GETTING THROUGH A POWER CUT

What fails when during a power cut, how to keep light, warmth, food and information going – and why you need no extra kit for EMP or solar storms.

Last updated: 05/11/2026

DO NOW

1. Check whether only your home is affected (fuses, neighbours)
2. Switch on a battery radio
3. Switch off sensitive devices, leave one lamp switched on
4. Keep the fridge and freezer closed
5. Save your phone battery – text instead of calling

AT A GLANCE

- Germany's power supply is one of the most reliable in Europe. Most outages are over within minutes or a few hours. But they can last for days – as in the Münsterland region in 2005 and in Berlin's Steglitz-Zehlendorf district in early 2026.
- Much more than the lights goes out: the cooker, the fridge, usually the heating too (including gas and oil heating), internet and landline, soon afterwards the mobile network, card

payments, cash machines, petrol stations, traffic lights and lifts. In tall buildings the water may stop.

- The most important preparation is simple: a torch, a battery or wind-up radio, drinking water, food that needs neither fridge nor cooking, cash, warm clothes and blankets, a charged power bank.
- The biggest dangers are not darkness and cold but **carbon monoxide** (barbecues, stoves or generators used indoors) and **fires** caused by candles.
- EMP and solar storms sound dramatic but need no special equipment: if you are prepared for a long power cut, you are prepared for them too.

START SMALL

You don't have to do everything in one weekend. Pick one of these little tasks each day – each takes ten minutes at most and costs next to nothing.

- **Find your torch and test it.** Where is it, do the batteries still work? Give it a fixed place that everyone in the household knows – even in the dark.
- **Find the fuse box.** Where is it, and can you get to it in the dark? Note its location under Home, together with the name of your grid operator (it's on your electricity bill) and its fault number.
- **Look at your heating.** What kind do you have – gas, oil, district heating, heat pump, stove? Most need electricity for the pump and controls. Is there one room you could keep warm?

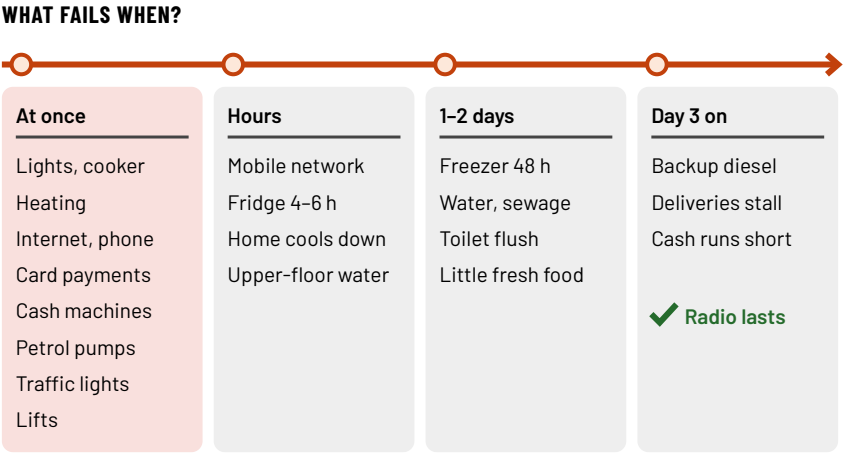
- **Check your radio.** Do you have a radio that runs on batteries or a crank? If not, put it on the shopping list. Until then, the car radio is your back-up.
- **Numbers on paper.** Write the most important phone numbers on a slip of paper and keep it with the torch.
- **Charge a power bank.** Charge it today and put the right cable with it. Set a reminder to top it up every few months.
- **A little cash.** Put aside a small amount in small notes and coins – cash machines and card payments don't work without power.

UNDERSTANDING

Why so much depends on electricity

Almost everything that "just works" in daily life needs electricity – often in a place you wouldn't think of. Gas heating needs it for the circulation pump and controls, the waterworks for its pumps, the supermarket for tills and doors, the petrol station for its pumps. When the power fails over a wide area, many things that seem unrelated stop at the same time.

What matters is the timeline: some things go at once, others hold out for a few hours because they have batteries or back-up power, and others only run short after days. Knowing this lets you calmly do the right things first.



Rough guide – varies from place to place

Timeline: lights, heating, internet, card payments, traffic lights and lifts fail at once; after hours the mobile network and fridge; after one to two days the freezer and water; from about day three back-up fuel and deliveries run short

At once

- **Lights, cooker, oven, kettle** – everything connected to the mains.
- **Heating:** Not just heat pumps and electric heating – many oil, gas and district heating systems fail too, because controls, circulation pumps and regulators need electricity. Only some wood, coal or log-burning stoves work without mains power. How quickly it gets cold depends on the outside temperature, insulation and heating system.
- **Internet and landline:** Routers and fibre connections need power. Since landlines now run over the internet (voice over IP), your home phone goes silent at once.

- **TVs and computers** – and many radios that plug into the wall.
- **Money:** Cash machines, card terminals and tills stop working. Many shops cannot sell without back-up power; some still sell goods for cash in daylight.
- **Petrol stations:** The pumps need electricity.
- **Traffic:** Traffic lights and street lights go out; in the first hours there are delays and accidents, especially in towns and cities. Trains can come to a halt between stations.
- **Lifts, door openers, car park barriers** stop.

After minutes to hours

- **Mobile network:** Mobile masts have back-up power only in part and only for a short time. According to a report for the German Bundestag (2011), depending on operator and location they may fail after 15 minutes or last up to eight hours. On top of that, networks quickly become overloaded during unusual events.
- **Fridge:** With the door shut, it stays cold for about four to six hours, depending on how full it is and its insulation.
- **Your home cools down.** In winter you will clearly feel it after a few hours.
- **Water pressure in tall buildings:** Pumps that create the pressure for upper floors stop if they have no back-up power. Then little or no water reaches the upper floors.

