TRENDS IN ELECTRICITY DEMAND

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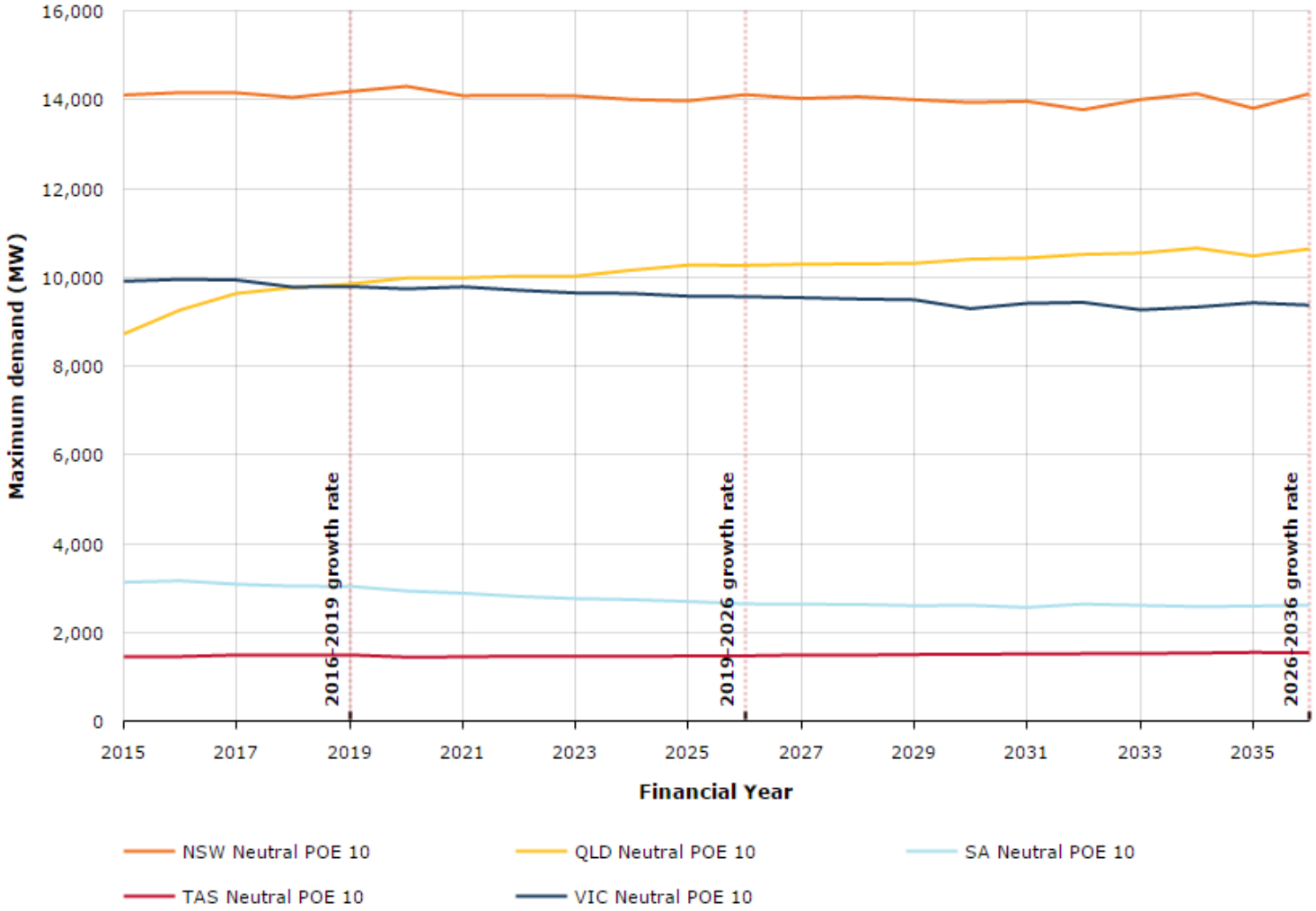
PRESENTED BY JESS HUNT

