Automated desktop computer shutdowns

AUSTRALIAN LEGAL SECTOR ALLIANCE
PROMOTING SUSTAINABILITY

Summary	
Cost to implement	$ **30,000** Will depend on the size of your firm's desktop fleet
Cost savings	$100,000 p.a. (in combination with other electricity-saving initiatives)
Environmental impact	25% reduction in electricity usage
Implementation Issues	*Communication, staff engagement*
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Overview

Introducing an automated desktop computer shutdown initiative reduces your firm's electricity consumption, electricity bills, enhances computer performance and encourages staff to think about shutting down unused appliances at home.

Programme details

Any initiative to reduce a firm's carbon footprint should start with benchmarking the current status. This enables reductions to be measured and helps identify where to focus effort. At Norton Rose, the collated results made it clear that reductions in electricity consumption would have a major impact on the total carbon footprint.

The process of getting the hourly electricity consumption from retailers is not difficult. The Norton Rose Australia figures were revealing. Around 75% of the electricity consumed (excluding heating and air conditioning) was constant day and night. More detailed analysis identified that 2/3 of the electricity consumed for computers and other electrical equipment was used by the desktop PCs. The remaining 1/3 was used by the servers, printers and other electrical devices.

Many considerate users shut their computers down at night when they go home. However, most don't. An awareness campaign on shutting down had less impact than hoped. Therefore, at Norton Rose we decided to automatically turn off the desktop computers at 7:00pm. A product called Nightwatchman was deployed to automate the shutdown process. Nightwatchman was configured to send a warning 1/2 hour before the scheduled shutdown. If computers are in use, the user simply clicks "No" when prompted to shut down.

The desktop operating system, Windows XP provides a shutdown feature, but this wasn't able to shut down all applications. Nightwatchman, by contrast, shuts down everything uniformly and even saves unsaved documents and emails in a special area for retrieval the next day. Surprisingly, this feature is hardly needed as few people leave important unsaved documents and emails on screen when they go home at night.

The automated shutdown process received a mixed response from users. Some thought it was a great initiative but others complained about being inconvenienced. Most complaints centred around having to wait for computers to start up in the morning. At first the slowest computers could take 1/2 hour to start up. Considerable effort was put into simplifying the start-up process in order to reduce the pain. A target of 5 minutes was achieved. Many people argued that this is still too long, but the average of 2 or 3 minutes seems acceptable.

The option of automatically starting up computers was discussed at length. This would have reduced the complaints regarding logon times, but would also have reduced electricity savings, because some individuals start later than others. Further, at Norton Rose we have computers on every desk for interstate and international travellers and starting these computers up automatically would waste electricity if they were unused. Environmental awareness was also a factor considered. We wanted to encourage staff to switch things off at home and in the office and

believe having to turn computers on in the morning encourages this practice.

Shutting the computers down at night had a huge impact on electricity consumption. It more than halved the power used by the desktops. Combined with other initiatives, a total reduction of 25% in Norton Rose's energy use was achieved (over $100,000 a year). As electricity prices increase these savings will also increase.

Other initiatives included;

- Bringing forward the automated lights-off time
- Configuring the printers to go into "sleep mode" after 1 hour of inactivity
- Reprogramming the boiling water taps to only heat water during business hours
- Upgrading older style fluorescent lights to more efficient units
- Reducing the number of lights in public areas that don't need to be so brightly lit
- Replacing inefficient halogen downlights with LEDs

Additional benefits of automated shutdowns included the refreshing of memory in the desktops, which reduced the number of desktop crashes. The software deployment was also more reliable because the machines were remotely started-up in the night and new software deployed onto fresh computers. By contrast, the unattended installation process often failed on computers that ran for days, sometimes weeks at a time.

Electricity is a major contributor to the production of greenhouse gases in Australia, particularly in Victoria where brown coal is burnt. Any investment in the shutdown process is quickly recovered through reduced electricity bills. At Norton Rose these savings were used to finance other initiatives that helped reduce the firm's carbon footprint even further. Coupled with other initiatives a total reduction of 35% has been achieved over a 3 year period.

More information

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