



Minimum Demand South Australia

ESIG June 2020

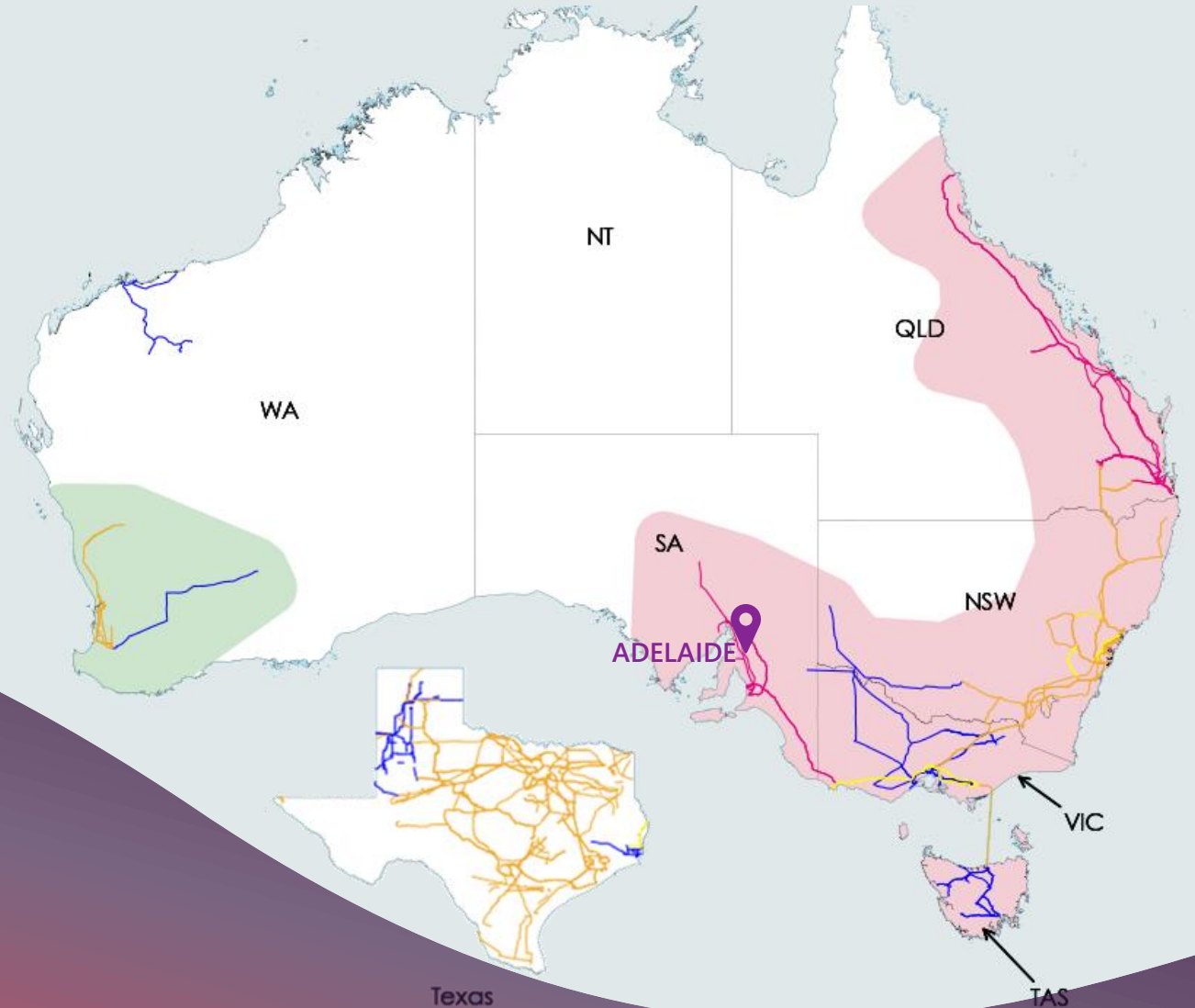
Mike Davidson Manager Operational Forecasting

