Save energy

Hot Water Bottles

This might sound strange - Hot water bottles are in high demand and sold out in some areas. They keep your bed nice and warm at night. This allows the families to reduce the heating use at night.

Charge at work

Since AD / Civilians have been taking their computers home and working from home, this is an added pull of energy and extra cost to the members. I would suggest charging your devices at work on base and not at work from home!

Wear sth warm

Cover-up at home and don't wear shorts and a t-shirt around the house in the winter. Invest in some sweatpants, hoodies, and thick socks.

Save energy

Save at work

Be cautious of your energy usage in your offices too- keep the air vents clear/ set thermostat based on season and business hours/ turn off monitors at the end of the work day/ turn off lights when not in use/ activate sleep settings for all office equipment. Also- print double sided and reduce printing.

Insulate heating pipes

Since AD / Civilians have been taking their computers home and working from home, this is an added pull of energy and extra cost to the members. I would suggest charging your devices at work on base and not at work from home!

Buy fuel in bulk

Cover-up at home and don't wear shorts and a t-shirt around the house in the winter. Invest in some sweatpants, hoodies, and thick socks.

Buy reusable

Buy reusable bags, straws, etc.

EWV

DEINE ENERGIE. DEINE REGION.

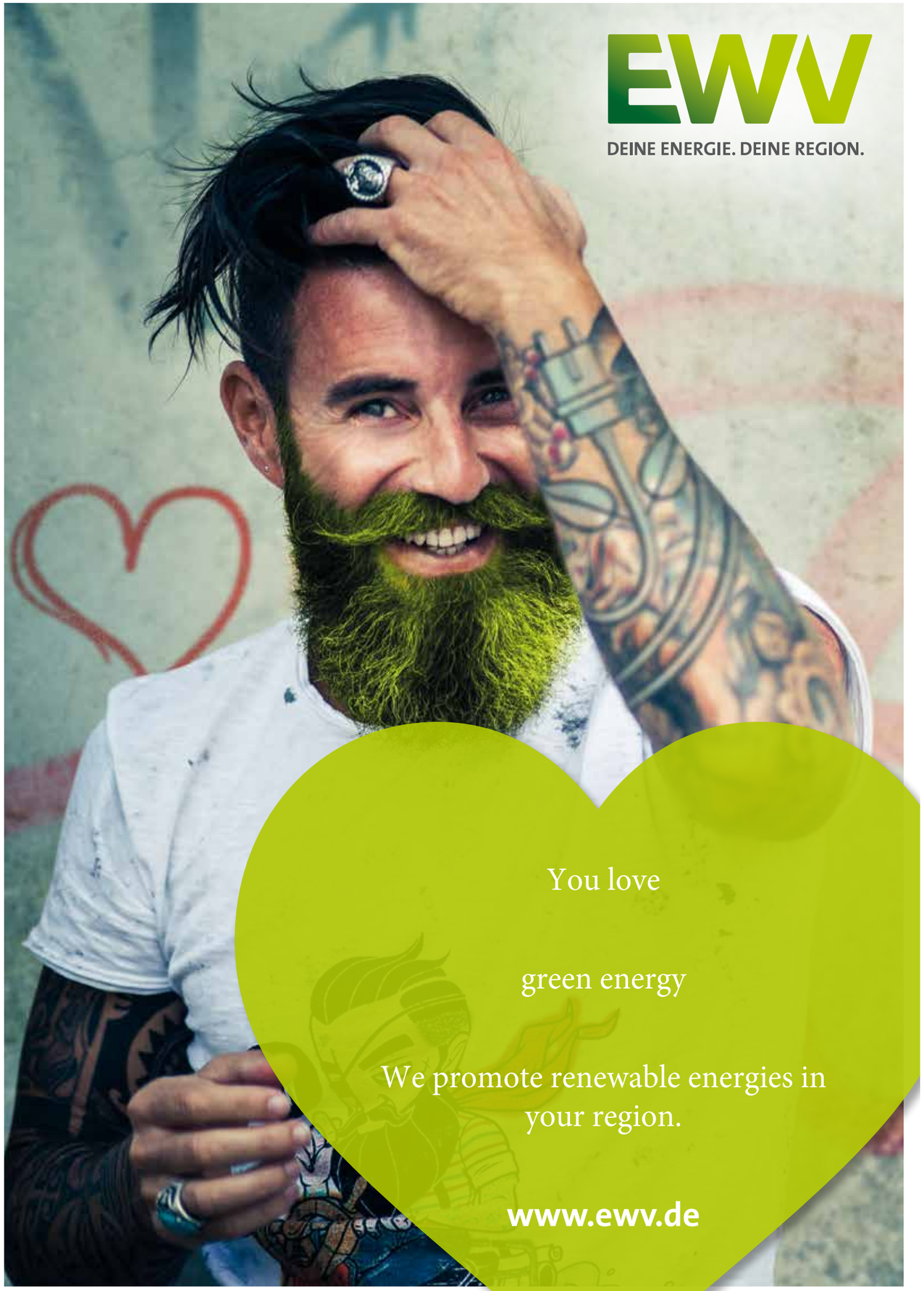





24 Stunden Energie

Energy saving tips that protect nature and relieve your wallet

www.ewv.de



Save energy, protect the environment and your wallet

The nature on our doorstep is beautiful. And that's exactly why we love our region. But climate change does not stop here either. But what can we do specifically? Because you and our environment are important to us, we support you with numerous tips for saving energy.

In our EWV energy-saving brochure, you can find out how you can easily reduce your energy consumption – and thus protect nature and your wallet.

We at the EWV are also involved in a variety of ways in our region for the protection of nature. Our green energy is generated by wind, solar or hydropower. This means that you always get climate-neutral and TÜV-certified green electricity from EWV - whether you have a basic supply or buy another electricity product from us.

With REGION PLUS, together with you, our customers, we promote regional climate and nature conservation projects, such as renewable energies, meadow orchards and forest reforestation.

And with our EWV funding program, we support our customers financially for their efforts to protect nature.
With all these measures, we can work together to ensure that our region remains what it is in the future: our home, where we feel comfortable.

Use Cold Water

Even if it might look nicer to position the single-lever mixer in the middle, you save a lot of energy in the cold water position (usually on the right).

Tip: When buying a new single-lever mixer faucet, pay attention to the information "middle position cold".

01

TIP

No Hot Air!

A 1,500 watt hair dryer that a 4-person family uses 5 minutes per day, contributes with 183 kWh to the annual electricity bill Electricity costs = 0.26 euros/kWh).

Tip: Let your hair air dry, it's gentle and free of charge!

02

TIP

savings potential per year **48 €**

Showering instead of bathing

Use the shower instead of the bathtub - the energy costs for heating the water are halved.