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

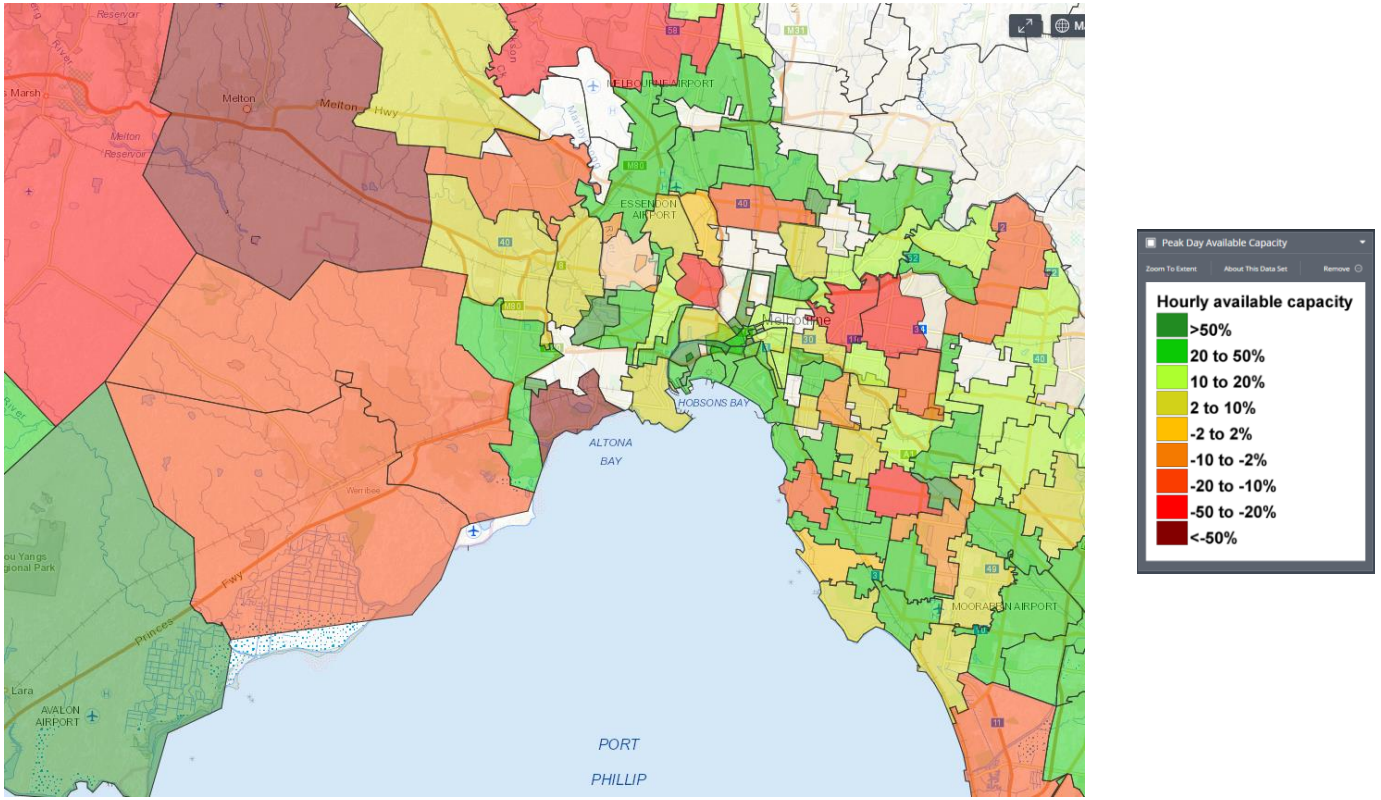
TRENDS IN ELECTRICITY DEMAND

1. NEM demand characteristics
2. What does this mean for the DMIS?

