



DP ENERGY

Hybrid Advantage

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About DP Energy

Renewable energy
developer for 25+ years

Operating in Australia,
UK & Ireland and
Canada

396 MW built wind farms

807 MW consented

1400 MW of wind, solar
and tidal in development

Project life cycle from
inception to commercial
operation



Project Case Studies

Hadyard Hill Wind Farm

Country: Scotland

Sector: Wind energy

Project Value: £85m

Development Date: Commenced August 2005

Commissioning Date: September 2006

Asset Overview: 52 Turbines - 130MW, which, at the time was the largest onshore consented wind farm in the UK.

Bow Lake Wind Farm

Country: Canada

Sector: Wind Energy

Project Value: US\$200m

Development Date: Commissioned in 2015

Asset Overview: 36 Turbines – 60MW located in the Province of Ontario, Canada providing energy for approx. 15,000 homes. The project benefits under a 20-year offtake agreement with the Ontario Power Authority.

Blackraig Hill Wind Farm

Country: Scotland

Sector: Wind Energy

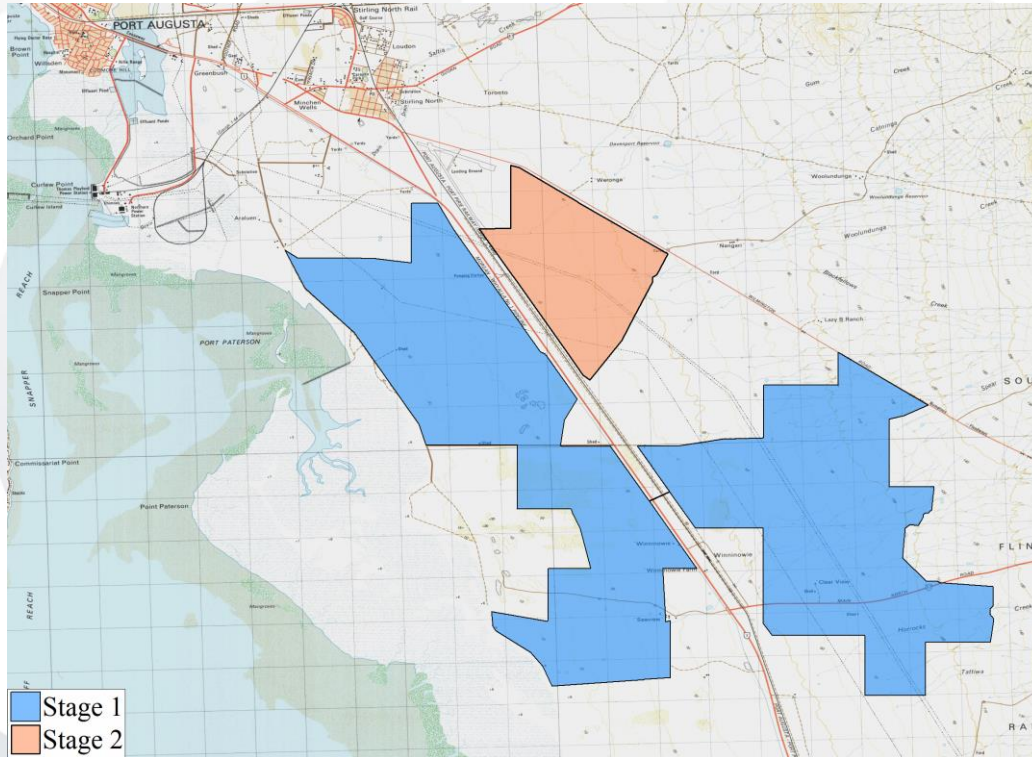
Project Value: US\$124m

Financial Close: 18 December 2015

Asset Overview: 23 Turbines – 69MW located in south-west Scotland. Produces some 150 GWh of renewable electricity annually, enough to meet the electricity requirements of over 37,500 homes.