Tip: A "shower coach" uses an alarm to signal when you have exceeded your preset shower time.

03

TIP

ENERGY-SAVINGS **50 %**

Shower Conservatively

On average, about 18 liters of water per minute flow through a conventional, fully turned-on shower head. If you shower for 5 to 10 minutes, that's 90 to 180 liters. With an economy shower head, the amount of water is reduced by an integrated flow limiter. This saves you money with the usual shower comfort.

Stop the Flow!

If you don't want to replace your shower head, you can also significantly reduce your water bill with a flow limiter or aerator. Installed between the fitting and the shower hose, the water flow regulator reduces water consumption to around 10 liters per minute, regardless of the pressure! Of course there are also water-saving aerators for taps on the sink.

Every minute counts!

Especially in winter, a hot shower to warm up is just the thing for many. So that not too much water disappears down the drain, just jump under the shower and – don't forget – turn off the water when soaping up, then take a shower and you're done. At best, 30 liters of water are sufficient for a shower.

04

TIP

If everyone in a family of four takes a 5-minute shower a day, a flow limiter (10 liters) reduces consumption by around 1 year 60,000 liters of water!

Comparison: instead of 18 liters/minute better 10 liters/minute

What is that noise?

While brushing your teeth, turn off the tap and use a cup to rinse your mouth. You can change your habits when soaping your hands or wet shaving: simply turn off the tap from time to time - a small measure to reduce water consumption!

05

TIP

One is enough!

Do you like turning lots of knobs and switches? But please not in the bathroom, because a modern single-lever mixer tap not only increases washing comfort, but also saves considerably more water by simply regulating the temperature.

Hot Enough!

06

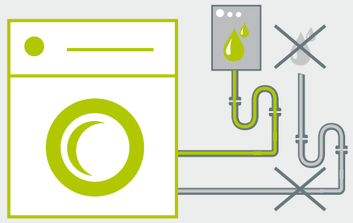
TIP

Instantaneous water heaters are mostly used for decentralized hot water supply in the bathroom. The water is heated in any amount exactly when the water is requested.

Models with hydraulic technology heat the water depending on the water flow rate - the instantaneous water heater refuses to work with smaller water volumes. The water temperature also decreases as the flow rate increases.

An electronically controlled model, on the other hand, offers more convenience, as the preset extraction temperature remains constant throughout the entire period of operation. The degree of efficiency when converting electrical energy into water heating is higher (up to 99 percent) and can result in energy savings of up to 20 percent compared to hydraulic technology.

Fully electronic instantaneous water heaters work even more efficiently. An electronically controlled engine valve reduces the flow rate to such an extent that the outlet temperature can be kept constant even beyond the performance limit, and the desired temperature is always reached to the exact degree. Overall, you can save 30 percent water and energy with fully electronic instantaneous water heaters compared to hydraulic devices.

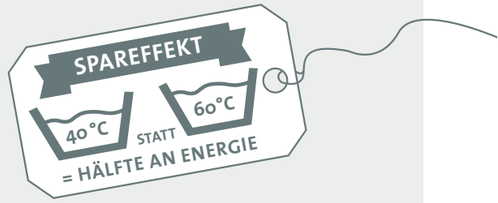


Clean performance!

07

Is the hot water in your household produced with a heat pump or with solar collectors? Then connect your washing machine with a ballast directly to the hot water supply connect, the water no longer needs to be heated. Please note that you use the cold water connection for washes at 30 to 40 degrees, otherwise your laundry could be damaged. The effect of modern detergents is very good, so you can significantly reduce the washing temperature. Avoid hot wash and wash white laundry at 60 degrees. Colored laundry also gets clean at 30 to 40 degrees.

BY THE WAY: Since heating up the washing water consumes a lot of energy, the washing machine works most efficiently when it is fully loaded.



Clever little one!

Use the energy saving program on your washing machine: the temperatures are low, the exposure time is longer, you save electricity and water. Without a pre-wash program, the wash cycle is shortened. The short program is often sufficient for lightly soiled laundry. With "Fuzzy Logic" technology, the water supply is optimally adapted to the laundry load, so that less energy is required for heating.

Wash, dry, lay

With a tumble dryer you save time, but use a lot of electricity. Only a few devices achieve energy efficiency class A+++. It is best to opt for a device with a heat pump that uses the heat from the exhaust air to dry the laundry.

Close or outside?

There are two different systems: If there is no water drain, a condensation dryer is suitable for you. The moisture condensed in the device collects in a container that must be emptied regularly. A vented dryer is cheaper to buy, the laundry dries faster and around 10 percent more efficiently. An exhaust hose leads the moist air directly to the outside.

For how much longer?

The right dryer function is easy on your budget: With dryers with time control, you can set the duration of the drying process manually. Clever dryers have humidity sensors, they “know” when the laundry is dry and switch off automatically.

Lint free

Without balls of fluff in the fluff filter, laundry will dry faster! Power consumption drops if you clean the air filter more frequently, while dryer performance remains consistently optimal. To maintain the efficiency of the heat exchanger, keep the fins free of dust, lint and other debris.

Tip: Spin the laundry at 1,200 to 1,400 revolutions, you save up to 25 percent energy when drying in the tumble dryer.

EVEN BETTER: Dry your laundry in the sun and wind or in the attic: That's 100 percent energy-efficient!

08

TIP

THINKING AHEAD

Are you a techie and love convenience? Then install a faucet in the bathroom that you can control without touching it. Thanks to infrared technology, this intelligent device recognizes whether you need water. If you pull your hands away from under the tap, the water flow stops automatically - this enables hygienic washing and saves a lot of water at the same time.

09

TIP

ENERGY-SAVINGS

50%

Oh, you fat egg!

With an electric egg cooker, you save up to 50 percent energy when preparing your breakfast eggs compared to cooking in a pot. And since the eggs are cooked using the steam principle, only a little water is required.

10

TIP

ENERGY-SAVINGS

30%

There is a lid for every pot!

You should consistently heed this wisdom when cooking. If the heat stays in the pot, you can reduce the energy supply and switch off the plate a little earlier.

Tip: With long cooking times, you can reduce your energy costs by 30 percent with a pressure cooker!

11

TIP

Open, close, open ... close the door!

Cherry jam or plum jam? Please only open the refrigerator door briefly, otherwise too much warm air will enter from outside. The device has to work with increased energy in order to reach the desired cooling temperature again.

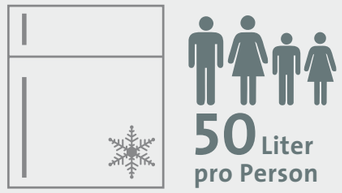
Tip: Thaw frozen food in the fridge to reduce energy consumption.

12

TIP

Lots of space, lots of energy

The right size of refrigerator saves energy: 100 to 140 liters of usable capacity is sufficient for one person, and 50 liters per person is appropriate for a large family.