OVERALL, THE OUTLOOK IS FLAT



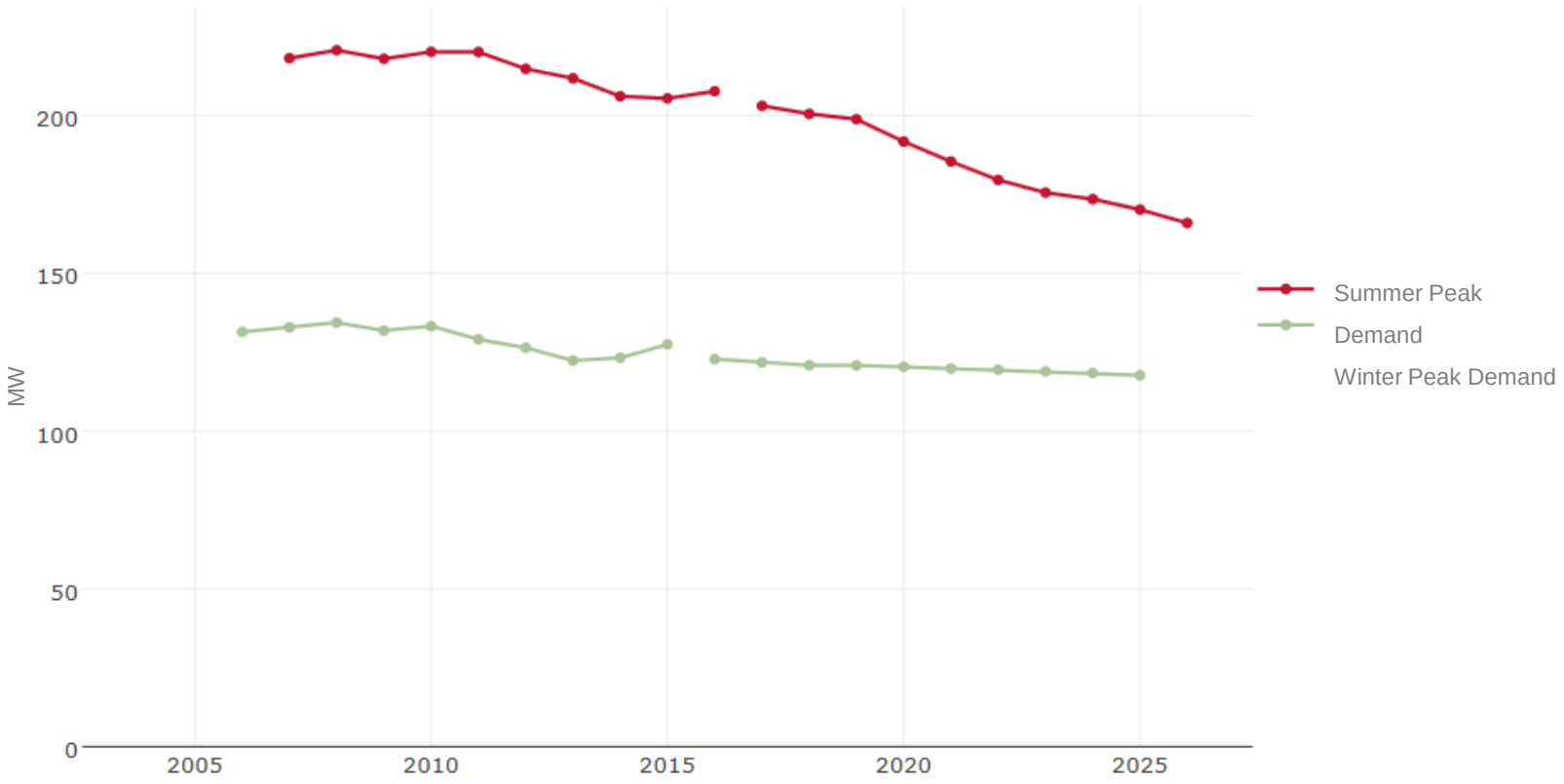
CONSTRAINTS EXIST AT LOCAL LEVEL



Source: Australian Renewable Energy Mapping Infrastructure http://nationalmap.gov.au/renewables

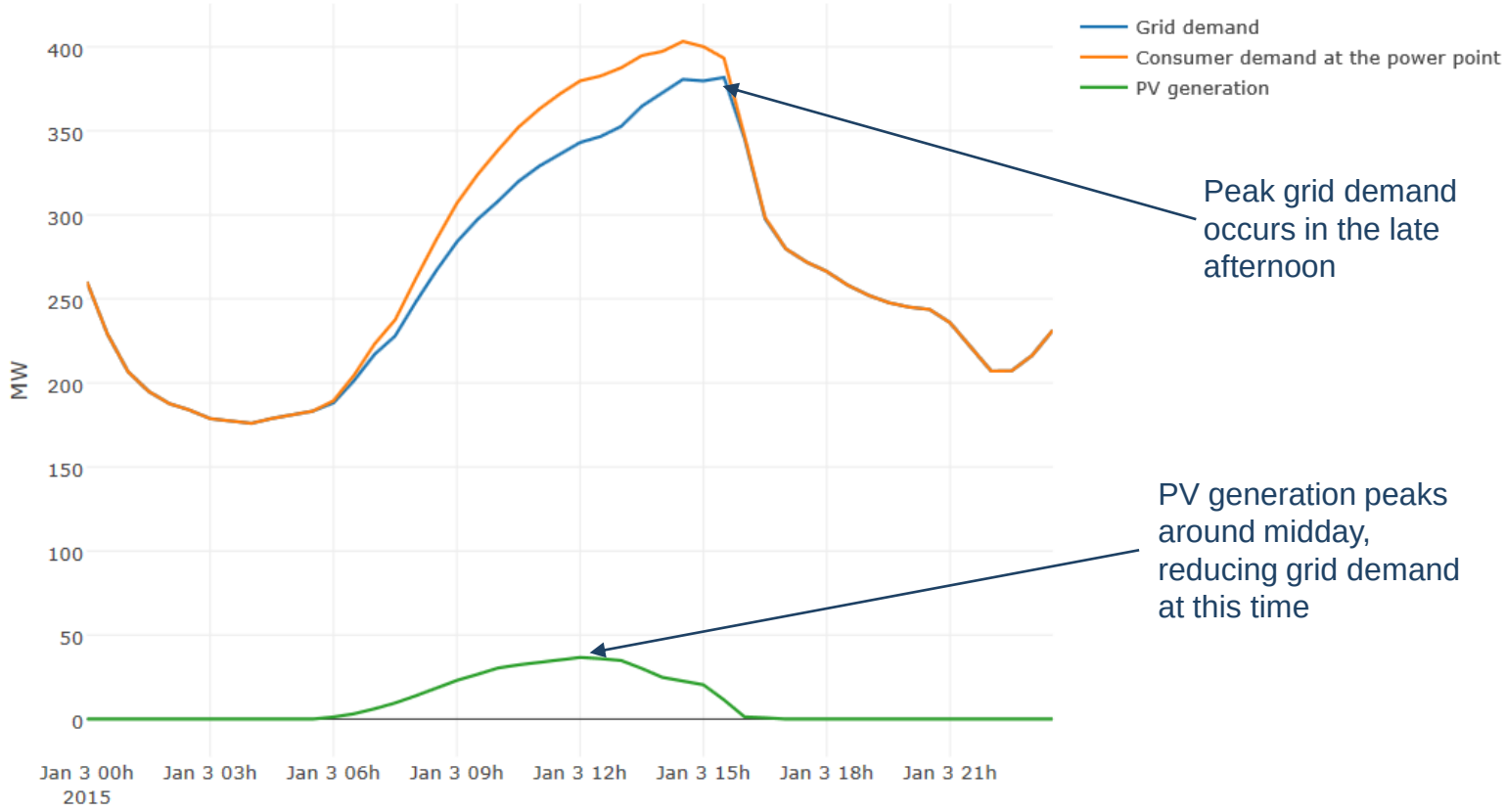
Pockets of growth within the distribution networks

