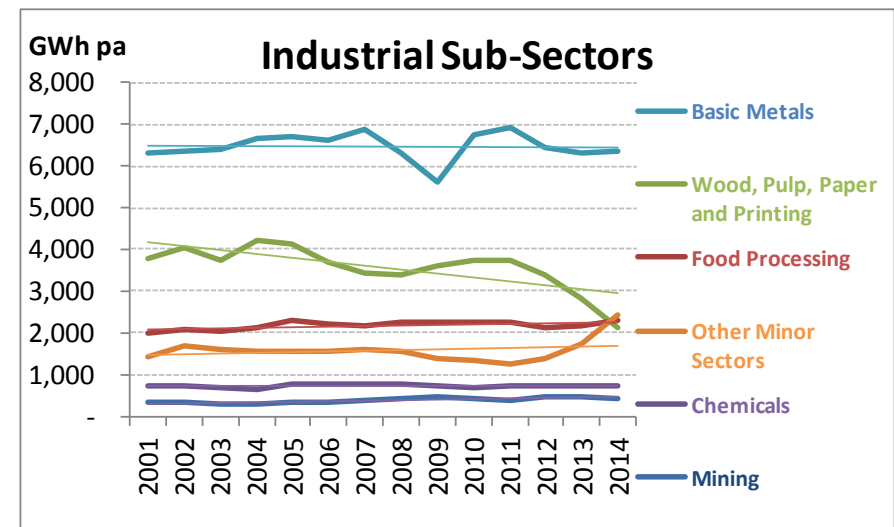
Source: Transpower, Meridian

# Sector View of Demand - Industrial

- Low overall demand growth over recent years
- Mostly driven by reduction in the industrial sector
- Some one-off shocks
- Wood, pulp, paper and printing being the single biggest contributor



Source: MBIE



Source: MBIE

# Residential Demand Influencers



Population



NZ's population was 4.4m (2012)  
Will increase to 5.4m in 2036 and  
to 6.0m in 2061



Technology/lighting/  
water heating



Driven by efficiency improvements



Solar PV



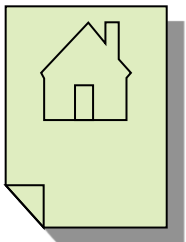
Small impact relative to overseas



Electric vehicles



Positive impact but will take time  
to reach noticeable scale



Space heating and  
building envelope

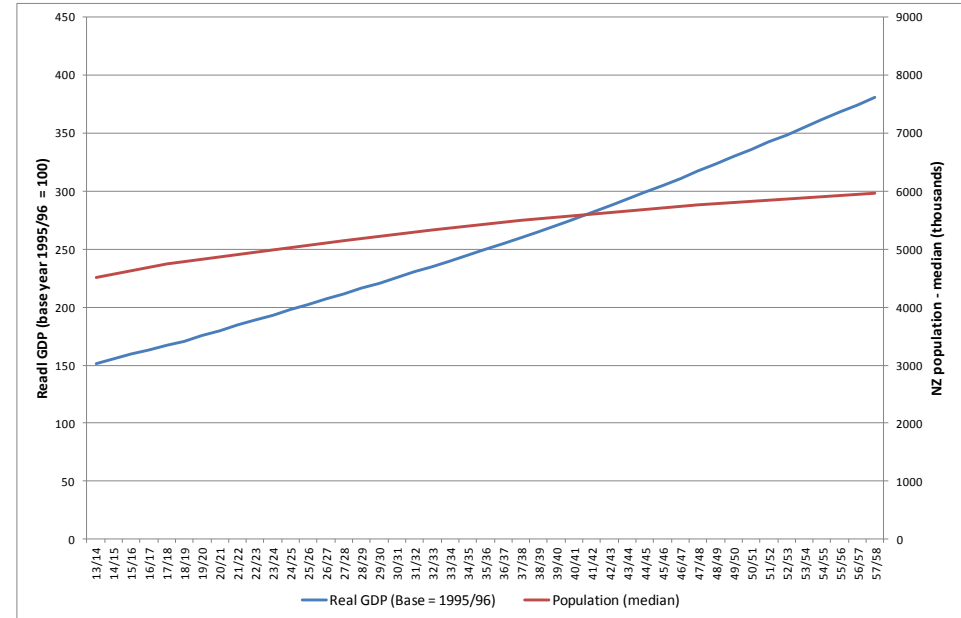


Competing factors offset each  
other

# Future Demand

- Forecast growth in New Zealand GDP and population underpin continuation of the link to growth in electricity demand
- Expect growth to be lower than seen historically
- This has clear implications for new generation

**New Zealand Real GDP and Population Projections**

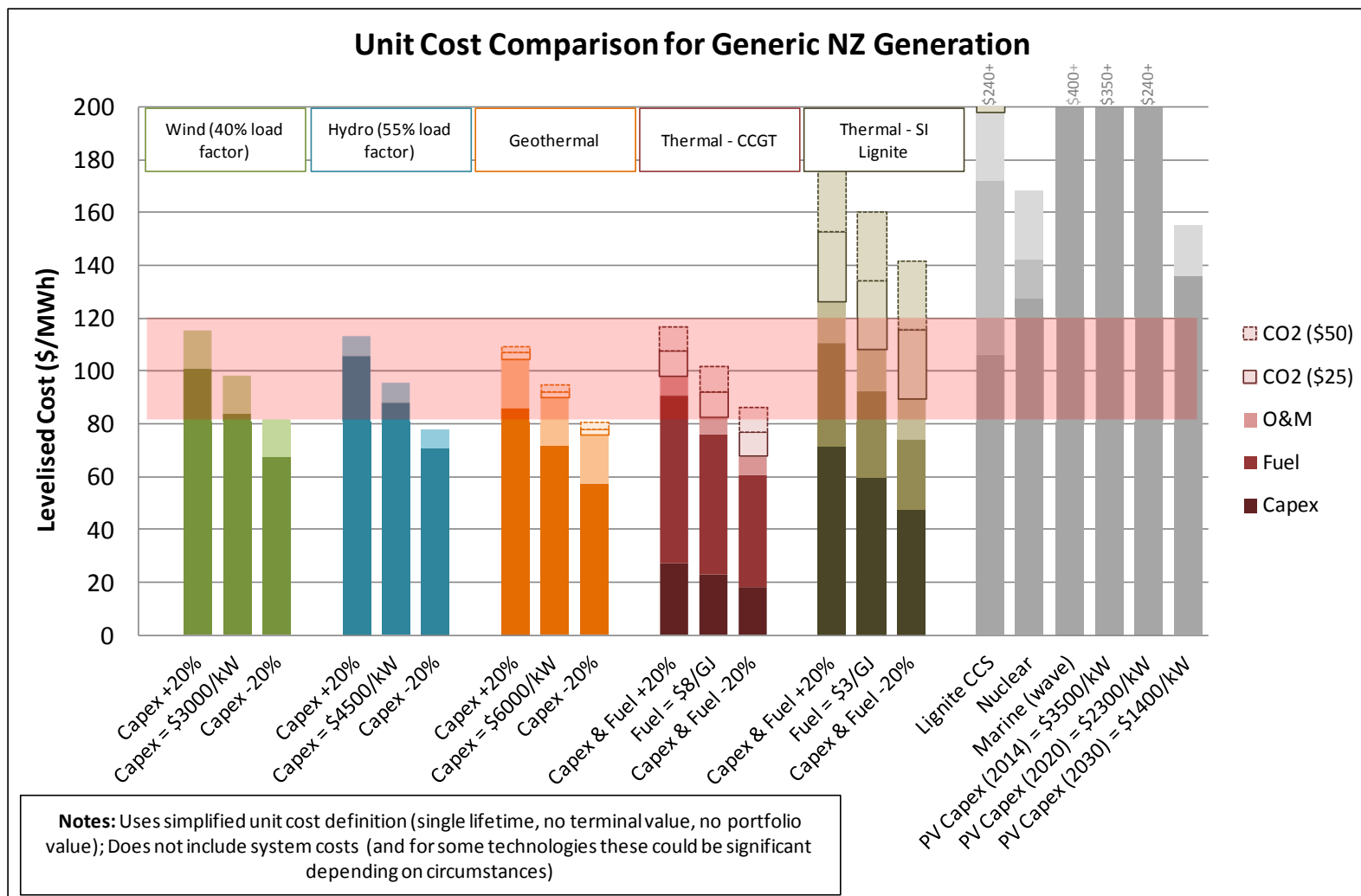


Source: NZ Treasury, NZ Statistics



# Unit Cost Comparisons - Generic NZ Generation

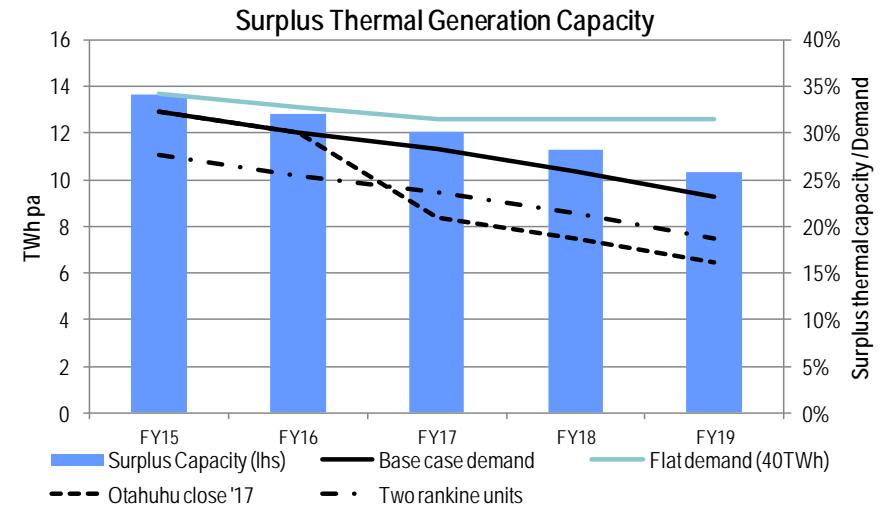
- New Zealand's energy future will be predominately renewable led



Source: Meridian

# Supply Perspective

- New Zealand is not capacity constrained
- Energy balance has always been the dominant driver of New Zealand's investment
- Well signalled closure of thermal plant is manageable



Source: Meridian

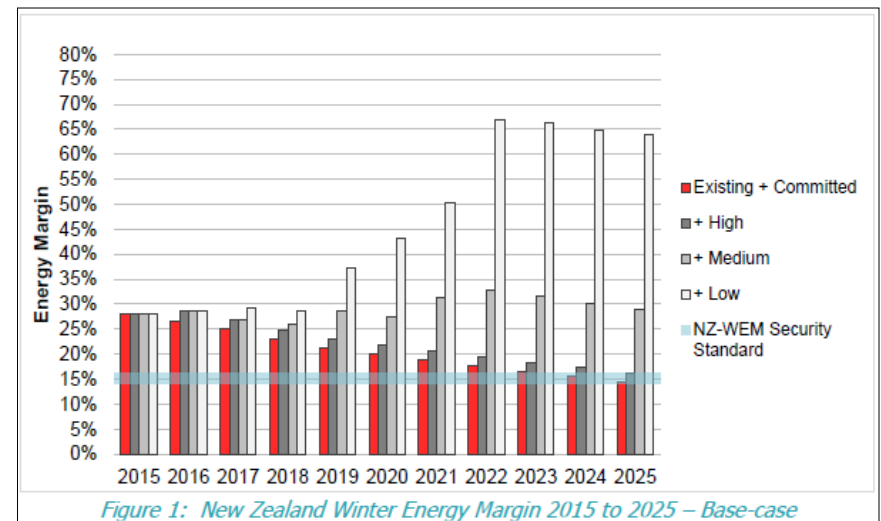


Figure 1: New Zealand Winter Energy Margin 2015 to 2025 – Base-case

Source: System Operator

# Transmission Pricing

## Guy Waipara



# Market Reform

- Transmission pricing review is one of many reforms underway by the Electricity Authority

## Wholesale

- Reserves and frequency management
- Spot market review
- Hedge market development

## Retail

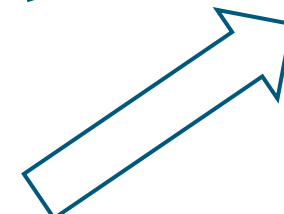
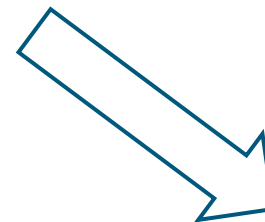
- Price change announcements
- Saves and winbacks
- Consumption data availability

