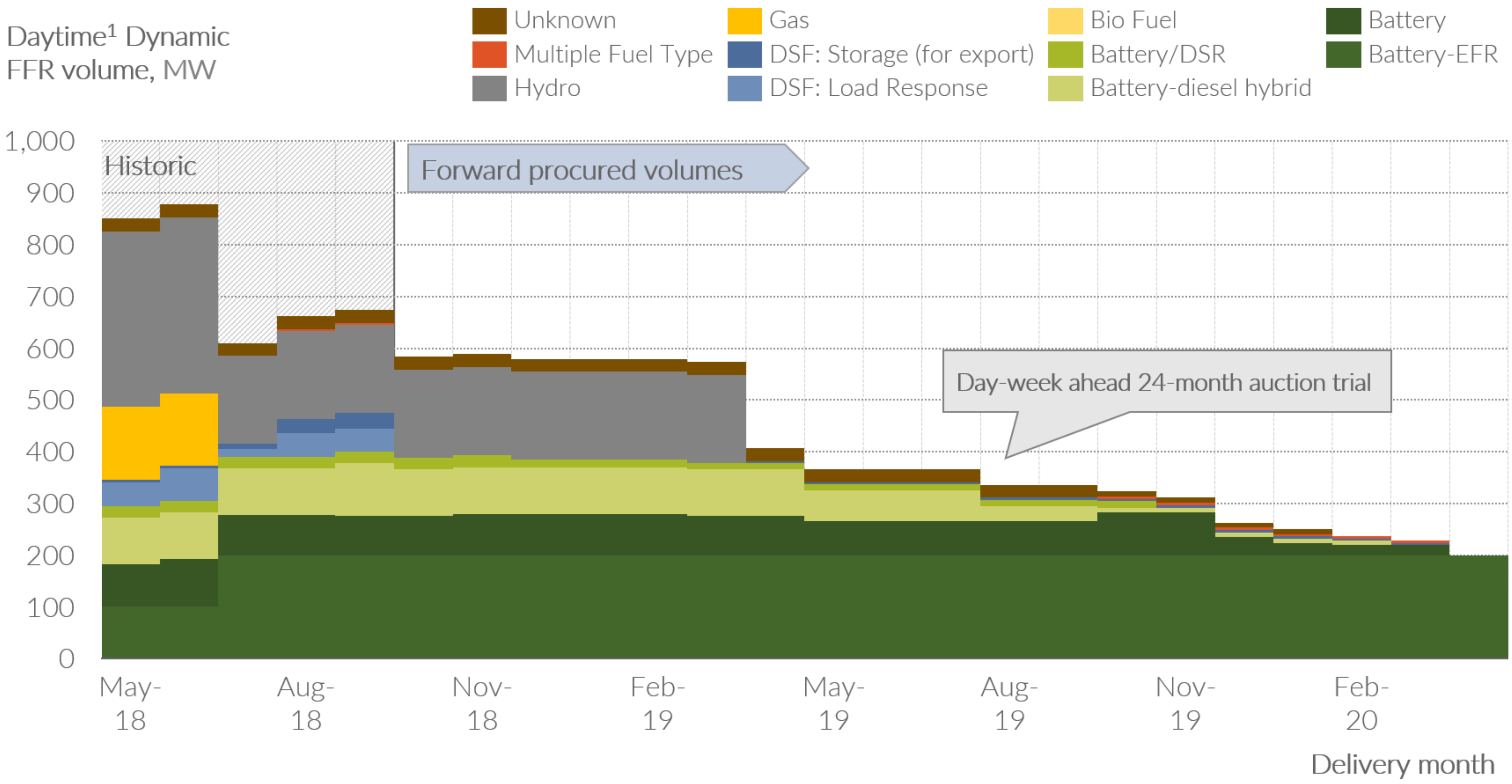
FFR: Batteries will eat themselves; how to make up revenue shortfall

