DP ENERGY

Global Maintenance Upper Spencer Gulf Conference

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Port Augusta, August 2018

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

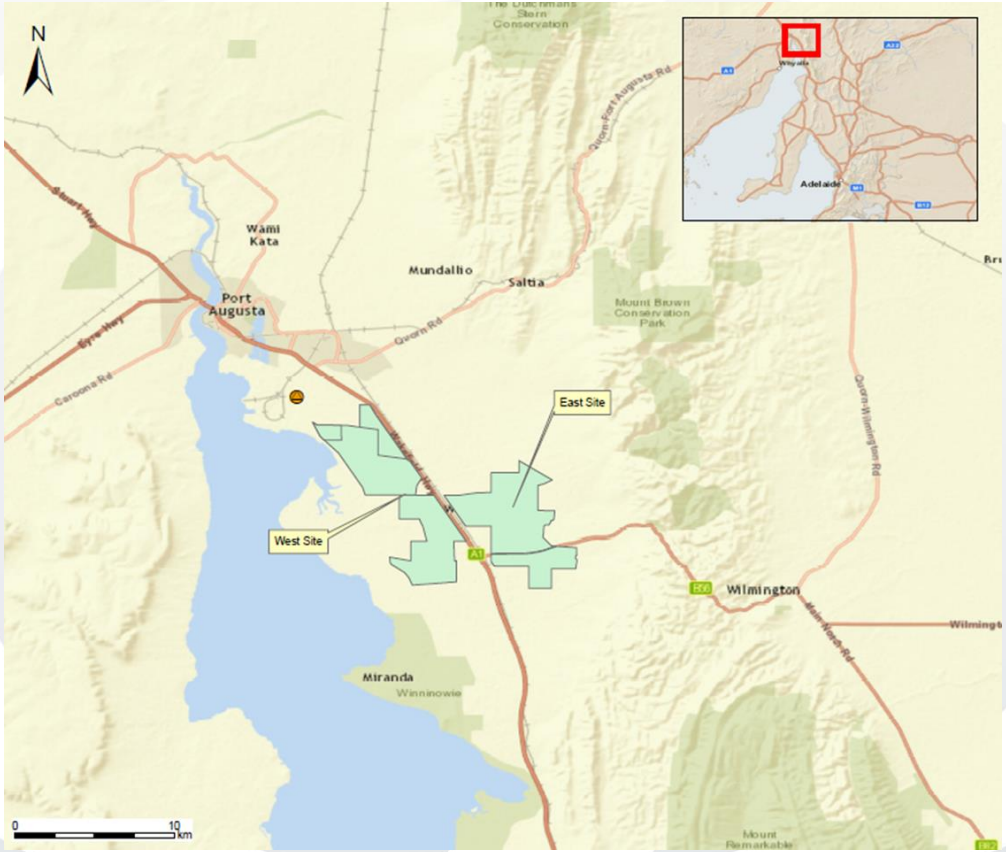
Project Case Studies

DP ENERGY

Hadyard Hill Wind Farm	Bow Lake Wind Farm	Blackcraig 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.	**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.	**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.