## Transmission

- Transmission pricing review

## Distribution

- Standardising Use of System Agreements
- Review of distribution pricing



## Long term benefit of consumers

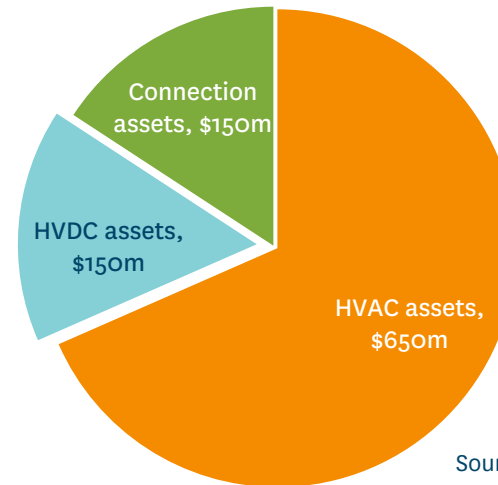
- Competition
- Reliability
- Efficiency



# Transpower's Annual Transmission Charges

- Around \$950m per annum
- Charges are recovered from market participants in various ways
- Who pays?
  - HVAC assets paid for by distributors and directly connected customers
  - HVDC assets paid for by South Island generators
  - Connections assets are paid for by generators and distributors

Transpower's Annual Transmission Charges



Source: Transpower

# Current Transmission Pricing Methodology

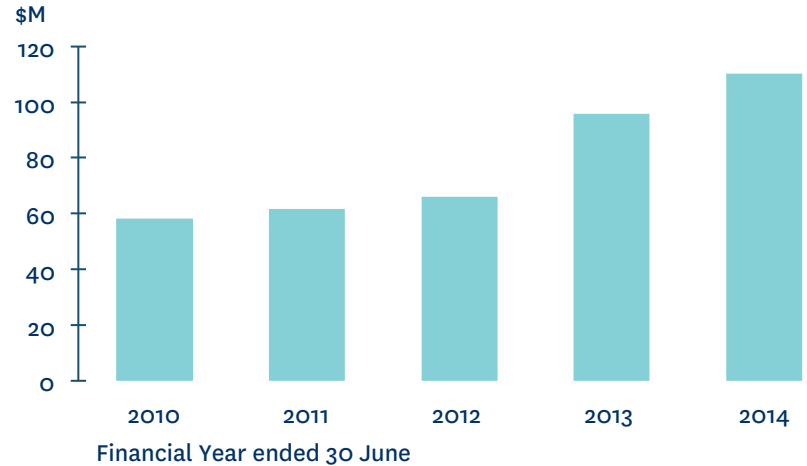
- Different perspectives on what the problem is, or whether there is one
- Perspectives can be driven by commercial interest
- Meridian's view is that the core issue relates to HVDC pricing
- TPM does not align HVDC pricing with who pays and who benefits
- Other misalignments, including recent transmission investment in the upper North Island being paid for by South Island consumers



# HVDC Pricing

- HVDC charges of \$150m per annum are paid for by South Island generators
- Meridian's annual charge has grown to \$100m per annum
- These charges are not recoverable in the competitive market
- Meridian's view is that all parties benefit from the HVDC link
- This is confirmed by analysis from the Electricity Authority (EA)
- The current charging also creates efficiency problems, making new South Island generation projects more expensive than the North Island

**MERIDIAN'S HVDC COSTS**



Source: Meridian

# The Process for Change

- The EA's review is still in process
  - Options paper delayed until June
  - Final issues paper by the end of this year
  - EA are working hard to ensure their proposals are robust
  
- Meridian expects to see:
  - Change based on a beneficiaries pays methodology
  - More than one option to make change
  - Broad reallocation of costs to consumers and generators
  - Degree of change is difficult to assess until the options paper is released

Apr-15	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan-16	Feb
	Options paper									
						2 <sup>nd</sup> issues paper				
										Potential TPM conference

Source: Electricity Authority



# Water Reform

## Guy Waipara



# Water Reform and Management

- Water use in the Waitaki and Waiau catchments account for almost 90% of Meridian's annual NZ generation
- Resource consents for both catchments require renewal in 2025 and 2031 respectively
- Involved in shaping water management at a national policy level and in catchments where we operate
- Part of the Land and Water Forum (LAWF) since 2009 – the entity that advises Government on water reform
- The Government has made important changes to freshwater policy in recent years
- LAWF has been asked to provide a report to Government by September 2015 to establish water quality limits



# Iwi Rights and Interests

- Government is engaged in discussions with Iwi Leaders Freshwater Group on iwi rights and interests in fresh water
- Government has recognised iwi do have rights and interests in fresh water
- Government has also announced their view is that no one owns water
- Meridian expects to see a high level announcement on direction and process for reform to be made at 2016 Waitangi Day celebrations
- Meridian's hydro schemes are located in the Ngāi Tahu takiwa
- Meridian has a close working relationship with Ngāi Tahu
- We are making a joint submission on management of the Waitaki catchment



# The Waitaki Catchment

- Waitaki catchment has a water allocation plan (WAP), developed in 2006
- While Meridian's consents require renewal in 2025, stakeholders expect the WAP will form the basis of renewal
- Key points in the WAP are:
  - Minimum flows on the Waitaki river
  - Access to emergency storage in Lake Pukaki
  - Consenting status of the infrastructure
- Environment Canterbury has developed a proposal to change aspects of the WAP, following work by affected stakeholders
- The proposed changes improve the current WAP for Meridian and are supported by Ngāi Tahu and irrigators
- Hearing will start in June 2015, with decisions before the end of the year





# **New Energy Technology**

## **Grant Telfar**

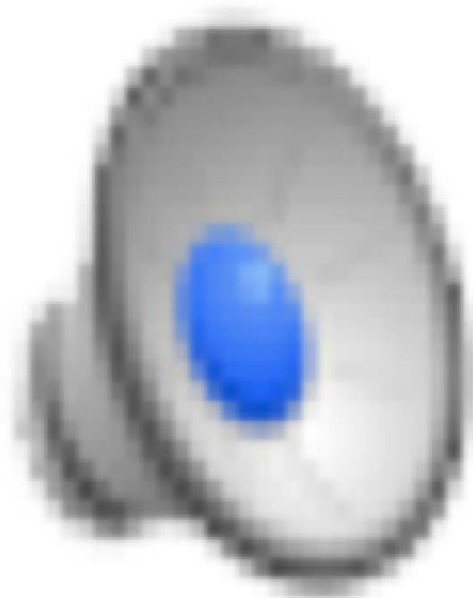


# New Energy Technology Introduction

- Meridian is not a tech company – so can add little to the discussion surrounding technical details of the multitude of new and exciting technologies that are currently dominating headlines
- Meridian does have a significant role to play in understanding and explaining the potential impacts of these technologies on the future power system and on Meridian, as these technologies become more commonplace
- In many parts of the world new technology development is motivated by concerns over climate change and a resulting policy desire for the decarbonisation of power, heating, and transport systems
- In many instances (internationally), the decarbonisation agenda is backed by substantial regulatory support and both direct and indirect subsidies

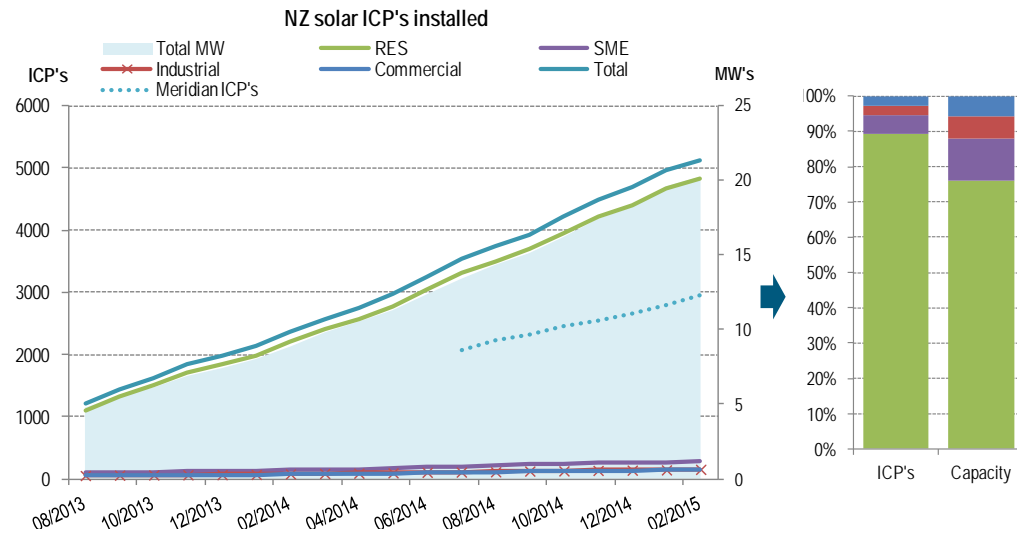






# Meridian and Solar PV

- Tariff revision complete
- Meridian's tariff continues to be one of the more attractive buy back rates
- Installation rate post change has been the same as before
- Surveys of our customers indicate there are multiple reasons for installations
- The Electricity Authority is reviewing distribution charges, including in a solar context, which may impact financial incentives to install – but other motives will remain

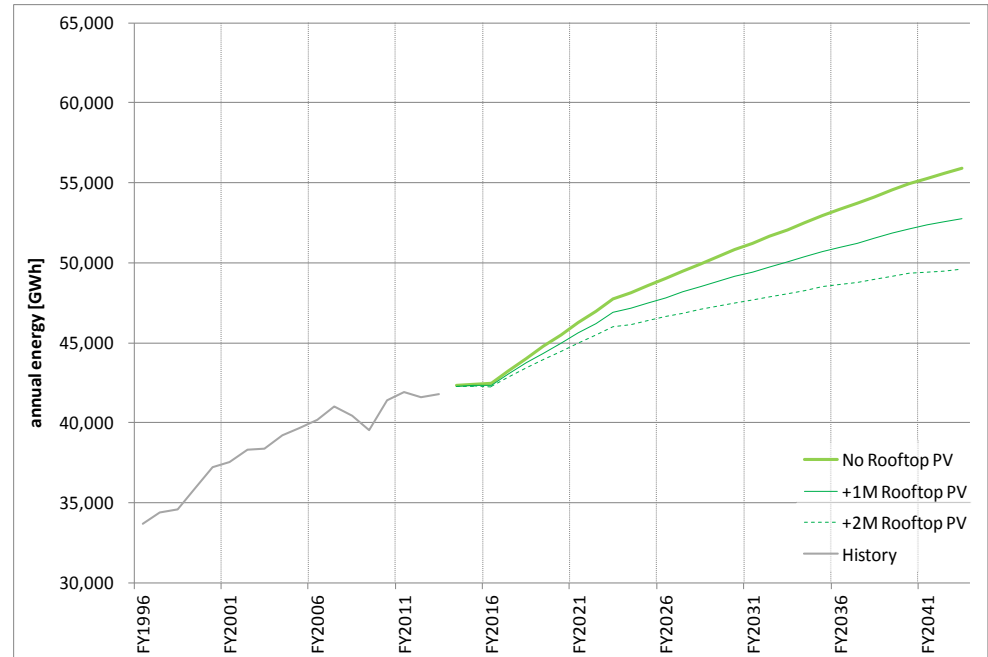


Source: Electricity Authority, Meridian

# Solar PV → Changes Grid Level Demand Growth

- The growth in annual demand for energy from the grid falls significantly if large quantities of PV are installed over time
- For example:
  - By 3TWh\* for 1 million rooftops
  - By 6TWh\* for 2 million rooftops
- But incremental demand growth still occurs:
  - Driven by growth in population, housing and GDP
- Solar produces little energy for the size of the installation:
  - Peak MW may become problematic

Underlying Grid Demand Growth and PV Impact



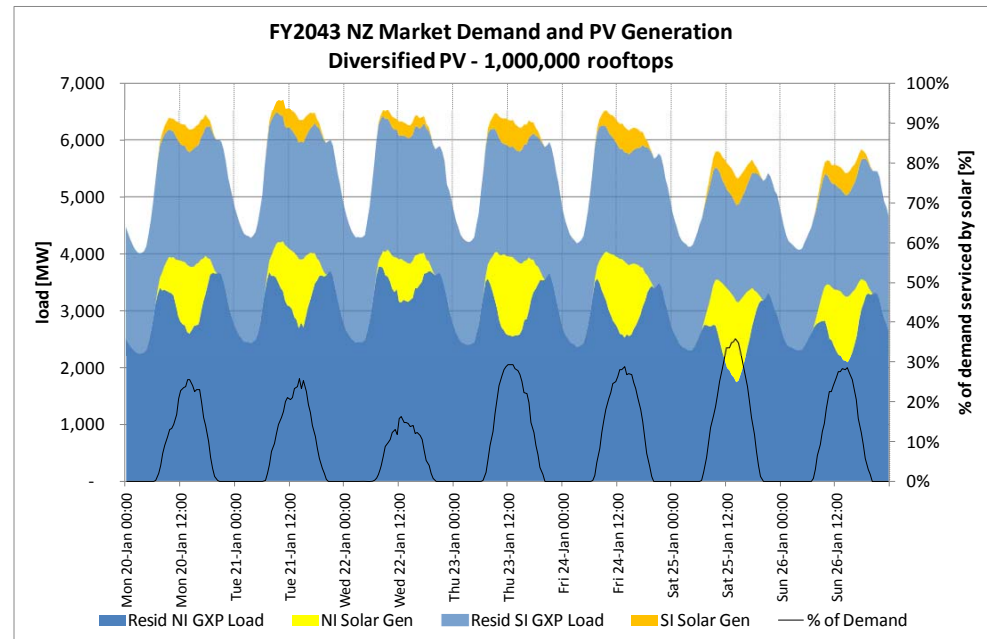
Source: Meridian

\*We assume a diversified solar load factor of 14% and an average installation of 2.5kW

