Winds of Change

An analysis of recent changes in the South Australian electricity market

Dylan McConnell
Melbourne Energy Institute
Australian-German Climate & Energy College

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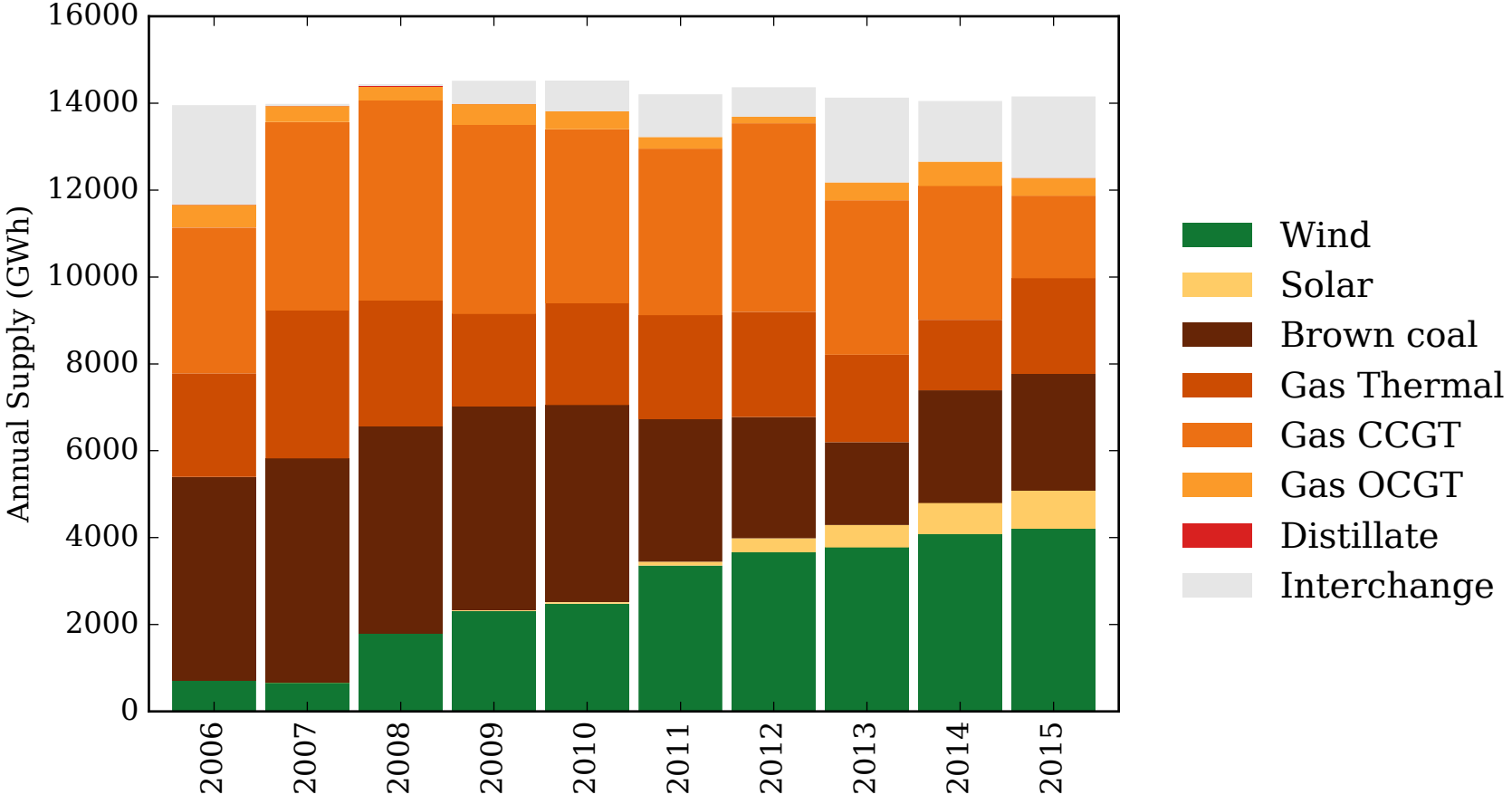
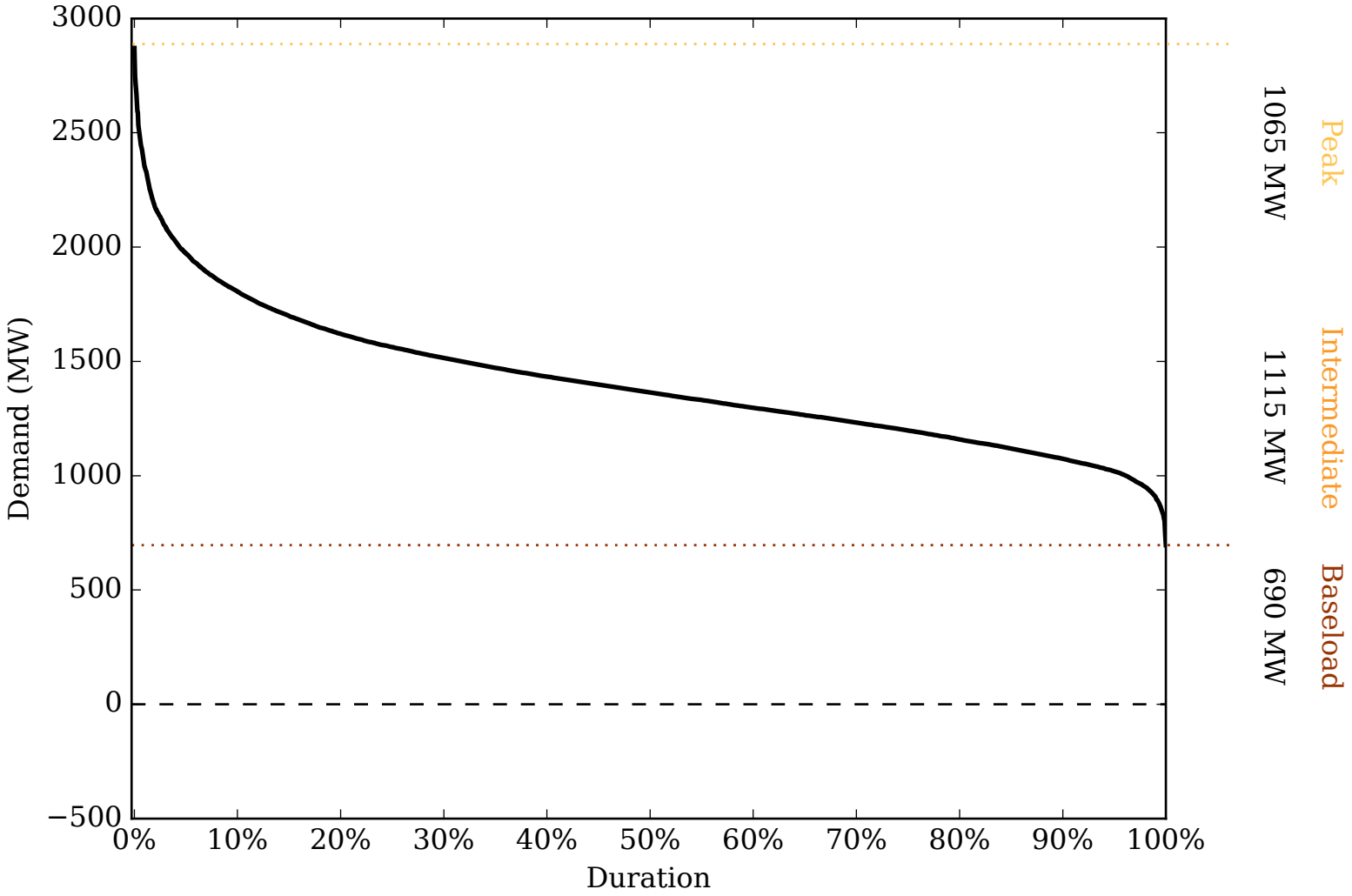
South Australia's changing supply mix



South Australia's changing demand curve



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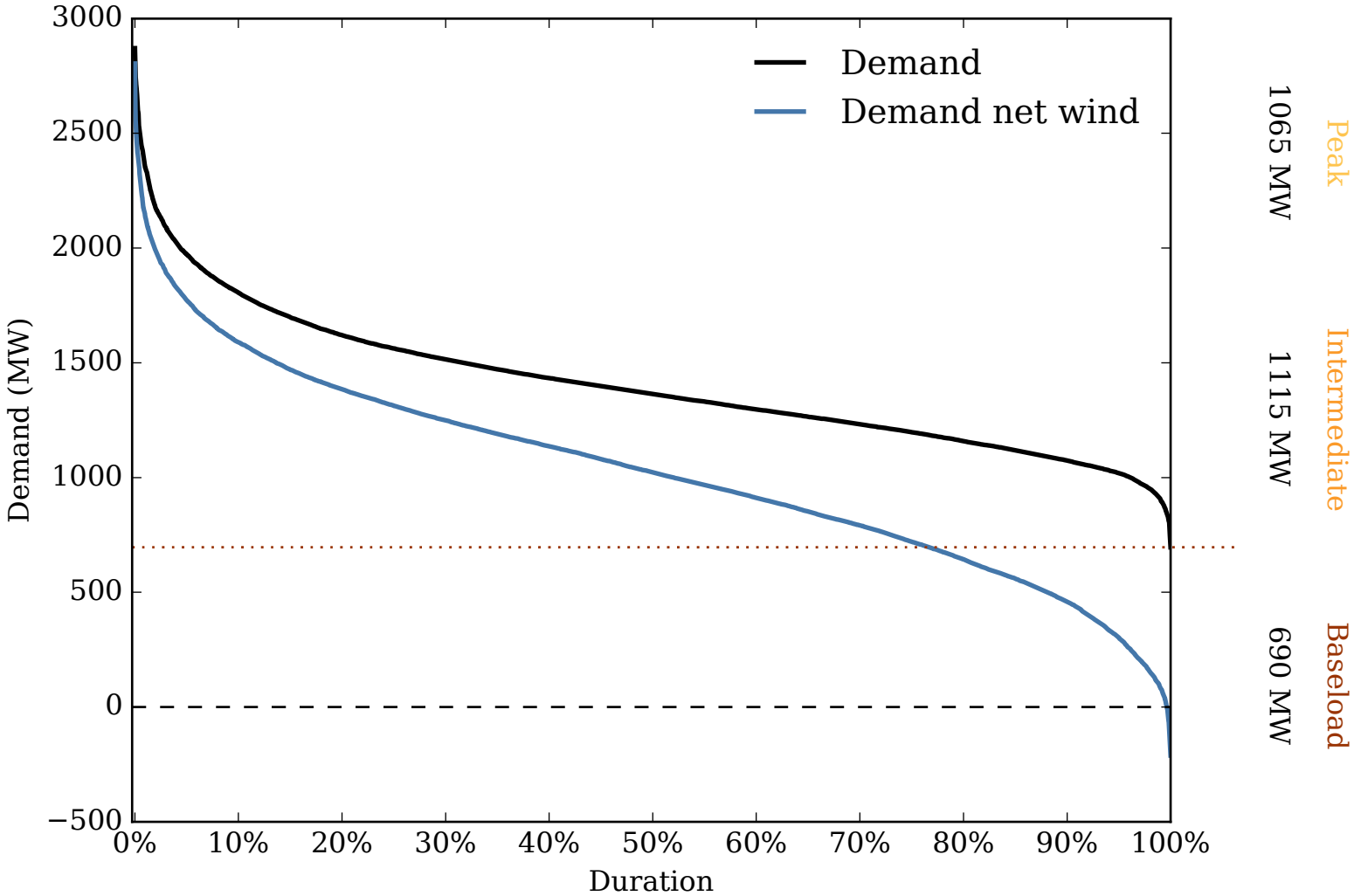

