

# Save energy at home

Track, seal, shut off and turn down



Tips for energy-use awareness

## Electricity and other energy

Homes use energy for heating, hot water, electrical components and air conditioning.

- We can draw energy from electricity, oil, district heating, wood, heat pumps, etc.

Remember to review your energy consumption from time to time. Drains on electricity are easy to find if you know where to look! This pamphlet includes lots of useful suggestions.

## Electricity for appliances

Electricity not used for heating, cooling or hot water is called household electricity and is used for:

- Lighting, TV, computer, household appliances, refrigerators, freezers, washing machines, dishwashers, etc.

By choosing energy-efficient appliances, you can reduce your energy consumption. Make a habit of checking energy labels before you buy something new.

## When do you start the dishwasher?

Electricity must meet many needs in our society. If many people want to use a lot of electricity at the same time, a short-term power shortage can occur. Did you know that electricity must be produced at the same time that it is consumed? Save energy by charging your car or starting your washing machine at off-peak hours in order to help us all reduce the risk of power shortages.

Choosing energy-efficient appliances and lamps (low wattage) will save you money. Remember to always check the energy label.

## Unnecessary electricity on standby

Standby means waiting mode, or 'always ready'. When your TV is in standby, it draws electricity even while you are not watching, and the same applies for computers, radios, etc.

Find appropriate ways to eliminate standby electricity consumption. Power strips with switches are one way.

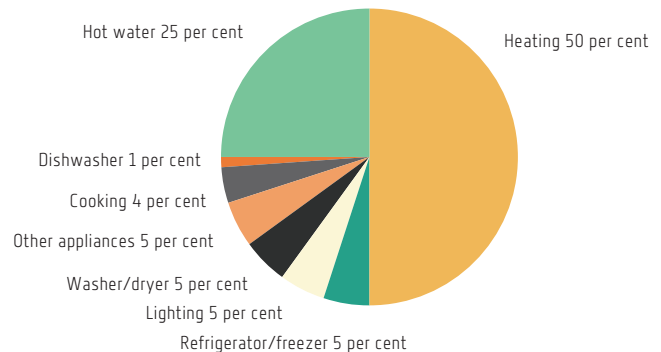
## Unnecessary electricity

Lamps left on in empty rooms, transformers and chargers left in the socket all day use electricity unnecessarily.

If something creates warmth, it is drawing electricity! If chargers of various types or lighting transformers create warmth, be sure to unplug them!

## How is your energy used?

Whether you live in a house or an apartment, among other factors, impacts your energy situation at home and to what extent you can impact your energy use. Some energy savings at home will benefit your bottom line, and all savings will make a big difference overall - we must work together!



## Unnecessary electricity on standby

Whether you rent or own your own home, mansion, castle or cottage, you can save electricity by improving your energy-use awareness. Do you know what is draining electricity in your home and how to save energy? Take the test and see how you measure up.

With some practice, your energy-use awareness will become second nature, so that you can take control over your energy costs! We hope that you will find plenty of useful suggestions in this pamphlet! Best of luck!

### 1 We know...

- A We know how much electricity we use.
- B We know how much other energy we use - district heating, pellets, etc.
- C We know how our electricity use affects the climate and the electricity system.

Always  
Rarely  
Never



### 2 Heating

- A We have max. 16-18 °C in the bedroom.
- B We have max. 18-20 °C in other rooms.
- C We have sealed doors, windows, cat doors and attic hatches for winter.
- D We furnish so that heat can circulate.
- E We ventilate briefly and efficiently.
- F In summer, we have energy-efficient sun blinds and no need for AC.



### 3 Hot water

- A We take short showers.
- B We have installed energy-efficient taps and shower heads.
- C We avoid running water when washing dishes and brushing teeth.
- D We do not have dripping or leaking taps.



### 4 Household electricity

- A No appliances are in standby mode.
- B We unplug chargers that are not in use.
- C We start the dishwasher and washing machine when they are full.
- D We use eco mode.
- E We hang-dry laundry as often as possible.
- F We keep track of the temperature in the fridge and freezer and defrost food in the fridge.



### 5 Efficiency

- A We monitor and control the charging of our electric car/plug-in hybrid day and night.
- B We spread out electricity-intensive activities during the day - we don't cook, use the dishwasher or dryer, use the sauna and bake bread all at the same time.
- C We change the settings of all electrical appliances so that they do not turn on between 5 and 7 on cold evenings during winter months.
- D We adjust our electrical heating during the daytime and night to provide big benefits for the electricity system.



## Does eco mode really work?

For washing machines and dishwashers, it is the heating of the water that 'costs' most energy, not the energy used to turn the motor, i.e., the time during which the machine is running. The length of time and the temperature of the water needed for a "clean" result is determined by how dirty the dishes or laundry are.

The various washing modes are designed to always give the same result, i.e., clean dishes/laundry. An estimated 1.4 kWh is needed for 4 kilos of laundry at 60 degrees, and 0.6 kWh if you wash at 40 degrees. By selecting a lower temperature, running a full machine and using eco mode you will save a lot of electricity.

For an average family, the energy consumption for laundry is about 200-300 kWh per year.

## Habits and behaviours

### There is no right or wrong - everyone has different needs

Energy use differs between homes and families. Those who are elderly or ill, for example, may need to turn up the thermostat indoors - and that's fine. The key is to be an active energy user rather than a passive one.

That is, practice awareness regarding how much energy you use and for what purpose. Then, if you want to save energy, you know what is draining power! This pamphlet provides suggestions on where to start looking.

### Change habits before changing tech

Remember to always remove all unnecessary energy use before buying new appliances or a new heating system. Use the suggestions in this pamphlet and invest in educating yourself before buying new technology.

### Maintain equipment

Some things are always on and use electricity, such as refrigerators and freezers. They can draw more or less depending on their energy efficiency and how they are maintained.

### At home with Carlos and Maria

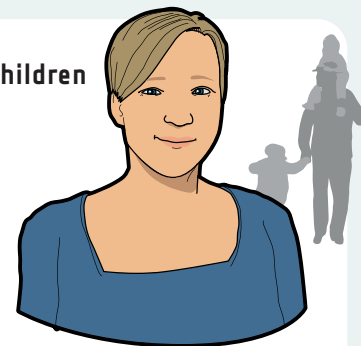
Various apps and meters allow you to track electricity usage in real time or see how it is used over the course of a day. Such tools allow you to see how much a particular product uses, helping you calculate your total energy use.

## Our energy use differs

Maria and Carlos are neighbours, and live in identical homes with the same heating system - direct electric heating with an air-to-air heat pump - but their energy use is completely different. What sets them apart is their behaviour, appliances (e.g., standby or not), windows, doors (leaks, proper ventilation), how they use heating and hot water, and how many people live together.

