

Efficiency Is Free –Ask For More

Facility Management of the Future

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Facilities management is facing a large range of challenges over the next few years as the world grapples with climate change and the related cost of carbon, worn out electrical supply infrastructure that requires billions of dollars to repair and renew, the advent of smart metering, carbon taxes or similar and the cost of changing to a renewable energy based and carbon reduced economy.

For most facilities managers this results in one outcome. Increasing power costs. Confirmations of, for example, 60% increase over the next three years in NSW (IPART,2010) and predictions of a minimum for the longer term of 10% per annum (Davis Langdon 2008) and 15% per annum (Clean Energy Council 2009) mean that power costs will have to become part of the balance sheet and risk analysis for any facility. If you are spending \$40,000 per month on electricity it doesn't take a lot of mathematical skill to work out a compound interest and net present value impact on your power bills over the next twenty years. Dollar figures with lots of Zeros are the outcome.

The built environment contributes around 40% of the carbon to the climate change equation. Unfortunately for building owners but fortunately for those that live on the planet, the government has identified that one of the cheapest and easiest ways for them to control carbon emissions is through the built environment. Remember that around 97% of the built environment we need for the next 20 years already exists so it is the existing facilities that can provide the greatest opportunity for the most carbon reduction as they make up the largest percentage of carbon creators. Most of those facilities are usually inefficient in their design and often in their operation too.

This methodology of carbon reduction mandated by the government at last year's COAG meeting in Hobart is that the building owners will pay for the reduction in carbon. Let's face it. That is an easy and cost effective way to reduce carbon –charge the owner of the building –minimal cost to the government!

This process is being implemented through the BCA (Building Code of Australia) Section J requirements which are significantly increased in performance levels in 2010 and have changed the focus of the BCA from energy efficiency to carbon abatement and through the implementation of mandatory disclosure energy efficiency auditing on all commercial class 5 building over 2000 sq metres under the new BEEC scheme. This proposed scheme, coming of age in July 2010, will mandate that any commercial building over 2000 sq metres that is being sold or leased must undertake a detailed audit and provide an output of the energy consumptions level of that building. In addition a range of sustainability recommendations

must be made by the accredited auditor and all of this must be displayed and be a part of the advertising and sale or leasing documents. Naming and shaming is probably a better term and is possibly close to the intent. Really though is that a bad thing? If it actually saves you running costs as the existing or new owner while also reducing your carbon footprint it can't be all bad!

In all the inspections and audits we undertake of facilities we are always amazed at the amount of waste and inefficiency we notice. Yes it is so our job to notice those things as that is what we do but in many cases there is a so much that can be done cost effectively to so many facilities to save resource wastage. The related costs of resource wastage can also impact on other areas of the facility. If you for example, have not implemented smart procurement then you will be paying to throw away and remove the waste you have incurred through your poor procurement policy. This equates to buying something to just throw it out! The retail industry, for instance, disposes of large amounts of waste from packaging etc that could actually be removed from the production process. So instead of paying to ship the packaging here and there and then paying to unpack the item from the packaging then paying for the value it took up and the weight it created and then paying for someone to pack it up and remove it again wouldn't it be better to just forgo the packaging in the first place?

In many facilities we see the use of electrical lighting when there could be daylighting used effectively. The British retail kings Tesco and Sainsburys, for example, utilise natural ventilation and daylight in the majority of their stores now because it is saving them so much money on running costs, and improving their internal environment so they are selling more.

Tesco's, Sainsbury's and Walmart, the second largest company in the world, are all committing to carbon neutral retail stores. Carbon neutral ... not low energy, not sustainable but carbon neutral! That is a high level of sustainability commitment.

Hands up how many readers believe they are doing that because they are simply wonderful corporate citizens? Hands up how many readers think there might be a dollar in it for the owners?

Embracing a sustainable approach to your facility starts at the CEO or preferably the board making the commitment and then the required focus and related actions will follow. Once that commitment is made then the hardest bit is over.

Sustainability is about efficiency. Nothing sinister, No rocket science, No cloak and daggers, Clear and simple it is about efficiency. Yet every single business we have been to is inefficient in some areas. Even the efficient ones!

And efficiency is available in new buildings as well as old. We audited a 12 month old aged care facility recently where the client was experiencing massive energy bills. The building was constructed under 2008 Section J energy efficiency requirements yet was chewing through power at a very high level.