South Australia

Population **1.8 million**

984,000 km² or **380,000 miles²** which is 1.5 times the size of Texas

Approximately **25%** of homes have a solar system



Distributed PV Generator (DPV)

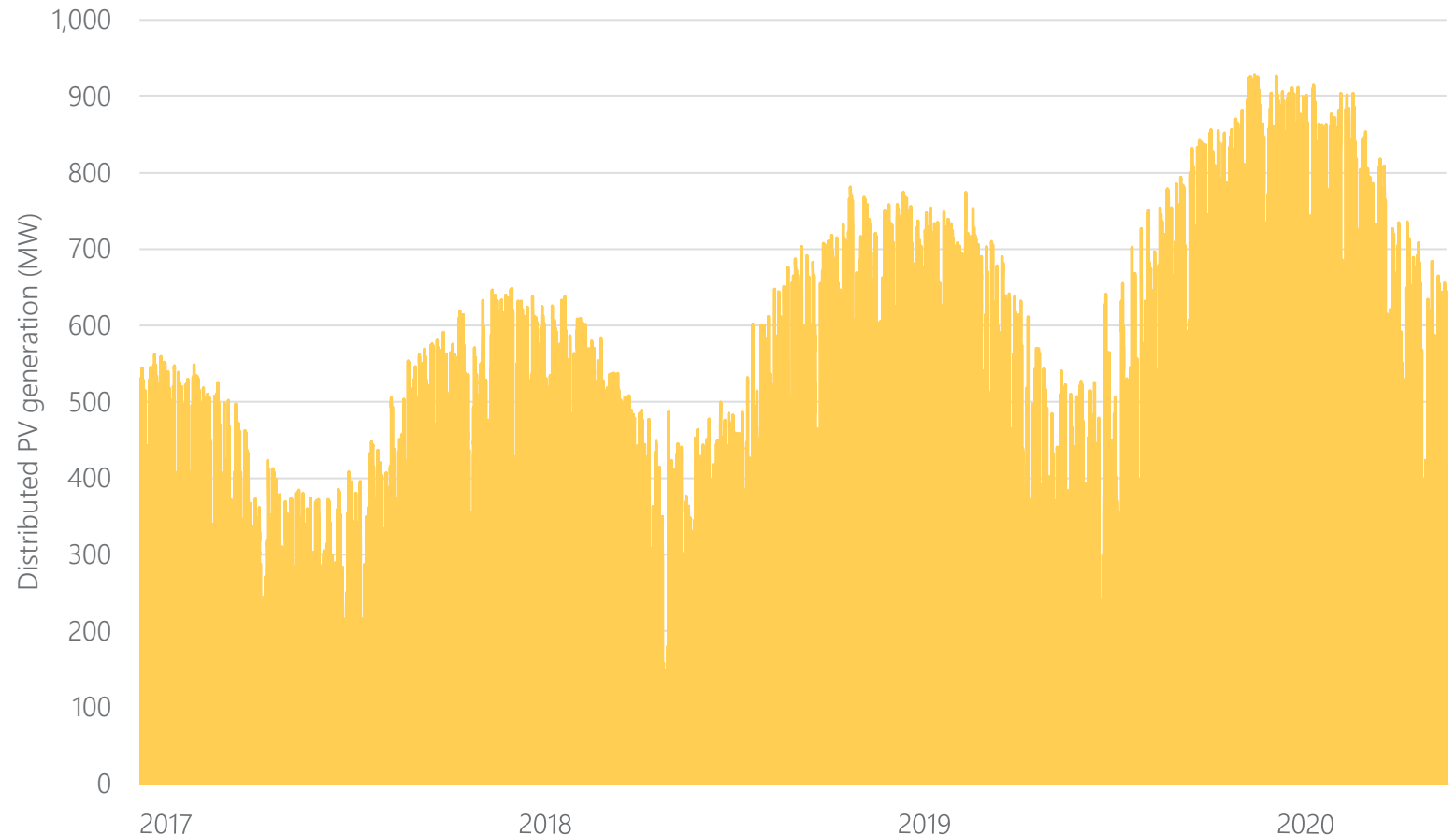
Over **2.2 million** DPV systems installed across the NEM

