

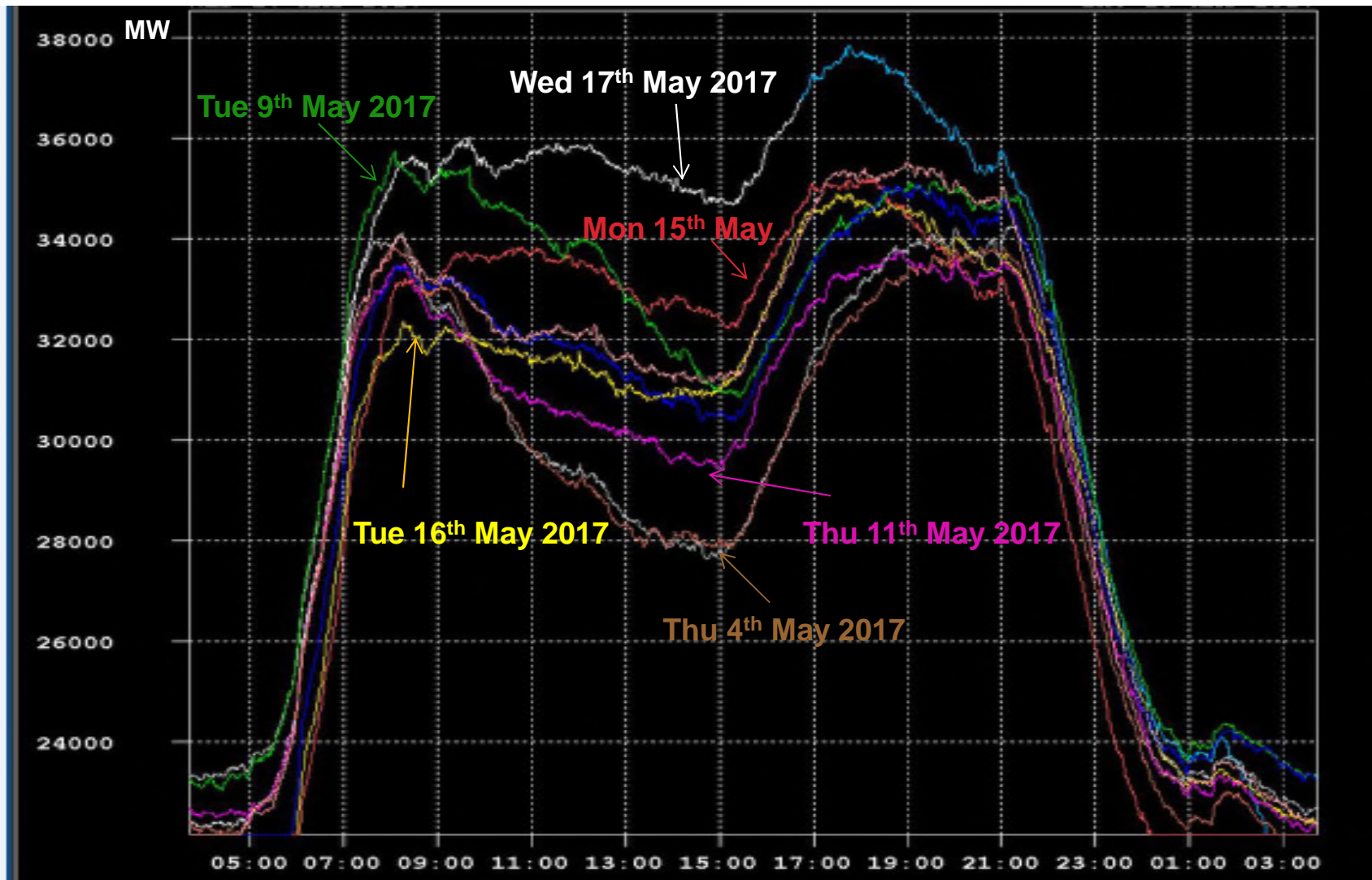
On-the-day decisions in the Control Room