Optimally served

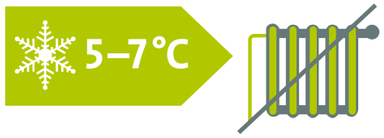
Well-closing doors are a good basis for energy-efficient cooling of your refrigerators and freezers. Make sure the hinges are intact and the rubber seal is clean. In this way, you can avoid insidious cold losses. An integrated door warning toner gives an alarm if the door is not properly closed.
To avoid heat build-up and

Power Consumption!

Do you still have an old sweetheart cooling the milk? Better swap it out for an energy efficient device.

Old fridge: Consumption/ year = 392 kWh Electricity costs/year = approx. 102 euros* Modern fridge: Consumption/year = 157 kWh Electricity costs/year = approx. 41 euros *€61 at least per year

*** Electricity costs = 0.26 euros/kWh**

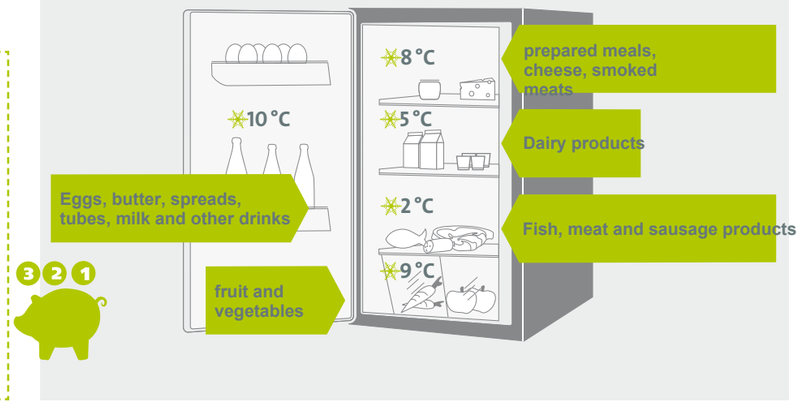


To avoid higher energy costs, clean the ventilation grille more often. You will be rewarded for regular defrosting of the devices with a lower electricity bill.

Comfortable Climate

Do not place the refrigerator next to a stove or heater. If the ambient temperature is 1 degree lower, you save 5 percent in energy costs. A storage temperature of 5 to 7 degrees is sufficient in the refrigerator (-18 degrees is ideal in the freezer). With each additional degree of cold, the device uses 5 percent more electricity!

Cleverly sorted:



Clean performance!

Do without the pre-rinse and the pre-rinse program of the device. 50 degrees are enough, short and economy programs reduce the energy by up to 15 percent.

Big!

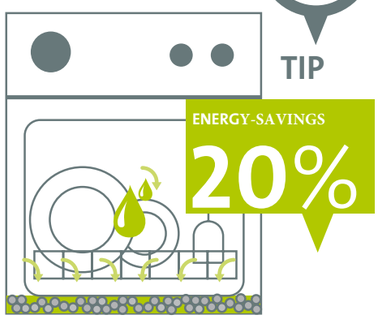
Dishwashers with a width of 60 centimeters are number 1 when it comes to saving when fully loaded. Compared to narrower devices, they get by with 40 percent less water and 30 percent less electricity in the energy saving program.

13

TIP

Zeolite in your new Dishwasher?

With the environmentally friendly alumino silicate mineral, your appliance flushes even more economically. Zeolite can store moisture and heat and release it again: the heat energy heats up the washing water, the moisture is stored in the mineral balls during drying, and the heat generated supports the drying process of the dishes.



FURTHER INFORMATION:

14

TIP

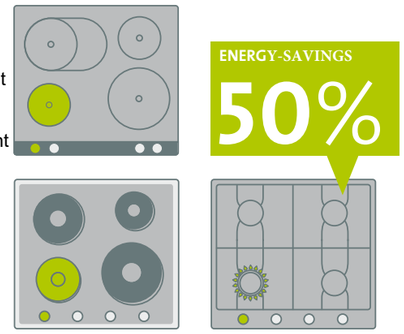
Culinary art for connoisseurs

The diameter of the pot and heating plate should match. Up to 20 percent of energy is wasted if the stove top is just 1 to 2 centimeters larger than the pot. Energy-saving pans have a flat base (15 percent energy savings compared to a curved base) and well-fitting lids (that saves 60 percent energy), thicker pan bases store heat better and conduct it particularly well to the food. In the pressure cooker, larger amounts of food are ready more quickly (50 percent less energy consumption).

Hot Kitchen Surface!

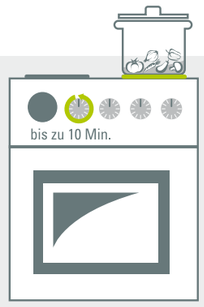
The conventional electric stove has had its day. The cast iron plates take too much time to heat the food. If the plate is switched off prematurely, the longer heat storage capacity can be used to continue cooking the food.
Glass ceramic panels have a clear advantage over cast-iron panels. Here, only the areas that are to be heated are heated, as less heat flows through them. Up to 20 percent energy savings are possible.

The front runners when it comes to saving energy are electric stoves with induction fields. The heat is generated directly in the magnetisable base of the saucepan without any loss of transmission energy. Energy consumption is reduced by up to 30 percent compared to a cast iron plate.
Cooking with gas is around 50 percent cheaper than with electricity. When buying a new one, look out for gas stoves with glass ceramic cooktops to avoid heat loss.



15

TIP



On, off, done

Each time the oven door is opened, the temperature drops and leads to a new heating process. If you switch off 5 to 10 minutes before the end of the cooking time, you use the residual heat and save up to 20 percent energy!

Tip: Note that modern self-cleaning ovens use more electricity!

Convection Cooking

Do you like baking cookies? In an oven with a convection function, you can heat three trays at the same time because a fan distributes the heat better in the oven.

BY THE WAY: The temperature can be set about 20 degrees lower than in an oven with top and bottom heat, which means less energy consumption! And preheating is not necessary here either.

16

Clever Helpers!

Do not heat water on the stove. Up to a volume of 1 liter, a kettle is the most efficient device for heating water, it only requires half the energy compared to a microwave or electric stove

Use the toaster instead of the oven to heat up rolls, you can use up to 70 percent less energy.

THINKING AHEAD

Do you love magnificent flowers on your balcony? Recycle kitchen waste such as fruit peels, wilted lettuce or leftovers in a compost bin specially made for the kitchen - an odorless alternative to the organic waste bin. Depending on the model, your organic waste is fermented into valuable fertilizer with microorganisms or carbon filters, your plants are guaranteed to flourish!

17

TIP

ENERGY-SAVINGS

20%

Cool head?!

