

NZWEA 2019 AGM

Welcome





Chair's Report

2019 AGM

Blair Walter, Chair, NZ Wind Energy Association
October 2019

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- About NZWEA
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About NZWEA

- Established 1997
- An industry association
 - Promotes the development of wind as a reliable, sustainable, clean and commercially viable energy source
 - Policy & regulatory advocacy, public awareness and industry development
- Represents over 50 members:
 - Generators and developers
 - Turbine manufacturers, equipment suppliers, consultants
- Utility scale generation
 - Also supporting smaller scale and community wind initiatives

NZWEA Board



- Election for
 - Three members representing Corporates
 - Two representing Associates / Individuals
 - Strong interest in positions
- Continued involvement of
 - Peter McCafferty (Beca)
 - Adam Radich (NZ Windfarms)
 - Jared Wallace (Individual)
 - Tony Webster (Vestas)
- Retired
 - Jim Pearson (Tilt)



Strategic Focus

- 3 key strategies:
 - Leveraging NZ's emission reduction imperative to enable the energy transition to renewables, particularly wind energy
 - Optimising wind energy's position and ensure the regulatory environment supports wind farm development
 - Expanding the opportunity for wind energy development to enable community and industrial projects including wind's integration with other technologies
- Significant progress across priority areas
 - Step change in Government focus on addressing climate change
 - Electricity sector key to lowering carbon emissions
 - Association active in engagement with positive results
- Ongoing focus on health and safety programme
 - New challenges with wind farm construction commencing

Financial Performance

- Association has faced challenging times
 - Major restructure to reduce costs in 2015
 - Surplus in 2016 but deficits in 2017 and 2018
- 2019 Wind Energy Conference a turning point
 - Industry activity and Turitea investment increased registrations
- Surplus in 2019 \$22k from a deficit of \$35k in 2018
 - Net growth in members from 47 to 57
 - Attendance at conference 138 (last year 82)
 - Expenses reduced from \$171k to \$168k
- Outlook improved but remains challenging
 - Increased activity should underpin membership levels and 2020 Conference
 - But current financial strength limits ability to invest in enhancing the position and acceptance of wind

