

putting **GREEN** at the top of the agenda





In summary, ELSAVE can help you to reduce your energy bill, reduce your carbon emissions, & meet your obligations under new legislation such as CRC (Carbon Reduction Commitment).



'The costs of climate change for developed countries could reach several percent of GDP as higher temperatures lead to a sharp increase in extreme weather events and large-scale changes.'  
(Stern Review)

'Electricity demand will almost double in the next two decades' - (Energy Information Administration)

'Global temperature rises in the last 50 years are nearly doubled those of the previous 100 years'  
(Intergovernmental Panel on Climate Change)



## What is it and how does it all work?

The energy demands of the modern office are constantly increasing with more PCs, monitors, printers, and other IT equipment in use than ever before. Yet the pressure on companies to reduce their carbon footprint is also increasing, both from legislation and from public opinion. Furthermore, companies strive for greater efficiency whilst energy prices are rising.

One area where significant improvements can be achieved is at the office desk. The equipment at a typical desk may include a PC, one or two monitors, a phone charger, task lighting, speakers and so on. In many cases this equipment is left on 24 hours a day, 7 days a week because users do not realise just how much power this equipment is consuming. A significant saving in energy usage can be made by shutting down unused equipment out of hours, leading to lower energy bills and reduced CO2 emissions.

A simple and cost-effective way to achieve this without impacting efficiency or relying on individual users is the Elsave product range from Office Electrics.

Elsave has been developed to provide Facilities Managers with the ability to monitor & control energy use in the office environment, a key element for any business energy management strategy.



**'60% of PCs are left switched on overnight'  
(Harris Interactive)**

The range includes four products designed to suit a variety of requirements & budgets:

### basic

Entry level  
utilising simple master  
switch, allowing user to  
cut all power to desk  
from a single point

### bronze

Automatically  
switches off  
peripherals when the  
desktop PC goes to  
sleep or is shut down

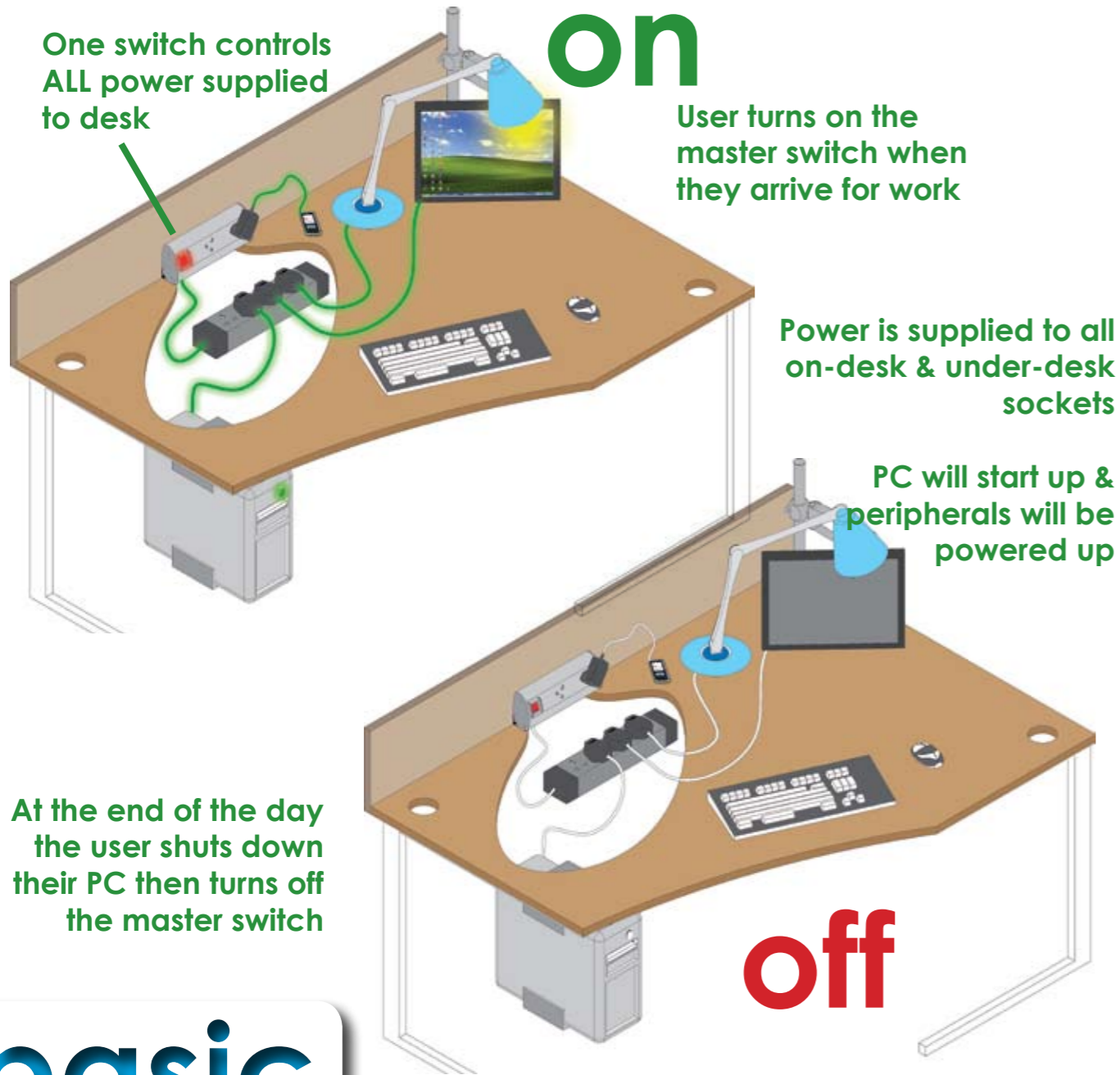
### silver

Builds on Bronze by  
adding an automatic  
startup and shutdown  
schedule for the PC

### gold

Includes power  
monitoring and allows  
link with access  
control system to  
synchronise desk  
control with entry and  
exit events





One switch controls ALL power supplied to desk

**on**

User turns on the master switch when they arrive for work

Power is supplied to all on-desk & under-desk sockets

PC will start up & peripherals will be powered up

At the end of the day the user shuts down their PC then turns off the master switch

**off**

### Benefits

- Simple, reliable & very low cost
- Single switch controls all on-desk AND UNDERDESK sockets
- Large neon switch can easily be seen if left on
- Savings are maximised because everything is switched off

### Why Use Elsave Basic?

If you need to take steps to save energy on a tight budget, then Elsave Bronze may be for you. You will get the full benefit if all of your staff routinely initiate a PC shut down & wait for it to finish before turning off the master switch as they leave the office. If you don't want to rely on your staff to do this, it may be worth considering one of the other Elsave products.

**basic**



# on

The computer is plugged in to the first socket and the peripherals are plugged in to the rest

When the user starts their computer the peripherals switch on

## Computer off - Everything off

First socket always on other sockets controlled automatically

When the user shuts down their computer the peripherals switch off

**'Around two thirds of the energy used by a mobile phone is lost when it is unplugged after charging but the charger itself is left in a live socket.'**

**(Vice President of Environmental Affairs at Nokia)**

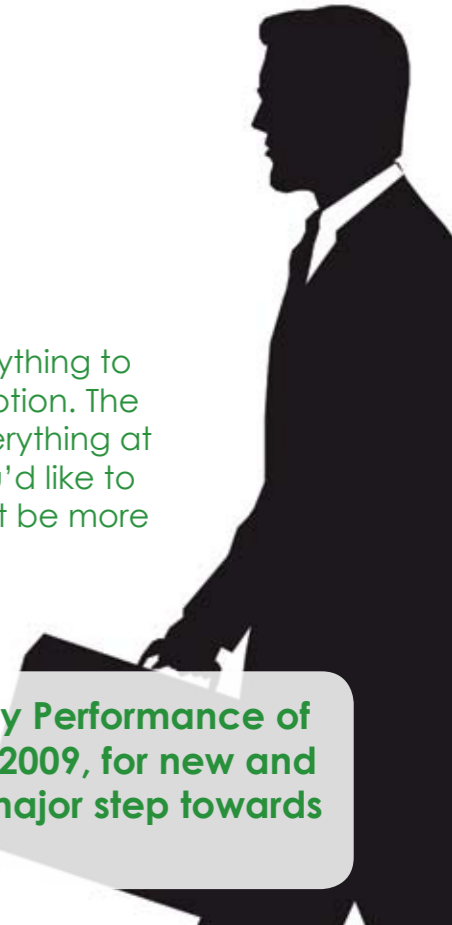
### Benefits

- Cost-effective
- Self-contained
- Does not rely on the user to turn off the power
- Power box can be built to your own specification
- Can also control on-desk sockets