# Solar PV → Changes Grid Level Demand Profile

- The daily profile of demand that is effectively removed at the grid level may become significant at times – especially in summer
- Residual system load is peakier (especially in summer) than would otherwise be the case
- Coincidence with system peak load is weak – none in winter

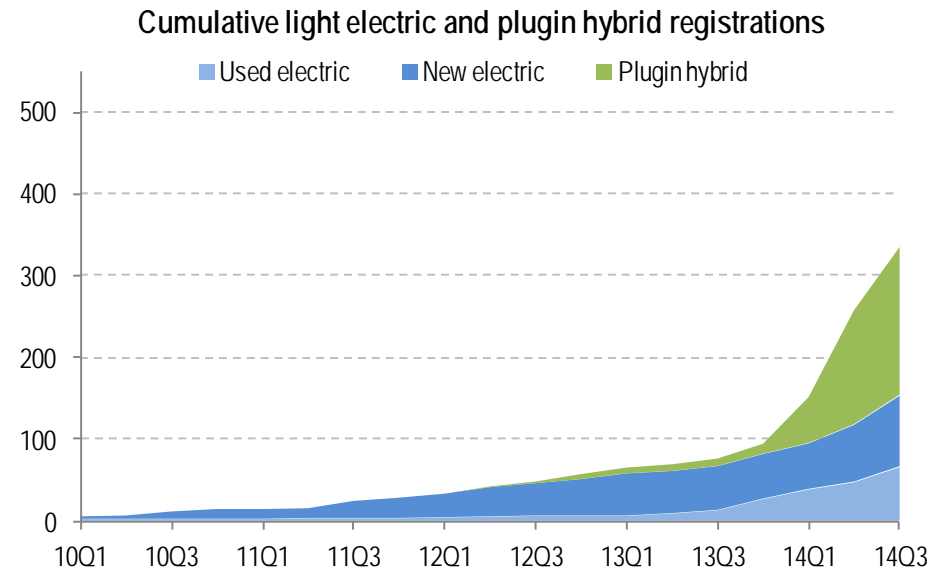
Mid Summer Solar Output



Source: Meridian

# Electric Vehicles in New Zealand

- Early days
- Anecdotal, 548 electric vehicles (EVs) in New Zealand at end of March 2015
- More than 50 public charging stations
- EVs offer an opportunity to transition towards a lower carbon future
- And make the most of our national renewable energy advantage

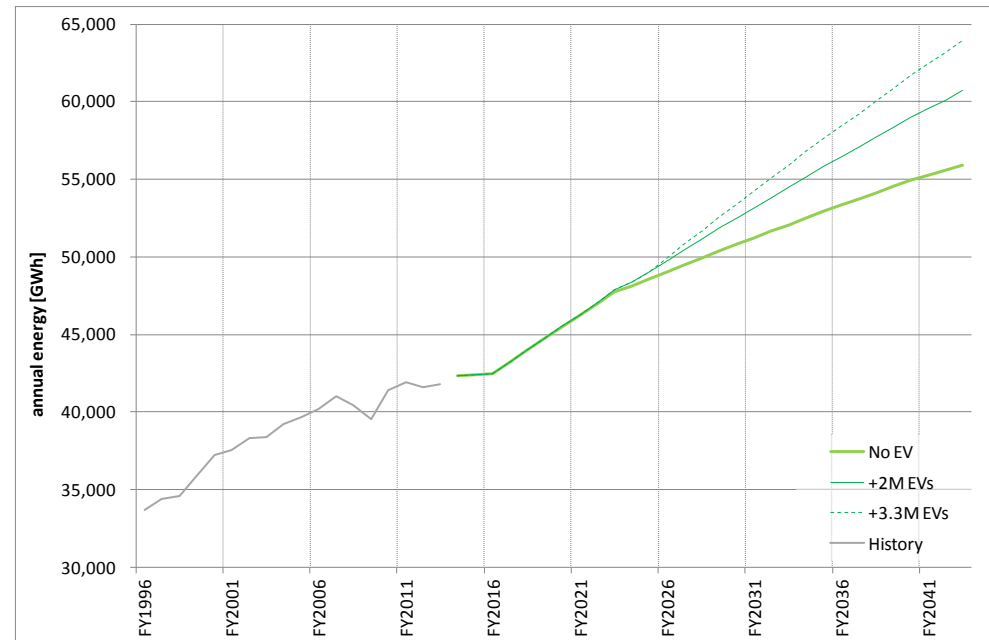


Source: NZTA end of September 2014

# Electric Vehicles → Changes Demand Growth

- The growth in annual demand for energy from the grid increases significantly if large quantities of BEV<sup>1</sup> replace ICE<sup>2</sup> requirements
- For example:
  - By 4.8TWh\* for 2 million vehicles
  - By 8TWh\* for 3.3 million vehicles
- Bolstering demand growth
- Charging consumes little energy compared to the maximum load:
  - Peak MW may be problematic

Underlying Demand Growth and EV Impact



Source: Meridian

<sup>1</sup>BEV: Battery electric vehicles

<sup>2</sup>ICE: Internal combustion engines

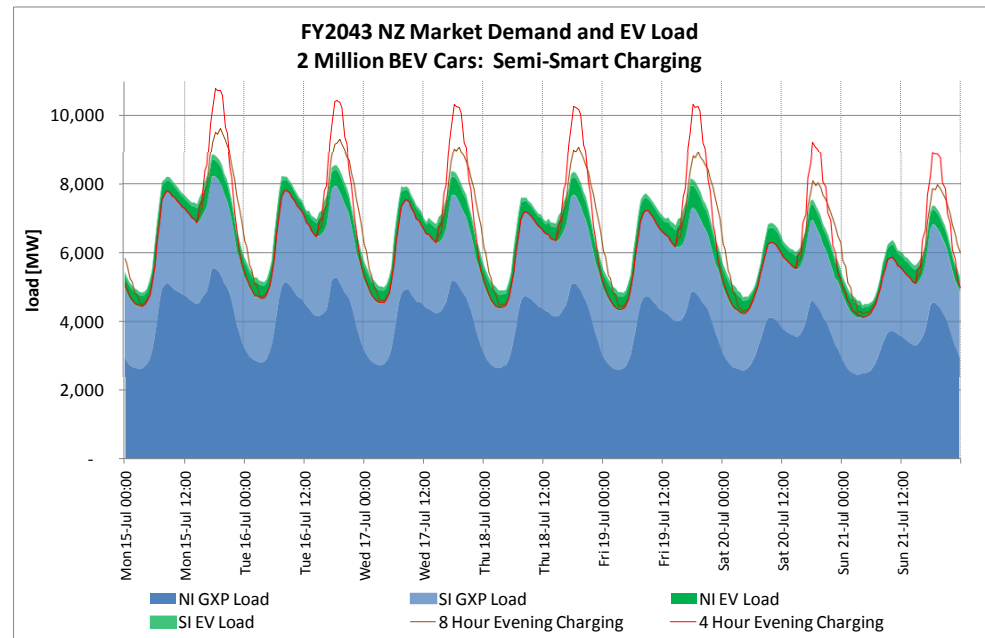
\*We assume 10,220km/year average travel, 18.6kWh/100km BEV efficiency, an 85% battery charging efficiency and 6.5% distribution losses and 4-8 hour charging



# Electric Vehicles → Changes Demand Profile

- Travel patterns are strongly diurnal – but BEV<sup>1</sup> charging may be an end of day issue, a “charge as you go” issue, a combination of both, or ...
- The daily profile of charging demand added to the system is the key BEV<sup>1</sup> issue
- Coincidence with system peak load may be large if ‘dumb’, ie end of day and fast – with peak increasing by 50+% ... all depending on consumer behaviour
- Being only a little smarter in how charging occurs may limit this peak increase to <10%

## EV Charging and Peak Load



Source: Meridian

<sup>1</sup>BEV: Battery electric vehicles

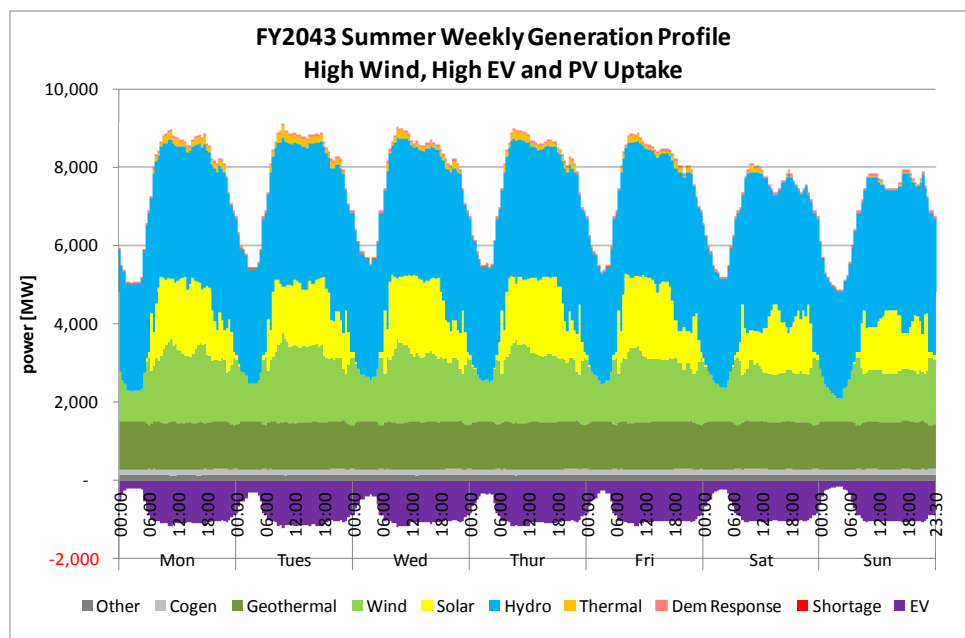
<sup>2</sup>ICE: Internal combustion engines

# Solar and Electric Vehicles → A 'Green Revolution'

- We examine a future where:
  - Carbon prices are high at \$100/t
  - 3.3M BEV<sup>1</sup> charging daily
  - 2M rooftop PV units
  - Huntly retires – not viable
- The New Zealand power system shows remarkable resilience to the large changes
- This is due to the inherent flexibility of the hydro, thermal and transmission systems:

- i.e. hydro and thermal generation flex around solar output and charging loads
- Average price levels (LWAP) are not impacted strongly since flexibility is not expensive
  - Day-night and weekday-weekend prices are altered noticeably
  - Seasonal impacts are more pronounced

Mid Summer Weekly Generation Profile



Source: Meridian

# Batteries → Domestic Energy Storage

- Very early days
- Future is intrinsically linked to EVs
- Interest due to:
  - Enabling consumers to go off-grid entirely
  - Helping customers avoid peak pricing
  - Reducing injection back into the grid for solar PV
  - Increased household resilience
  - Lines network management



# Battery Storage → An Off-Grid Revolution?

- Economics are mostly unattractive:
  - Going off-grid: PV + battery system would cost > \$100K for an average home
  - Avoiding peak pricing: Peak to off-peak price differential needs to regularly reach levels > \$300-\$500/MWh
  - Reducing PV injection: helps avoid \$80/MWh injection prices to secure a \$280/MWh tariff but relies on a temporary cross subsidy
  - Resilience: depends on personal attitude to risk and frequency of outages
  - As and when costs outweigh alternatives

We assume NZD \$7,000-8,000 6.5kWh battery with daily cycling capability sufficient for a 10 year lifetime (100kg & 1.0m by 0.5m)

## Household Off-Grid Costs

Day-time consumption 25%

### No Seasonality

	<u>Solar PV</u>	<u>Battery</u>	<u>Total</u>
Installation kW	7.4	5.5	
Cost \$/kW	\$3,333	\$4,000	
Installation \$	\$24,622	\$22,160	\$46,781
Efficiency	14%	85%	
Annual kWh	8,000	7,059	
Daily kWh	21.9	19.3	
Load kW	0.9	0.8	
Per unit \$/MWh	\$310	\$470	\$780
From the Grid \$/MWh			\$2,200 275