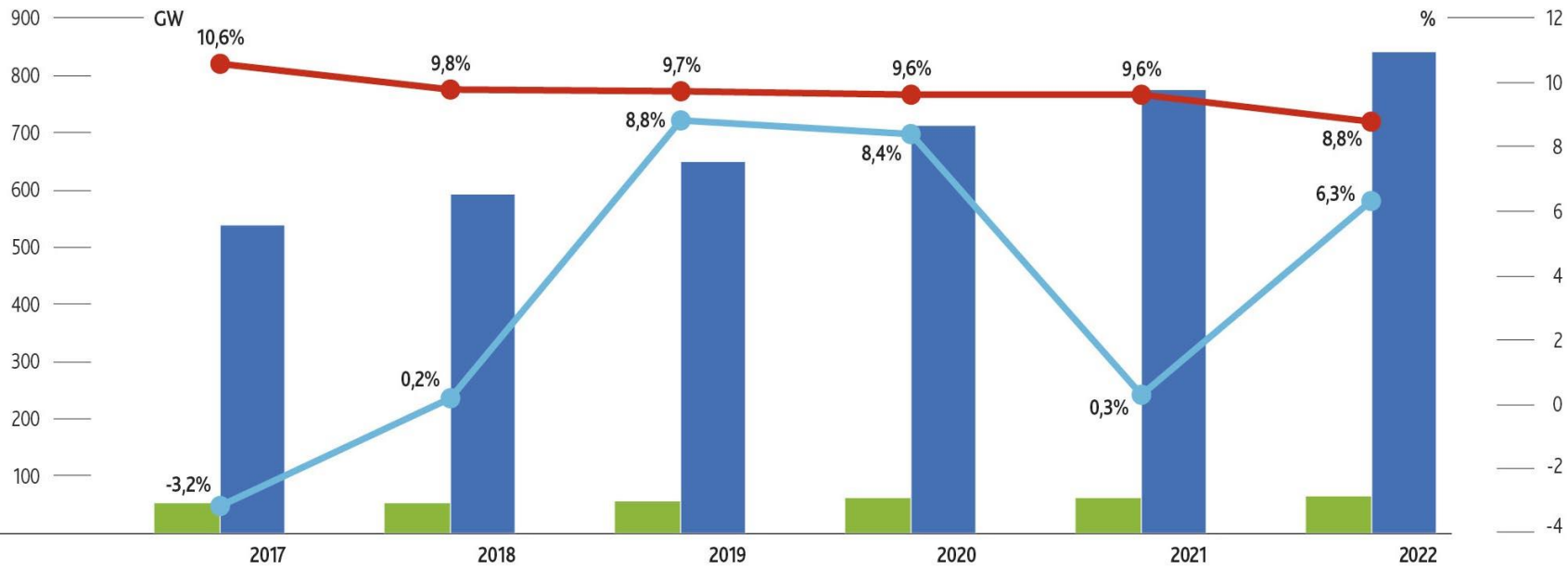
International Trends

- Outlook positive
 - Technology, price and need for emission reductions
 - Transforming from subsidies to a purely commercial model
 - Offshore wind price breakthrough
 - But... solar growth rate outstripping wind
- Cumulative capacity 597 GW but growth had plateaued
 - 50GW new capacity in 2018, including 4.5GW offshore
 - Latest forecast + 330GW over next 5 years
 - Main drivers US and China onshore markets
- Key trends
 - Increasing share of “subsidy free” growth
 - Increasing number of bilateral PPA’s
 - 8 to 10 GW of offshore wind pa forecast

Positive Global Growth



MARKET FORECAST 2018-2022



	Cumulative installed capacity	539.1 GW	592 GW	649.5 GW	711.8 GW	774.4 GW	840.9 GW
	Cumulative capacity growth rate	10.6%	9.8%	9.7%	9.6%	9.6%	8.8%
	Annual installed capacity	52.5 GW	52.9 GW	57.5 GW	62.4 GW	62.6 GW	66.5 GW
	Annual installed capacity growth rate	-3.2%	0.2%	8.8%	8.4%	0.3%	6.3%

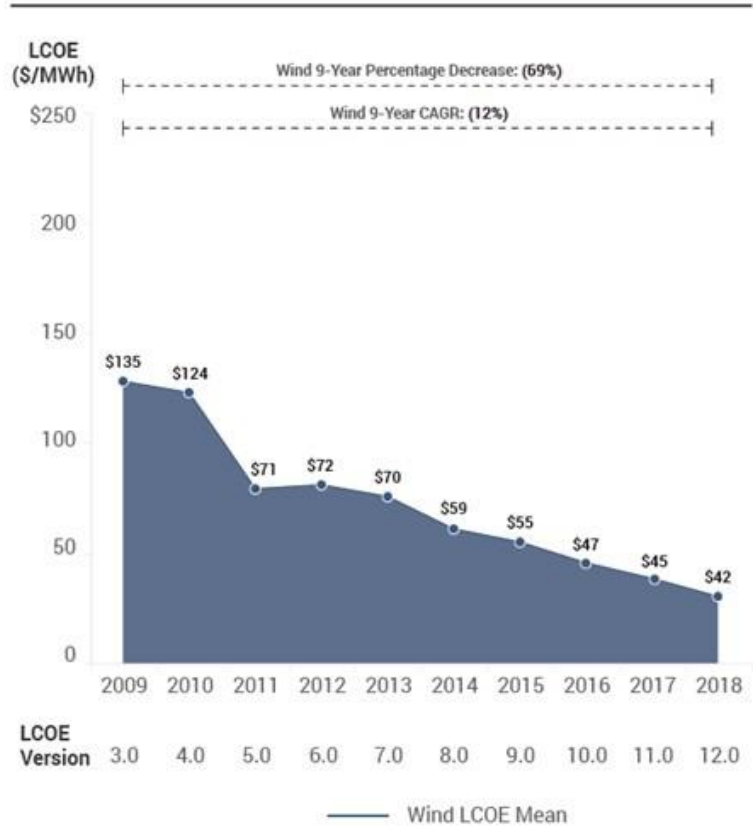
Source: GWEC

- Increase of 53 GW in 2017 rising 67 GW in 2022
- Installed capacity increasing from 525 GW to 841 GW