Port Augusta Renewable Energy Park: Stage 1 and Stage 2



Port Augusta Renewable Energy Park: Building the Power Station of the Future



Stage 1 – 375MW wind and solar PV

Stage 2 – 150MW solar PV plus addition of battery storage and synchronous condenser



Project Rationale

Unique wind resource/ strong solar

- Afternoon peak, average 6-7pm each night
- Summer peak
- Uncorrelated other mid-north wind farms

Proximity to strong node on network

- Single circuit connection to 275kV line through Davenport substation
- Ample unconstrained export capacity

Flat, grazing land

- Minimal environmental impact
- Excellent access, benign Geotech

Strong Public Support

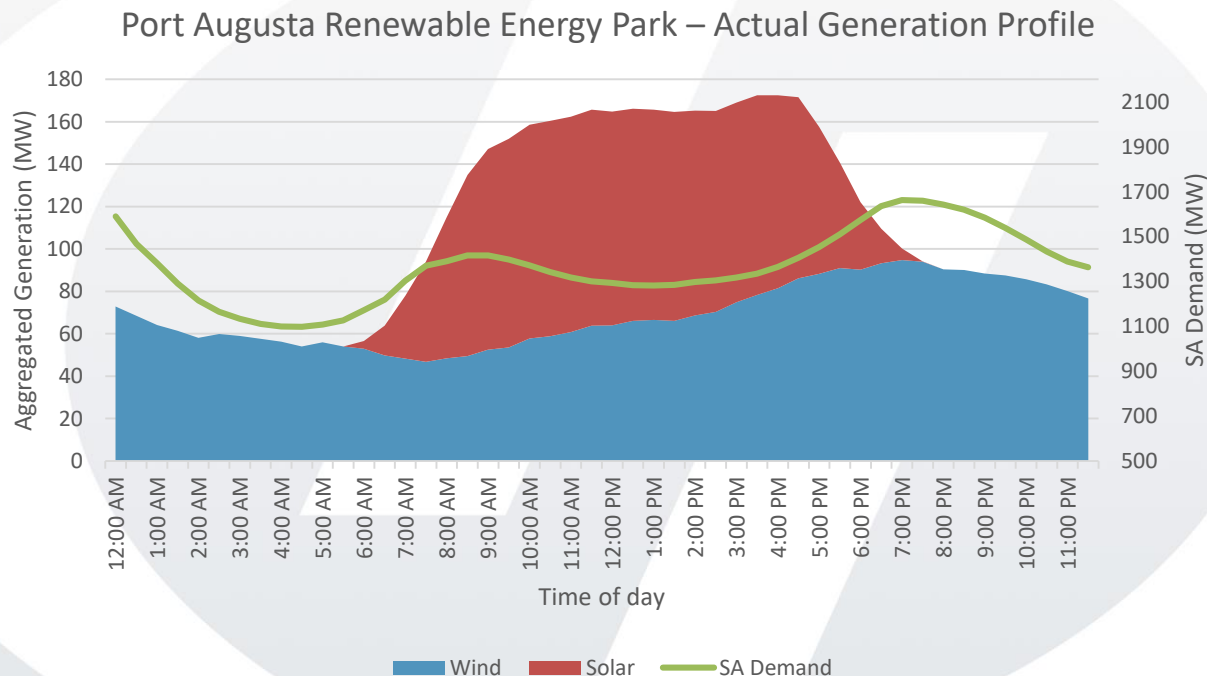


Post RET environment: Hybrid advantage

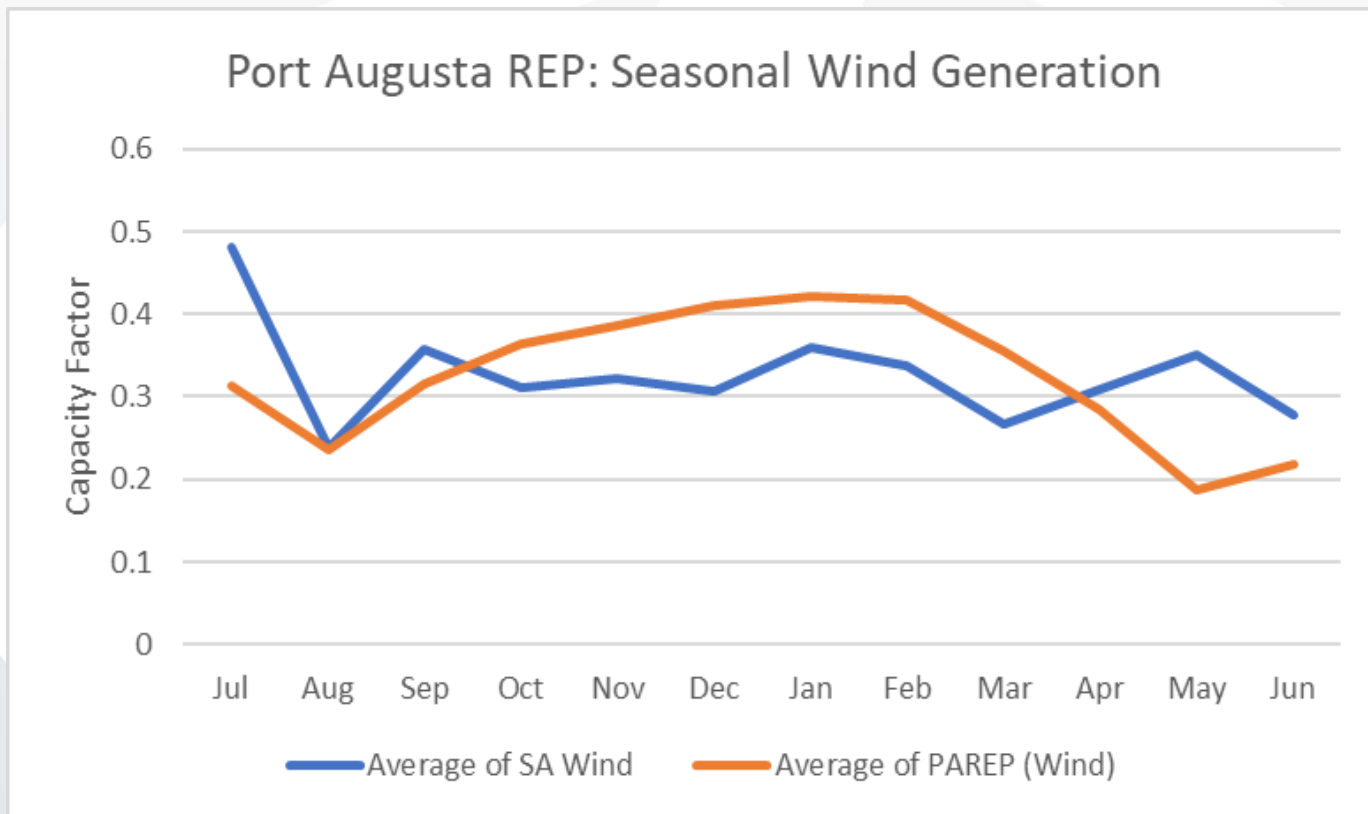
- LGCs and high capacity factor less value
- Time of day generation an advantage
- Potential advantage with storage
- New markets for renewable energy generation
- Capitalises on connection cost where generation is uncorrelated