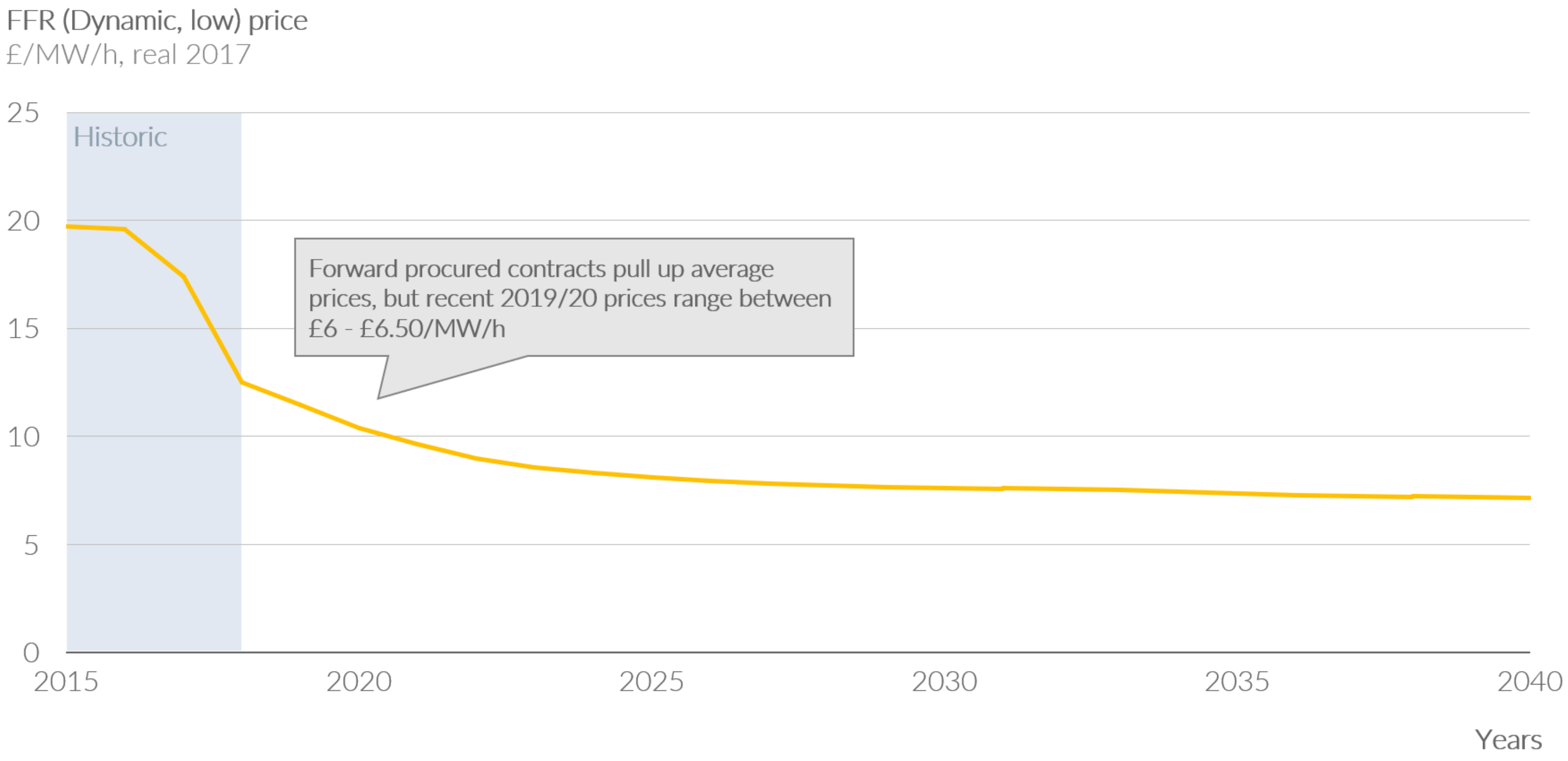
Speaker:
Nathanael Goh
Senior Associate, Flexible Energy Research

The Daytime FFR market is satisfied until Apr-19. Providers are already looking to season-ahead windows in from 2019 to 2021

AURORA ENERGY RESEARCH



Prices have fallen by ~60% since 2015, and look to plateau in the £7-£10/MW/h range from the early-2020s

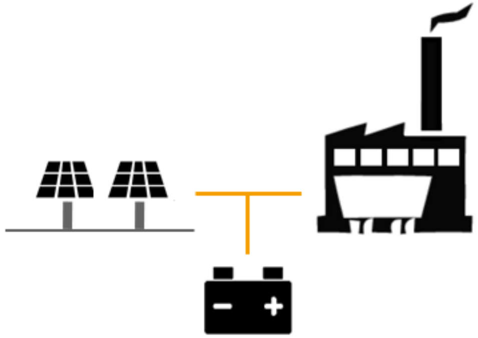


There are three main mid-long term opportunities that can supplement revenues and enable battery projects

