TREND advance

OPTIMISING BUILDING PERFORMANCE

BMS Optimisation

Royal Bank of Scotland Group, Edinburgh

TREND advance have been partnering with a key customer, Royal Bank of Scotland Group, over the last four years, to optimise the operation and energy performance of its major buildings across the UK and Ireland.

The RBS Energy team had recognised that their existing BMS installations had not been delivering the expected energy consumption performance and were required to improve this to ensure environmental and financial targets were met.

RBS engaged TREND advance to audit the plant operation and it was highlighted that there were numerous issues that were causing the high energy consumption – it was “normal” that buildings were simultaneously heating and cooling, plant was overridden to operate 24/7, time zones were not in line with current business requirements, setpoints were wide and varied etc.

To address these issues, the TREND advance team in Scotland assisted the RBS Energy Manager and his team to develop a BMS Energy Reduction Strategy, which would ensure heating and cooling plant was demand lead and instead of mechanical cooling, free cooling was provided by AHUs.

CASE STUDY: FIRST PUBLISHED 01 OCT 2016

In addition, setpoints were reviewed and standardised, to prevent adjacent terminal units fighting against each other and building occupation hours refined to reflect current requirements. It having been common that times had previously been set for short term arrangements, but not reset when areas returned to normal occupation patterns.

Once these fundamental basics were put in place and a better understanding of the building operation was gained, it was then possible to make additional control strategy refinements to further reduce energy consumption.

For example, sub-dividing control of floors within a building into more convenient zones, meant that specific areas on each floor could be programmed off via the BMS when unoccupied, where previously the whole floor would have to run because one area had extended occupation requirements.

Also, optimum start stop routines for each zone were introduced, which avoided the previous practise of extended time-zones being implemented to try and satisfy worst case conditions.

In addition to the significant energy savings achieved, the customer also benefitted from improved user comfort and the number of hot/cold complaints reported to the helpdesk reduced dramatically.

This approach has been rolled out across the top 40 energy consuming buildings within the RBS UK office portfolio, with installed Trend BMS and has resulted in these buildings reducing their cumulative electricity consumption from 196 GWh to 151 GWh, or 22%.

These savings are being maintained and increased by continuing to engage TREND advance to monitor the performance of these sites, and take proactive actions to ensure that previous practices are not allowed to return, with local “fixes” reversing the good work carried out. The practical implementation of which relies on the engagement and partnership of all stake holders, i.e. the RBS Energy Team, TREND advance and the respective buildings’ Facility Manager, R&M contractor and users.

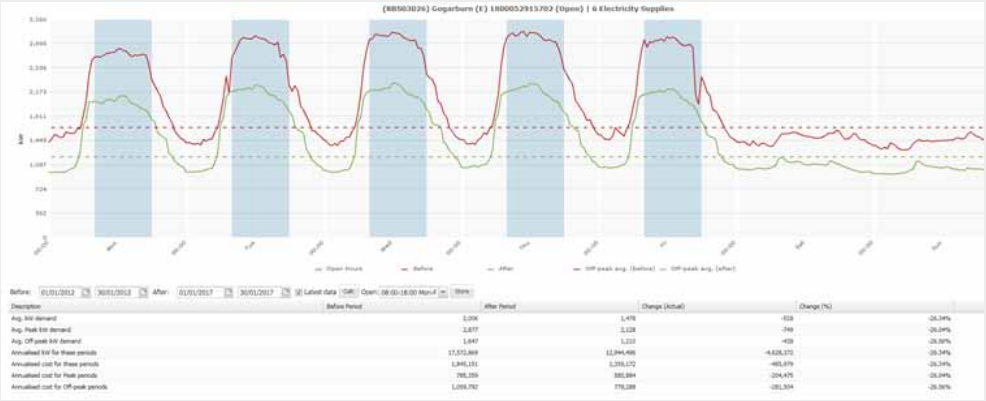
Gareth Harman, RBS Technical Specialist, who has been closely involved with the program commented – “Working with TREND advance on this project to improve the operation of previously underperforming BMS, has been a significant contributor in helping RBS reduce its energy consumption and meet our environmental targets”.

Results | RBS Headquarters Gogarburn Edinburgh

1. Performance

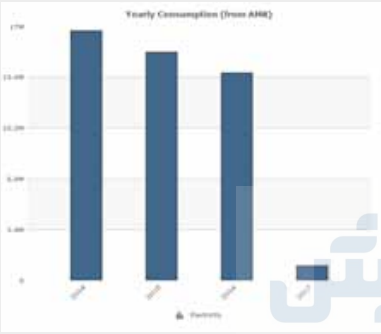
Current Performance – Green line January 2017 Previous Performance – Red Line January 2012

Reduction – 26%



2. Year on Year Performance 2014-2017

Reduced Consumption year on year



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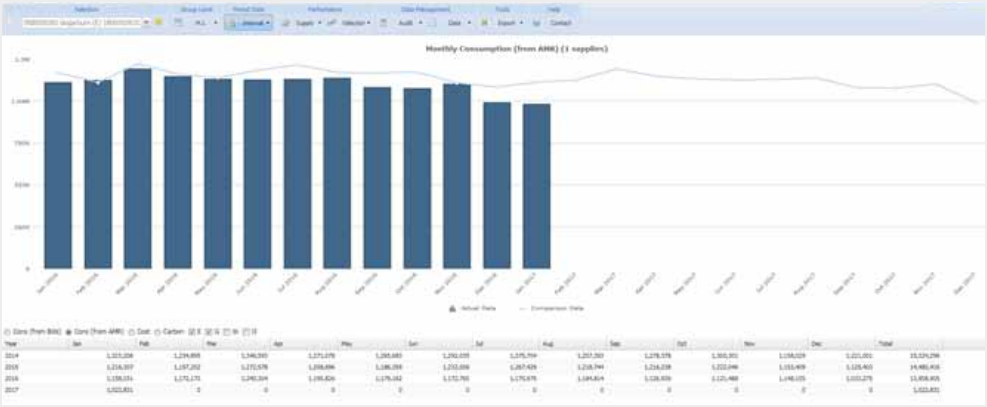
Gareth Harman | Technical Specialist, RBS

3. Month on Month Consumption 2014-2017

Reducing each month compared to previous year



4. Average Daily Consumption 2014-2016

Reduced from 42,000 to 38,000kWh/day

For further information about this case study please email Trend Marketing, **marketing@trendcontrols.com** or visit **www.trendcontrols.com**

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