

# **Tilt Renewables presentation for Infratil Investor Day**

11 April 2018



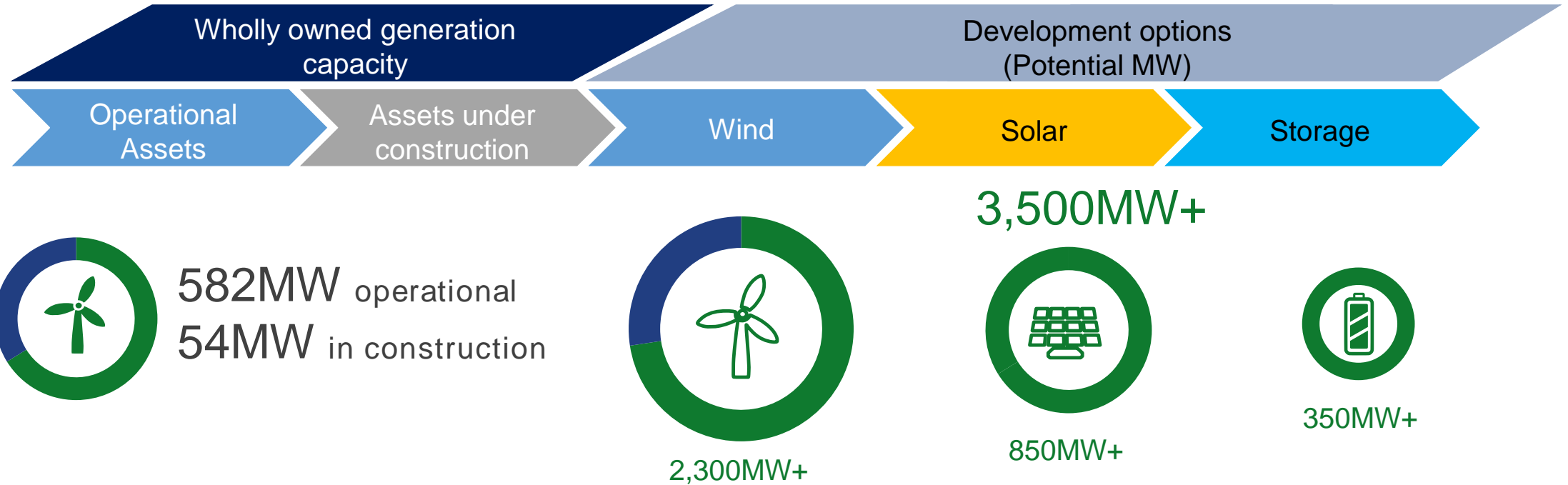
- Overview – portfolio and team
- Tilt Renewables differentiators
- Highlights for FY2018
- Australian NEM in transition
- Policy trends
- Market trends
- NZ - Renewable energy landscape
- Focus areas for Tilt Renewables