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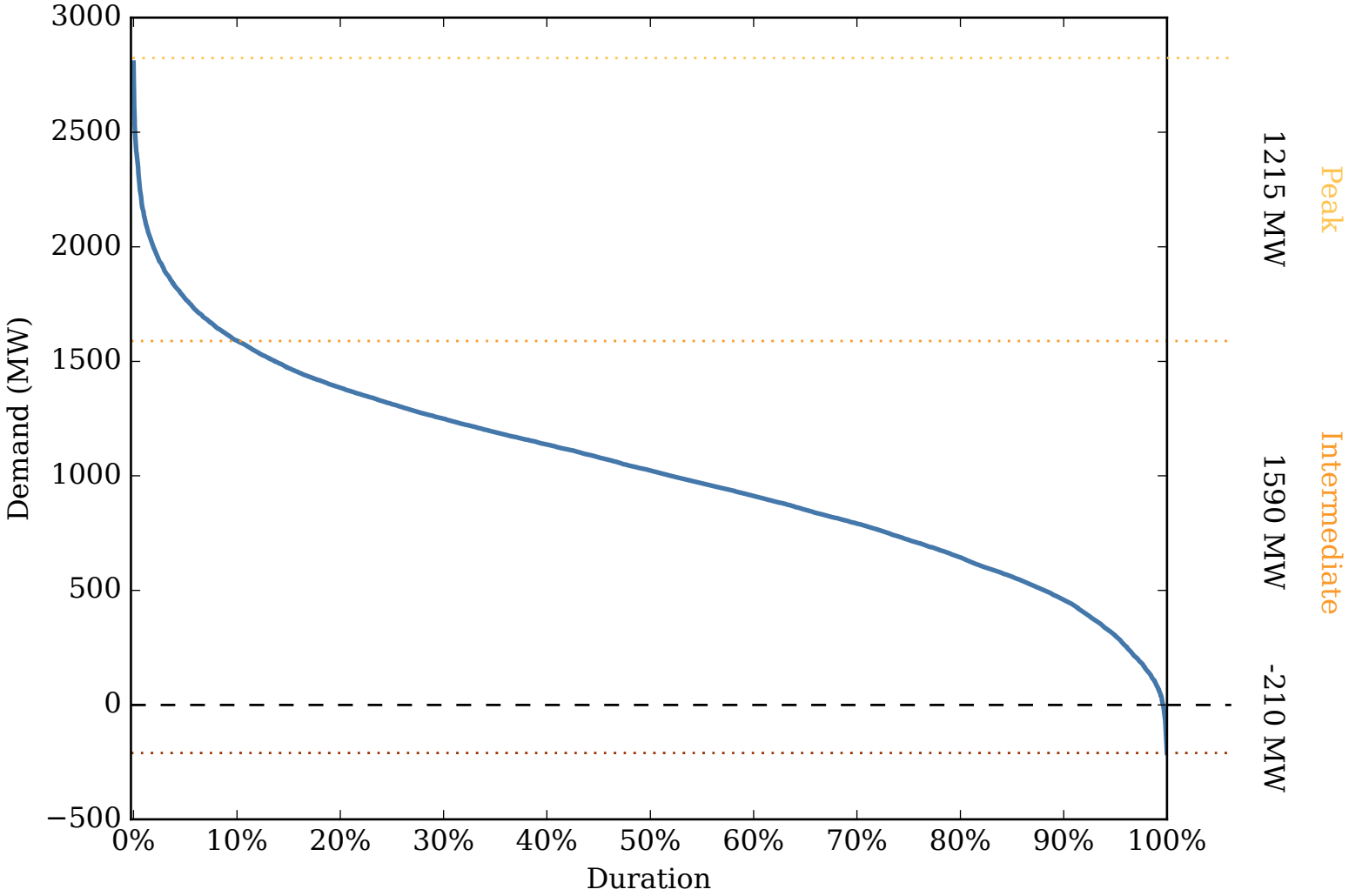

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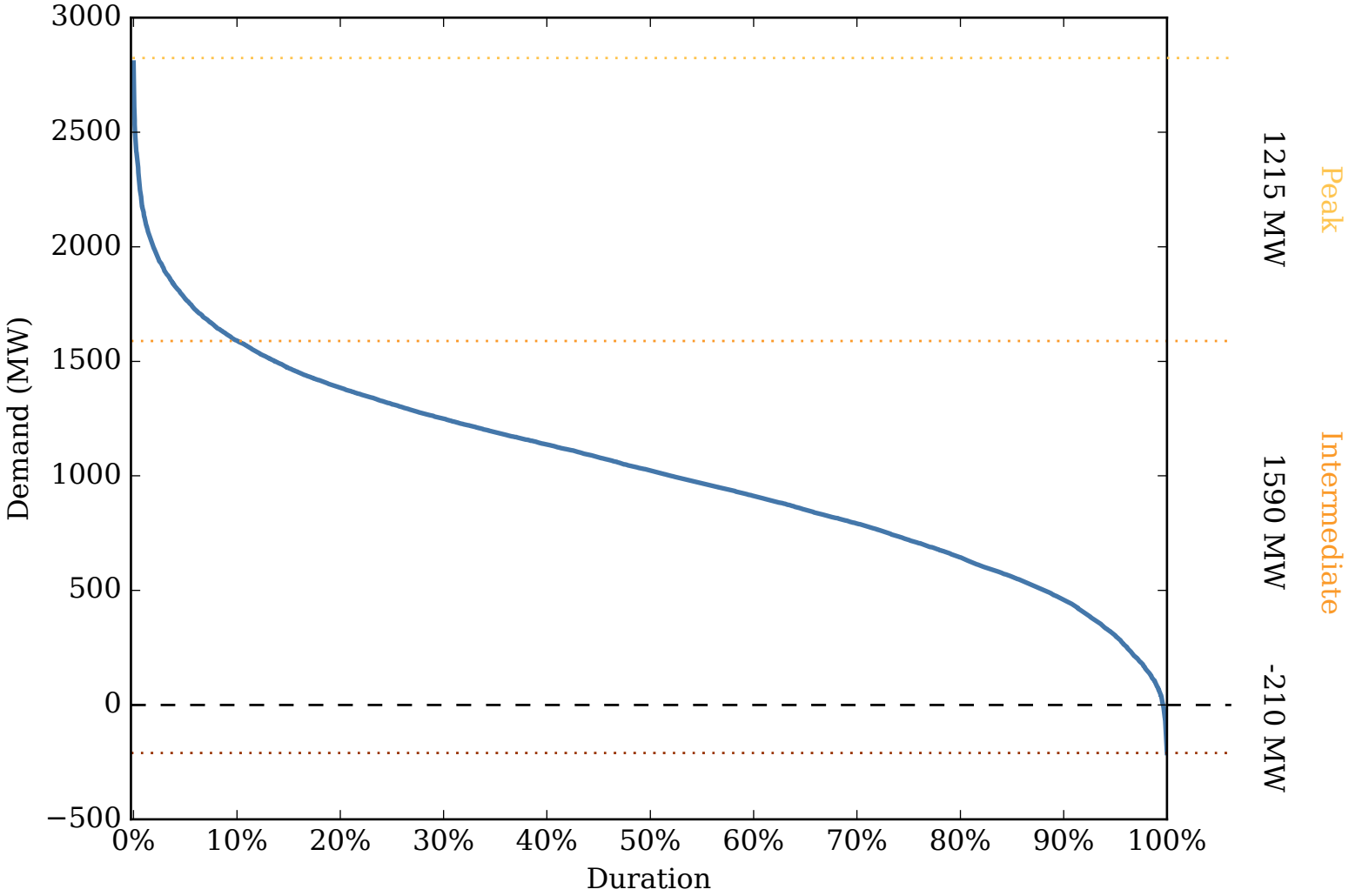
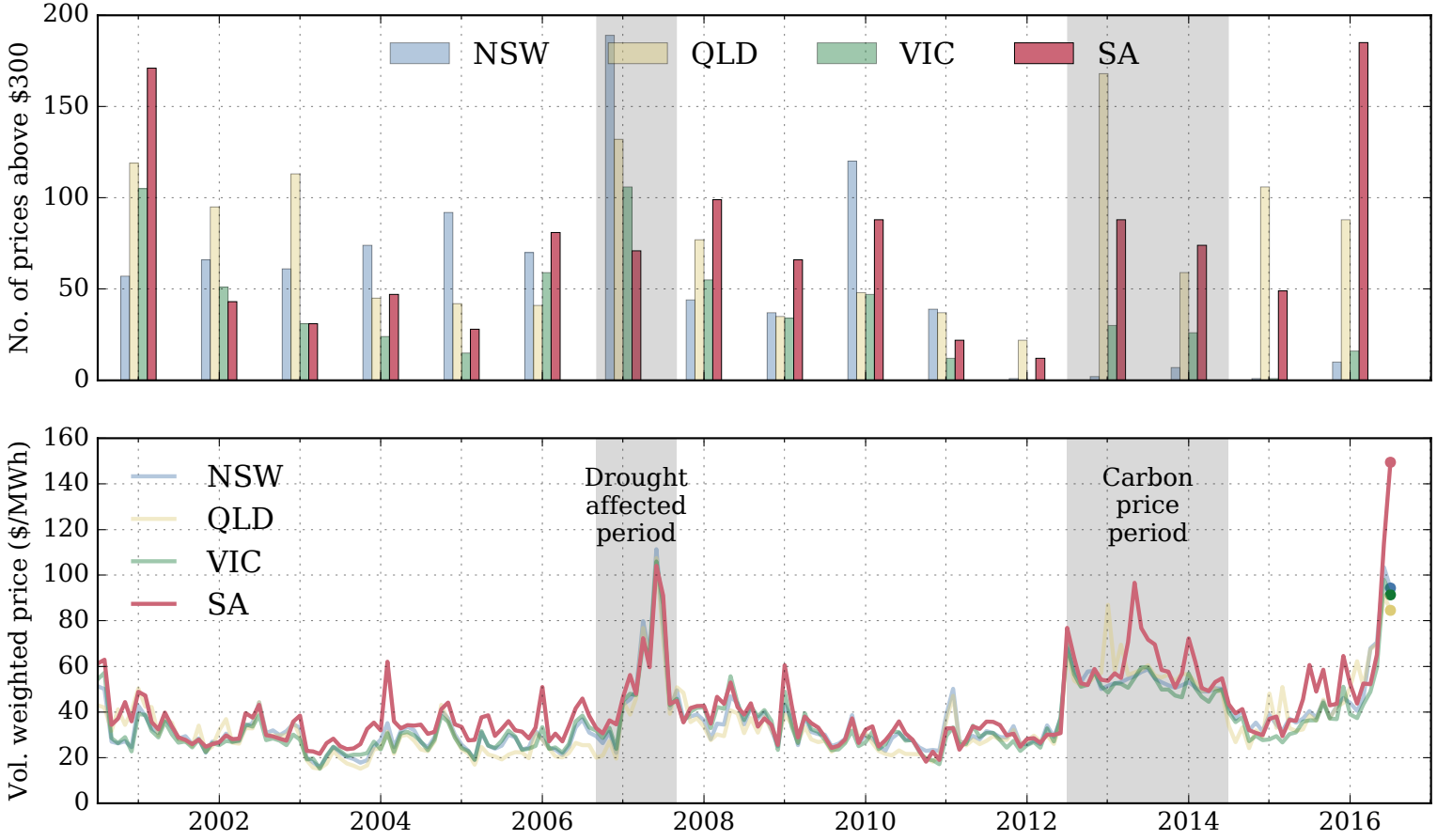
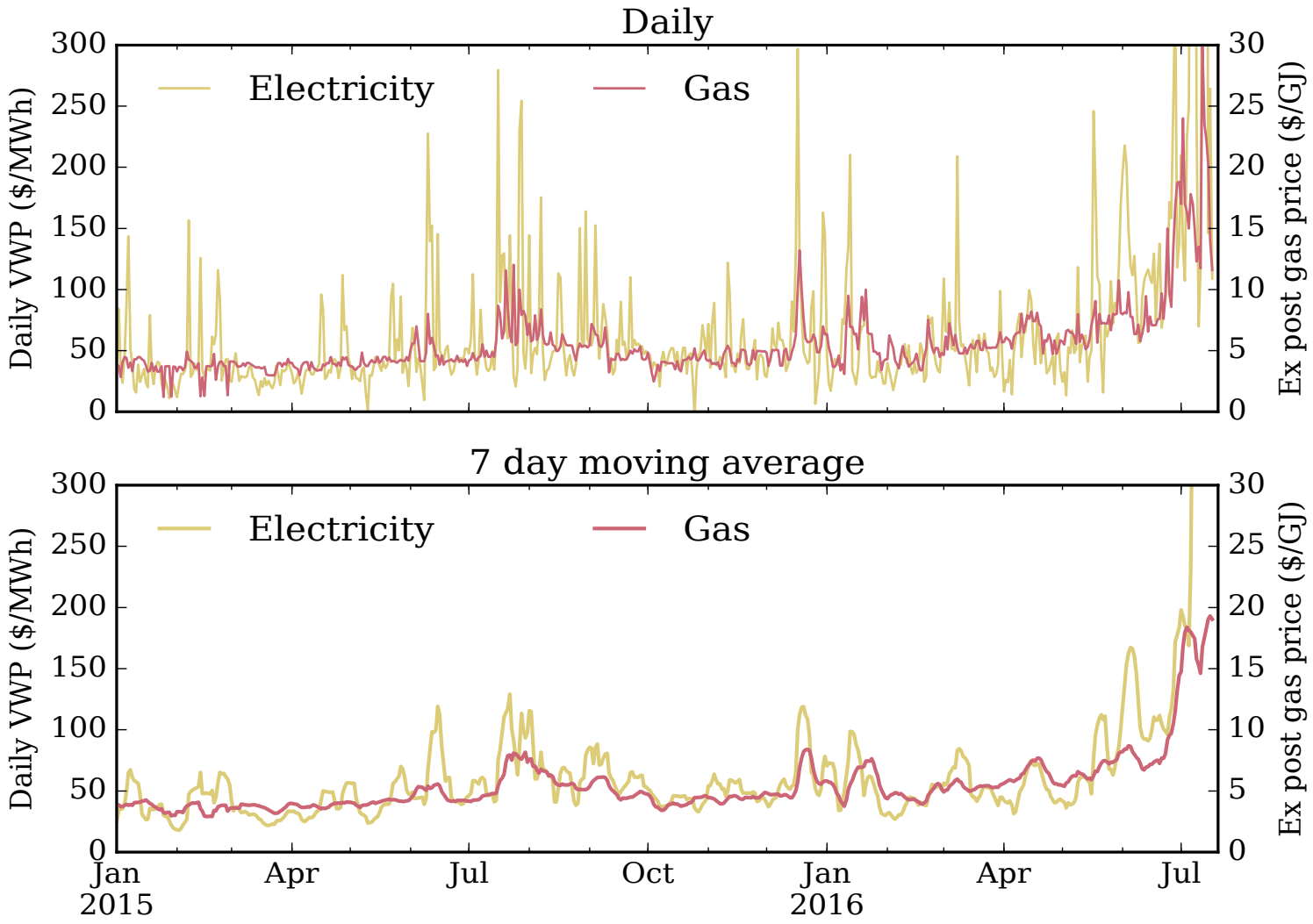