DECLINING PEAK DEMAND IN SOME AREAS



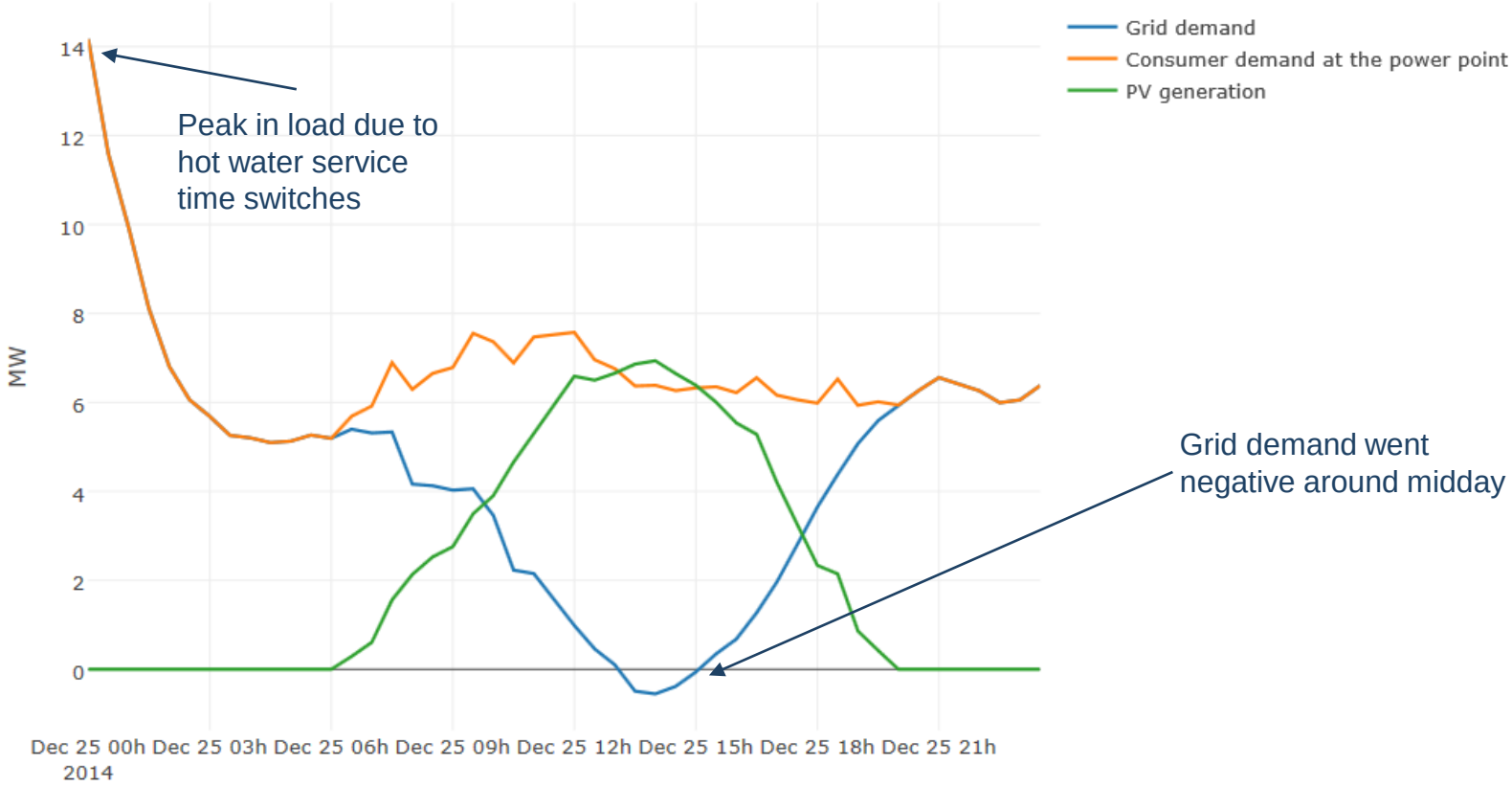
Scope for DM to reduce replacement costs