COMMERCIAL IN CONFIDENCE

375 MW Port Augusta Renewable Energy Park



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

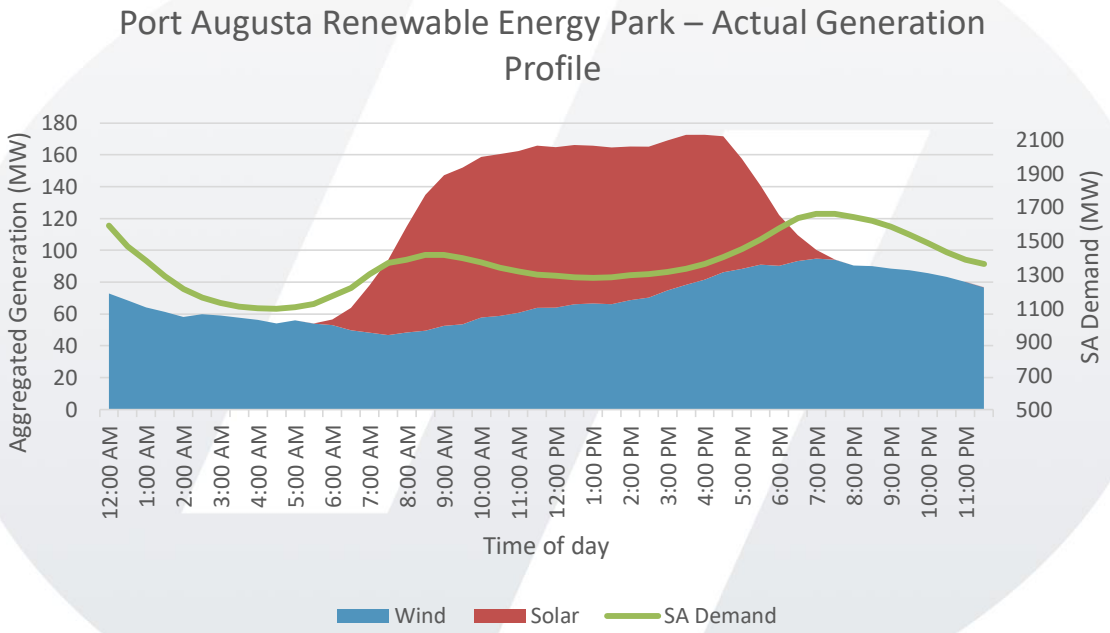
Project Status

- Preferred EPC contractor:
  - Vestas
- ~$600 million capex
- Financial Close Q4, 2018
- Construction Q1, 2019
- 250 construction jobs, 600 at peak times
- 15-20 ongoing jobs