Day-time consumption 10%

Source: Meridian

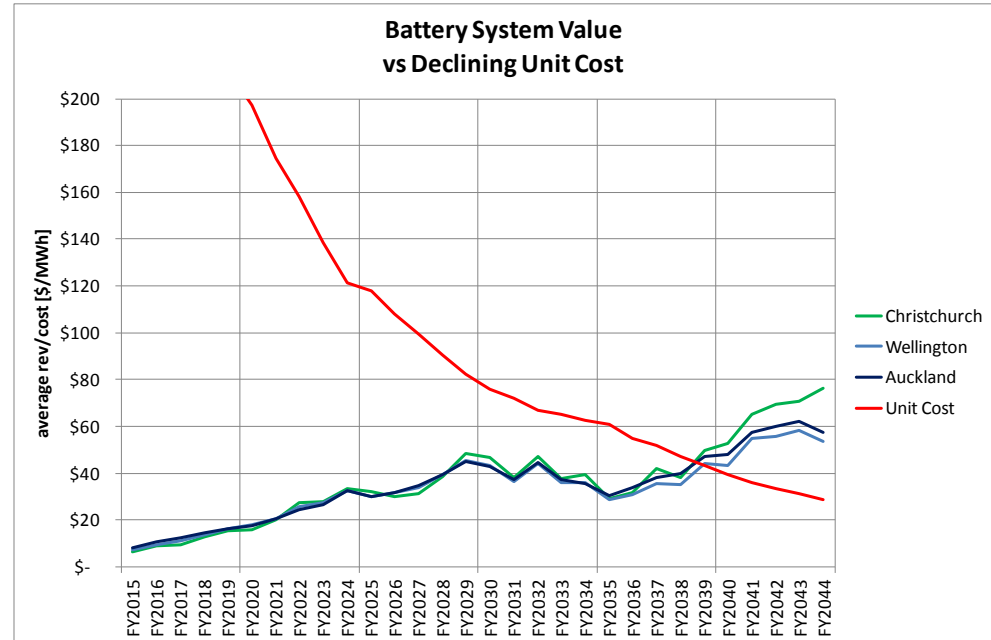
### Winter

Installation kW	16.9	15.2	
Cost \$/kW	\$3,333	\$4,000	
Installation \$	\$56,442	\$60,957	\$117,399
Efficiency	7.5%	85%	
Annual kWh	9,600	10,165	
Daily kWh	26.3	27.8	
Load kW	1.1	1.2	
Per unit \$/MWh	\$600	\$890	\$1,490

# Battery Storage → Low Value in the NZ System?

- New Zealand has a significant amount of grid storage within the existing power system:
  - Thermal 4.8 TWh – monthly
  - Reservoirs 4TWh – monthly
  - Smaller lakes – weekly
  - Headponds – daily
- Domestic battery storage will do little to add value to system flexibility any time soon

System Value of Battery Storage



Source: Meridian

- The value of battery storage in the New Zealand power system is currently <\$10/MWh while costs are >\$300/MWh
- Costs will likely fall over time while the value will increase, however the transition point is not for some time

We assume NZD \$4,000/kW battery cost declining at 5% pa and a 10 year lifetime increasing to 25 years

# Strategic Asset Management

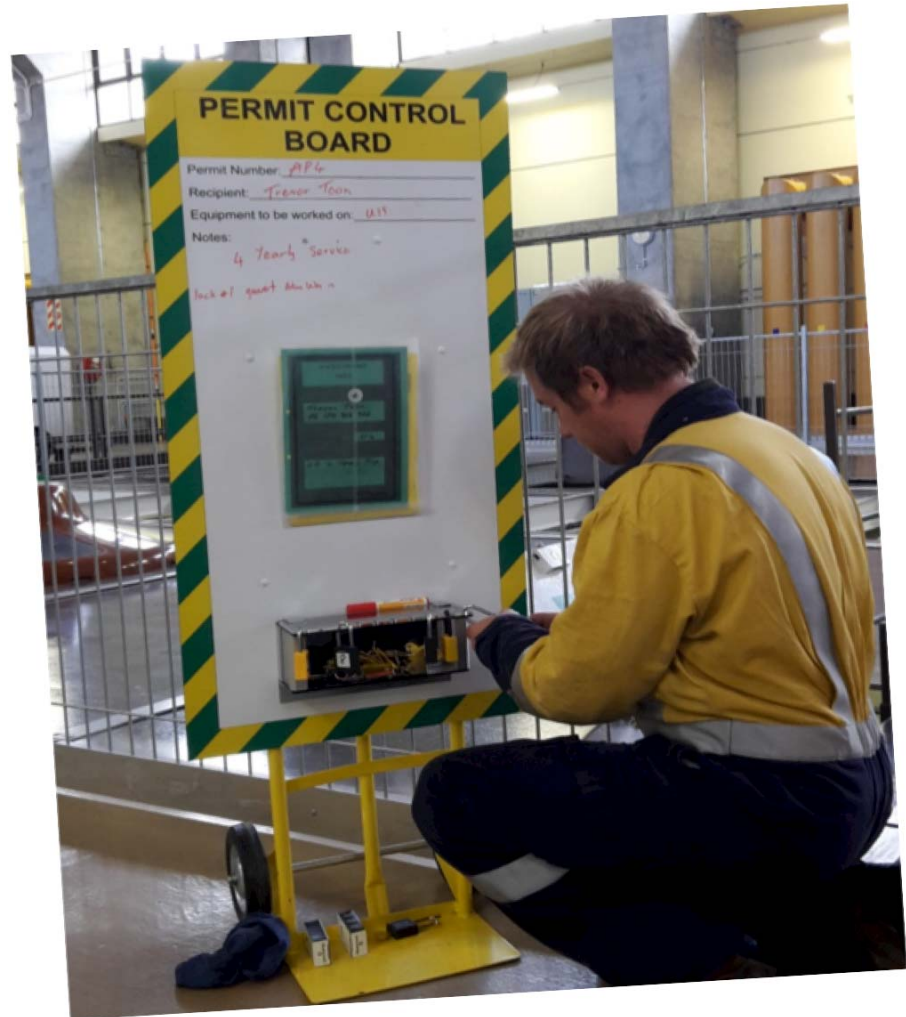
## Neal Barclay





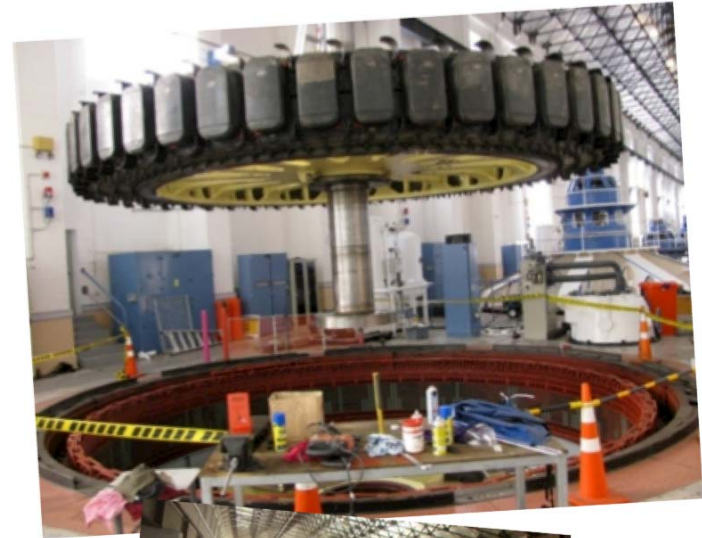
# “Safety is for Keeps”

- Lag indicators are mildly interesting at best
- Meridian is focused on Fatal Risks
- Building further on our cultural programme
- Working with the industry through Staylive Forum
- Health and Safety Framework has been externally tested against the new Health and Safety Reform Bill



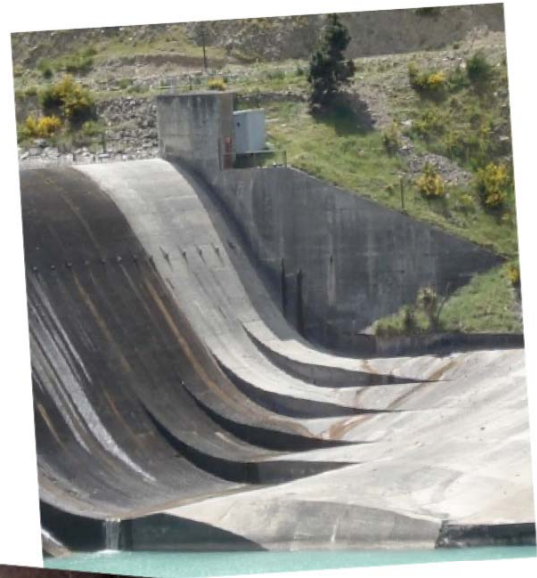
# Waitaki Refurbishment

- Total cost around \$35m (\$10m better than planned)
- Site work from March 2013 to June 2017
- Work completed to date:
  - Unit protection and fire suppression
  - Upgrade of station cranes
  - Repairs to sluice structure
  - River bank erosion protection
- Unit 3 re-commissioning in progress
- In the design phase
  - Upgrade to transformer fire walls
  - Seismic strengthening of powerhouse



# Waitaki Refurbishment

- Dam structural safety evaluation works are still in design
- Scope includes:
  - Inundation protection of the Hornell Gallery
  - Manifolding and upgrading of the uplift drainage system
  - Enhance uplift drainage on the left abutment dam blocks





# Manapouri Transformers

- Replaced all HV bushings on all seven main unit transformers in FY14 to address hairline cracks
- During replacement, discovered oil coolers were failing, causing aluminium contamination of oil in some transformers
- Previously unknown failure mode
- Two transformers were sufficiently contaminated to require replacement
- A third transformer was marginal
- Two are installed, third is underway
- Two external reviews of transformer strategy and conditioning monitoring framework complete



# Hydro Asset Risk Management – Plant and Planning

## Plant

- Assets are robust, reliable and simple design
- Operated within original equipment manufacturer recommendations
- High reliability and availability and low capacity factors provide operational flexibility to best manage river chain hydrology and risk

## Planning


- 20 year plan, reviewed annually
- Consistent and comprehensive risk and opportunity based approach to prioritise and plan future work
- Risk management approach consistent with ISO31000
- Asset performance underpins Meridian's portfolio position, provides operational flexibility and contributes to grid support and security

# 20 Year Hydro Plan

- Major turbine and generator work set the primary timing of the 20 year plan
- Ohau B and C refurbishments will be aligned



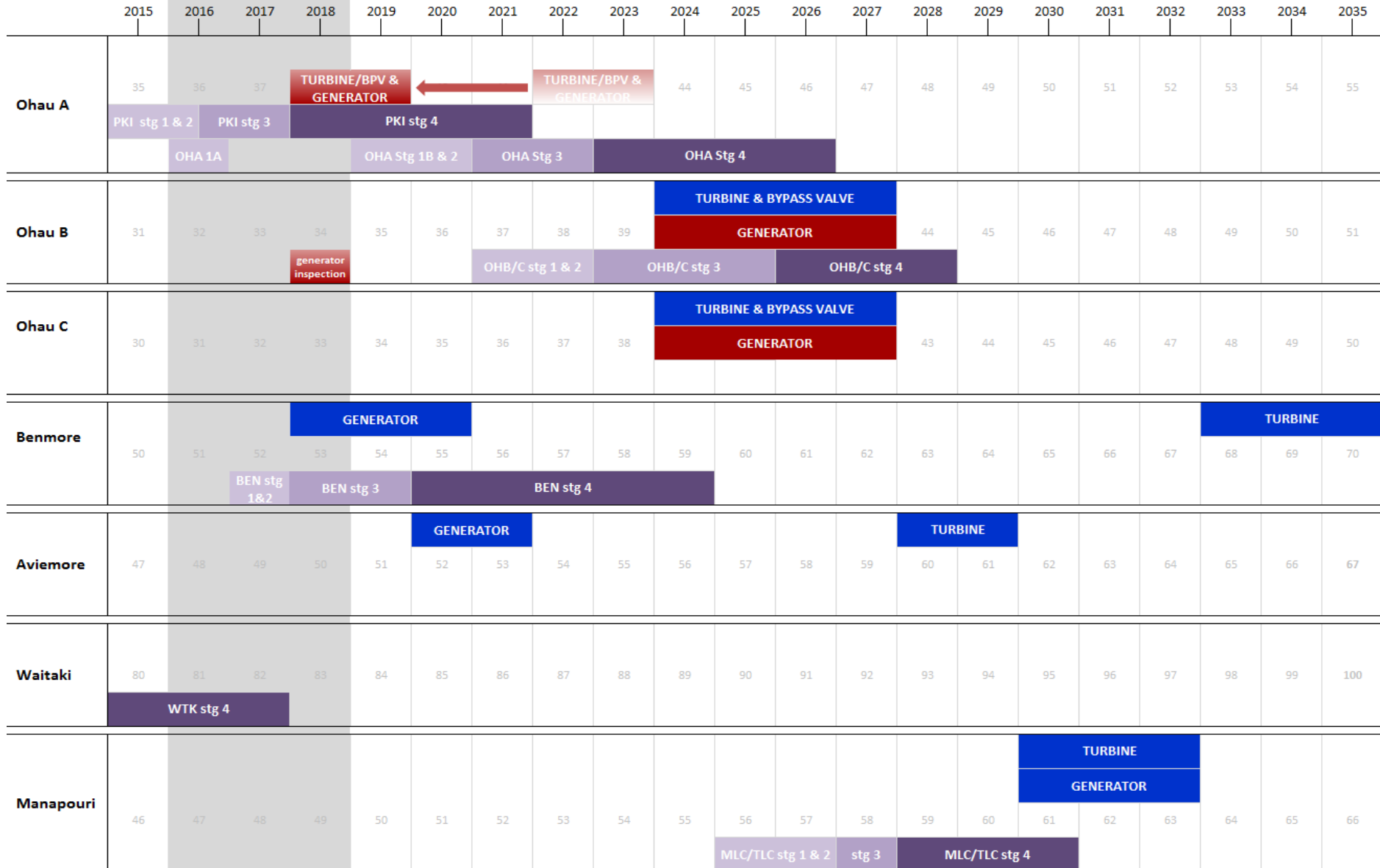
# 20 Year Hydro Plan

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Ohau A	inspection	36	37	TURBINE/BPV & GENERATOR				TURBINE/BPV & GENERATOR		44	45	46	47	48	49	50	51	52	53	54	55
Ohau B	31	32	33	34	35	36	37	38	39	TURBINE & BYPASS VALVE											
				generator inspection						GENERATOR				44	45	46	47	48	49	50	51
Ohau C	30	31	32	33	34	35	36	37	38	TURBINE & BYPASS VALVE											
										GENERATOR				43	44	45	46	47	48	49	50
Benmore	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	TURBINE		
Aviemore	47	48	49	50	51	GENERATOR			54	55	56	57	58	59	TURBINE						
Waitaki	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Manapouri	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	TURBINE					
																GENERATOR					