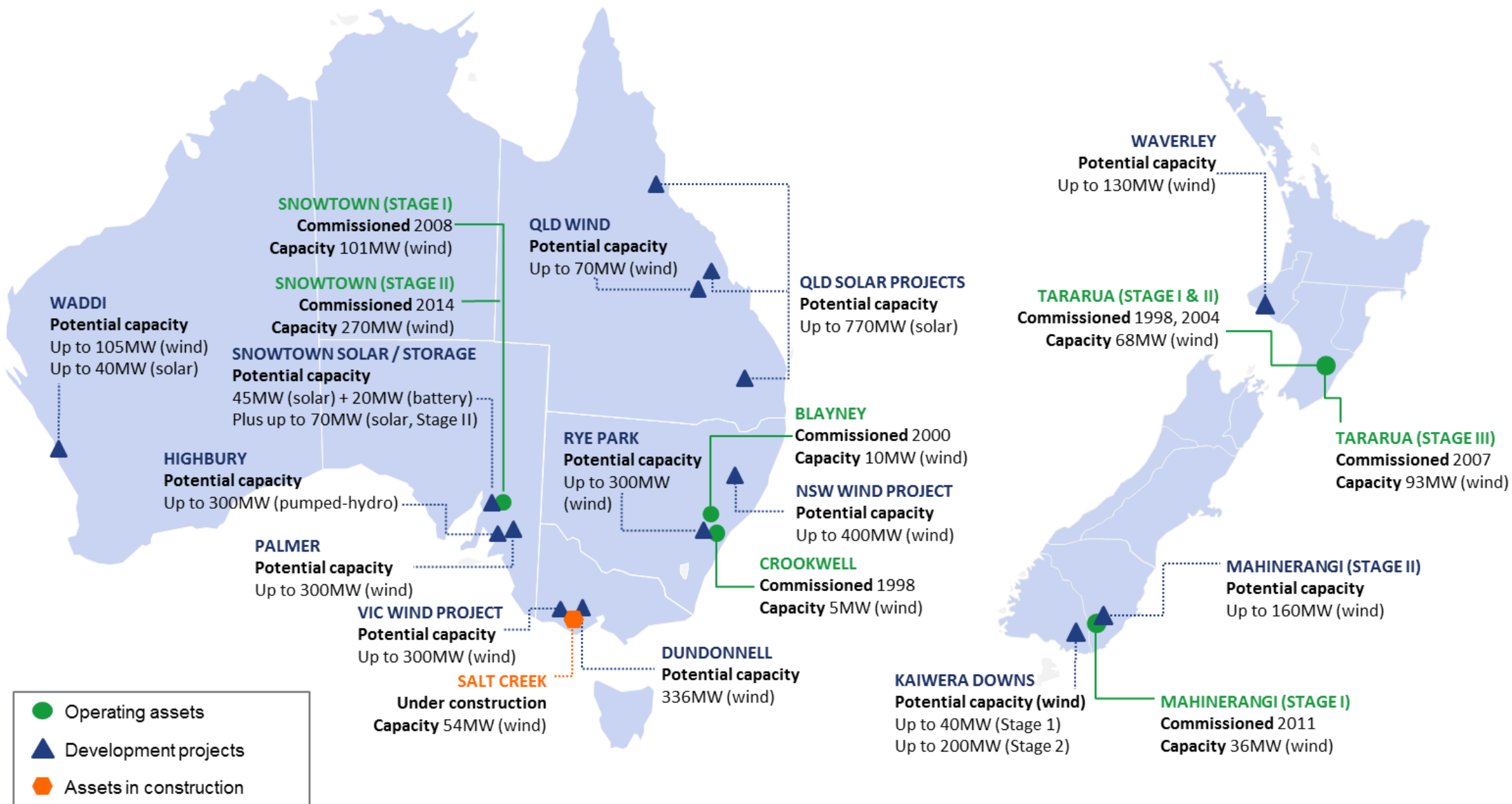


## Overview of Tilt Renewables

19+ years experience developing, owning and operating renewable generation assets across Australasia



- We aim to be the leading renewable energy business in Australasia by:
  - ensuring key stakeholder and partner relationships are fostered to enable innovative commercial and technical solutions to market opportunities,
  - leveraging our development, execution and asset management skills to enhance our existing portfolio and monetise our development pipeline, and
  - sustaining a high performance, flexible culture capable of adapting to market dynamics
- Our goal is to more than double assets under management by 2020 whilst maintaining a flexible and diverse pipeline of opportunities



## Key differentiators

1

High performing assets, revenues contracted to strong counterparties

5yr capacity factor:

- Australia 37%
- New Zealand 39%

5yr availability:

- Australia 97.0%
- New Zealand 97.5%



Not rated



Baa3 / BBB-



BBB+

Currently ca.98% contracted

2

Solid balance sheet with strong cashflow generated from operating assets

Prudent gearing

Portfolio debt facility

Shareholder support

Clear alternatives to traditional PPA market

Flexibility to pursue growth

3

Developing storage / firming capability with technology neutral approach

Highbury Pumped Hydro

Gas Peaking

Trading and Market Risk Management Products

Snowtown Solar + Battery

Positioning for policy, market and technology changes

4

Demonstrated ability to develop, execute and fund projects

Salt Creek under construction: 54 MW

Dundonnell bid into VREAS  
Other consented wind projects: Up to 930 MW

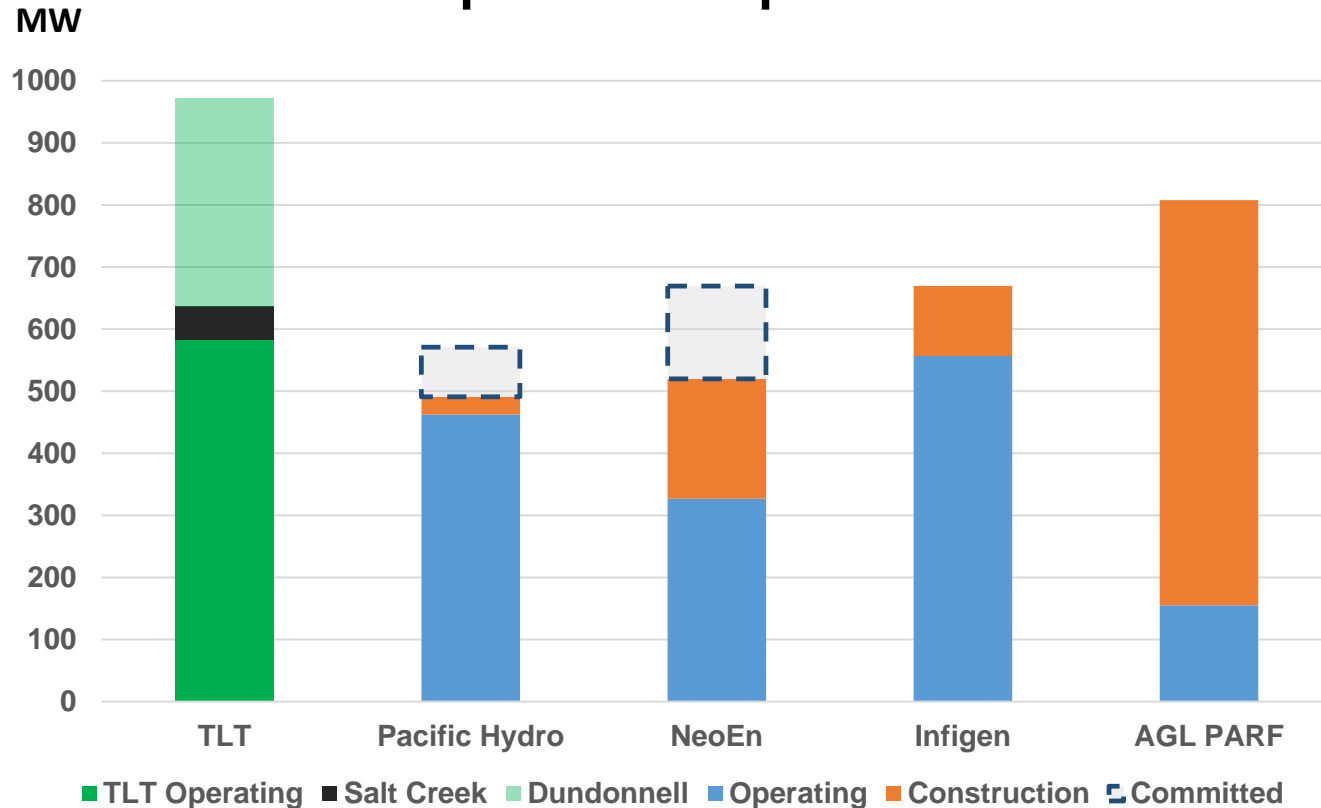
Consented solar pipeline: Up to 470 MW

Experience from greenfield through to end of life stages of renewable projects

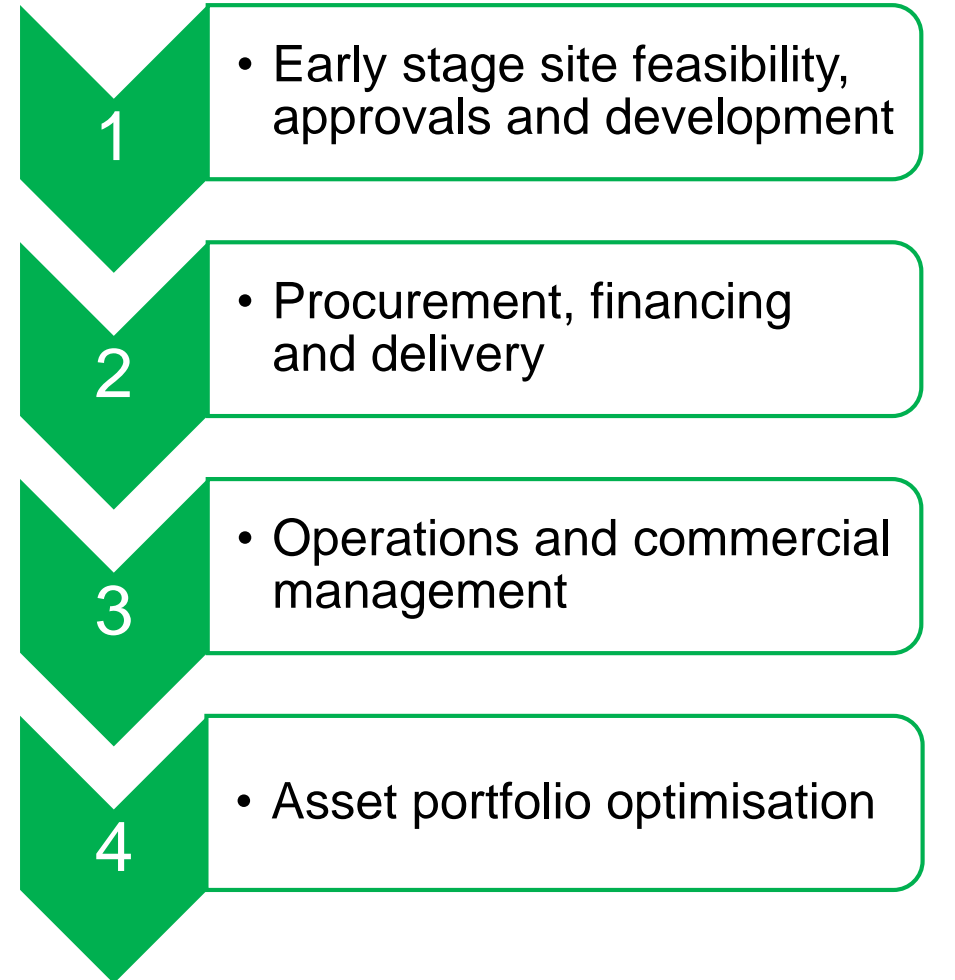
# Tilt Renewables Value Proposition

Large operational base and immediate growth opportunities

## Competitor Comparison



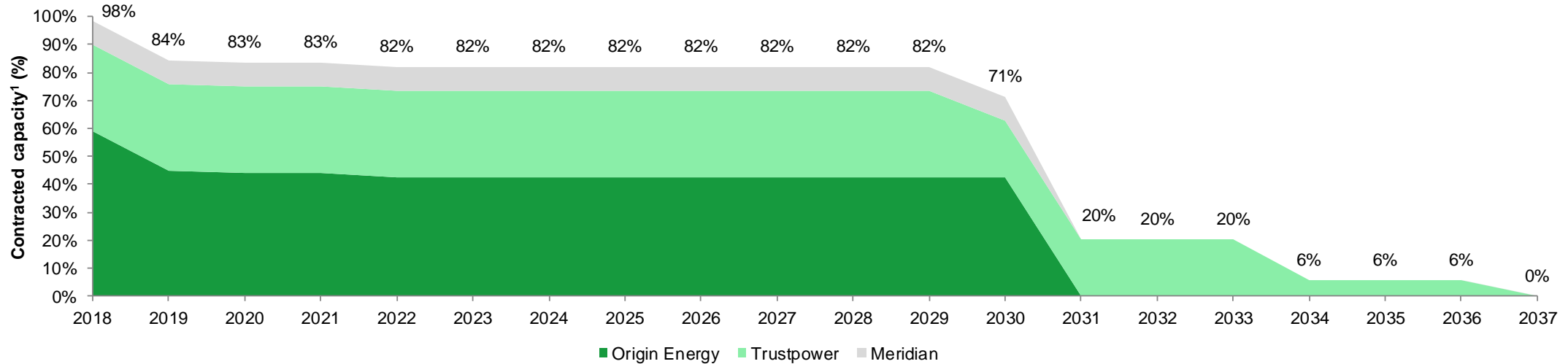
Source: TLT Analysis