Collectively DPV is now the **largest generator**

Installed DPV is **~12x** the largest generator in the NEM

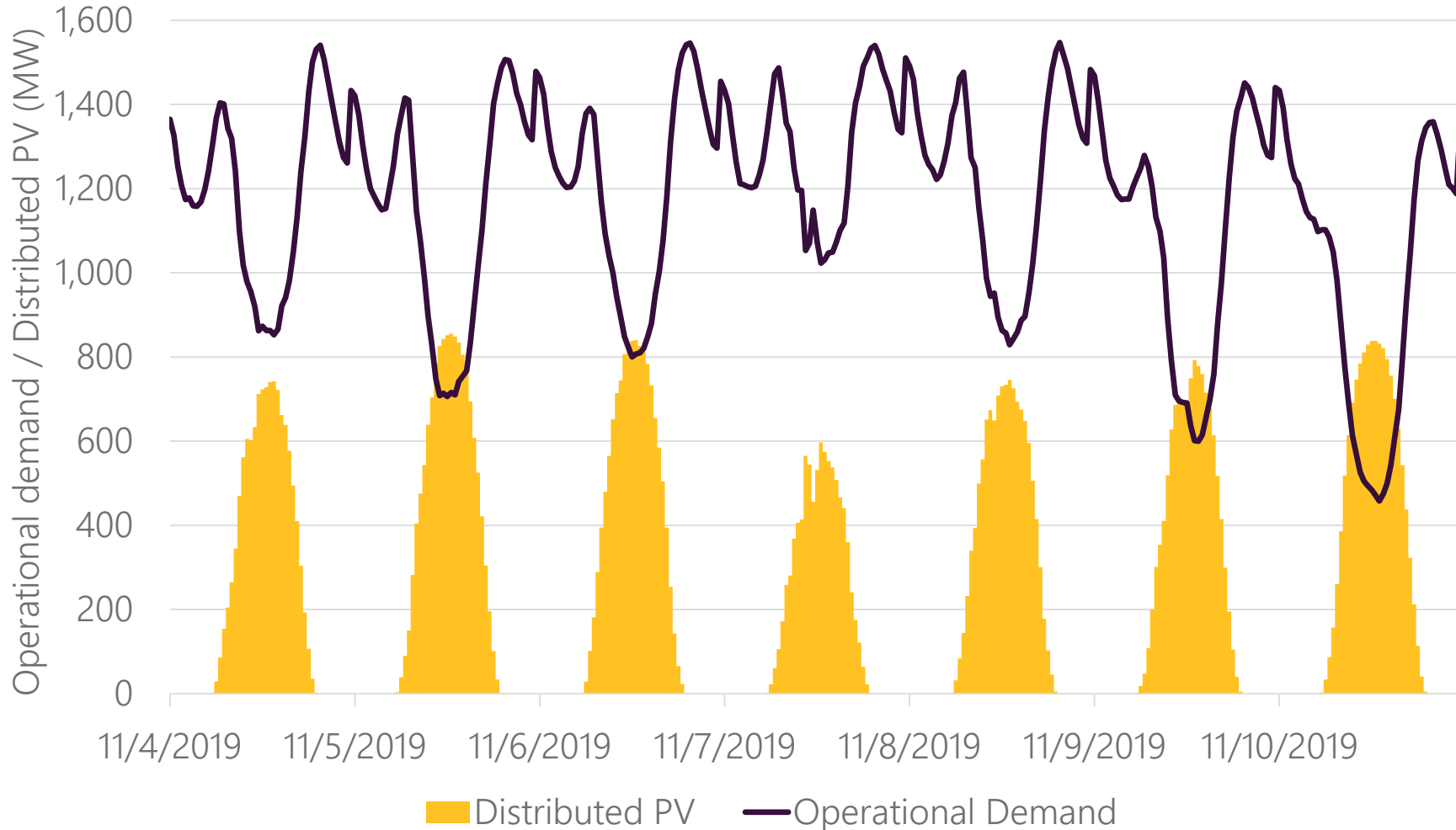
DPV is **distributed, passive, invisible and not curtailable**

