nationalgridESO

Balancing Costs

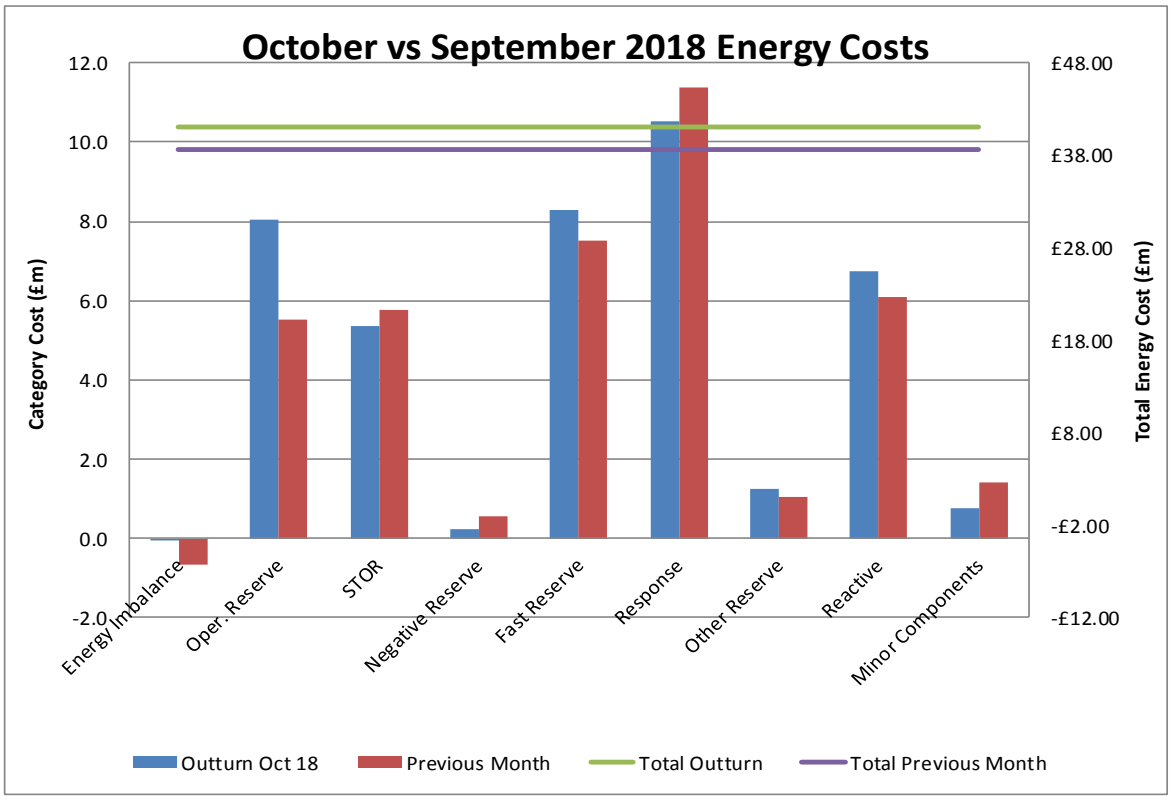
Hotspots

October 2018

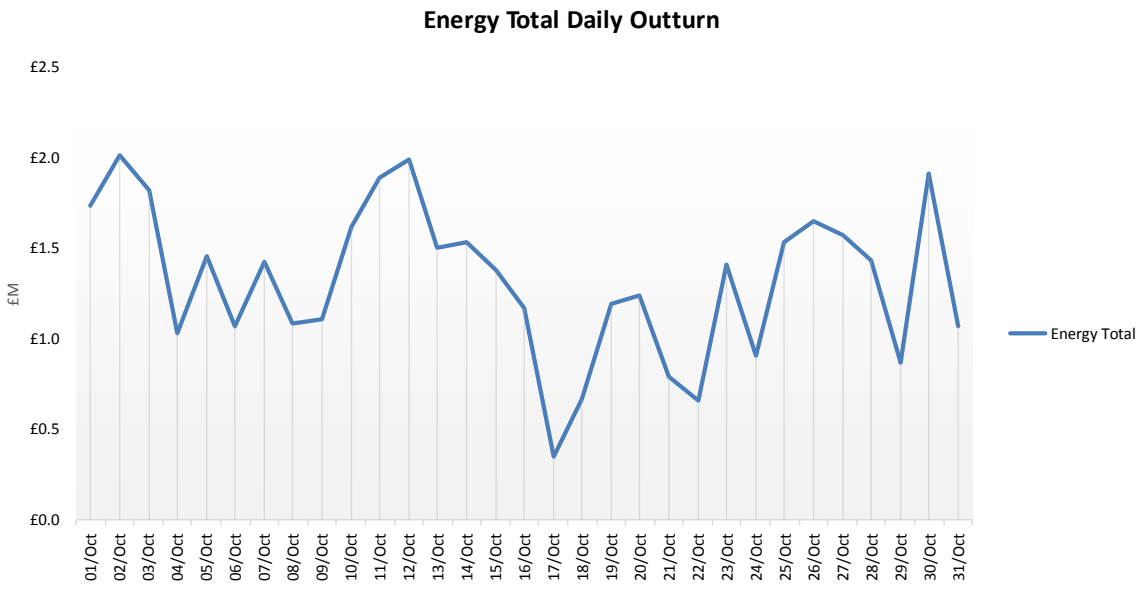
Contents

Energy Costs

Energy costs (including energy imbalance) for October 2018 out-turned at around £41m, with an increase from the previous month outturn of £2.5m. The average daily energy spend for this month was around £1.3m. The energy costs increase from the previous month, was mainly due to the Operating Reserve spend that showed an increase of £2.5m. All the other category costs showed little variance from September 2018.



1. Energy Total Daily Outturn

