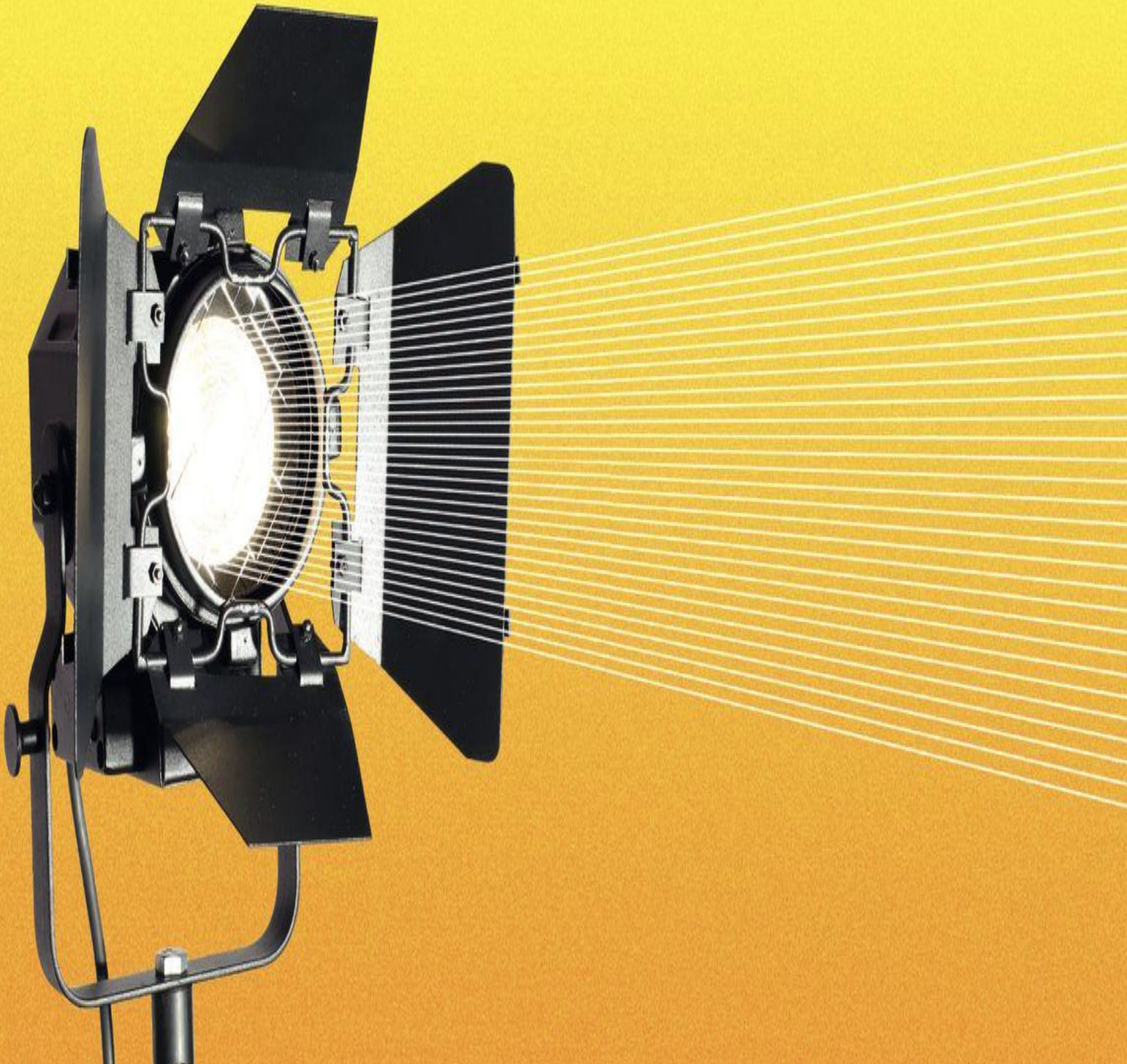


nationalgridESO

Balancing Costs

Hotspots

January 2019

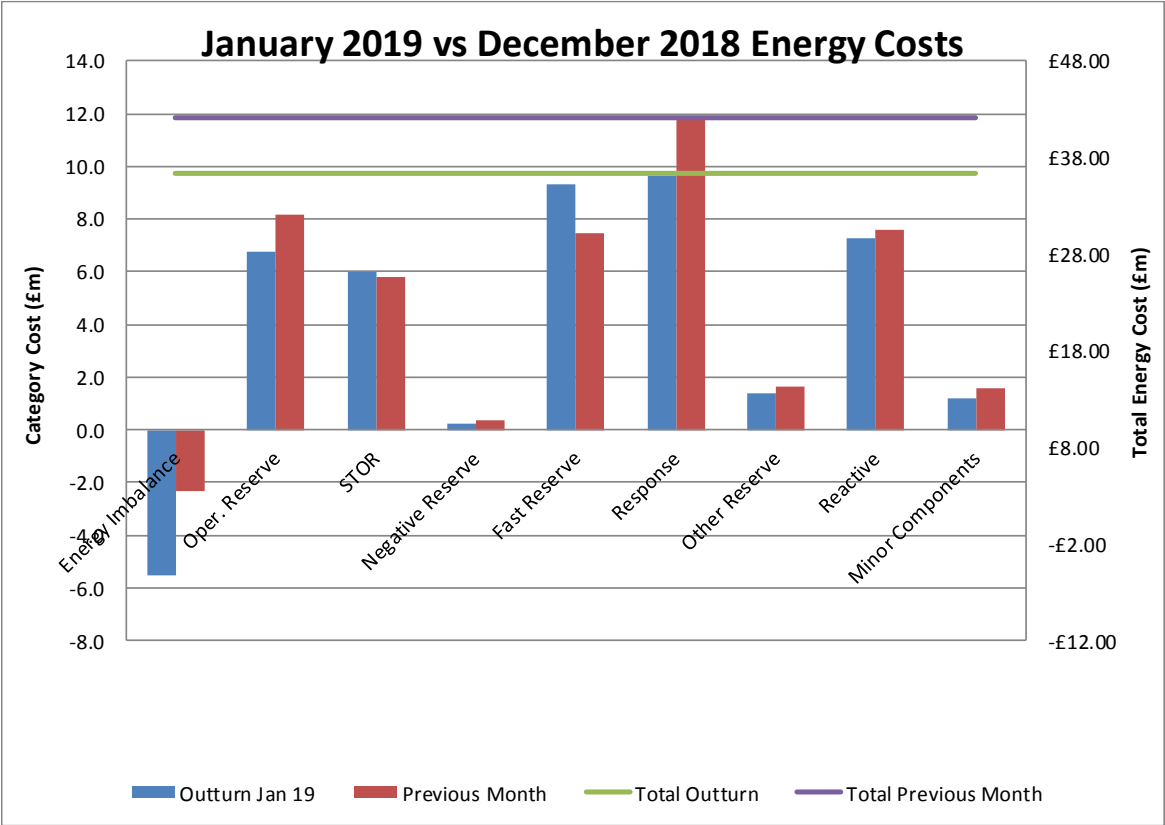


Contents

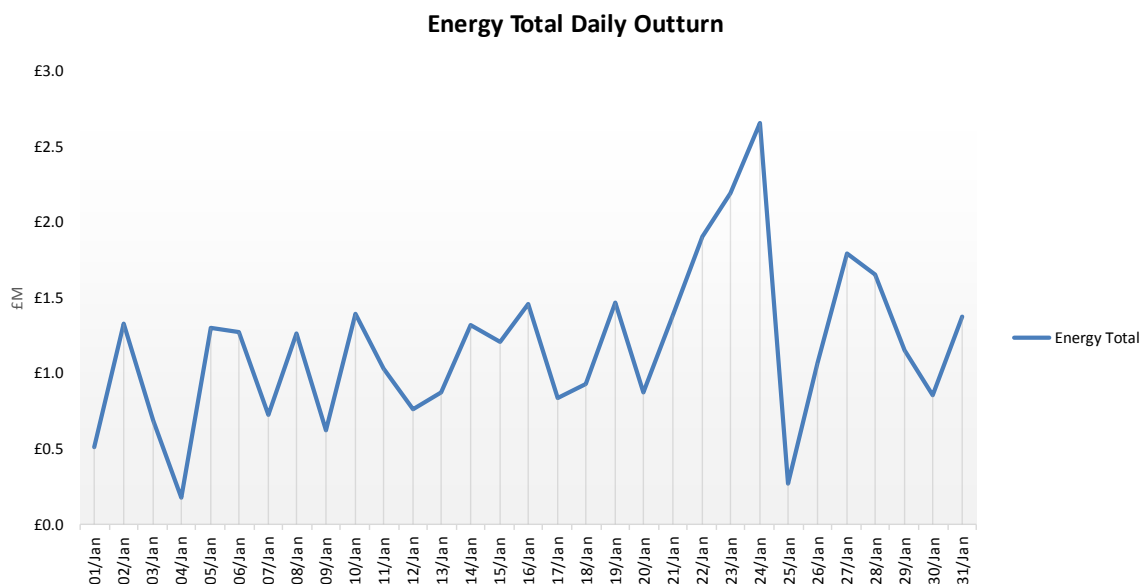
| | |
|-------------------------------------|---|
| Contents..... | 1 |
| Energy Costs | 2 |
| 1. Energy Total Daily Outturn | 3 |
| 2. Operating Reserve | 3 |
| 3. STOR | 4 |
| 4. Margin Price | 4 |