### Maria's family: two adults and two children

Maria's family doesn't reflect much over their energy use. They like it to be warm inside. The family likes to take long showers every day. They often forget to turn off the lights when leaving a room. When they come home, they switch on their TVs and computers, whether or not they are being used. Night and day, the TV, etc., are on standby.



**Annual energy needs: 20,000+ kWh**

### Carlos' family: two adults and two children

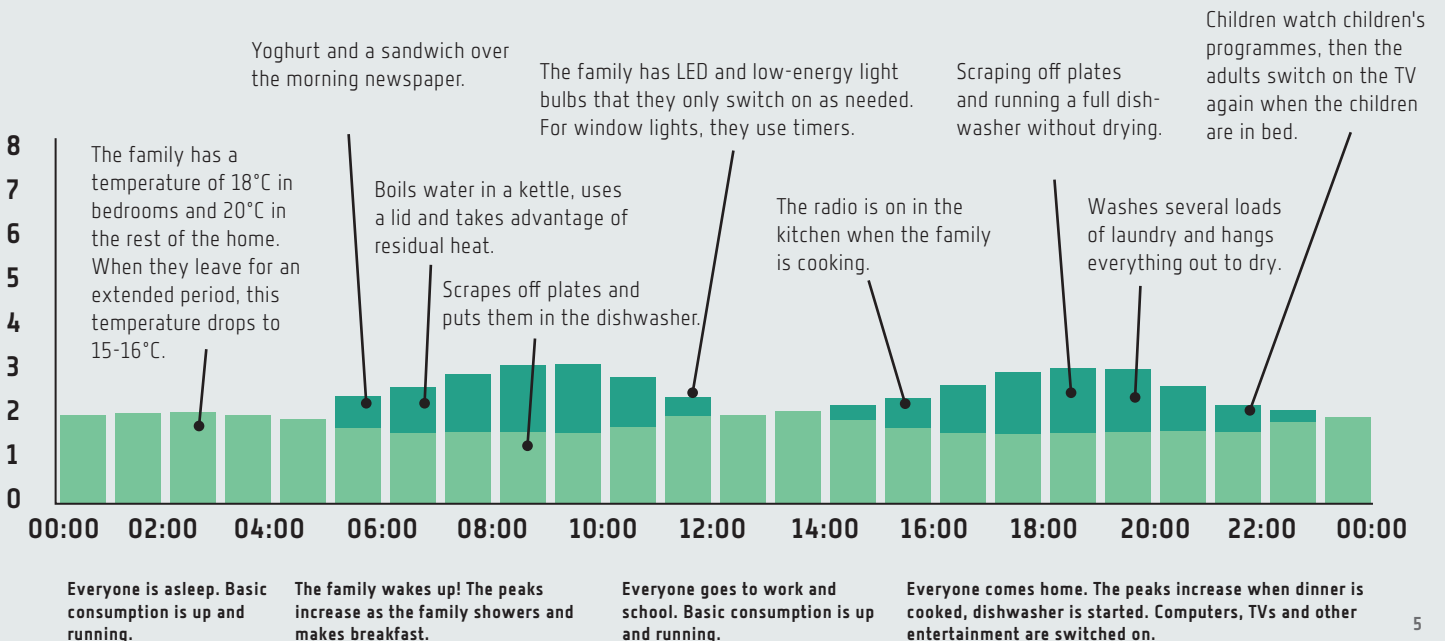
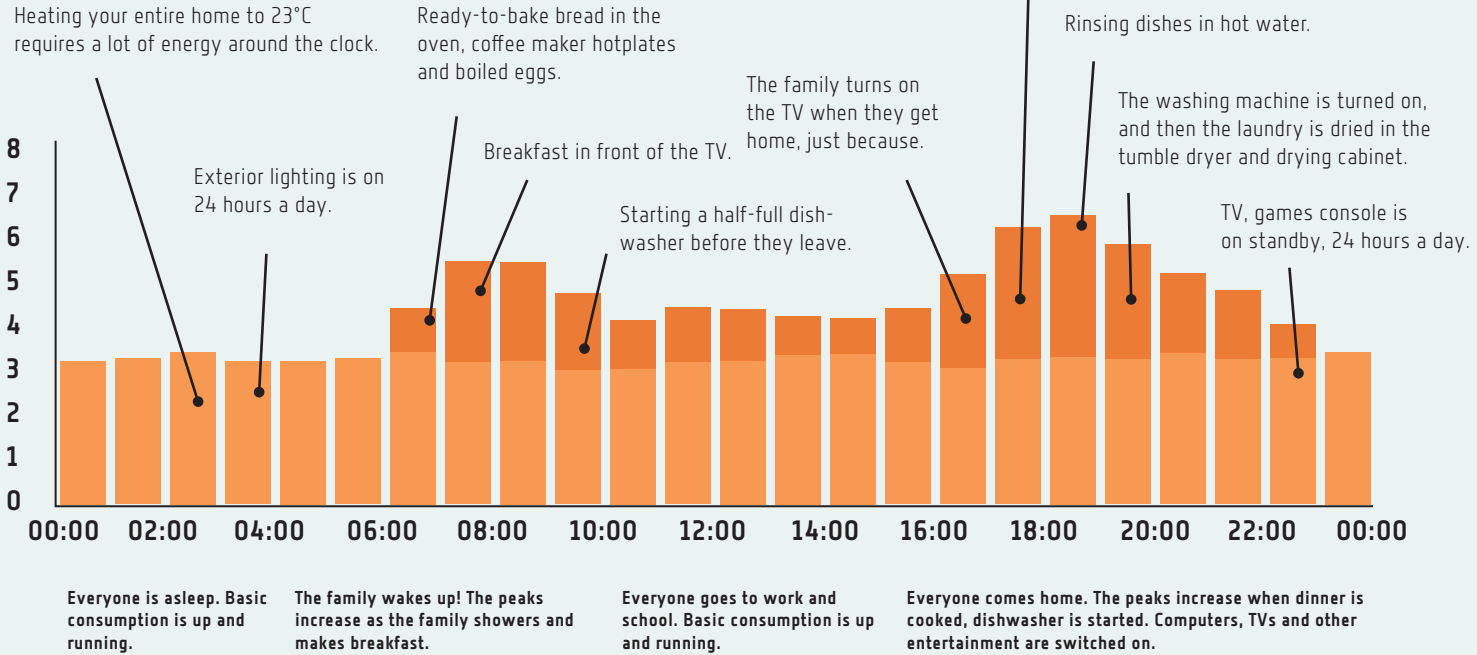
Carlos practices energy-use awareness. He has switched to LED lights and chosen energy-efficient appliances. He tracks the temperature in the house, as well as the temperature of the fridge and freezer. The family takes short showers, and runs the dishwasher or washing machine only when they are full. Laundry is hang-dried.