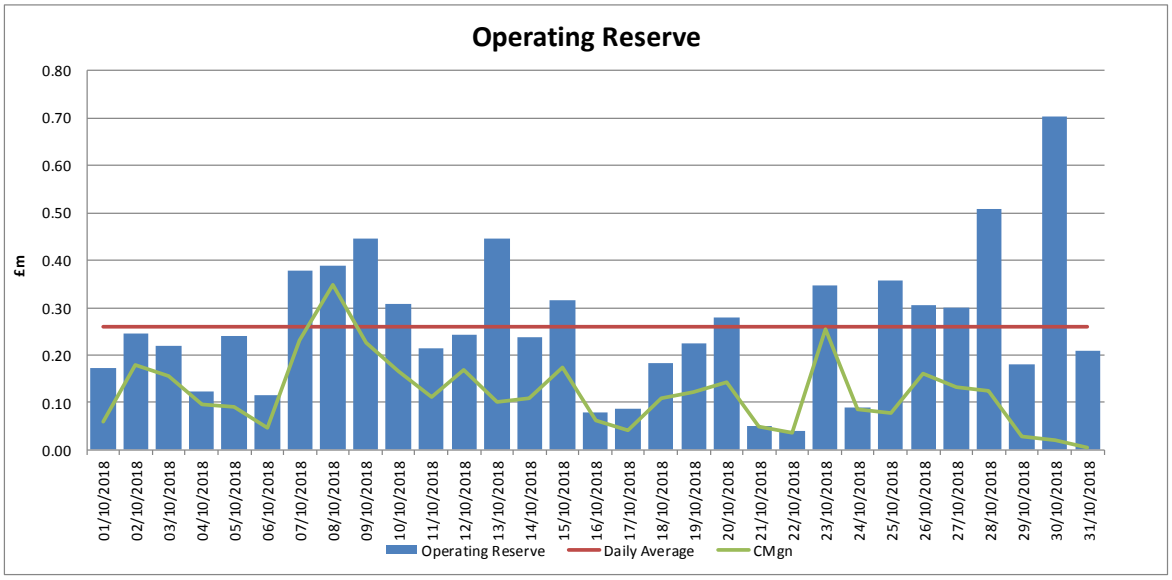


The average daily cost for October 2018 was around £1.3m. The daily spend peaked at around £2m over different days in October 2018. Long periods of short market, throughout the 24 hours, sometimes in excess of 1.5GW, and the deployment of high volume of STOR due to wind volatility were the main drive behind these high cost days. On Thursday 11th and Friday 12th, up to 1100 MW of STOR was run to account for the loss of 1000MW following an interconnector trip when the market was short and when the wind generation was turning out lower than forecast.