LOAD PROFILES ARE CHANGING



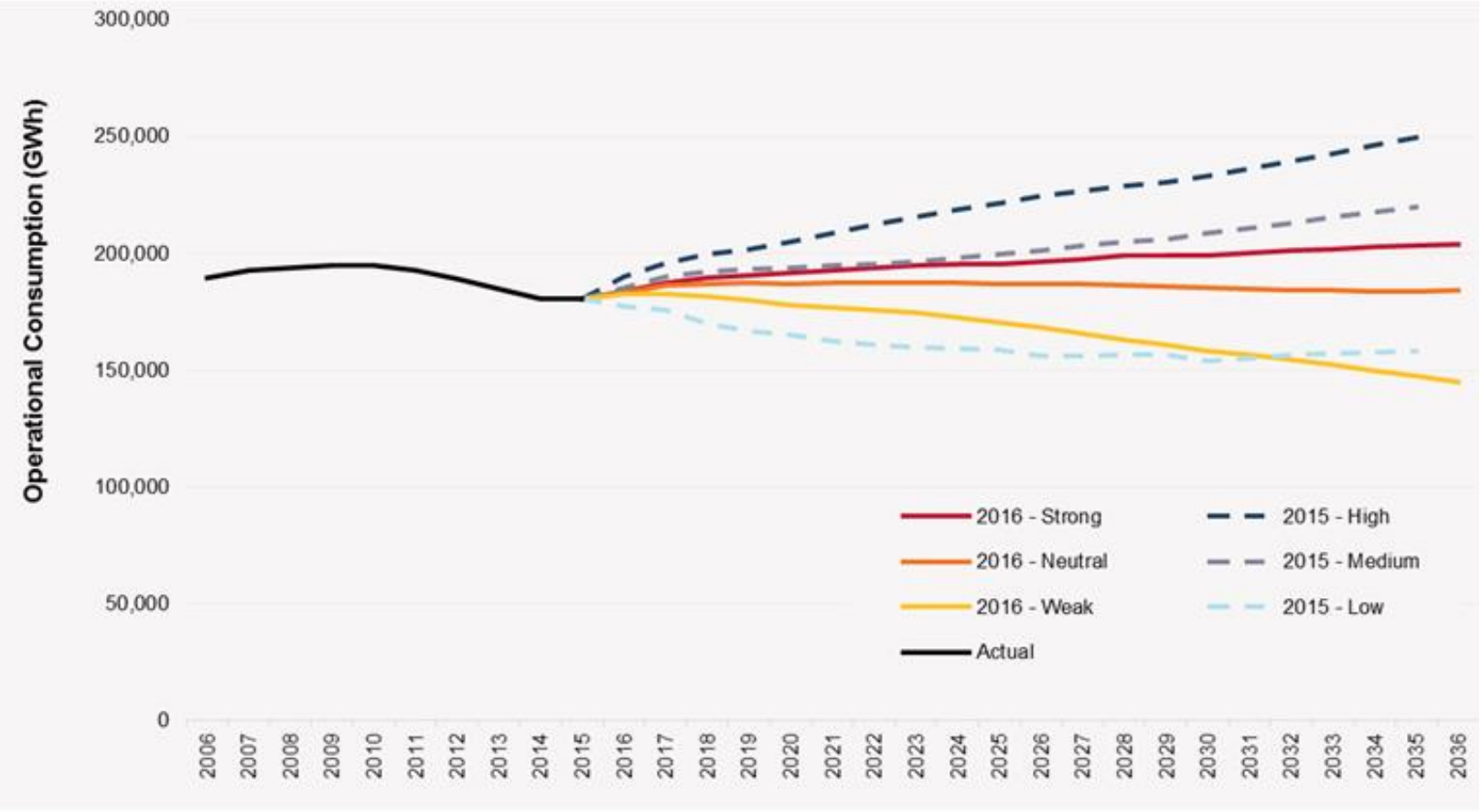
Less demand during day, peak occurring later in day