| 5. Frequency Response | 5 |
| 6. Fast Reserve | 5 |
| 7. Negative Reserve | 6 |
| Constraints Costs..... | 7 |
| 8. RoCoF | 7 |
| 9. Voltage | 7 |

Energy Costs

Energy costs (including energy imbalance) for January 2019 out-turned around £36m which is £5m lower than the previous month. Fast Reserve increases of around £2m, all the other categories decreased or showed little variance from December 2018.



1. Energy Total Daily Outturn

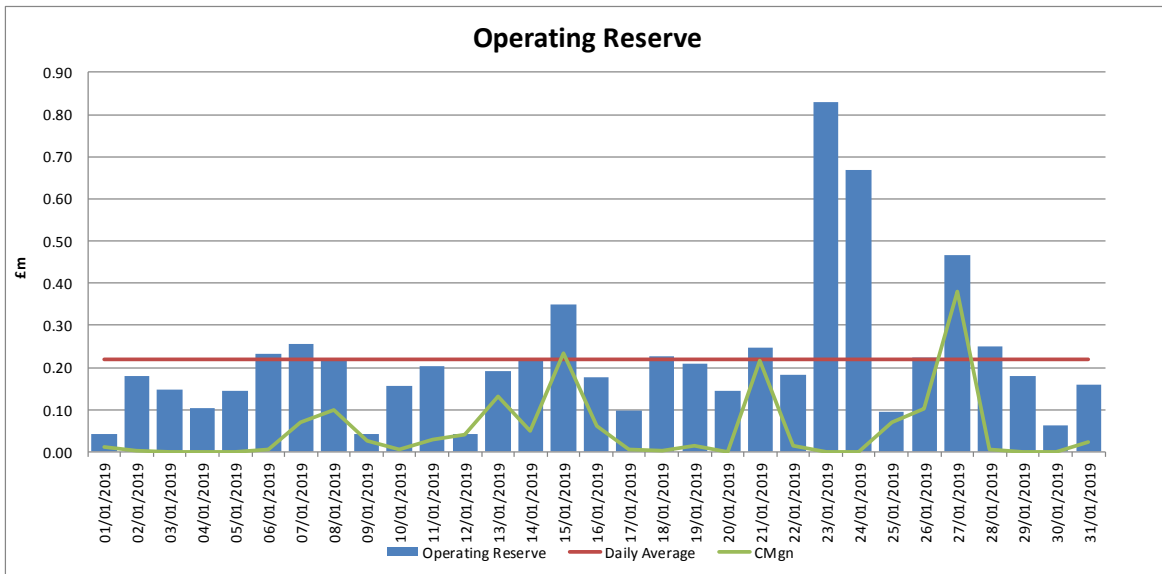


The average daily energy spend for the reporting month was around £1m. Daily energy costs remained below £1.5m for most days in January 2019, except for the days between Tuesday 22nd, and Thursday 24th when the daily spend was over £2m, peaking at £2.7m on Wednesday 23rd.