AURORA ENERGY RESEARCH

1

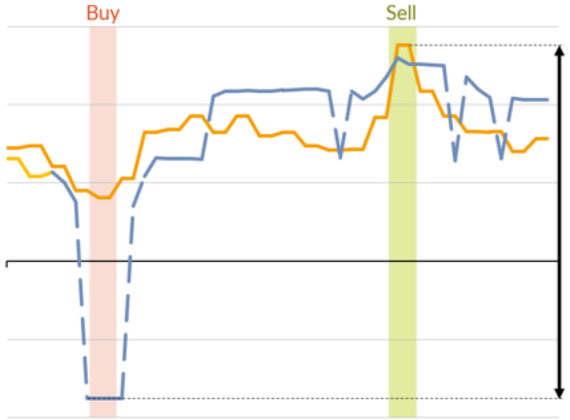
Behind-the-meter Opportunities



Retail electricity cost savings with co-location of battery storage and renewables with demand load

2

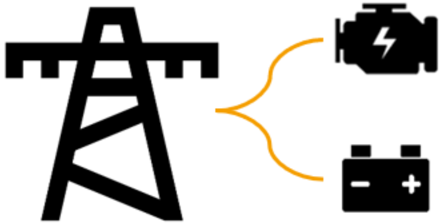
Energy arbitrage in Wholesale and Balancing



Trading in the main Wholesale and Balancing markets

3

Local Flexibility Markets

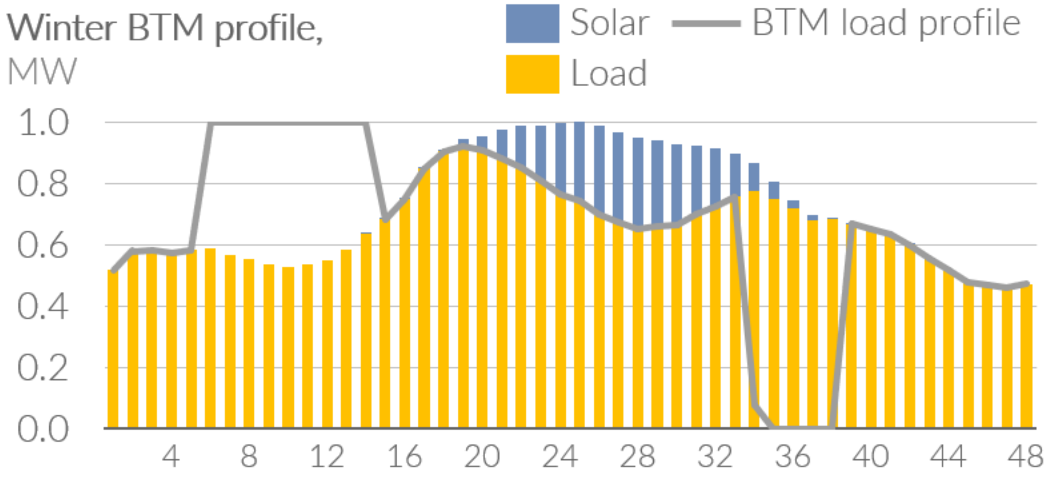


Participation in DNO-led local flexibility markets, with contracts of up to 4 years

