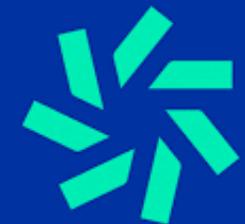




Meridian.

# 2021 Investor Day Presentation



Meridian.

# Introduction

Mark Verbiest  
Chair

# Welcome

Welcome and introduction	Mark Verbiest	Chair
Strategy and targets	Rory Blundell	Group Strategy Manager
Retail	Lisa Hannifin	Chief Customer Officer
Flux Federation	Nic Kennedy	CEO Flex Federation
Future of the NZ system	Grant Telfar	Modelling Manager
South Island demand options	Guy Waipara	General Manager Development
Portfolio balance	Chris Ewers	General Manager Wholesale
Harapaki wind farm	Chris More	Wind Maintenance and Development Manager
Generation development	Rebecca Knott	Head of Renewable Development
Closing comments	Neal Barclay	Chief Executive

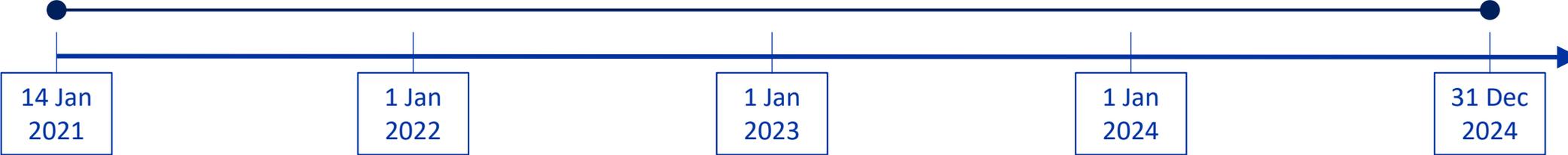
# Three key themes

- Aotearoa's future decarbonisation and the electrification opportunity
- Future dry year solutions
- Meridian's response to a 2024 NZAS exit



# NZAS exit response

NZAS contract



## Meridian portfolio response

Current swaption



CUWLP



NI battery



Process heat



Data centre



Green hydrogen



# Board matters

## Dividend policy

- No changes to ordinary dividend policy proposed (subject always to circumstances)
- 'No earnings or dividend guidance' approach will remain in place

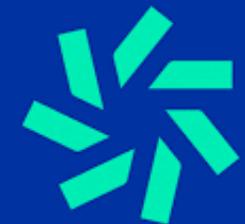
## Current Board

- Diverse skill set
- Gender parity

## Board rotation

- Further changes planned this year





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# Strategy and targets

Rory Blundell  
Group Strategy Manager

# Strategy

Strategic initiatives

**Champion**  
Competitive markets  
Sustainability  
Climate action

**Optimise**  
Trading & asset management  
Re-consenting  
Financing

**Grow**  
Retail  
Generation  
Flux

5-year targets

Grow a clear sustainability leadership position

NZ's highest customer satisfaction

Use our 5,000 GWh renewable opportunity to fast-track NZ's decarbonisation

NZ's largest retail group by ICPs

Triple Aus FY20 customer numbers

3 million ICP's on Flux

A resilient wellbeing and safety culture

Current position

5<sup>th</sup> in Colmar Brunton Better Futures Report

1,500 GWh new demand opportunities identified

5<sup>th</sup> highest customer satisfaction

3<sup>rd</sup> largest retail group by ICPs

6% growth in Aus customer numbers

550,000 ICP's on Flux

90% positive staff wellbeing and safety sentiment, deteriorating injury frequency rates

# Strategy

Strategic initiatives

**Champion**  
Competitive markets  
Sustainability  
Climate action

**Optimise**  
Trading & asset management  
Re-consenting  
Financing

**Grow**  
Retail  
Generation  
Flux

Current initiatives

Regulatory and government relations programmes drive positive change

New South Island demand options to mitigate NZAS closure

Generative health and safety culture

Portfolio evolution to support continued growth

Enterprise security

Customer best in class digital and infrastructure

Reduce Aus retail cost-to-serve, advance pipeline

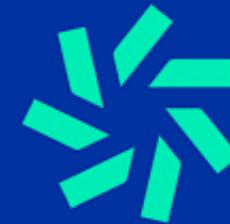
Grow the Flux client base

Deliver Harapaki

Secure new development options

Shift in our management practices to accommodate increased agility and a changing world of work

Covering today



Meridian.

# Retail

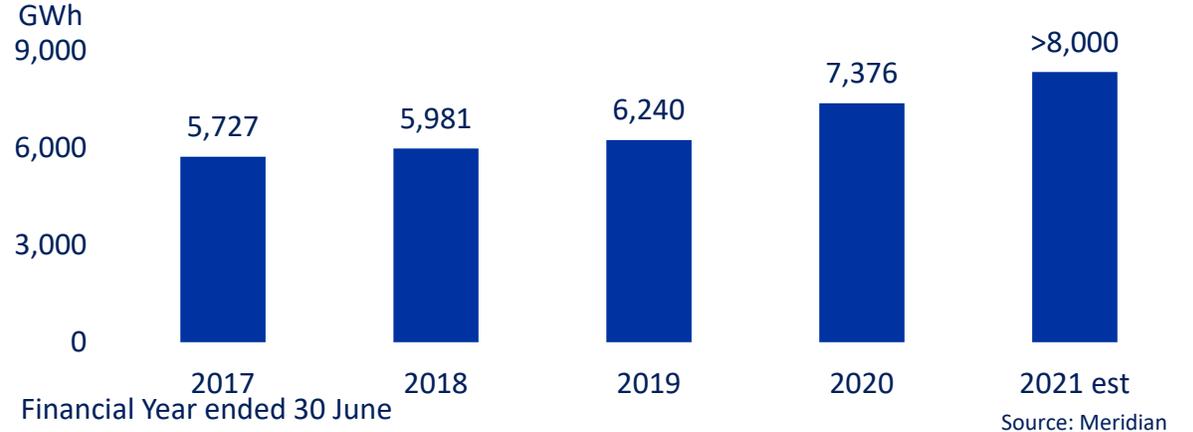


Lisa Hannifin  
Chief Customer Officer

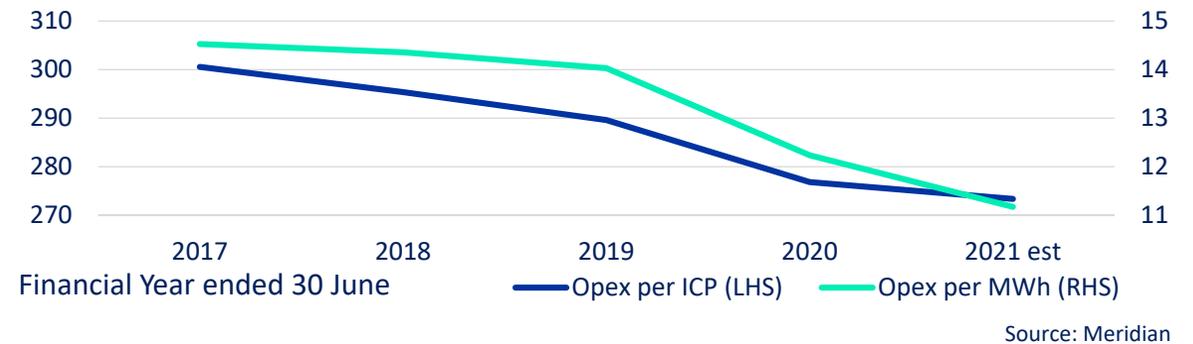
# Profitable growth

- Being delivered through volume and margin management
- Improved financial performance continues despite increased competition and pressure on retail margins
- Significant volume growth has been achieved through targeted acquisition across both brands
- Meridian most notably in the C&I segment, whilst Powershop has grown its Residential and Small Business market share
- Strong discipline on controllable costs despite an increasing customer base has seen a continued reduction in operating expenditure by ICP and MWh

**New Zealand retail sales volumes**



**Operating Expenditure**



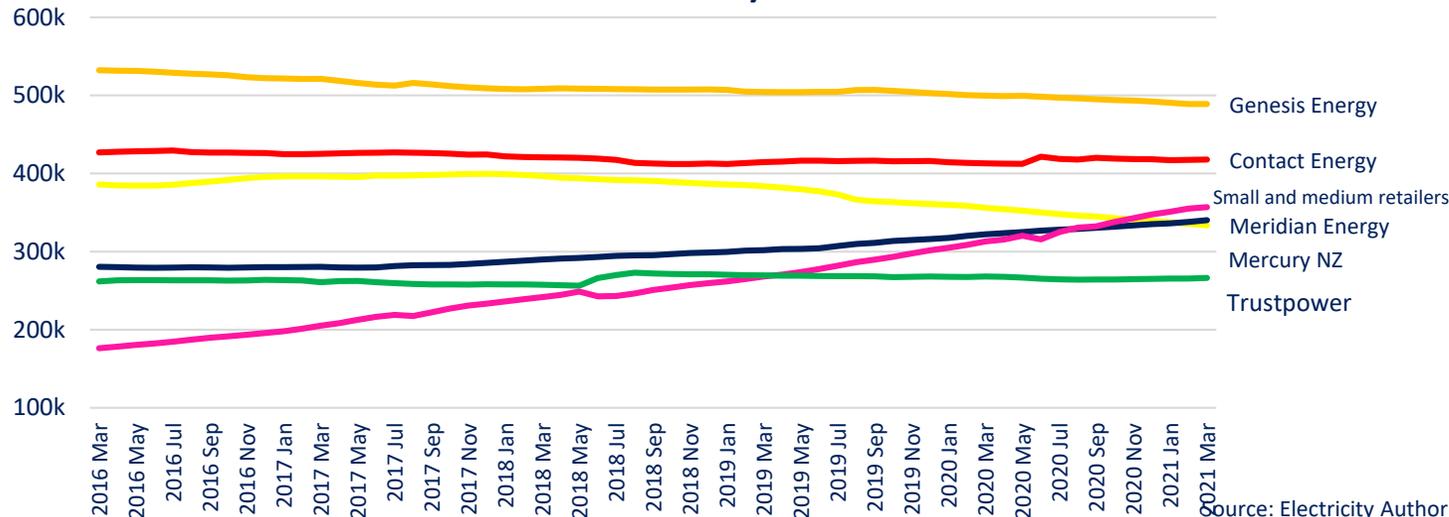
## NETBACK \$/MWH



# Sustained customer growth

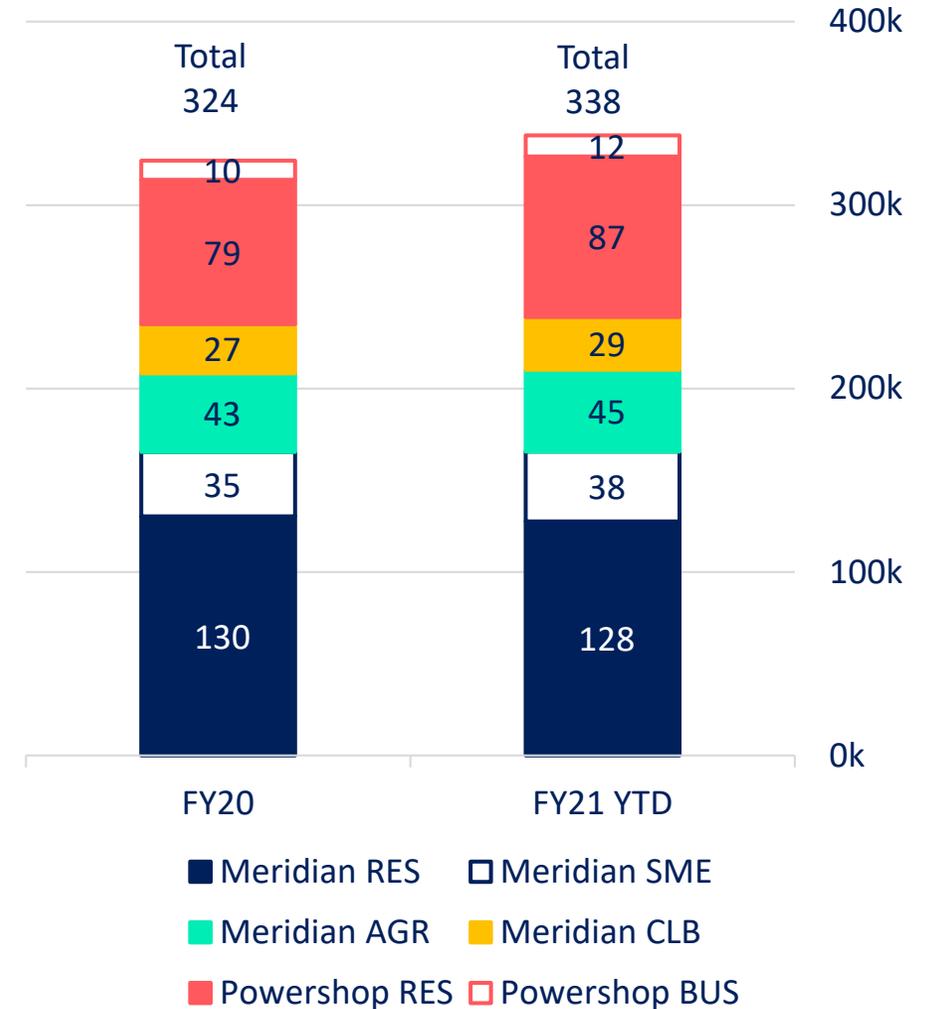
- Through disciplined execution of multi-brand strategy
- The Group is delivering net growth in all segments and has become the 3rd largest retail group in NZ
- Powershop recently surpassed a milestone 100k ICPs
- The strong growth trend of small and medium retailers continues, and Meridian's multi-brand strategy ensures we're well positioned to leverage this

