



PowerIt Fwd

The CE Change
Keith Scoles

What do you prefer?

New Energy

Optimised for Community Cost Saving

Community Focussed

Shared Benefits

Stimulates RE Investment

More efficient with optimal design and localised generation

More agile and modern thinking

Old Energy

Inflexible Regulated Return on a suboptimal solution

Lost Communities

Energy Poverty

Status quo

Inefficient model / 7.5 % electricity loss in NZ Grid

Factory mindset slower to innovate

Current Utility Challenges

- ▶ Disengaged Consumers
- ▶ 30+ Distribution companies
- ▶ Networks would have been built differently if solar/storage was available at the time
- ▶ Inefficient:
 - ▶ Current model not an entirely a commercial model as it based on regulated return.
 - ▶ over design required for future capacity that may or may not be realised.



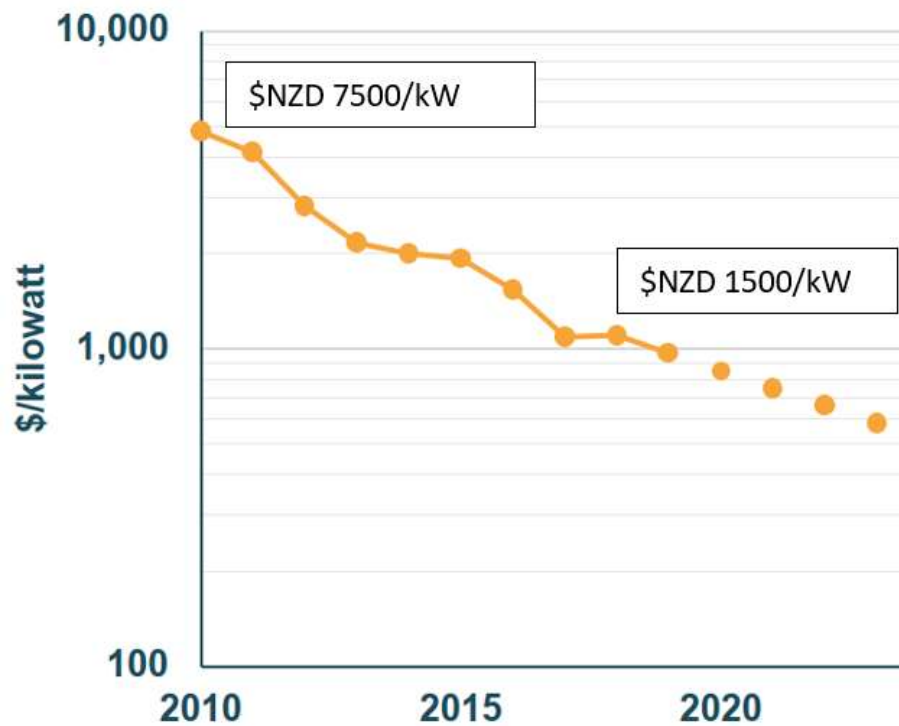
Now is the time for community energy

- ▶ “Affordable and dependable technology now allows communities to turn away from utilities and take control of their energy future”