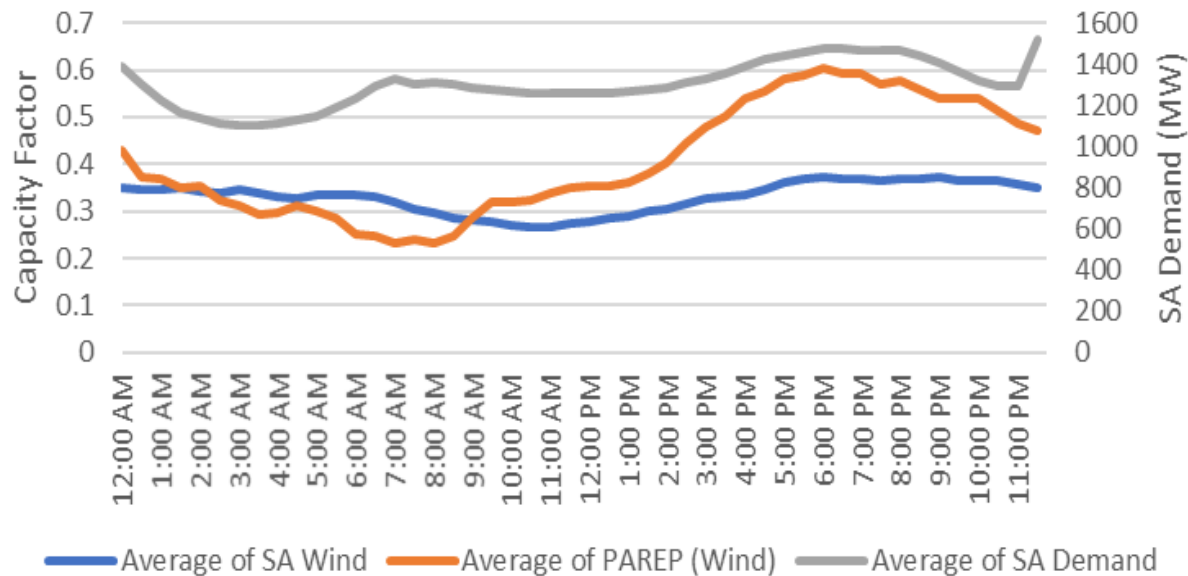
Port Augusta Renewable Energy Park: Generation supports SA demand



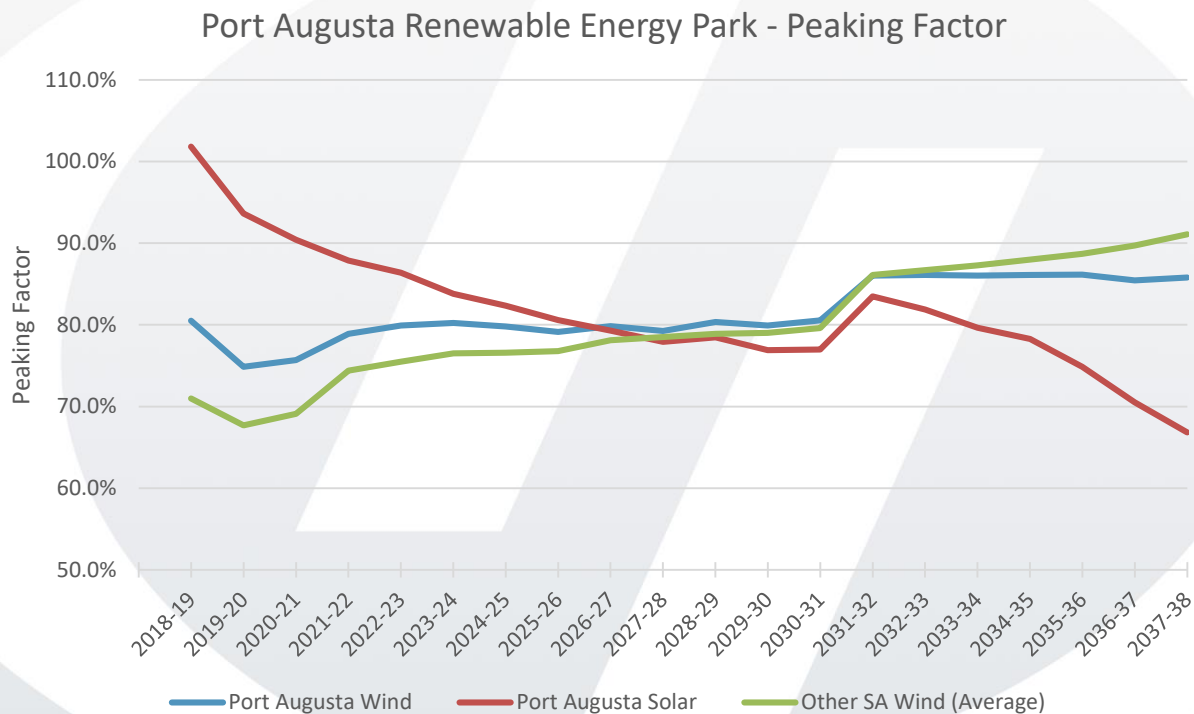
Not all Wind is the Same



Port Augusta REP: Time of Day Wind Generation (Summer)