ICP count by Retailer



Source: Electricity Authority

ICPs by Segment

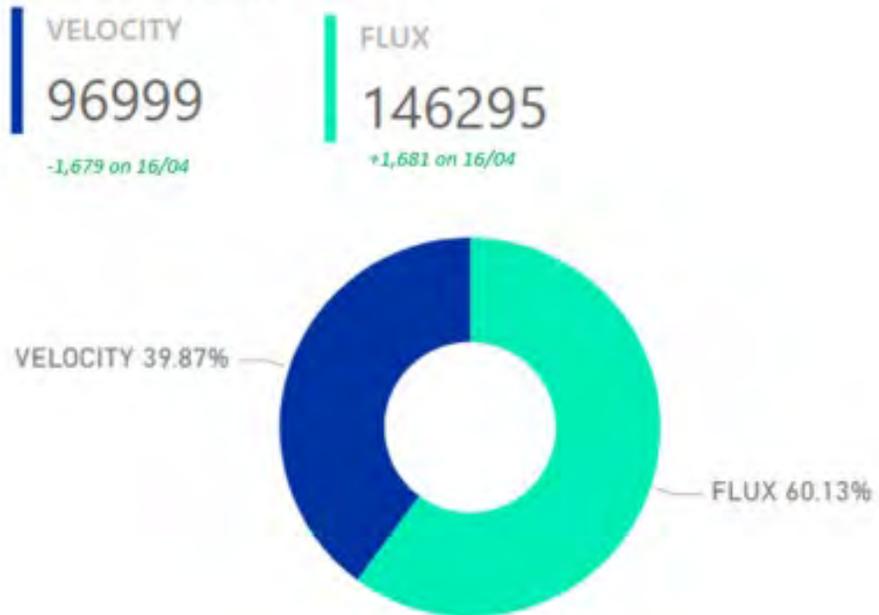


Source: Electricity Authority

# Core platform transformation

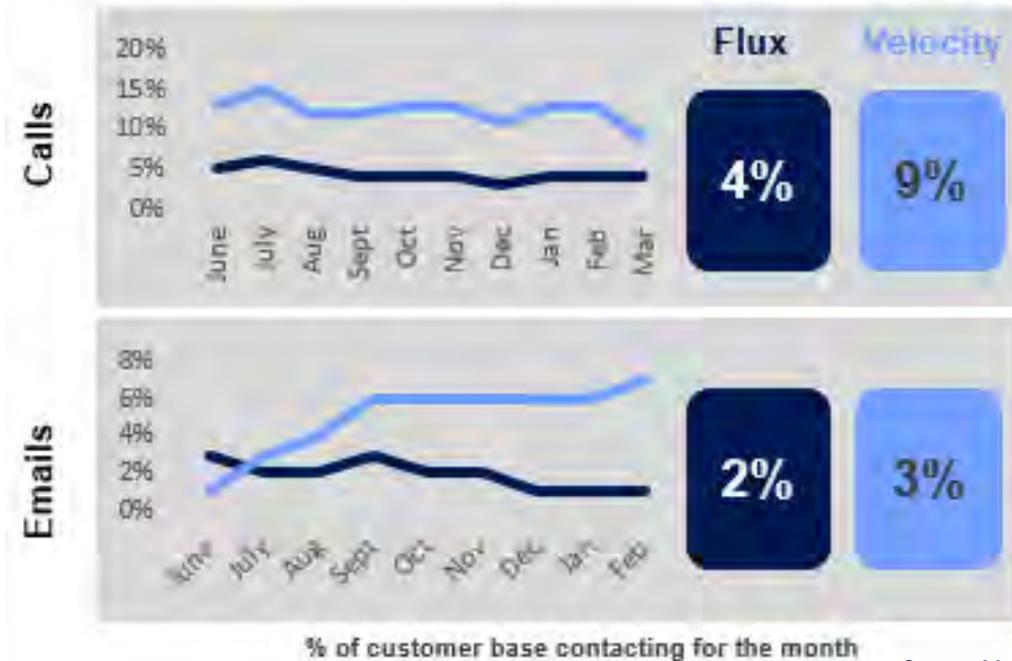
- Near completion with no major issues to date and improved efficiencies
- Over 60% of Meridian ICPs have been successfully migrated to the Flux platform with the project due for completion in 2021

Meridian ICPs by Platform



Source: Meridian

## Customer Interactions



Source: Meridian

- Platform productivity benefits are being realised with improved customer care agent to ICP servicing ratios driven by reduced customer interaction volumes

# Stable customer satisfaction

- In both brands, despite core platform transformation



Meridian.

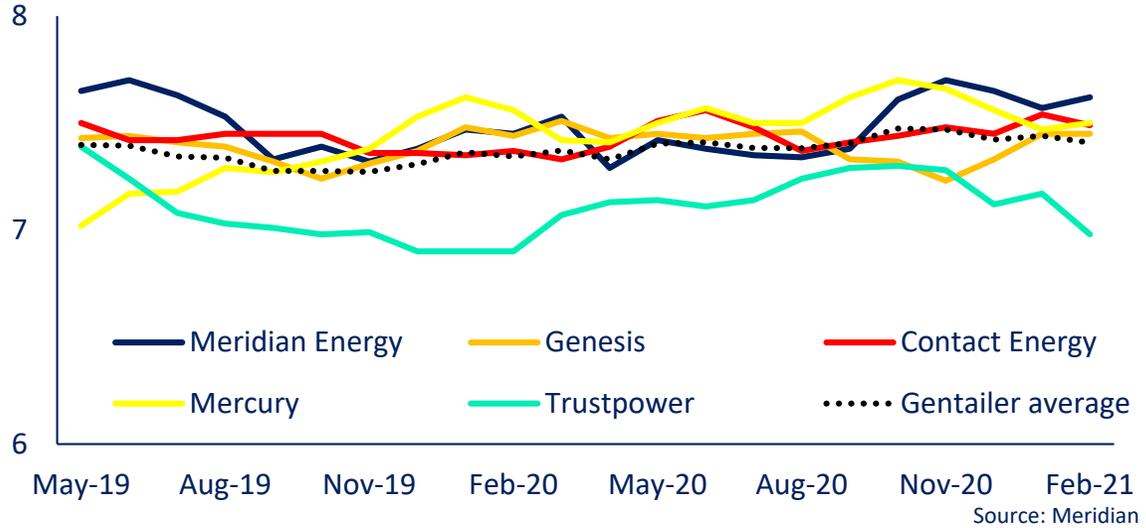


Source: Meridian

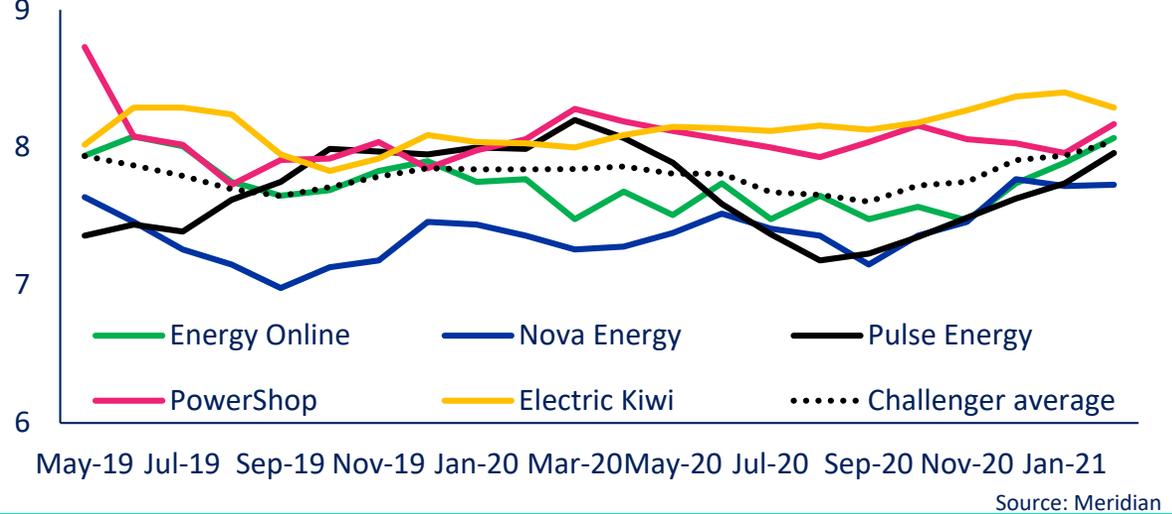


Source: Meridian

## CSAT – Gentailer brands



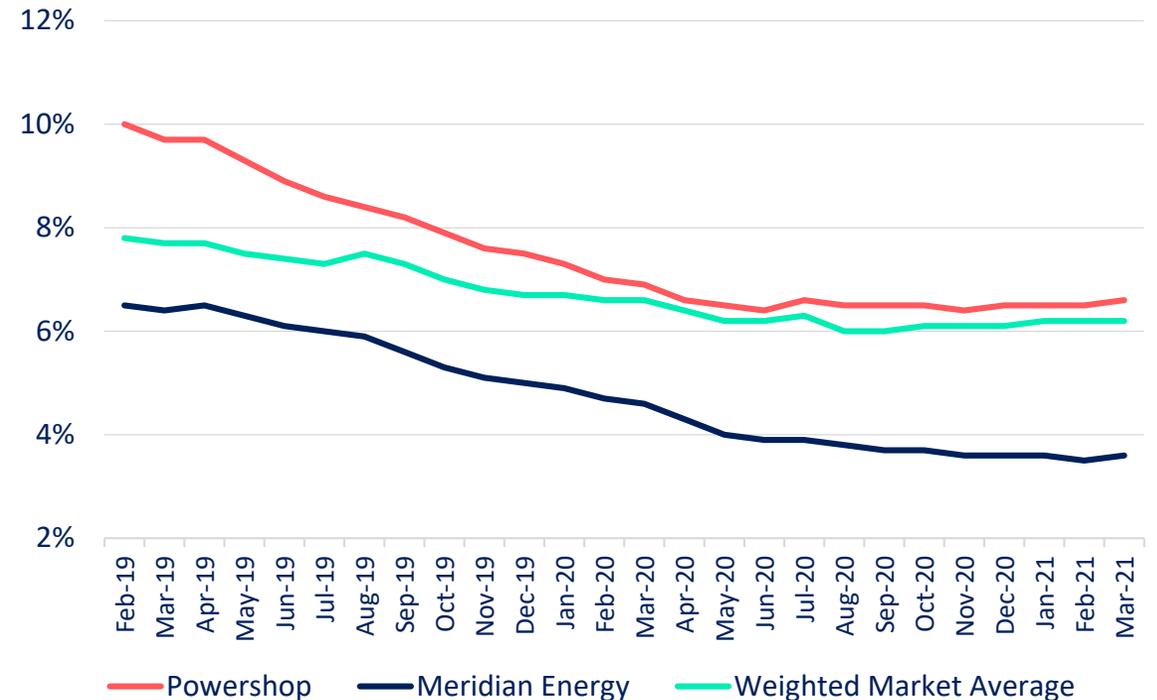
## CSAT – Challenger brands



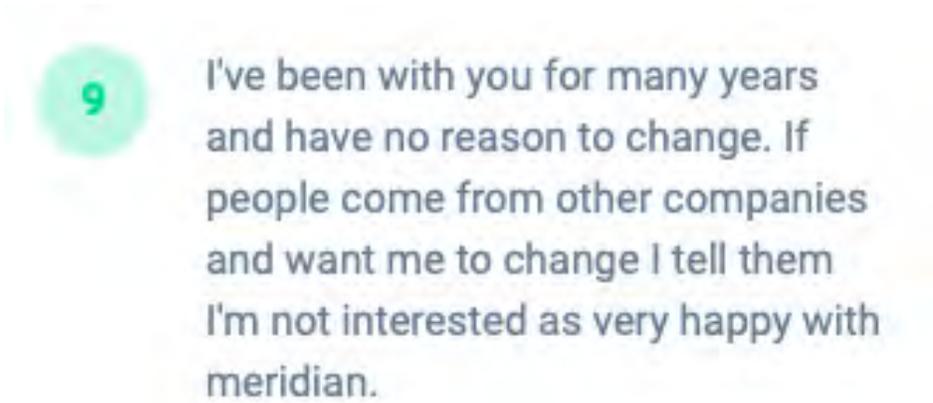
# Improving retention and market leading brand

- Meridian continues to enjoy trader churn rates significantly below the market average
- Powershop's programme of 'churn busting' work has delivered substantial improvements to its churn rate
- Brand health continues to remain strong in both brands – providing a platform for us to continue sustained growth

12 month rolling average trader churn



Source: Electricity Authority



Source: Meridian

# Innovation and delivery with a decarbonisation focus

## EV Charging Network

Meridian is launching a nationwide network of more than 200 EV chargers to help build real momentum for the switch to electric as electrification of transport is one of the biggest ways to help combat climate change

## Process Heat Electrification Programme

Accelerating New Zealand's transition away from fossil fuels by supporting customers to electrify their process heat through competitive pricing, long term pricing certainty and funding support

## ECertified Renewable Energy

A market leading product that aligns with customers' sustainability goals providing an accredited alternative to carbon offsetting, enabling businesses to report their Scope 2 electricity emissions as zero

## Commercial Solar

Meridian offers solutions to businesses that want to lead the way to a renewable energy future with an array of options to go solar



# Our way of working continues to evolve

**From**



**To**

Traditional & Specialised



- **Progressive & cross functional**

*New ways of working*

Silo/multiple handovers



- **Managed end to end customer outcomes**

*Broader Frontline Capability*

Solid



- **High Performance**

*People & Process Optimisation*

Transactional



- **Added Value / Trusted Partner**

*Everyone is responsible for CX*

---

Single brand

*Brand essence integrity*



- **NZ Retail**

One Product

*Extended operational skillset*



- **Multiple products**

Disparate data & reporting

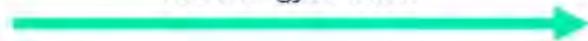
*Actionable Insight- Voice of Customer*



- **Single integrated service platform**

Manual

*Meaningful work*



- **Automated**



# Flux Federation

Move faster, price smarter & integrate widely

Nic Kennedy, CEO

May 2021

## FLUX FEDERATION VISION

Flux **empowers** visionary companies leading the energy transition; **enabling them to respond** to changing generation, distribution and consumption models by **moving faster, pricing smarter and integrating widely.**



# Flux creates value for the Meridian Group in three ways...

1. Providing the best retail platform in market to the Meridian Group retailers
2. Selling that platform to other retailers to capture revenue for the Meridian Group
3. Building the enterprise value of the Flux asset

Enabling retailers to  
move faster, price  
smarter and integrate  
widely

- 100% owned by Meridian Energy
- 250+ staff globally
- Remote-first operations
- World class Exec team
- Targeting growth in AU, NZ and UK, in mass market, SME and C&I

Flux provides deep industry knowledge and assists clients with:

- Energy retail best practice
- Operational improvements
- Cost savings
- Risk reduction
- Digital transformation and change management
- Data insights

“Energy retailers globally are being challenged like never before.”

- McKinsey

Energy transition challenges - the 3D's:

- Digitisation
- Decentralisation
- Decarbonisation

On top of:

- Increasing regulation
- Changing competition landscape
- Decreasing margin
- Challenging stakeholder demands
- Low in-house change and digital skills/talent

## COMPETITION

New entrant tech companies see great opportunity in the energy transition

### Incumbents

- SAP
- Gentrack
- Oracle
- Agility

### New entrants

- Flux (Meridian)
- Kaluza (Ovo)
- Kraken (Octopus)
- Ensek

## LOOKING AHEAD

Great things in  
business are never  
done by one person.  
They're done by a  
team of people.