# 20 Year Hydro Plan

- Major turbine and generator work set the primary timing of the 20 year plan
- Ohau B and C refurbishments will be aligned
- Long term commitment to the Structural Safety Evaluation Programme

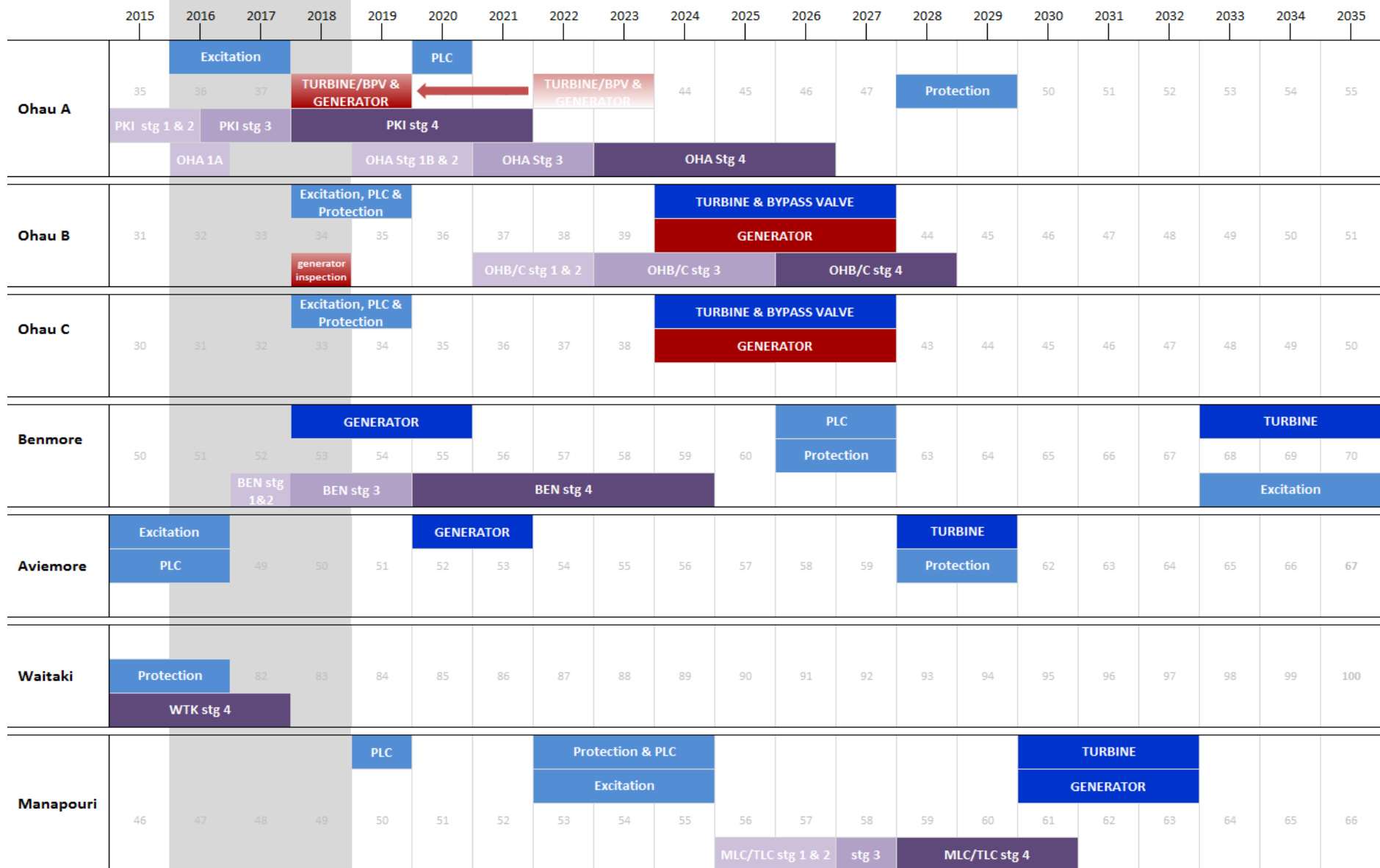
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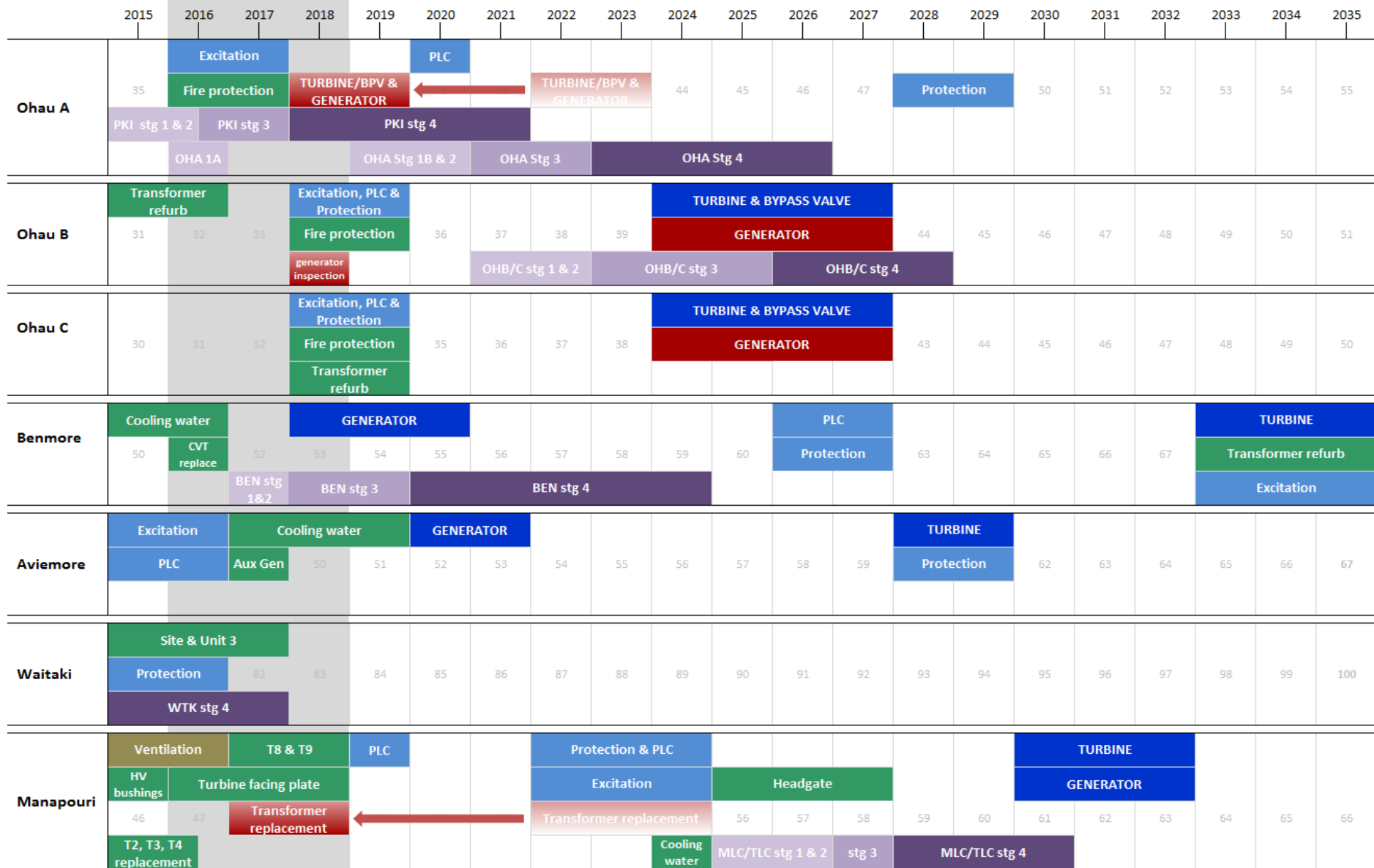
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- Fit other projects in at optimum timing

# 20 Year Hydro Plan

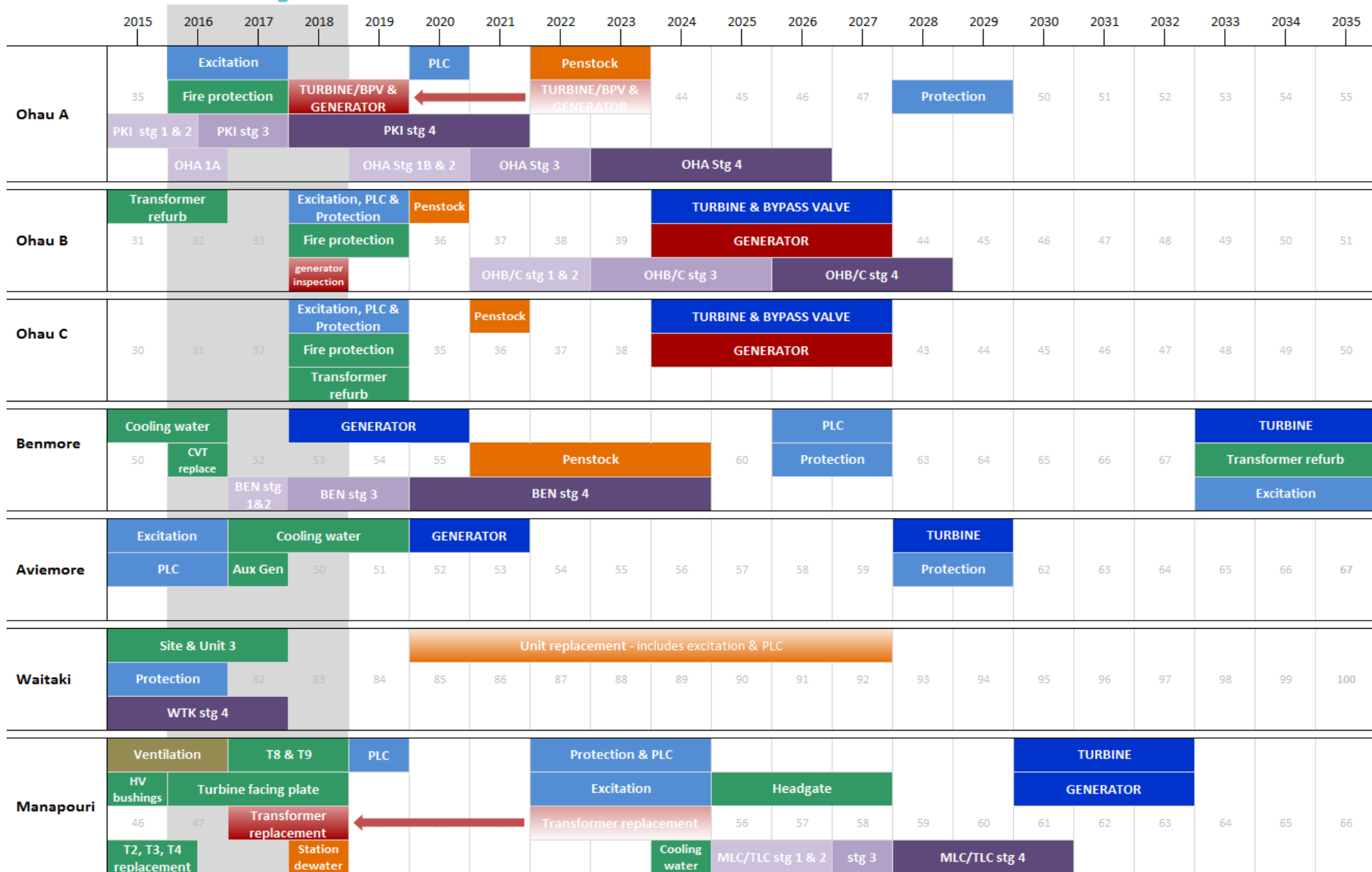




# 20 Year Hydro Plan

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- Ohau B and C refurbishments will be aligned
- Long term commitment to the Structural Safety Evaluation Programme
- Control systems, excitation and protection replacements are best fit and will be combined where feasible
- Fit other projects in at optimum timing
- Waitaki main units are run to failure with the 'N+1' re-commissioning of unit 3
- Remain flexible with timing of large civil works, firm up costs three years out
- Contingent works
  - Lower Lake Pukaki if required for management of dry year risk