MINIMUM DEMAND IS AN EMERGING ISSUE



DM can soak up excess PV generation

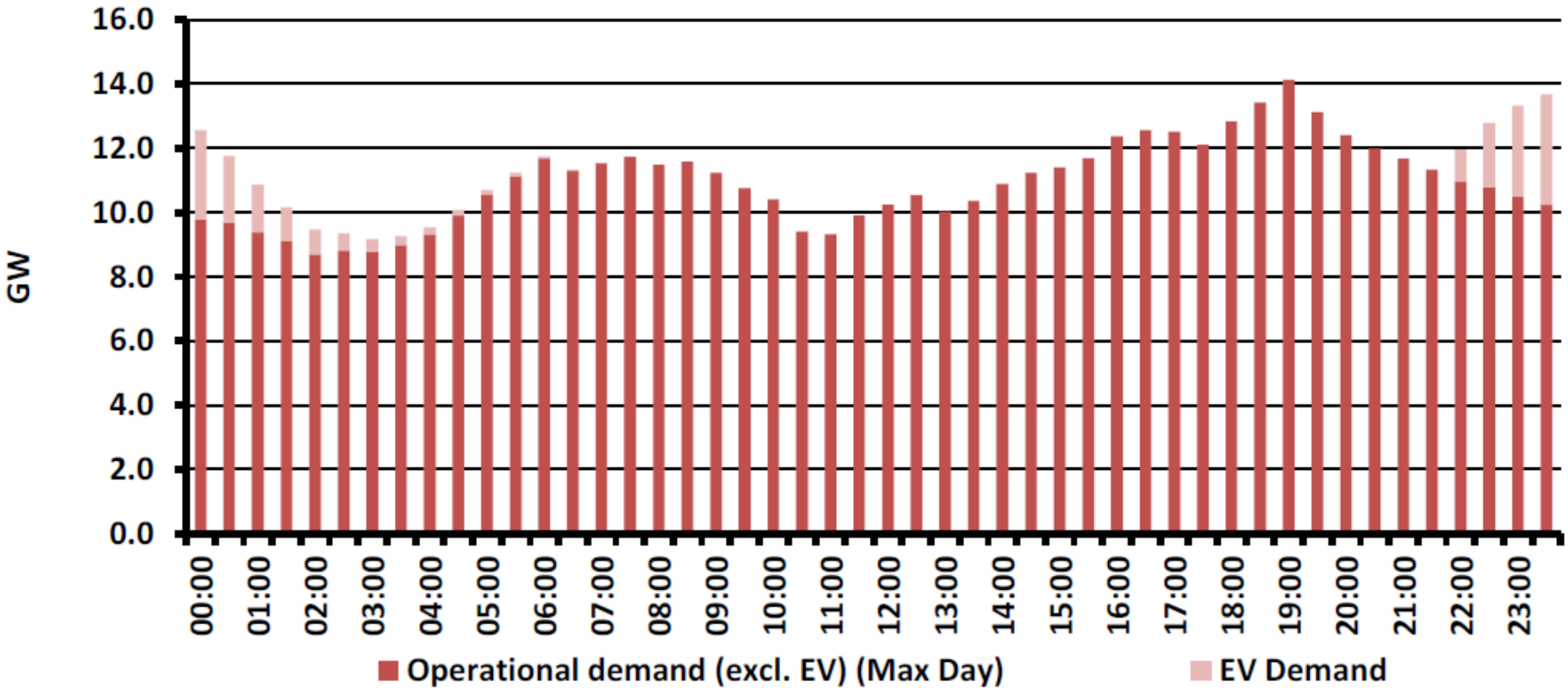
DEMAND IS HARDER TO PREDICT THAN IT USED TO BE



Option value given uncertainty

IF/WHEN THEY ARRIVE, EV LOAD WILL NEED TO BE MANAGED IN SOME WAY

Forecast NSW peak demand day with & without EV (2036, neutral case)



Source: Energeia

WHAT DOES THIS MEAN FOR THE DMIS?

- DMIS needs to be targeted to achieve network benefits
- DMIS should create incentives on DNSPs to provide a price signal that reflects the value of
  - Peak shaving
  - Downsizing or deferring repex
  - Managing diverse power flows
  - Flexibility, given uncertain demand.

Key challenge for DMIS is assessing the deferred value associated with avoided network costs