Electricity prices across the NEM



A gas linked electricity market



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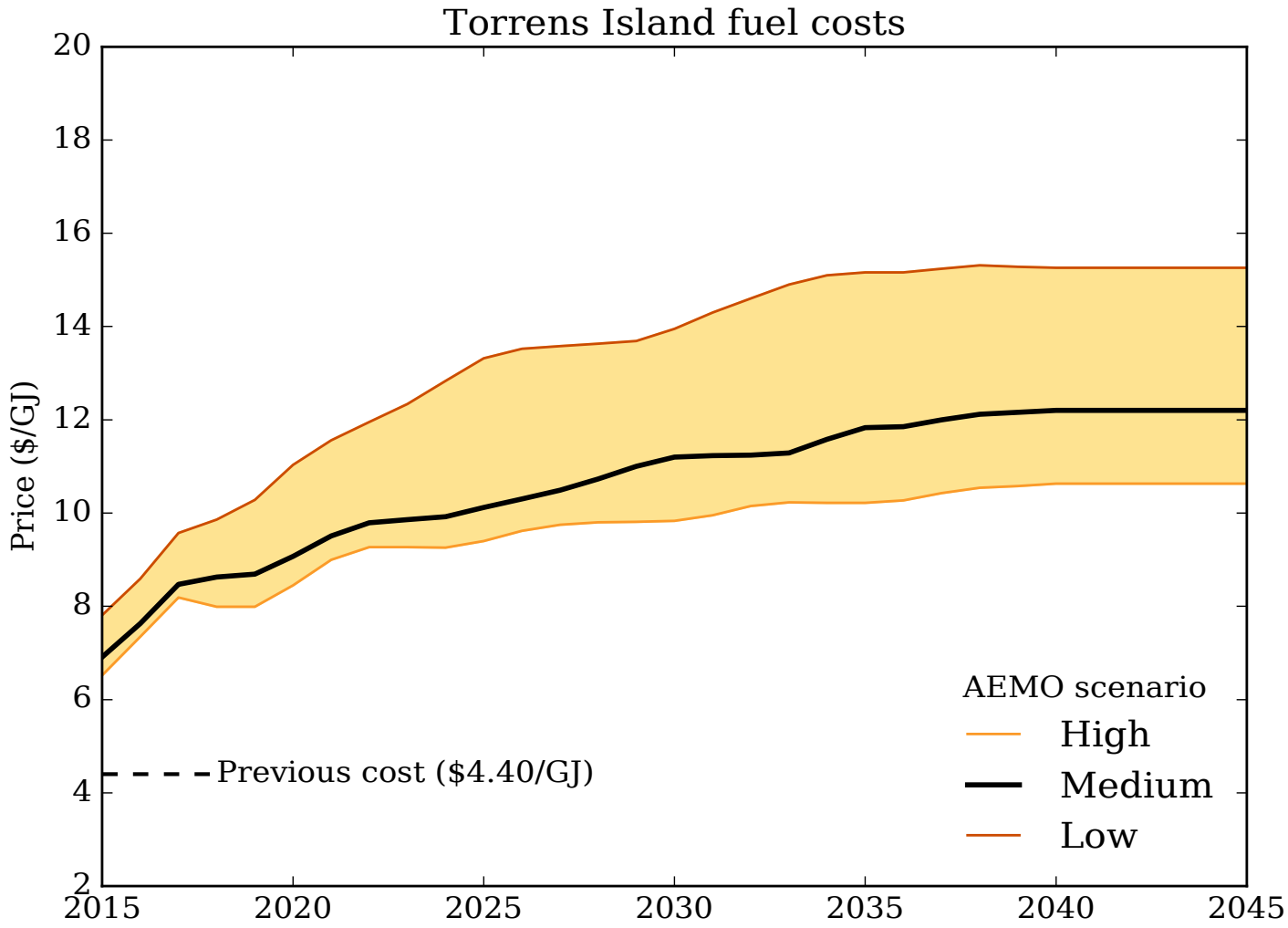
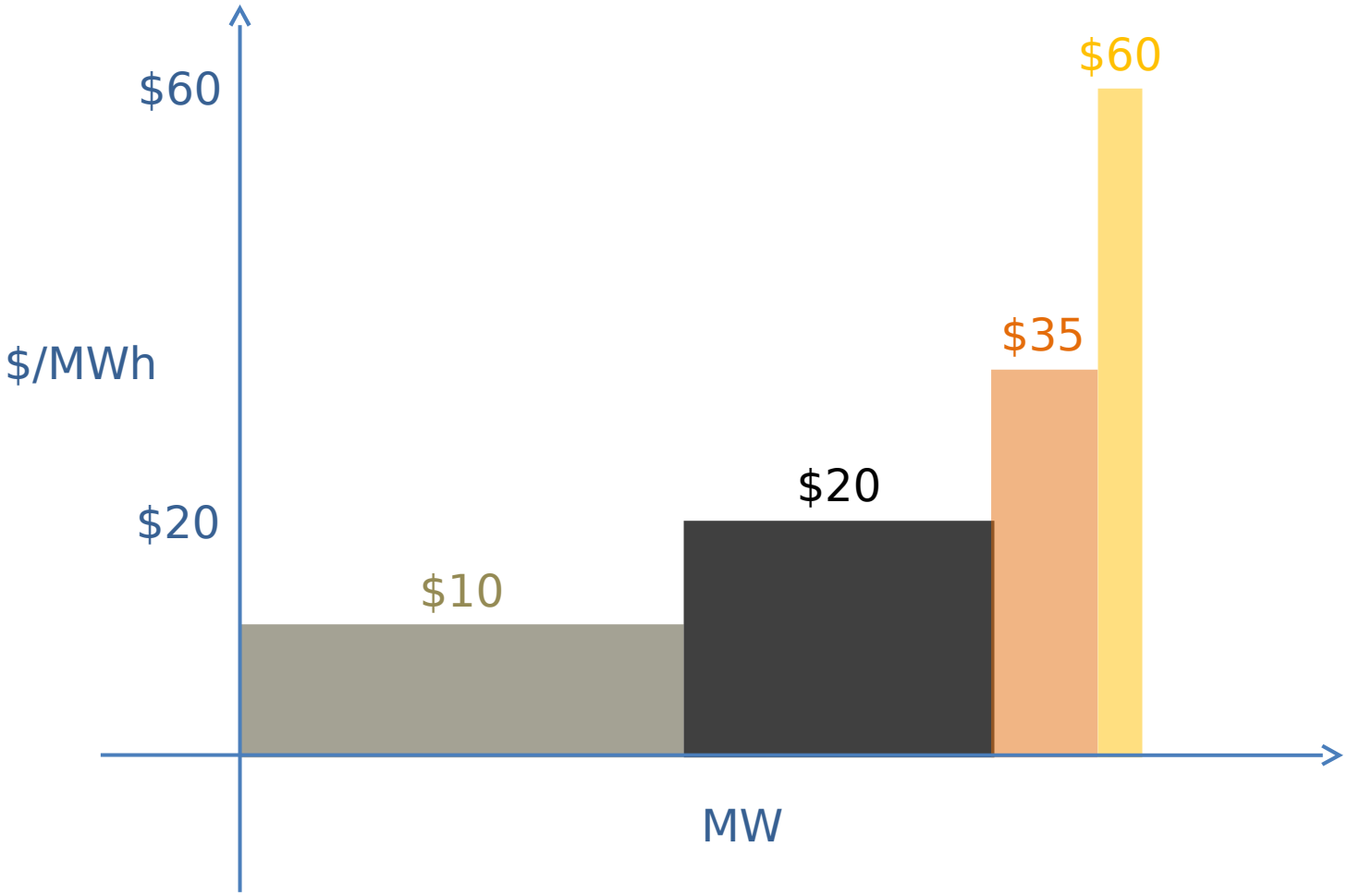


