

# Building Management Systems or machine/equipment control



**Upgrading the AMR, live metering and sub-metering applications with t-mac, businesses can incorporate CONTROL. By connecting t-mac to lighting, heating, air-conditioning, refrigeration, compressors and other energy intensive equipment within a building or site, the system can highlight opportunities for energy reduction by identifying unnecessary use and controlling this equipment to reduce use and cost to the company.**

Control of heating, lighting, air conditioning, refrigeration and compressors alone can improve energy reduction targets from 15 per cent to 30 per cent by simply switching things off at night, reducing set-point controls and ensuring equipment isn't operating at the same time, (for example air conditioning operational while heating is on).

Energy management should be about best practice, (i) identify consumption (mains meter) and (ii) identify inefficiencies (sub-metering) but also (iii) control to reduce excess consumption and eradicate waste.

An immediate energy saving opportunity from implementing 'control' is being able to stop air conditioning fighting heating systems; eg: t-mac has found that whilst a boiler is running 24/7, colleagues may turn down the radiators to reduce heat in the rooms and then switch on the air conditioning.

Other quick wins from adding CONTROL through t-mac is to (i) manage time-clocks which independently run a variety of equipment within the building and are usually out of sync and (ii) manage temperature set-point control to remove the varying temperature set-points often caused by staff increasing and decreasing temperatures within the building.

**“Control of heating, lighting, air conditioning, refrigeration and compressors alone can improve energy reduction from 15 per cent to 30 per cent”**



bms  
control



energy  
monitoring

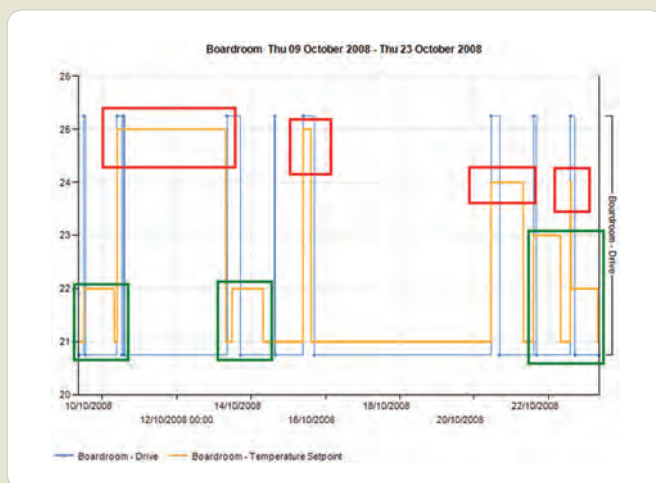


mains & sub  
metering

## Control with t-mac.

Below is an example of the benefits of t-mac taking over the local controller to stop colleagues from changing set-points and wasting energy consumption:

acceptable set point change within the defined limits however, more often than not, the user is varying the set-point to an unacceptable range: 24°C and 25°C.



### The Problem

The graph above is an example of end users changing the set-point for a varying occupancy board room. The company stipulates that the air conditioning be switched on only when the room is in use, and that the heating or cooling should be set between 20°C and 23°C. From the diagram, the areas highlighted in green show an

### The Solution

t-mac allows companies to either 'block' the local control, so the users cannot change the set-point or, t-mac 'limits' the set-point, so the user can only change it within certain limits thereby reducing energy consumption, unnecessary energy waste and ultimately providing for a more comfortable conditions within the board room.

### To find out more, please contact t-mac technologies

t-mac Technologies Ltd, Stand Park,  
Sheffield Road, Chesterfield, Derbyshire, S41 8JT

t. +44 (0) 1246 233632  
info@t-mac.co.uk

f. +44 (0) 1246 201193  
www.t-mac.co.uk