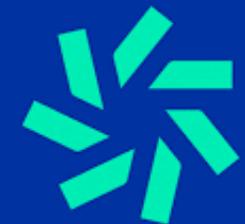
- Steve Jobs

**Last 12 months** - Foundations for scale. Improving the team, architecture, product, brand and delivery and establishing strategy for growth

- Secured 101 talented people in 2020 during Covid, all remotely
- Transformed the culture, high-performing, Remote-first, staff satisfaction and productivity gains
- Improved client satisfaction by 30%
- Replaced Gentrack at Meridian including C&I
- Re-architected product to microservices
- Rebranded, logo, website, messaging
- Hired VP Global Sales

**Next 1-2 years** - Build on customer intimacy and product leadership strategy to shape the market. New client acquisition in UK, AU and NZ

**Next 3-5 years** - Expansion into Asia and the US



Meridian.

# The future of the NZ system with 100% renewables

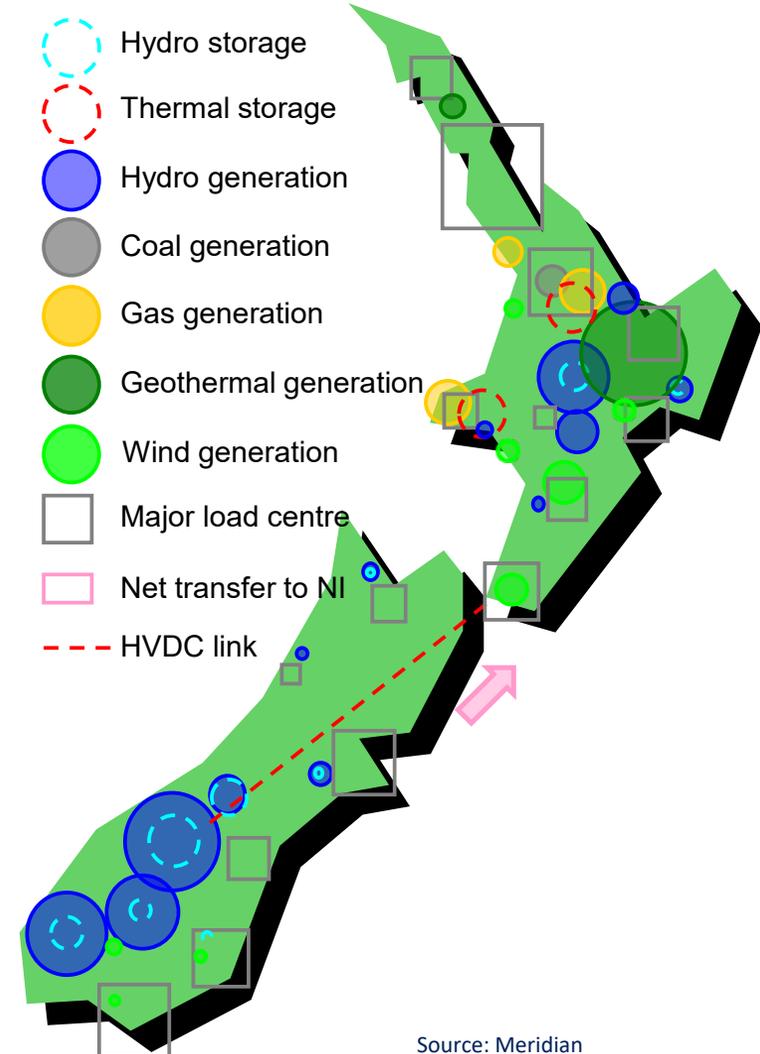
Grant Telfar  
Modelling Manager

# Living in uncertain times: renewable energy & dry year flexibility

- Hydro inflow deficits of 5TWh (20%) have historically been managed by maintaining thermal capacity, flexible thermal fuel storage, and flexible thermal fuel deliveries
- Newly committed wind and geothermal projects (2.7TWh) will move the system to 90% renewable over the next few years
- The Government has stated its intent for a 100% renewable system by 2030
- They are proposing the Onslow-Manorburn pump storage scheme as a key plank towards this goal
- As more wind enters the system, it too can face extreme deficits of 8-10%. Solar also faces deficits of up to 3-5%
- A Tiwai smelter closure by the end of 2024 could see 5TWh of excess Southland-Otago generation attempting to flow northward
- In response to this regional energy imbalance, large-scale demand stimulation projects are being pursued
- Significant new demand in Southland that is also flexible could address regional energy balance *and* create an alternative mechanism for dry-years

## Major Generation Sources

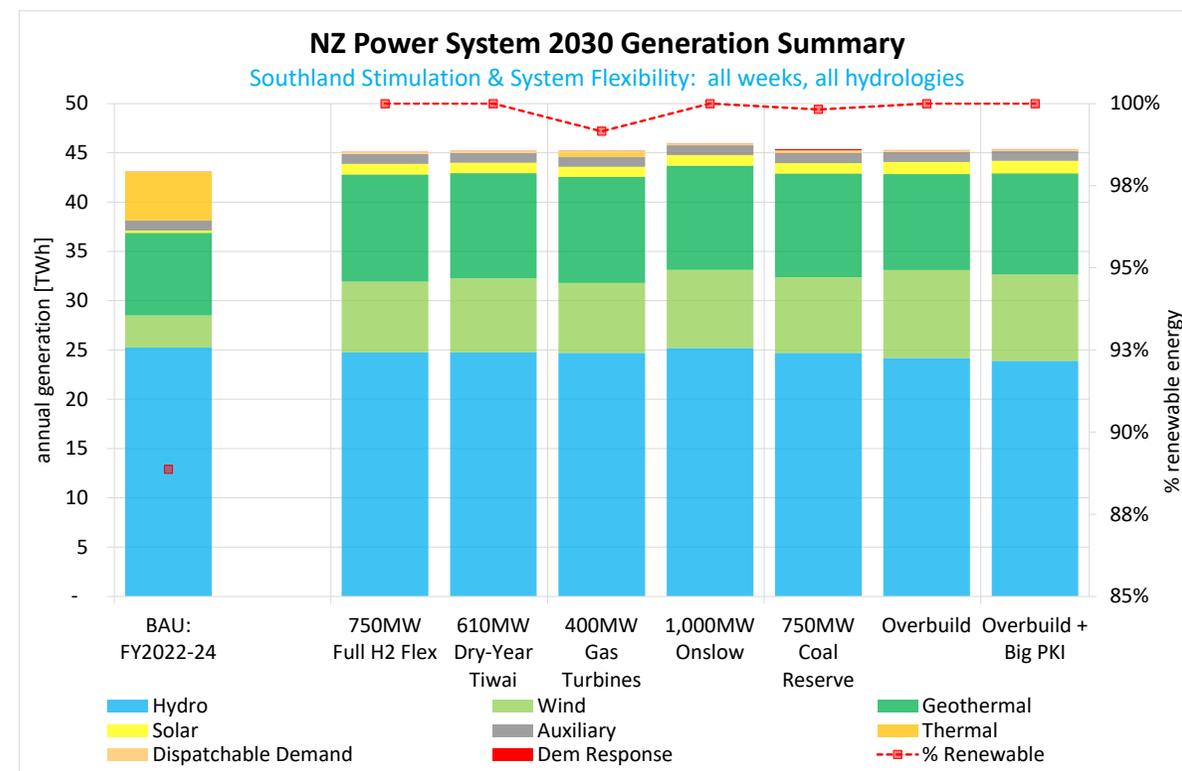
Scaled to size of mean energy contribution : 2021-23



Source: Meridian

# Changes to the power system by 2030

- A large volume of new renewable energy (RE) generation is needed: 12TWh, 3GW, and \$7B of new *grid* generation
- A secure power system can be achieved multiple ways:
  - retaining thermal generation, 99% RE possible
  - with Onslow, system overbuild, or large-scale demand flexibility, 100% RE possible
- All solutions rely on other power system components *also* flexing: dispatchable demand, renewable spill, batteries, ...
- The pace of change and sheer scale of this challenge is enormous, regardless of the dry-year flexibility solution
- Wide-reaching changes are expected: storage, prices, and generation all alter dramatically from today's expectations
- Any of these solutions can do the job: a secure power system with low carbon emissions and a high level of RE



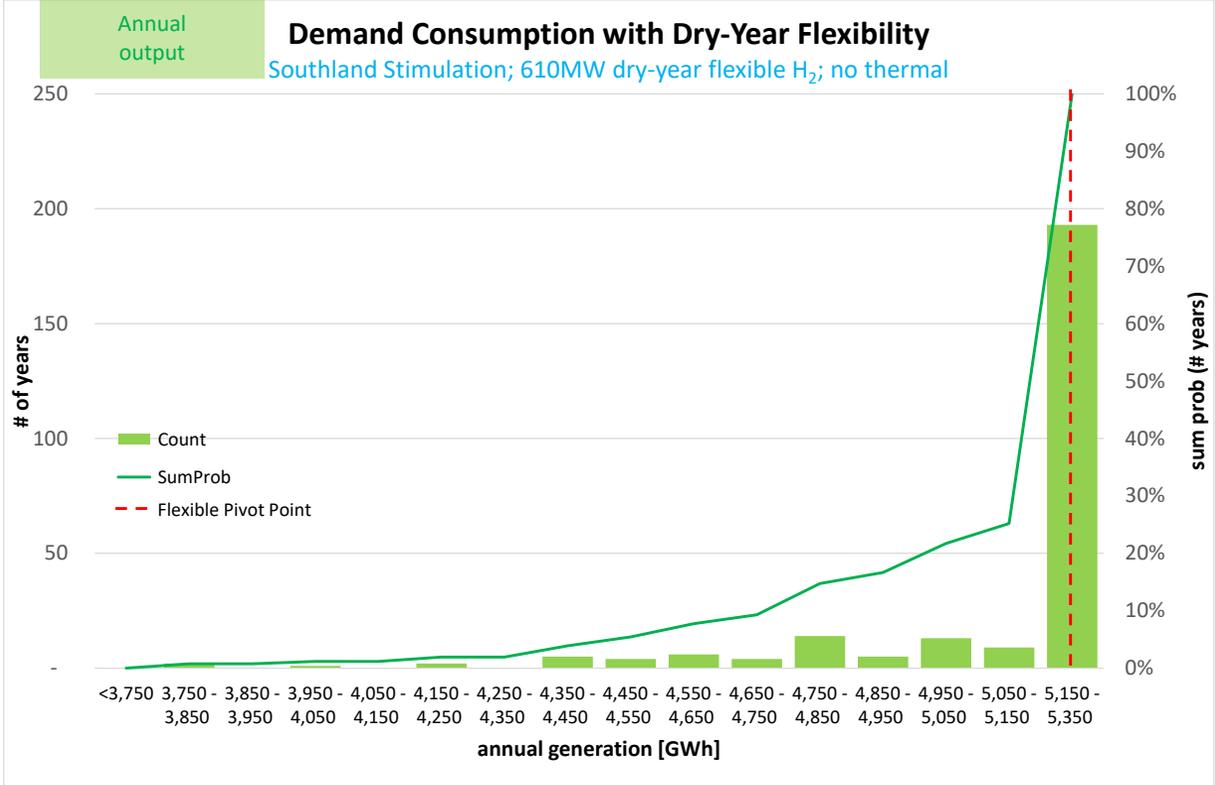
Source: Meridian

- Costs, cost allocation, and implications for market are more challenging for some solutions

# Future dry year flexibility scenarios

## (1) 610MW Southland demand

- This could either be new or existing demand
- Flex production down in times of hydro inflow scarcity, and falling lake levels, in incremental steps
- Across all hydrological history, demand reduction is low 250GWh pa (5% of annual production)
- This can vary between 0 and 1,500GWh (30% of production) with the extreme occurring infrequently, <1% of all inflow years
- No flexibility at all is required in up to 75% of all hydrological years
- On rare occasions of extreme stress, the market could consume the entire load of the facility (610MW) for a number of weeks or even months



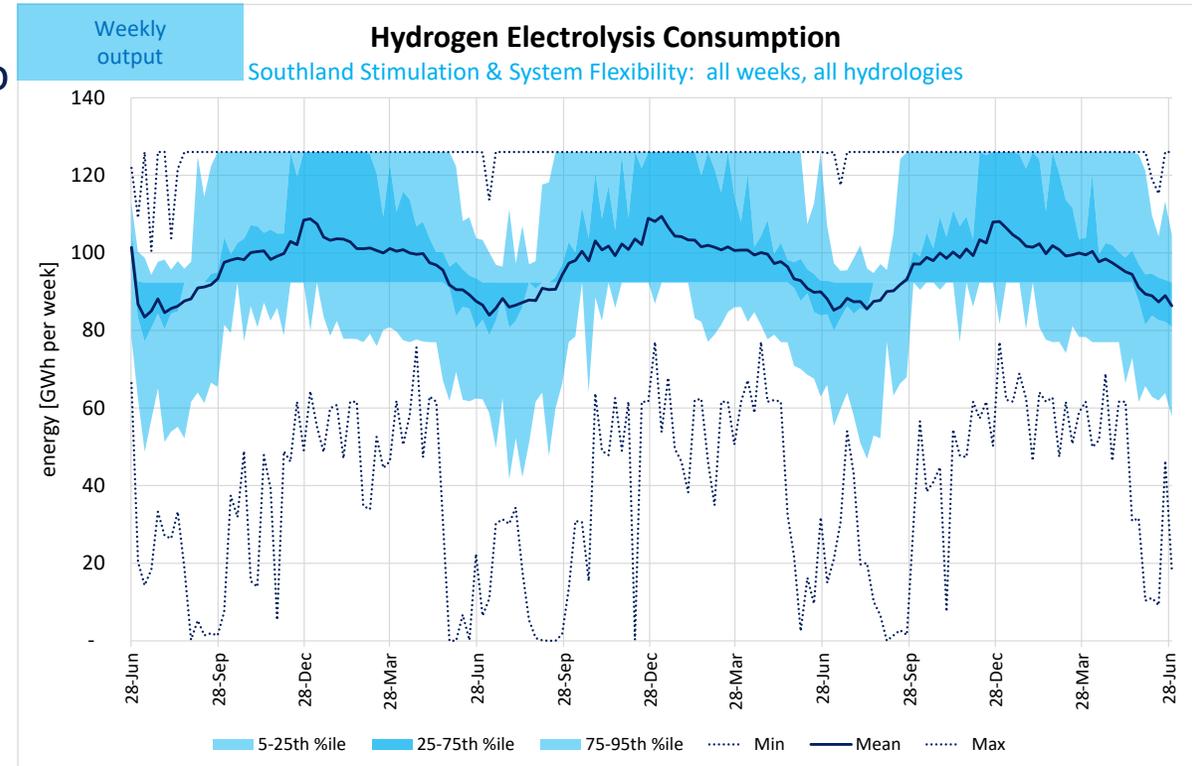
Source: Meridian

The need for flexibility in large scale demand is modest but with some extreme usage seen in rare, dry years