Renewable energy and merit order dispatch



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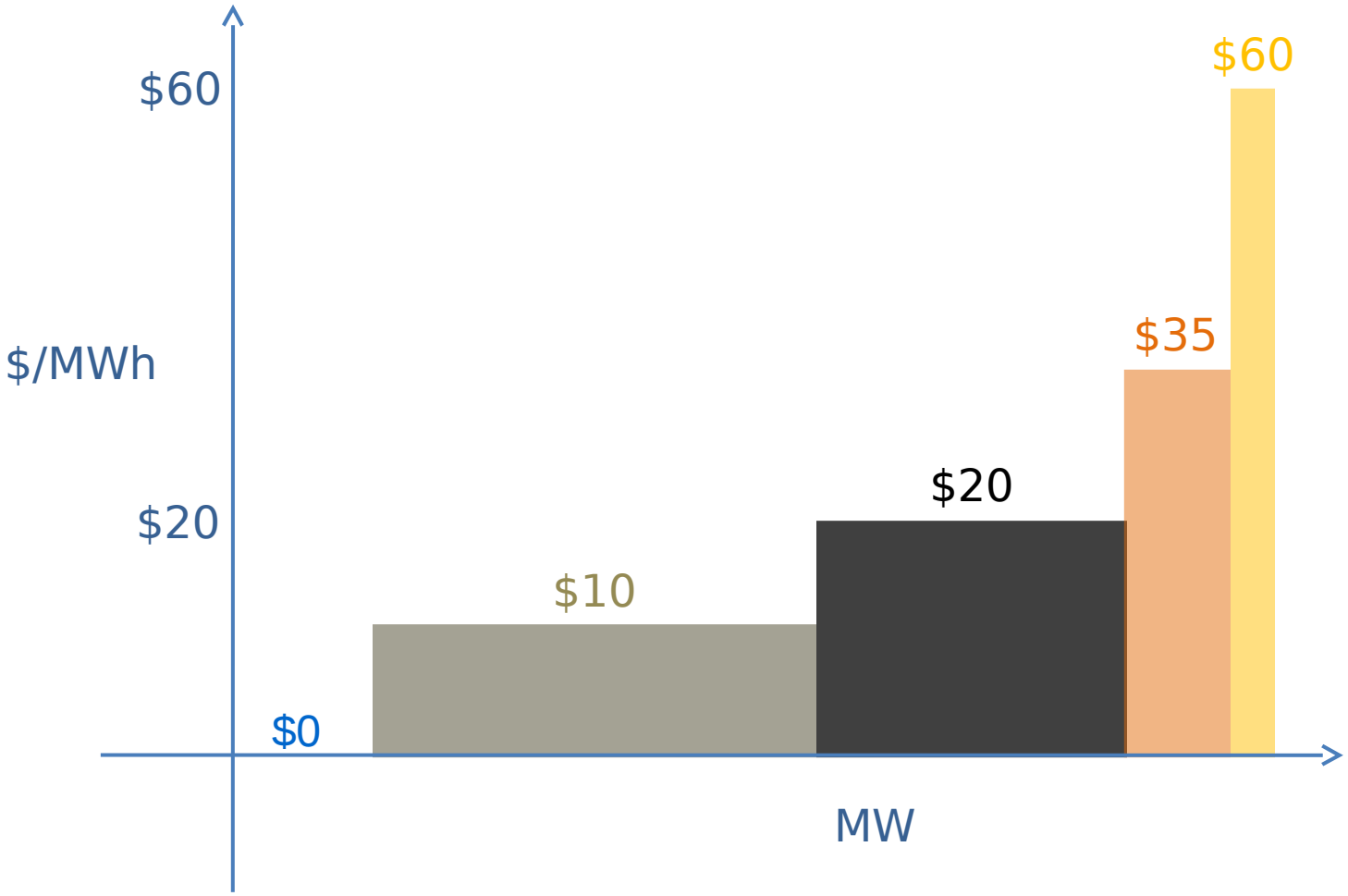
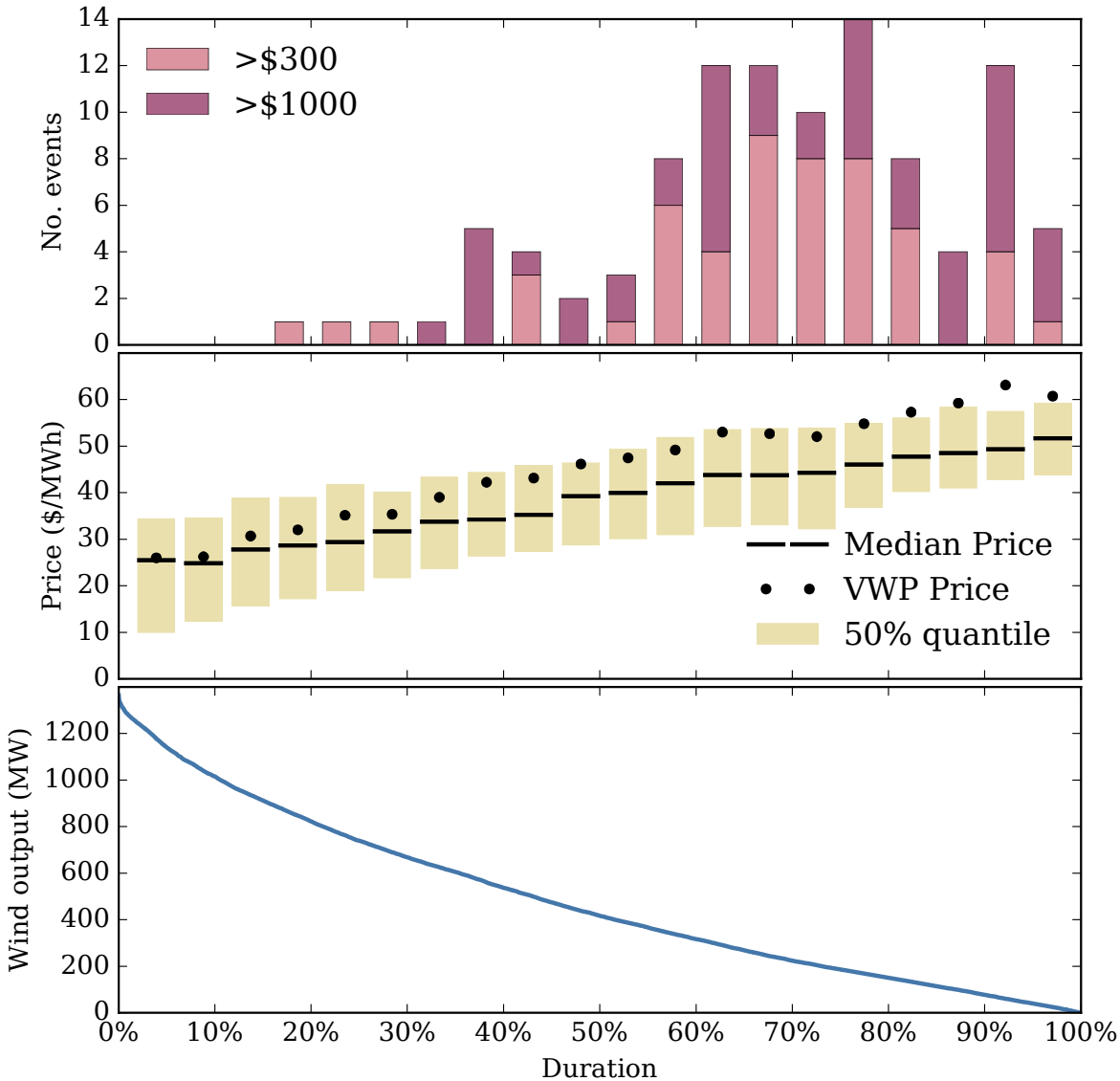
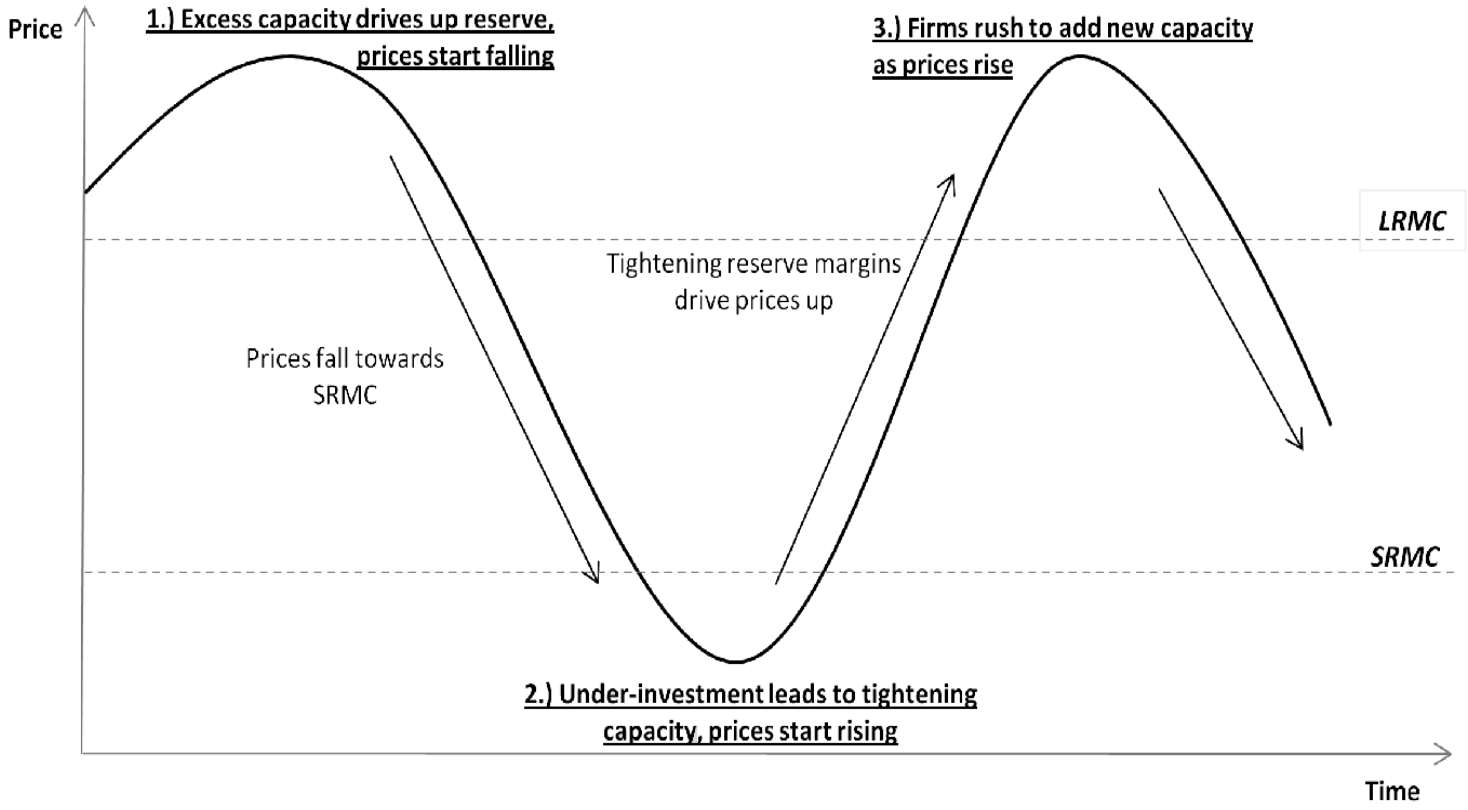