Half hourly distributed PV generation in South Australia



The biggest passive generator

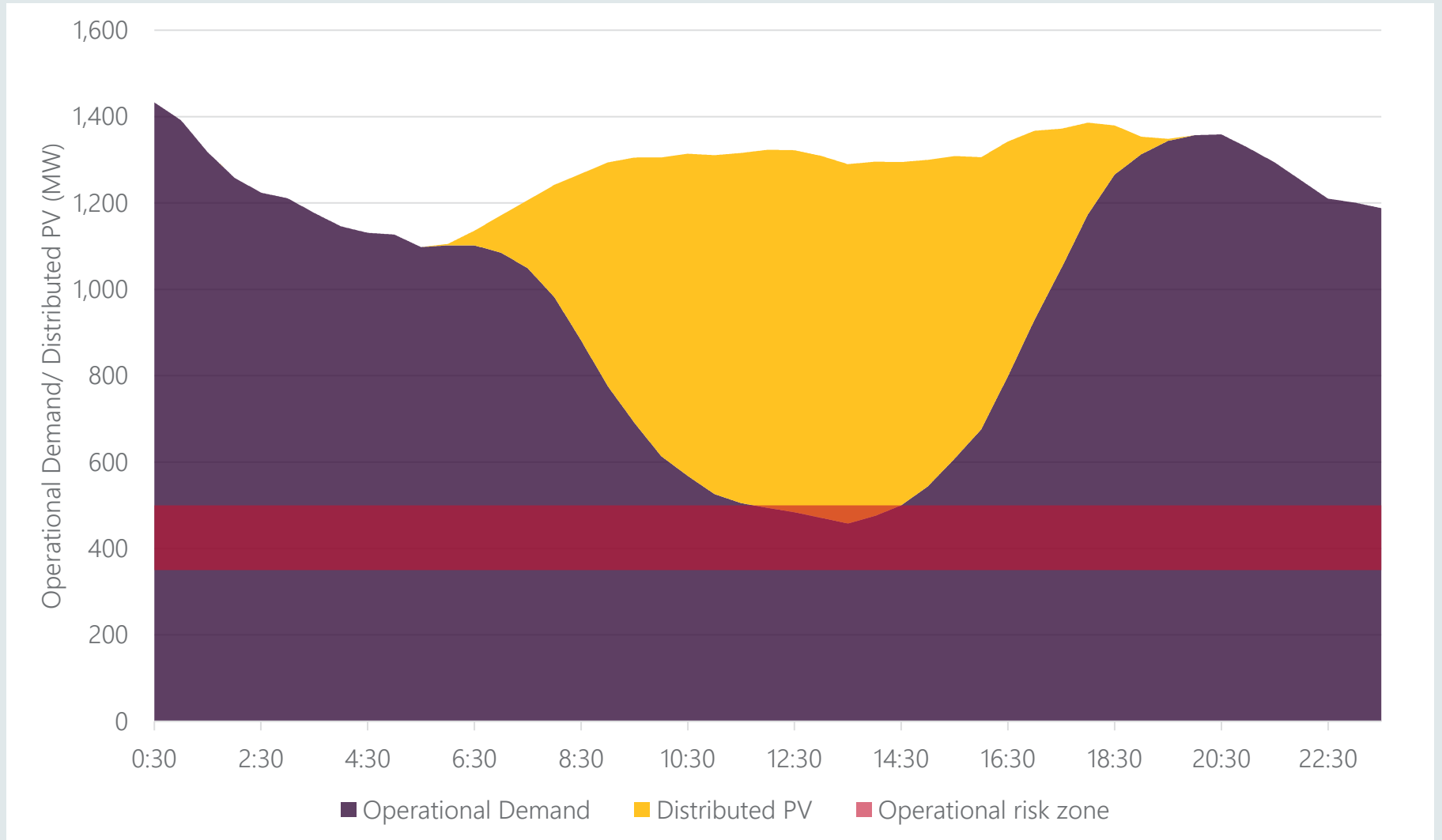
A typical
spring week
in South
Australia:



Record minimum demand

10 November 2019

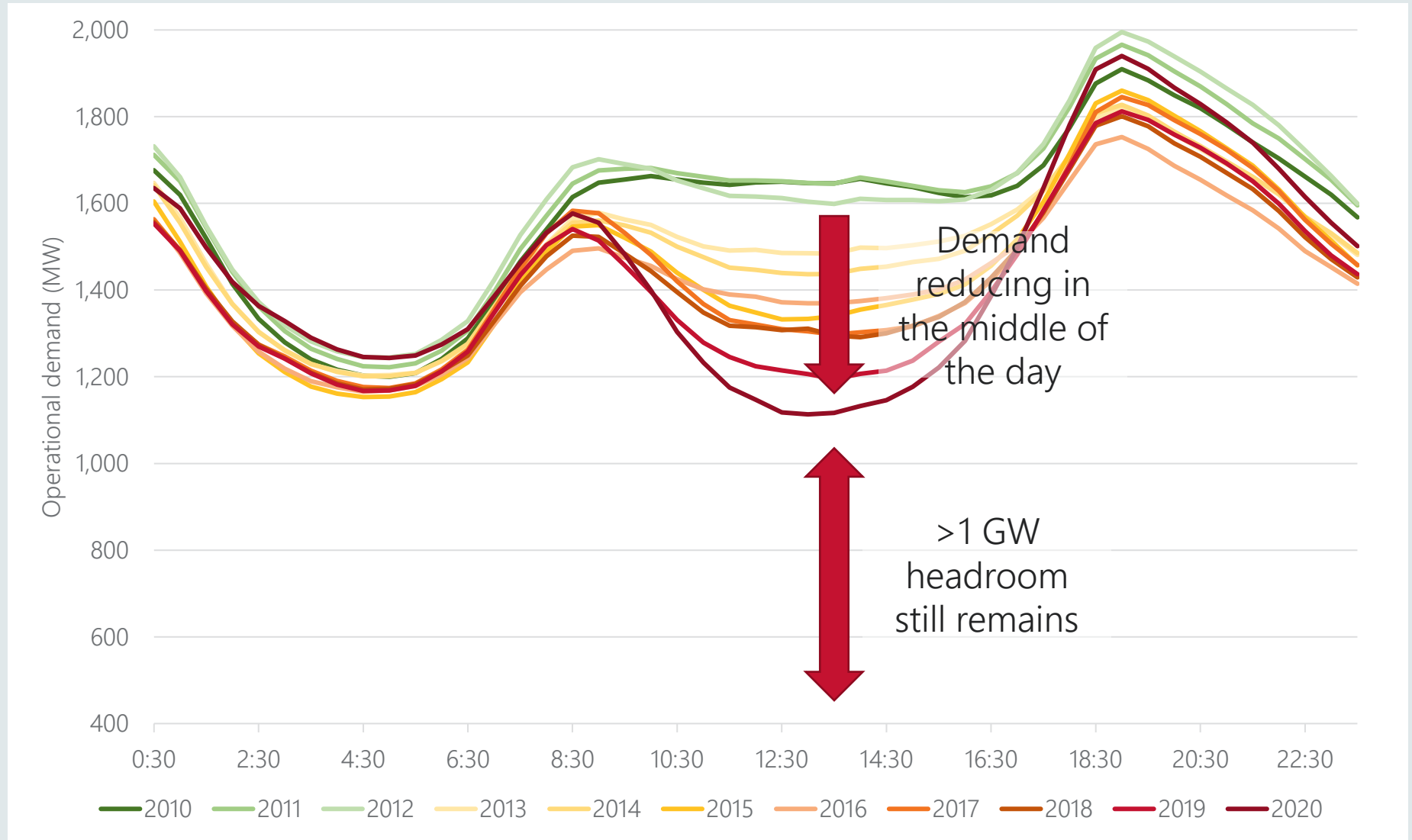
Record minimum operational demand in South Australia was **458 MW**