**plus proven capability across the asset lifecycle**

## Key Differentiator - PPA & Counterparty Overview

Tilt Renewables has a high level of contracted revenue, counterparties include Origin Energy, Trustpower, and Meridian Energy



Source: TLT Analysis

1. Capacity and contracts include Salt Creek Wind Farm

- ✓ Tilt Renewables' Australian operational wind assets have Power Purchase Agreements ("PPAs") in place with Origin Energy comprising approximately 70% of current business revenue
- ✓ In February 2018 Tilt Renewables entered into an agreement to sell electricity from Salt Creek Wind Farm to Meridian Energy Australia.
- ✓ In New Zealand, PPAs with Trustpower for all New Zealand asset production - approximately 30% of business revenue
- ✓ The mechanics of the PPAs provide revenue protection against low spot prices, with New Zealand PPAs including a base price referenced to futures pricing and a floor provision, should the base price fall too low

# Australia's National Electricity Market is in transition

## Market characteristics today

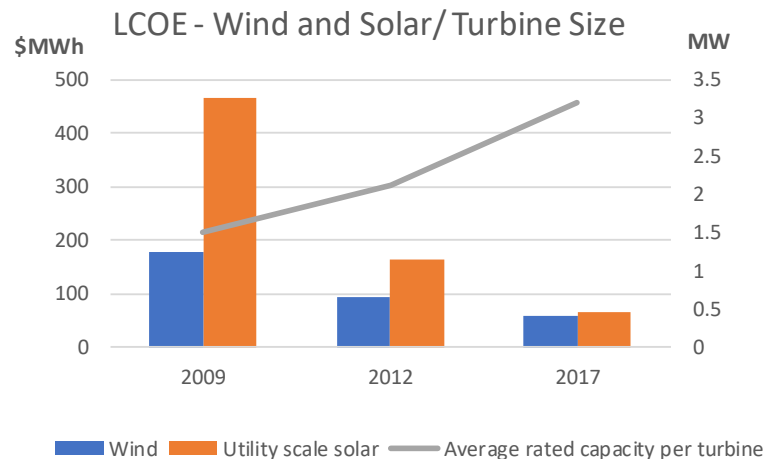
- Dominated by black/brown coal, which is ageing
- Low, but growing renewables penetration (8% wind, 4% solar)
- Gas/hydro fill the firming role
- Battery storage in its infancy