### Why use Elsave Bronze?

If you want to go green on a budget, but don't want to leave everything to your staff by installing Elsave Basic, then Bronze could be a good option. The staff can initiate a PC shut down then walk away, knowing that everything at the desk will be switched off automatically once the PC is off. If you'd like to take control out of your staff's hands completely, Elsave Silver might be more appropriate.

**The implementation of the EU Energy Performance of Buildings Directive (EPBD) from Jan 2009, for new and refurbished buildings, is seen as a major step towards meeting Kyoto Agreement targets.**



# bronze

# off



on



Software controls the PC startup & shutdown schedule

Server application (running on suitable server)



Monitor connected to underdesk controlled socket

Schedule  
On 09:00  
Off 17:00



Workstation PC connected to first socket running schedule software

The PC automatically wakes each morning, and the remaining sockets switch on.

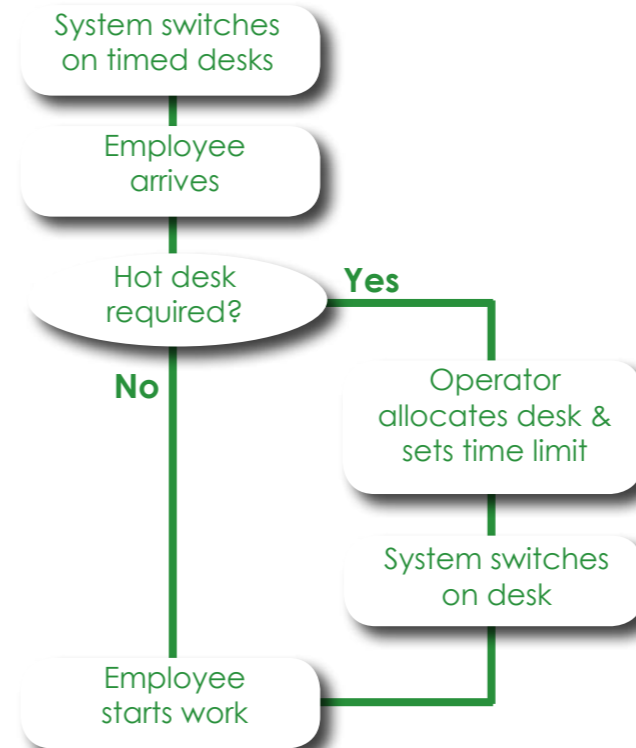
The PC automatically hibernates each evening, and the remaining sockets switch off