2. Operating Reserve

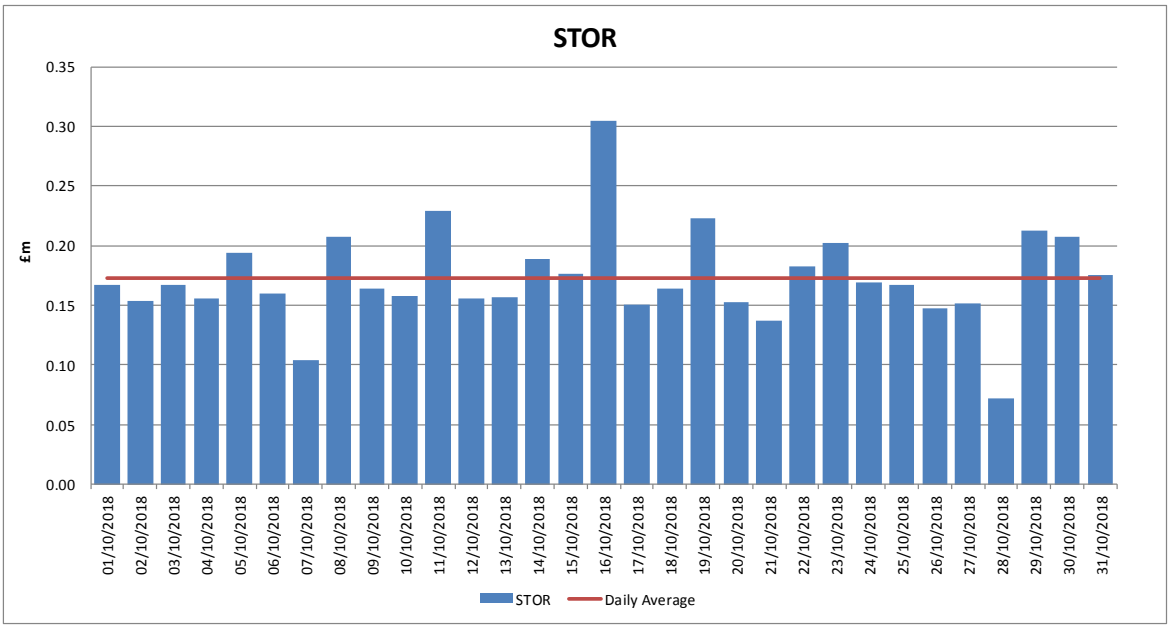
Operating Reserve out-turned at around £8m showing an increase from September 2018 of around £2.5m. the daily costs remained below £0.4m on most days in October 2018.

The highest daily cost for this category was recorded on Tuesday 30th with a spend of £0.7m. On that day, the market was prevalently short throughout the 24 hours, in excess of 900MW in the morning and in excess of 400MW in the late evening. In the morning, spin gen was instructed because of tight margin. Over the darkness peak the Positive Reserve spend was in excess of £60k. This was mainly because of units with prices in excess of £200/MWh were deployed to account for demand outturning higher than forecast.



