

Operational optimisation measures for companies: Homeoffice



Table of content

Homeoffice

Reduce energy consumption in unused rooms3

Working in your home office5

Reduce energy consumption in unused buildings and rooms

Well-planned implementation of home office working for your employees will cut energy consumption if you reduce the operating levels of your heating, ventilation, lighting and IT equipment at the same time.

Action

Reduce the room temperature and switch off all unnecessary equipment that consumes electricity when the building or parts of it are not in use.

Requirement

Your employees work from home offices, and the building (or individual areas and storeys) are standing empty.

What to do

- Plan your home office operation, and define which parts of the building do not need to be used. Your company's technical department will assist you with this.
- Combine vacant areas (see overleaf) and check whether the heat and air distribution can be controlled individually.
- Turn the heating and ventilation down:
 - Reduce the room temperature (12 to 18 °C).
 - Reduce airflows.
- Switch off equipment that consumes electricity and optimise the intake of natural air:
 - Switch the lighting off completely.
 - Disconnect electrical, electronic and IT devices (printers, WLAN routers, WLAN repeaters, vending machines, water dispensers, etc.) from the power supply (no standby mode).
 - Close doors, gates and internal windows in the building.
 - When the sun is shining in directly during daytime in winter, roller shutters and louvres/blinds should be opened. They should close tightly when the sun is not shining.



Costs – effort

- A specialist can implement a reduction programme for heating and ventilation in half a day. For small buildings (if you have a little technical skill), you can implement this setting yourself.
- Lowering the room temperature by one degree Celsius will reduce the energy consumed for heating by 6% to 10%.

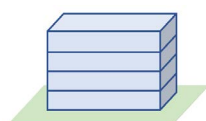
Please note!

- Home office working will cut your costs and save energy. However: you are passing part of your energy consumption on to your employees. It is best to deal with this issue in the expenses regulations. For example, you can compensate “passed-on operating costs” with a monthly flat-rate payment (see the additional information, link: “Home office and expenses in Switzerland”).
- In the fact sheet “Working in your home office”, your employees will find suggestions on how to keep their energy costs down when working from home.

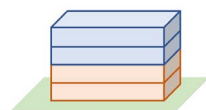
Additional explanations

Variants for reduced operation

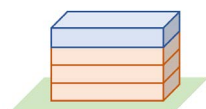
To achieve lower room temperatures in individual parts of a building, you must combine these rooms to create a “cool unit”. Also, the heating system must support individual controls of this sort in the building. This is not always the case, especially in older buildings.



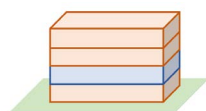
Ideally, you should set the entire building to “economy mode”. This is technically the simplest solution, and it produces the best effect.



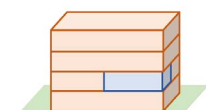
If you continue to use parts of the building, combine the unused areas into one unit.



If only one storey is to be “cold”, the top floor is the best choice in terms of saving energy.



If the top floor has to remain in operation and an intermediate floor is standing empty, the temperature here should only be reduced slightly (to about 18 °C). Reduce the airflows, and consistently switch off the lighting and electrical equipment.



It is technically difficult, if not impossible, to reduce the temperature in one single area of an intermediate floor – and the savings from this are very low. But even in this case, switching off all power consumers is effective.

Define the right room temperature

Temperature reduction is influenced by factors such as building design, the heating system, and the usage and position of the rooms. In office buildings that are not used for lengthy periods, you can reduce the room temperature to between 12 and 14 °C. If you alternate usage of the building – heated from Monday to Thursday but at reduced temperature from Friday to Sunday – a reduction to between 16 and 18 °C should be a practicable solution. In both cases, observe how the building behaves (humidity, condensation) and how long it takes for the rooms to become “warm” again after a reduction.

Ventilation

Ventilation is often forgotten when considering how to reduce energy consumption. But reducing the airflows to meet effective demand actually opens up important potential for savings.

Organisational aspects and communication

Astute organisation of home office operating mode is just as important as the technical measures. Control workplace occupancy so that all the employees on one floor are working from their home offices – or on another level of the building. That allows you to shut the whole floor down completely. Or: launch a regular home office day for the entire workforce on Fridays – so you can already put the whole building into “economy mode” on Thursday evening.

Additional information

- Information sheets on operational optimisation for practical use
 - [Heating 02: Reduce the temperature at night](#)
 - [Ventilation 01: Adapt operating times](#)
 - [Miscellaneous 02: Working in your home office](#)
- [Energy manual for caretakers](#), SwissEnergy, 2022
- [Home office and expenses in Switzerland – an overview](#), Handelskammerjournal (Journal of the Chambers of Commerce) 2021

Working in your home office can be pleasant without wasting energy

There are plenty of steps you can take in your home office to save energy and cut costs. They all add up to a valuable contribution to the fight against energy wastage.

