

# Bigger IS better, but who should own it?

## Clean Energy Summit

1 August 2018

**Jill Cainey**

Regulatory Affairs Director



**S&C ELECTRIC COMPANY**  
Excellence Through Innovation

# Service Required: 1 MW Frequency Response

## Domestic Aggregation

## Utility-Scale

24% response rate

100 % response rate

4.2 MW required

1 MW required

840 batteries

1 battery

\$13.5M

\$2M

Slow to respond

Sub-second

Inexperienced operators

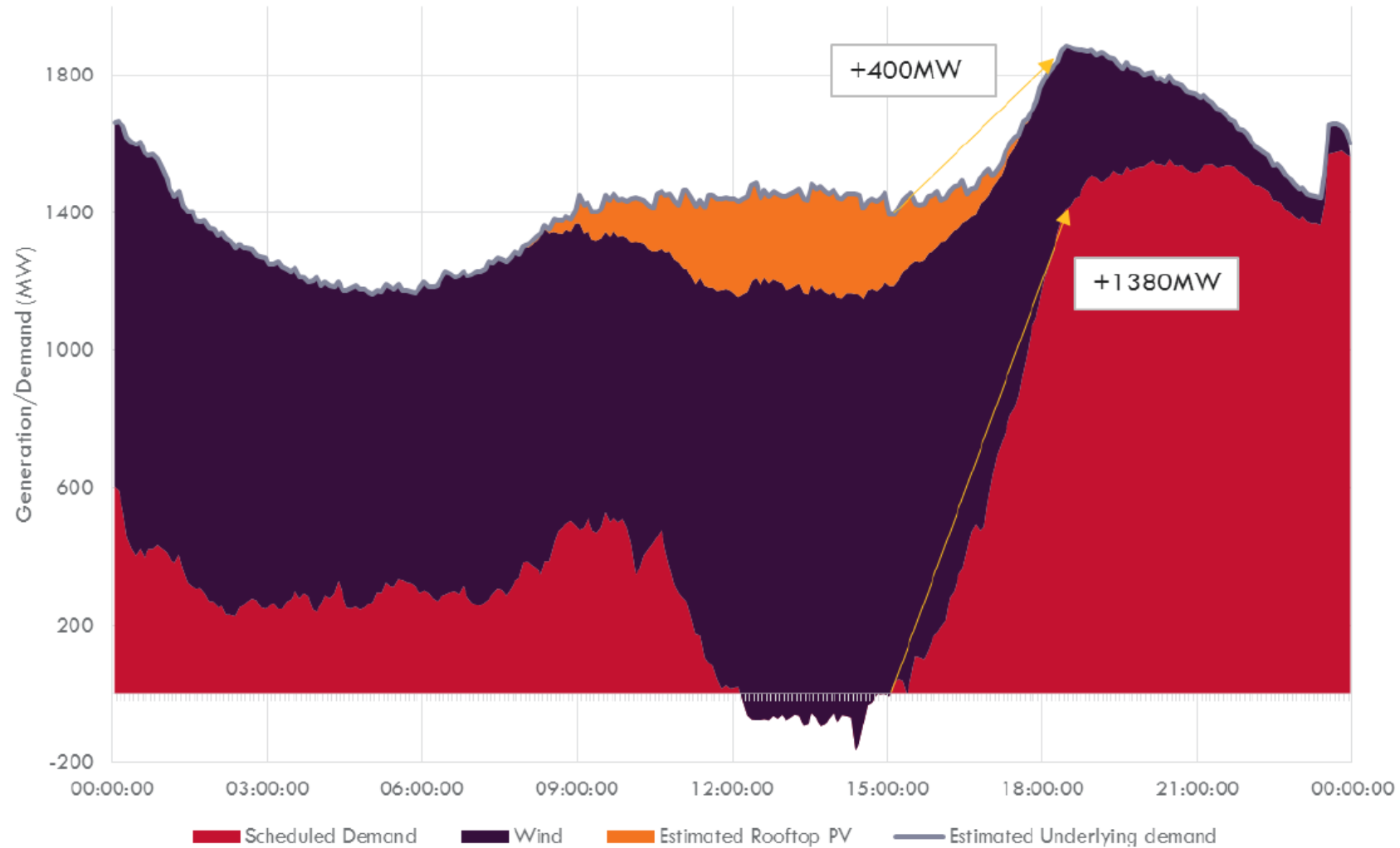
Experienced operators

Maintenance costs & responsibility?

Asset base

# Batteries like...

Figure 28 Flexible plant ramping, South Australia, Sunday 23 July 2017 (case study 2)



**We all want batteries**



## A large number of barriers



# Very complex