off

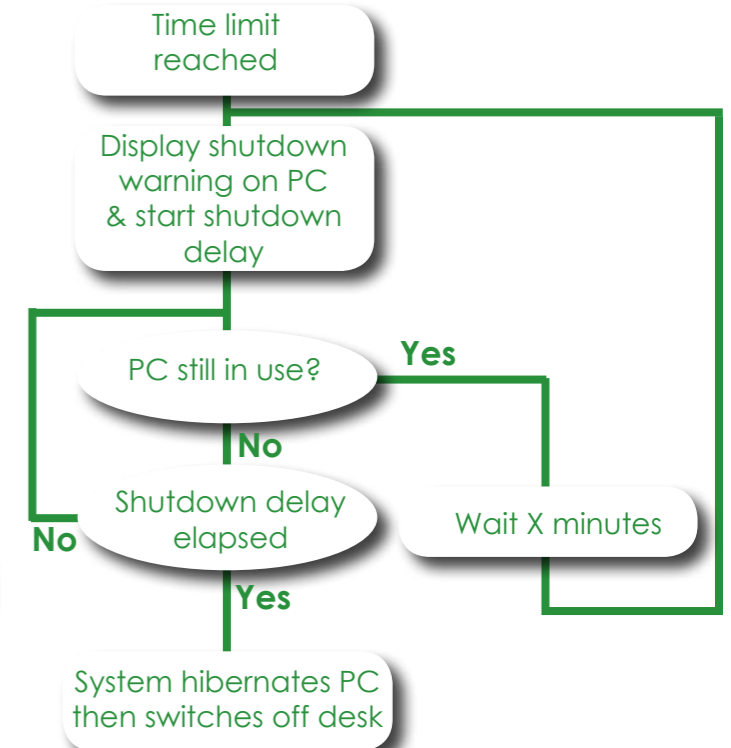
### Benefits

- Fully automatic control of PC and peripherals
- Computer carries on each morning from where it left off the night before
- Out-of-hours events (e.g upgrades) can be scheduled
- Holidays can be allowed for
- Wake up on remote connection is possible
- PC can be shutdown instead of hibernate if required

### At start of working day...



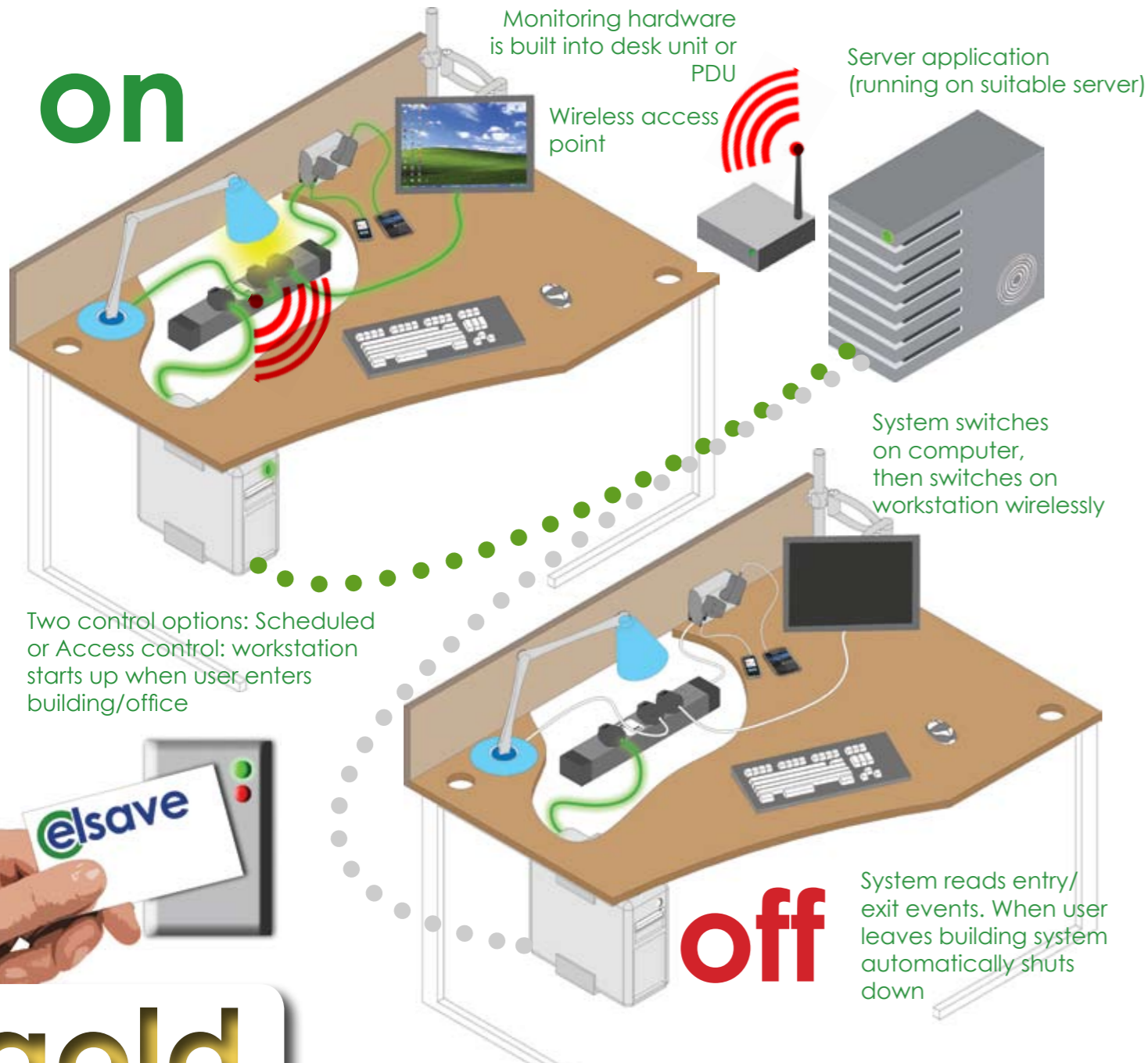
### At end of working day...