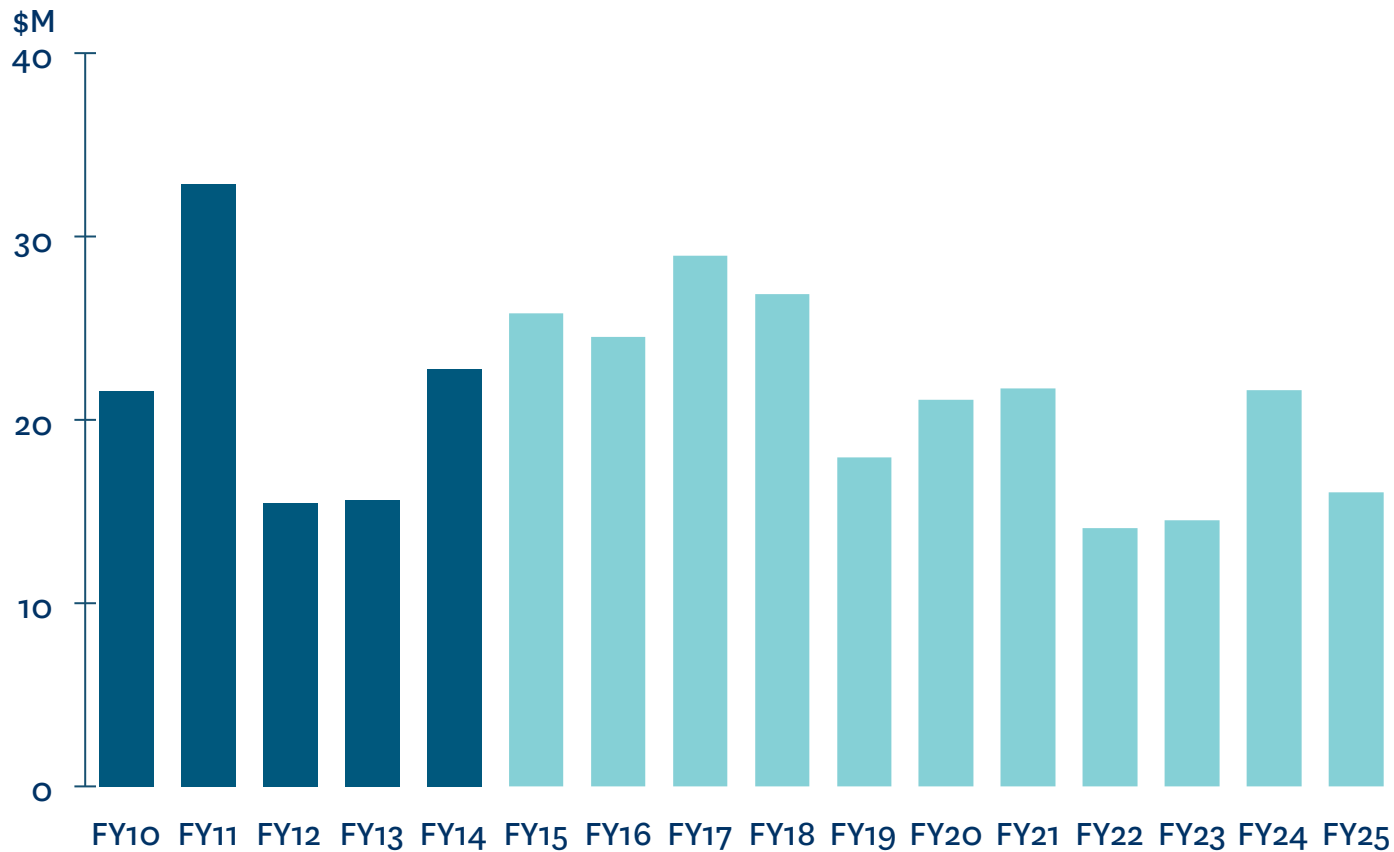
# 20 Year Hydro Plan



# Hydro Expenditure Profile

- The bulk of stay in business capex is hydro maintenance and IT spend

## HYDRO CAPITAL EXPENDITURE



Projections are not adjusted for inflation (2015 real dollars)

Source: Meridian

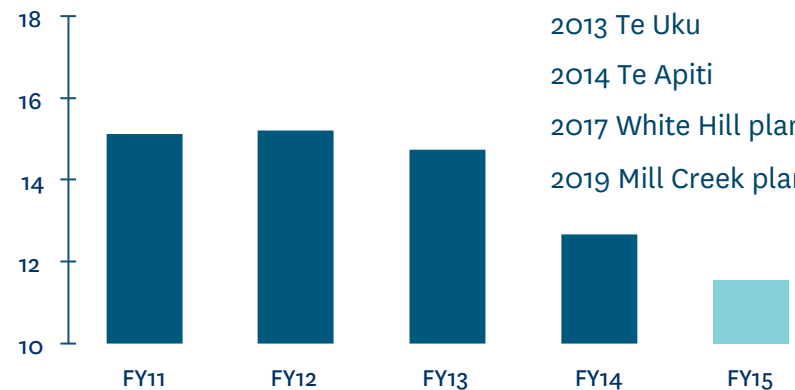
# Wind Maintenance Strategy

- Te Apiti, our oldest wind farm only just turned 10 years old
- Repowering options and significant capital reinvestment still 10+ years away
- Manufacturing quality issues on new farms have been addressed through original equipment manufacturer warranties
- Strategy to in-source maintenance has delivered strong results



## WIND UNIT COSTS

\$/MWh



### Maintenance in-sourcing

2012 West Wind

2013 Te Uku

2014 Te Apiti

2017 White Hill planned

2019 Mill Creek planned

Source: Meridian

# Future Generation Options

## Chris More

### Te Apiti

Manawatu Gorge

91 MW

Opened 2004

### White Hill

Southland

58 MW

Opened 2007

### West Wind

Wellington

143 MW

Opened 2009

### Ross Island

Antarctica

1 MW

Opened 2010

### Te Uku

Waikato

64 MW

Opened 2011

### Mill Creek

Wellington

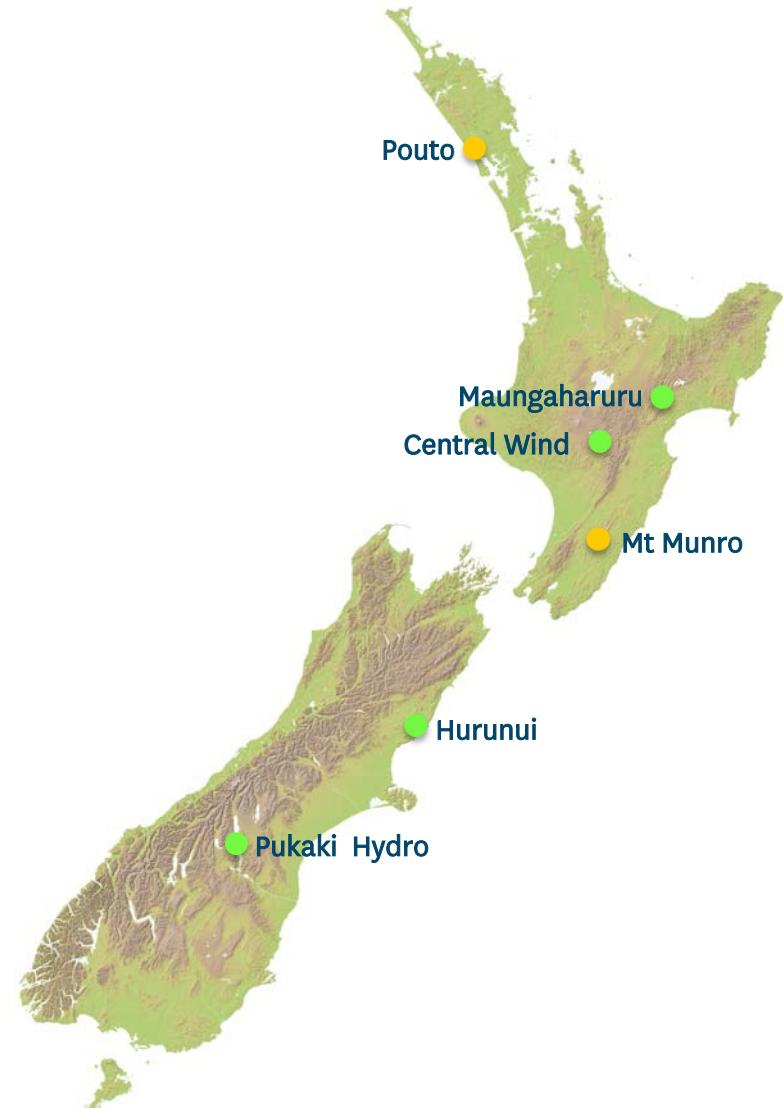
60 MW

Opened 2014



# Current View of Meridian's Pipeline

- Three main groups – Consented Development, Unconsented Development and Investigation sites
- Consented Development sites:
  - Maungaharuru
  - Central Wind
  - Hurunui
  - Pukaki Hydro
- Unconsented Development sites:
  - Pouto
  - Mt Munro
- Investigation and early stage sites remain confidential
- These options are at various stages of development and confidence





# Portfolio Summary of Options

- Energy range (GWh pa): 120 to 410
- Capacity factors (%): 36 to 44
- Installed capacity (MW): 35 to 132
- Capital costs (\$M): 110 – 331
- Unit cost ranges (\$/MWh) 79 - 99 (0.60 Euro)  
72 - 91 (0.70 Euro)



# Maungaharuru

- Located on the Maungaharuru range within the Hawkes Bay region
- Nearest port is Napier, 50km away
- Proposed site is adjacent to SH5
- Site has half the 220kV Wairakei – Whirinaki transmission lines passing over the corner of the site
- Key physical attributes
  - 8.8m/s mean wind speed
  - 37.7% capacity factor
  - 93 – 123 MW (depending on final land configuration)
  - 305 – 410 GWh





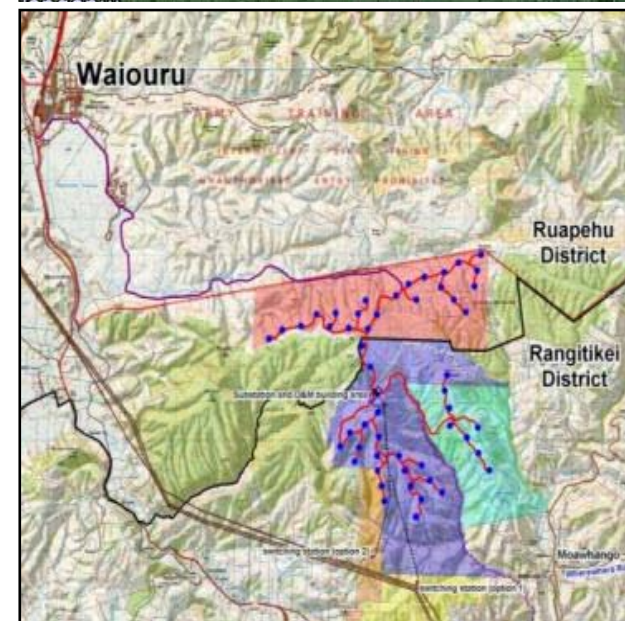
# Maungaharuru - Google Earth Simulation





# Central Wind

- Located adjacent to the Central Plateau, 8km southeast of Waiouru
- The current preferred port for supply would be Port of Auckland
- The proposed site is close to SH1 and Transpower 220kV Bunnythorpe – Wairakei transmission line
- Key physical attributes
  - 8.0m/s mean wind speed
  - 35.1% capacity factor
  - 100 – 132 MW (depending on land configuration)
  - 300 – 400 GWh