The main drive behind these high cost days were the large volume of trades on interconnectors for positive reserve and the STOR deployed to account for long periods of short market at times of high demand. Wednesday 23rd the darkness peak demand outturned at 47.1GW which is, so far, the highest recorded this winter.

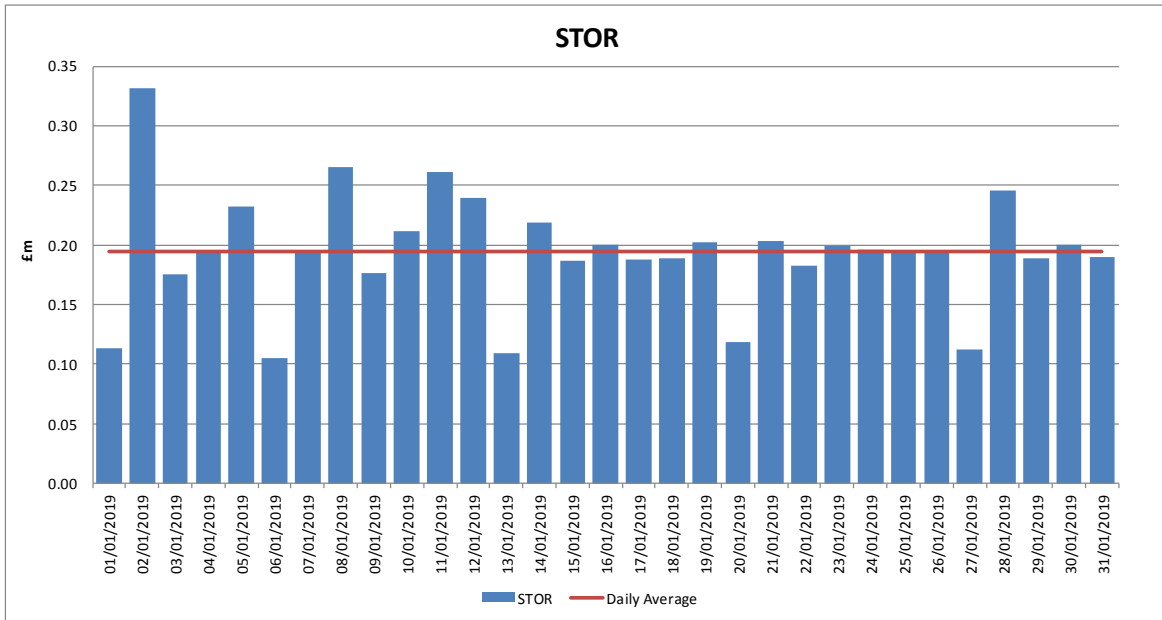
2. Operating Reserve

Operating Reserve out-turned at around £6.8m showing a decrease from the previous month of £1.4m. The average daily cost was around £0.22m in January 2019. Wednesday 23rd and Thursday 24th were the days with the highest daily spend with an outturn of around £0.8m and £0.6m respectively. Large volume of trades on interconnectors for positive reserve and the STOR deployed to account for long periods of short market at times of high demand were the main drives behind these high cost days.