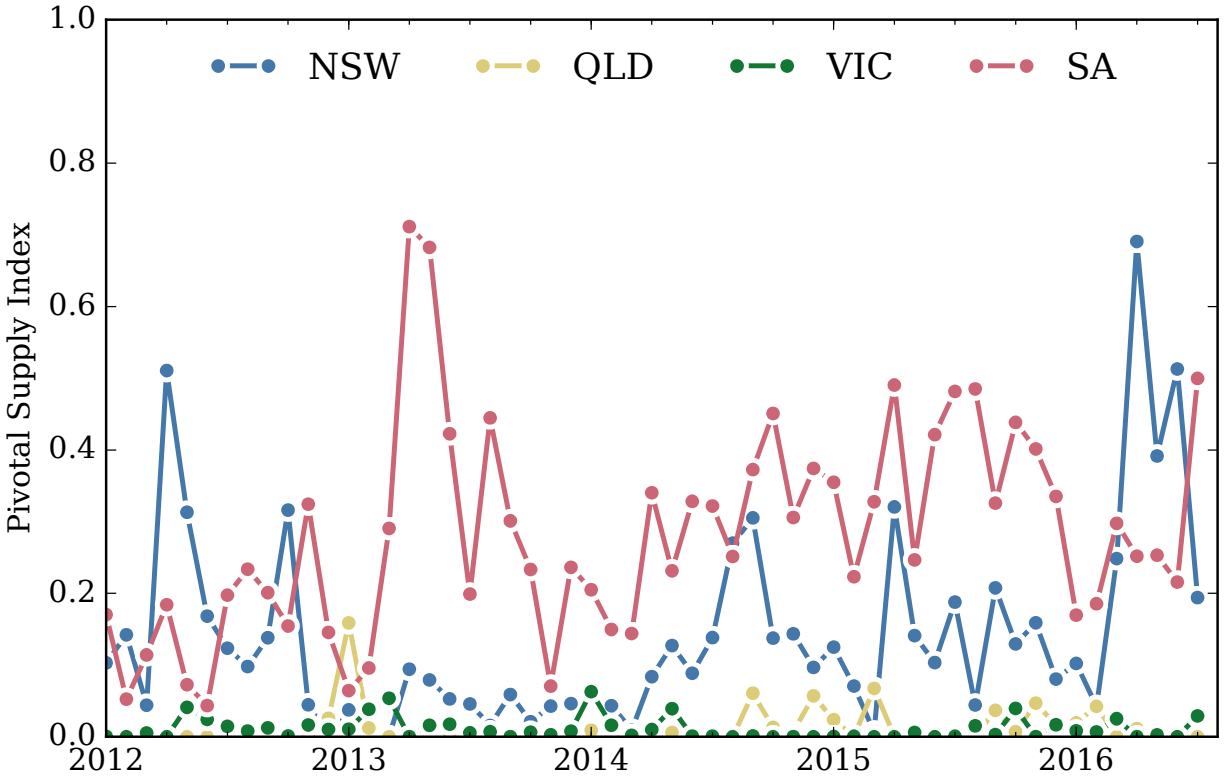

>$300
>$1000
No. events
Price ($/MWh)
Median Price
VWP Price
50% quantile
Wind output (MW)
Duration
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

Capacity cycle



Competition and market power

- Herfindahl–Hirschman Index of the South Australia 3000 – 3400
- Above the value of 2000 that the ACCC uses to flag competition issues



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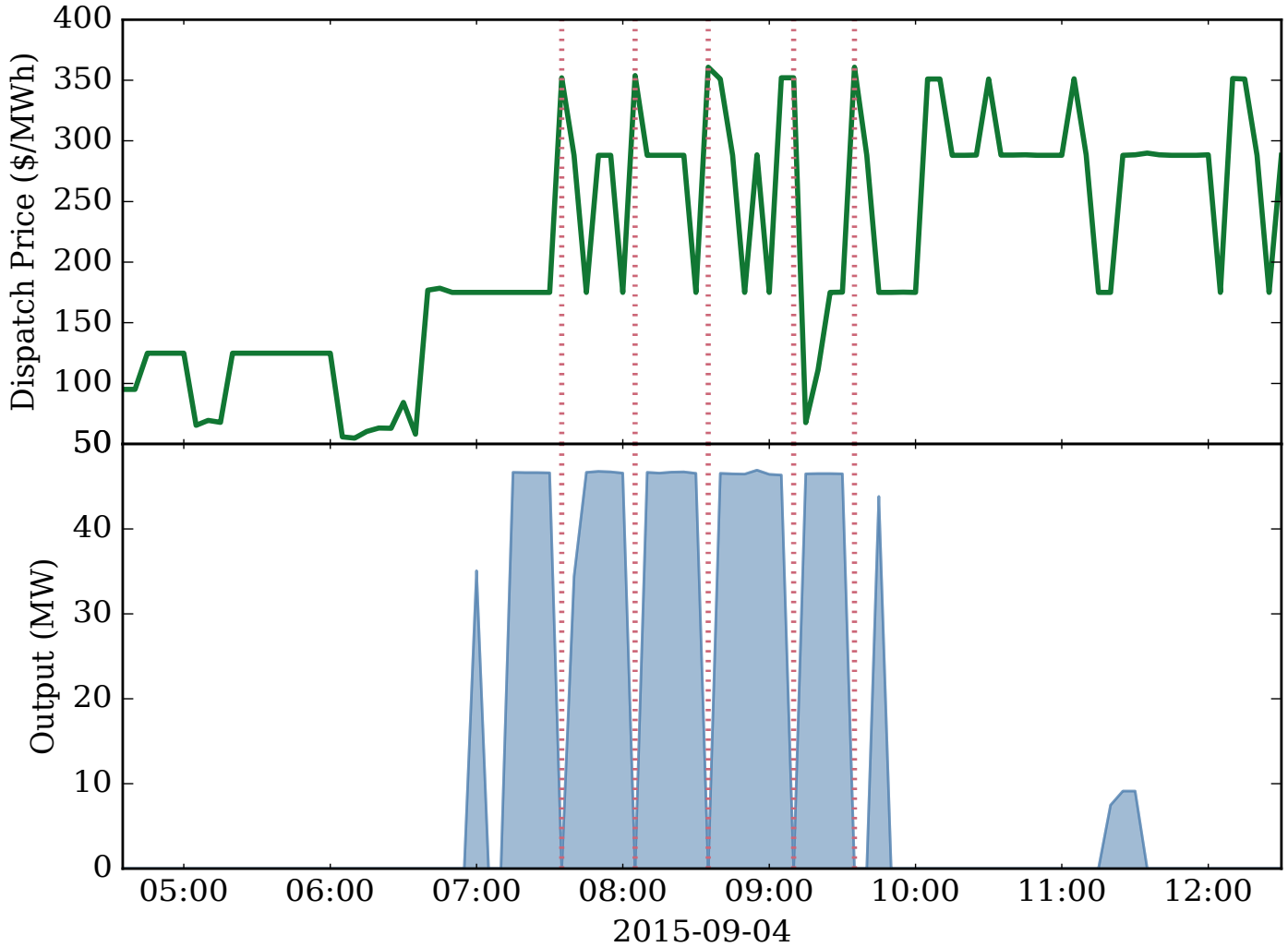

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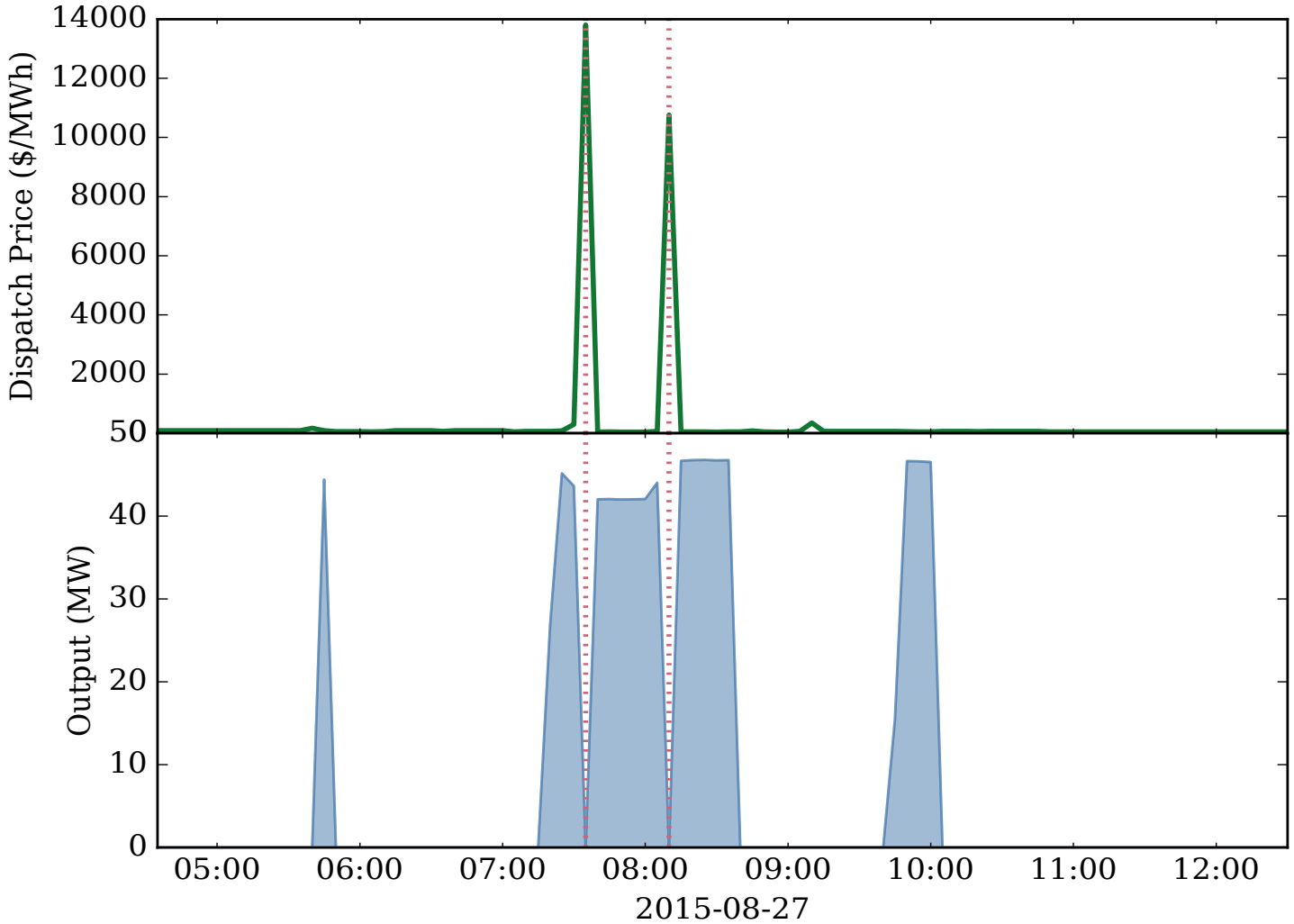

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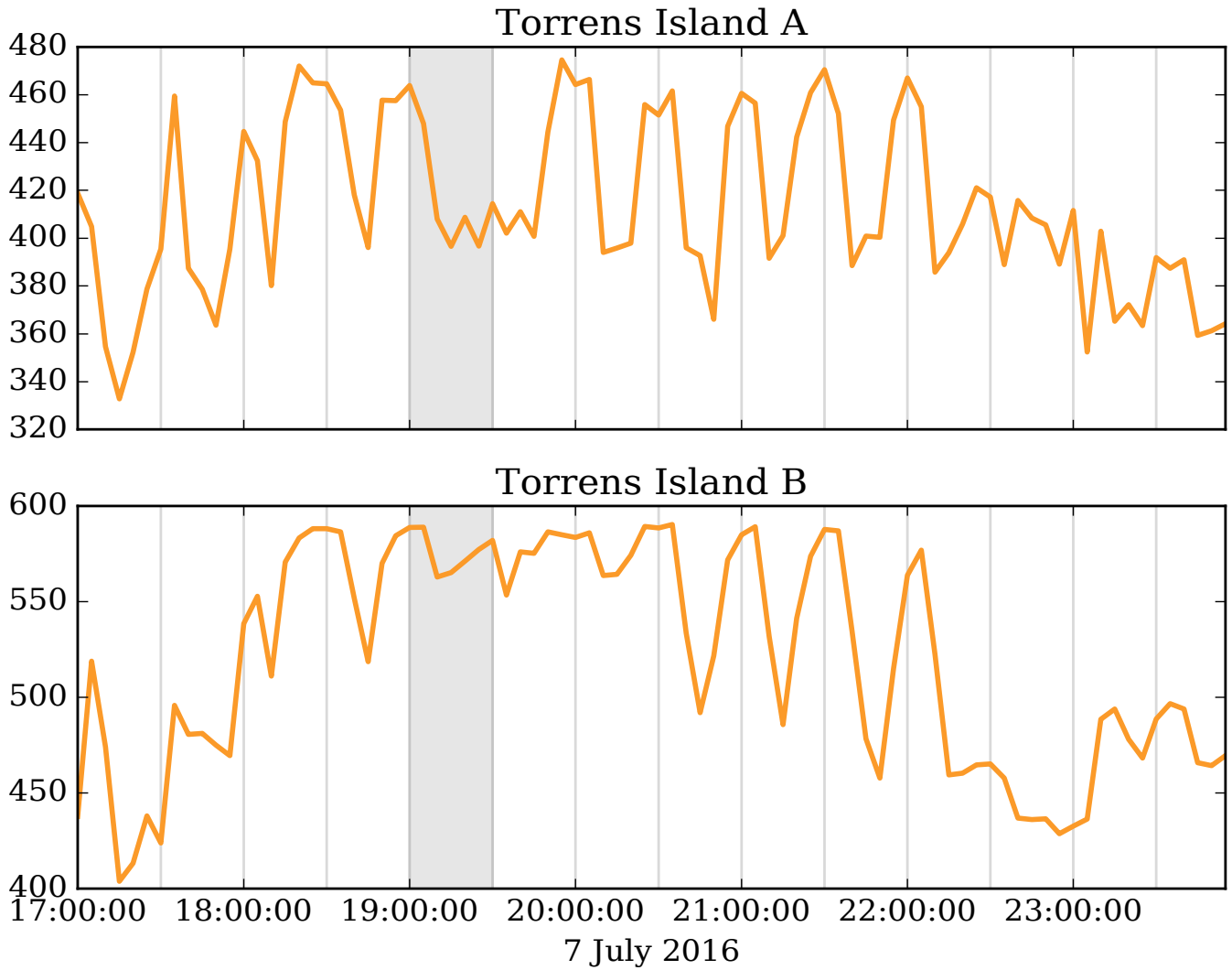

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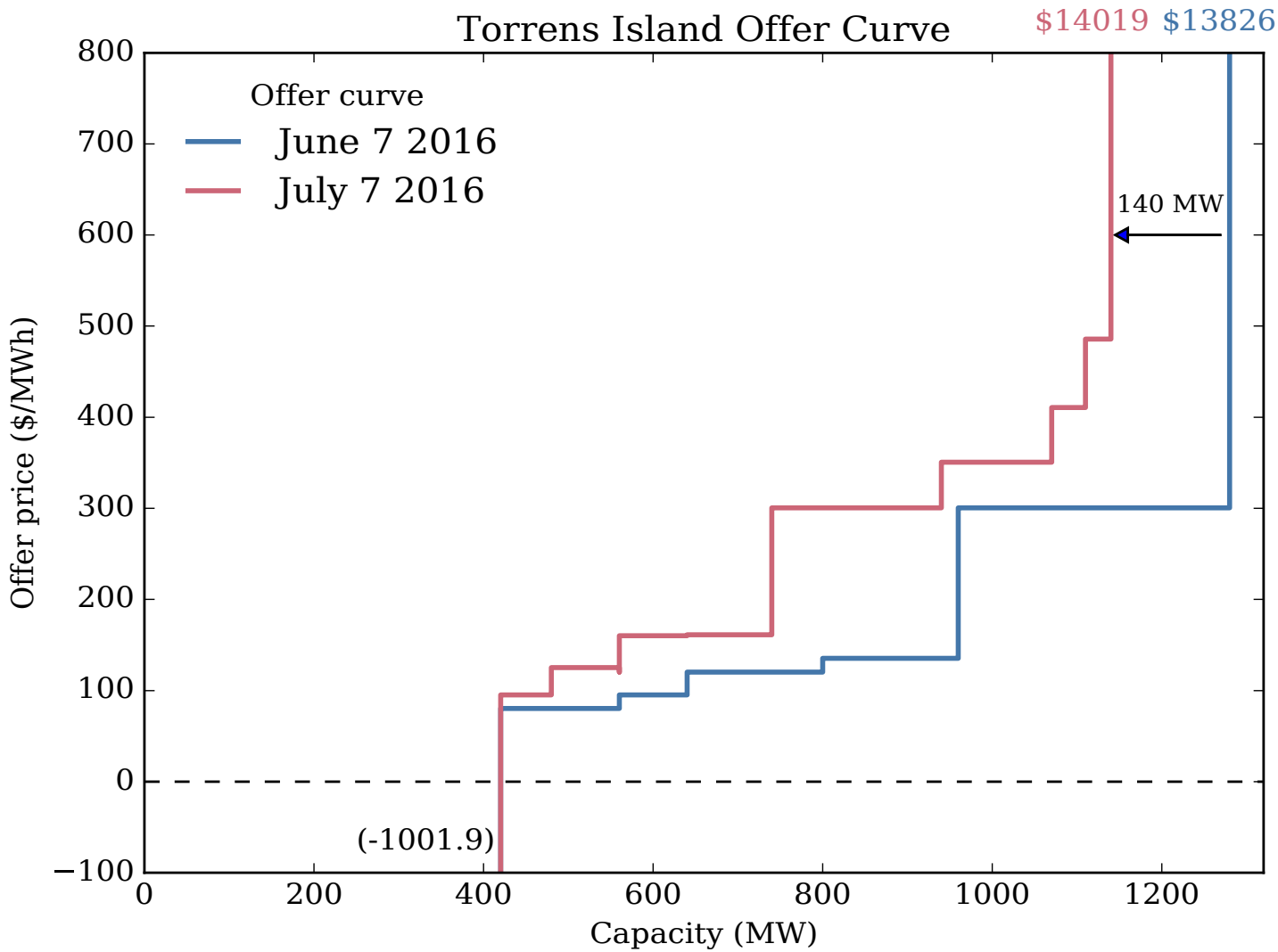

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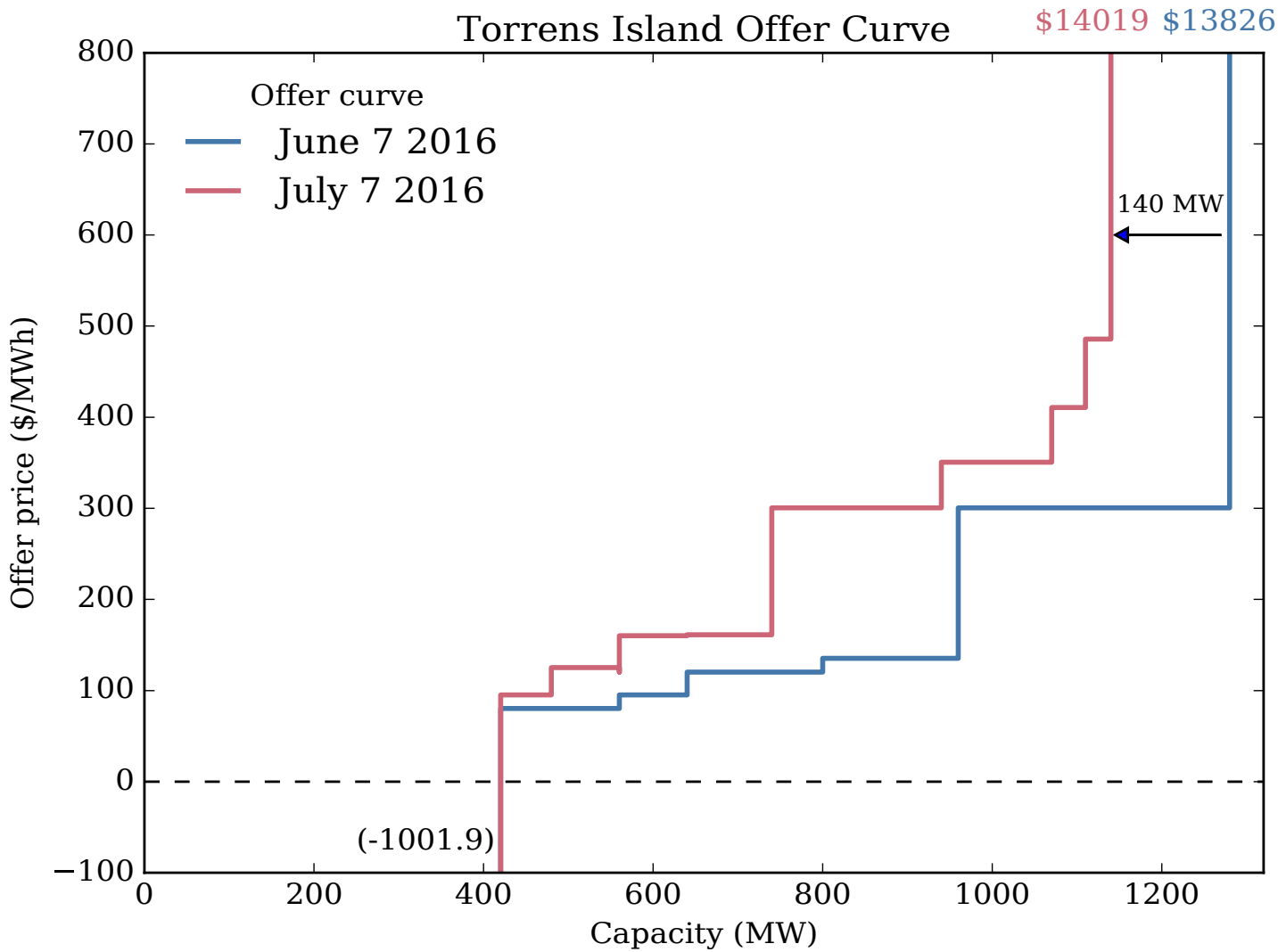
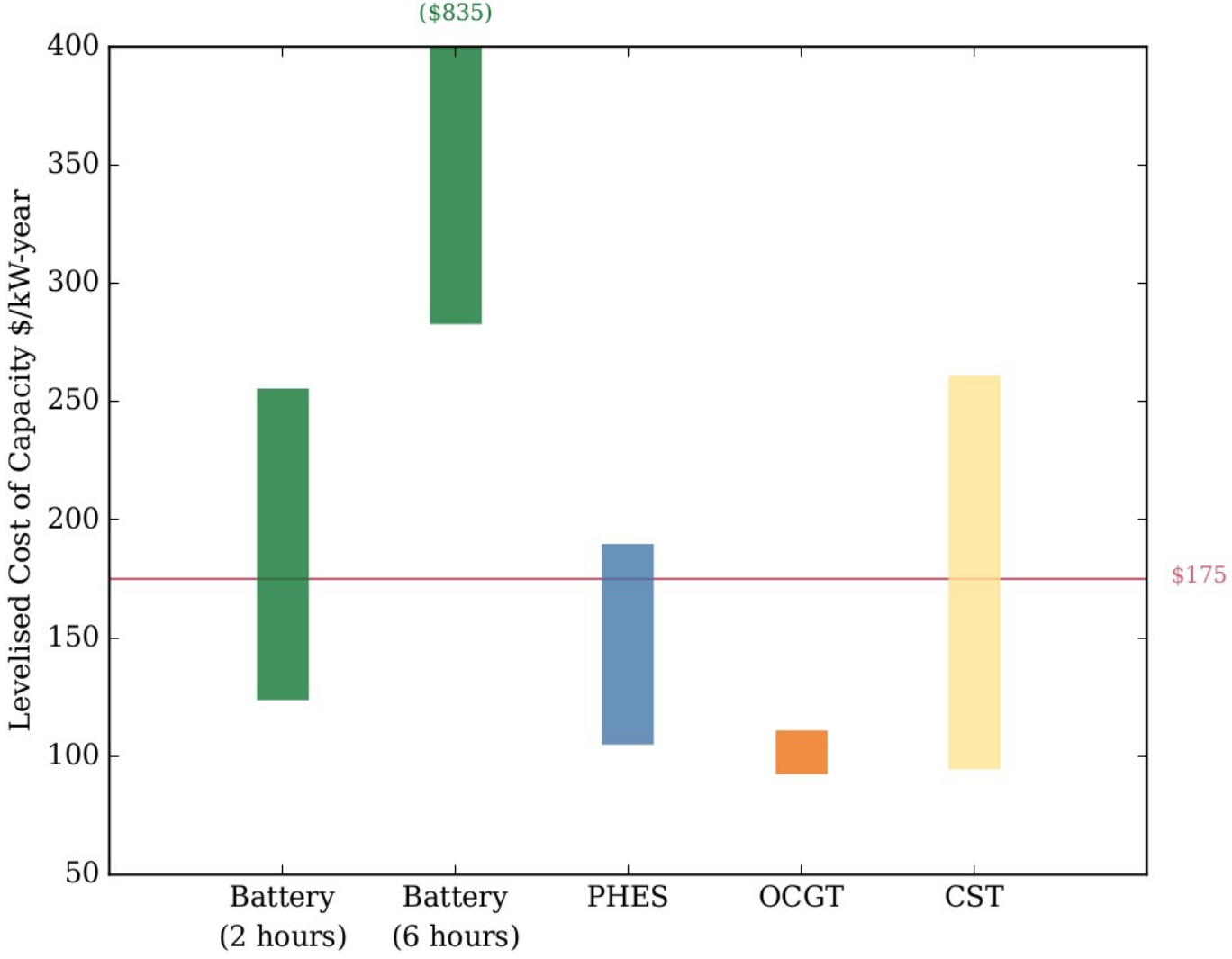


