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Guide to the role of energy
Management Systems

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Guide to the role of an Energy Management System

Overview:

- The role of an Energy Management System
- Data collection from metering and monitoring
- Data processing
- Energy management strategy
- Achieve a reduction in energy usage in the long term

Target:

- Increase energy efficiency by 20%
- Lower energy consumption and greenhouse gas emissions by a fifth



Action:

- Understand our buildings and the energy they consume
- Introduce a strategy for reduction

- Businesses keep a close eye on the manufacturing costs
- Does energy use come under the same close scrutiny?



Businesses need to monitor and understand their energy usage in order to make informed decisions about how to make savings.....

but they also need to make sure that the savings are not detrimental to the people using the building.

The case for an Energy Management System (EMS)

- There are some easy wins for energy savings

BUT

- Most upgrades do require long term attention
- Lack of attention will lead to worse performance

When does action need to be taken?

- Does it work as designed?
- Is it performing as intended?



- A well designed, installed and commissioned BMS can be invaluable
- But not all Building Management Systems operate efficiently all of the time
- Are they the route to achieving efficiency or do we expect too much of them?

- A BMS provides real time control of a buildings plant
- A BMS is not built for dealing with historical data
- To enable a change, analysis is required

- The EMS is the dashboard
- The BMS is the steering wheel



You need both to drive significant energy savings

Functionality of an Energy Management System (EMS)

- Commercial buildings are dynamic entities
- No two days and no two buildings are the same
- The key to energy management and the long term reduction in usage is continuous improvement

- We don't want the big picture
- We need detailed information about the individual parts which make up the entire picture

The solution lies in real time monitoring of energy and utilities and live data relating to energy consumption, allowing you to target different parts of the network for improvement

Understanding your energy usage is imperative but before analysis takes place you need to have all of the data in one place



- An energy monitoring solution working on its own is better than nothing
- A BMS which works independently of everything else is better than nothing

BUT

- The ideal solution is to link the energy monitoring solution to the BMS via an interface

- Data analytics are now being used for everything from financial transactions to retail buying habits
- They are also increasingly being used to optimise the energy usage in commercial buildings



Simple, fast, data acquisition

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Analysis

=

Improved building performance

- Energy monitoring and analysis is key to understanding energy usage
- The data enables comparisons to be made on energy use
- Looking to the future.... With the right metrics in place you can establish the baseline energy consumption and accurately track the return on investment for each energy saving initiative

- Talk to the occupants of the building
- Make it visible
- Motivate them to do better
- Its time to name and shame!



- Collect the data
- Analyse the data
- Use the data
- Feed it back to the BMS
- Unlock the potential energy savings in your building



- Gather and use the information to determine an effective energy management strategy
- Make it visible
- You're in it for the long run!





Questions?