**Annual energy needs: approx. 11.000 kWh**

Basic consumption = the base of the graph represents what is always on: fridge, freezer, radiator, underfloor heating, clock radio, etc. A high basic consumption may be due to standby electricity or unnecessary lighting. Temporary use is shown as 'peaks'. These peaks become more numerous and increase in height the more appliances, such as TVs, computers, ovens, or irons, get turned on or the more lights are turned on.

## A day of different habits - hour by hour



## LIGHTING

### Turn them off when you go

- Switch off lights when you leave the room.
- Use LED bulbs, which draw four to five times less electricity than halogen bulbs.

## STOVE

### Cook efficiently!

- Use lids - an obvious fact that is easy to forget. You save 30% energy with the lid on.
- If you don't have an induction stove, try to use residual heat by switching off the stove before the food is ready!

## OVEN

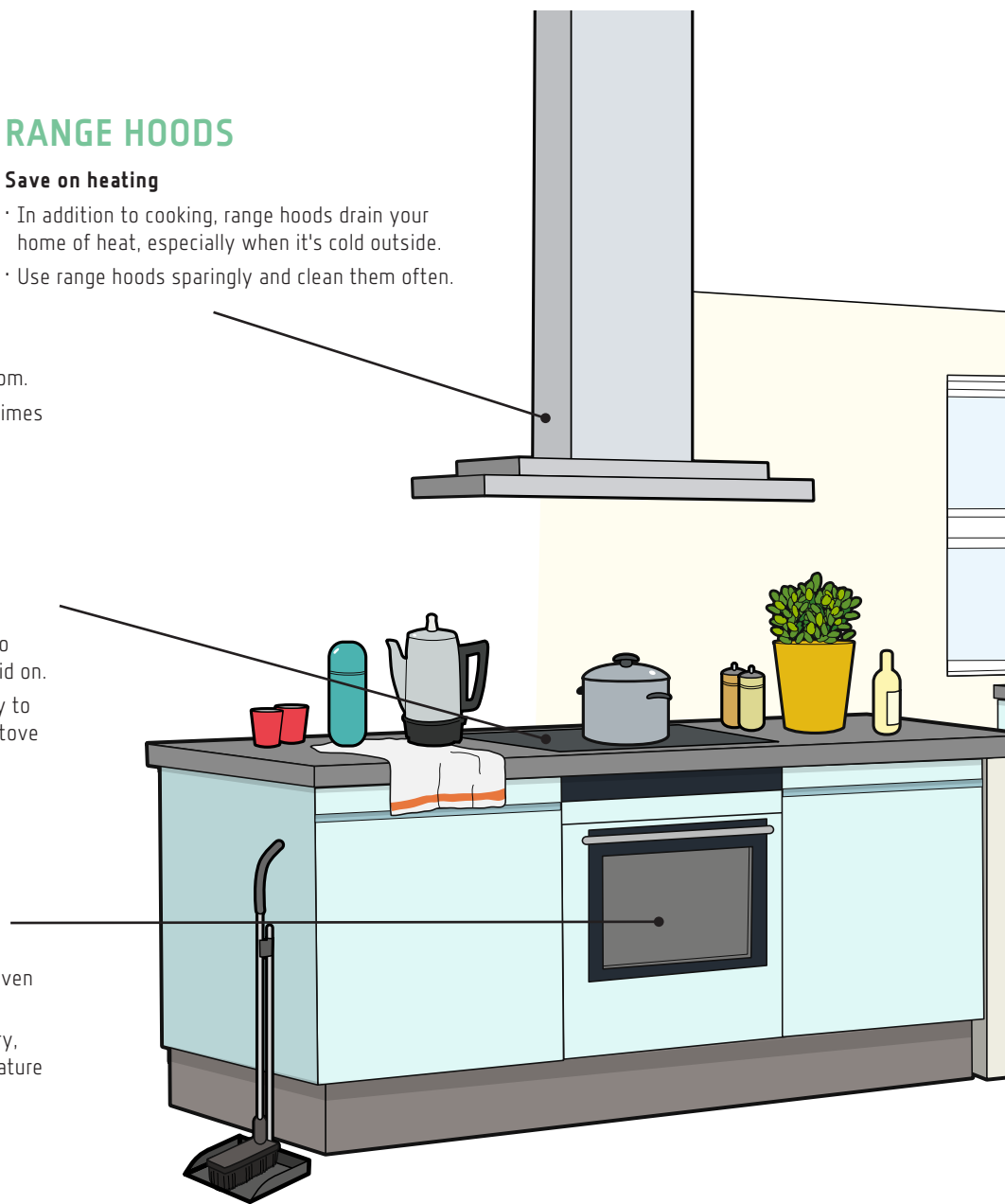
### Cook efficiently!

- Use residual heat by switching off the oven just before the food is ready.
- Only open the oven door when necessary, since each time you open it the temperature falls by 25-50°C.

## RANGE HOODS

### Save on heating

- In addition to cooking, range hoods drain your home of heat, especially when it's cold outside.
- Use range hoods sparingly and clean them often.



## Save more!

1

### Cold start

- Thirsty? Turn the tap to cold to avoid filling the pipes with hot water unnecessarily!

2

### Are you pouring money down the drain?

- If you wash your dishes under hot running water, you are pouring your money down the drain.
- Use a tub or dishwasher!

3

### Size matters

- If the hob is 1 cm larger than the pan, energy consumption increases by 20%.

4

### Smooth is best

- Use only pots and pans with a flat bottom. 0.5 mm of unevenness increases energy use by 25%.

## MICROWAVE OVEN

### Think small

- The microwave is a good option for warming small amounts of food.

## FRIDGE

### Taking care of the cold

- Don't let the cold escape, make sure the seal is tight and don't leave the door open unnecessarily.
- Recycle cold - thaw frozen food in the fridge.
- Do not put hot food in the fridge.
- Maintain the right temperature, +5°C is fine.