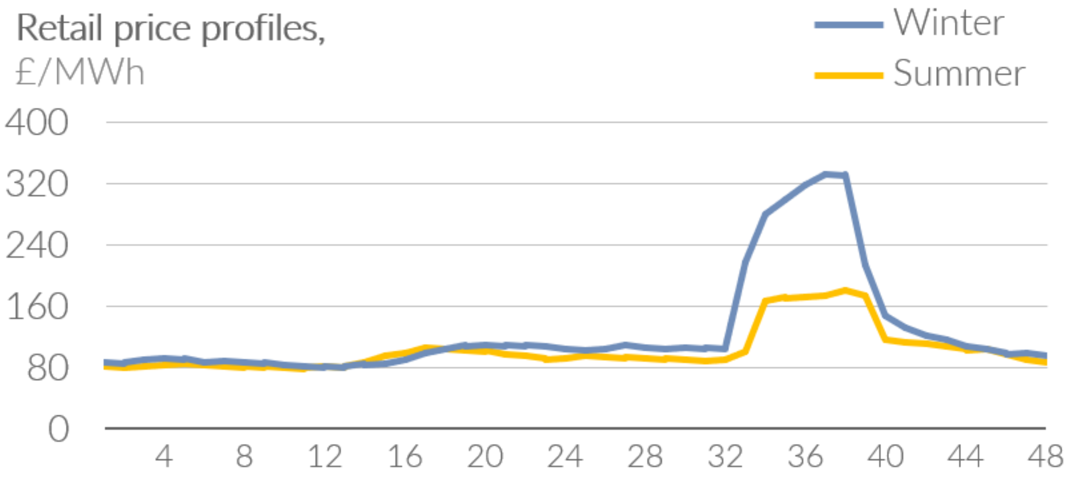
Behind-the-meter opportunities are driven by retail price avoidance through renewable generation and battery load-shifting

AURORA ENERGY RESEARCH

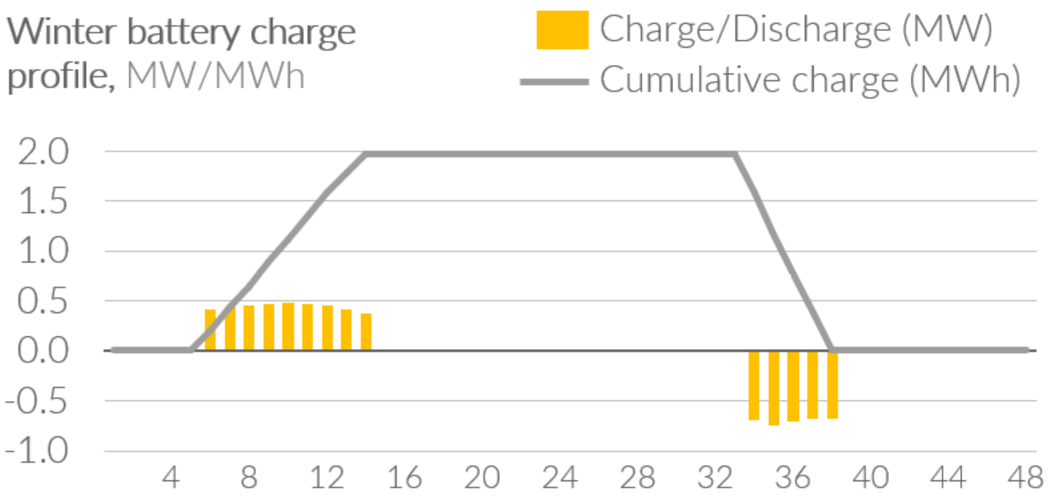
1 Behind the meter load + solar + battery profile



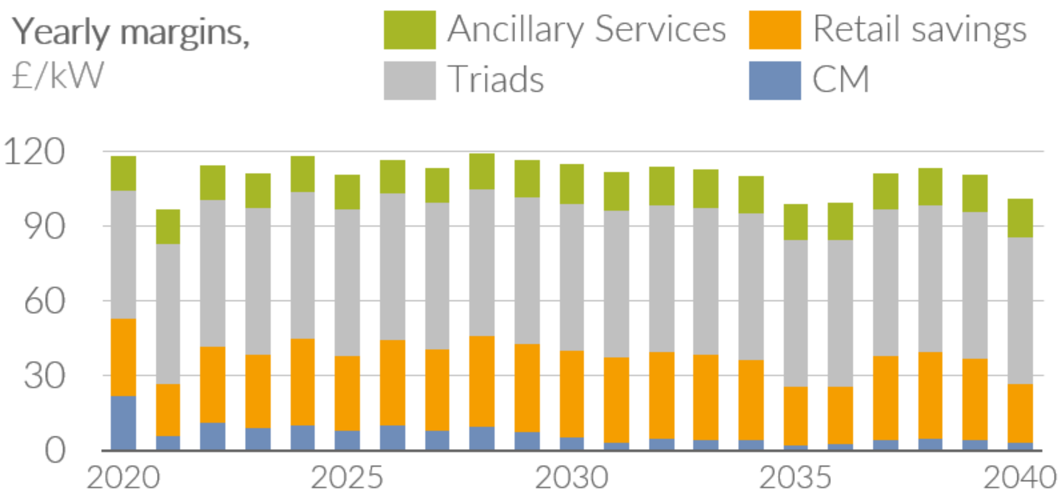
2 Seasonal retail electricity prices (Weekday profiles)