silver



# on



# off

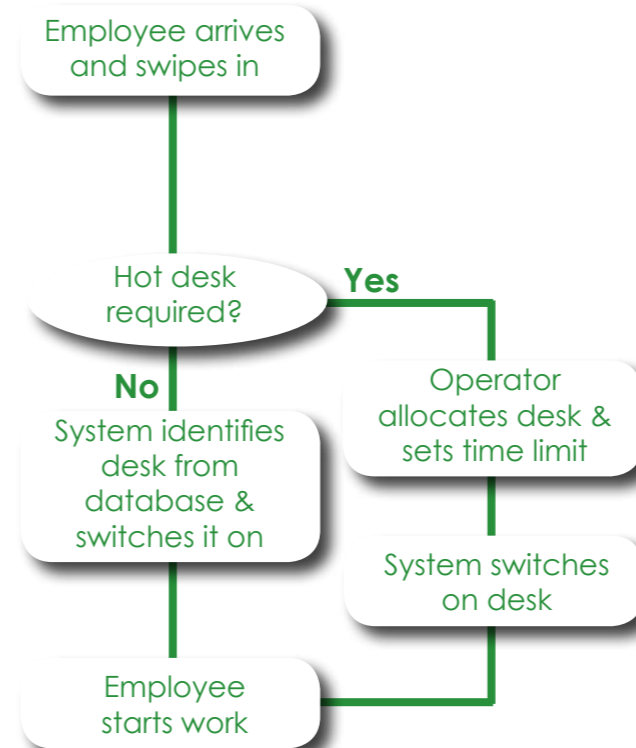
# gold

## Benefits

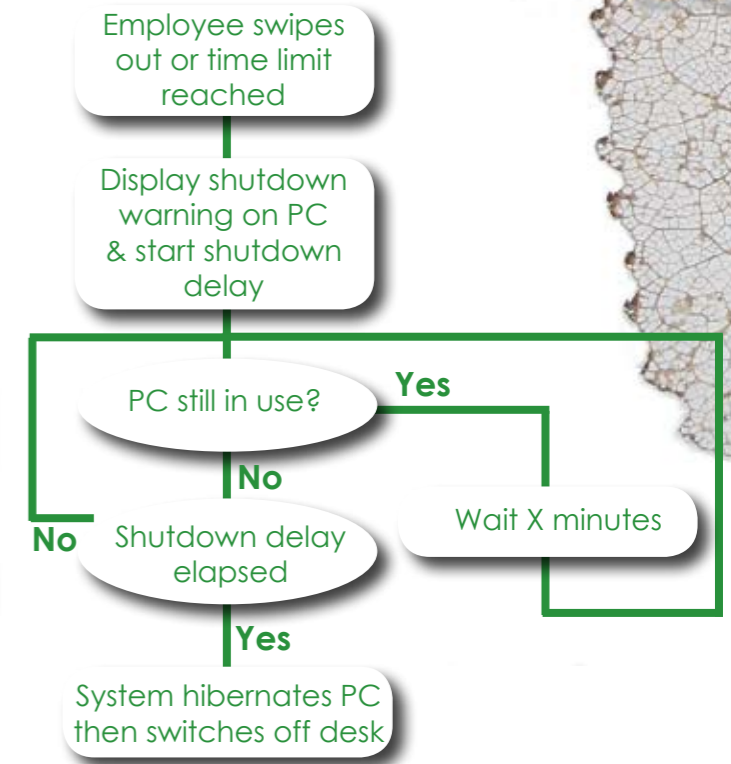
- No need to adjust a schedule for annual leave or sickness with access control
- Fully automatic control of PC and peripherals
- Out-of-hours events (e.g upgrades) can be scheduled
- Accurately measures the power consumption in the office environment

