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Information Paper

Understanding the choices for building controls

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The control of energy in buildings is generally poor, despite the availability of a range of tried and tested systems incorporating both mature and innovative technologies. The installation of heating, ventilation and air conditioning (HVAC) zone controls, optimising controllers for wet heating systems and lighting controls, are encouraged by the government. Despite this, specifications are often limited to the minimum requirements; innovative technologies, such as building energy management systems (BEMS) and demand control ventilation (DCV), are rarely applied.

The main reason for this dumbing down is the perceived overly technical nature of innovative technologies and hence the resulting complexity issues when operating them. This, with the lack of resource available to building occupiers, leads to a poor uptake of technology solutions that are aimed at reducing the carbon footprint of a building and providing a better environment for building occupants.

This Information Paper addresses these barriers by providing simple explanations of the technology, what it can do – where and why it can and should be used – and how to get to an effective solution in practice.

Finally, the Information Paper introduces BS EN 15232 which illustrates the different effects control systems can have on the same building and how functionality is the key. This leads to the conclusion that programmable BEMS currently offer the best solution towards achieving the dual objectives of providing the desired environment for the occupants, and running the building efficiently.

The Information Paper will be relevant to those working to identify energy waste and advise on energy saving measures and programmes – controls are the easiest and most cost effective solution for saving energy. It is specifically aimed at clients and building occupants so that they can specify systems that are fit-for-purpose.

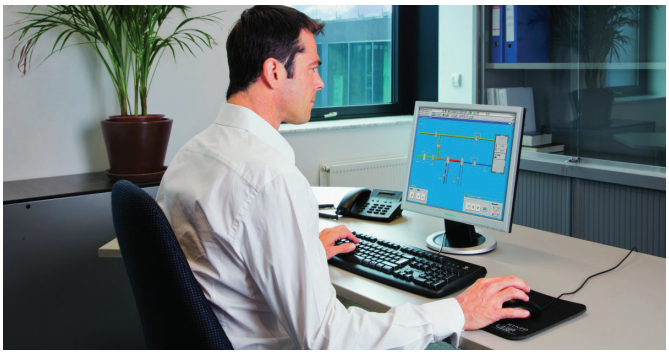

Figure 1: Building energy management systems (BEMS) being operated remotely

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