Options for South Australia



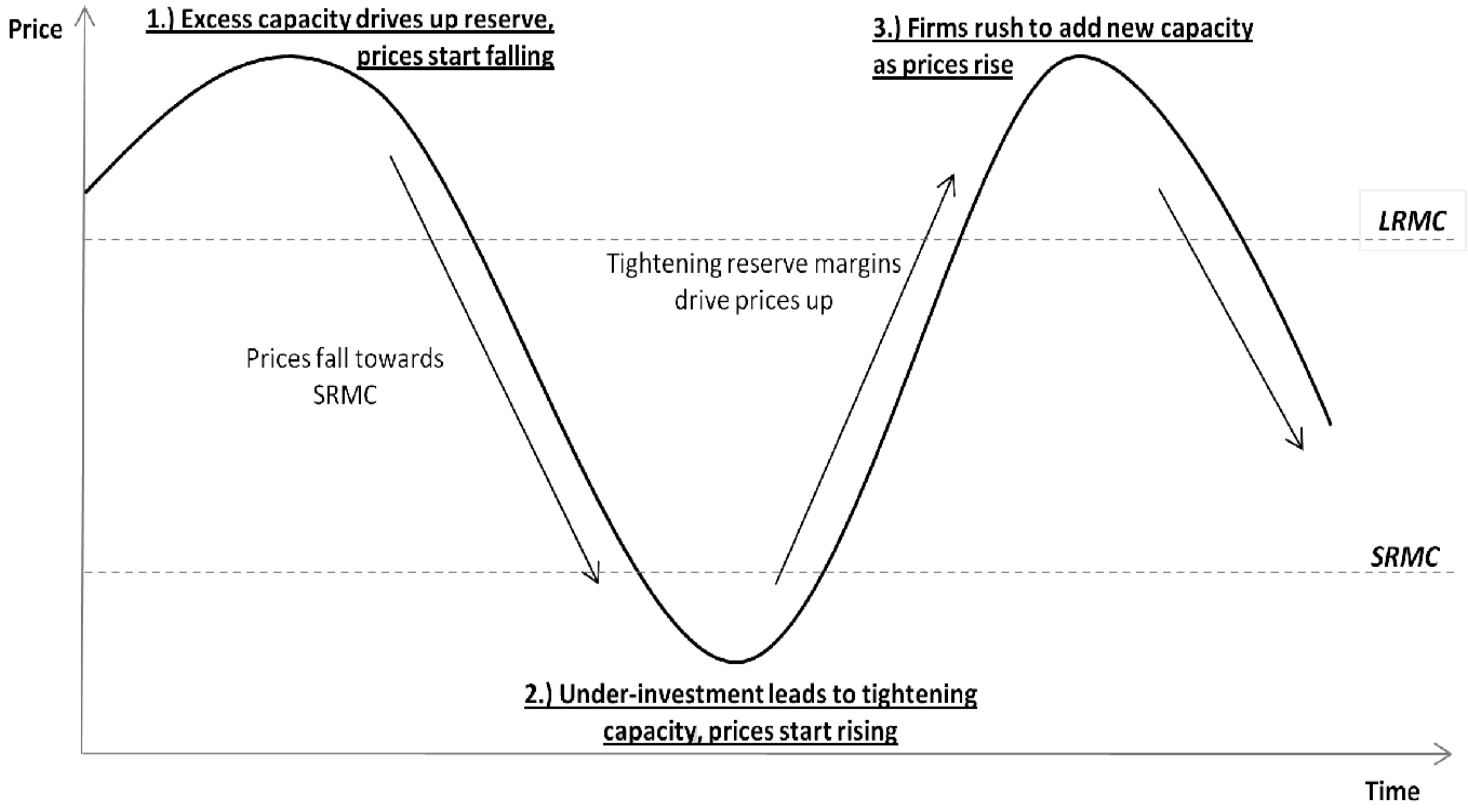
Summary

- Potential for market power to be concentrated as a consequence of transitional arrangements
- Diversification of low emission generation and storage portfolios
- Alignment of national energy policy across related sectors, specifically the intersection of gas export markets and the Renewable Energy Target
- Coordinated system planning of transitional arrangement

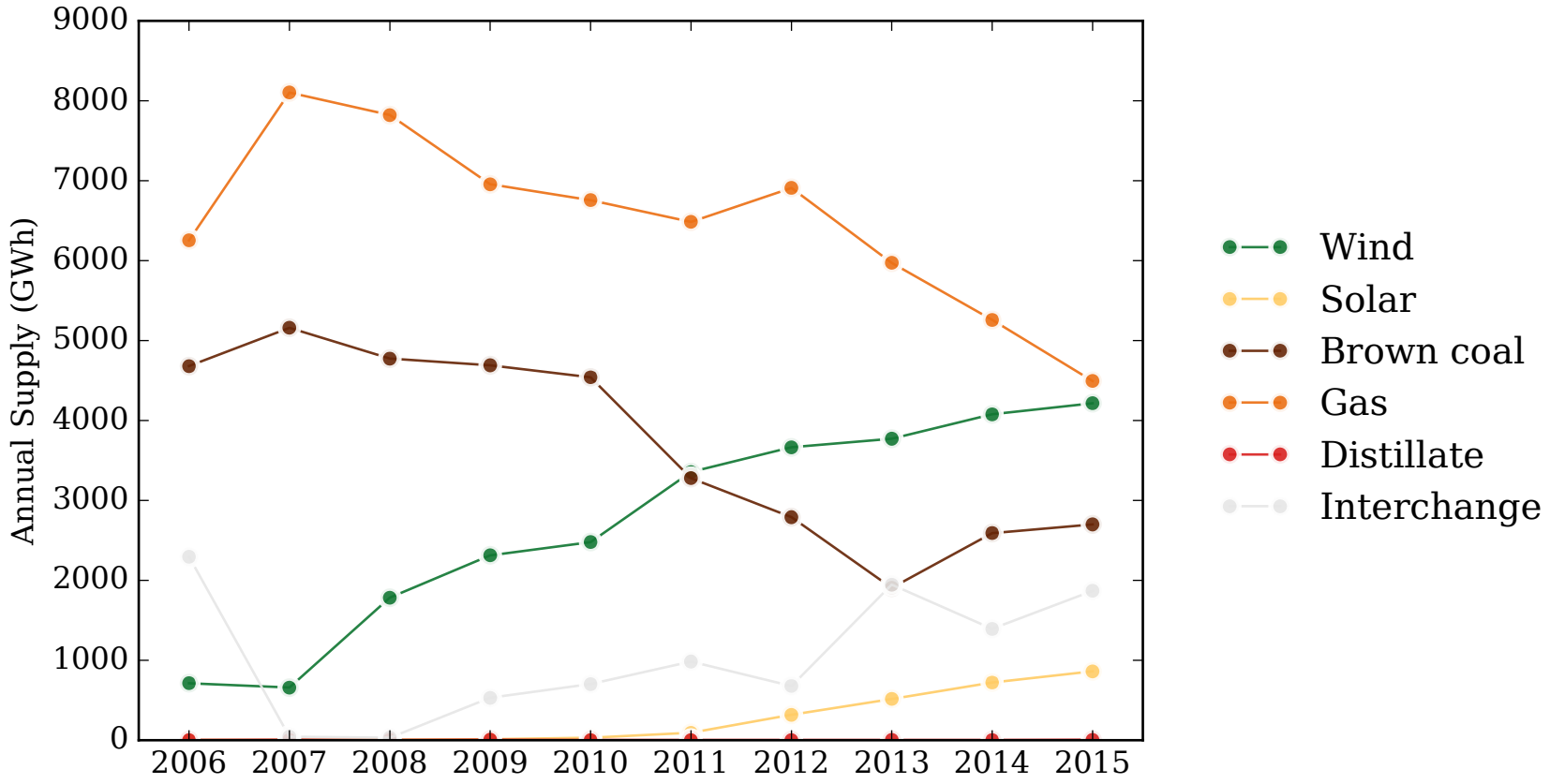
Thank you

‘When the wind of change blows some build walls while others build windmills’