Upon inspection we found that the chapel had the air conditioning running 24 hours a day 7 days a week all year. Most of the time it was empty. The timer or sensor control unit was faulty and despite the

building being empty the unit just kept going. Pumping out cold or hot air to cool or heat the empty chapel day in and day out.

This wasn't noticed as an issue for at least six months because the chapel was not used often. When it was used everyone just thought the A/C sensor was working because the A/C was on when they were in there. During our audit it was picked up and rectified and the power bill has dropped measurably since.

In another facility we audited we told them if they spent \$35,000 once on that facility changing lights, timers and providing switches and controls they could save \$50,000 per annum on their power bills, every year. The client, who was extremely shocked at that information, indicated he had 10 other facilities with the same problem. We told him to do the math -10 x \$50,000 per annum savings. That is serious money. And that is based on current power costs which are increasing rapidly as previously mentioned. That \$50,000 per annum saving will shortly become \$60,000 per annum then \$70,000 per annum etc etc. Next thing you have a \$100k going out the door which is just waste. The savings become not just fret they are making you money.

The great thing about efficiency is it is generally free. So many aspects of sustainability are small tweaks and changes that add up to a serious saving.

At a recent site investigation we noticed that the programming for the advertising signage lighting had one error in the timer programming meaning that for the last four years the external advertising sign had been turning on every Tuesday, like clockwork, at 6am instead of 6pm and running 24 hours a day! Just what the world needs more of –signage lighting running during the day.

You will shudder when we tell you what that cost the client for the past 4 years. Only a little error but significant in electricity and maintenance costs.

A recent energy audit for a retail client indicated we could reduce their power bills by around 35% per annum. With paybacks of around three years. The facilities use between \$10-25 k per month and they have scores of facilities so the savings across their portfolio are significant.

The use of renewable solar panels is becoming more and more prevalent and that is a great step forward from even two years ago. Mention someone turning their roof into a power generator in 2005 or 2007 and the padded van would arrive and the stretcher would be bought out for you. Now though, the value of generating power is becoming more and more a reality. We do get concerned though those companies are purchasing renewables to create power before they get their house in order. If you have an inefficient facility and spend a lot of money to install Photovoltaics you are spending money on something you can get for free. Why would you do that?

Making your facility, your business, more efficient in as many ways as possible should be the first step. Maximize those efficiencies before you go and spend money on renewables. You only need renewables once you have maximised your operating efficiencies, then they make great sense. All the homes we see installing renewables makes us wonder how much more effective it would have been to encourage

those owners to maximise efficiency before spending on the renewables. Then the cost of carbon abatement for all stakeholders would be a lot less.

The use of efficiency in your facility is an overarching solution but one that is relatively simple. If you are trained to look of efficiency in all you do then you will see so many areas that are currently inefficient.

Spend the time making your facility efficient before you then spend on other areas such as photovoltaics or wind turbines. Understand the way your building works and how everything within it is interrelated. Changing a light can affect the energy the light uses but also can affect heating and cooling loads. Is the changing of the light going to increase or reduce your overall heating and cooling loads? In some cases the changing of the light can have a detrimental effect on air conditioning; in many cases it has a good effect on air conditioning and related loads. There is no straight rule though.

A building is a living breathing entity. Understanding the relationships between equipment and the built form and the built form and equipment with the inhabitants or the user is of prime importance. Neglect that and you are in trouble. Understanding and reviewing and revising and considering all the relationships in your facility will drive you towards efficiency.

The role of the facility manager is changing fast. Being aware and up to date of what is available or what the authority requirements are and what socially and corporately is expected of you is a different world to even 5 years ago.

The facility manager that doesn't embrace sustainability could be increasing risk to his company and to his own position. The challenge lies in embracing the changes and being ready for what the future holds. It is a new and changing world where efficiency is the key. Increased training that will improve your knowledge and understanding of the climate changed world and all it requires must now be seriously considered. No running way from where the world is heading. Tenants as well as owners are also demanding improved sustainability from all their facilities. The facility manager is facing a range of challenges that he must be abreast of to ensure he keeps his facility operating as efficiently as possible.

The great thing though is that if you remember that efficiency is free, it doesn't cost to become efficient, and then you will realise you can ask for more.....and moreand more.