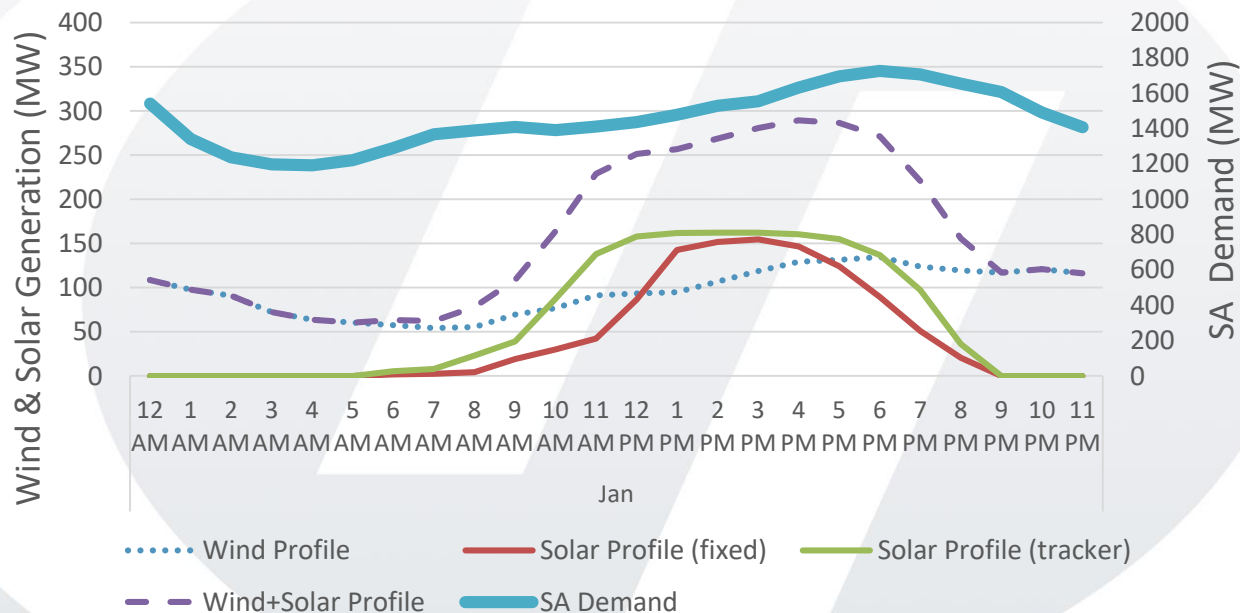


Time of Day Advantage



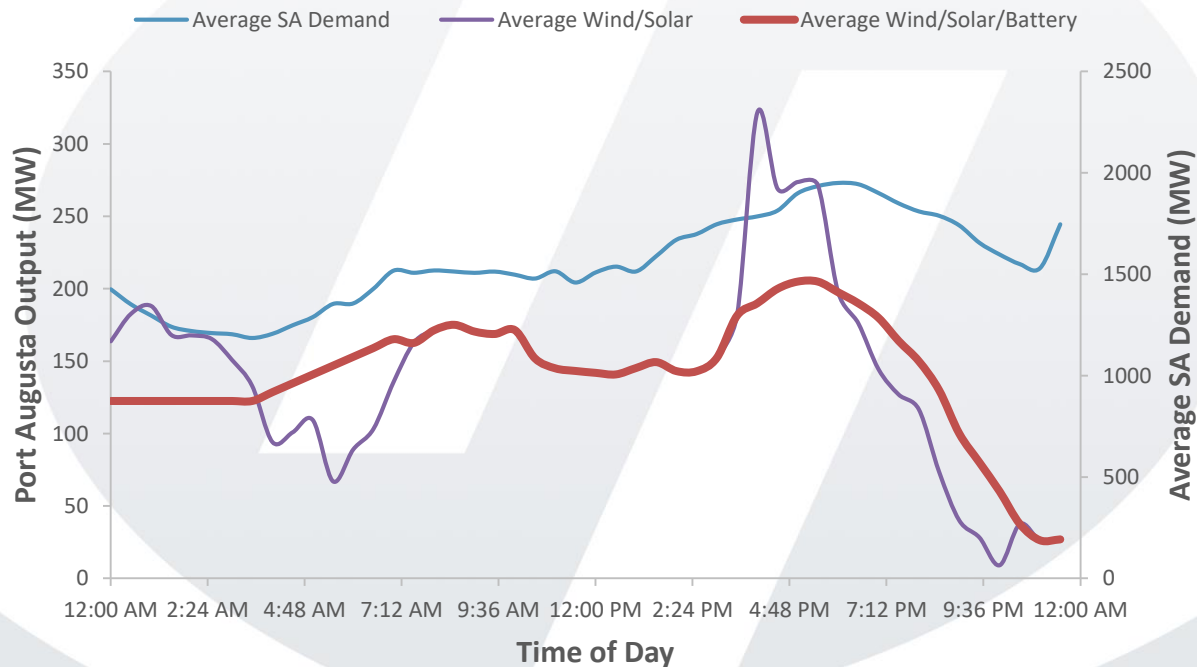
Correlation with Demand Strongest in Summer, Stage 1

Solar & Wind Profile vs SA Demand (January)



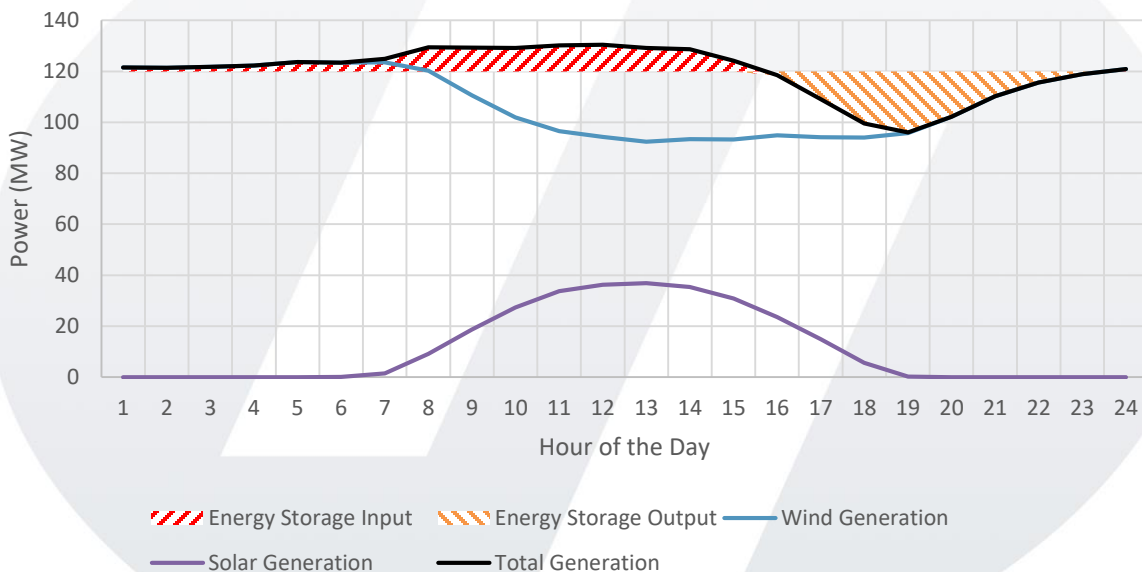
Stage 1 with Storage

Generation Profiles of PA1 (Wind/Solar) and Combined Wind/Solar with Battery



Hybrid Advantage: Constrained Grid Location

Project Design for a Constrained Grid Scenario





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