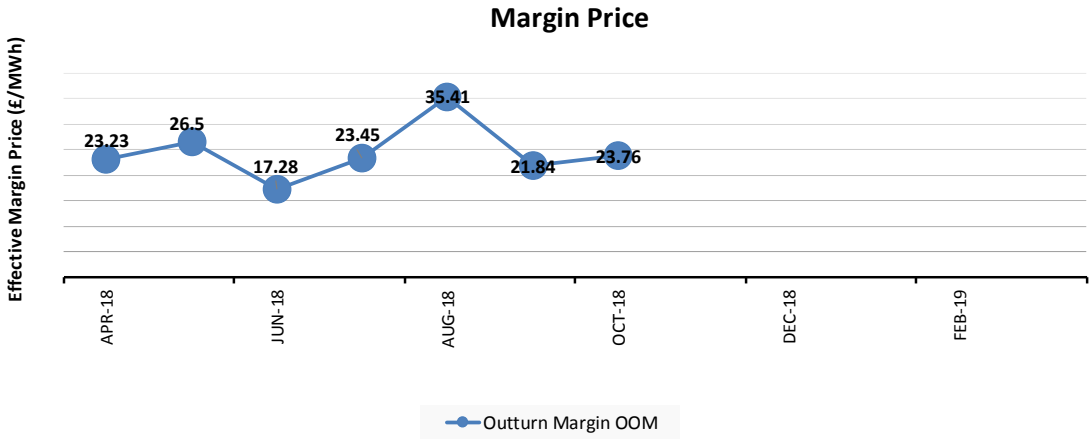
3. STOR

STOR cost for October 2018 was around £5.4m which is £0.4m lower than the past month. The average STOR daily cost was £0.2m. The main drives behind the utilisation of STOR in October 2018, were demand uncertainty and wind generation shortfall against the forecast. Tuesday 16th was the most expensive day for this category with spend of around £0.3m as STOR in excess of 650MW were deployed to account for the loss of generation over the morning peak.



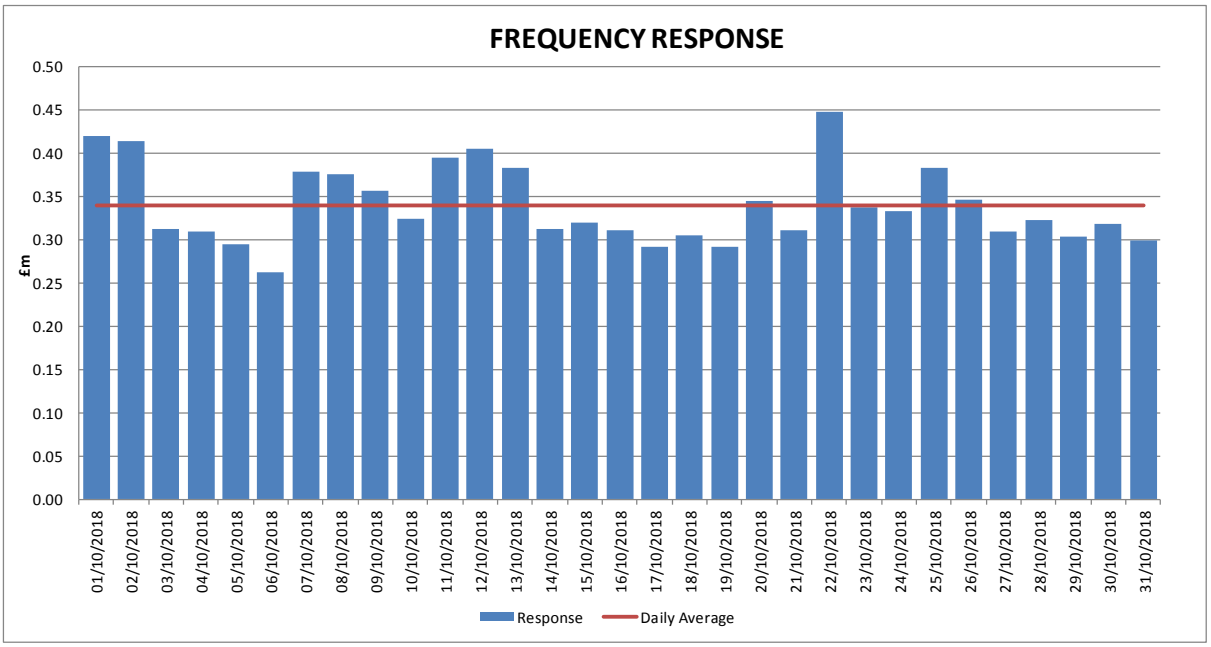
4. Margin Price

The Average margin price in October 2018 increased from the past month out-turning at £23.76/MWh.