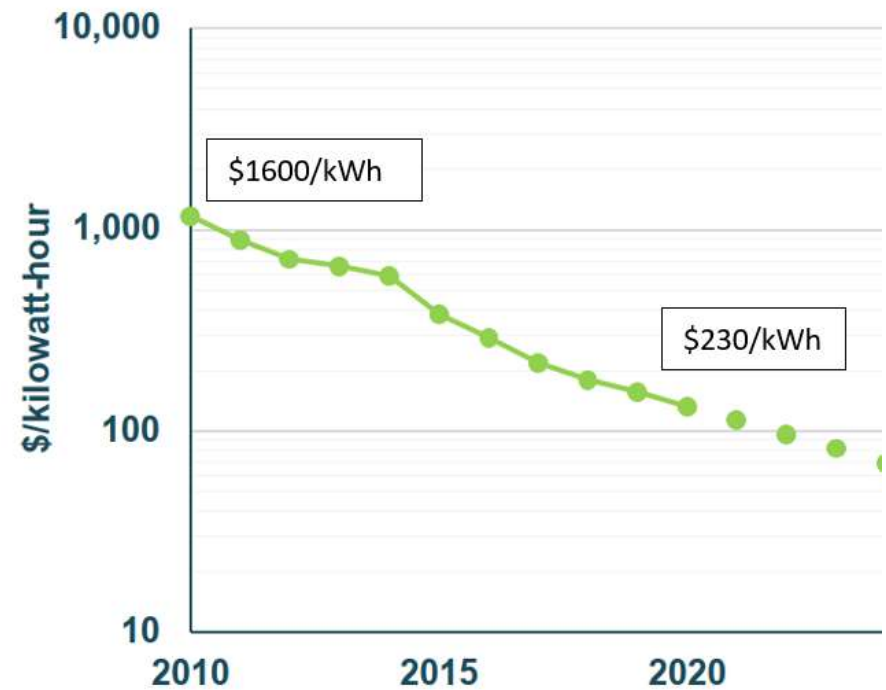
Reason 1: The business case is now very strong

Solar PV



Source: NREL, 2018.¹ RethinkX projections 2019-2030.

Batteries



Source: BNEF, 2019.^{4,7,8} RethinkX projections 2020-2030.

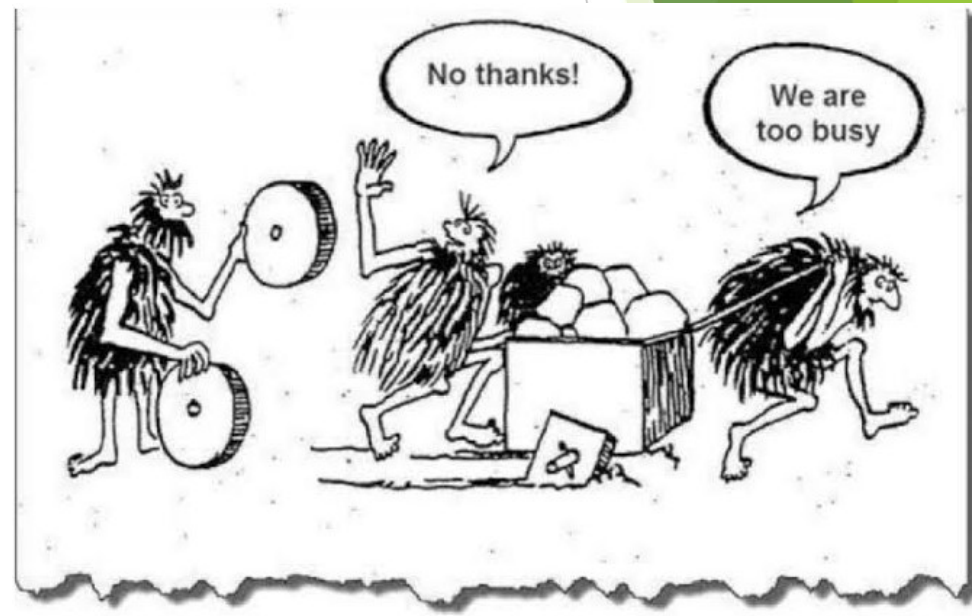
Reason 2: The time is right

- ▶ A change in social focus can refresh the electricity industry and promote new ways of thinking.
- ▶ Energy hardship affects communities and cant continue to be ignored. Whats best for NZ Inc needed.



Reason 3: Your local lines company may not choose to help

- ▶ Too busy perspective
- ▶ Unsure how it will affect them - seen as a competitive market (but is it?)
- ▶ Unsure of the technical benefits that can be derived from new distributive energy models
- ▶ Unclear how to attribute value to distributed energy and storage to their networks
- ▶ New technology and experience lacking in a historical factory business limiting adaptability
- ▶ Traditional experience and mindsets need to shift



How to Bring About Your Renewable Community Energy Project



Where to from here?