## Opportunities for Tilt Renewables

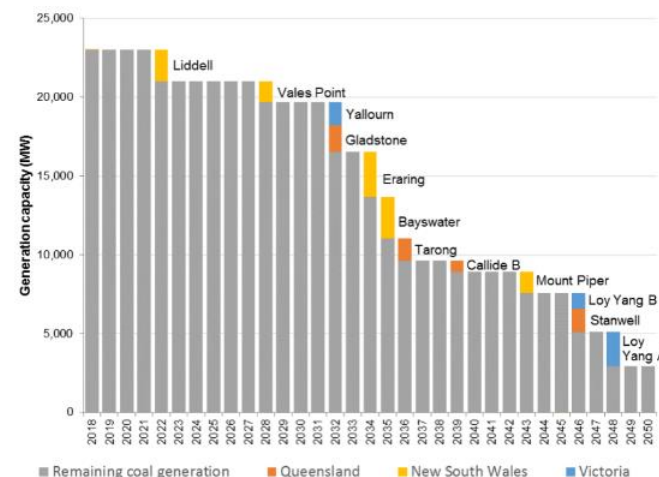
- Progressive retirement of 20GW coal, which must be replaced
- Renewables /MWh costs reducing, strong and diverse pipeline
- Options for firming including battery storage / pumped hydro / interconnectors / gas peakers

## Falling cost of renewable energy



Source: Lazard Levelized Cost of Energy Analysis 2017

## Ageing coal fleet in the NEM



Source: AEMO



## 1 Policy Trends are supportive

- National Energy Guarantee – components:
  - Emissions linked to Australia's international commitments
  - Reliability standards

- Mandatory Renewable Energy Target (RET) continues to enjoy bi-partisan support
- Confidence that scheme continues to 2030

- State based schemes are targeting further decarbonisation
  - VRET 25% by 2020 / 40% by 2025
  - QRET 50% by 2030

## How Tilt Renewables is positioned

- Tilt Renewables has a zero emissions portfolio
- Tilt Renewables has storage and firming options
- Development approach is technology agnostic

- Has facilitated Tilt Renewables existing high level of portfolio contracting
- Supports recontracting outcomes, and short-term firm LGC prices

- Dundonnell bid into the VRET auction
- Pipeline is positioned with consented wind and solar projects across the majority of NEM states
- Quality of assets and proven track record is attractive to State sponsors and off-takers

Tilt Renewables has balance sheet and funding flexibility to take advantage of the energy market transition

## 2 Market Trends are supportive

- Genuine alternatives to traditional PPA market available
  - Corporate PPA market (Telstra, AB Inbev, Orora)
  - State based auctions (VREAS, QRET)
  - Non-Tier 1 PPA market (New retailers, community buyers)
  - Short-term traded market (LGC forward contracts, rolling hedges)
- Incumbent market players transitioning away from coal
  - Hazelwood shut in March 2017
  - AGL announced Liddell closure in 2022
  - No new investment in coal
- Renewable technology costs are rapidly falling, supporting the transition of generation mix
  - Wind and solar LRMIC economics (incl. cost for firming) improving vs gas
  - Global solar LCOE costs declined 72% since 2009



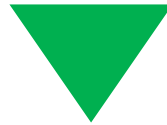
## How Tilt Renewables is positioned

- Allows TLT to access multiple offtake options to maximise risk adjusted returns:
  - Salt Creek PPA (electricity only) with Meridian
  - LGC forward trades with multiple counterparties
- High credibility with key counterparties
- Trading capability - \$34M LGC forward sales in place
- Tilt Renewables' portfolio is at the forefront of this transition
- Renewables + firming is lowest cost long term solution, as demonstrated by recent announcements in SA
- Broad development pipeline can respond to market signals to deliver lower cost outcomes
- Technology neutral approach
- Awareness of location and peaking effects in each market

Tilt Renewables has balance sheet and funding flexibility to take advantage of the energy market transition