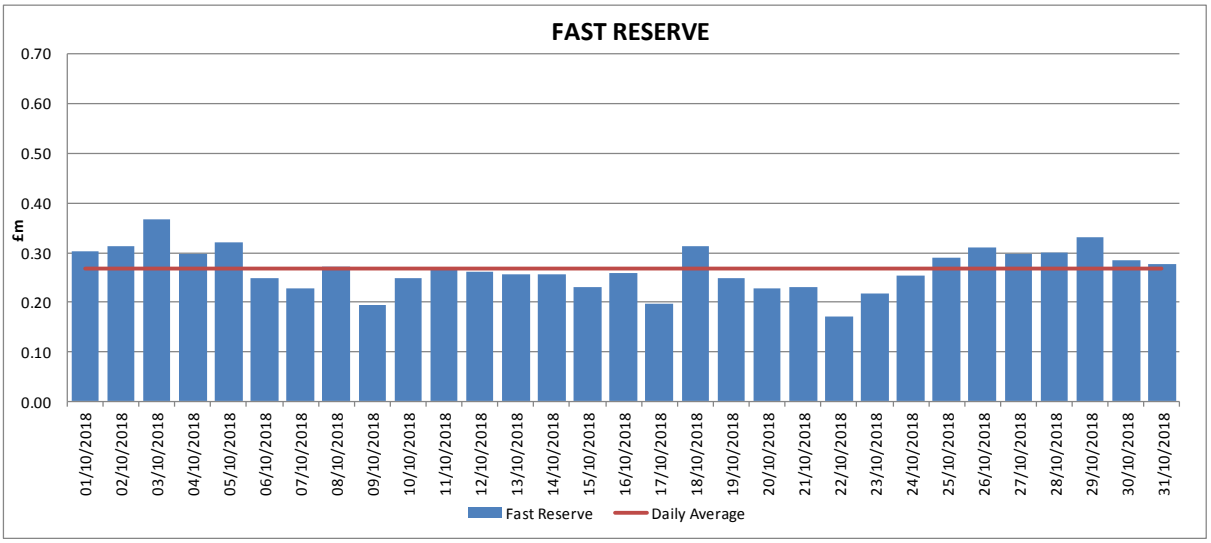
5. Frequency Response

Frequency response in October 2018 out turned at £10.5m showing a decrease from last month of around £1m. Over 85% of the monthly cost were ancillary costs with the remaining incurred in the BM, positioning units to provide a response service. The average daily cost was around £0.3m. Thursday 22nd was the most expensive day for this category with a spend of around £0.45m.



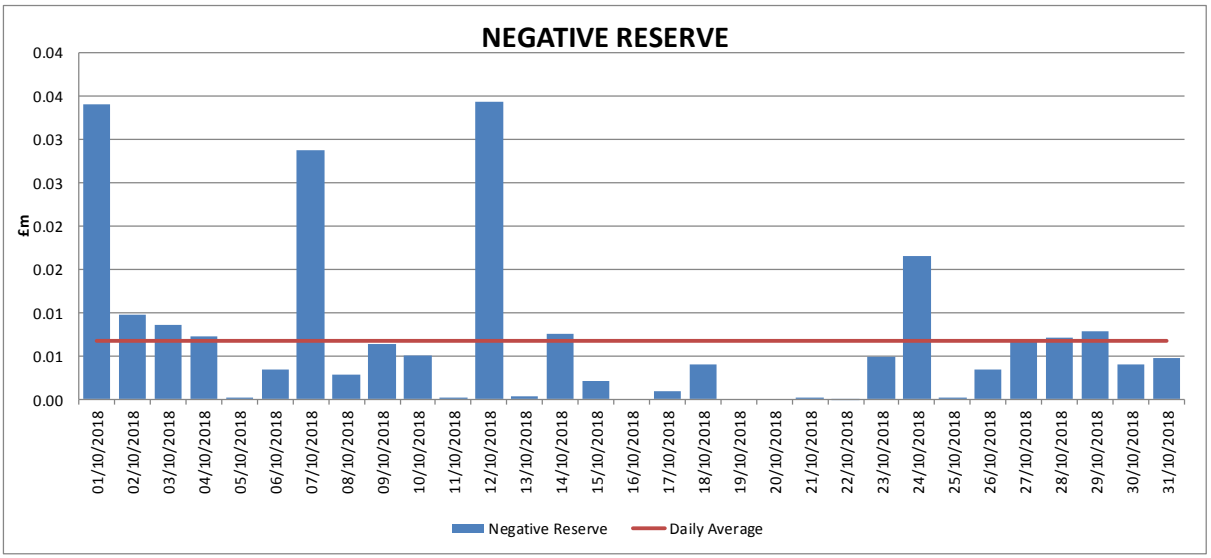
6. Fast Reserve

Fast reserve out turned at £8.3m, which is nearly £1m higher than September 2018 costs. Throughout the month, the average daily cost was around £0.3m and the ancillary costs made up over 88% of the total costs, most of which is incurred on the SpinGen service. Arming the service delivers consumer value over procuring reserve in the BM (Operating Reserve).