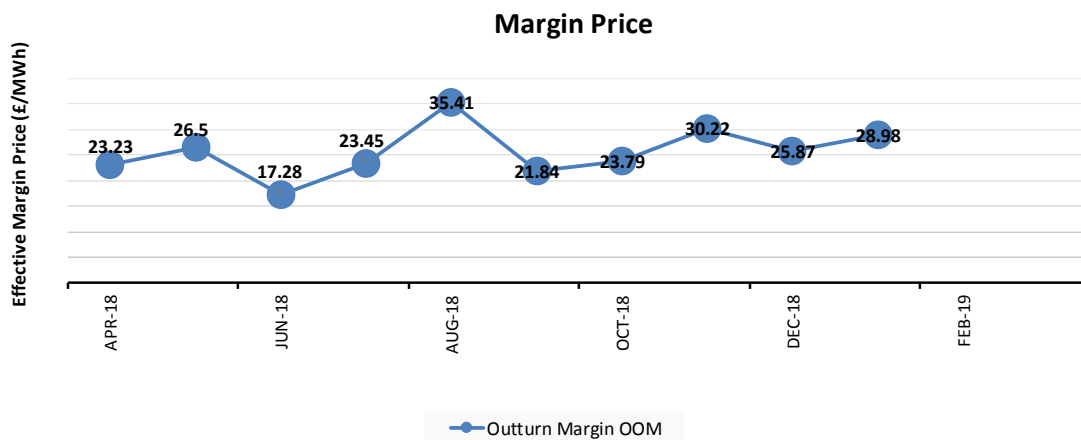
3. STOR

STOR cost for January 2019 was around £6m showing little variance from the previous month. The average daily cost was around £0.2m. Wednesday 2nd was the most expensive days for this category with a spend of £0.33 when STOR was required to cover for unplanned generation shortfall over a period of short market.



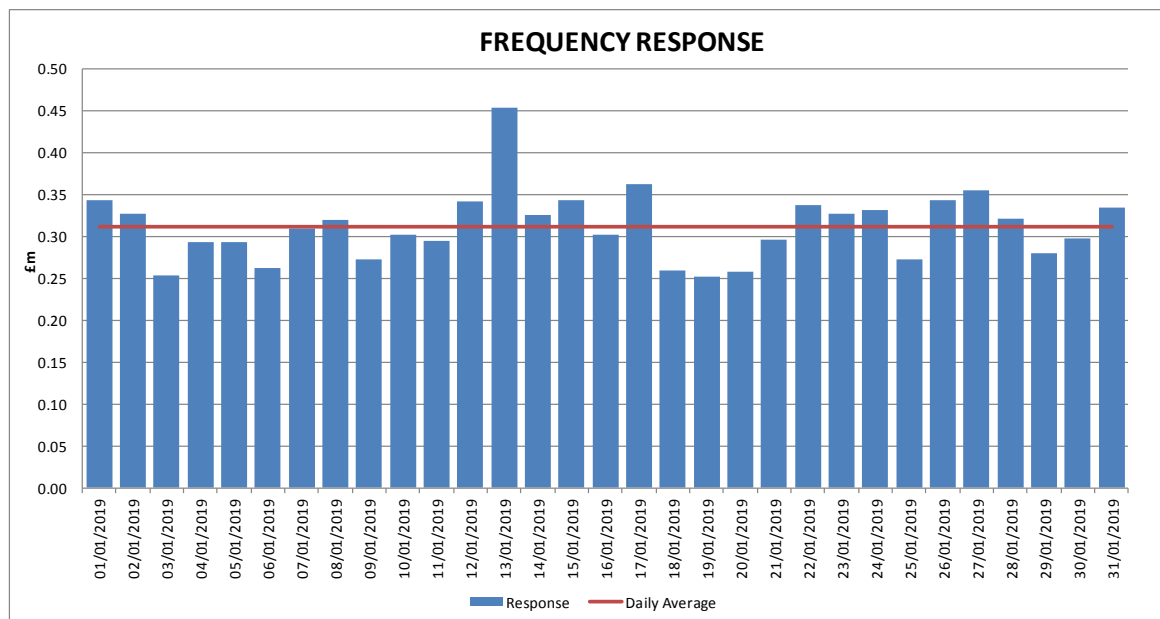
4. Margin Price

The Average margin price in January 2019 increased from the previous month out-turning at £28.98/MWh.