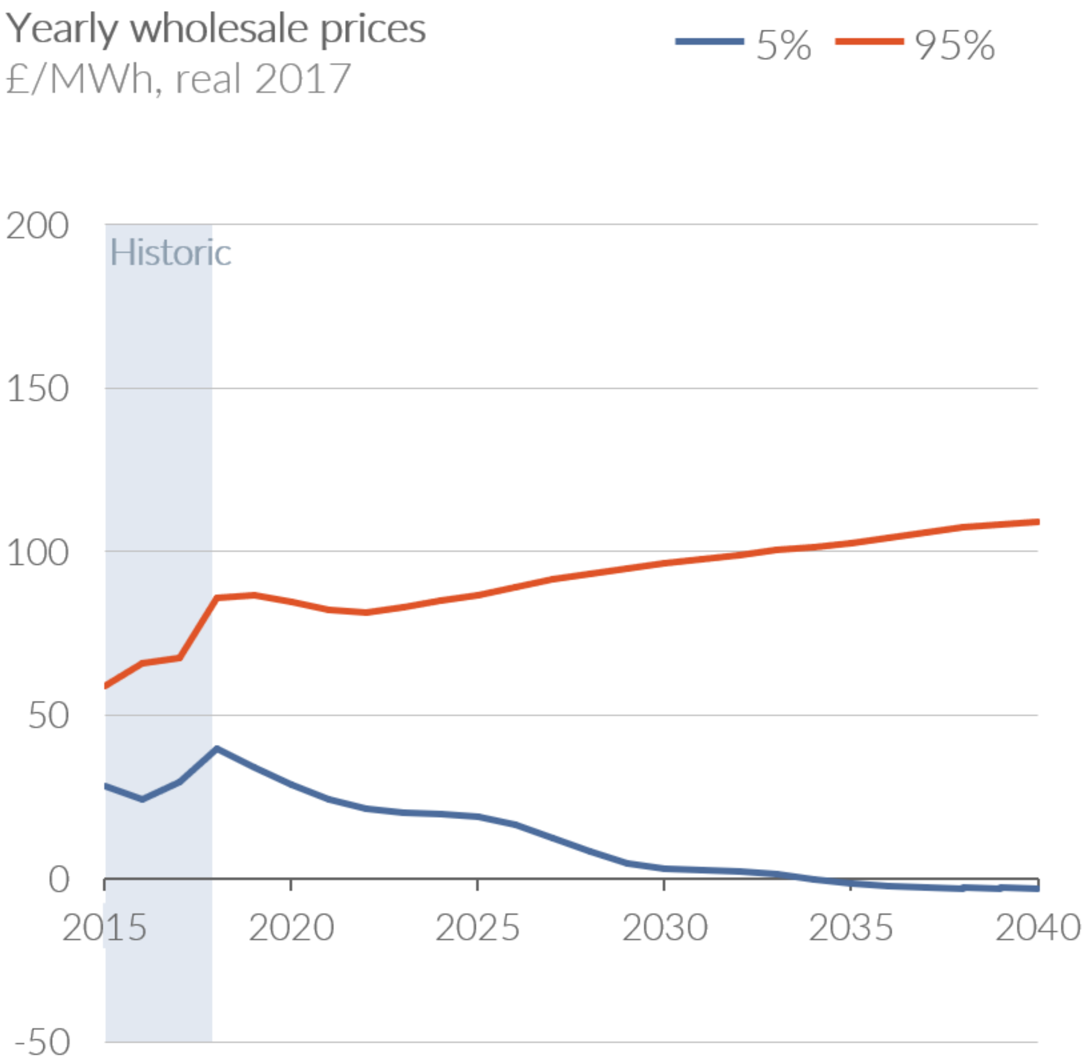
3 Battery charge and discharge operations