## FREEZER

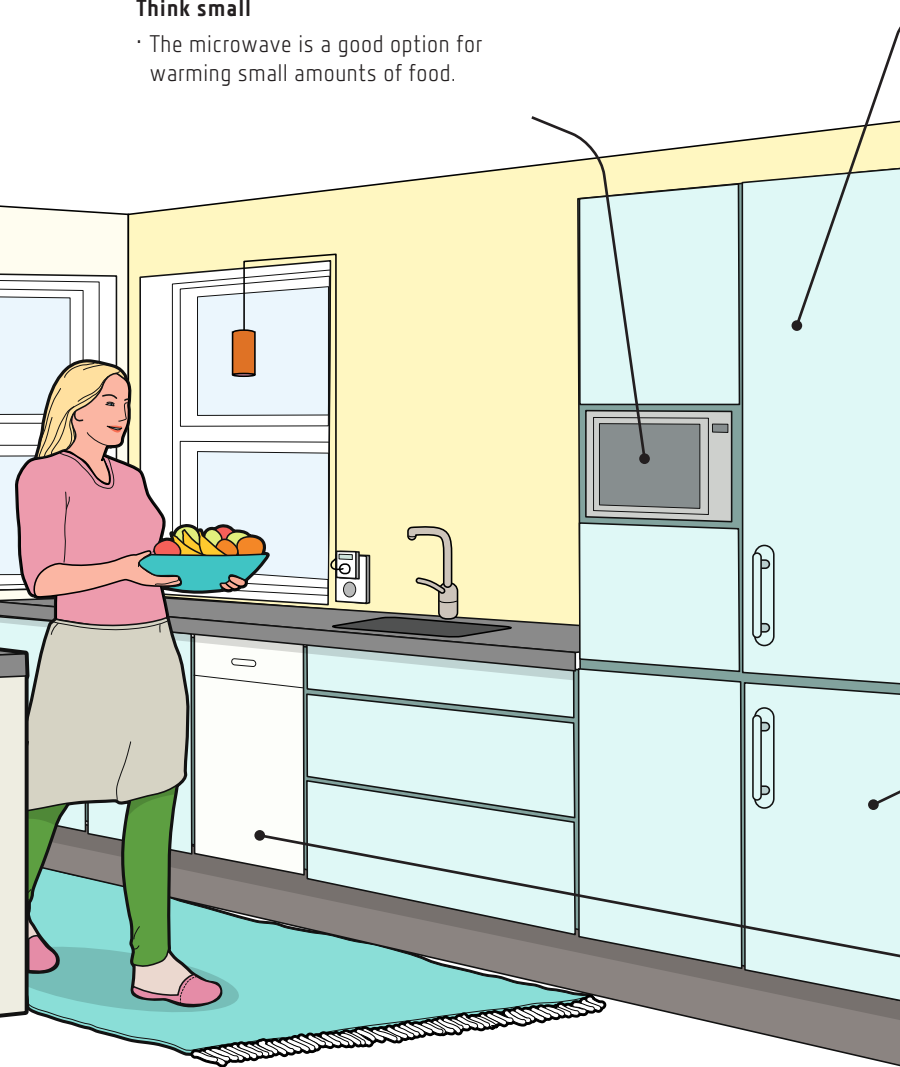
### Taking care of the cold

- Defrost at regular intervals, taking the opportunity to defrost in autumn so you can store food outside while defrosting.
- Keep the backside clean - dust on the back of your freezer increases energy consumption.
- Only open the door for a short time.
- Maintain the right temperature, -18°C is fine.

## DISHWASHER

### A real energy saver

- Use the right mode, preferably eco.
- If possible, switch off the drying feature.
- Run only full machines.
- Scrape plates instead of rinsing them.



5

### Moderation is best

- When making tea or just heating water, use a kettle. Do not fill it beyond what you need.

6

### Time for a refill?

- Pour coffee into a thermos to keep it warm until it's time for a refill!

7

### A bun in the oven?

- After baking, seize the opportunity to cook in the oven while it is still hot.

8

### All sealed up?

- Check that sealing strips are tight by placing a piece of paper between the door and the fridge/freezer. If the paper doesn't stick when the door is closed, it's likely to leak cold air. Or put a lit flashlight in the freezer - in a dark room you can see the leaks.

# Bathroom

## HOT WATER

### A brief shower is worth its weight in gold

- A short shower of five minutes instead of 15 minutes can reduce annual hot water needs by 500 kWh.
- Use a shower timer to keep track of how long you shower.

## LIGHTING

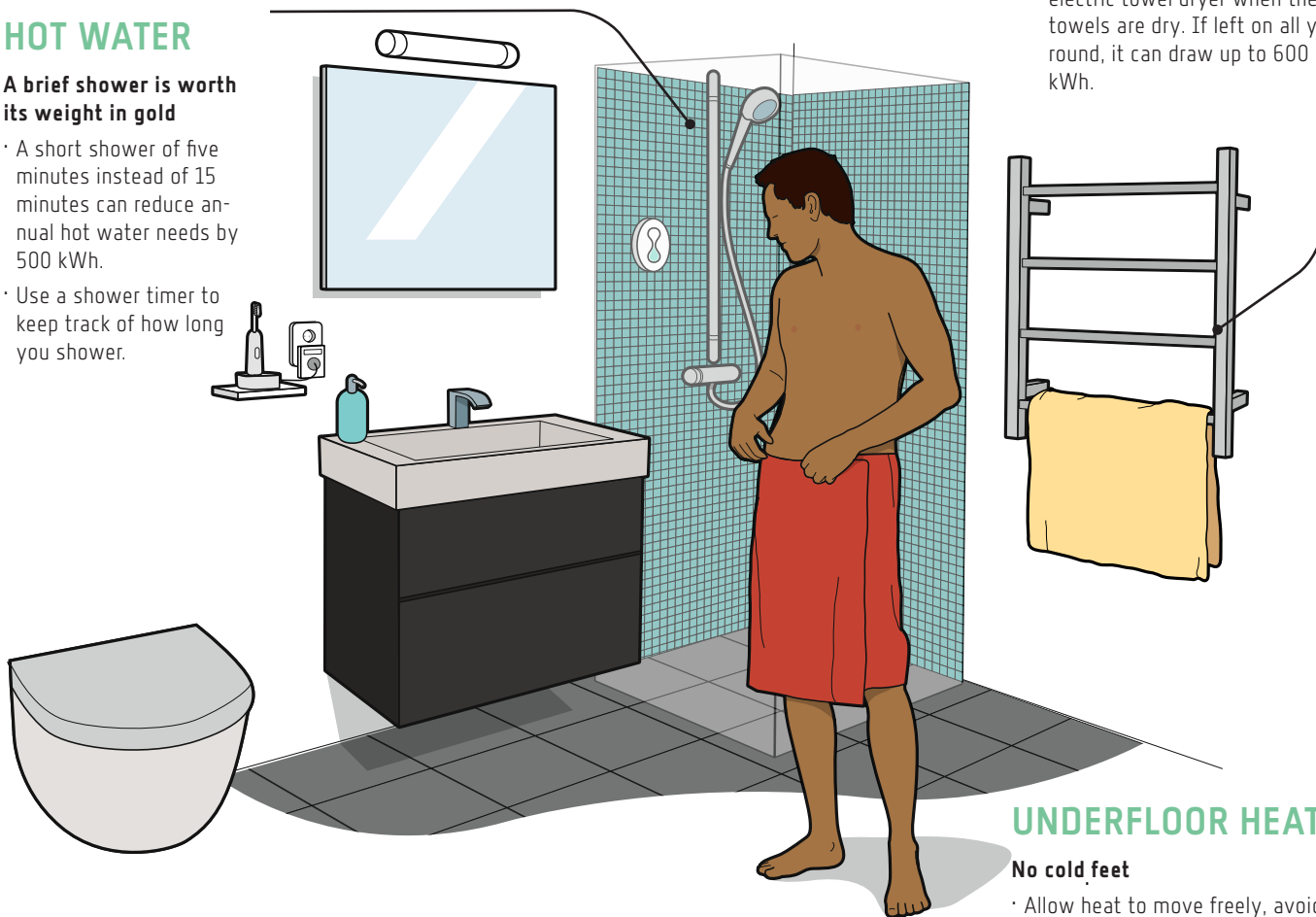
### A helping hand

- Timers, motion sensors and dusk switch all help you save energy by ensuring that lights only turn on when needed.