After one to two days

- **Freezer:** With the door shut, a well-filled freezer often holds its temperature for up to 48 hours.

- **Water and sewage:** Waterworks usually have back-up power for their central plant, but not everywhere and not indefinitely. Depending on where you live, water and sewage can fail – and then the toilet won't flush. Storage in the network often only bridges a few hours to about a day.
- **Shopping** becomes difficult: many shops stay shut, and perishable food is hard to find.

After several days

- **Back-up power runs short:** Critical facilities such as hospitals or waterworks are meant to manage at least 72 hours on back-up power without refuelling. After that, a lot depends on whether diesel can be delivered.
- **Deliveries stall:** Food, medicines, cash and fuel arrive only in limited amounts.
- **Radio keeps going:** Broadcasters can often keep transmitting on back-up power. You can then listen with a battery, solar or wind-up radio, or in the car.

Water and sewage – why it depends on your floor

Whether you have water depends on where you live. On the ground floor the pressure from the mains is often enough; on higher floors it isn't if the booster pump in the basement fails. Sewage needs pumps too; if they fail, toilets, sinks and showers can't be used, or only partly. How to build an emergency toilet is in the Hygiene and emergency toilet guide; how to store drinking water is in the Drinking water guide.

Communication – why the radio matters more

Without power, TV, internet and landline go off at once, and the mobile network soon after. That also takes out warning apps and phone alerts. Radio stations keep broadcasting, though – which is why a radio that works without a socket is your most important link to the outside world in an emergency. The car radio counts too.

PREPARING

Germany's Federal Office of Civil Protection and Disaster Assistance (BBK) recommends that a household can manage **ideally for ten days** without outside help; even three days helps a lot. Start with what you have and add to it gradually. The supplies calculator shows what your household is still missing.

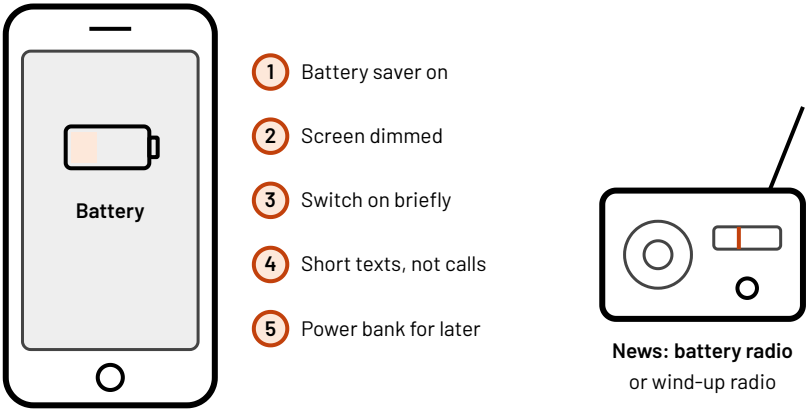
Light

- **Torches and head torches** (LED) are the best choice, with plenty of spare batteries. Wind-up torches need no batteries at all.
- **Camping lanterns** help to light a whole room.
- **Candles** are possible, but only with care: never unattended, on a non-flammable surface, away from curtains – and air rooms with candles regularly, even in winter.
- A **smoke alarm** in every living space adds safety; fires caused by candles are a known problem during power cuts.

More on torches and batteries: Equipment.

Information and communication

- **Radio:** a battery, solar or wind-up radio and spare batteries. Also check whether your phone can receive FM at all – radio apps that stream over the internet stop when the network does.
- **Power bank:** charged, with a cable. It slowly loses charge on its own – so top it up regularly.
- **Keep batteries charged:** phone, laptop and cordless phones charged whenever possible.
- **Numbers on paper:** A handwritten list helps if you can't get to your saved contacts.
- **Offline map:** Download the map of your area in the app while you still have a signal.
- **Know your help point:** During longer outages, many local authorities open help points, in Germany often called "Katastrophenschutz-Leuchttürme" (disaster lighthouses). There you can get information and make an emergency call if the phone doesn't work. Calmly ask your local authority where yours is.
- **Household arrangements:** Where will you meet if phones don't work? More under Signal.



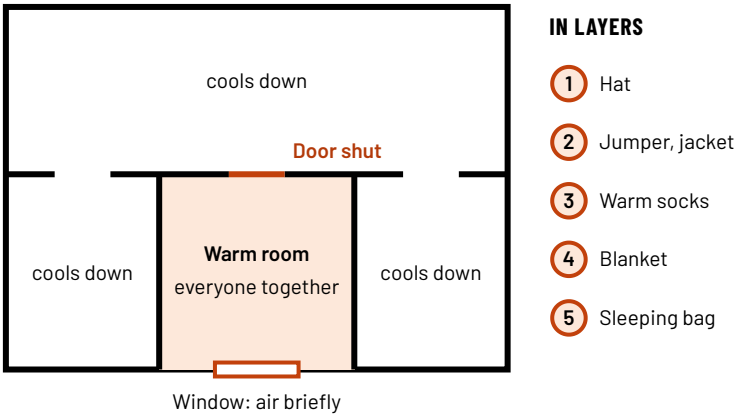
Saving your phone: battery saver on, screen dimmed, switch on only briefly, short texts instead of long calls, power bank for emergencies; news from a battery radio

Warmth

- **Warm clothes, blankets, sleeping bags** replace the heating for quite a while. Think of hats, warm socks and slippers.
- **Choose one room** to stay in. