# Resourcing Challenges in a Changing World

Sunesh Parbhu | Apex Summit 2021

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# Resourcing Challenges in a Changing World

- Climate Change 2050 Goal
- Electricity Industry 2020 vs 2050
- Challenges
  - Time
  - People & Recruitment
  - Supply Chains

# Climate Change 2050 Goal

- The *Climate Change Response Zero Carbon Amendment Bill* requires that by **January 1**, **2050**, and subsequent years, net accounting emissions of greenhouse gases (other than biogenic methane) are **zero**.
- How will New Zealand achieve this?
  - Transport
  - Process Heat
  - Electricity System

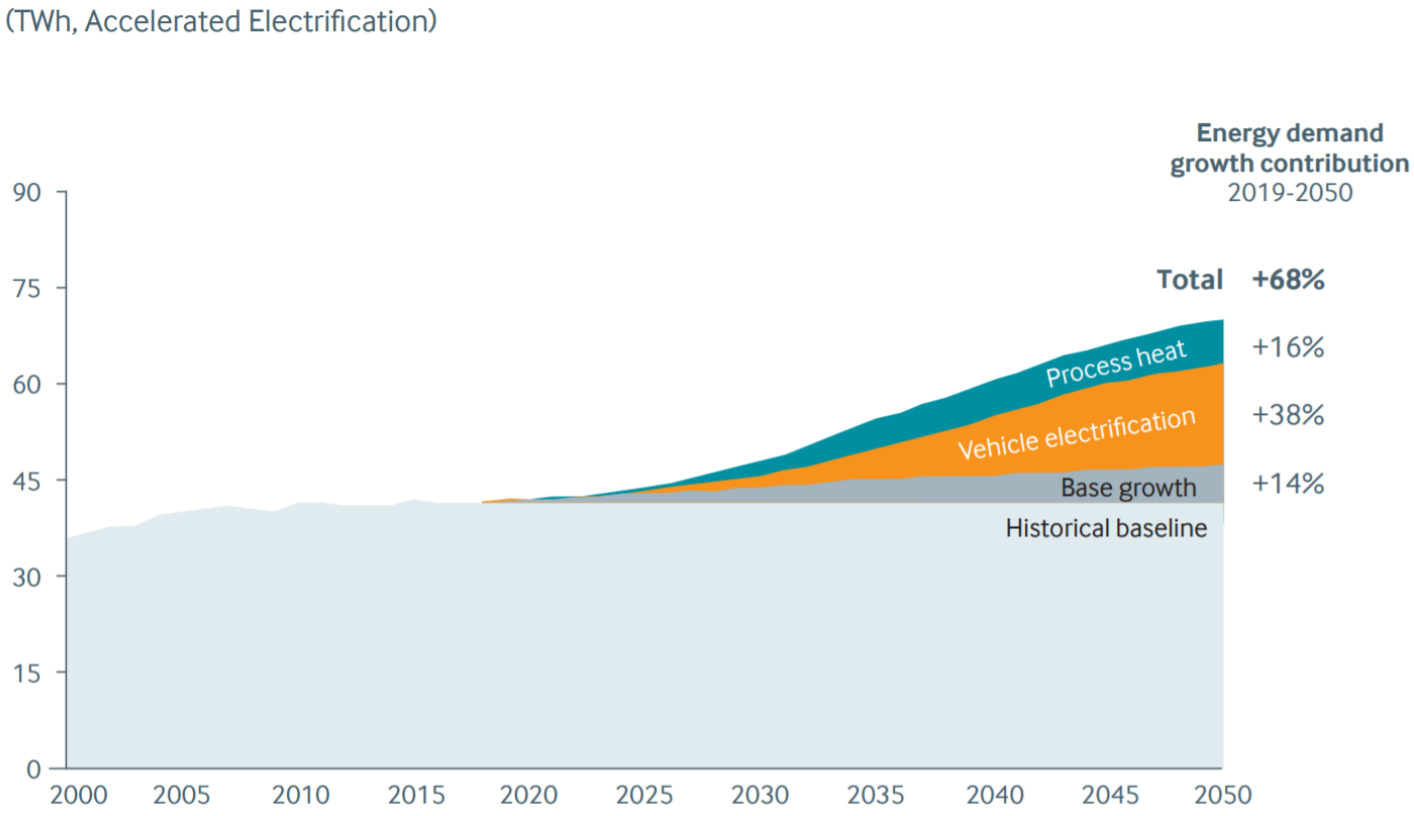
# Resourcing Challenges in a Changing World

