

Making sense of energy

How CIOs can understand the cost of power

By David Tebbutt, July 2009 Originally published by



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Have you started getting the energy bills for your department yet? What about your distributed IT and communications estate; on- and off-site? What about building management? Is it, or will it become, part of the IT remit? Just like air, water and electricity, IT (as you know) permeates the organisation, sucking power from here there and everywhere to do its job. Unless you work for a heavy manufacturing company, your operations probably account for a huge chunk of the organisation's energy needs.

Do you ever wonder or worry about where it comes from? If you're not being hit with the bills, then you're probably not greatly bothered. It's someone else's problem. But, someday soon, it's going to be yours. (See this piece by Dale Vile.)

Common sense suggests that energy costs will rise; especially those based on fossil fuels which are, at the moment, the source of about 90 per cent of the UK's electricity. We have all manner of vested interests trying to stop wind farms, wave barrages, solar installations, new nuclear installations and so on. We can hardly slash the population to decrease demand. And getting us to massively change our lifestyles will go down like a lead balloon. But, somehow, we're going to have to become more energy efficient on a massive scale. According to a recent book by Professor David JC MacKay, a ninety per cent cut in fossil fuel use should just about do it.

This won't be achieved by token gestures. It will need some huge changes. And, let's be clear about this, this argument is based on issues of availability and security of supply of energy. It's not about climate change or other 'green' discussions.

We already know what IT can do with its own estate: virtualisation, consolidation, remote device management, free cooling and the like. It can also be applied to improving the energy efficiency of buildings, transport fleets and working practices, for example. Big changes are needed and IT can play a substantial part, but only if the issues are properly understood and emphasis put on the correct actions.

The problem most of us have is knowing what those right actions should be. We are bombarded on all sides with advice, yet most of it arrives in a vacuum. How important is it to switch off phone chargers? Media publicity suggests "Very". Common sense makes us ask, "Really?" Computers and screens are obviously much more energy gobbling. Shouldn't an 'Environmental' button such as that on some Fujitsu machines be seen as more important?

Should you install photovoltaic panels, solar thermal panels, wind turbines, ground source pumps or air source pumps? The more choices you have, the more confused you get and, as you've probably heard, "The confused mind always says 'No'".

This is a good time to return to Professor MacKay and his book. He blows away all possible energy-related confusion. The book is called 'Sustainable Energy - without the hot air'. You can read/download it free of charge at withouthotair.com or buy a paperback version for a bit less than £20 at Amazon. To give a flavour, here's his opening sentence: "I'm concerned about cutting UK emissions of twaddle - twaddle about sustainable energy."

The reason for mentioning it to you is that it will give you a very solid basis for participating in conversations about your organisation's use of energy. It will bind IT and business management closer, help the company minimise its energy bills and help it steer an environmentally sound course into the bargain.

It will also help you and your family understand and make your own intelligent decisions.

Although the book is not about climate change, the author says, "The climate problem is mostly an energy problem." He mentions the subject at the start and end of the book, but the remainder is pragmatic, understandable and rooted in facts. He largely ignores ethical questions so as not to confuse the underlying realities. He brings everything down to the human level - kilowatt hours per person per day is his favourite way of helping us understand anything - whether it's defence spending, catching a plane or heating the patio. Europeans consume about 125kWh per day per person. The average American consumes double that. To give an idea of what this means, that patio heater, if left on for two hours in the evening, would consume 30kWh.

The book looks at the energy we use and where it comes from, all broken down into considerable detail. Having done that, it then looks closely the three biggest energy gobblers - heating, transport and 'electrical stuff' and considers new approaches.

Unless you're already a sustainability or environmental wizard, you'll learn tons. You'll immunise yourself from the bamboozlers and wielders of impressive-sounding statistics. Most importantly of all, the book will help you think for yourself and become a more valuable member of the organisation.

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