

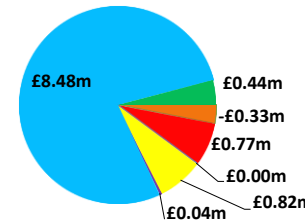
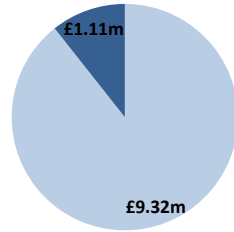
Daily Balancing Costs

Date:

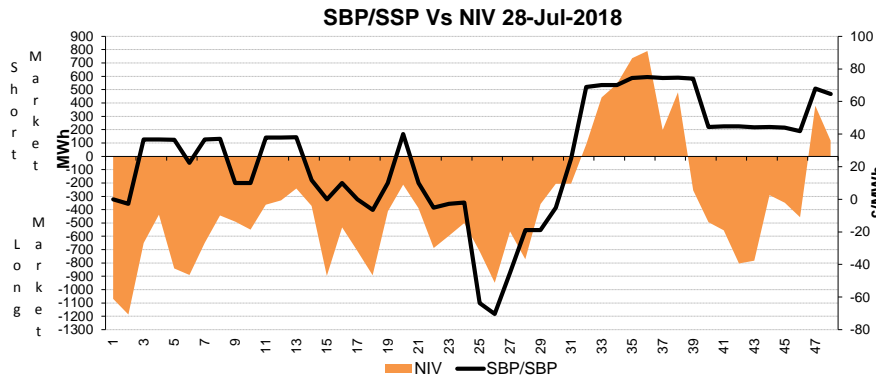
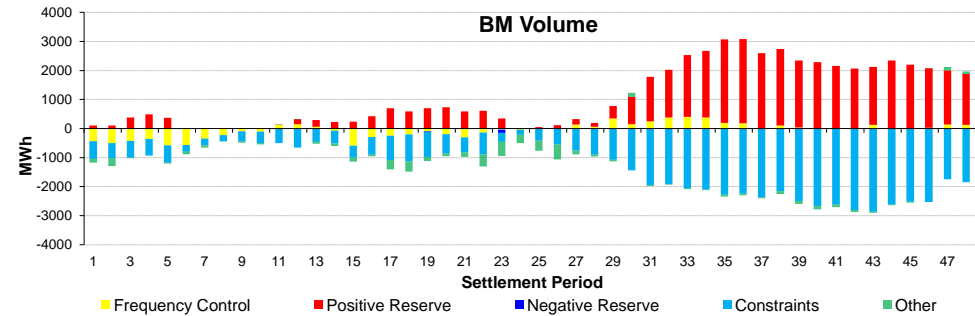
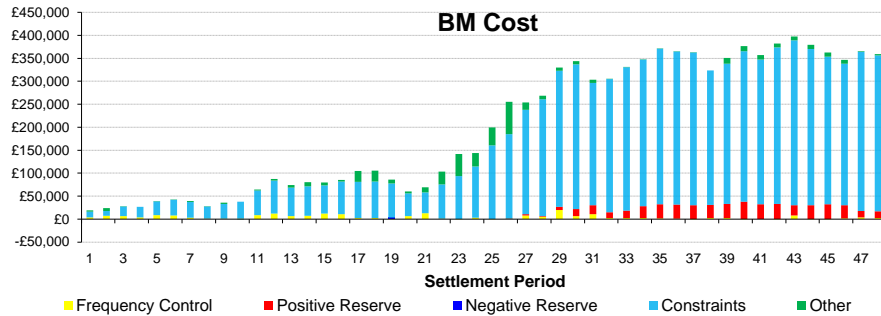
28/07/2018

BSUoS Charge Estimate: £10.37/MWh
Total Outturn: £10.43m

■ BM Cost (Indicative)
 ■ AS Cost (Estimate)



■ Energy Imbalance
 ■ Positive Reserve (Op Res + STOR)
 ■ Negative Reserve (Footroom)
 ■ Frequency Control (Response + Fast Reserve)
 ■ Other Reserve (Ancillary Costs Only)
 ■ Constraints (BM & Trades only)
 ■ Other (Reactive + Black Start + BM & AS General)



Commentary

Wind volatility in the early hours required additional primary secondary and high response to be held, with HF volumes up to 3 times the minimum volume. Throughout the morning and afternoon, demand forecast errors were in excess of 2GW. Wind bids were taken to provide response and additional negative reserve on other units. The DTU (demand turn-up) service was also utilised in the afternoon for 2 hours to provide additional negative reserve. Up to 850MW of STOR was instructed late afternoon and through the evening. During the morning voltage issues were managed across a number of units and regions via trades and BM actions. The ROCOF level was low due to significant wind generation displacing conventional generation and low demands (<20GW) overnight. A number of conventional plant were bought on to provide additional inertia to solve ROCOF. Additional plant was again required during the middle of the day to provide inertia and solve ROCOF, this was despite trades being taken on interconnectors. Significant increases in wind output during the afternoon required multiple trades and BM actions to solve a constraint in North of England. Pump storage units were instructed to generate late on Saturday in preparation for pumping instructions to be issued early Sunday. Over 3000 BOAs were issued on Saturday.

Note: A new category - Other Reserve - has been more clearly defined. Costs in this category used to be mapped to either Positive Reserve or Fast Reserve. These costs include BM Startup, Fast Start and some Hydro services. These changes have been made to align with the new Monthly Balancing Services Summary report.