Action

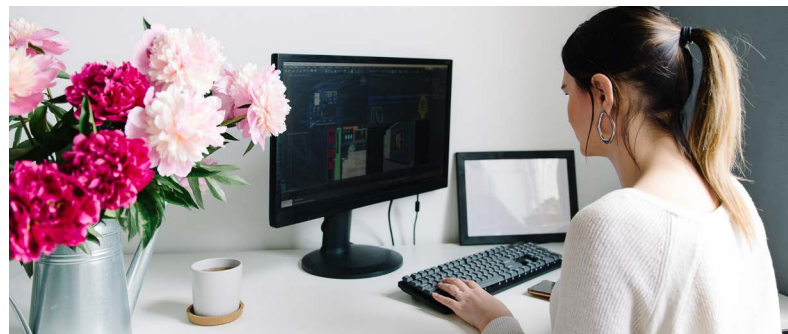
Be aware of how you use energy, and switch off all unnecessary equipment that consumes power.

Requirement

You work from your home office and you want to save energy and cut costs.

What to do

- Close the room door so as to retain the heat in the room where you work.
- Ventilate regularly. Open the windows fully – but only for short periods (see page 2).
- A small workstation lamp provides optimal lighting for your home office space.
- Switch the lighting off as soon as sufficient daylight is available.
- Switch computers, screens and printers off completely during your lunch break and in the evening.
- Always charge mobile devices with the cable, not with the wireless charging pad.
- If possible, use the internet with a cable connection (Ethernet etc.), not with a wireless system (WLAN, G4 or G5 mobile network). Cable solutions are also faster and more secure.
- Only switch the printer on when you need it. Laser printers in particular cause high standby losses.
- Check whether you can switch your router off completely at night – between 11:00 pm and 5:30 am, for example (see page 2).
- Activate the energy-saving function on your office equipment (see page 2).



Costs – effort

- An average household has standby consumption of 25 to 35 watts, causing superfluous electricity costs of around CHF 40 per year. Typical standby consumers in an office are notebooks (1 to 3 W), screens (1 to 2 W), modems (7 W) and chargers or power units (0.1 to 3 W, depending on their age).

Please note!

- In home offices, the breaks are often the times when most energy is wasted. Only heat up the amount of water you actually need for your tea or instant coffee (one cup or, better, one whole Thermos flask). Always use the electric kettle to do this – never a pan. Switch your espresso machine off completely after using it. Do not wash up manually; always use a fully loaded dishwasher. Incidentally: when you wash your hands, cold water is perfectly adequate for a clean and hygienic result.

Additional explanations

The right room temperature

For home office working – i.e. office work – the Swiss Society of Engineers and Architects (SIA) recommends an indoor temperature of 21°C and relative humidity of 30% to 60%. If your home is heated to between 19 and 20°C in winter (or if you actively reduce the temperature), note the following points:

- Put on a warm pullover and move about or exercise regularly during breaks from work.
- Close the door to your home office so as to save the valuable “waste heat” given off by your body, the lighting and all the office equipment that uses electricity.
- When the sun is shining, open the window shutters and roller shutters to let the natural heat come into the room.

Ventilate regularly

You must ventilate your workspace regularly, even though this requires energy. This is because “used” air with a CO₂ concentration of more than 1000 ppm has a significantly negative effect on performance. Ventilate five times a day: before you start work, during your morning and afternoon breaks, after lunch, and after you finish work. At these times, open the window fully for two to three minutes. In apartments or homes with a ventilation system (comfort ventilation), additional ventilation through the windows is not necessary. Half-open or tilted (bottom-hung) windows increase energy consumption without noticeably improving the air quality.

Lighting

During winter, artificial light is often needed in the mornings until there is sufficient daylight to work. Modern lighting systems in offices will then switch the lights off automatically. At home, you have to switch the lights off yourself – something that’s easily forgotten. One LED desk light is often sufficient for working at home. It requires only 3 watts – about five times less electricity than an LED ceiling light.

Switch IT equipment off completely

Computers, screens and printers are running round the clock in many home offices. That means they consume precious energy in standby mode. Although this only costs an individual person a few francs a year, the IT devices in Switzerland’s 3,9 million households cause standby losses totalling 180 GWh – equivalent to about 6% of the power generated each year by the Beznau 1 nuclear power plant. You can very easily prevent some of this pointless energy wastage: switch all your devices off during lunchtime, in the evenings and at week-ends, and disconnect them from the mains with the help of a power strip (switchable power bar).

Switch routers off at night

Before you switch routers off at night, check whether your internet provider performs security updates during this period. Also, note that many household devices (telephones, surveillance cameras, smart lighting and heating systems, smart home devices, etc.) do not function without a router, or their function is restricted.

Activate energy-saving functions

You can go to the system settings to activate the energy-saving function for your computer, monitors (screens) and printers. The software menus for this purpose are often self-explanatory; the operating system and the individual hardware determine what is possible. Please note:

- The screensaver is a relic from the past. It is technically superfluous, and it increases power consumption by up to 50%.
- Reduce the screen brightness on your monitor or notebook to 70%. This will generally be sufficient.
- Activate standby mode on all devices after 5 minutes without activity.

Additional information

- [Efficient office equipment](#)
- [Standby mode](#)
- [Everyday ways to save energy](#), SwissEnergy, 2022
- [Energy efficiency in the household](#), SwissEnergy, 2021

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