# Future dry year flexibility scenarios

## (2) 750MW hydrogen electrolysis plant

- As per scenario #1, flex production *down* in times of hydro inflow scarcity in incremental steps
- Adding to this: flex production *up* in times of renewable surplus: wet, sunny, windy, low demand
- A “typical” running load of 550MW
- The ability to increase to 750MW during periods of surplus at lower market prices
- Annual consumption the same as previous case (5TWh), a 77% capacity factor, with dry-year flexibility offered back to the power system, up to 1.5TWh
- Strong seasonality in the demand for flexibility
- The distribution of potential H<sub>2</sub> plant loading is far broader than was observed for dry-year demand response only



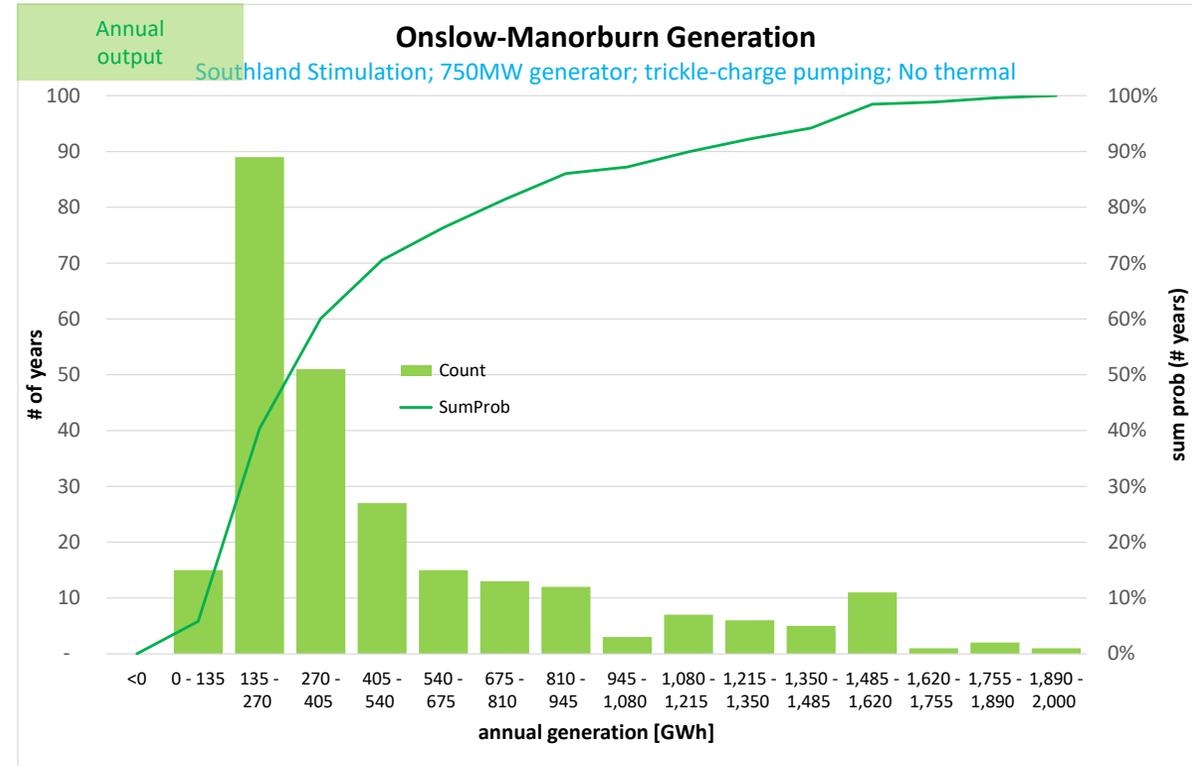
Source: Meridian

Benefits to the system can be significant: increasing the overall power system capacity factor, dry-year management, and the ability to absorb more intermittent renewables

# Future dry year flexibility scenarios

## (3) Onslow-Manorburn (simple) pumped storage

- 585MW of (new or old) Southland load with no flexibility
- A simple 4,000GWh storage and 1,000MW power station scheme:
  - 25% losses: 750MW available for hydro management and 250MW for intermittency management
- Reservoir release rules determined by dynamic needs of the power system, dispatched according to water-value:
  - Mean dry-year pumping load is 650GWh – ‘trickle charge’ overnight in summer
  - Mean generation / releases are 325GWh. This will increase as Lake Onslow fills. Intermittency management contributes an extra ~125GWh
  - There is a clear seasonal need for generation
  - In extremes, up to an extra 1,500GWh of generation is dispatched back into the market



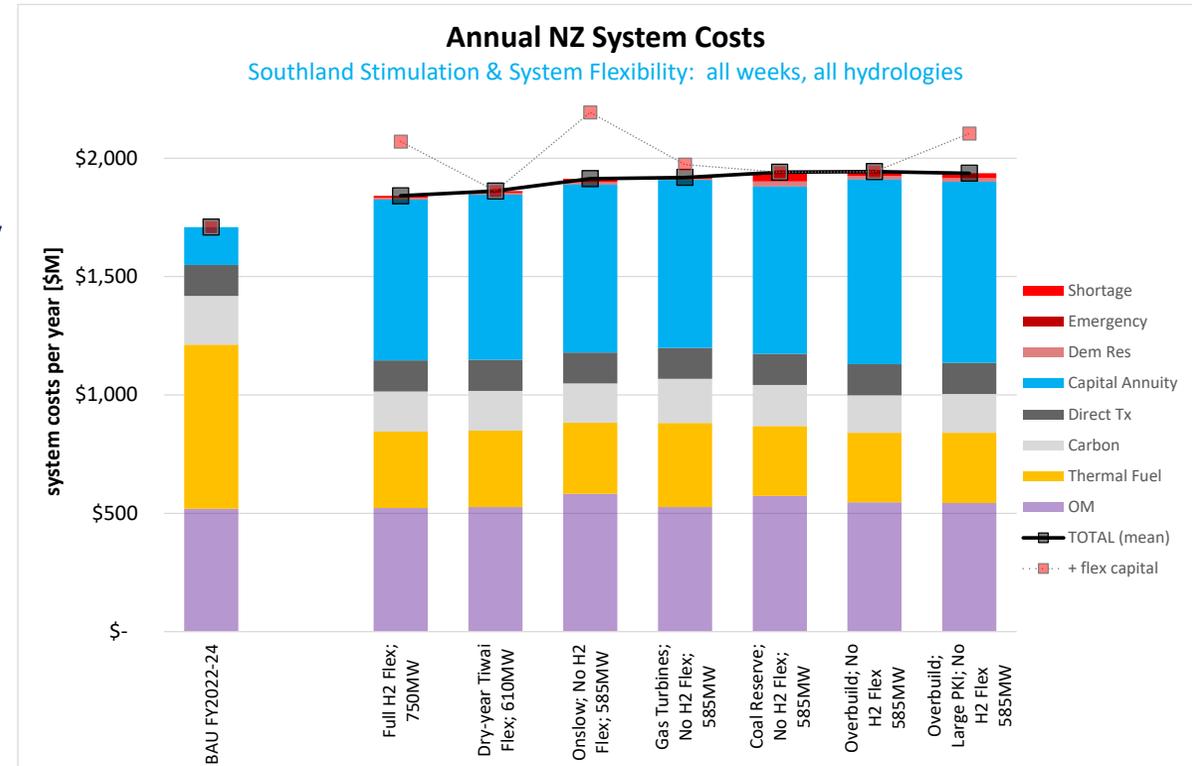
Source: Meridian

The estimated \$4B<sup>1</sup> Onslow scheme can be a viable dry year mechanism, along-side other sources of flexibility

<sup>1</sup>estimated cost, not including further required investment in transmission

# Annual system costs by 2030

- Over the decade, the challenge of meeting the generation needs of a power system moving towards 99%-100% RE are significant, regardless of the dry-year solution pursued:
  - 13-15TWh of new generation, including roof-top PV
  - New capital requirements are broadly in line with energy needs – similar between scenarios
  - \$9.5-10B (including \$1.9B of roof-top PV)
- Additional costs are likely for new flexibility:
  - For example: H<sub>2</sub> = \$2.5B; Onslow = \$4B; gas flexibility = \$0.5B; Pukaki high dam = \$2.5B (all estimates)
  - Depending on how costs are socialised, dry-year load response, reserve coal, or gas turbines could all look significantly cheaper
- System cost is not the only metric for the Government (or regulators) to consider: carbon, security, volatility, and investment/market stability are all important

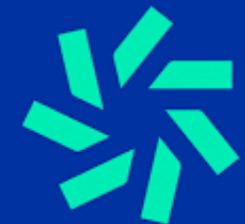


Source: Meridian

A tight range of system costs is seen between quite different solutions to dry-year flexibility *until* the unknown costs of flexibility are considered

# The best source of future dry year flexibility

- The scale and pace of change required to move the NZ power system to 100% renewable energy is significant
- Changes expected in wholesale market outcomes and performance will be dramatic at times:
  - Mean modelled prices ~\$80/MWh in most scenarios, but sufficient to generate a return on investment
  - Weekly price volatility – especially in winter – is significantly higher than seen today (4-5x)
  - Storage levels are held higher, creating a buffer against deficits in renewable fuel
  - Expected carbon emissions are low in all cases: but slightly higher for coal and gas solutions
  - Expected shortage is greater than today's market but manageable
  - Significant renewable energy spill (wind, geothermal, solar) adds to the hydro spill seen in today's market
- There is no single solution to future dry-year flexibility that produces a desirable outcome in all situations
- Of the solutions explored:
  - flexible demand response solutions – especially if it can manage both dry-years and intermittency; and
  - a gas-turbine based solution – if upstream flexibility can be delivered;
  - can achieve a balanced compromise of power system outcomes across a range of metrics
- All dry-year solutions have the potential to help solve much of the NZ dry-year issue. Any given solution does not need to solve it in its entirety, nor be mutually exclusive with other complementary future solutions



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# South Island demand options

Guy Waipara  
General Manager  
Development

# Datagrid - overview

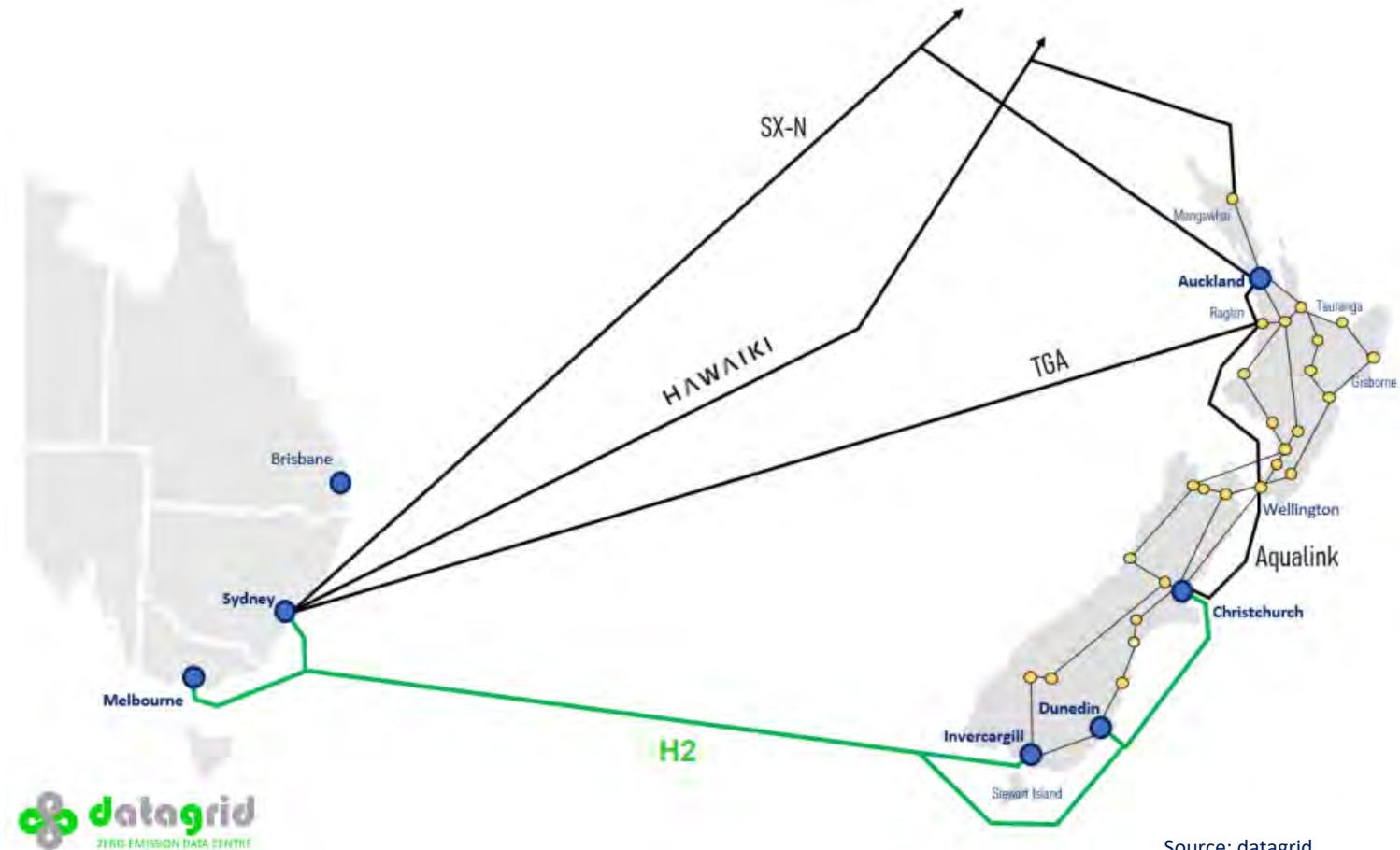
- Manapouri has abundant, stable and very competitive renewable energy (versus lack of hydro power in Australia)
- Southland has the coolest weather in ANZ (average 9.8°C temperature)
- Shortest distance to Australia, 20M population within 35 millisecond latency
- Existing high reliability transmission grid (built for Tiwai) and access to “unlimited” and affordable land
- Plus – NZ provides a safe environment, well educated workforce, state-of-the-art UFB network - optical fibre connectivity



Globally, data centres are expected to consume around 8% of the world's electricity by 2030