## TOWEL DRYER

### A warm feeling

- Remember to switch off your electric towel dryer when the towels are dry. If left on all year round, it can draw up to 600 kWh.



## UNDERFLOOR HEATING

### No cold feet

- Allow heat to move freely, avoid carpets and lots of furniture on floors with underfloor heating.
- Don't forget to switch off completely when not needed!

## Save more!

1

### Bad hair day

- Hair dryer, straightener, crimping iron, curling iron - sometimes nothing helps. Don't turn it on too early and be sure to switch off when you're done.

2

### Home spa

- Jacuzzi, sauna, solarium. Oh, how nice ... if you're buying a new home, be sure to consider energy efficiency.

3

### Happy brushing

- Try to use cold water.
- Switch off the tap when brushing.
- Unplug the electric toothbrush charger when it has finished charging.

4

### All sealed up?

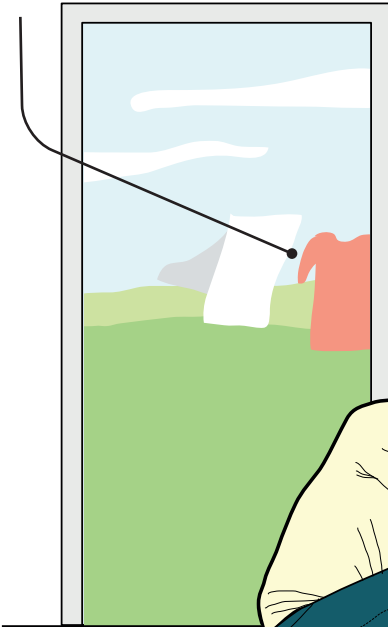
- If a tap leaks hot water in, e.g., a weak stream, you are pouring more than SEK 16,000 down the drain every year for no good reason.



## DRYING

### Climate hero for real

- Hang-drying laundry is always the most energy efficient!
- An electric dryer uses much more energy than a washing machine.



## DRYING CABINETS

### Outdated technology

- Drying cabinets, which do not have heat-pump technology, use as much electricity today as they did 30 years ago - a major energy drain!

## Dehumidifier

### Just in time

- A dehumidifier can be a good way to dry laundry. But ... set it to step when the laundry is dry, or use a timer.

## WASHING MACHINE

### Only full loads

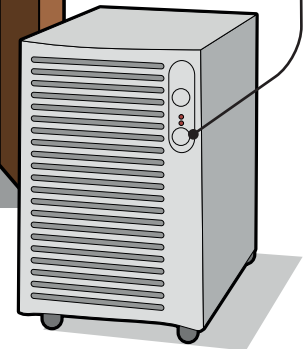
- Running washing machines with full loads saves energy - some machines can self-adjust programmes according to the amount of laundry.
- Extra spin cycles makes the laundry dry more easily.



## DRYER

### Half-loads are best

- It's easy to overfill your tumble dryer with too much laundry, so that more energy is needed to dry laundry. Check how your tumble dryer works.



## Save more!

1

### Does it crunch when you walk?

- Avoid hauling out the vacuum cleaner every time there is gravel in the hallway or crumbs under the table - keep a broom handy instead.

2

### A foul odour

- Cross-ventilate for a few minutes. The air is refreshed, but the house does not have time to cool down.

3

### Chill out

- Modern detergents wash just as clean at 40° as at 60°, so turn down as often as possible!
- Use the eco mode as often as possible.

4

### Just a waste

- Tumble dryers are inefficient, as only about half of the energy dries the clothes, the rest is wasted.

## Living room

### LIGHTING

#### Full throttle!

- Not all lights need to be equally bright. Put the right lamp in the right place and save energy.
- A dimmer not only gives a cosy feeling, but can often save energy for you! Ask an expert what you can do in your home.

### WINDOWS

#### Leaking like a sieve

- Regularly check seals and ensure that all windows are properly closed.
- Short curtains and blinds can help keep heat in and cold out - draw them at night.
- Old windows can be insulated with draught stoppers.

### FURNISHING RIGHT

#### Let air circulate

- The heater should heat the air in the whole room, not just behind the sofa or curtains.
- Insulate exterior walls with bookshelves, televisions or perhaps an old-fashioned wall hanging.
- Place an armchair against an interior wall to avoid cold drafts, and decorate with a blanket and cosy rug.



## Don't forget!

1

#### On when it's off?

- Even a switched-off lamp can draw power. Lighting transformers on halogen lamps draw current even when switched off. Unplug the cord.

2

#### Frozen stiff

- Electric blankets and mattresses, heating pads, electric foot warmers - we all have to get warm somehow ... but these draw electricity, so remember to set a timer!

3

#### Jingle bells

- Traditions and customs, what applies? Consider whether all the Christmas lights really need to go up next time.

4

#### Free air

- Many houses with direct electricity use air-source heat pumps. Make sure that the warm air is free to spread throughout your home.



## LIGHTING

### Red and green

- Christmas trees, electric candlesticks and illuminated Christmas stars add a dash of holiday spirit to your electricity bill at Christmas time.
- Use LED lights and timers for an eye-poppingly energy-efficient celebration.

## TELEVISIONS AND SET-TOP BOXES

### Use and enjoy

- Switch off when you're not watching - some people need TV for company, but for most the TV's an energy drain when it's on in an empty room.
- Bye bye standby. Really switch everything off when not in use: TVs, boxes of various kinds, etc.

## GAME CONSOLES AND SOUND SYSTEMS

### For fun's sake

- Do all your consoles really need to be switched on to watch TV? Try turning on only what you need.
- Don't use your games console to watch a film if you can do it instead with the standard features. The games console uses more electricity.

## Save more!

### 1 A hot tip

- To avoid a cold draft on your neck while watching TV, don't put your armchair or sofa next to the window.
- A blanket on the sofa keeps you warm.

### 2 Shelf warmers

- If you place the bookcase against the outside wall, it provides extra insulation against the cold!

### 3 Unsophisticated underfloor heating

- A pair of slippers or thick socks will quickly warm a frozen soul.
- A rug under the coffee table isn't bad either!

