Energy efficient equipment

Computers and office equipment such as printers, photocopiers and fax machines can typically contribute between 30 and 55 per cent of tenant energy use. When evaluating purchase options companies need to consider not just purchase price, but day to day running costs. With the rapid rate of development in equipment, efficiency of most items has at least doubled in the last ten years. Choosing or leasing the right office equipment will have significant impacts on your energy use and costs. Audits, energy ratings and staff behaviours will all help your organisation make efficient choices.

Key elements

Selecting efficient equipment

Tuesday, March 05, 2013

A more extensive energy efficiency audit procedure will help calculate the financial and greenhouse achievable from equipment upgrades. There are a number of tailored financing options for equipment upgrades, like loans and leasing, which help reduce the upfront capital required and enable more regular upgrading to new more efficient models as they become available.

Computers, monitors and printers

The Energy Star (http://www.energystar.gov) scheme nominates the most energy efficient office equipment, including very low or nil standby power. Developed in the US, it has been adopted here in Australia for computers, printers and monitors - so look for the logo. As a general approach, providing laptops and docking stations can save 50% - 90% less power compared to desktop computer towers, depending on usage habits. This approach can increase the mobility of your workforce.

Managing your corporate data through virtual servers may offer energy efficiency benefits by removing the data centre and its temperature and humidity control loads from the tenancy or base building and having it managed instead by an expert provider capable of optimising its running performance.

With the exponential growth in storage and processing capacity, upgrading old servers can substantially reduce the number of machines required to deliver IT requirements. The rise of cloud computing means that more processing is done off the machine terminal. This might mean that companies should invest more in their internet connection and less in the processing power of individual machines.

Kitchen equipment

When choosing other appliances and white goods, the energy rating (http://www.energyrating.gov.au/) indicates the energy consumption in kWh over a year. The more stars, the better for lower running costs and less environmental impact. Energy rating labels are mandatory on refrigerators, freezers, dishwashers, washing machines, air conditioners and televisions, making it easy to compare different models.

When choosing appliances or whitegoods also consider:

- smaller water boilers cost less to buy and run and alternatives like electric kettles are more efficient to run
- choose a small bar fridge if it only needs to cater for a few staff
- select whitegoods with a high energy star rating.

For more information, see:

Green Procurement >> (http://si37348.swp0001-004cmv.server-web.com/Resources/CitySwitchResources/GreenProcurement.aspx)

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Related resources

ENERGY EFFICIENCY CERTIFICATION SCHEME

This certification scheme offered by the Energy Efficiency Council certifies professionals that can lead comprehensive energy retrofits of commercial buildings. Certification helps building owners and managers find professionals they can trust and provides a benchmark for energy efficiency professionals.

Read more (http://www.efficiencycertification.org.au/)

CITYSWITCH ENERGY AUDIT TOOLKITS

This Energy Audit Toolkit set has been developed to assist non-technical or semi-technical energy managers in small to medium organisations identify actions to improve energy efficiency through the use of a simple but detailed audit checklist and develop plans for implementing energy efficiency actions.

Read more (http://www.cityswitch.net.au/Resources/CitySwitchResources/Energyefficientequipment/Energyefficientequipmentarticle/TabId/153/ArtMID/816/Artic Energy-Audit-Toolkits.aspx)

ENERGY HUNTER HOW TO GUIDES AND COURSE

This kit was developed for small and medium sized businesses across the Hunter Region to identify, manage and improve their energy consumption. This region, traditionally dependent on carbon-intensive industry can become a showcase for clean energy technology and best practice energy efficiency.

Read more (http://theenergyhunterscheme.com.au/how-to-guides/)

COMPUTER AUDIT TOOL

A simple Computer Energy Management tool, developed by CitySwitch. Click to download a Microsoft Office Excel spreadsheet that makes it easy to calculate the greenhouse and financial impact of computers left on overnight.

Read more (http://www.cityswitch.net.au/Resources/CitySwitchResources/Energyefficientequipment/Energyefficientequipmentarticle/TabId/153/ArtMID/816/Artic Audit-Tool.aspx)

DATA CENTRE ENERGY AUDIT SUBSIDIES

The NSW Energy Saver program is offering eligible businesses a 50% subsidy for Data Centre Energy audits when combined with a NABERS Data Centre rating to help businesses identify opportunities for improvement and cost savings.

Read more (http://www.cityswitch.net.au/Resources/CitySwitchResources/Energyefficientequipment/Energyefficientequipmentarticle/TabId/153/ArtMID/816/Artic centre-energy-audit-subsidies.aspx)

ALLOCATING DATA CENTER ENERGY COSTS AND CARBON TO IT USERS

An overview of measuring energy cost and allocate carbon emissions by Schneider Electric. It is both easy and inexpensive for any data center to get started regardless of size or age.

Read more (http://www2.schneider-electric.com/sites/corporate/en/support/white-papers/allocating-data-centre.page)

ENERGY RATING LABELS

The red stars for equipment energy efficiency is an Australian labeling standard that applies to computer monitors, major appliances for cooling and heading, white goods, and home entertainment. This website allows you to compare models.

Read more (http://www.energyrating.gov.au/)

ENERGY STAR

The ENERGY STAR is a voluntary label that indicates excellent energy performance for computers, monitors, printers and whitegoods. Products with the label are third-party certified based on laboratory testing.