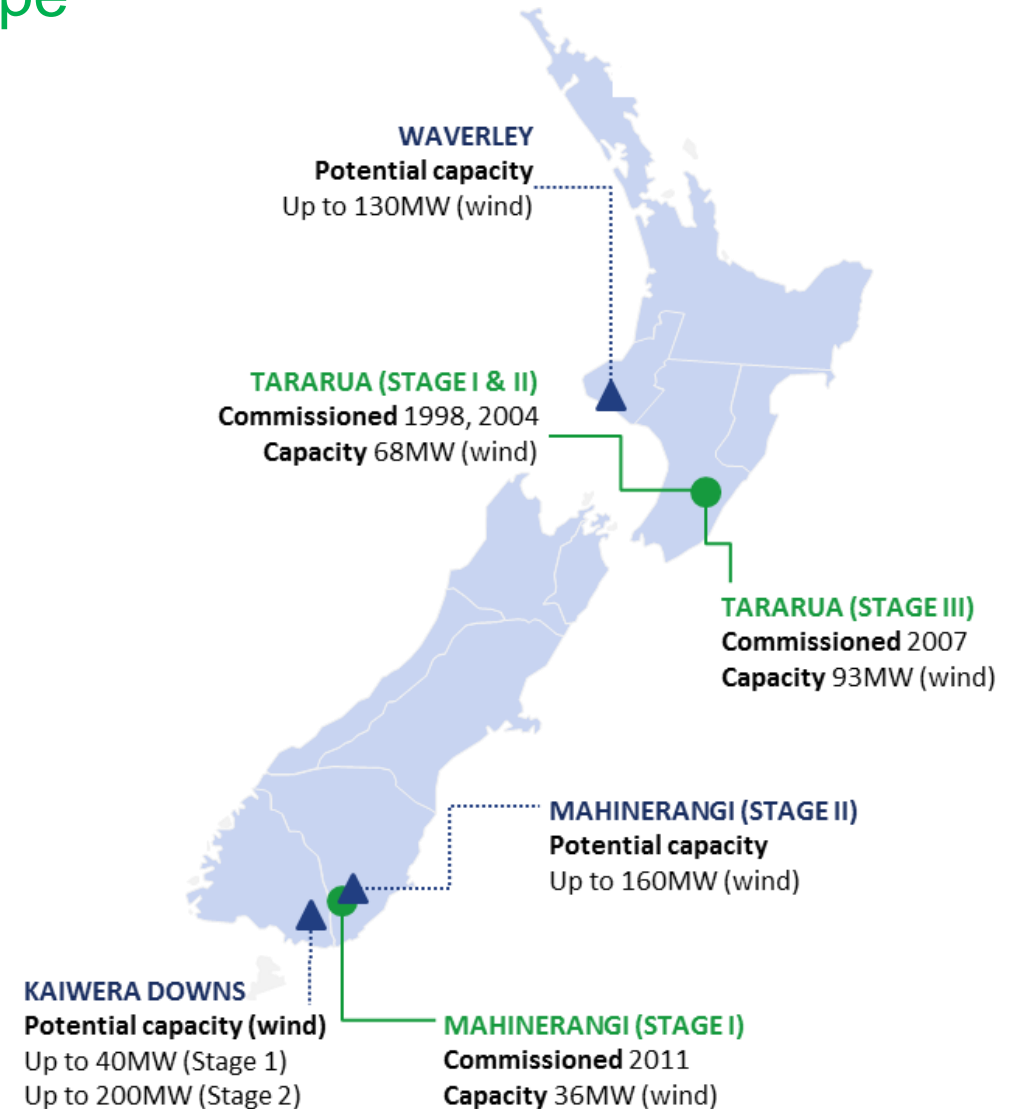
## 3 Market Trends are supportive

- Relatively stable NZ energy market
  - Aluminium prices support short-term Tiwai smelter operation
  - Government review of electricity pricing underway
  - Labour govt. supportive of transition to zero emissions energy mix
  - Demand in the North Island is growing – medium term build opportunity



## How Tilt Renewables is positioned

- Waverley consent allows larger rotor turbines resulting in attractive LCOE, compared to other consented North Island projects
- Options to respond to Government initiatives:
  - Kaiwera Downs Wind Farm
  - Mahinerangi Stage 2
  - Tararua 1&2 repowering option



## Focus areas for Tilt Renewables: Next 12 months



### Dundonnell / VRET process

- Opportunity to grow operational portfolio by 50+%
- Bank due diligence underway
- Delivery contracts in place
- Debt funding fully in place
- Infratil equity support commitment
- Options without VREAS being explored



### Delivering value from the pipeline

- Diversity across NEM states and technology
- Debt/equity funding model will depend on offtake structures
- Portfolio approach to optimise growth



### Storage and firming options

- Technology neutral approach: batteries, pumped-hydro, gas peakers, financial contracts
- Highbury 300MW, 1350MWh pumped-hydro
- Snowtown 45MW solar & 20MW battery storage
- Offtake optionality
- Building capability



# Dundonnell / VRET process

## *Key commercial arrangements negotiated*

- Firm EPC and long-term O&M pricing
- Transmission connection option into Mortlake Power Station
- AU\$600m investment

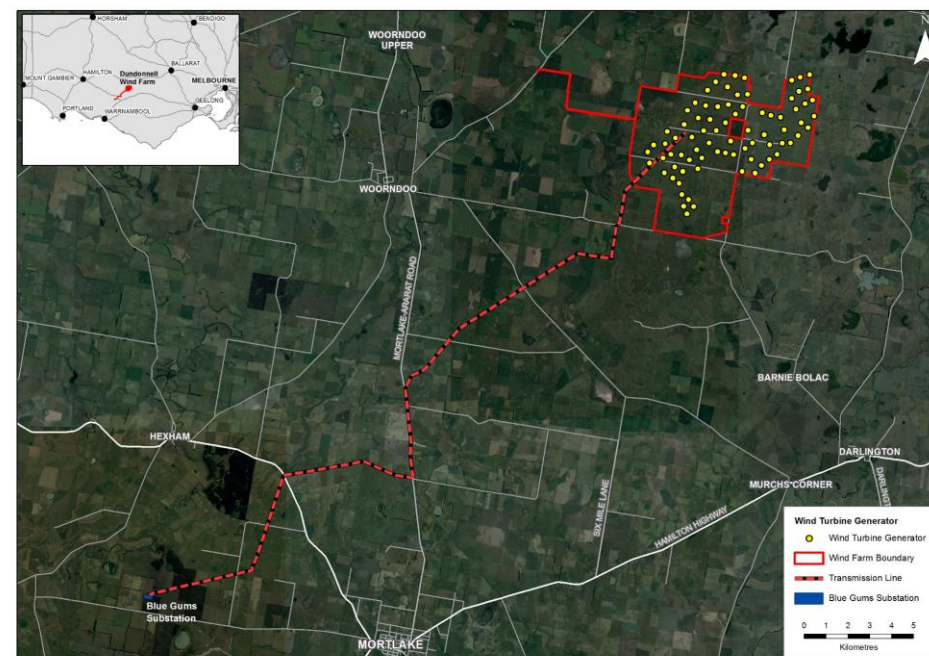
## *Remaining activities before Final Investment Decision*