With a fully automatic air conditioning you drive relaxed. And your vehicle also consumes significantly less fuel than with a semi-automatic system. Tip: Before switching on the air conditioning, first open the windows and ventilate well!

Saving potential of CO2 emissions per year is approx.

1.748 kg

18

TIP

Savings Model!

With an electric car you save in compared to a combustion engine the entire useful life of the Vehicle calculated between 30 and 70 percent of CO2 emissions. You benefit from lower fuel costs and pay no vehicle tax until 2030 (if registered by 2025). Pure electric cars will receive a subsidy of up to 9,000 euros with an environmental bonus and innovation bonus until the end of 2022, plug-in hybrids will receive a subsidy of up to 6,750 euros. Information and funding applications are available from the Federal Office of Economics and Export Control at www.bafa.de.

Tip: An electric car keeps inner cities emission-free. This creates a better quality of life for all of us.

19

Alternate Transportation!

Public transport: a good plan for environmental protection.

20

TIP

Cycling with a tailwind

An electric bike is also suitable for commuting to work. A strong drive, a powerful battery and your personal pedal power guarantee dynamic but effortless driving and efficient mobility.

Tip: charge your bike in an environmentally friendly way with green electricity that is generated from 100 percent renewable energies.

Driven by Innovation

Natural Gas Car

In natural gas vehicles, a processed natural gas/air mixture is burned instead of the usual petrol/air mixture. Compared to a petrol car, this drive technology causes up to 25 percent less CO2 emissions, and fueled with biomethane the CO2 emissions are even reduced by 97 percent.

Hybrid Car

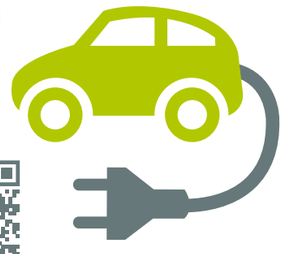
The drive concept of hybrid vehicles consists of a combination of conventional and electric drive units. The mild hybrid uses the electric drive to assist when starting and in stop-and-go traffic. This saves around 30 percent fuel and pollutant emissions are reduced by a third. The combustion engine turns on at higher speeds. The full hybrid can be driven entirely with an electric drive. The energy gained during braking is stored in batteries. With the plug-in hybrid, the batteries can be charged externally at a socket before setting off. The electric range increases with the capacity of the battery, which reduces fuel consumption and thus CO2 emissions.

Electric Car

Electric cars are powered by an electric motor. The energy required for this is stored in a battery. The CO2 balance is currently 30 to 70 percent better than that of petrol or diesel vehicles, especially if they run on green electricity.

21

TIP



Fuel Cell Car

Fuel cell cars are powered by electricity - the energy for this is generated by the reaction of oxygen and hydrogen in a fuel cell. Energy that is not required is temporarily stored in a drive battery. This future technology is still in the development phase.

23

Tip: switch off the engine when the traffic is stationary, the engine needs about 0.5 to 1 liter of fuel per hour when idling!

ENERGY-SAVINGS 3%

Drive and Save

Optimize your driving style: drive off immediately after starting, shift into 2nd gear, accelerate briskly, quickly shift up to the next gear and continue driving at low speed in the highest possible gear. Anticipatory driving also saves energy when starting, accelerating and braking. They reduce fuel consumption by 10 to 20 percent. EVEN BETTER: Avoid short trips. Free your vehicle from unnecessary ballast, 100 kilograms less weight means 0.5 liters of fuel savings. A bicycle carrier equipped with 3 bicycles causes an additional consumption of up to 4 liters/100 kilometers. With summer tires you save about 10 percent fuel. Check the tire pressure regularly: If the air pressure is 0.2 bar too low, the increased rolling resistance will result in an additional fuel consumption of 1 percent.

Trendsetter?

With the right tires you drive more cheaply. Energy tires (low-resistance tires) have a lower rolling resistance compared to conventional tires, fuel consumption can be reduced by around 3 percent depending on the comparison model. Since the "green" tires still show weaknesses in the wet, seek appropriate advice before buying a new one.

Like Clockwork

Low-friction engine oils reduce fuel consumption: the friction in the engine is reduced thanks to the special composition, the moving parts of the engine turn more easily and work more efficiently.

22

TIP

Alternatives On The Go

Liquid gas (autogas) is a "waste product" of mineral oil production. Compared to petrol engines, engines powered by liquid gas only emit 20 percent nitrogen oxides and 50 percent unburned hydrocarbons. Liquid gas is tax-privileged until December 2022.

The natural gas fuel does not produce any soot particles. Natural gas cars are only half as expensive as petrol engines and a third cheaper than diesel. They produce no soot and emit around a quarter less greenhouse gases – in the case of bio natural gas even around 40 percent.

The use of hydrogen in fuel cells to generate electricity for electric vehicles will gain in importance in the future, especially for commercial vehicles. If the hydrogen is produced from natural gas, Greenhouse gas emissions are around 30 percent lower than with combustion engines.

Electricity is the drive of the future. The consumption costs are three to four euros for 100 kilometers. However, electric cars only really make sense if they are fueled with green electricity. Then the CO2 emissions are only 7 grams per kilometer. If you "fill up" with conventional electricity, it is around 100 grams - a value that economical petrol engines also achieve.

Potential savings for bargain hunters per trip up to max. 25%

Change please!

From the car to the bus, tram or subway. Energy-efficient and low-emission technologies are increasingly being used in public transport. In vehicles with an electric drive, part of the kinetic energy can even be reconverted by having the motors act as generators when braking.

Commute Together!

If you drive around 15,000 kilometers a year in your mid-range vehicle, you cause around 2.7 tons of CO2 emissions. Reduce the negative consequences for the climate and household finances: carpool with colleagues, offer a ride for longer distances or lend your car to friends. If you don't have a vehicle and rarely need transportation, TIPP may be necessary for certain purposes Car sharing offer the right thing. Here you can often use newer vehicle models that have average CO2 emissions of 120 grams per kilometer and consume less fuel overall. With these environmentally friendly measures you protect the environment and save money at the same time.

24

TIP

THINKING AHEAD

Are you often on the go? With the route planner on your smartphone, you can see at a glance whether you can reach your destination quicker by car, bicycle, public transport or, if necessary, on foot. The car is not always the best choice!

Not always on standby!

Can your printer also copy, scan and fax? If so, great - then you avoid a whole lot of stand-by consumption that would occur with several individual devices.

Tip: But the same applies to a multifunction device: switch off when the work is done!

25

TIP

More juice!

Does your smartphone need to be recharged? Switch off automatic functions such as rarely used apps, Bluetooth, WLAN, widgets and multitasking programs and only activate them when you need them: This saves battery and wallet. Tip: The GPS location service consumes a lot of energy, you save 30 percent of power consumption in stand-by mode.

26

TIP

PC monitor or notebook?