### 4 On sunny days

- Let the sun's rays warm you up in winter. But the blazing rays of the summer sun should be prevented from entering the window. An awning can help.

## LIGHTING

### Bright and safe

- With bright colours in the room, less lighting is needed!
- Use LED night lights.
- All lights should be easy to switch off.

## TOYS AND GAMES

### The world of technology

- Children's rooms are often filled with aquariums, electric guitars, car tracks and lots of rechargeable toys. We adults have given them all the electronics, so we must help them do the right thing!

## CHARGING STATIONS

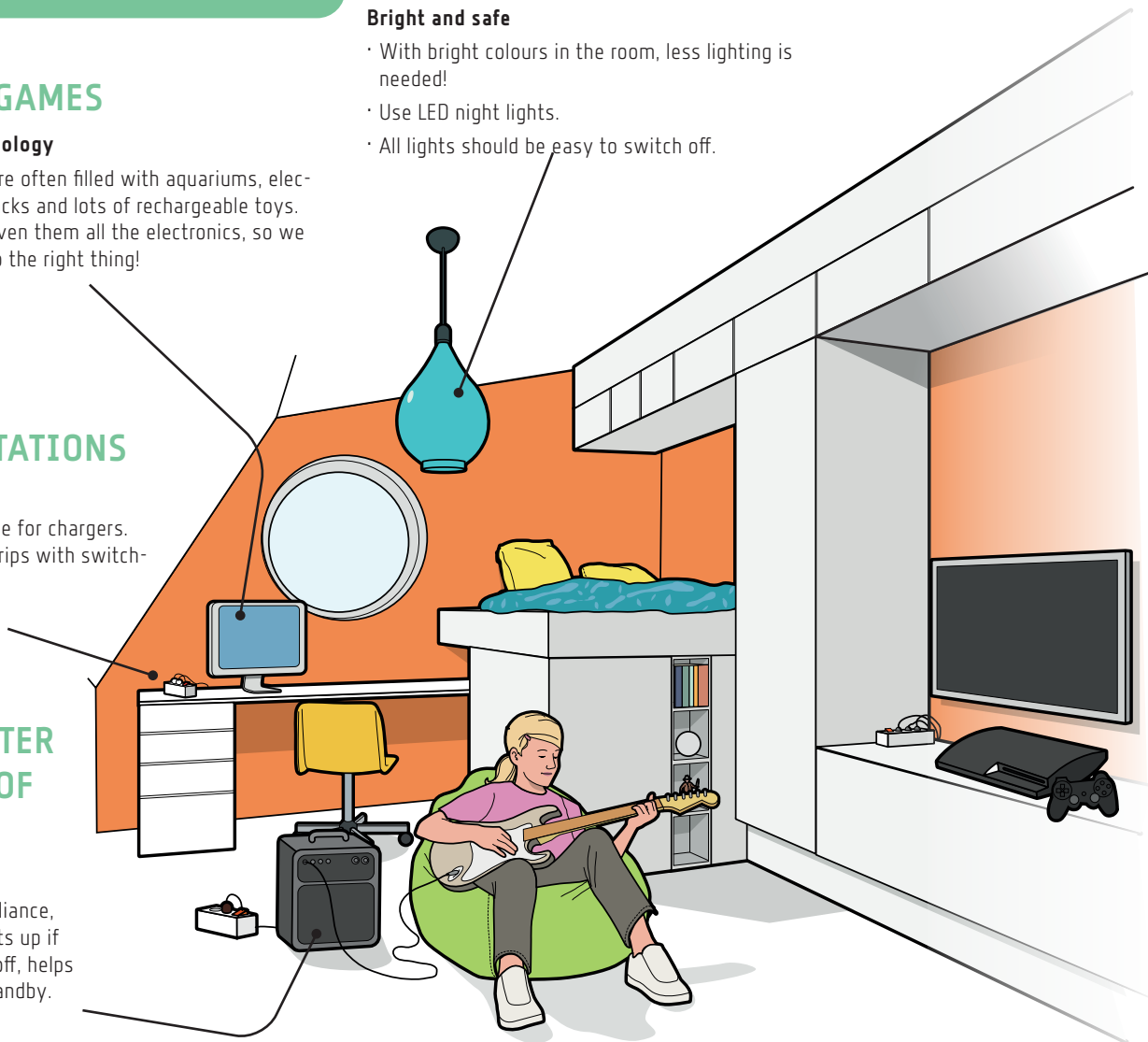
### Easy to do right

- Designate a good place for chargers. One or more power strips with switches may be needed.

## A TV, COMPUTER OR PRINTER OF ONE'S OWN

### A nook of your own

- A switch for each appliance, where the button lights up if you forget to switch off, helps your child to avoid standby.



## SMALLER CHILDREN CAN

- Switch off lights and turn off switches.
- Switch off the TV, radio, computer, etc. with one switch.
- Unplug the charger from the wall socket.
- Help the rest of the family to save energy - they are great at keeping tabs!

## TEENAGERS CAN

- Understand energy use and "pay as you go", put an energy meter in their room and read it together every week.
- Learn how much it costs to take a shower! Calculate how much it costs to shower for 5 versus 15 minutes.
- There are 75 million teenagers in Europe, and if they work together they can become eco heroes and contribute to a better world.

## LIGHTING

### Get enlightened

- Do not hang a lamp in any old place. With the right placement and choice of fittings, type of bulb, luminous flux and intensity, you will get a whole new experience and save energy. Ask for help in the shop!

## COMPUTERS AND ROUTERS

### Constantly online

- If you always need to be online when you're awake, maybe you can unplug at night!

## CHARGERS

### New heating system

- An unused charger left in the socket continues to use energy. Always unplug the cord.