- ▶ Community Energy enterprises need a co-ordinated and consistent approach to influence change
- ▶ We cant wait, Utilities can be part of the equation as the facilitators of energy transfer but they need to engage.
- ▶ Exemplar Community Projects needed, because that's where we can all engage and learn from each other to benefit NZ Inc.



PowerIt Fwd facilitating delivery

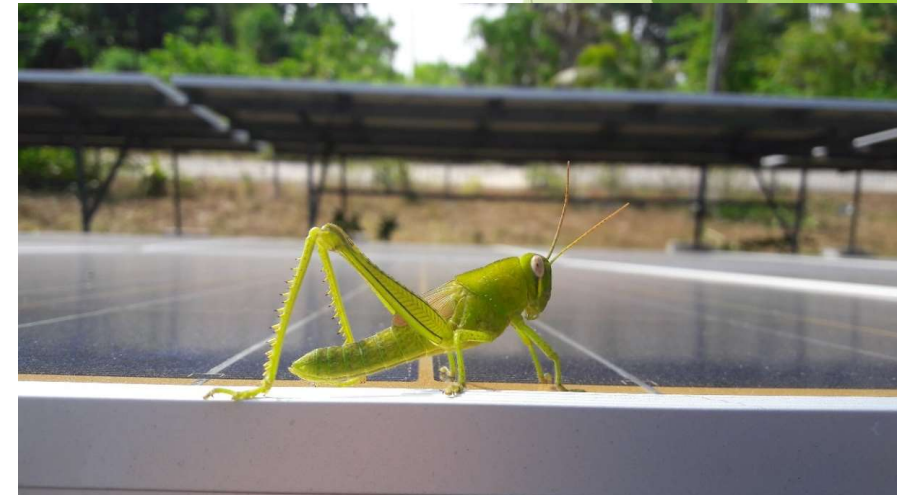


- ▶ High Level Utility Assessment
- ▶ Project Staging , Resourcing Strategy and high level project organisational plan
- ▶ Technical , Delivery and Procurement Strategy
- ▶ High Level Community Engagement /Land Consultation Strategy
- ▶ High Level Generation and Retailing Strategy

- ▶ Community Consultation Phase Begins firm up community Engagement plan
- ▶ High Level Technical Specification/Concept Design, Project Technical Modelling,Grid Integration Study
- ▶ Project Budget/Phasing/ Financial Modelling, Contract and Delivery Plan
- ▶ Geotech Study
- ▶ Environmental Risk and Consenting Process
- ▶ Identify land negotiation requirements and budgets
- ▶ Firm up Community Engagement Delivery Plan
- ▶ Confirm High Level Operation and Maintenance Strategy and Organisational Structure
- ▶ Generation and Retailing Agreements Developed
- ▶ Legal/Risk Identification

- ▶ Tender/ Contract Negotiation for Delivery
- ▶ Retail Agreements in place
- ▶ Detailed Design Phase
- ▶ Finalising Grid Studies
- ▶ Finalise Generation and Retailing Contracts
- ▶ Resource Consents Finalised
- ▶ Site Establishment
- ▶ Construction Phase
- ▶ Commissioning Performance Testing
- ▶ Confirm Operations Team/ O&M Requirements(or Contracts)
- ▶ Handover for Operation
- ▶ Operation and Maintenance Training
- ▶ Defect Liability Period
- ▶ Community Engagement Delivery Phase Continues

- ▶ Completion of Defects Liability Periods
- ▶ Operation and Maintenance Frameworks in place
- ▶ End of year one performance Testing
- ▶ Full operational phase post Defect Liability Period
- ▶ Community Engagement Delivery Phase Continues



To accomplish great things, we must not only act, but also dream, not only plan, but also believe.

Anatole France

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