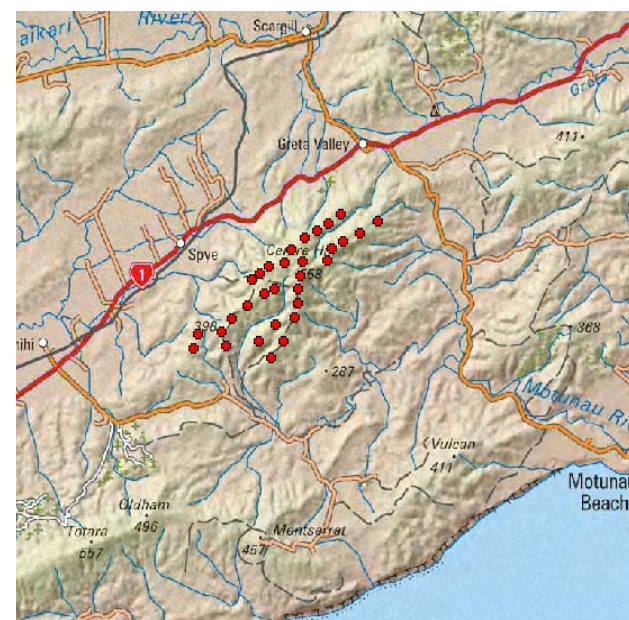
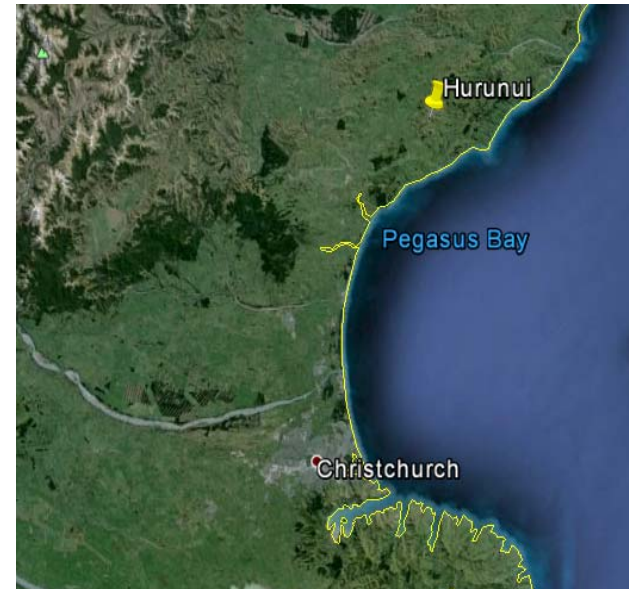
# Central Wind - Google Earth Simulation





# Hurunui Wind

- Located in North Canterbury, 60km north of Christchurch, 10km inland
- The current preferred port for supply would be Lyttelton
- The smaller end of the capacity range may be necessary if connection into the local 66kV network is deemed financially beneficial
- Key physical attributes
  - 7.6m/s mean wind speed
  - 36.4% capacity factor
  - Up to 70 MW (depending on final configuration)
  - Up to 230 GWh





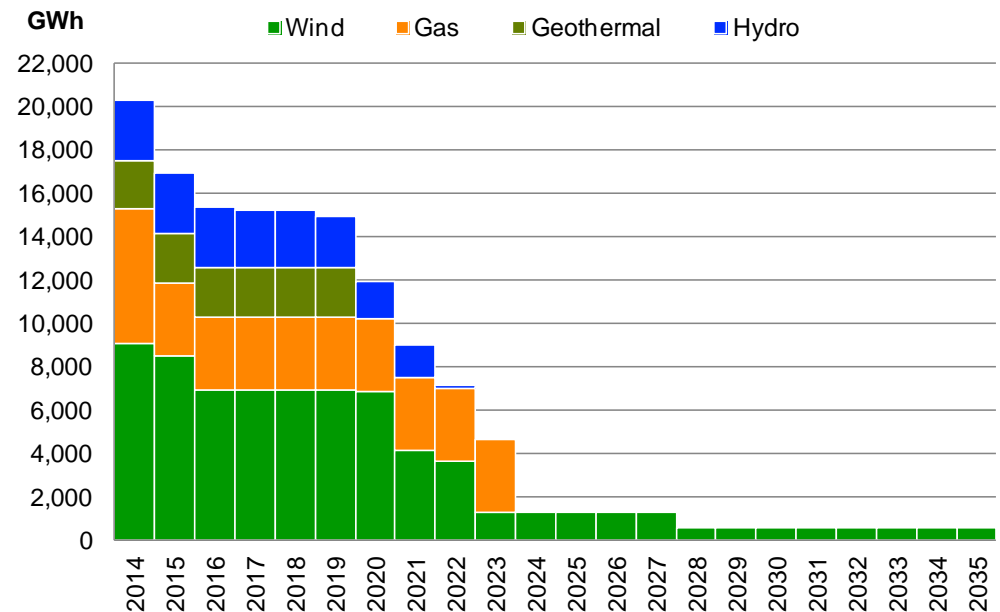
# Hurunui Wind - Google Earth Simulation



# Consent Profile

- Consents lapse if not given effect to, i.e. construction initiated within a defined period
- Most wind farm consents have either a 5 or 10 year lapsing period
- Consents can, under certain circumstances be extended
- Without extension, more than 90% of New Zealand's existing consented sites lapse by 2024
- Developers going forward are likely to rationalise total consents and only seek extensions of the most economically viable options

New Zealand Consent Decay Curve

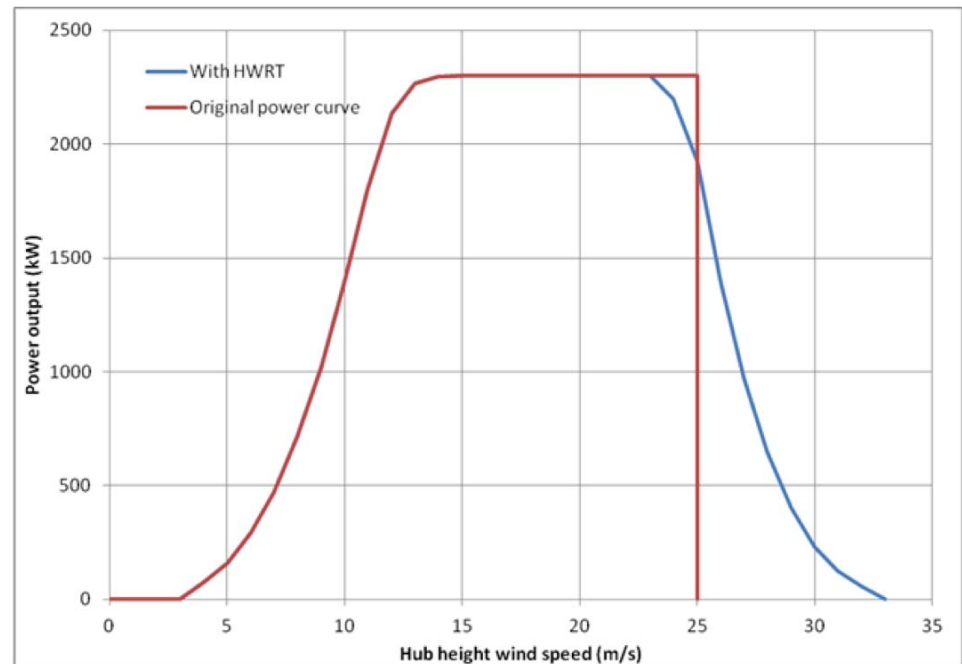


Source: Meridian

# Improving Yield on Existing Assets – High Wind Ride Through

- Increases cut out wind speed from 90 km/h to 115 km/h
- Tested and retrofitted at West Wind
- During 13 months of operation delivered 2% improvement in energy
- Innovation was factory fitted for the Mill Creek turbines

Power Curves at West Wind



Source: Meridian

# Improving Yield on Existing Assets - 'Blade Furniture'

- Blade furniture being considered at Te Uku
- Combination of additional hardware fitted to blades and software upgrade to the turbine
- Likely to provide an energy uplift of 3% across the site
- Mill Creek has this functionality fitted, although shorter blades than Te Uku

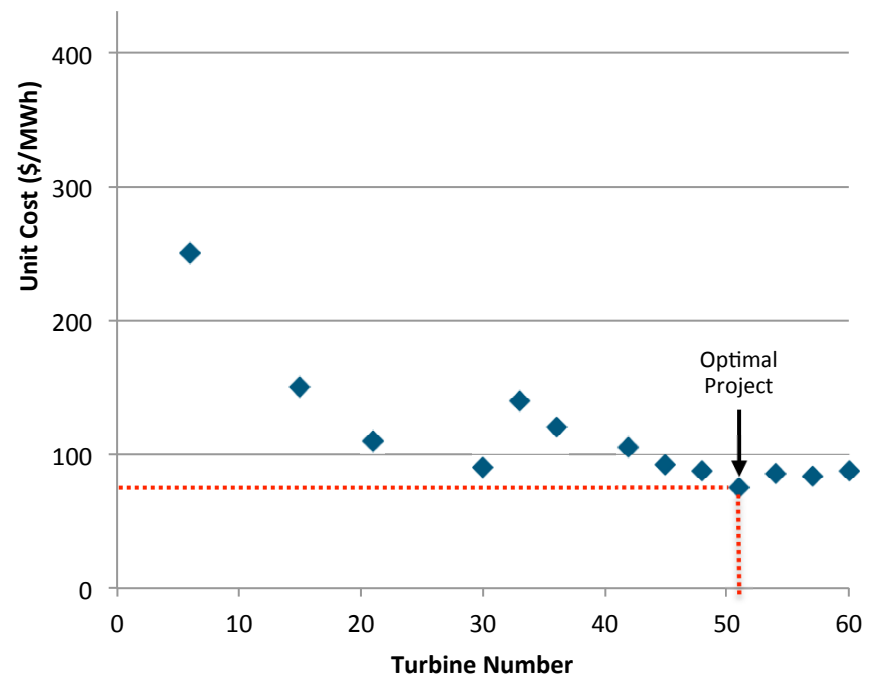




# Improving Economics on Future Developments

- Identify the maximum injection of MW that the national grid can accommodate at the project specific location
- Identify potential 'step change' influences such as grid connection, transformer sizing, number of electrical cable strings and construction programme
- Determine optimal project configuration through analysis using individual turbine yield, risk assessment, environmental considerations and construction cost estimates

Optimising Returns (Unit Cost v Farm Size)



# Pursuit of Step Change Wind Pricing

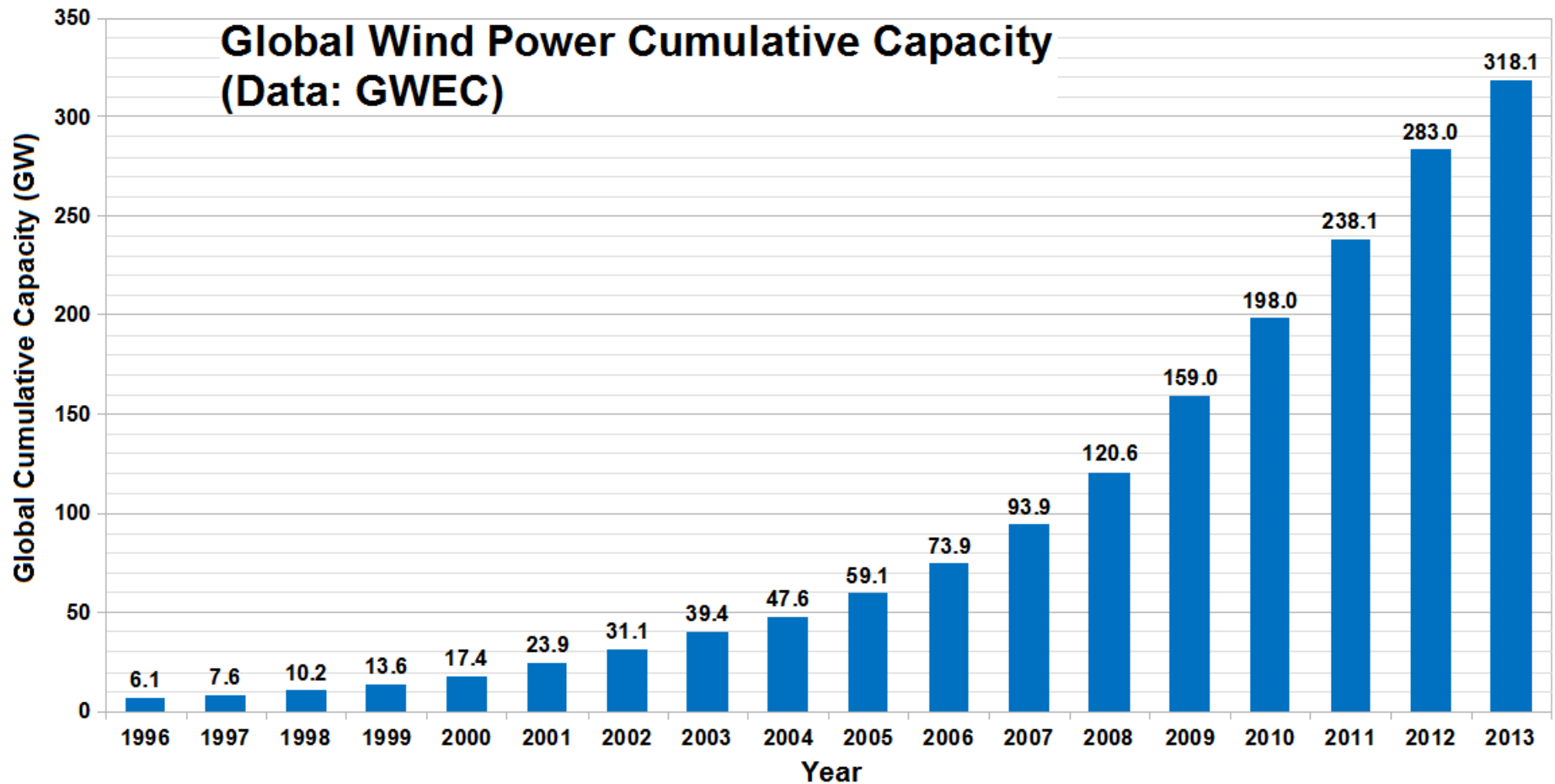
- Turbine blades have continued to increase in length over time and capture more energy
- The larger machines will make higher class 2 wind sites more economic
- Expecting future price improvements through automation and product standardisation in the manufacturing process