- Proves that energy-saving measures are having an effect
- Uses alarms to pre-empt problems & prevent a crisis
- Detects unauthorised use of power sockets
- Manual override available

## At start of working day...



## At end of working day...



## Monitoring features

Monitors voltage, current, power & kWhr down to desk cluster level.  
Genuine metered values; not estimates

Data can be viewed as live trend graphs from any web browser.

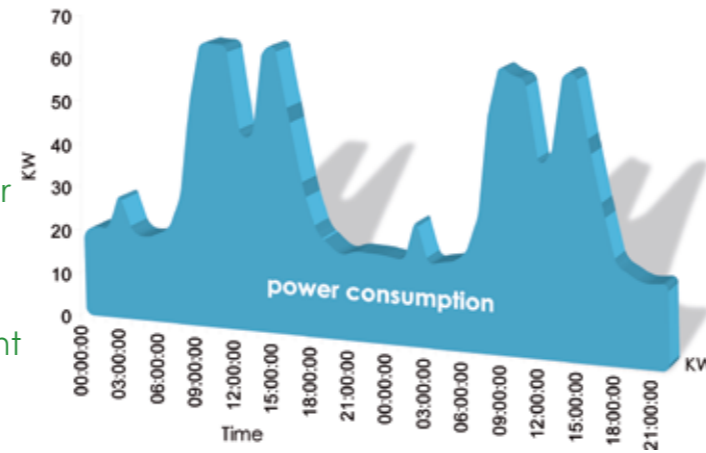
Data is collated wirelessly by the server

Historical data is recorded & can be exported for use in other packages.

Upper & lower alarm limits can be set for all recorded parameters & alarm events can be sent electronically.

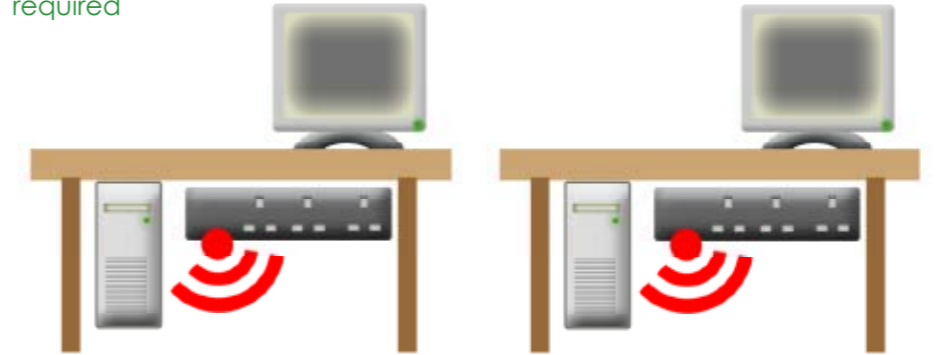
## Summary

- Direct savings
- Money and CO2
- Extended life of equipment
- Consequential benefits
- Improved environmental action and PR
- Reduced fire risk
- Saving in air-conditioning