A desktop PC with a 22" display consumes around 1,400 watt hours in operation for 8 hours, which is around 80 euros over 220 working days (electricity price = 0.26 euros/kWh).

Approx. Savings per Year
66 €

Tip: A comparable mobile energy-saving artist is content with only 240 watt hours per working day (approx. 14 euros per year).

27

TIP

Be careful when buying a screen!

Do you know the different labels in the area of communication electronics? For example, computers, notebooks, monitors, projectors and headsets receive the TCO label, which indicates low energy consumption, low emissions, environmental compatibility and recyclable. The Energy Star label helps to identify energy-saving computers, monitors, printers and copiers. When labeling environmentally friendly products and services with the Blue Angel label, the focus is on ecological criteria: environmental compatibility, reduced use of raw materials, recyclable and health and safety requirements. The strictest ecological criteria are used as a basis for the award of the Euroblume label for products or services, in particular the entire life cycle, including production and disposal, is taken into account.

28 TIP

Small but nice!

To ensure that the battery performance lasts for a long time, notebooks work in an energy-efficient manner – they use around 70 percent less energy than desktop PCs. Although these are more powerful and can be expanded to include components such as graphics and sound cards or processors, they also consume more power.

29 TIP

ENERGY-SAVINGS 70%

Optimization made easy

Older and heavily used PCs work more slowly, inefficiently and consume significantly more power than necessary. With an optimization program, you can increase PC performance, create more storage space, increase boot speed or extend the battery life of the notebook. The more efficient use reduces the power consumption.

Air conditioning instead of heat-free?

The use of air conditioning in offices contributes to a good indoor climate in the hot summer months. Tips for sensible use: Close the windows and doors in the respective room so that the cooled air does not escape outside or into unused rooms. Don't leave the air conditioner running at full power all the time, the air in the room should be no more than 6 degrees lower than the outside temperature. Regular maintenance ensures that the cooling capacity does not decrease rapidly.

BY THE WAY: From an environmental point of view, air conditioning systems are not necessarily recommended due to the high power consumption (depending on room size, duration of use, temperature, load). Heat protection - with shade providers or sun protection films - is a climate-friendly alternative.

Whirlwind

Or you can use fans: These require 35 times less energy than an air conditioner.

30 TIPP

Well Exhibited!

Innovative PC software helps you save electricity. In the Control Panel under "Power Options" you can define when the monitor, the hard drive or the entire PC should be switched off. There is also the function that the computer should go into stand-by mode or hibernate when not in use. Deactivate the screen saver, complex animations cause unnecessary energy consumption. If your software has an eco mode, energy savings of up to 50 percent are possible at the touch of a button.
Buy a monitor with light sensors. These adjust the screen brightness to the current lighting conditions. The monitor draws no power when equipped with a dedicated zero-watt switch. With switchable power strips, you can completely disconnect the monitor and computer from the power supply during longer work breaks so that they do not waste power in deep sleep mode.
Tailored to your personal user behavior, the individual measures can result in energy savings of up to 80 percent compared to standard operation.

31 TIP

Savings potential: 80 %

Proper care

The battery of your notebook is giving up again? Do not continually recharge batteries that are only partially discharged. Only fully charge the battery without interruption when the device indicates a lack of energy. If the notebook runs mainly with electricity from the socket, remove the battery from the device (charge level between 50 and 80 percent) and store it at cool room temperatures.

Charge batteries non-stop!

One for all

A multifunction device that can print, scan, fax and copy not only saves space, but also electricity costs and minimizes them
the no-load losses. Or you share a printer with your colleague: This not only reduces the acquisition costs and power consumption of a device in stand-by mode, but also the actual consumption costs such as electricity, toner, repairs, etc.

Multi-functional device saves space & electricity costs!

Standby - goodbye!

Is your PC always ready? Printers and copiers keep warming up? This is convenient, but also expensive and not energy-efficient. Avoid no-load losses and simply switch off completely!The stand-by consumption values of common devices at the PC workstation per day:

PC with monitor = up to 0.04 kWh
Inkjet printer = up to 0.05 kWh
Laser printer b/w = up to 0.025 kWh
Scanner = up to 0.02 kWh
Copier = up to 0.07 kWh

Often on the go online?

When searching on the Internet, be aware in advance that for an online request, in addition to the power consumption of approx. 4 watts, the providers' servers also consume energy when accessing the website and emit approx. 2 grams of CO2. Research with online search engines consumes about the same amount of energy as a 4-watt energy-saving lamp does in one hour. A well thought-out online search saves time and money!

4 Watt 1 Std. > 1 Std. Online-Suchmaschine

Thinking Ahead

Your office is on the 4th floor and the elevator is always ready? Take the stairs - you stay fit and burn about 60 calories a day*. That's more than 13,000 calories on around 220 working days a year!
* based on a weight of 65 kg and up and down stairs for approx. 6 minutes

32

TIP

Open Eyes

When buying a television, pay attention to the energy label. A Class A device consumes approximately 70 percent less power than an inefficient Class F model.
Tip: Screens with modern LED technology are way ahead when it comes to saving on electricity costs.

TIP

33

Does disconnecting hurt?

No! Disconnect TV (1 W*), DVD recorder (8 W*), Hi-Fi system (10 W*), radio after use (2 W*) and games console (3 W*) from the mains. No unnecessary stand-by consumption! * Consumption performance/hour when stationary by operation Tip: If the entertainment electronics are switched off 20 hours a day for 330 days, a family of 4 saves almost 45 euros (electricity costs = euros/kWh).

savings potential

45

ENERGIY-SAVINGS

80%

34

TIP

Bright idea!

Energy saving and LED lamps have a light output that is five times higher than that of the discontinued incandescent bulb. Despite the higher investment costs, the purchase of the economical lights pays off, they last 5 to 15 times longer.
Tip: A motion detector on the front door saves energy and money, the light only comes on when someone is right in front of the door.

Large, flat, brilliant

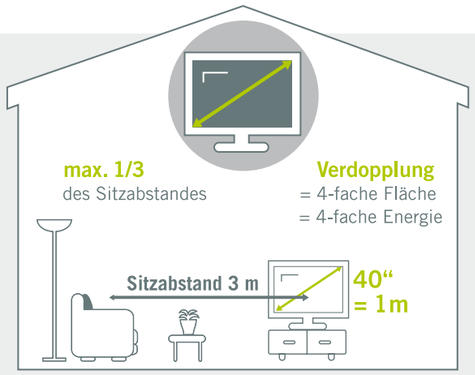
When buying a new television, you should not ignore the electricity costs. Large devices often consume significantly more than smaller televisions. Even LCD screens are not necessarily more efficient. The power consumption often depends on the manufacturer or on yourself. If you set the television very brightly, the device requires significantly more energy.