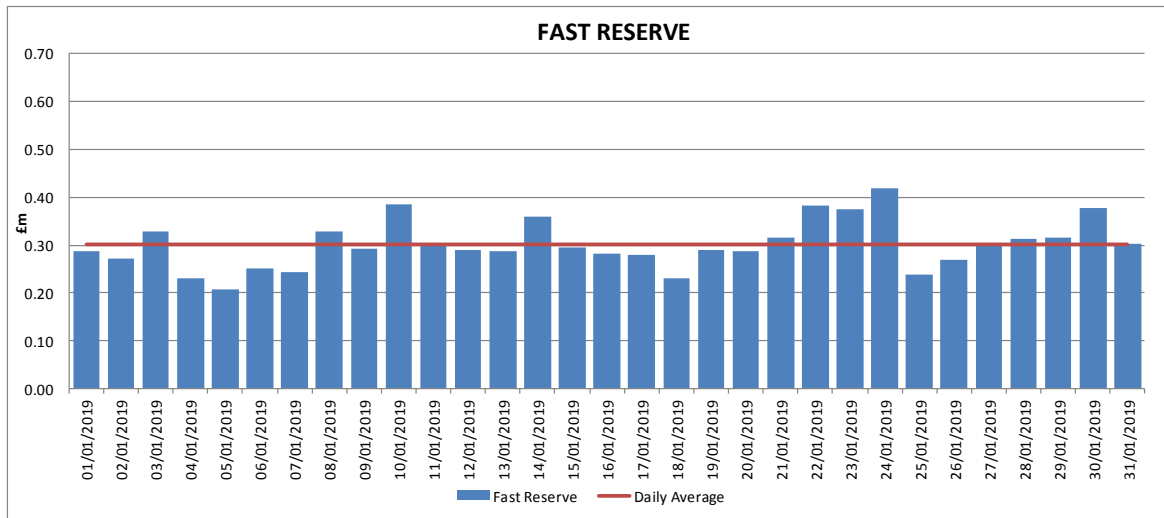
5. Frequency Response

Frequency response in January 2019 out turned at £9.7m showing a decrease from the previous month of over £2m. The average daily cost for this category was around £0.3m and the highest cost day was Sunday 13th with a spend of around £0.45m. wind volatility and demand uncertainty were the main drive behind the frequency response deployment.



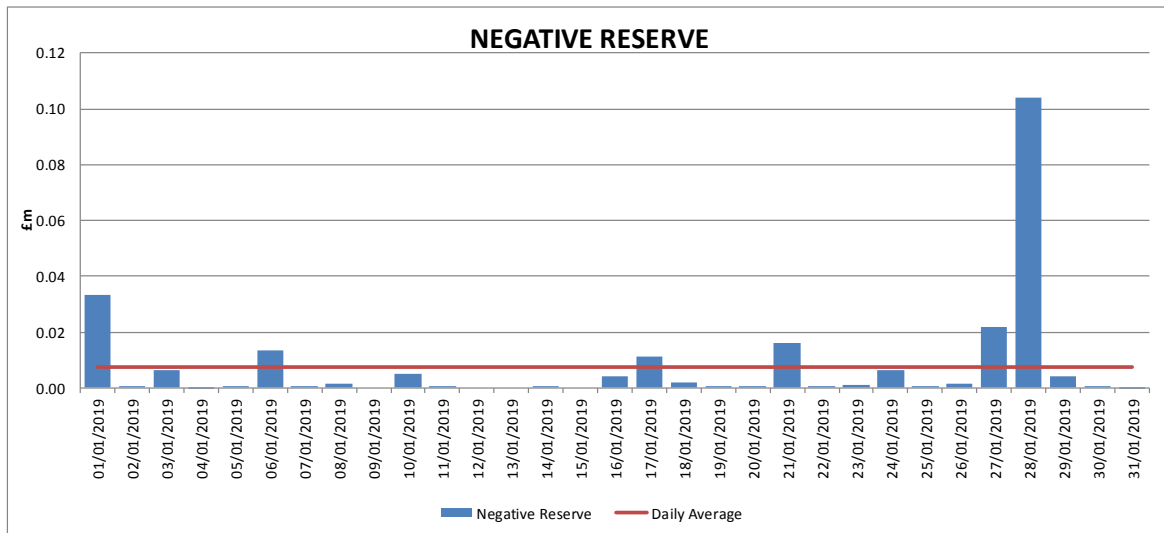
6. Fast Reserve

Fast reserve out turned at £9.3m in January 2019, showing an increase from the previous month of nearly £2m. Throughout the month, the average daily cost was around £0.3m and the ancillary costs made up around 87% of the total costs, most of which is incurred on the SpinGen service.