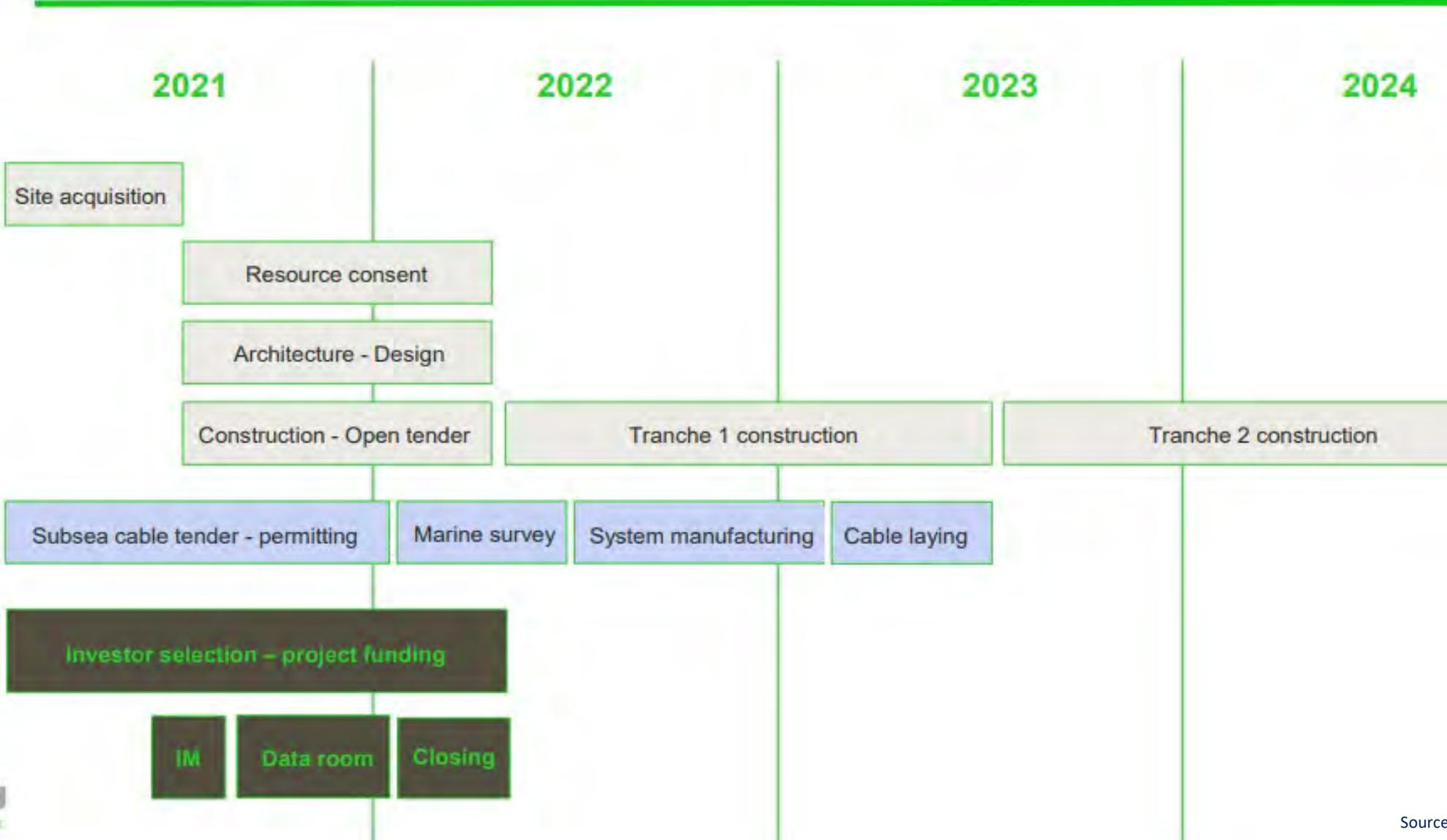
# Datagrid – project update

- Exclusivity arrangement - Datagrid have rights to up to 100MW of electricity
- Conditional on Datagrid achieving project milestones
- Working with Great South to identify potential sites, closure imminent
- Australian DC market forecast to grow from 500 MW in 2021 to 2200 MW in 2026.
- Datagrid team believe they can service Australia circa 30% cheaper than domestic green options



Source: datagrid

# Datagrid – project timeline



Source: datagrid

# Process heat electrification - business

- Meridian team is working with South Island industrial customers to assist with the decarbonisation and electrification of industrial plant
- Mainly replacement of coal boilers with electricity powered options
- Meridian is committed to:



## Competitive pricing

Reduced rates for projects that replace fossil fuels with electricity.



## Long term price certainty

Contracts with fixed pricing for up to 10 years.



## Funding support

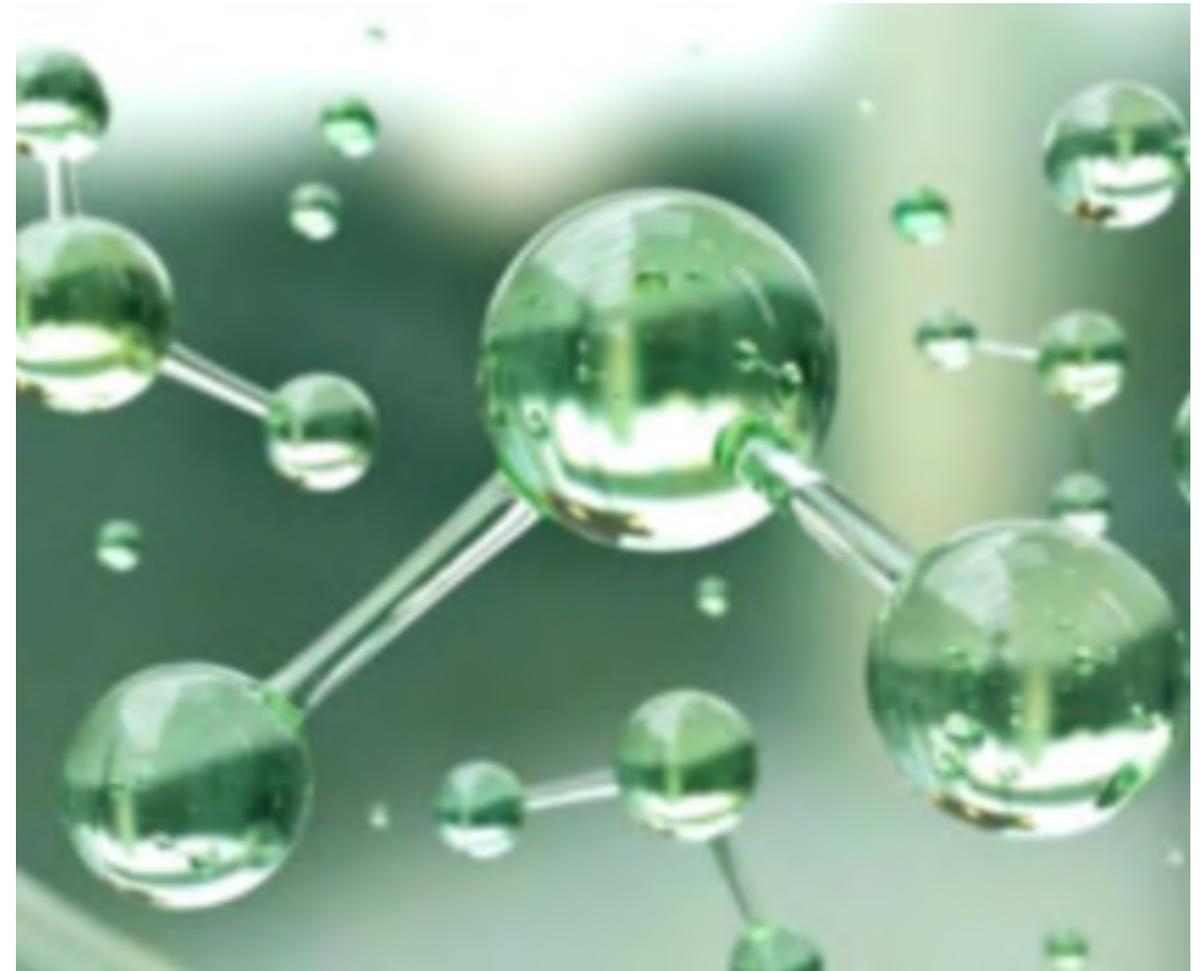
Funding support to assist with your electrification project.

- Potential new demand opportunity of 250GWh-500GWh pa
- To date leads of 132GWh, and 31GWh of load committed
- Provided a syndicated offer to large industrial user for their consideration

# Green hydrogen feasibility study



- A three part study:
  - Market scan – markets, end use cases, logistics, NZ opportunity
  - Technology and engineering assessment – development costs, technology options, health and process safety and logistics
  - Dry year flexibility
- Study completion by August 2021
- Registration of interest due out May 2021 – test end to end value chain
- Independent Advisory Board providing project governance



# Green hydrogen project plan



## Key dates

**May 2021**

ROI released

**August 2021**

Feasibility study and ROI completed

**March 2022**

Select pathway

**December 2022**

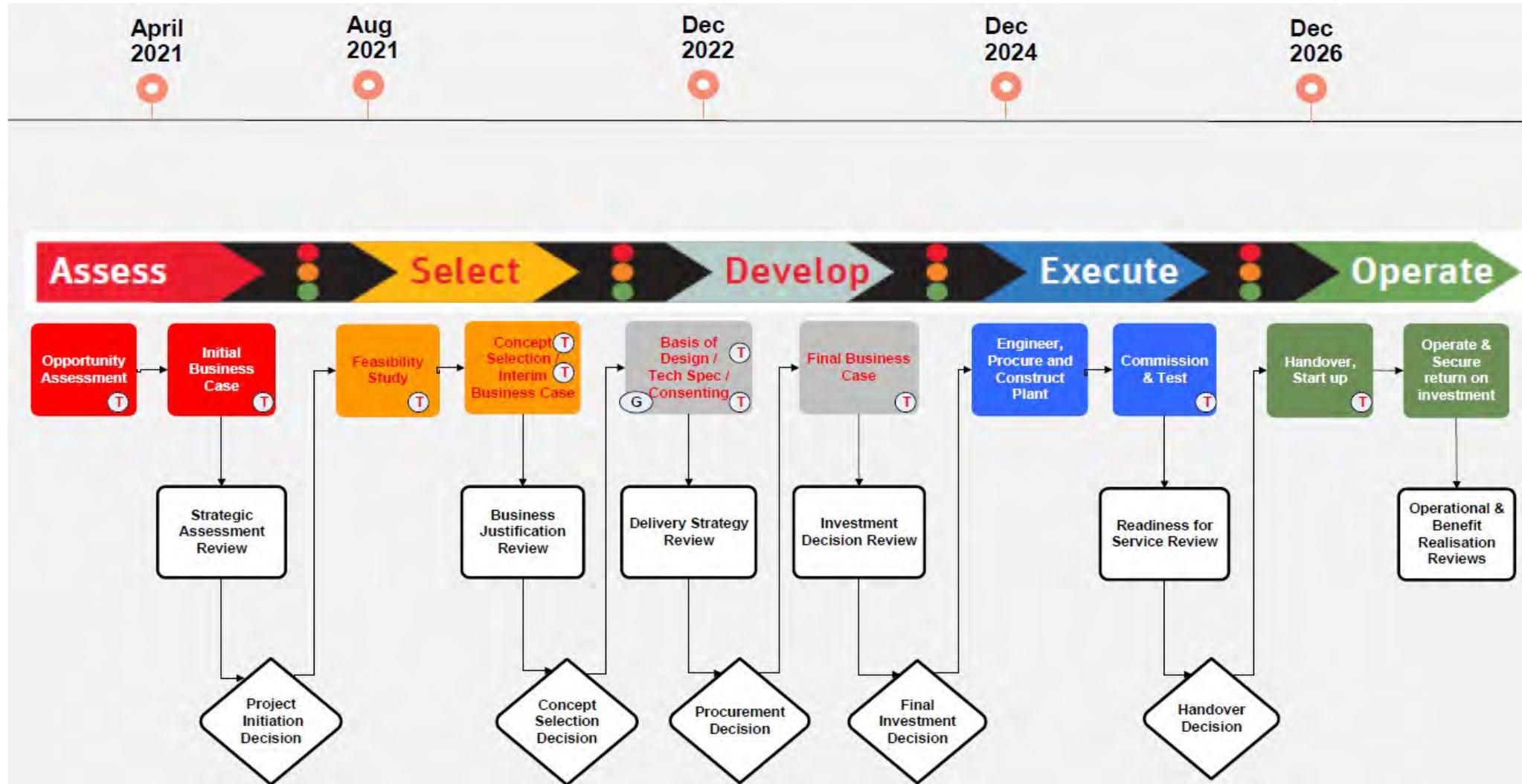
Develop consortium and commercial

**December 2023**

Complete detailed design and secure consents

**December 2024**

Final investment decision



Source: Contact Energy/Meridian Energy

# Green hydrogen initial conclusions

**Global demand forecasts are high**

- International focus on decarbonisation is driving large increases in demand forecasts for green hydrogen
- Countries such as Japan and South Korea have limited domestic decarbonisation options

**Many potential pathways**

- Ammonia and liquid hydrogen are the two likely carriers
- They enable numerous use case options spanning heavy transport, power generation and industrial process substitution

**Many variables**

- Optimal use cases, carrier options and potential partners are unclear
- Best strategy is to keep our options open for as long as possible

**Economic gap**

- The cost of producing green hydrogen is currently significantly higher than fossil fuels.
- Carbon taxes or subsidies will be key enablers

**Dry year solution**

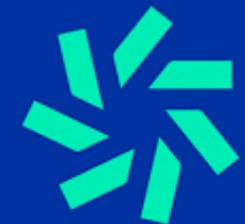
- May provide 35-40% of NZ's dry year flexibility requirement
- Likely to be lowest cost option for NZ

**NZ has a real opportunity**

- The combination of existing generation and transmission infrastructure combined with industrial sites and port access makes NZ's offer unique
- An initial export opportunity could facilitate a lower entry cost and earlier domestic opportunity

**Our overall initial assessment is cautiously optimistic**

- Supported by feedback and interest from a number of ongoing external engagements
- The ROI will be a critical test of this assessment



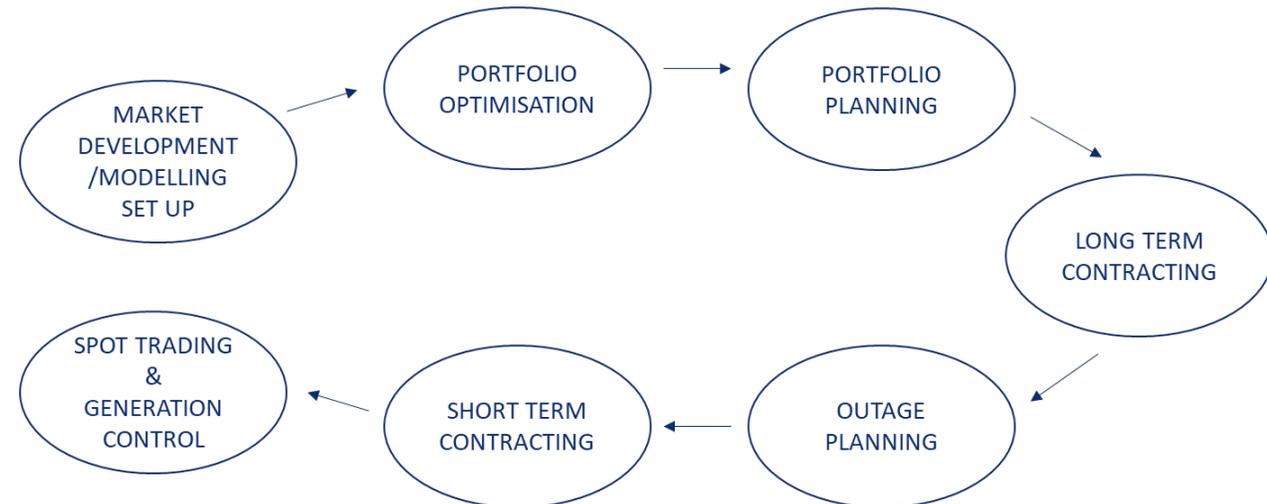
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# Portfolio balance