Yearly operational demand

Average May operational demand 2010 to 2020 in South Australia

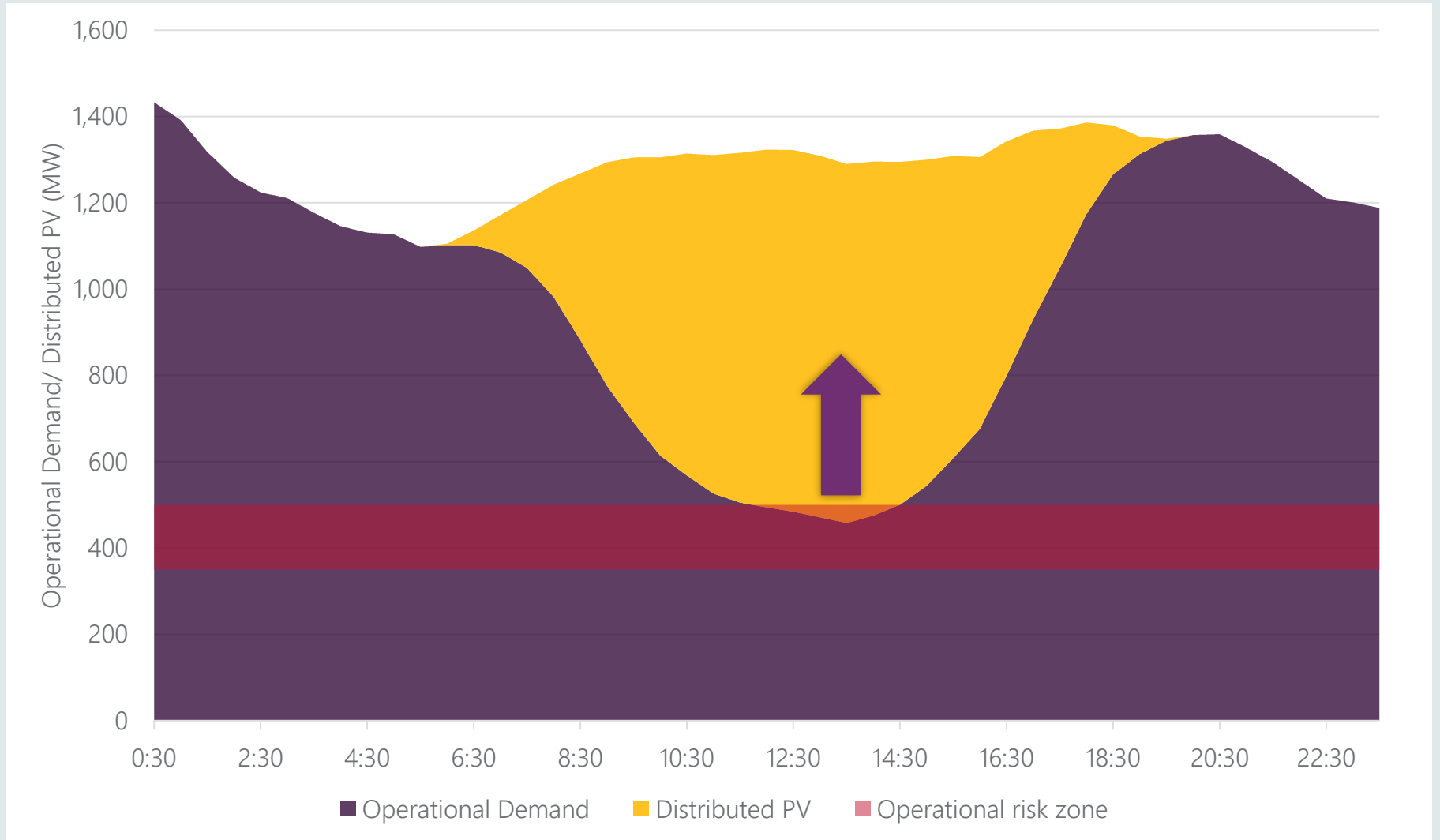
The reduction is more pronounced in Spring and Autumn