**Angela Wilks
Brendan Lyons
Operational Managers**

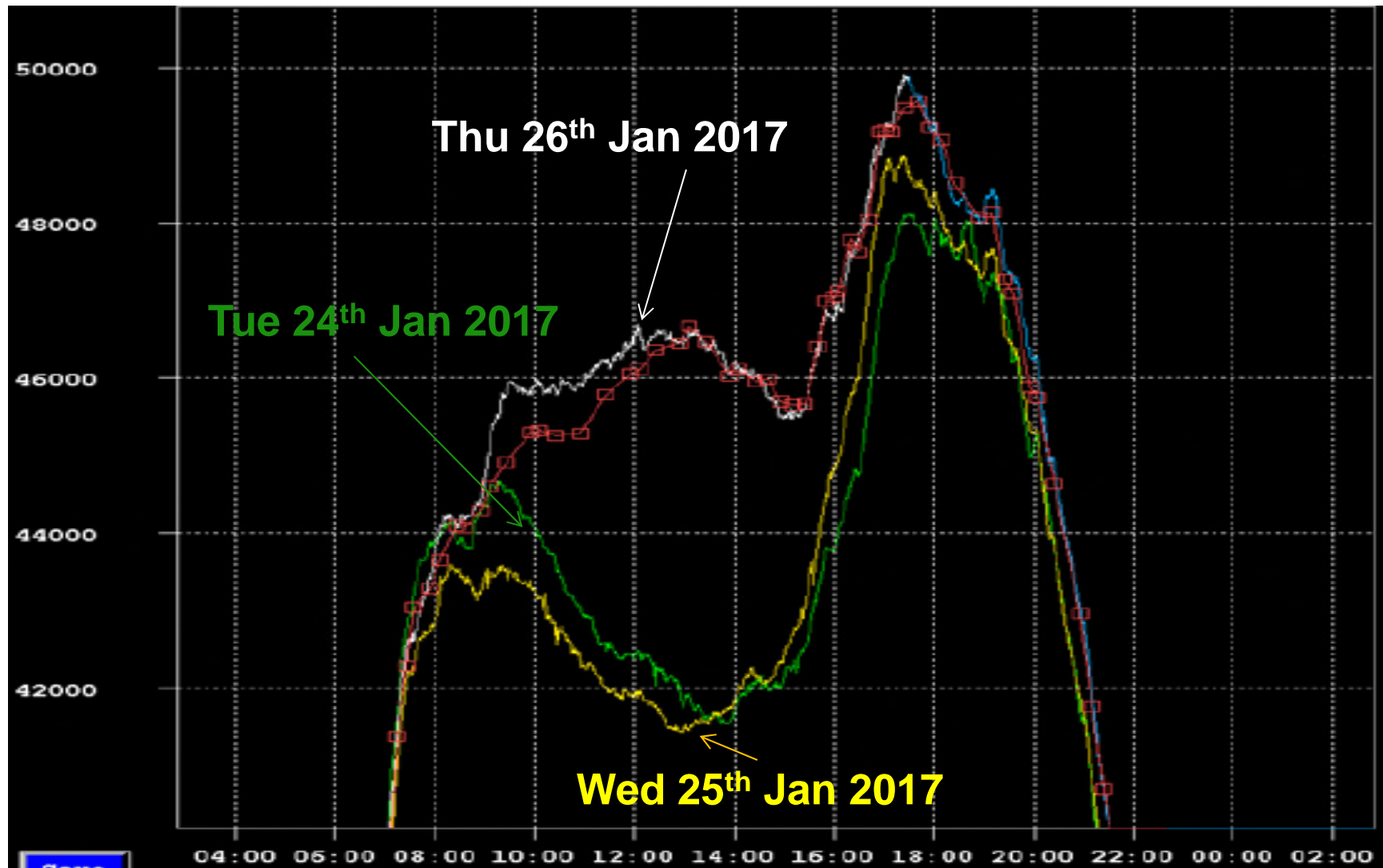
System complexity

- Higher levels of renewable generation
- Demand variability
- Conventional generation being displaced
- Low system inertia
- Less system flexibility

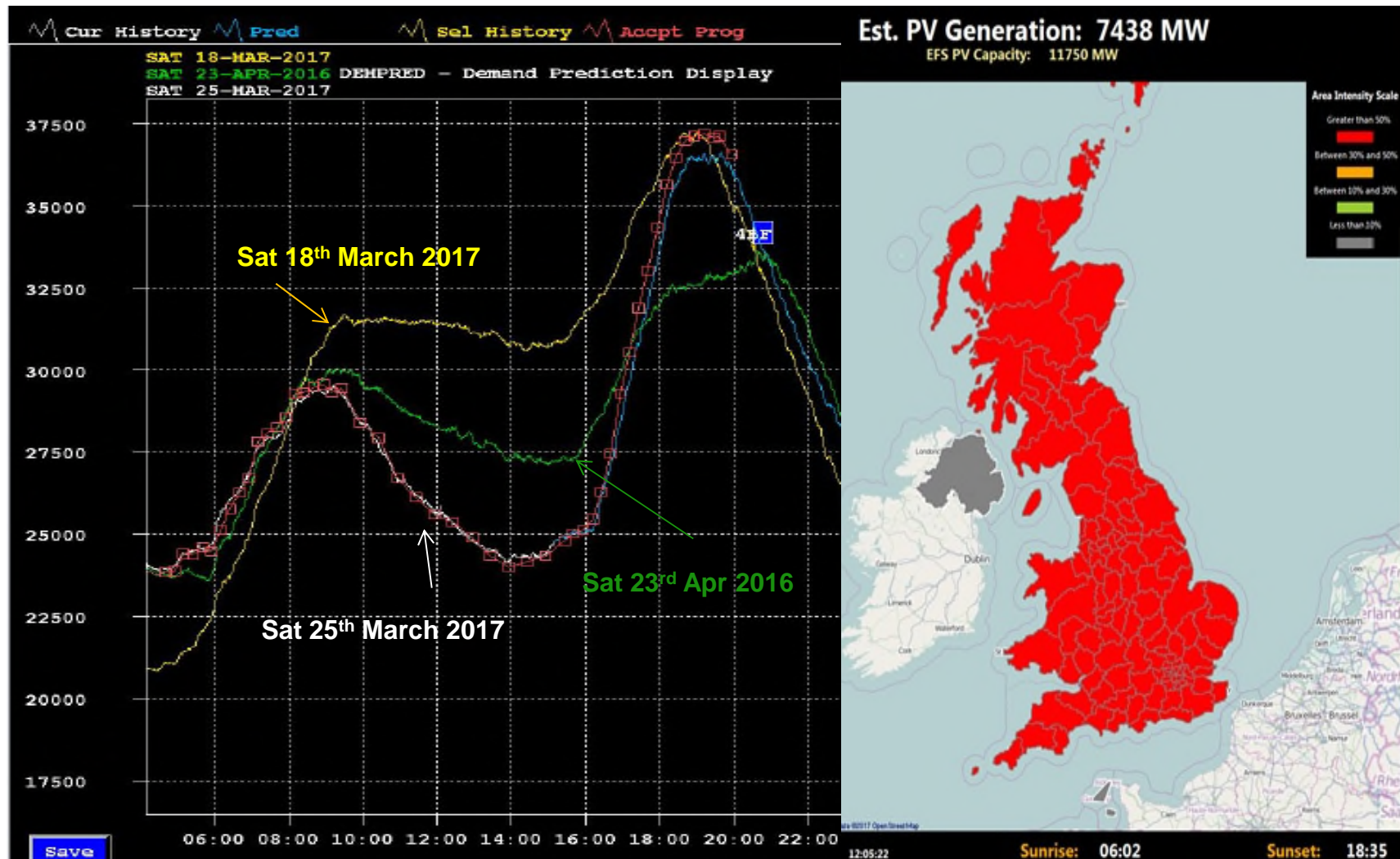
Demand curve May 2017



What a difference a day makes



Saturday 25 March 2017 was 'sunny'



Operational challenges 25 March 2017

- Thermal & Voltage Constraints
- Low System Inertia
- Frequency Response Requirements at low demand
- Negative Regulating Reserve Requirement
- Decisions impacting evening peak strategy