Chris Ewers  
General Manager  
Wholesale

# Role of Wholesale

- The Wholesale Team are accountable for delivering Energy Margin while simultaneously minimising risk and volatility across time.
- Specifically – we work collaboratively across Meridian to ensure we have:
  - the optimal amount of committed sales going forward
  - the optimal amount of plant available to support those sales
  - the fuel (hydro) required to operate that plant; and
  - the right amount of risk management products to mitigate any externalities (e.g. transmission outages/constraints) and internal shortfalls (low hydro or significant plant outages)



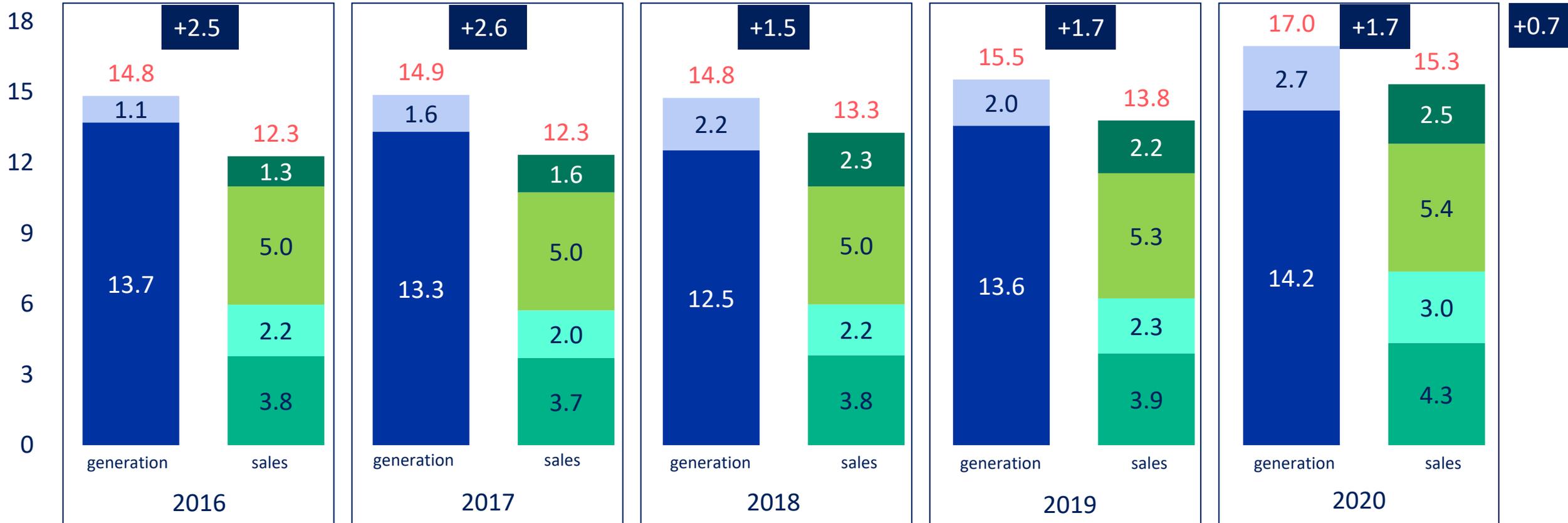
# Portfolio tracking

- Portfolio length is decreasing

■ physical generation   
 ■ hedging   
 ■ mass market sales   
 ■ C&I sales   
 ■ NZAS sales   
 ■ financial sales

TWh

1H FY21  
↓



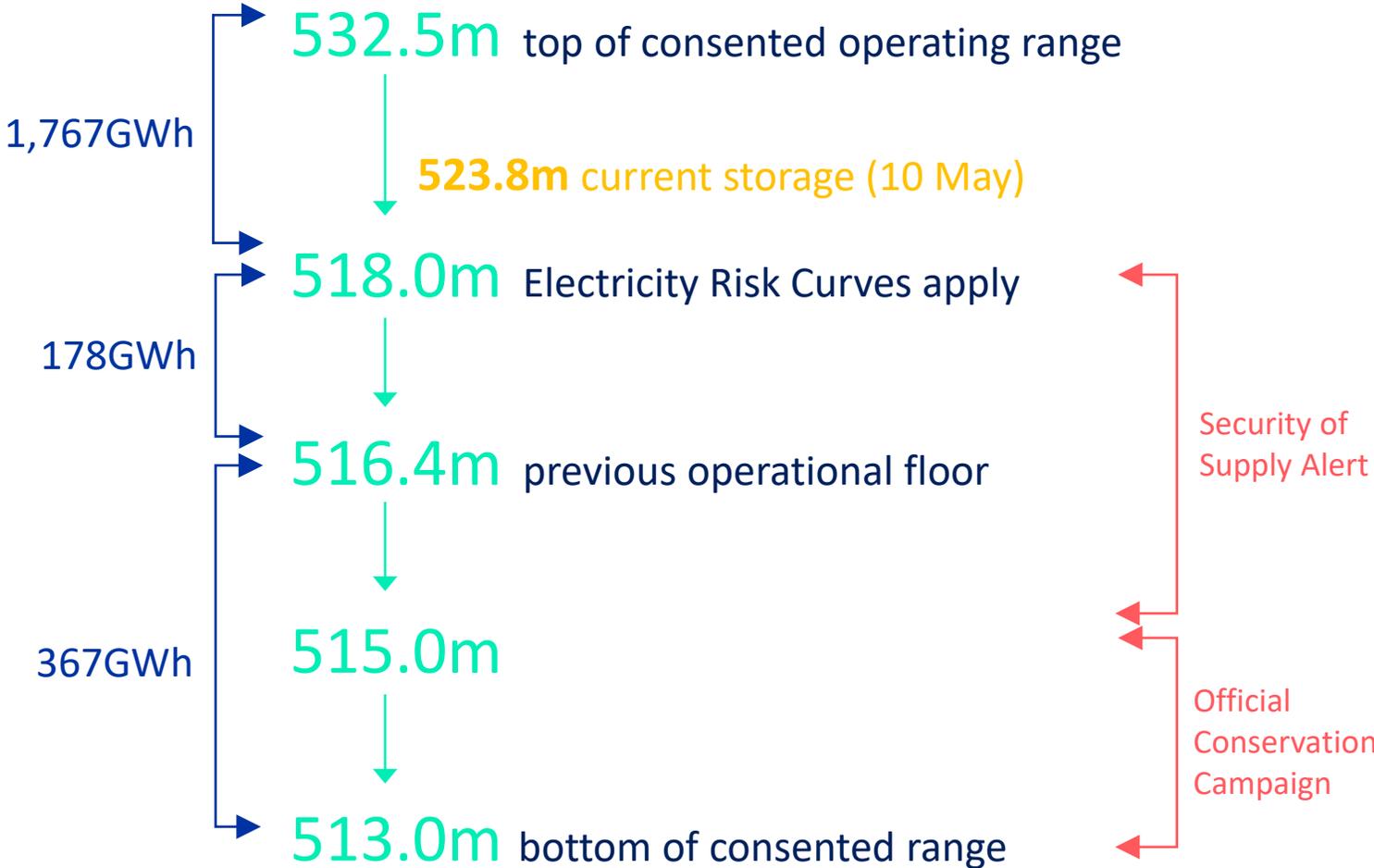
Financial Year ended 30 June

Source: Meridian

# Lake Pūkaki low range operation

- Lake Pūkaki is consented to be used down to 513.0m
- Usage below 518.0m is generally tied to the System Operator’s Electricity Risk Curves
- Operations have been extended down to 513.0m

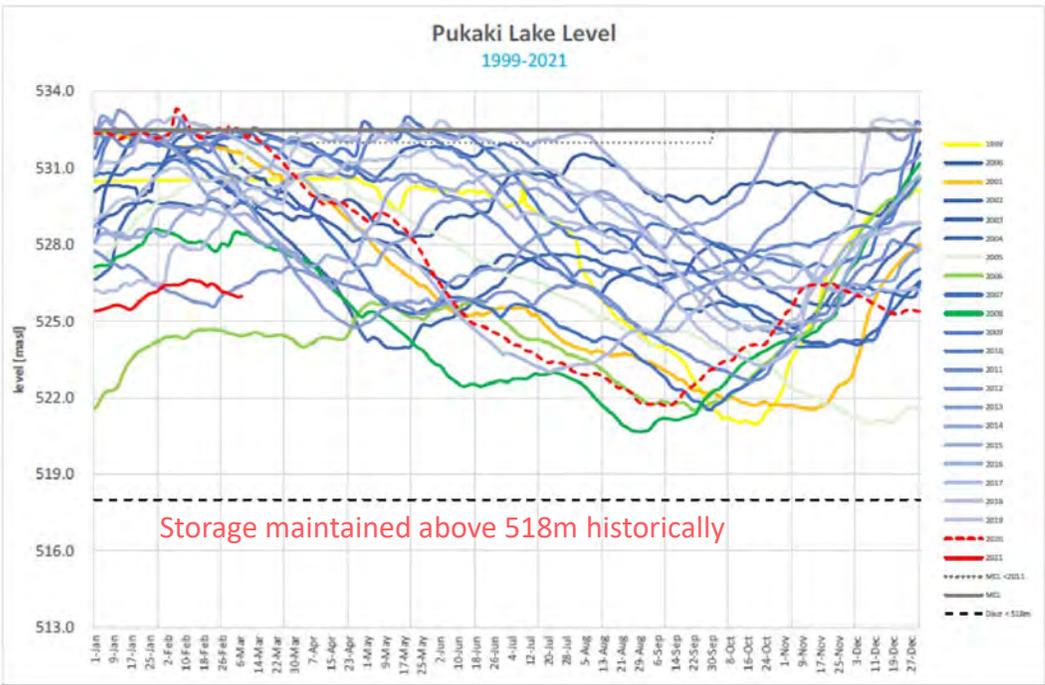
Lake Pūkaki operating range schematic



Source: Meridian

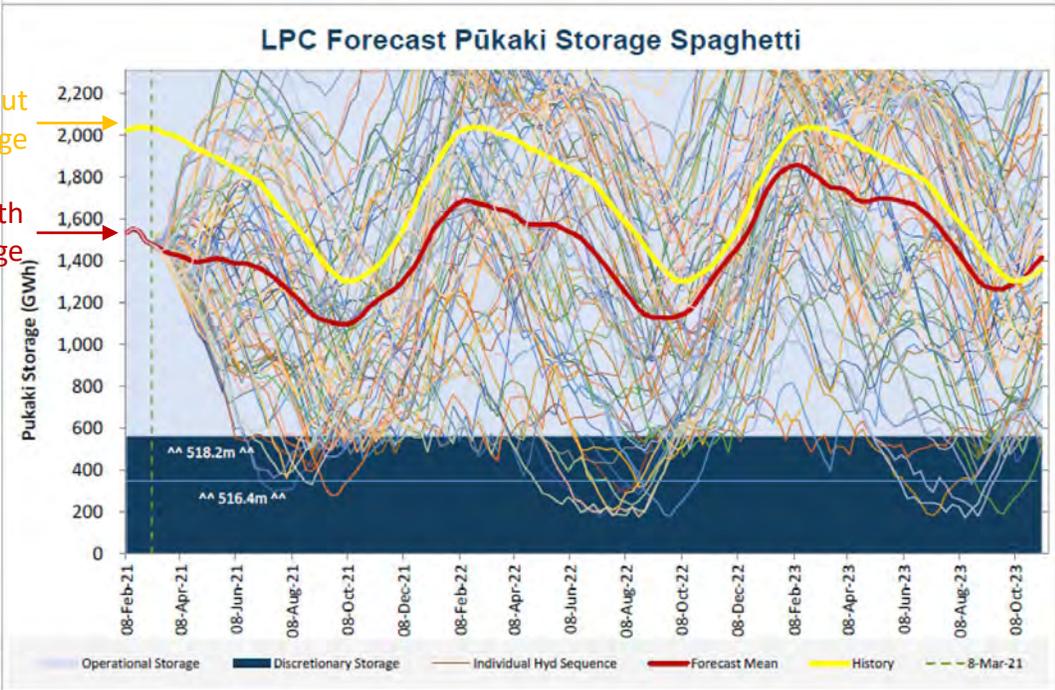
# Lake Pūkaki low range operation

- Since April 2020, the full Lake Pūkaki storage range has been included in our modelling and forecasting
- Including the contingent storage allows a greater use of flexibility in the main range which can be seen in the forecast distribution
- Contingent storage is also included in the Electricity Risk Curves, increasing the margin



historical mean without contingent storage

forecast mean with contingent storage



Source: Meridian

# Harapaki

- Investment in Harapaki will add length to the portfolio (542 GWh pa)
- And support existing flexibility while enabling continued retail sales growth
- Investment in renewables also aligns with New Zealand's move towards a highly renewable energy system
- And supporting the retirement of aging thermal plant