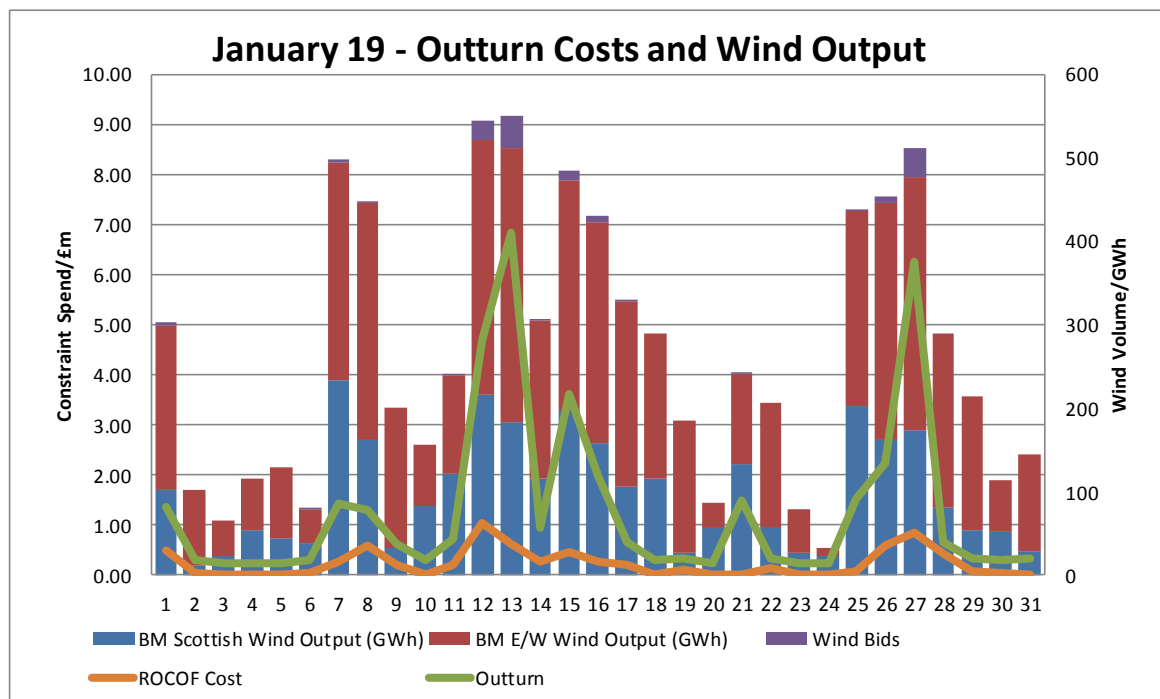
7. Negative Reserve

Negative Reserve outturned at £0.2m, showing little variance from the past month. The costs for this category were nil or below £0.02m for most of the days. The highest spend day occurred on Monday 28th January with cost peaking at £0.1m, which is over 50% of the entire month spend for this category.



Constraints Costs

The total constraints cost for January 2019 was £40.6m; £0m for England and Wales, £10.4m for Cheviot, £8.4m for Scotland, £8.4m for Sterilised Headroom, £7.1m on ROCOF, and £7.3m on Ancillary Services costs.



The graph above shows the daily outturn costs and the portion made up by ROCOF. It also shows output levels of BM wind and volume of wind bids (including trades) to indicate the extent to which wind output drives constraint costs.

The highest constraint costs in January 2019 were recorded on Sunday 13th and Sunday 27th with a daily spend peaking at around £6.8m and £6.3m respectively. In both cases, the main drive behind these high costs were the sustained high wind levels across the country over weekend days when the demand is low. In this scenario, high volume of BM actions and trades were required to solve the transmission constraints. Another high cost day was Tuesday 15th, with a daily constraint spend of £3.6m.

