

# New Zealand Geothermal Association 2019 Conference

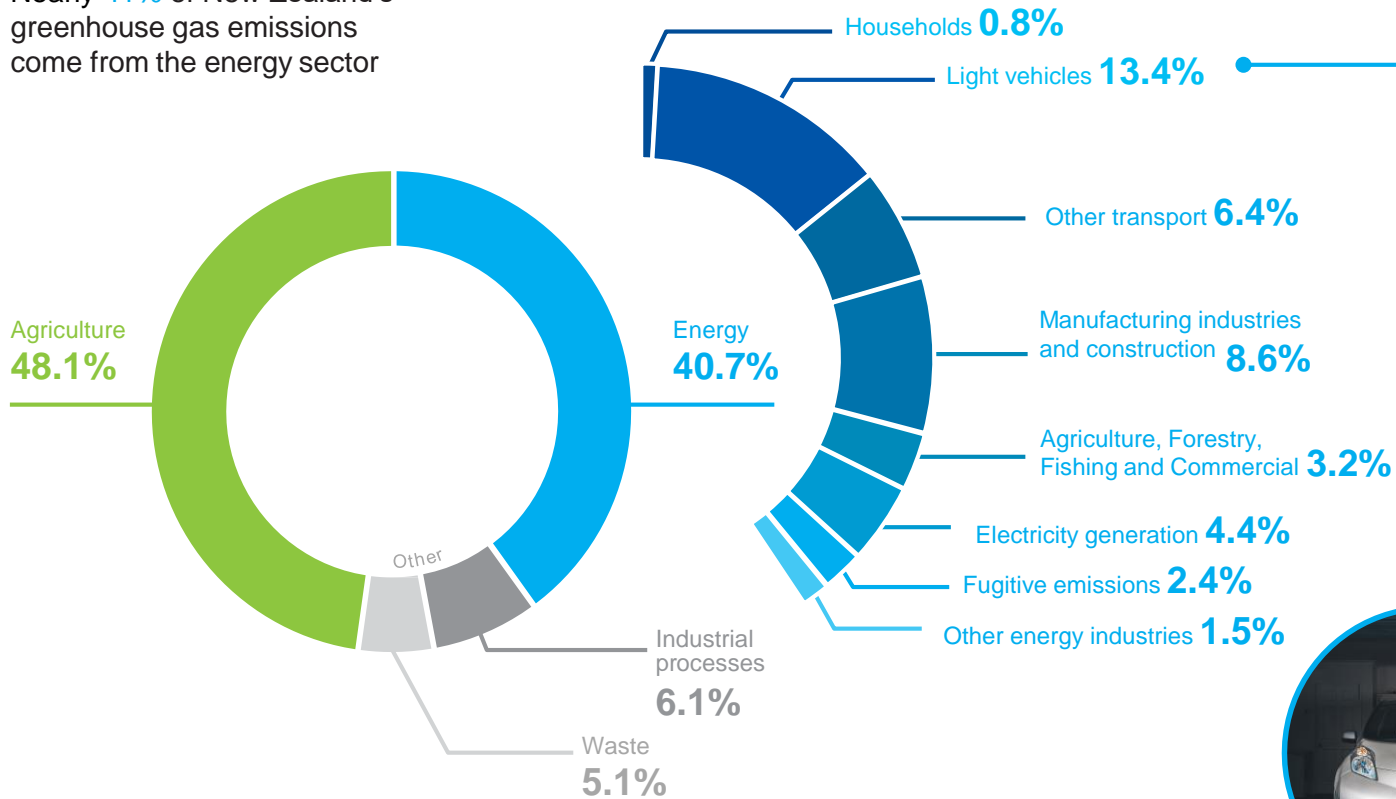
Presentation by: Andrew Caseley, Chief Executive  
Energy Efficiency and Conservation Authority (EECA)