# Genesis swaption

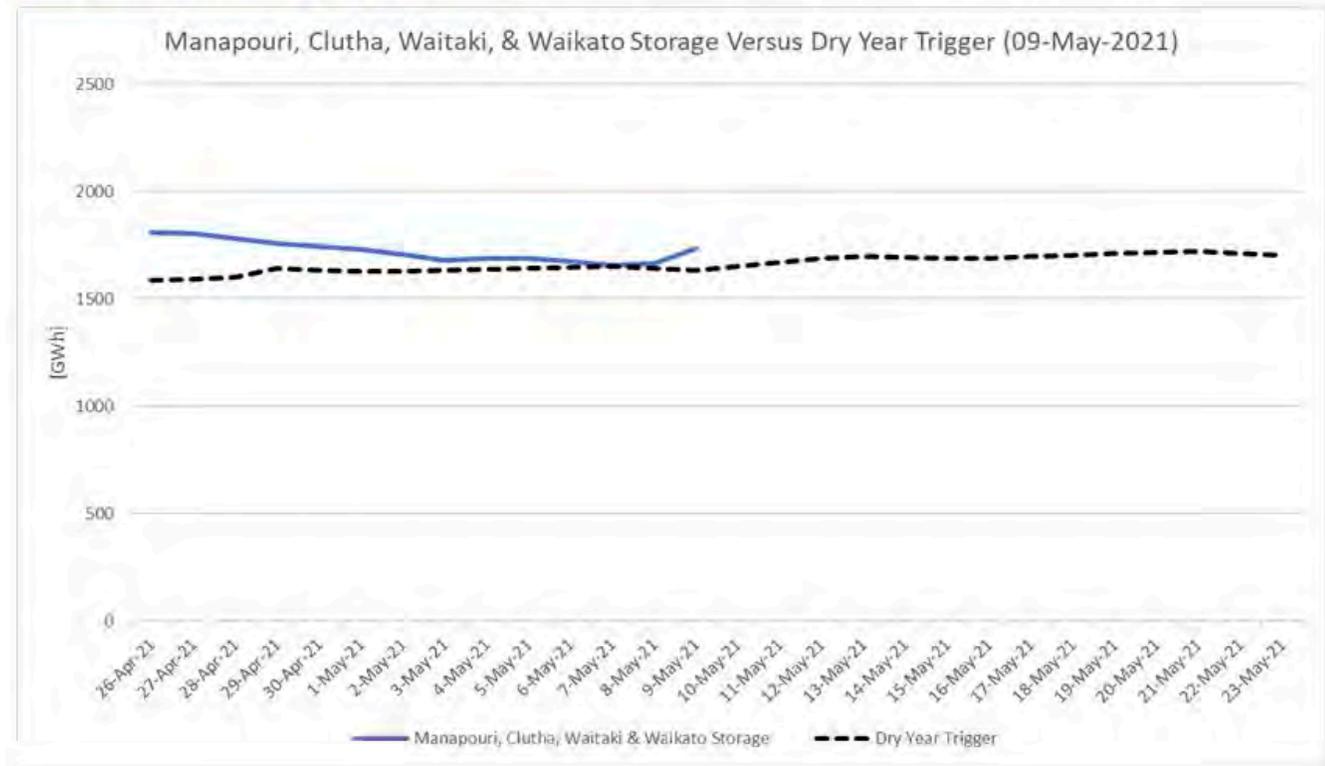
- Meridian has a swaption arrangement with Genesis for up to 150 MW, up until the end of 2022
- The swaption is a financial arrangement, which locks in a fixed price for the volume called
- Since this was agreed, Lake Pūkaki contingent storage availability has provided additional flexibility
- Currently exploring products from 2023 onwards with a range of parties
- Demand response will likely play a more important part going forward



# Smelter demand response

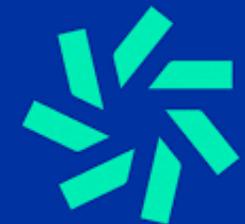
- Under the NZAS contract, Meridian can by notice to NZAS require a Smelter Demand Response (SDR) when the relevant hydro storage is less than the Dry Year Trigger Level
- If Meridian gives NZAS an SDR notice, NZAS must start to reduce electricity consumption by a date specified by Meridian which must be between 14 and 40 days after NZAS's receipt of Meridian's notice
- Under an SDR, NZAS must manage its electricity consumption to achieve a reduction in electricity consumption of 250GWh over 130 days
- With all material reductions in load occurring within 7 days of the date that NZAS is required to start reducing consumption

## Smelter Demand Response



Source: Meridian

As at 10 May, relevant hydro storage sat 101GWh above the Dry Year Trigger Level



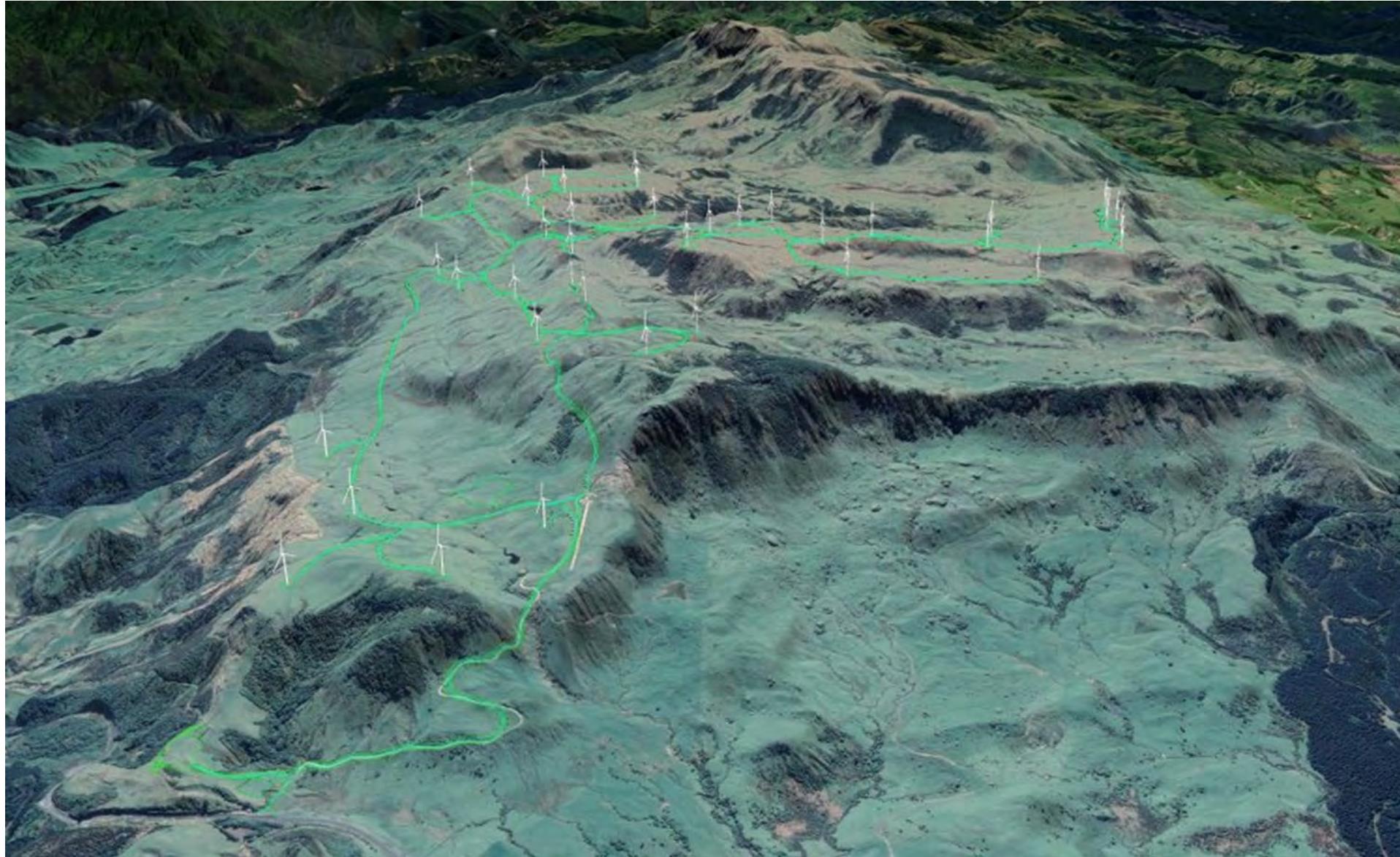
Meridian.

# Harapaki wind farm

Chris More  
Wind Maintenance  
& Development Manager

# Harapaki site features

- Highest wind farm in NZ – in sub-alpine altitudes
- Terrain has geological features that require innovative solutions
- Great access to site via State Highway 5 from Napier, being the main port of supply
- Transmission connection is on the site. Significant cable reticulation connecting turbines to the switchyard



# Community and Iwi

- Within the Te Pōhue community based on the eastern side of the range
- Two iwi have ties to the region; Ngati Hineuru and Maungaharuru Tangitu Trust
- Meridian will be a good long-term citizen and fulfil what is culturally appropriate to iwi and also support community led initiatives



# Team

- Assembled a very experienced delivery team with deep construction and operational experience
- Aim to use local expertise to fill site roles as much as reasonably possible
- Team disciplines aligned with contracts thereby having commercial and technical oversight
- Strong focus on culture, environment and sustainability through the life of the project



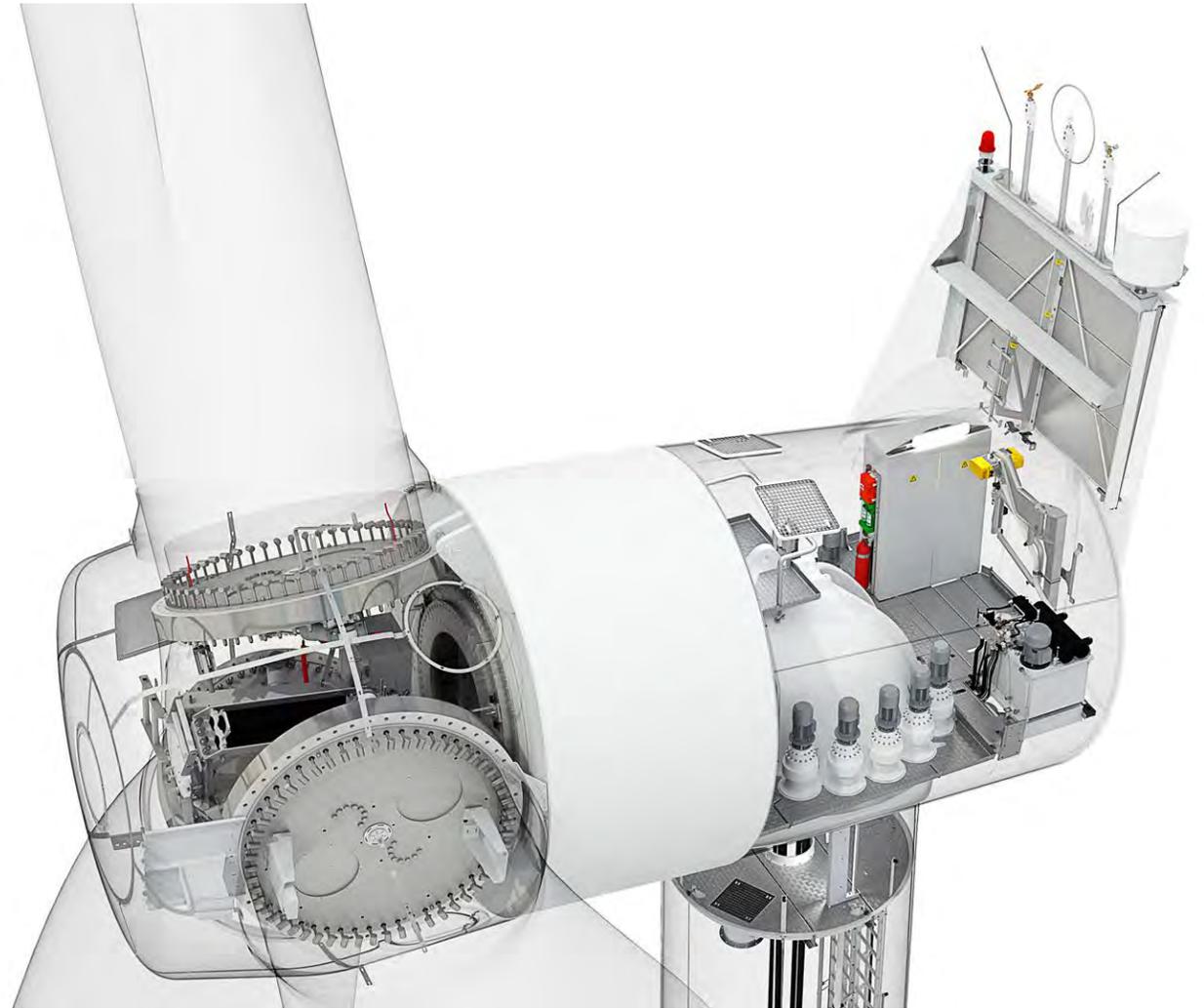
# Delivery

- Meridian has chosen the ‘Principal’ over ‘turn key’, or ‘Engineer, Procure, Construct’ models
- Enables Meridian to set, monitor and control the Health & Safety and performance culture on-site
- Enables the complex interaction between contractors to be seamlessly managed within the master programme
- Allows Meridian to manage the risks directly and deal with issues in real time



# Technology

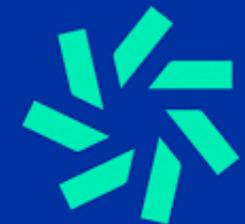
- Direct Drive (DD) technology has far less moving parts as there is no gearbox
- DD turbines use less oil, have greater ability to respond to changes in wind strength and generally have a longer life expectancy
- Meridian previous experience with DD technology at the Mt Millar wind farm in South Australia, the Ross Island installation and the Brooklyn wind turbine
- Our expectation is to consistently meet high availability output with lower operating costs



# Financials

- NZ\$395M capital investment
- 41 turbines | 176MW | 542 GWh
- 35% capacity factor
- NZ\$35M to NZ\$39M EBITDAF p.a.
- On a \$/kW basis, Harapaki construction is expected to be 17% lower than Mill Creek
- The technology change to direct drive turbines gives rise to two benefits:
  - Lower operational costs due to less moving parts and consumables (no gearbox)
  - Greater longevity, resulting in a contracted 30-year life backed with availability warranty
- Estimated Levelised Unit Energy Cost of NZ\$62.4/MWh





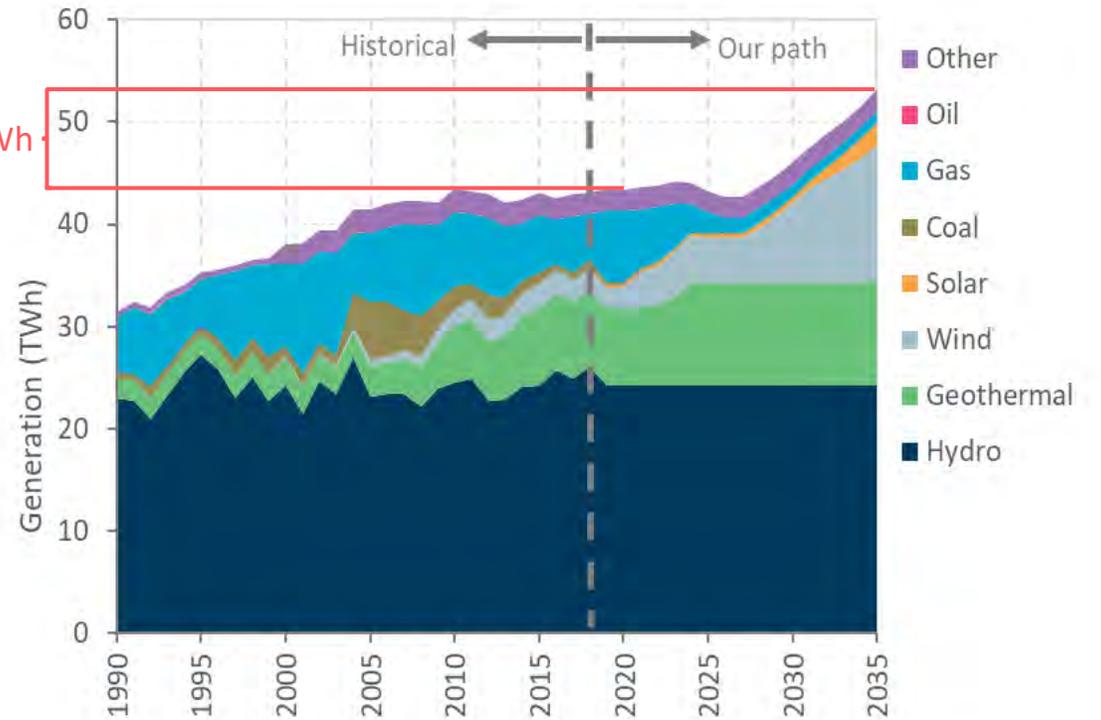
Meridian.