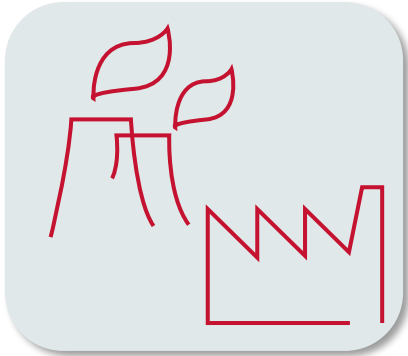
Record minimum demand

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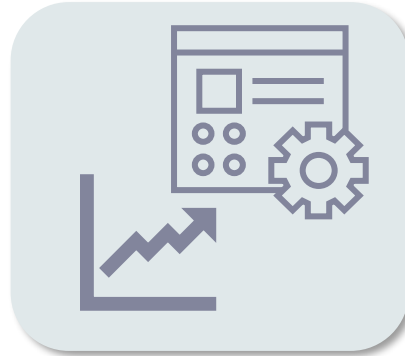


Activating Load & DPV



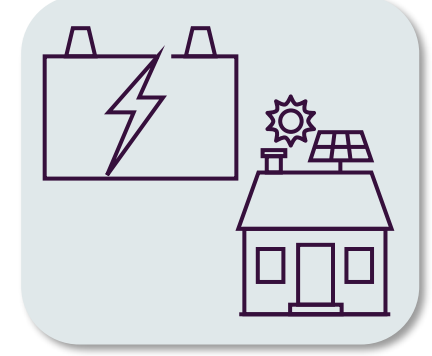
Current Actions

- Engaging large loads
- Visibility & curtailment of >100kW PV



Control & Visibility

- Drafting new Data Communications Standards
- DER Interoperability
- Appliance interfaces: e.g. AS 4777, AS4755 & batteries
- Secure APIs



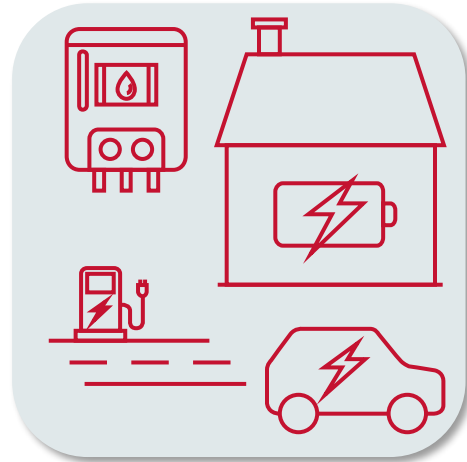
Active Participants

- Roles & responsibilities
- Virtual Power Plants & DER Aggregators
- Batteries, load & DER

Long term actions

Initiatives

- Load shifting
 - Existing hot water
 - Home batteries
- New load
 - EVs
 - Hydrogen



Market Activities

- Wholesale Demand Response & market development
- DSO / DMO & new Network Tariffs
- Retail products and services



Presenter

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