# Global Wind Activity

- Yield and cost improvements have underpinned large global capacity growth



# Retail

## Alan McCauley



# A Tale of Two Countries – Contrasting Retail Markets

- Australia
  - Incumbents offering little differentiation – dominated by 3 large competitors
  - Consolidation occurring amongst second tier retailers
  - Low service levels
  - Higher margins
- New Zealand
  - Competition remains strong
  - Offers are focused on sign-on credits
  - Increased usage of prompt payment discounts
  - Growing number of smaller retailers
  - Emerging differentiation between retailers
  - Slim margins



# Meridian Retail Highlights This Year

- Operational
  - Aged debt, unbilled customers and no read codes at their lowest level post Canterbury earthquakes
  - Switch-in times for new customers faster than ever before
  - High compliance and reputation with the EGCC on complaints management
  - Smart meter deployment kicked off, including supporting tools and processes
  - Significant revenue assurance focus paying off
  - Migration of customer interactions to online or self serve channels show call volumes trending down in last seven months
  - Improved operational model underpinned by robust ICT model now in place



# Meridian Retail Highlights This Year

- Product and Pricing
  - Significant number of historical pricing anomalies resolved
  - Solar export rates for new and current customers reset
  - Farm Source deferred winter payment launched
  - Self service about to launch for SMB<sup>1</sup> and Agribusiness
- Sales and Marketing
  - Auckland telesales team established and new Auckland office open
  - New advertising agency appointed







# Competitive Market Update

## Regulatory

- Saves exemption now in effect
- Low fixed user charge regime adds to complexity of the industry
- Commence Commission commenced review of fixed (term based) pricing
- Consumer Guarantees Act impact on exit fees

## Product

- Trustpower and Contact rebranding, Trustpower and Genesis bundles
- PPD's increasing – Contact 22/18%, Energy Online 20%, Mercury 12%
- Closure of Southdown likely to enable Mercury renewable positioning

## Brand and Above-The-Line Campaigns

- Increasing value of offers in market
- High above the line marketing activity across SMB and Residential segments
- Increased spending on mass market media

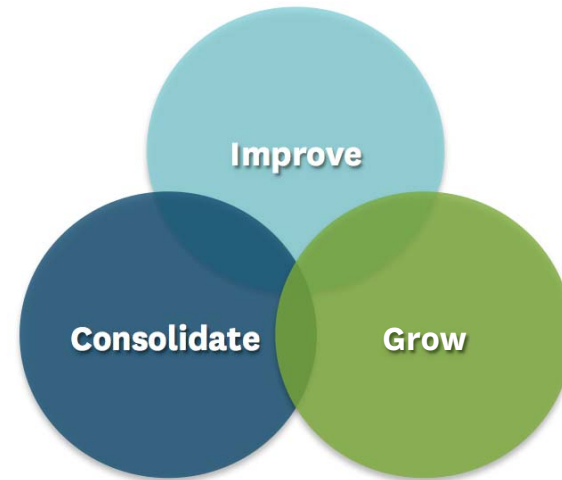
## Channels and On The Ground Activity

- Genesis out of door-to-door, Contact appointment based door-to-door
- Small retailers taking some market share but finding it hard in a slim margin market

# Meridian Retail's Progress

## Phase 1 (FY15) - Consolidation

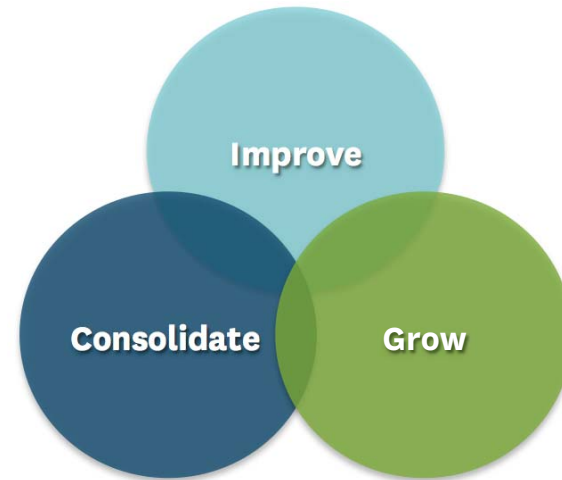
- Staff structure realigned with clearer objective delivery
- Commenced rationalisation of operational systems and processes
- Increased online channel effectiveness
- Operational framework of Attract, Welcome, Enhance and Resolve defined
- Shift to customer driven insight and design
- Revised market segment strategies now determined



# Meridian Retail's Progress

## Phase 2 (FY16) - Improvement

- Implement customer facing brand
- Implementation of Attract, Welcome, Enhance and Resolve model
- Complete system and process rationalisation
- Improve sales channel conversion and customer retention



## Phase 3 (FY16-17) - Growth

- Growth will be in value rather than volume
- Focused retention and acquisition of profitable customers
- Closing the profit gap to our competitors

# Remuneration

## Jacqui Cleland





# Employee Remuneration

- Based on market relativity and individual performance
- Fixed remuneration
  - Base salary and KiwiSaver
- Short term incentive scheme
  - At-risk and discretionary
  - Based on achievement of Board approved company profit levels
  - Together with individual performance against stretch objectives
- Employee share scheme
- Executive long term incentive scheme



# Executive Remuneration

- Aligned with shareholders' interests
- May be invited to participate in a short term incentive (STI) scheme
- Similar STI scheme to non executive staff
  - Based on achievement of Board approved company profit levels
  - Together with individual performance against stretch objectives
  - Individual stretch objectives based on company strategic objectives and business plan
  - Board approves company strategic objectives and business plan and reviews annually



# Executive Remuneration

- May also be invited to participate in long term incentive (LTI) scheme
  - LTI was introduced on listing together with a reduction to STI to offset potential cost of the scheme
  - Can only result in executives receiving shares if shareholder value is positive and exceeds peer returns





# Executive Remuneration

- LTI conditions for vesting
  - Continued tenure
  - Positive absolute Total Shareholder Return (TSR) over the three year period
  - Relative TSR against benchmark peer group over the three year period
    - Less than 50<sup>th</sup> percentile; 0% of shares vest
    - Between 50<sup>th</sup> and 75<sup>th</sup> percentile; 50% of shares vest
    - 75<sup>th</sup> percentile and above; 100% of shares vest



# Corporate Governance

## Jason Stein



# The Meridian Board

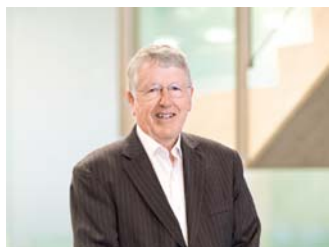


**Chris Moller**

Meridian Chair, director since May 2009

Current Chair of SKYCITY

Previously Deputy Chief Executive of Fonterra



**Peter Wilson**

Meridian Deputy Chair, director since May 2011

Previously Chair of Westpac New Zealand Limited



**John Bongard**

Director since May 2011

Previously Chief Executive and Managing Director of Fisher & Paykel Appliances Holding Ltd



**Mark Cairns**

Director since May 2012

Current Chief Executive of Port of Tauranga Limited



**Jan Dawson**

Chair of Audit and Risk Committee

Director since November 2012

Current Chair of Westpac New Zealand Limited



**Mary Devine**

Chair of the Remuneration and Human Resources Committee

Director since May 2010

Previously Managing Director of J. Ballantyne & Co and Chief Executive of EziBuy



**Sally Farrier**

Director since July 2012

Professional non-executive director and corporate advisor

Previously an Australian National Water Commissioner



**Anake Goodall**

Director since May 2011

Previously Chief Executive Officer of Te Rūnanga o Ngāi Tahu



**Stephen Reindler**

Chair of Safety and Sustainability Committee

Director since September 2008

Previously President of the New Zealand Institution of Professional Engineers

# The Meridian Board

- Role is to provide strategic guidance and have effective oversight of management
- Responsibility to work in the interests of all shareholders
- Directors are subject to reappointment every three years
- Shareholders receive information on candidates standing for election/re-election in notice of annual meeting
- All current directors are independent and are Meridian shareholders
- Director independence is assessed annually against NZX and ASX requirements



# Corporate Governance

- Meridian has adopted policies that reflect best practice
- Incorporating principles and guidelines from the FMA and NZX and ASX recommendations
- Board focus is on:
  - Promoting ethical and responsible behaviour, supported by:
    - Company values
    - Code of Conduct
    - Core policies
  - Governance framework that delivers highest standards of behaviour and accountability
  - Annual Board and Committee performance revaluations

## ***Meridian's governance structure***





# Board Committees

## Audit & Risk

- Integrity of financial reporting
- Adequacy of internal controls
- Appointment and performance of external auditor
- Monitoring risk management process
- Consists of Jan Dawson (Chair), Peter Wilson, Mark Cairns

## Remuneration and Human Resources

- Alignment of remuneration and people policies and practices
- Fair and responsible remuneration policies and practices
- Review of director remuneration
- Consists of Mary Devine (Chair), Chris Moller, Anake Goodall

## Governance and Nominations

- Overall governance of the business
- Board and Committee composition and performance
- Director independence
- Consists of the full Board

## Safety and Sustainability

- Overall wellness, occupational health and safety of Meridian's people
- Integration of safety and sustainability into strategy, risk management
- Consists of Stephen Reindler (Chair), Sally Farrier, John Bongard

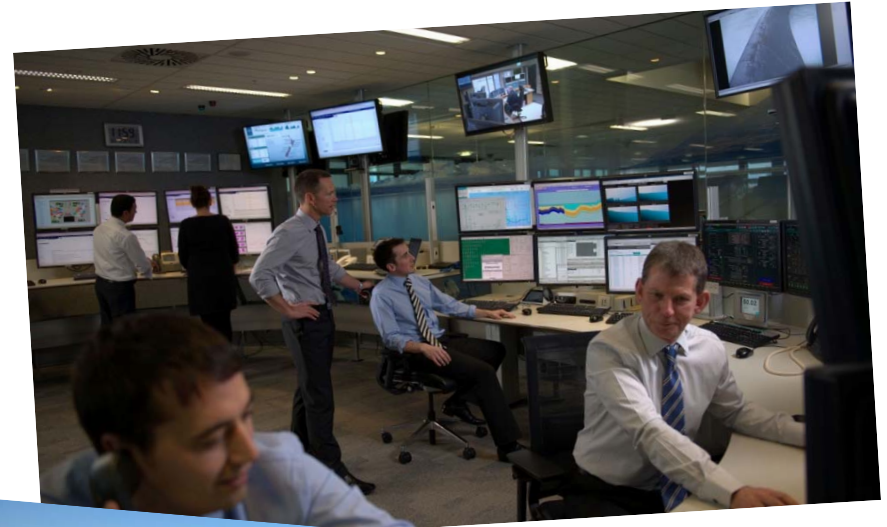
# **Role of Majority Shareholder**

## **Jason Stein**



# The Crown as a Meridian Shareholder

- The Public Finance Act and Meridian's Constitution require the Crown to hold at least 51% of shares
- No other person may have more than 10% of the Shares
- The Crown's shareholding is monitored by Treasury
- Management have regular briefings with Treasury officials covering only publicly available information
- Meridian is subject to periodic financial reviews by a parliamentary select committee, in the same way Air New Zealand has been since the Crown took majority holding in 2006
- The Crown is a supportive, reasonable majority shareholder





# The Crown and Shareholder Decisions

- As a holder of at least 51% of shares, the Crown can control matters requiring majority shareholder approval
- This includes resolutions for the election and removal of directors
- The Crown is likely to have influence over any special resolutions requiring 75% majority shareholder approval
- Examples of this would be changes to the Constitution or major transactions
- In addition, the Chair nominated by the Board must be approved by the Minister of Finance
- Meridian works well with the Crown to ensure these processes are seamless



# Information Provided to the Crown

- Under the Public Finance Act, Meridian has to provide certain financial information to the Crown
- This is not publicly available and enables preparation of Government's consolidated financial statements and forecasts
- The Crown and Meridian have a confidentiality agreement in respect of this information
- Treasury does not disclose the information to other parties
- Only Treasury staff directly involved in preparation of Government financial statements and forecasts are allowed to access information
- Those Treasury staff are not allowed to disclose the information to any other Treasury staff or shareholding Ministers
- Business plans are not provided to Treasury





# Concluding Remarks

## Mark Binns



# Company Timeline