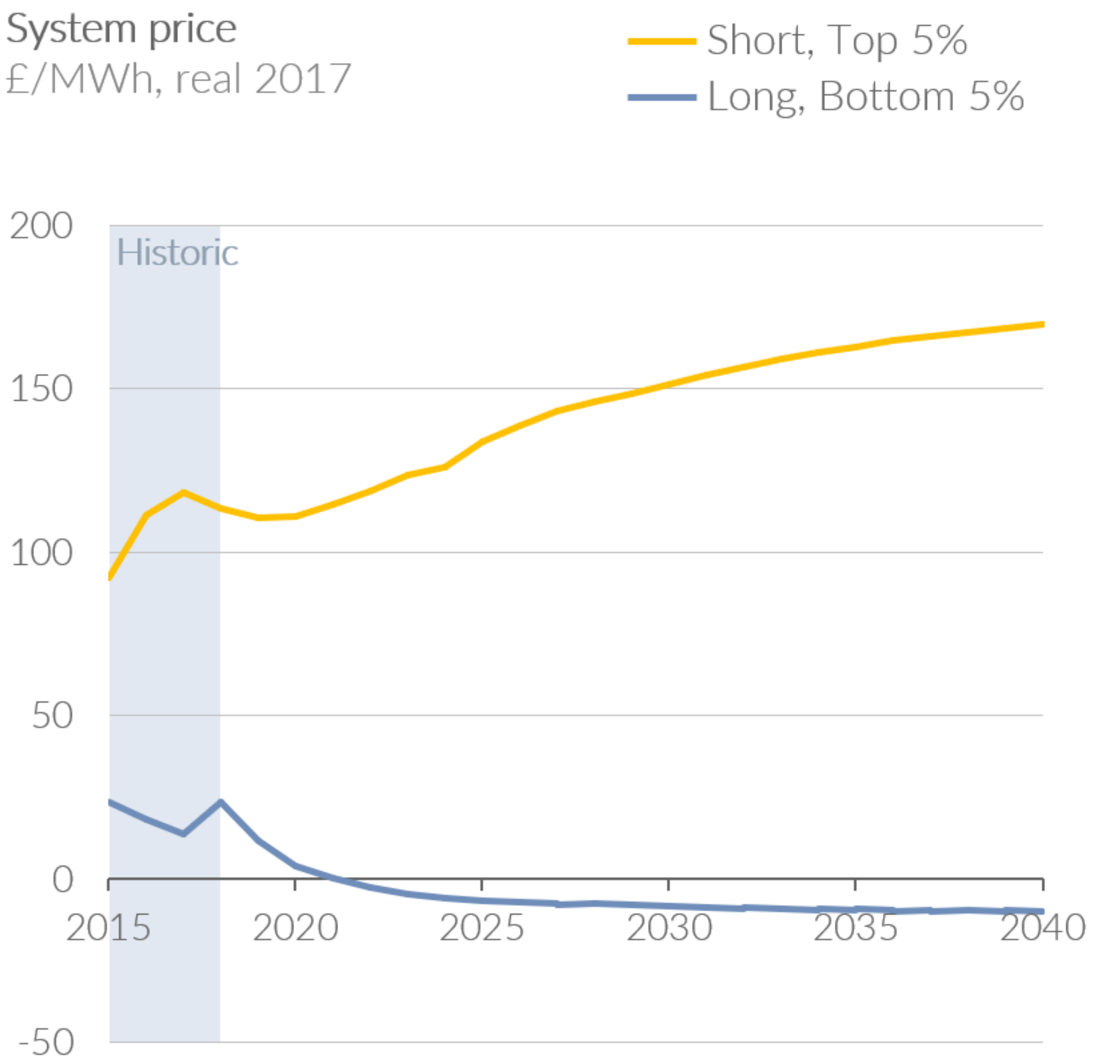


4 Yearly battery margins



Top and bottom prices in the Wholesale and Balancing market are expected to continue diverging, opening opportunities for arbitrage