# Current state

## New Zealand's greenhouse gas emissions

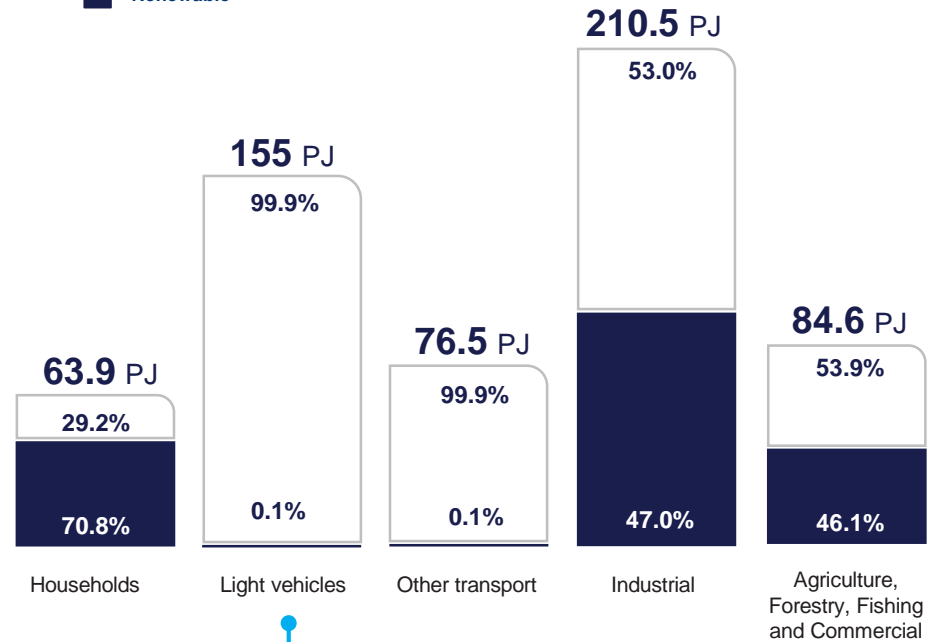
Nearly 41% of New Zealand's greenhouse gas emissions come from the energy sector



Over two thirds of the energy used in New Zealand comes from non-renewable energy sources

## Energy use in New Zealand

■ Non-renewable  
■ Renewable



By mid-June 2019, there were over

**14,500**

electric vehicles registered in New Zealand.

Five years ago there were only 250

Source: Greenhouse Gas Inventory 1990-2017, MfE (2019);  
 Light vehicles and Other transport estimates based on data from the MBIE 2017 energy balances and MBIE Energy in New Zealand (2018)

# EECA's Strategic Focus Areas

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**Low Carbon  
Productive  
Business**