- Finalisation of connection arrangements and network technical performance standards
- Victoria government aiming to announce successful bids Q3 2018
- Investment decision Q4 2018, first generation Q1 2020

## *Contracting approach has flexibility*

- 336MW build represents a significant increase in portfolio
- Tip height amendment received in December 2017 allowing latest technology and lower cost of energy
- Revenue contracting alternatives exist for Dundonnell
- Portion of output bid into Victorian Reverse Auction Scheme (VREAS)
- Short-term hedging opportunities in energy and LGC markets

Key project stats	Dundonnell Wind Farm
Turbines	80 wind turbines of up to 4.2MW
Installed Capacity	336 MW
Annual production	~1,200 GWh lifetime average
Construction period	~24 months
Funding	Debt and equity funding options in place
Offtake	Contract / merchant mix being optimised
Maintenance	Long term O&M contract with OEM
Target FID	Q4 2018



DDWF Indicative turbine layout  
Source: Tilt Renewables

## Delivering value from the pipeline

### Tilt Renewables has made good progress developing its pipeline of near-term investment opportunities beyond Dundonnell

- ✓ Three Queensland solar projects achieved development approval since June 2017 (420MW potential)
- ✓ SA government \$7M grant for co-located solar and battery at Snowtown – sharing existing connection infrastructure
- ✓ Palmer, Rye Park and Waverley wind projects all now with planning approval
- ✓ Pipeline size increased by circa 50%

### Diverse development opportunities within the pipeline provide a pathway for medium-term growth

- Further solar approvals being pursued in several NEM States
- Focused on maintaining a diverse range of options (spread by state / technology / market) capable of being executed quickly as market opportunities unfold
- Firming and storage options, including non-asset based are being pursued to increase offtake optionality

### Overview of key development projects

Projects with Environmental Consents	Technology	Location	Potential MW
Dundonnell	Wind	AU-VIC	336
3 x Queensland solar projects	Solar	AU-QLD	420
Rye Park	Wind	AU-NSW	300
Palmer*	Wind	AU-SA	300
Waddi wind 105MW and solar 40MW	Wind/Solar	AU-WA	145
Snowtown North Solar	Solar	AU-SA	45
Waverley	Wind	NZ-NI	130
Other NZ: Mahinerangi II, Kaiwera Downs	Wind	NZ-SI	400
<b>Total projects with environmental approvals</b>		<b>(A)</b>	<b>Circa 2,075</b>

\*ERD Court decision is currently under appeal

Other projects	Technology	Location	Potential MW
SA pumped hydro (Highbury)	Storage	AU-SA	300
VIC wind options	Wind	AU-VIC	300
NSW wind options	Wind	AU-NSW	400
NSW solar options	Solar	AU-NSW	120
SA solar options (Snowtown South)	Solar/Storage	AU-SA	75
QLD solar options	Solar	AU-QLD	350
QLD wind options	Wind	AU-QLD	70
<b>Total other development options</b>		<b>(B)</b>	<b>Circa 1,615</b>
<b>Total Pipeline Size</b>		<b>(A+B)</b>	<b>Circa 3,690</b>

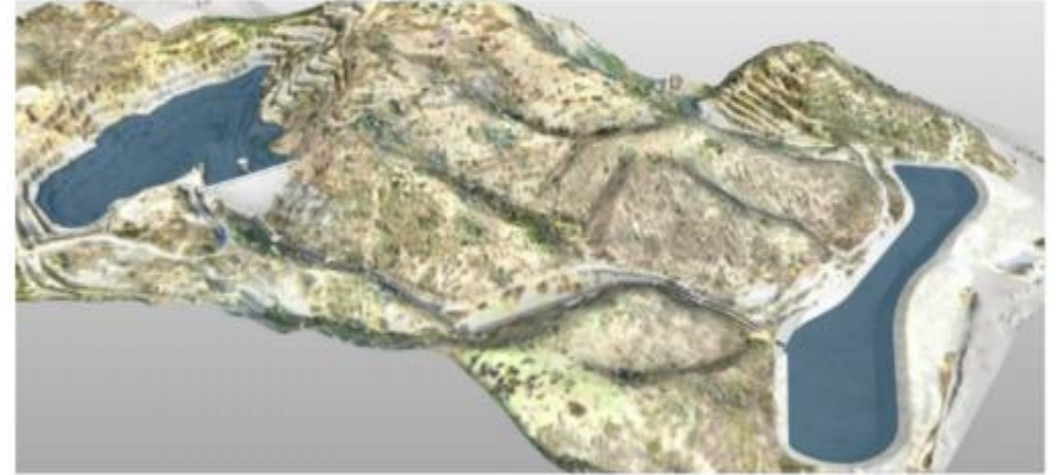
## Storage and Firming Options - Highbury Pumped Hydro