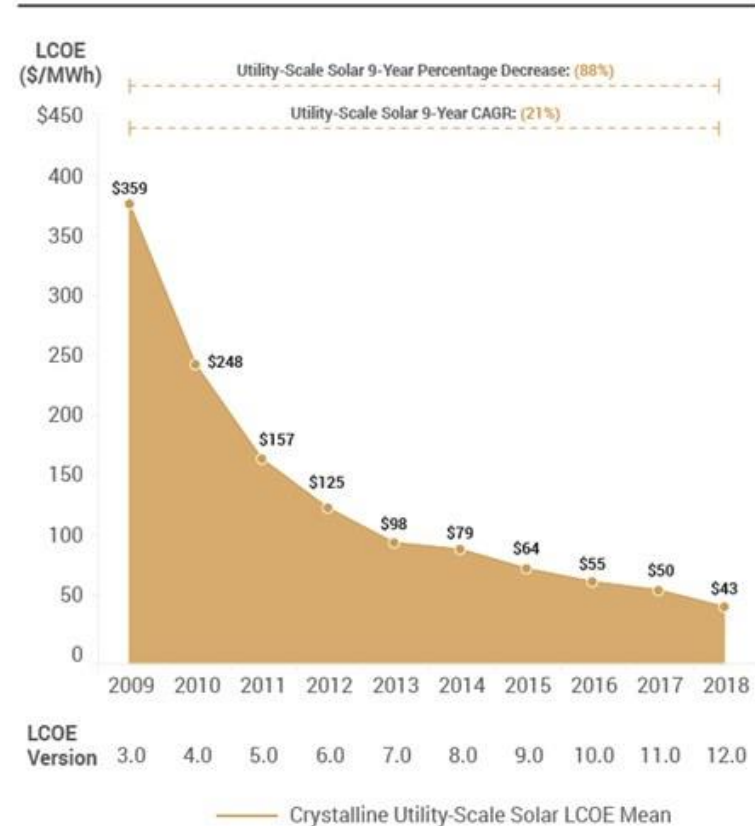
The declining cost of renewables



Unsubsidized Wind LCOE



Unsubsidized Solar PV LCOE



Lazard LCOE version 12.0

Australian Update



- At the end of 2018, 14.8 GW of new generation was under construction or financially committed = \$24.5 billion in investment and more than 13,000 jobs
- Renewable energy was 21.3% of generation in 2018:
 - Hydro 7.5%
 - Wind 7.1% (more than NZ!)
 - Small scale solar 4.2% (installed capacity now over 8GW)
- Market slowing down due to RET being met and uncertainty over new policy mechanisms
- Significant momentum in market and new opportunities such as green hydrogen to maintain high activity levels
- Major issues with grid connection process
 - Time and complexity of securing offer to connect
 - Delays in acceptance testing and ability to export
 - Big MLF swings
- Grid issues being addressed through strategic grid investments such as interconnectors and dedicated renewable energy zones