## PRINTERS

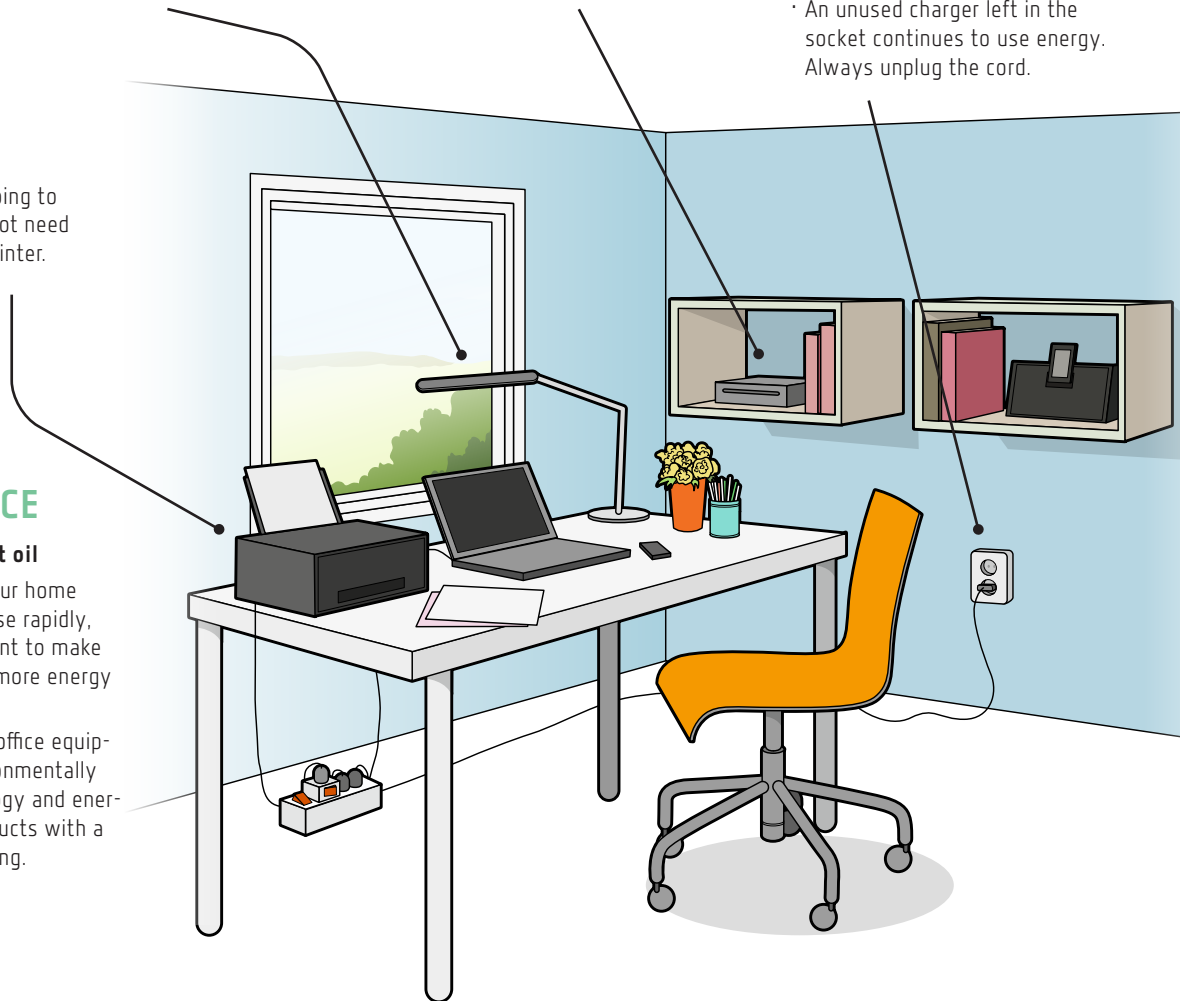
### All or nothing

- If you are not going to print, you may not need to turn on the printer.

## WORKPLACE

### Burning midnight oil

- Energy use in your home office can increase rapidly, and it is important to make your workplace more energy efficient.
- When replacing office equipment, buy environmentally friendly technology and energy-efficient products with a good energy rating.



## Save more!

1

### A screen to scream for

- A screensaver with moving images increases energy use.
- The bigger the screen, the greater its consumption.
- Run energy-saving mode with lower brightness for reduced electricity consumption.

2

### Office smarts

- Screens can constitute half of a computer's total energy consumption, use the power-saving function.
- Do not print unnecessarily.
- A desktop computer requires more energy than a laptop.
- Charge your phone so you always have between 20 and 80 per cent - do short charges during the day.

3

### Coffee break

- Put your computer in sleep mode when it's time for coffee.

4

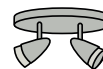
### Technophiles

- Do you love electric gadgets?! Love them with care and environmental friendliness by only turning them on when needed.

## LIGHTING

### On, off, on, off, on, off...

- Always switch off the light when you leave the room for more than 30 seconds.



## FRONT DOOR

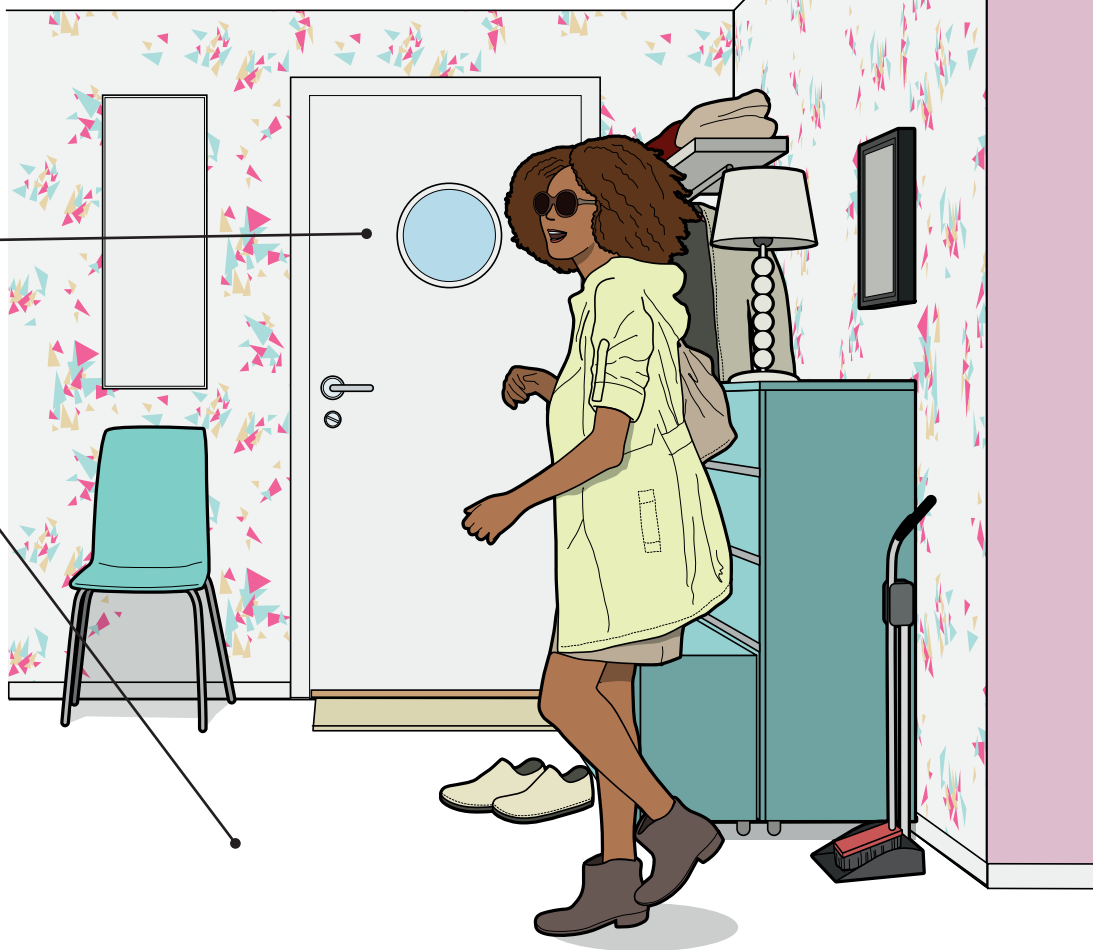
### Kicked to the curb

- Don't permit uninvited guests inside: close the door quickly when the cold weather hits!