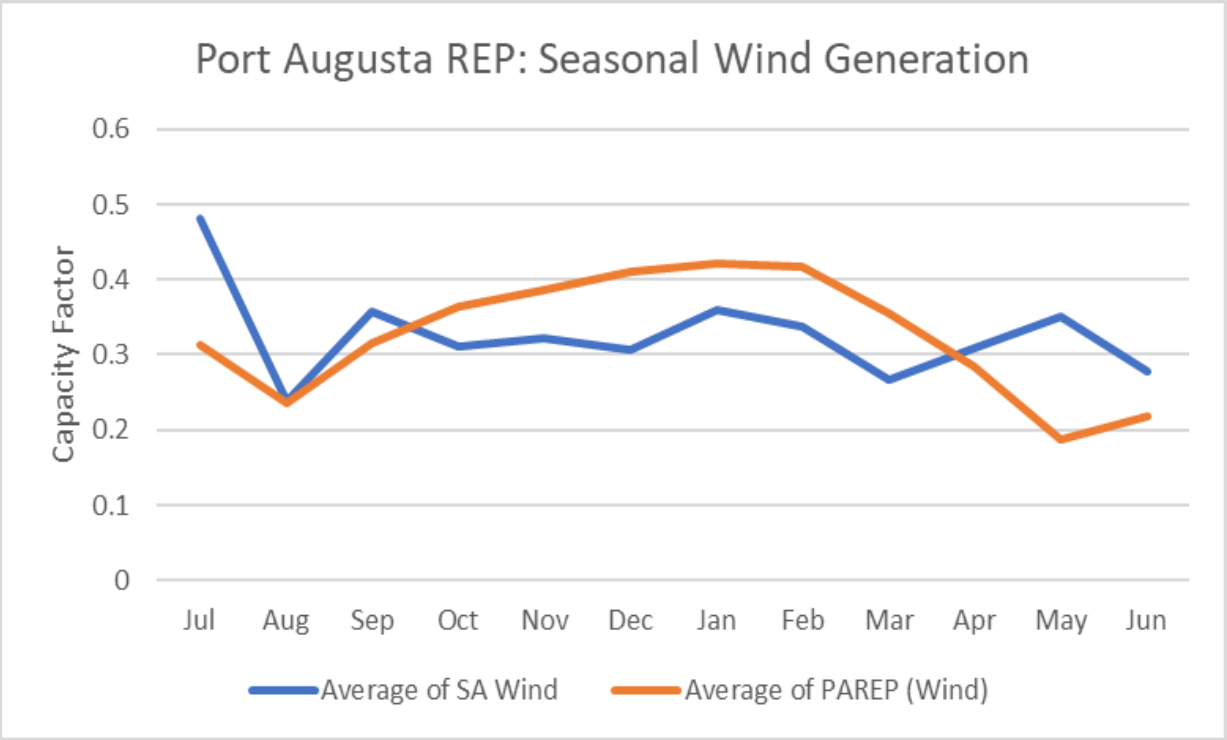
Post RET environment: Hybrid advantage

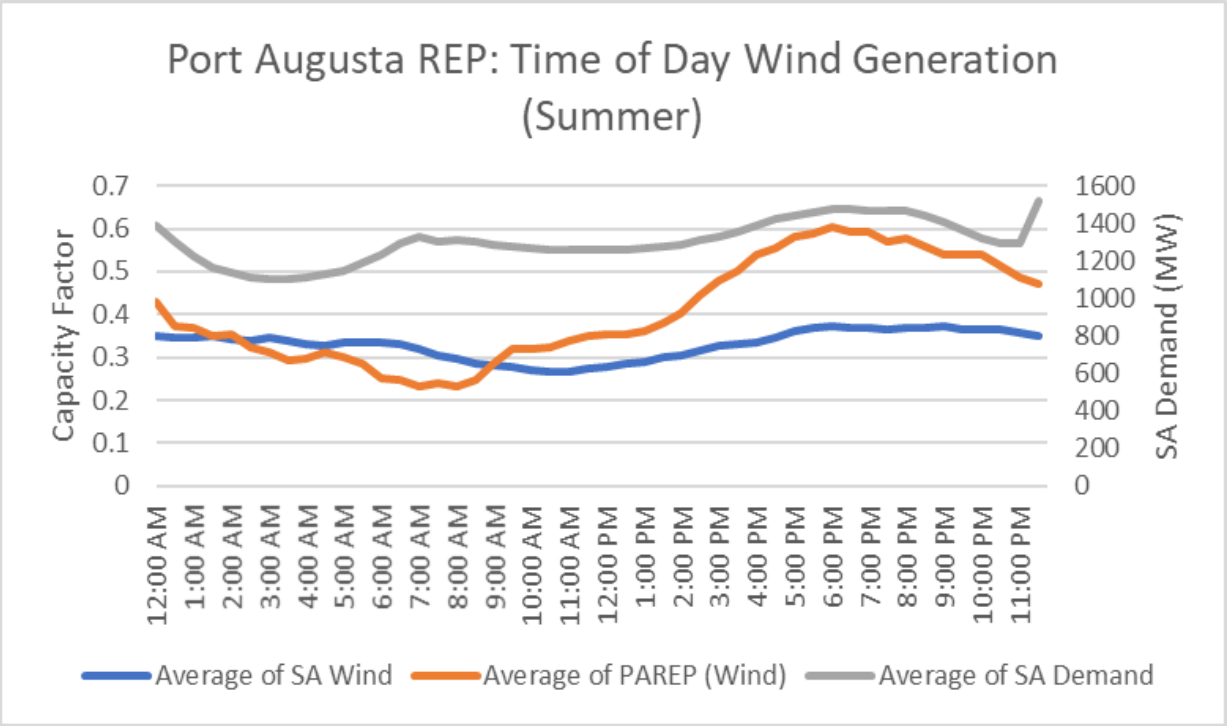
- LGCs and high capacity factor less value
- Time of day generation an advantage
- Potential advantage with storage
- New markets for renewable energy generation
- Capitalises on connection cost where generation is uncorrelated

Port Augusta Renewable Energy Park: Generation supports SA demand



Not all Wind is the Same




Port Augusta REP: Time of Day Wind Generation (Summer)
Capacity Factor
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
SA Demand (MW)
1600
1400
1200
1000
800
600
400
200
0
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
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7:00 PM
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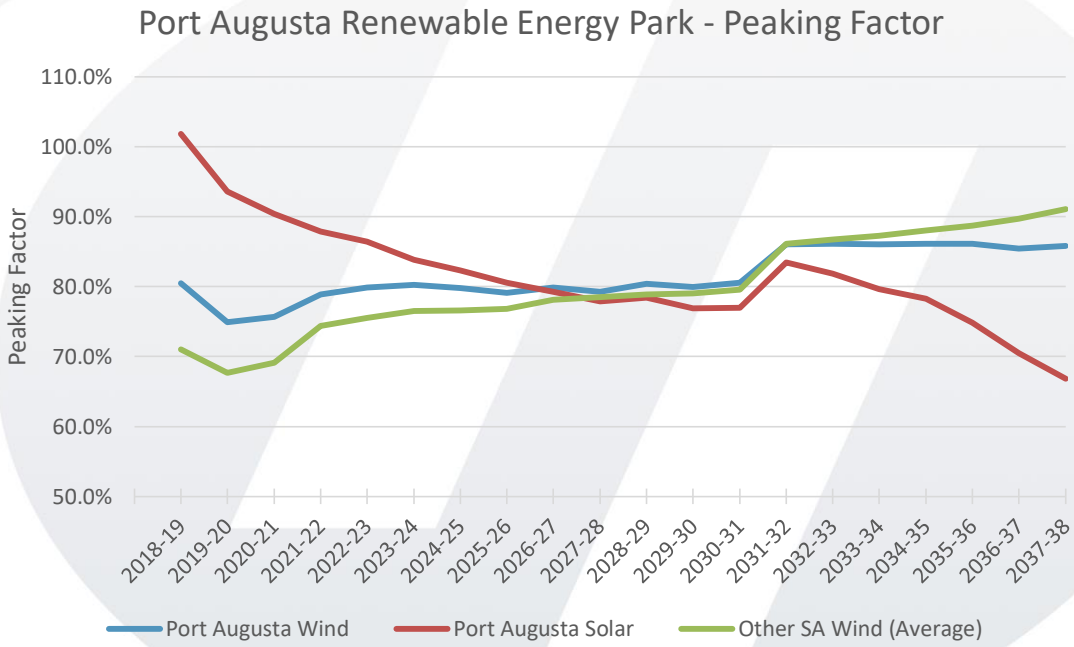
11:00 PM
Average of SA Wind
Average of PAREP (Wind)
Average of SA Demand

Time of Day Advantage



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

Stage 1 – wind and solar
Stage 2 – addition of battery storage and synchronous condenser

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