CE Report

2019 AGM

Grenville Gaskell, Chief Executive, NZ Wind Energy Association
October 2019

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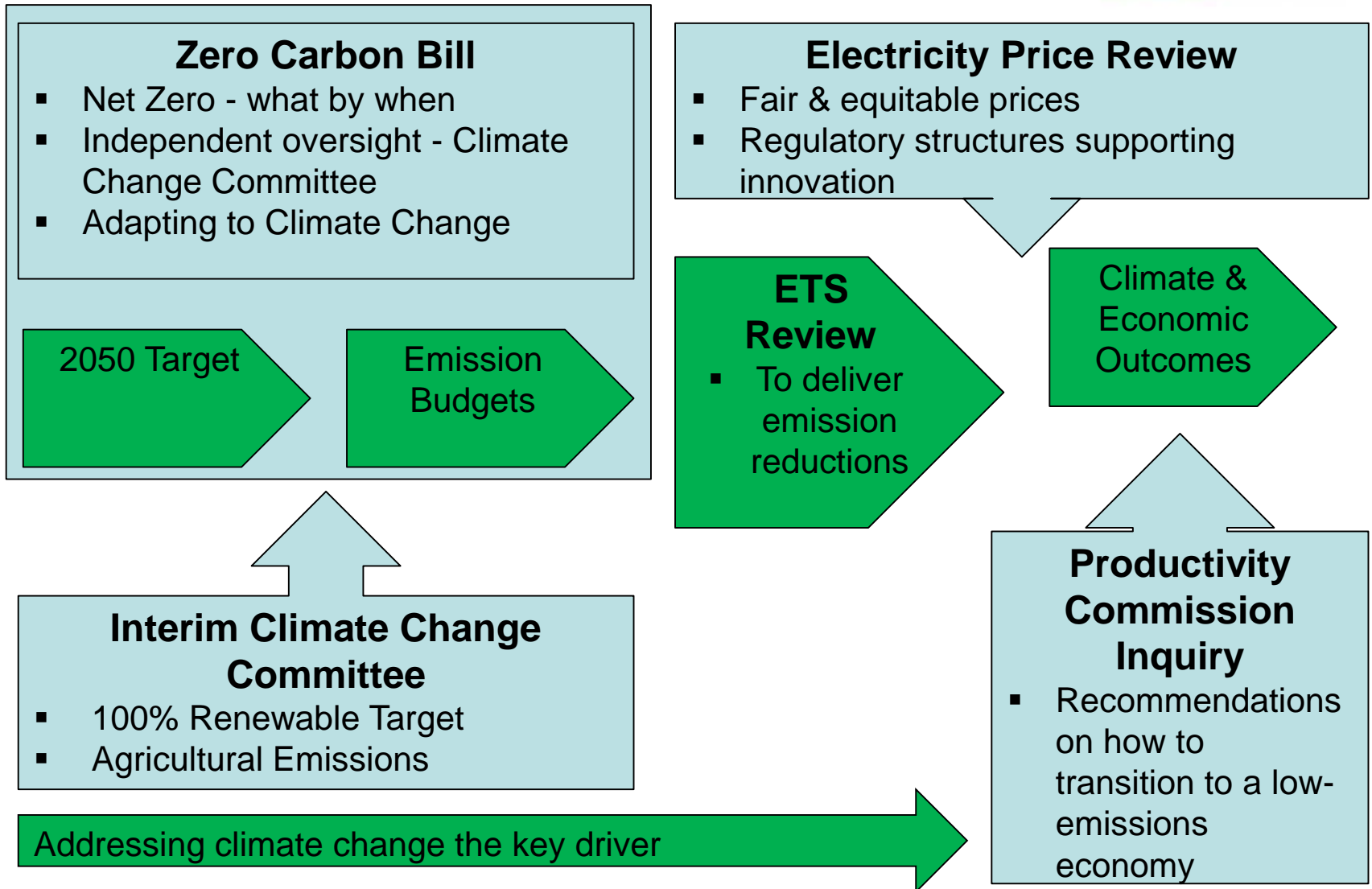
- NZ Context
- How it Fits together
- Highlights
- Wind Re-positioning
- Areas of Focus
- Summary



- Last year's positive outlook has lead to growth
 - Turitea - 3.6MW turbines, 119MW, 470GWh's, \$256m
 - Waipipi – 4.3MW turbines, 133MW, 455GWh's, \$276m
 - Consent lodged for the Kaimai Wind Farm – 4100MW, 400 GWh's
- All roads leading to wind

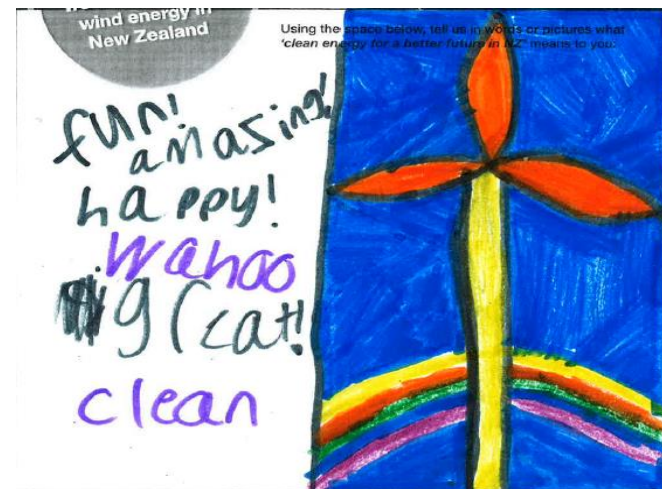
The modelling suggests wind will be the dominant form of new renewable generation out to 2035. This is because New Zealand has an abundance of quality wind-farm sites, and wind is the lowest-cost form of new generation - Interim Climate Change Committee
- Reviews and Inquiries everywhere
 - Zero Carbon Bill
 - Electricity Price Review
 - Interim Climate Change Committee Reports
 - Improvements to the ETS
 - Draft National Planning Standards
 - But...is leading to agreeing an emissions target and transition plan for a low carbon economy