Lots of image – lots of energy

35

TIPP

The size of the screen often determines the energy consumption. Before buying a new one, measure how far the seat is from the planned location of the device. The screen size of your television should be no more than a third of this distance. If the diagonal is twice as large, not only does the area of the screen quadruple, but also the energy consumption.



Efficient home cinema

Many criteria are decisive for the optimal energy efficiency of a television: Is the technology up to date? Can your TV adjust its brightness to the ambient light? Does it have a motion detector that switches to eco mode when you've left the room? With energy-efficient televisions you save up to 70 percent of the energy costs compared to a comparable inefficient device.

In general, there are particularly economical devices in the various device groups. Nevertheless, LED televisions alone are generally more energy-efficient. Even more economical are LCD devices with LED backlighting. This technology significantly reduces energy consumption.
Compared to LCD or LED devices, OLED televisions with organic light-emitting diodes have an extremely low energy consumption. The OLED display requires no backlight as it generates its own light. The picture quality convinces with stronger contrast and bright colors.

ENERGY-SAVINGS
70%

36

TIPP

Hi-Fi-Stereo active (15 W) › 4 Std./ Tag › = 21.900 Wh › 5,70 € *

Hi-Fi-Stereo Stand-by (5 W) › 20 Std./ Tag › = 36.500 Wh › 9,50 € *

*Stromkosten = 0,26 Euro/kWh

Although only 5 watt-hours per hour are consumed in stand-by mode, the energy consumption in the waiting position quickly adds up to an amount that is even higher than during active use.

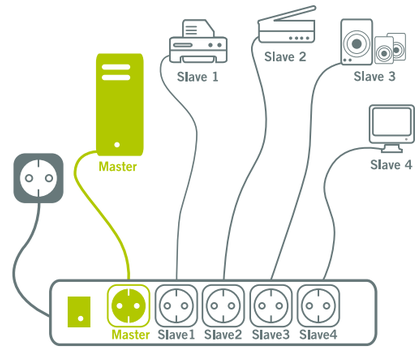
It's the sum that counts!

Active passive!

Entertainment devices are secret power guzzlers, even when it's dead quiet. However, the convenience of simply turning the 24/7 device back on by remote control costs a lot of money. The power consumption should not be underestimated even in the "standby" position. When buying new hi-fi systems, televisions, game consoles or recorders with a hard drive, be sure to pay attention to the energy consumption during active use and in stand-by mode. More equipment and performance lead to higher energy costs.

Smart savings

Use the power switch to completely disconnect devices from the power supply. If there is no real off switch, a switchable power strip helps to save electricity! With one movement, several devices are completely without power supply.
A master-slave socket works particularly ingeniously. When you turn on the main device plugged into the master-slave socket, the other devices will be turned on automatically. When the “master” is switched off, the other devices are also disconnected from the mains. With this technology, you can easily contain unnecessary stand-by consumption and save a lot of energy.



Illuminated!

37

TIPP

Incandescent bulbs have disappeared from the shelves since 2012 because they use electrical energy too wastefully. Only 5 to 10 percent of the energy is used for lighting and 90 to 95 percent is converted into heat.
Their lifespan is also very short. They only last 1,000 hours on average.

25 Watt	5 Watt
40 Watt	7 Watt
60 Watt	11 Watt
75 Watt	15 Watt
100 Watt	20 Watt

Spot On!

Switching to energy-saving bulbs with new technology pays for itself quite quickly. You save up to 80 percent energy, since these modern light sources can produce the same brightness as a light bulb with only around 20 percent energy. Another plus: the long service life of up to 15,000 hours.

Better and better

Fluorescent bulbs are even more economical. An electronic ballast produces a higher light output - up to eight times more than an incandescent lamp. In addition to the low power consumption, they also have a longer service life (up to 45,000 hours depending on the type and type).
music of the future
OLED bulbs go in a different direction. Complete ceilings or window panes can be illuminated with extremely thin foils.
Tip: Buy lamps that have amalgam instead of mercury and are shatterproof thanks to their splinter protection. You can let them shine in the children's room without any worries. LED lamps do not require any mercury at all.

Pretty bright!

ENERGY-SAVINGS
80

LED bulbs, the stars among light sources, shine for up to 50,000 hours. The luminous efficacy is very high because they require very little energy to generate brightness. With LEDs you save 80 to 85 percent compared to incandescent lamps.

BY THE WAY: Due to the very high luminance, LEDs are particularly suitable for accent lighting with spots.

Savings = 156 euros > service life 10,000 hours > electricity costs = 0.26 €/kWh

THINKING AHEAD

Equip your home technology with user-friendly home automation, with which you can operate electrical devices and the heating system via notebook, mobile smartphone or with the help of an intelligent app. Various functions can be easily controlled at the push of a button. If there is a storm warning, block the automatic blind control from your workplace. When you are on holiday, you can switch the lighting on and off remotely – ideal as protection against burglars.

Thick air?

38

TIP

You can achieve a pleasant room climate by airing the room. With the windows wide open, it takes 5 to 10 minutes to completely exchange the used air in the room in winter and up to 20 minutes in summer. Avoid air exchange through tilt ventilation. It takes more than 60 minutes fully replace the increased CO2 content and unwanted humidity.

ENERGY-SAVINGS

10%

40

TIP

Bulkheads tight!

If your apartment has roller shutters and roller shutter boxes on the outside, you can reduce your heating costs by up to 10 percent if you close the roller shutters at night.

Tip: In summer, closed roller shutters let the heat out!

39

TIP

Cozy warmth!

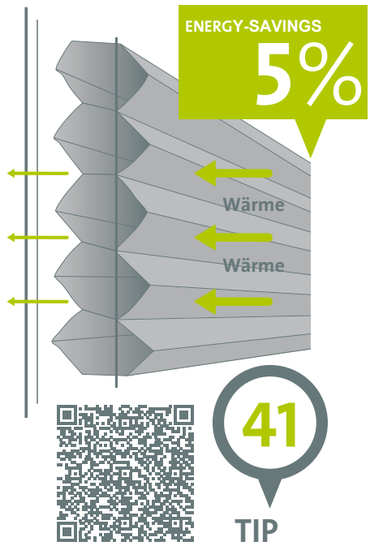
Do not cover your radiators with curtains or furniture. You should also do without decorative heating panels. This is the only way to avoid heat build-up. Your heater has enough space for the air to circulate, whereby the cooler air is drawn in from below and warmed up and then flows back into the room.

Are you groping in the dark?

The right roller blind in front of the window helps to save energy. The top-of-the-range pleated blind stops the heat escaping to the outside with honeycombed air chambers. Savings: up to 5 percent compared to a window without a blind! Also efficient: roller blinds made of semi-transparent metal foil that can be cut to size. The room heat stays inside during the cold season.