# Generation development

Rebecca Knott  
Head of Renewable  
Development

# Development context

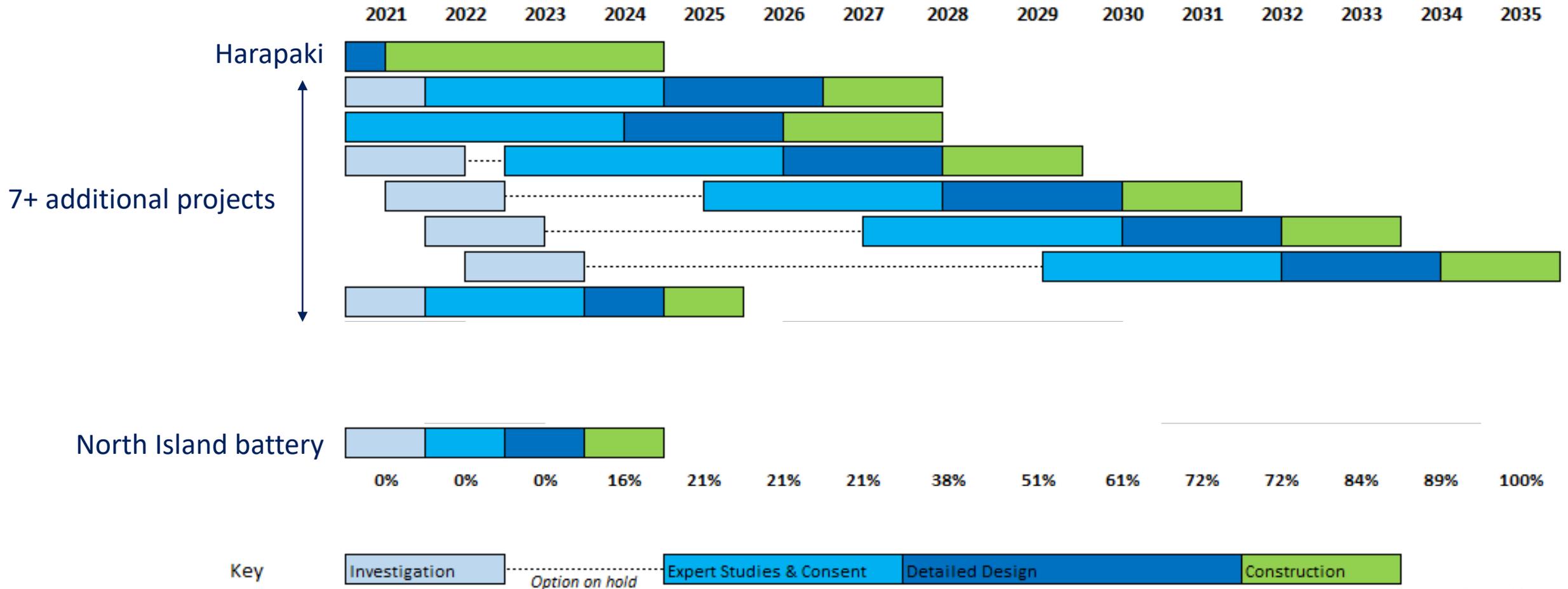
- Meridian's analysis suggests 12TWh of new grid generation by 2030 to meet 100% RE
- Greater than the CCC's Draft Advice, which suggested 10TWh of additional system generation +10TWh by 2035
- A third of that growth equates to at least 7 Meridian generation projects by 2035
- Longer term analysis suggests further system demand growth of at least another 10TWh 2035-2050
- Development challenges are significant:
  - Timing of new demand growth uncertain
  - Consenting timeframes are subjective
  - Long greenfields development timeframes
  - Upswing in competition for options



Source: Climate Change Commission Draft Advice January 2021

# Development scenario

- Frequent builds will be needed just to meet a portion of the CCC's projected system growth
- Development focus is on finding, consenting and holding options, not the timing of builds

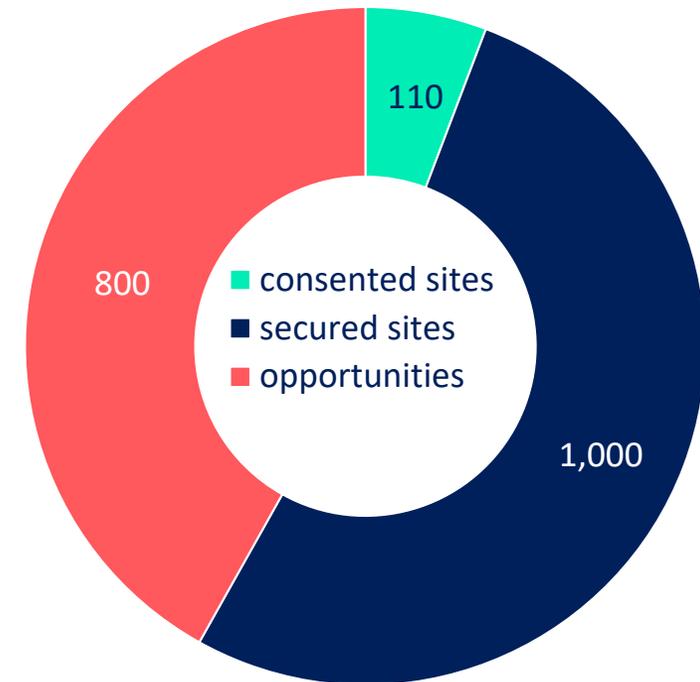


Source: Meridian

# Current development pipeline

- Pipeline of 1.9GW (4,400GWh)
- Consented sites will likely require re-consenting for better technology fit
- Design, development and construction timeframe is subject to site complexity
- Opportunities inevitably will not crystallise, more development options are needed
- Wind sites will come down off the ridgelines
- Solar is faster to analyse, design and build than wind

Development pipeline (MW)



Source: Meridian

# North Island battery

- To build greater depth to North Island reserve offers
- In turn allowing greater HVDC North transfer and less inter-island price differential
- Potentially shared ownership with Contact Energy
- Likely 100MW capacity
- NZAS exit delay gives more time to consider location and technology alternatives
- Intended commissioning in 2024



Tesla 100-MW/129-MWh energy storage system, Hornsdale Wind Farm in South Australia . Courtesy: Tesla

# Forever Forests

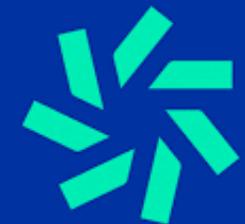
## Target

- 1,100 hectares of new plantings to grow Meridian's own carbon offsets (21t)
  - Plant Meridian land
  - Partner with others land
  - Purchase land (marginal land)
- Long-term native biodiversity through mixed model (exotics and natives)

## Progress

- 60ha planted (~60k stems), 80k stems ordered for 2021
- Registration of first forests in the ETS now underway





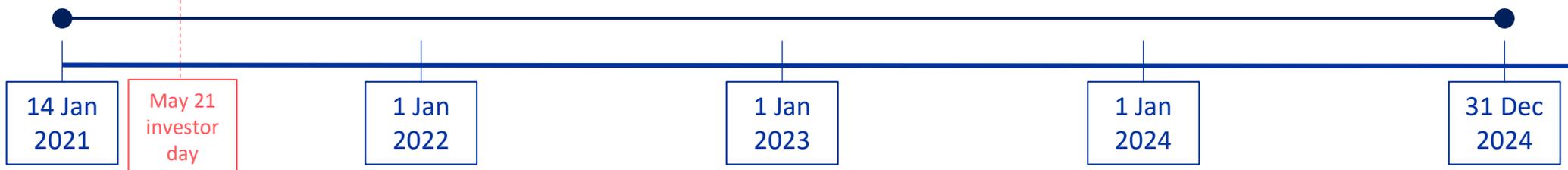
Meridian.

# Closing comments

Neal Barclay  
Chief Executive

# NZAS exit response

NZAS contract



## Meridian portfolio response

Current swaption



CUWLP



NI battery



Process heat



Data centre

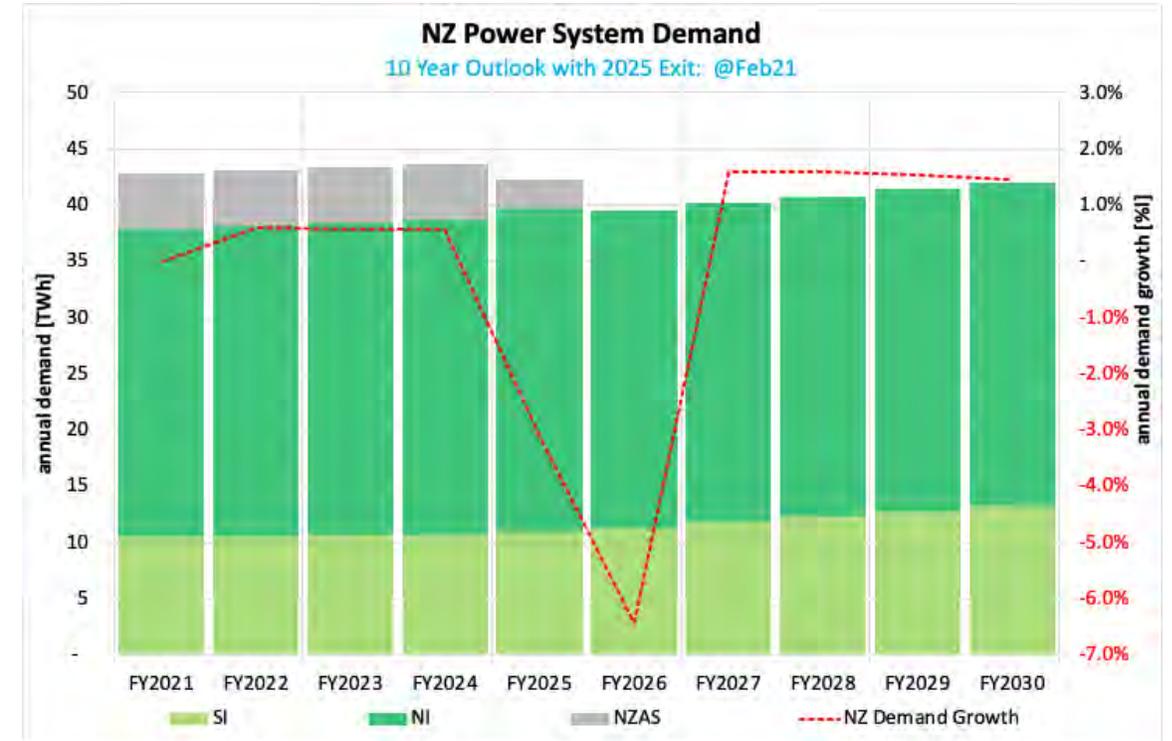
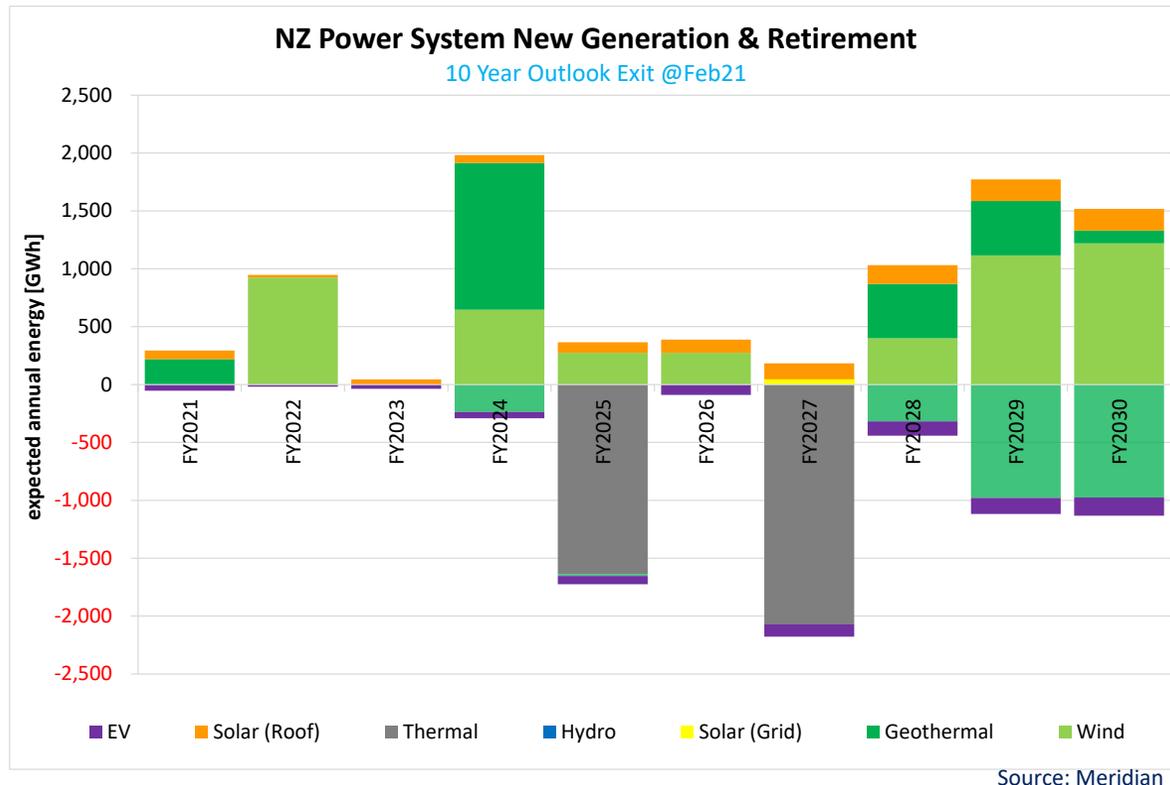


Green hydrogen



# Supply demand balance

- NZAS exit mostly absorbed by 2030 with modest organic demand growth and new load (industrial heat, data centre, EV's)



- New renewable builds announced recently support thermal retirements before 2030
- With some rationalisation of existing renewables

# Closing comments

- Engaged Lazard to assess Australian strategic direction and options
- People focus
  - changing world of work
  - health, safety and wellbeing