**Resourcing Challenges**

- Time
- People & Recruitment
- Supply Chains

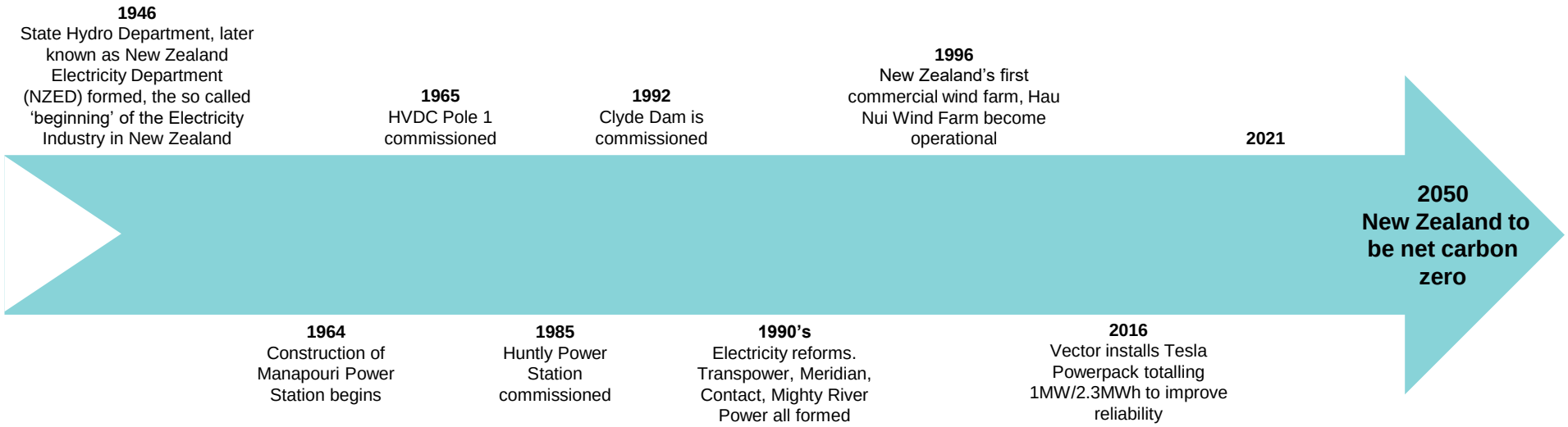
**Changing World**

- Carbon Zero 2050
- Future Grid




*Whakamanai te Mauri Hiko – Transpower 2020*[1]

# The Next 30-years…




## 2020

- Electricity demand ~6 000 MW
- Renewable generation is 80-85%
- 180 Substations
- 320 Transformers
- 12 000 km Transmission Lines

## 2050

- Annual demand estimated to rise by 50-100%
- Net zero electricity generation
- 230 Substations?
- 450 Transformers?
- 17 000 km Transmission Lines?

# People

- 8000 people provide highly−skilled services[1]. This is split across contracting, engineering design, project management and asset maintenance. It is estimated that we will need thousands more.
- Trade roles account for 48% of technical roles[2].
- 21% of the total technical workforce is over 55 years old[2]. So, over the next 10-15 years a significant portion of the workforce will retire.
- Those who have been trained and developed are encouraged to stay local and apply their skills in New Zealand.

*Whakamanai te Mauri Hiko – Transpower 2020*[1]
*EEA'S Electricity Industry Training Survey* [2]

# Recruitment

- Power is not viewed as an attractive option for school leavers. It is a niche industry that is often overlooked.
- 81% of industry participants find it challenging to recruit technicians, and 78% for engineers.
- Scholarships are a useful tool to motivate people to the industry.
- Marketing campaigns targeted at primary, secondary and tertiary levels are too important. As this targets students at the age where they are making decisions regarding their future.
- All areas of the industry need to understand their capacity and develop methods to combat constraints. If some areas of the industry have constraints, it has consequences that reach the entire industry.

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# Summary

- Electricity industry is embarking on a massive challenge over the next 30-years to enable New Zealand to reach net zero carbon emissions.
- It has resourcing challenges that are imminent now and through to 2050.
  - Time
  - People
- Skills and knowledge relating the power industry will be in high demand over this period.
- We need to find a way to encourage more people to our industry and highlight the exciting work ahead and the technical challenges it represents.

There is no better time to be in the power industry!

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