How it's fitting together...



What they are saying

- Zero Carbon Bill
 - Net Zero greenhouse gases by 2050
 - Except methane 24 - 47% below 2017
- ICCC Accelerated Electrification
 - Electrify transport and industrial heat
 - Value hydropower
 - Provide for wind development at scale
 - Responsive regulatory system
- Electricity Price Review
 - Strengthen consumer voice & competition
 - Reinforce wholesale market
 - Improve transmission and distribution
 - Improve the regulatory system
 - Prepare for a low-carbon future



Some highlights...

- Conference 2019 – energised participants
- Health and Safety - a shared priority
- Price of carbon has risen
- Positive responses to NZWEA submissions
- National Planning Standards in place
 - Standard format for statutory planning documents
 - Includes mandatory adoption of NZ Wind Noise Standard NZS6808
- Wind offer arrangements in place
- Government commitment to addressing RMA issues
- Wind is an essential component of the energy mix
- Investment and new builds

Key Conference Takeout's...



- The Minister is considering options to better support renewables
- Includes community and small-scale renewables
- The climate change imperative is very real
- Deep decarbonisation required but social license and political will are key barriers
- Zero Carbon Bill and ETS reform are essential tools
- Future demand growth is real but the extent uncertain
- Wind cheapest and NZ unlikely to see large scale thermal again
- Significant change in future price duration curves
- Bulk of new investment is wind and Tauhara geothermal
- Low interest rates & offshore investment can further reduce wind costs
- Intermittency and matching generation to winter demand a challenge
- Efficiency, demand response and peak load management key enablers
- Dry year risk increases with growing demand
- Steady or lower prices over the medium term

Wind Re-positioning

- Energy that powers the hearts of NZ
 - Inspire around the power of renewables - Designworks
- From what we do (the how) to why we do it
- From pictures of turbines to capturing what wind means to people
 - Freedom, freshness and sustainability
 - Enhancing wellbeing
 - Generators to enablers



Areas of Focus...

- Health and safety
- Development of a coherent decarbonisation strategy
 - Zero Carbon Act and ETS reform
- Strengthen national direction planning instruments
 - Recognising the national importance of renewables and transmission
 - More directive standards and support for small scale developments
- Finalise transmission and DG pricing
 - Provide investment certainty and unlock South Island development
- Wind positioning
 - Galvanising support for wind farm development
- Retail tariff reform
 - Effective price signals to improve sector efficiency
 - Encourages innovation - demand side management / load shifting
 - Enables consumer investment to be optimised

Areas of Focus...

- Industry training - NZ certificate in wind farm maintenance
- Wholesale market depth, products and duration
 - Better support independent generators
- Assessment of off-shore wind potential
 - A counterfactual for on-shore development
- On-going regulatory risk
 - Changes to the NPS for freshwater management
 - Draft NPS for indigenous biodiversity
- Information availability for all fuel types
 - Replicate hydro storage for gas and wind
- Real time pricing
 - Supports innovation and participation (dispatch-lite)
- Opportunity for wind to support green hydrogen
 - Economies of scale
 - Dry year option

Summary

- Outlook - hot
 - Increased activity and investment
 - Zero Carbon Bill close
 - Wind recognised as an essential to decarbonisation
- But a number of risks to manage
 - When will demand growth come
 - RMA uncertainty – NPS Freshwater management, NPS indigenous biodiversity, strengthening NPS renewable electricity generation
 - Regulatory delays – transmission pricing
 - Sustaining health and safety performance
 - Ensuring technical skills to support growth
- International growth positive – NZ's second wave
- Thank members for continued support



Thank you