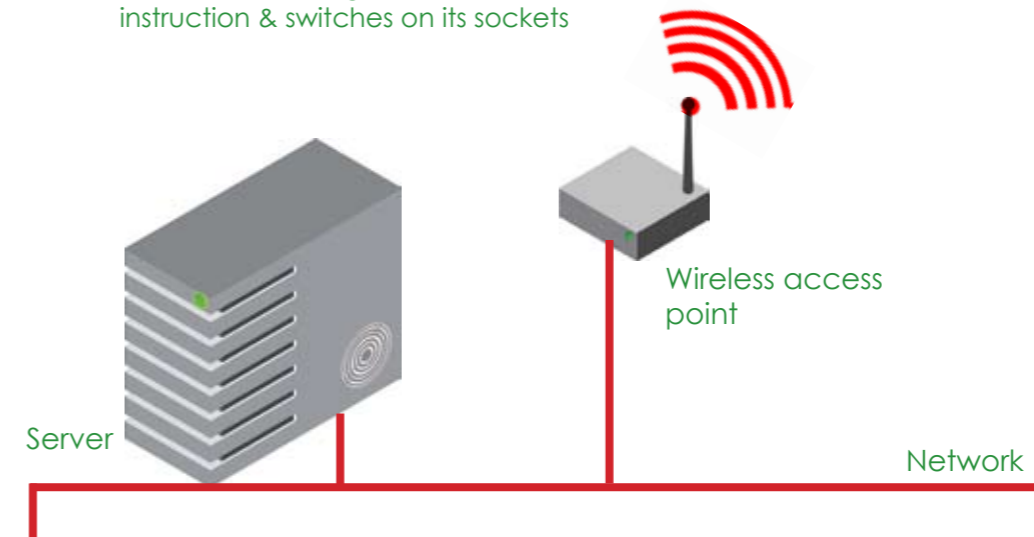


## Mesh wireless network

The wireless link has two purposes:  
Switching the sockets on & off remotely from the server application  
Transmitting energy data back to the server from each workstation  
Bespoke wireless system that will not impact on any existing WiFi network  
Does not carry company information and so is not a security risk  
Uses mesh network technology to reduce number of access points required



- An instruction (e.g. 'switch on sockets') is sent from the server to the wireless access point
- The message is transmitted wirelessly to all modules in range
- The message is re-transmitted by these modules and received by other modules further away
- Finally, the message reaches the intended module, which acts on the instruction & switches on its sockets



gold

**Q: How much can I save?**

A: Elsave can reduce the energy consumption of a typical desk by as much as 75%, compared to leaving the equipment at the desk fully powered for 24 hours per day, 7 days per week. This figure is based on a desk comprising just a typical desktop PC with single LCD monitor and no other equipment connected.

**Q: What factors affect the savings?**

A: Naturally, the actual savings that you experience will depend on many factors, such as the power consumption of the equipment; the number of other devices on each desk (like phone chargers, lamps, speakers etc); the hours that the employees normally work; and the effect of any energy-saving measures that you have already taken.

**Q: How long before Elsave has paid for itself?**

A: Achieving savings like those shown above should provide a return on investment in well under one year for Basic, Bronze or Silver solutions.

**Q: Which Elsave solution is right for me?**

A: If you require power monitoring then Elsave Gold is the system you need. If not, there are three different products to choose from with differing levels of automation. If some of your employees leave their PCs on at night, then Elsave Silver will ensure that they are all shut down. If all of your employees always shut down their PCs, then Elsave Bronze may be enough for you. Finally, if your budget won't stretch to any form of automated solution but you still need to make steps towards a greener office, Elsave Basic is a good start.

**Q: Do all Elsave products qualify for the ECA?**

A: The ECA only applies to monitoring systems, not to control systems, so Elsave Gold's monitoring features allow it to qualify for the ECA.

**Q: What if I'm using laptops instead of desktop PCs?**

A: All Elsave Solutions can work with laptop computers, but the payback time may be longer because the main consumer of power is removed from the desk at the end of each day, reducing the potential savings. Please note that there may be special requirements for Elsave Bronze & Elsave Silver for use with laptops.

**Q: Does Elsave Gold save more energy than Elsave Silver?**

A: Elsave Gold with Access Control can save slightly more energy than Elsave Silver because the desks are only switched on precisely when the employee arrives & leaves, rather than basing the startup & shutdown on a schedule. However, the most significant benefit of Elsave Gold is the power monitoring.

**Q: Will Elsave make my business greener?**

A: Just as important as the financial rewards for installing Elsave are the ecological benefits. According to the Carbon Trust, one unit of grid electricity releases over 0.5Kg of CO2. By saving 75% on your desk energy consumption you will save 75% of the corresponding CO2 emissions too, which could amount to over 300Kg of CO2 per desk per year.

**Q: How can I prove that I'll make savings before installing elsave?**

Because every office is different, the best way to find out how much you could save is to install the product. Why not talk to us about a small scale trial that will prove the savings and give you the confidence you need to roll out Elsave across your whole business?





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elsave is an Office Electrics' product.

For all your power and data cable management needs please visit:  
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