8. RoCoF

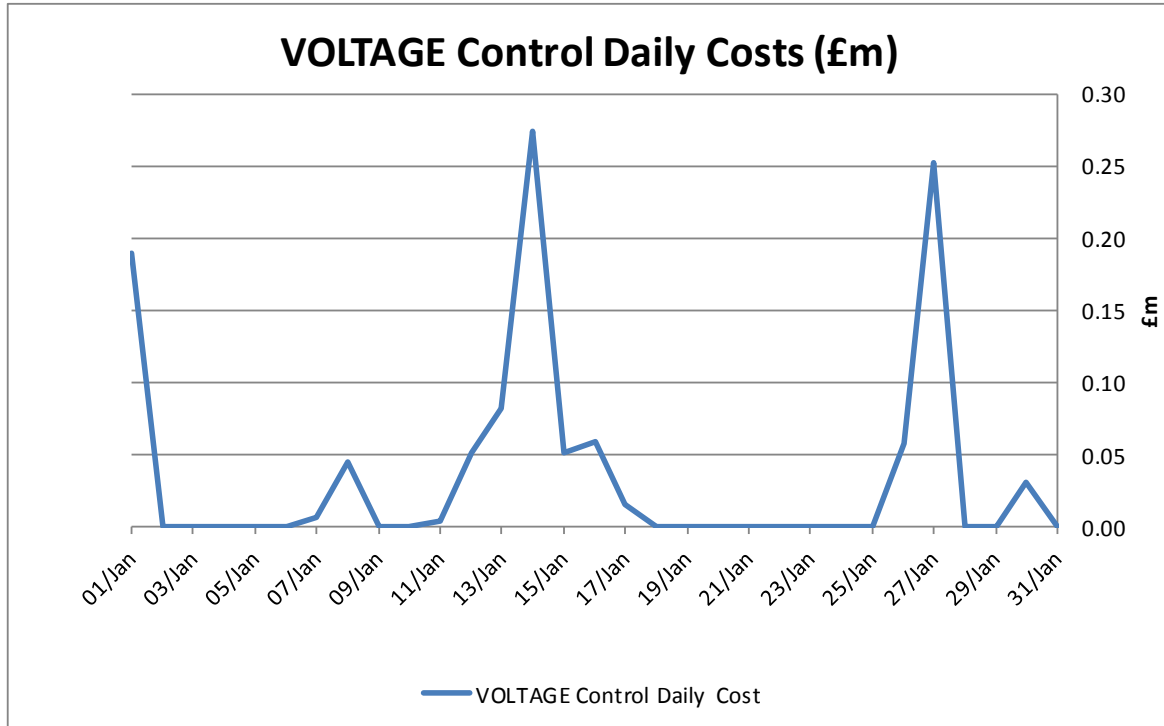
The RoCoF outturn for January 2019 was £7.1m. Wind and demand levels were the main drive behind high costs days for this category, on this reporting month, requiring large volumes of trades on the interconnectors and on generating units, sometimes with the support of BM actions, to limit the largest generation loss on the system. The highest daily costs occurred on weekend days when RoCoF constraints are likely to persist through the day due to lower system demand. Saturday 12th and Sunday 27th January, the RoCoF daily spend recorded was of around £1m and £0.8m respectively.

9. Voltage

These costs relate to the buying of energy in order to access the voltage capability on the generating units. The costs for voltage are reported in the Reactive Power category.

Voltage costs in January 2019 out-turned at around £1m to deliver 112.0GWh of energy with voltage supporting capabilities, of which around 53% of volumes were solved with forward trading.

For many days during the reporting month, no voltage costs incurred as the voltage management requirement was met by the market. The highest daily cost for this category occurred on Sunday 13th January and Sunday 27th, when actions were required to support voltage control.



nationalgrideso.com

Faraday House, Warwick Technology Park,
Gallows Hill, Warwick, CV346DA

national**grid**ESO