## UNDERFLOOR HEATING

### A grand entrance

- Underfloor heating can be an invisible energy drain, and your feet don't always tell the truth - they can trick you into thinking the room is cold. When you increase the heat on the floor, the heat in the room will also rise, perhaps more than necessary.
- If you heat your home with underfloor heating, let it heat more than carpets and shoe soles.
- Switch off when not needed.



## Save more!

1

### Hanging off the hinges

- If your front door is warped or poorly sealed, you will soon be visited by the winter wind.

2

### Entryways make a good first impression

- Stop dirt, cold and moisture in the entryway to save energy in the rest of your home.

3

### Leaky boots

- Shoe and mitten dryers can work wonders, but remember the timer.

4

### A tree here, a tree there ...

- Adverts may block the draft under the door when they fall through the letterbox, but a 'No thanks to advertising' sign saves both energy and trees.

## OUTDOOR ELECTRICITY

### Electric BBQ, swimming pool, infrared heating, garden pond

- All electricity costs money, even what we use outdoors! Switch off, turn down, use wisely - inside and out.
- Can the sun heat your water or provide light?

## LIGHTING

### Lights use the same amount of electricity outside?

- What kinds of lighting do you have outside? Make sure lights only turn on when they should by using timers, motion detectors or twilight relay. Remember that it grows lighter quickly in spring!
- Many different energy-efficient lights work outdoors too, so ask in the shop for help!



## ENGINE HEATERS

### A sensitive matter

- Always use a timer for the engine heater, and keep a close eye on the outside temperature.
- At  $-15\text{ }^{\circ}\text{C}$  = 1.5 hours, at  $0\text{ }^{\circ}\text{C}$  = 1 hour and at  $+10\text{ }^{\circ}\text{C}$  no engine heater is needed.

## STAIRWELLS

### Poor man's gym

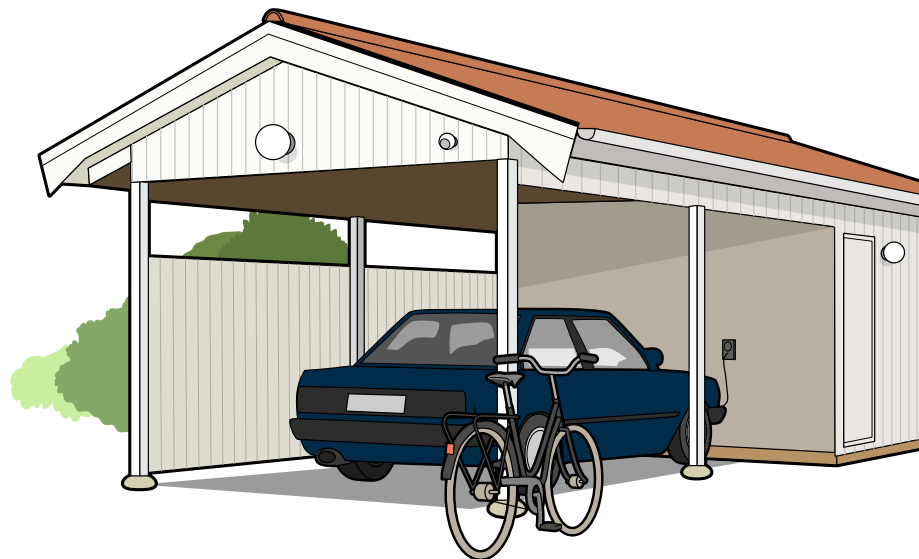
- A brisk trot up the stairs is a good everyday workout, avoid the lift if you can.
- Don't switch lights on out of habit, only when it's dark.

## STOREROOMS AND GARAGES

### Spotlight on an empty stage

- Of course you need good lighting, but switch it off when you leave!
- If you don't want to store paint in freezing temperatures, you may be able to find a place inside instead of heating the entire storeroom/garage.

## *Stairwells, storerooms and garages*

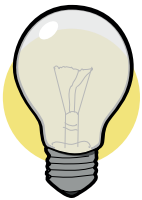


# Energy for science enthusiasts

## CALCULATING ENERGY

**Energy is measured in kWh (kilowatt hours, i.e., 1,000 watt hours), and each day you use more or less energy at home.**

Energy use is no mystery. Different items require different amounts of energy. The more appliances or lights you switch on, and the longer you leave them on, the more energy you have to pay for. How to calculate energy:



### Power

Power is measured in watts (W) and describes how powerful a stove or lamp is. More energy is needed if a lamp is:

- 60 W compared to 40 W

*Choose right = choose fewer watts*



### Time

Time is measured in hours (h). More energy is needed if a light is on:

- 24/7 - compared to
- 4 hours per day

*Act right = switch off and turn down*

When you know the power and time, you can easily calculate your energy use, i.e., how many kWh you have to pay for:



Power

Time

Energy

## An uneven playing field

Where you live: bidding zone

Your electricity contract: variable or fixed price

Additional costs are: subscription cost, network fee, energy tax and VAT

Electricity use per month in kWh	Cost per month depending on the price of electricity			
	0,7 SEK/kWh	1 SEK/kWh	5 SEK/kWh	7 SEK/kWh
January 2,800	1,960 SEK	2,800 SEK	14,000 SEK	19,600 SEK
February 2,400	1,680 SEK	2,400 SEK	12,000 SEK	16,800 SEK
March 2,400	1,680 SEK	2,400 SEK	12,000 SEK	16,800 SEK
April 2,000	1,400 SEK	2,000 SEK	10,000 SEK	14,000 SEK
May 1,200	840 SEK	1,200 SEK	6,000 SEK	8,400 SEK
June 800	560 SEK	800 SEK	4,000 SEK	5,600 SEK
July 600	420 SEK	600 SEK	3,000 SEK	4,200 SEK
August 600	420 SEK	600 SEK	3,000 SEK	4,200 SEK
September 1,000	700 SEK	1,000 SEK	5,000 SEK	7,000 SEK
October 1,600	1,120 SEK	1,600 SEK	8,000 SEK	11,200 SEK
November 2,000	1,400 SEK	2,000 SEK	10,000 SEK	14,000 SEK
December 2,600	1,820 SEK	2,600 SEK	13,000 SEK	18,200 SEK

*Example of electricity use in a house using 20,000 kWh per year.*



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