7. Negative Reserve

Negative Reserve out-turned at £0.2m, showing little variance from the past month. The costs for this category were nil or below £0.1k for most of the days in September 2018.


NEGATIVE RESERVE
£m
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0.04
0.03
0.03
0.02
0.02
0.01
0.01
0.00
01/10/2018
02/10/2018
03/10/2018
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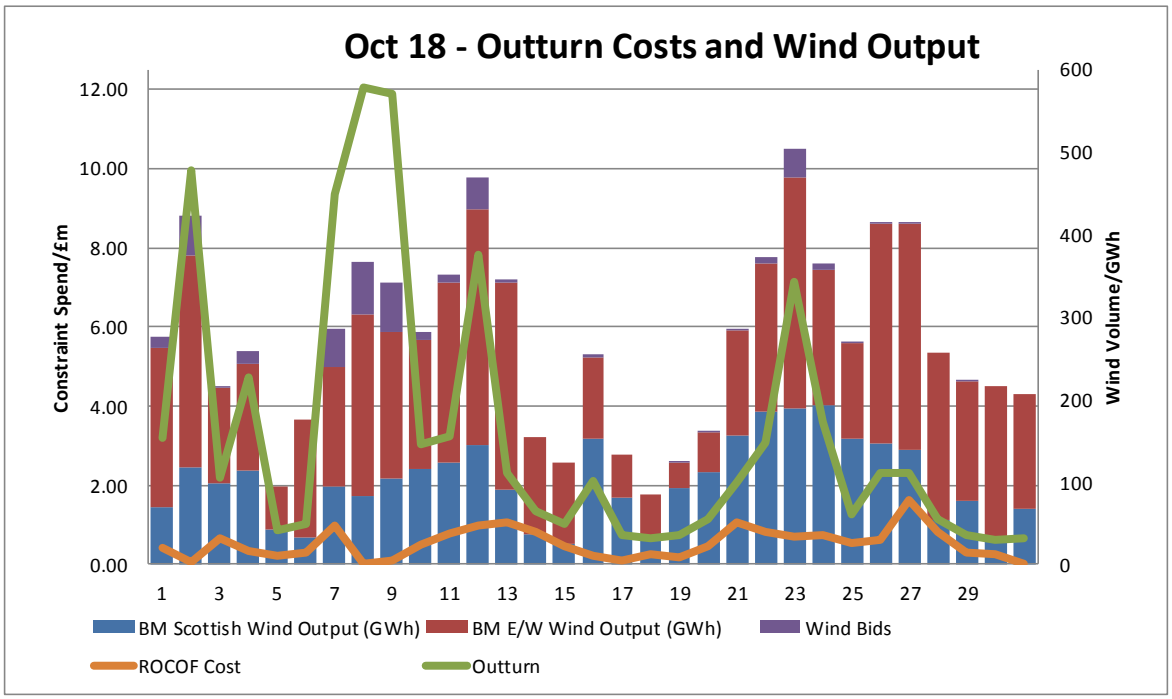
30/10/2018
31/10/2018
Negative Reserve
Daily Average

Constraints Costs

The total constraints cost for October 2018 was £104.5m; £40.8m for England and Wales, £6.6m for Cheviot, £8.8m for Scotland, £18.3m for Sterilised Headroom, £16.4m on ROCOF, and £13.7m 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. Over the first half of October the constraint spend was high over many days. The Western HVDC Link interconnector got back into service on Friday 16th. Until then, high volume of wind bids were required to solve network constraints in Northern England and across the Scotland-England border due to key planned outages, particularly on days with high wind levels at times of low demands.

The highest costs were recorded on Tuesday 2nd, Sunday 7th, Monday 8th, and Tuesday 9th, Friday 12th, with a spend of around £10.0m, £9.4m, £12.1m, £11.9m and £7.8m respectively.

Over these days, the power flow restrictions that were in place due to planned outages were exacerbated by the sustained high wind levels in Scotland, Wales and England. Because of it, large volume of wind generation was bought off in the BM and with trades actions to solve constraints on the network boundary between England and Scotland.

Tuesday 23rd was another high cost day for constraint with a spend of around £7.2m. Even in this case, large volume of wind generation was bought off in the BM due to solve constraints due to planned outages. Some of these outages were in the North West of Scotland and do not experience the benefit of the Western Link.