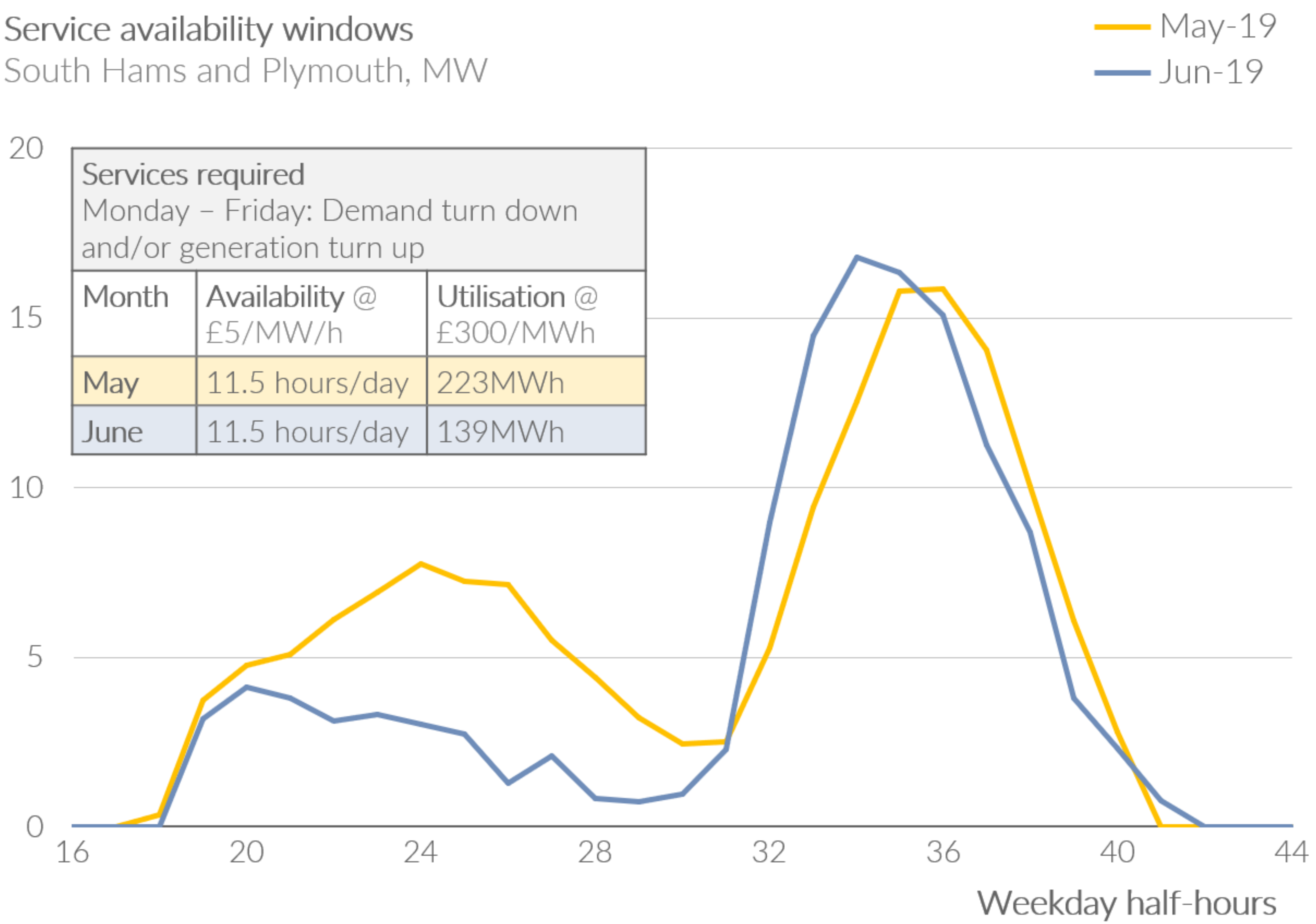




Local Flexibility Markets are DNO-procured flexibility services which can be a potential source of valuable and contracted revenue

Service availability windows

South Hams and Plymouth, MW



Services required

Monday – Friday: Demand turn down and/or generation turn up

Month	Availability @ £5/MW/h	Utilisation @ £300/MWh
May	11.5 hours/day	223MWh
June	11.5 hours/day	139MWh

A provider could capture payments of £1,350/MW (availability) and £6,900/MW (utilisation) in each month

Monthly LFM value of £8,250/MW is comparable to the most lucrative ancillary service contracts

Availability windows are from 0900 to 2030, allowing stacking with Overnight FFR (2300 to 0700)