Read more (http://www.energystar.gov)

GRANTS AND ASSISTANCE FINDER

Commonwealth and State/Territory government grant programs available to support the investigation and implementation of energy efficiency projects. Be sure to check eligibility requirements and funding guidelines, which can differ significantly across programs and jurisdictions.

Read more (http://eex.gov.au/business-support/grants-funding/grants/)

1 (http://www.cityswitch.net.au/Resources/CitySwitchResources/Energyefficientequipment/TabId/115/PageID/1/PgrID/817/ArtMID/539/ArticleID/274/Default.aspx)

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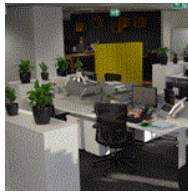
Case studies

CASE STUDY: EXERGY

(http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study Exergy WEB FINAL.PDF)

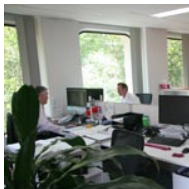Exergy are the first CitySwitch signatory to achieve a 6 Star NABERS rating without Green Power. Exergy focussed on getting the simple things right, including laptops for staff and greater use of the cloud, zoned lighting and occupancy sensors, and energy monitoring that sends an alert when usage is higher than usual.

Read more (http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study Exergy WEB FINAL.PDF)

CASE STUDY: ACORPP

(http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study ACORPP FINAL.pdf)

ACORPP involved staff in selecting a new office and save over a thousand dollars a year in electricity by choosing a space with natural light, providing laptops, and timers on boardroom air conditioning. ACORPP also chose furniture and fitout materials for certified low environmental impact, recycled content and recyclability.

Read more (http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study ACORPP FINAL.pdf)

CASE STUDY: WT SUSTAINABILITY
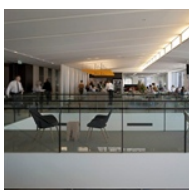
(http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study WT Sustainability final.pdf)

WTS took the opportunity, when fitting out their new office in North Sydney, to use in-house expertise and knowledge in integrating sustainable design and construction practice and initiatives. They successfully achieved their goal of a 6 Star NABERS Energy tenancy rating and now have an energy consumption level of 78 per cent less than a typical office.

Read more (http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study WT Sustainability final.pdf)

CASE STUDY: GOODMAN GROUP

(http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study - Goodman Group.pdf)

Goodman Group have increased staff collaboration, job satisfaction and achieved energy savings of 46 per cent as a result of transitioning to an activity-based workplace. The

CitySwitch award-winner cites an innovative staff change management program and technology upgrades as the key to the fitout's success.

Read more (http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study - Goodman Group.pdf)

CASE STUDY: CLIMATE FRIENDLY

(http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study - Climate Friendly.pdf)

Climate Friendly are striving for energy efficiency excellence by applying the simple philosophy of 'measure, offset, reduce and review'. The consultancy is ensuring effective ongoing measurement using technology such as PowerMate and FutureSwich, and has successfully created a switch-off culture at their Sydney office to meet a target 6 star NABERS Energy rating.

Read more (http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study - Climate Friendly.pdf)

CASE STUDY: BAENZIGER COLES

(http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study_BaenzingerColes_Final.pdf)

Baenziger Coles, an architecture and interior design company, has further optimised office energy efficiency by investing in renewable energy. As a result of feed-in tariffs and a reduction in energy use, the Melbourne office is enjoying a good return on investment, along with annual CO2 savings.

Read more (http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study_BaenzingerColes_Final.pdf)

CASE STUDY: VICTORIAN DEPT. OF TRANSPORT

(http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study - Dept of Transport.pdf)

Long-time Signatory, the Victorian Department of Transport, Planning & Local Infrastructure, has achieved a number of operational gains including a 33 per cent reduction in energy use. With the help of the CitySwitch RMIT student program, resource audits have provided useful insights into staff 'switch-off' behaviour, waste avoidance tactics and office equipment procurement to achieve ongoing environmental and economic savings.

Read more (http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch Case Study - Dept of Transport.pdf)
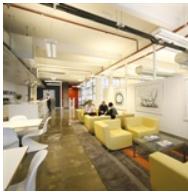
CASE STUDY: DTZ

(http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch case study - DTZ.pdf)

As the first corporate tenant to join CitySwitch, DTZ has since achieved outstanding energy efficiency results in their Sydney office. They've slashed operating costs by 40 per cent and reduced emissions by 375,000 kg CO_2 over 8 years.

Read more (http://www.cityswitch.net.au/Portals/0/Case study pdfs/CitySwitch case study - DTZ.pdf)

CASE STUDY: CAMERON CHISHOLM NICOL

(http://www.cityswitch.net.au/Portals/0/Case study pdfs/CameronChisholmNicol_Case Study.pdf)

The Perth tenancy of architecture and interior design practice Cameron Chisholm Nicol is testimony to the organisation's energy efficiency and carbon neutral commitment. They have achieved energy cost savings of 30 per cent and a 4.5 star NABERS Energy rating.

Read more (http://www.cityswitch.net.au/Portals/0/Case study pdfs/CameronChisholmNicol_Case Study.pdf)

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