Insulate and seal

Old roller shutter boxes are real energy wasters. Strong heat losses and thus increased heating costs are often associated with draughts. Without costly renovation you can retrofit insulating materials. It is important to insulate the roller shutter box in all directions to avoid thermal bridges and to insulate the sides facing the room with thermal insulation. Advantages: The rooms are more comfortable, the heating costs are reduced strong, less CO2 is emitted, the measure is inexpensive and pays for itself quickly. Don't forget to insulate the roller shutter belt guide, as additional heat can escape here. Special brush sealing elements contain heat loss and stop the air flow. So it stays cozy in the room.



41
TIP

Optimally adjusted

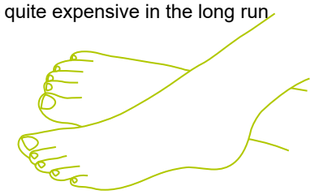
Your heating system runs particularly efficiently when a specialist carries out a hydraulic adjustment: He calculates the heating load, determines the right amount of heating water for each room and calculates the optimal pressure of the heating pump. Based on these results, the thermostatic valves of each radiator are adjusted accordingly. Excess air is released and, if necessary, water is added to the heating system. These measures distribute the heat efficiently throughout the house. The heating costs in a detached house can be reduced by up to 110 euros per year.

Well tempered

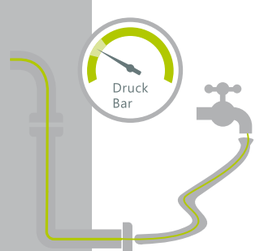
The thermostat head is difficult to turn, the radiator always stays the same temperature? Outdated thermostats waste a lot of heating energy. When replacing, opt for electronic thermostatic heads, as they regulate the room temperature based on the previously set time. To ensure that the rooms do not overheat while you are away, you can program the desired heating time for each room individually. In addition to more comfort - there is no need to turn down the radiator when leaving the room - you also use less energy.

Cold feet?

Not with ecologically sensible underfloor heating. Opt for the energy-saving hot water system with a flow temperature of 33 to 40 degrees. A coupling to the use of alternative energy sources such as the sun or environmental heat is possible. Electric underfloor heating is cheaper to buy, but heating with electricity alone can become quite expensive in the long run.



42
TIP



Who's on fire for you?

If your heating system is already 20 years old, then replace it with resource-saving heating technology including a modern natural gas condensing boiler. This converts the fuel almost completely into heat. Due to the high level of efficiency, you save 20 to 30 percent in energy costs. You can noticeably reduce the annual energy requirement for hot water preparation if you add solar panels to your natural gas condensing boiler.

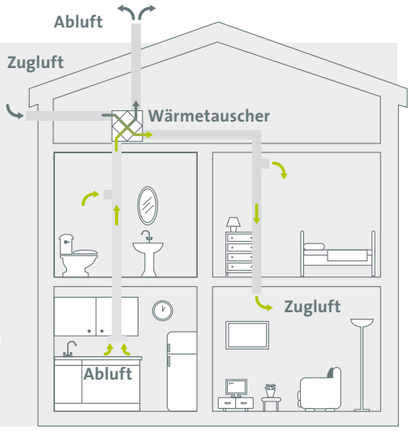
Niche Product

Radiators on thin outer walls can result in heat losses of up to 90 percent. An additional insulation layer made of polystyrene, for example, can help. The material can be cut to size and glued to the wall. Or you slide in a thin insulating foil with aluminum lamination.

43
TIP

Cool ventilation technology

Do you constantly open and close the windows to let fresh air into the apartment? Are you afraid of moisture and want to prevent mold? With the right shock ventilation, this is certainly not a problem, but a lot of heat is lost as a result. A ventilation system with heat recovery offers a remedy here: It pumps the air out of warm rooms with high humidity (bathroom/kitchen) and sucks in fresh air from outside. In the heat exchanger, the heat is extracted from the used air and added to the cold fresh air. Controlled ventilation can save you up to 20 percent in energy costs.



Time Out

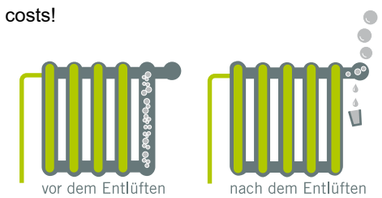
Give your heating system a break. Turn the heating down to around 12 degrees when you travel or set the thermostatic valve to the frost protection position. With an absence of 1 to 2 days, an average temperature of 15 degrees is sufficient.

Can it be a little less?

Room temperatures that are too high cost energy and money unnecessarily, 1 degree less results in heating cost savings of almost 6 percent. By lowering the flow temperature of the heating system by 5 to 8 degrees at night, heating costs drop, which means energy savings of 5 to 10 percent.

Is the Air Out?

If not, then it's gurgling in the only moderately warm radiator. In general, bleed all radiators before the start of the heating season. This contributes to the energy-efficient operation of the entire system and helps to reduce heating costs!



Saved neatly

Dust and dirt prevent heat from the radiator from reaching the interior of the room. More energy must be used to heat the room to the desired temperature.

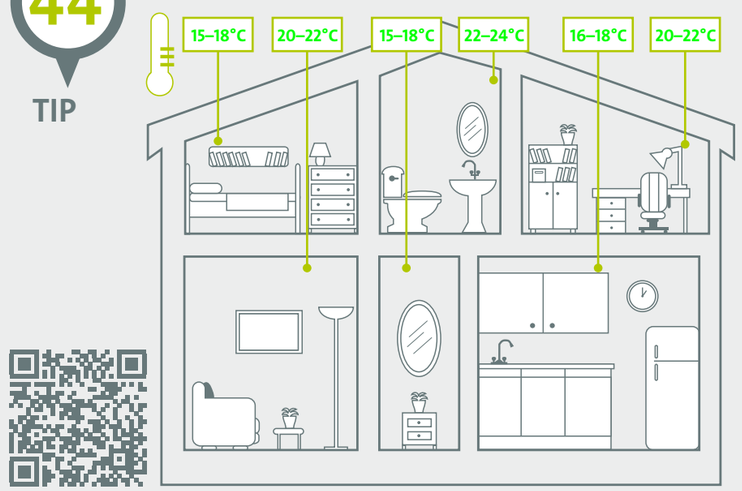
Tip: Regularly vacuum the radiators!

Everything Tight?

The windows don't close properly, the seals are porous? Repair the warped window (in the old building), call in a specialist for plastic windows. In the case of a renovation or in a new building, thermal insulation windows with triple glazing with U-values in the range of 0.9 to 1.2 are recommended. The U-value indicates the degree of heat permeability: the lower, the less heat escapes to the outside.