### Why Storage?

- Store wind energy at times of high production (low price)
- Release wind energy at times of high demand (high price)
- Participation in system support ancillary services market
- Enables options beyond variable volume PPA offtakes
- Participation in Cap Market
- Spot price arbitrage
- Support a commercial and industrial market entry (risk reduction)
- Enable additional wind/solar investment in South Australia (development pipe value)
- Additional system load will reduce curtailment – improve existing assets

### Highbury Pumped Hydro

At 300MW/1350MWh, the proposed Highbury project is perfect scale for the Tilt Renewables assets and will deliver 3X more capacity and store 10x more energy than the Hornsdale Tesla battery



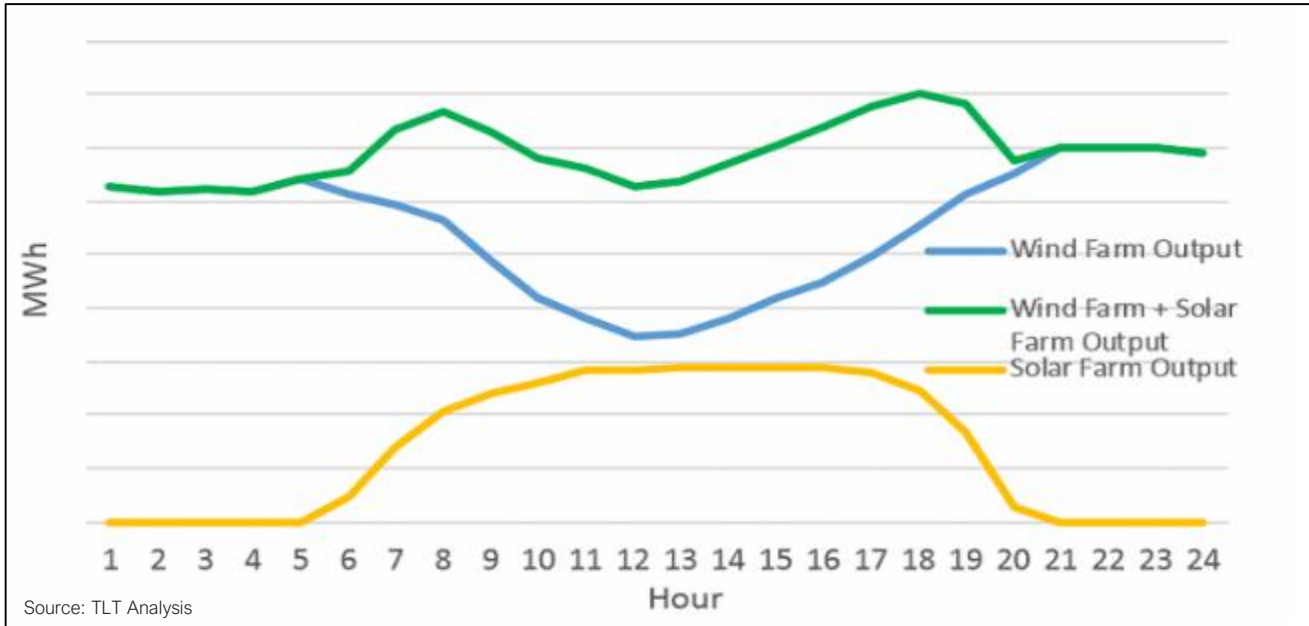
Visualisation of Highbury pumped-hydro storage project



The existing upper storage pond at Highbury



## Storage and Firming Options – Solar and Batteries



**Co-located wind and solar options at Snowtown and Waddi**

- Co-located solar + wind + storage =
  - smoother energy profile,
  - lower ancillary services costs,
  - higher transmission asset utilisation
- Batteries provide additional short term variability smoothing
- SA government support for Snowtown 45MW solar 20MW battery improves economics





## Summary

- Diverse operational base, strong cashflows
- Revenues highly contracted
- Immediate opportunity for significant growth
- Key market fundamentals remain positive
- Significant development pipeline
- Storage and firming options being developed
- Real alternatives to traditional PPAs for offtake
- Business model ready to TILT to secure opportunities