Capacity cycle



Changing supply



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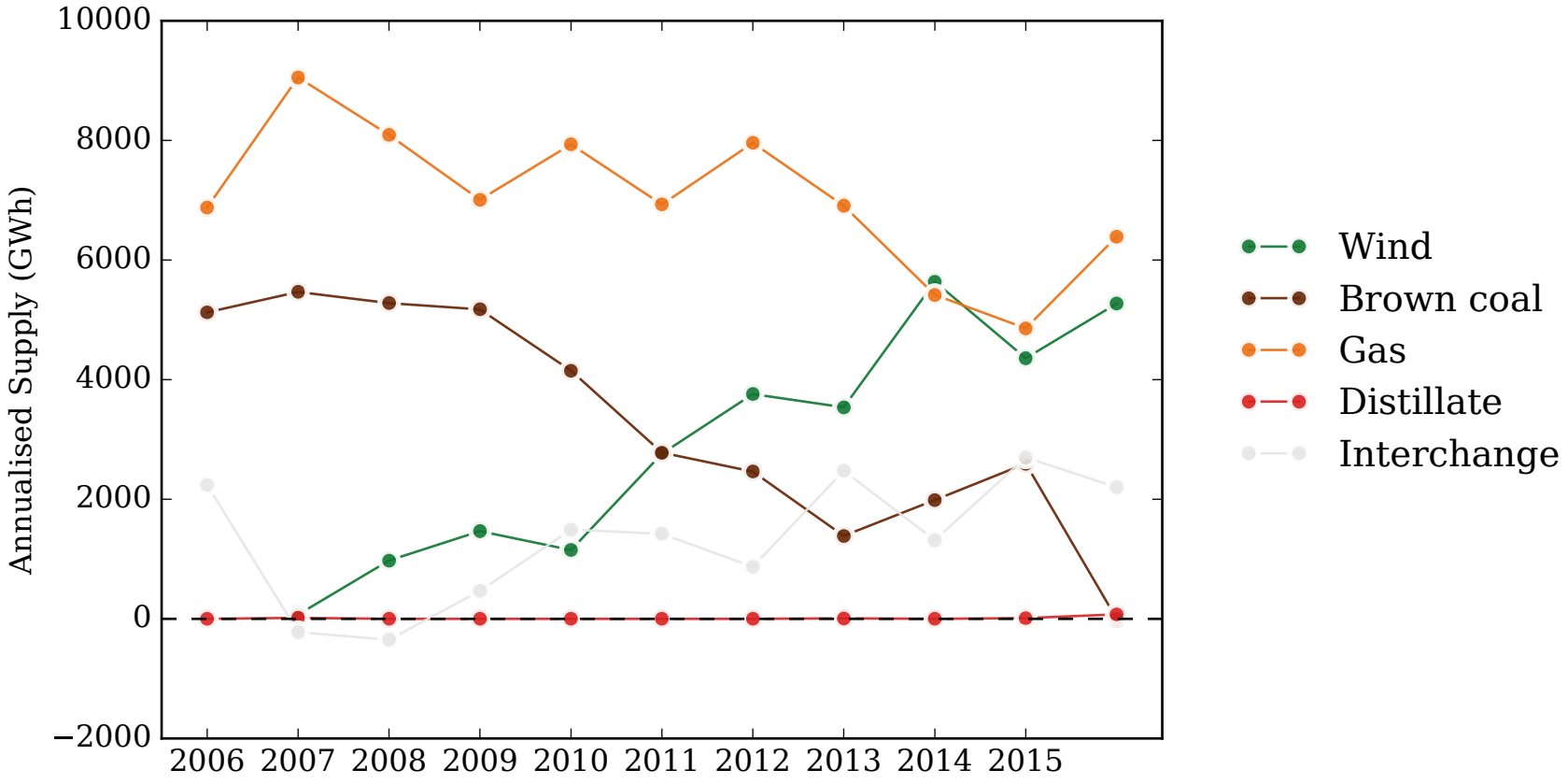
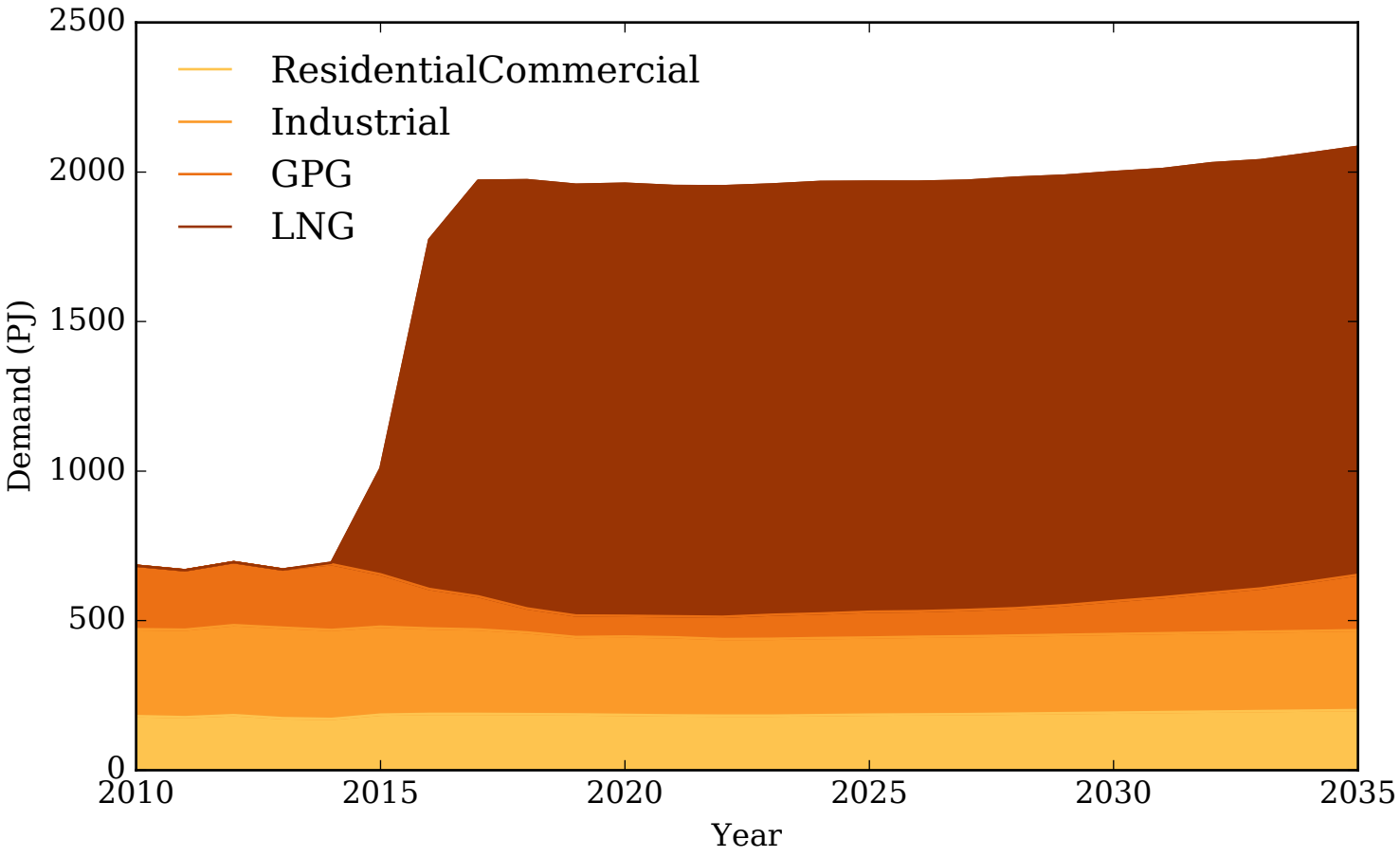
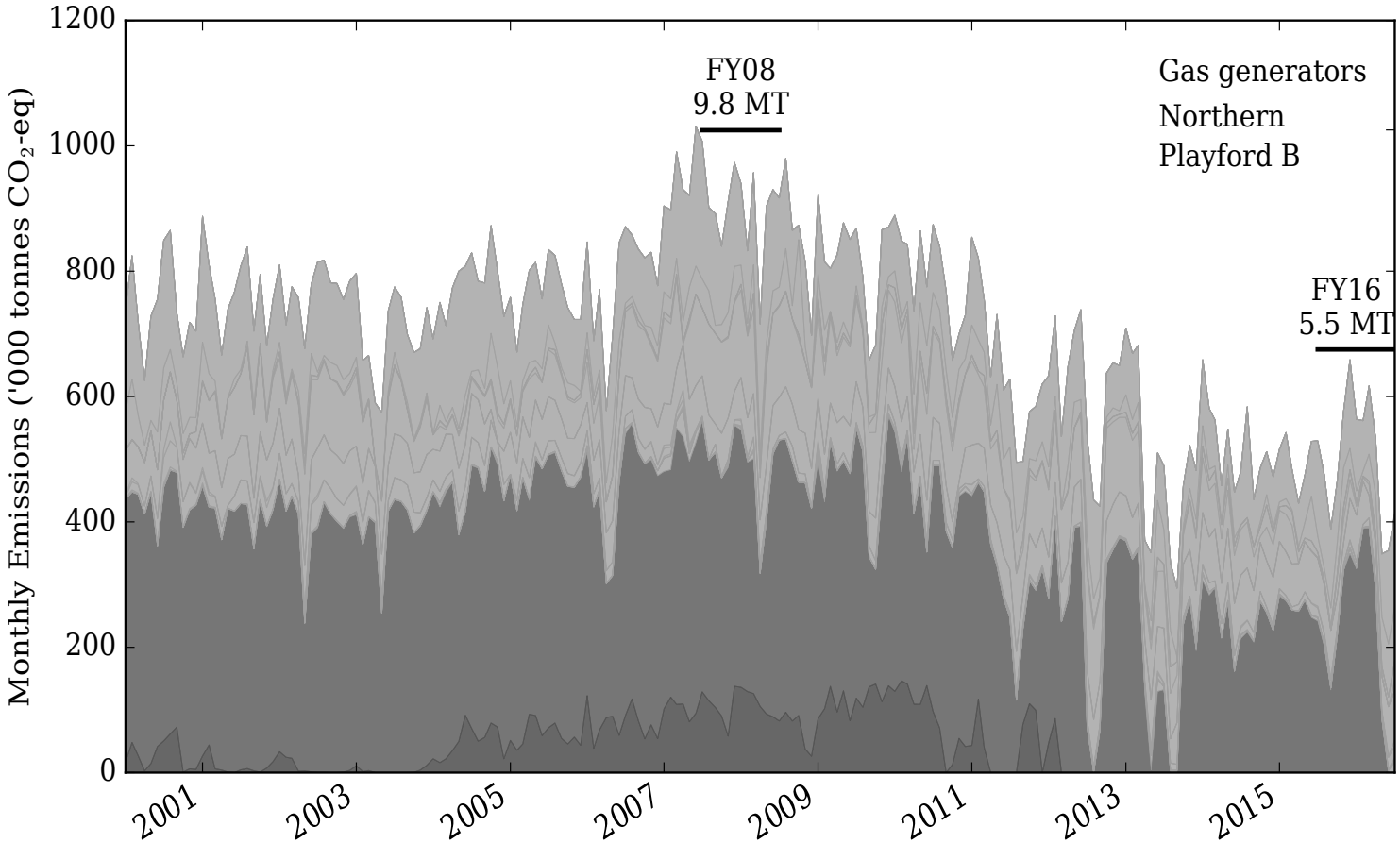


Gas demand


ResidentialCommercial
Industrial
GPG
LNG
Demand (PJ)
Year
0
500
1000
1500
2000
2500
2010
2015
2020
2025
2030
2035

Gas demand


Monthly Emissions ('000 tonnes CO_2-eq)
1200
1000
800
600
400
200
0
2001
2003
2005
2007
2009
2011
2013
2015
FY08
9.8 MT
FY16
5.5 MT
Gas generators
Northern
Playford B