44
TIP

The optimal room temperature



THINKING AHEAD

Do you like to sit outside during sleepless nights? Electric radiant heaters give off cozy warmth even in cooler temperatures. what is comfortable for you However, it is harmful to the environment: such a device emits up to 200 kilograms of CO2 emissions per year, and the operator pays up to 70 euros in electricity costs. Infrared heaters work more effectively because they give off concentrated heat to people and not to the surrounding air. By the way: Thick jackets and fleece blankets also warm you up.

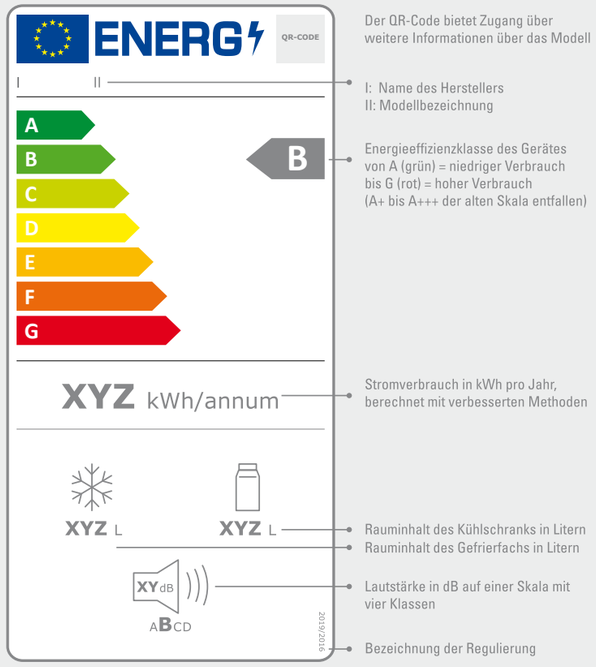
Good to know - everything about the EU label!

Power consumption is one of the most important criteria when buying a new electronic device. With the EU label attached to each new device, you can quickly find out about the energy efficiency and environmental compatibility as well as compare different models of a device group with each other.

From March 1, 2021, there will be new energy labels for some product groups: The "+" classes will be gradually abolished and the products will again be rated on a scale from A to G.

A QR code should also be included on the labels, which can be used to obtain further information about the product in a database. All product groups are to receive a new EU label by 2030.

Example: EU energy label for refrigerators and freezers (source: European Commission)



New Energy Efficiency labels

Since March 2021 there have been new EU energy efficiency labels for refrigerators and freezers, dishwashers, washing machines, washer-dryers and electronic displays such as televisions and monitors. New labels for lamps were also introduced in September 2021. The new labels are not only intended to provide information about the power consumption of a lamp, but also, like the other EU labels, provide information about other important purchasing criteria.
The efficiency classes A+ to A+++ do not apply to the device groups mentioned. With the return to classes A to G, it should be easier for you to evaluate and compare products.

The basic classification on the color scale from green to red remains preserved: The higher up in the alphabet and the more "green" a device is classified, the more efficiently it works. With the changeover to the new scale, the demands on the economy of the devices increase. This is why some devices are rated worse than before, although they have by no means become worse in quality. But the new labels are based on other measurement methods that reflect everyday use of the devices more realistically.
The new EU labels also have a QR code that you can use to obtain additional product information. By 2030, all product groups are to receive a new EU label.

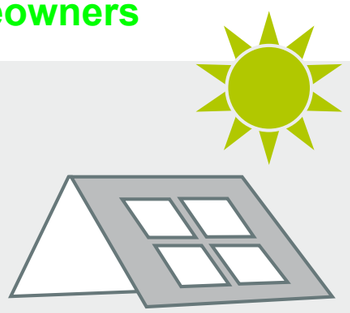
Vehicles

Similar to the energy efficiency label for household appliances, the car label uses a color scale to indicate how efficient a vehicle is. So you can see at a glance in which CO2 efficiency class the new car falls and what costs for fuel and vehicle tax are to be expected.

The new Energy label:

Renovate and save energy – tips for homeowners

If you, as a homeowner, want to modernize your house in an energy-efficient way in order to reduce energy costs, you will ask yourself many questions: when will it pay for itself Insulation measure, how can I use solar energy, do I receive grants, which tradesman on site will carry out a professional renovation? Below you will find some important information, addresses and tools that will certainly be helpful for you in the run-up to your construction and renovation projects.



Check!

The climate protection campaign funded by the Federal Ministry offers numerous checks on the website www.klima-sucht-schutz.de, which you can use to check a wide variety of topics in advance: With the free energy saving account, you can compare your consumption with similar households and get tips on where and how best way to save energy. With the funding check you can find the right funding programs for your municipality, state and federal government. With the HeizCheck you can check whether your house is thermally ok or should be insulated better. With the insulation check, you can find out which insulation materials are suitable for your building after just a few entries. Before you have a new heating pump installed, do the pump check. Use the solar roof check to test whether your roof is suitable for a solar system. Under expert search you will find contacts in your area: energy consultants, craftsmen, banks and consumer advice centres.

Energy Consulting

At www.zukunft-haus.info, the German Energy Agency (dena) provides information on the topics of energy advice and energy-related refurbishment and provides portals on energy-efficient buildings. On the website www.zukunft-haus.info/beratung-planung/experten-finden/ dena provides a list of over 5,100 energy efficiency experts for federal funding programs who carry out on-site energy advice and energy Specialist planning and construction supervision can take over.

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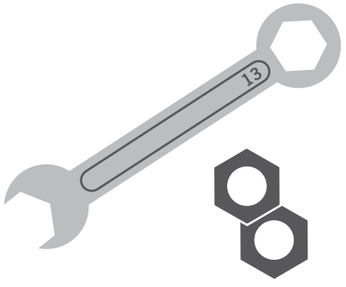
If you would like to read detailed preliminary information on topics such as building a house, photovoltaics, modernization and saving energy, take a look at the books and special booklets from Stiftung Warentest at www.test.de.

Online Tools

At www.energietipps.hea.de you will find clear online calculators and practical tips for the areas of cooking and baking, washing dishes, cooling and freezing, washing and drying, heating and ventilation, warm water, lighting, TV, PC, garden and Terrace.



Information about energy efficiency and energy saving

At www.ganz-easy-energiesparen.de, energy customers receive information in various service tools with which further energy-saving potential can be exploited.

For example, an electricity check and a building check are offered for household customers. You can find an up-to-date list of energy-efficient household appliances under “Initiative Hausgeräte

Other tools provide useful information on light sources and tips on saving energy. With the building check, you can determine potential energy savings when renovating your property at the push of a button. Under "Germany makes it efficient", the Federal Ministry for Economic Affairs and Energy lists federal funding programs and gives numerous tips for saving energy.

In addition, current funding programs can be determined directly on the site using a database.
The ServiceTool Energieexperten provides addresses of energy consultants from the region.

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