**Efficient and  
Low Emissions  
Transport**

**Energy  
Efficient  
Homes**

**Government  
Leadership**

**Engage Hearts  
and Minds**

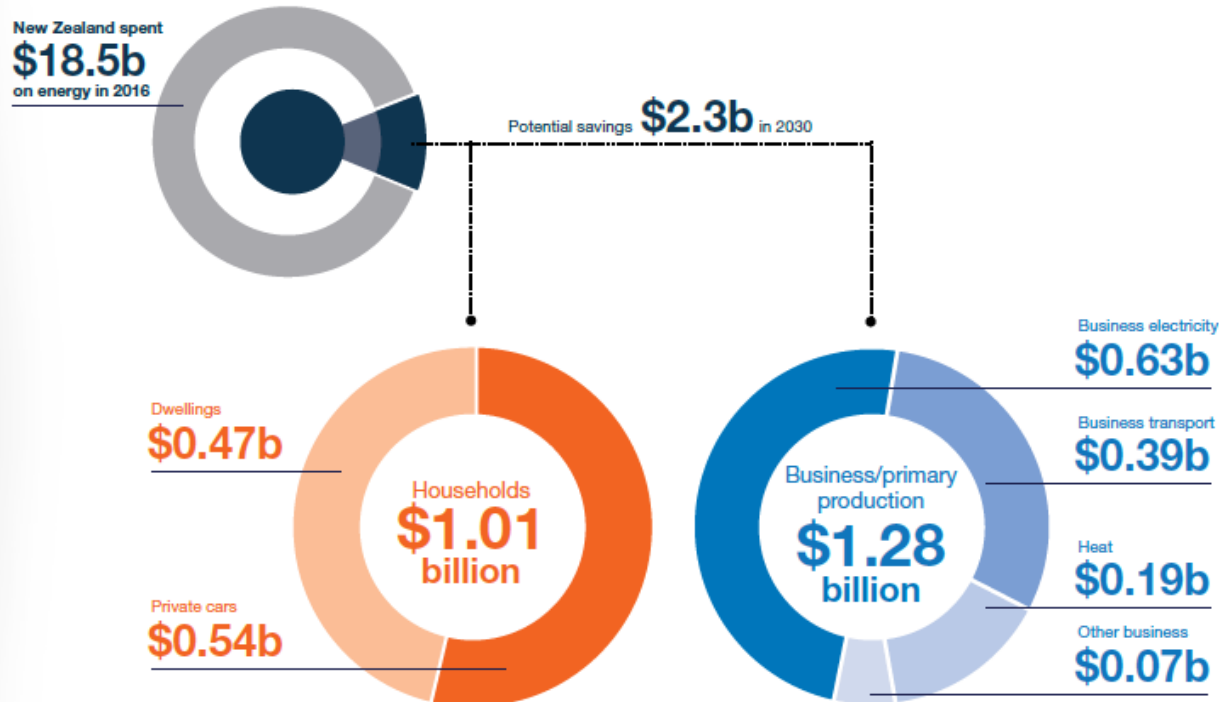


# Efficiency First

- Energy Efficiency remains one of the greatest cost/benefit initiatives

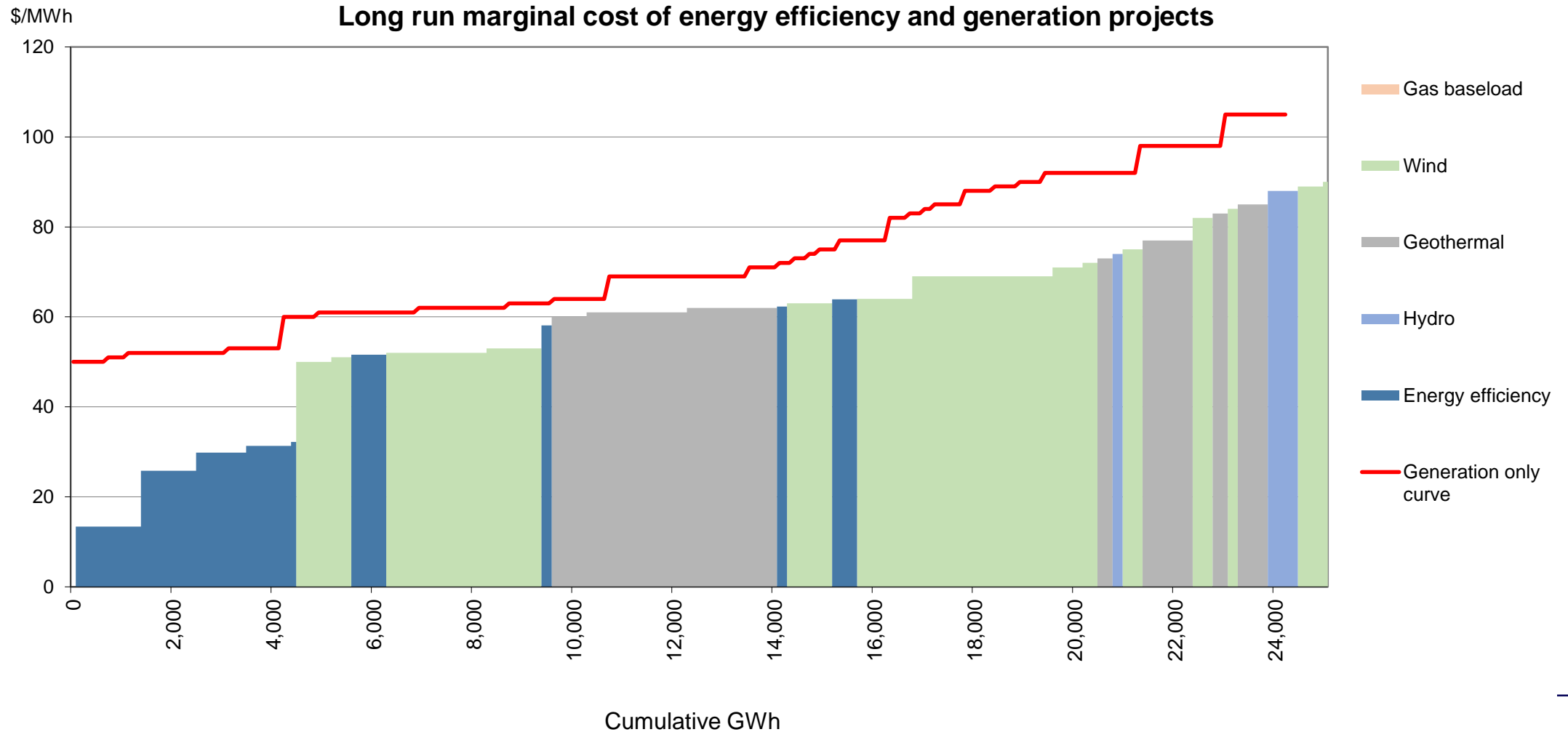
## 2030 economic energy savings potential

Energy efficient practices and technologies could reduce New Zealand's annual energy use by 20% by 2030.



# Efficiency First

## Energy efficient technology can cost less than new generation



# Efficiency First

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- **Retrofitting existing energy systems**
- **New Investment opportunities**
- **Utilising the digitalisation revolution**
- **Well planned maintenance**
- **Price signals through the Emissions Trading Scheme**
- **Further Regulation**
- **Developing professional capability**

# “Innovations” in Energy Use

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- **Business**
  - Heat Pump Technologies
  - Electrode Boilers
  - Heat Capture and Reuse
- **Transport**
  - EV's
  - Hybrid Vehicles
  - Hydrogen – where will it go commercially?
- **Residential**
  - Hot Water
  - Lighting
  - Space Heating



# Increasing supply of renewable generation

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- **Geothermal will meet some demand**
- **Wind will be key**
- **Solar**
  - Grid scale booming worldwide
  - Commercial/Industrial scale will develop
  - Residential still has high payback scenarios
  - Community schemes evolving
- **Hydro**
  - Environmental considerations dictating
  - Smaller scale to continue
- **Biomass**
  - Options evolving but hampered by security of supply and cost
- **Liquid Fuels are still costly**





# Questions?

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