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GREAT DEBATE

Can't stand the heat



Peter Staelens.

With significant carbon reduction goals to be met, the heat is on for UK businesses to find effective ways of lowering emissions but according to Peter Staelens, Solar Gard regional manager, EMEA, energy efficiency depends on more than just thermal insulation.

"By encouraging heat-retention, particularly in the form of double glazing and wall insulation, cooling strategies have been left out in the cold."

At the end of 2010, The Carbon Trust reported that the average payback of energy efficiency projects carried out in commercial premises was 48%.¹ Figures like this are only strengthening the case for energy efficiency, and with every passing year, it is becoming clear that to invest in sustainability is to save money.

But while the UK government is supporting carbon reduction by introducing grants and green initiatives, these have done little more than skew people's perception of what represents an energy saving. By encouraging heat-retention, particularly in the form of double glazing and wall insulation, cooling strategies have been left, rather more, out in the cold.

KEEP COOL AND CARRY ON

As an example, the government's Renewable Heat Incentive (RHI) was announced in March 2011 to drastically alter the way heat is generated and used by businesses. The business and public sector currently contributes 38% of the country's carbon emissions,² but under the RHI, those investing in renewable heat installations will be offered long-term financial support. Many will be enticed by such offers, particularly as Britain's largest energy users are required by the CRC Energy Efficiency Scheme to start lowering carbon emissions immediately.

But what incentives like the RHI fail to acknowledge is that when a commercial building is designed, the crowds of people and electrical appliances that then occupy it are not taken into account. Human bodies and devices such as computers, printers, coffee makers, toasters and refrigerators generate an exceptional amount of heat and cause room temperatures to dramatically increase. As a result, most commercial buildings have to bring temperatures down, not up, in order to maintain a

comfortable environment and maintain productivity.

Office cooling from air conditioning represents a huge energy burden, and can increase a building's emissions by 100%.³ So to use it on a daily basis, yet take a grant to invest in heating and insulation, is a notion most people would surely see as perverse. The reality of air conditioning is that, despite its widespread use, the energy it consumes often goes to waste.

HERE COMES THE SUN

Think about your own offices when the sun comes out. Chances are, it isn't made welcome. When it's hot, windows get thrown open to create a through draft, or in colder months, blinds are snapped shut to block out the sun's glare, meaning that lights have to be switched on. Either way, this behaviour ends up negating the effect of air conditioning, causing wildly fluctuating internal temperatures and eating up a large, unnecessary supply of heat and energy.

Such widespread and basic energy wastage should not be allowed to continue. Particularly when the glazing industry offers solutions that can make an immediate and telling impact. It is time to explore cooling options that minimise air conditioning, allow natural light to enter the building and help to block out heat, rather than trap it within the building. One of the most simple and most cost-effective options that can deliver all of these benefits is solar-control window film.

By rejecting up to 82% of solar energy, window film can reduce internal temperatures by up to 10°. Existing cooling systems therefore run more efficiently and inexpensively, reducing a building's cooling load by 30%, or roughly 5% of the energy bill. If window film were taken into consideration during the design stages of a new building, savings would be greater still, as



businesses would reduce cooling requirements from the outset; using smaller, cheaper air conditioning units that are easier to install and maintain.

In plain English, making a switch to more efficient office cooling could mean thousands of pounds in savings to many UK organisations.

With budgets being restricted and such significant carbon reduction goals to be met, the heat is on for UK businesses to find meaningful ways to lower emissions. It is the responsibility of our government to steer them in the right direction.

Improved insulation and heating is, without doubt, an effective means of preventing energy waste, and many UK businesses will currently think of this as the first port of call for energy savings. But insulation is only half the story. More vocal support for efficient cooling solutions by government schemes and incentives would show these companies that such measures are just the tip of the iceberg.

For more information visit:
www.solargard.co.uk or: www.environdec.com

¹ www.carbontrust.co.uk/news/news/press-centre/2010/pages/uk-business-energy-efficiency.aspx

² www.dec.gov.uk/en/sectors/industry/energy/energy-renewable/policy/incentives/incentives.aspx

³ www.carbontrust.co.uk/so-often-reduce-cost/products-services/technology-advice/?tag=uk-com/glazing.aspx