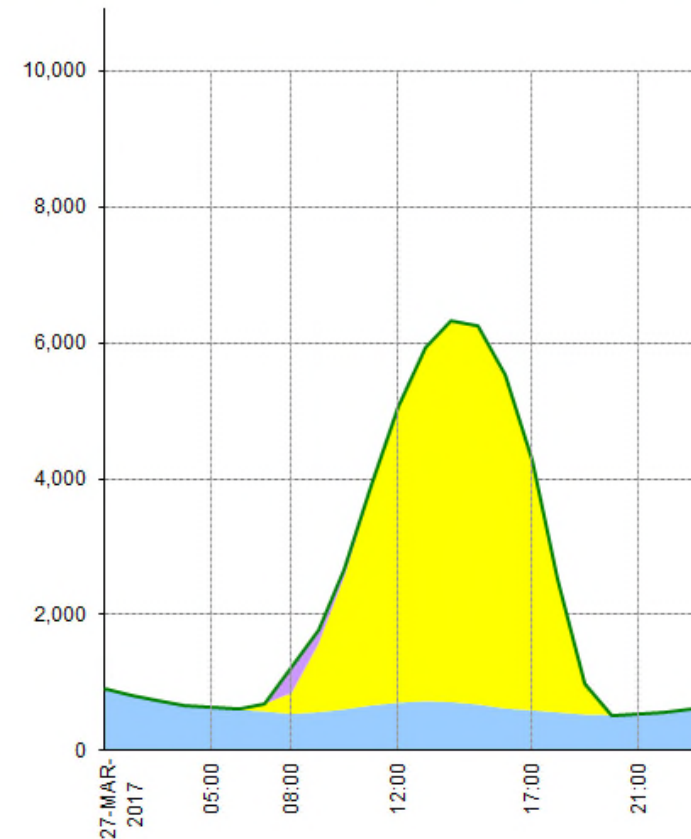
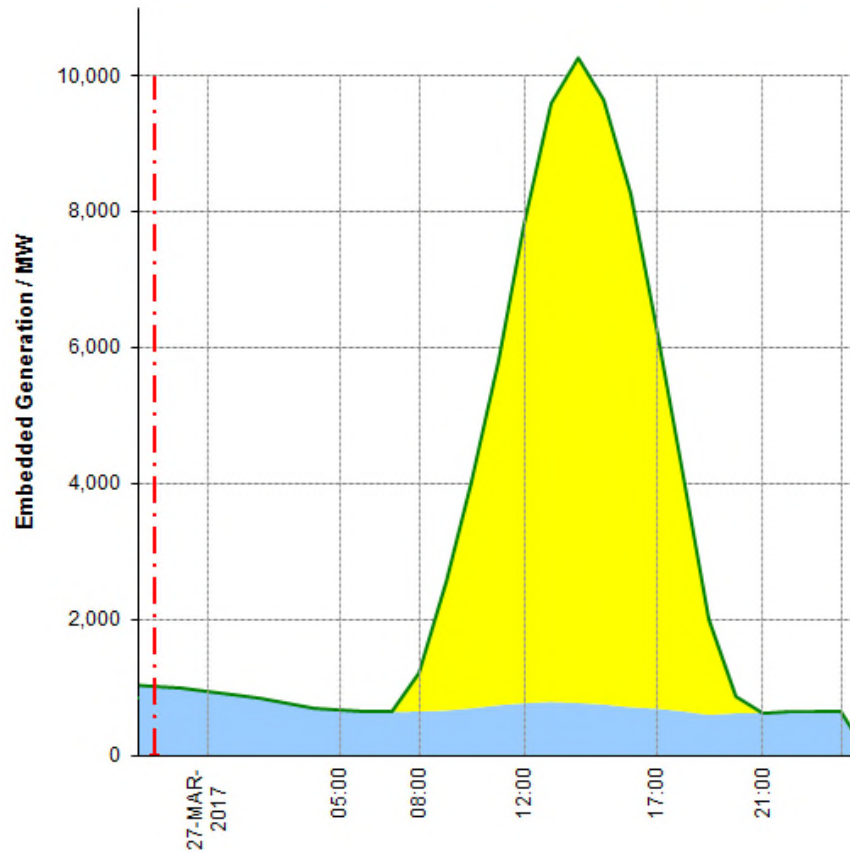
Monday 27 March 2017 was 'not too sunny'

Forecast

27-MAR-2017						
	00:00	05:00	08:00	12:00	17:00	21:00
Solar (MW)	0	0	577	7048	5619	0
Wind (MW)	940	667	648	770	689	628
Total (MW)	940	667	1225	7818	6308	628

Actual

27-MAR-2017						
	05:00	08:00	12:00	17:00	21:00	
Solar (MW)	0	310	4360	3680	0	
Wind (MW)	633	539	705	593	541	
Total (MW)	633	1223	5065	4273	541	



Key messages

- Energy diversity leads to a wide range of demand profiles and operational challenges
- Wide range of operational tools and strategies available which enables secure and economic system operations
- Actions we take can sometimes appear confusing or expensive but this isn't deliberate