8. RoCoF

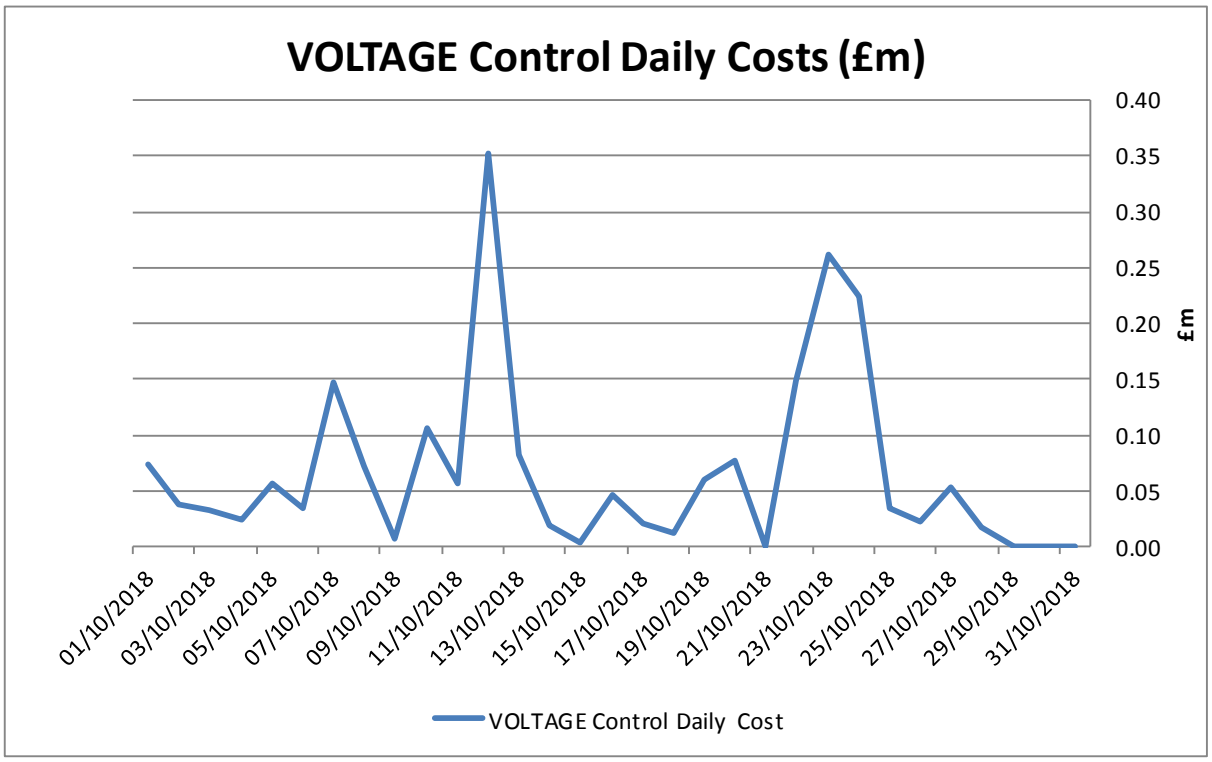
The RoCoF outturn for October 2018 was £16.4m, which shows little variation from the costs recorded in the previous month. Wind and demand levels are the main drive behind high costs days for this category, requiring large volumes of trades on the interconnectors and on generating units, sometimes with the support of BM actions, to limit the largest generation loss on the system. The highest daily costs for this category incurred on Sunday 23rd, with a spend of around £1.6m. Daily costs of around £1m were recorded on Sunday 7th, Friday 12th, Saturday 13th, and Sunday 21st. Days characterized by low demand, and wind generation level uncertainty were the main drive behind these high cost days

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 October 2018 out-turned at around £2.1m to deliver 265.2GWh of energy with voltage supporting capabilities, of which around 50% of volumes were solved with forward trading.

High costs incurred on the 12th October were driven by a significant shortage of self-despatching plant across the voltage regions. Units had to be synchronised in six regions, with some regions requiring multiple units. In addition, Scotland security issues required plant to run throughout the day and provide the required reactive power. Similarly, six regions required actions on the 23rd and five regions on the 24th; these days did not require actions for the same system security issues in Scotland.



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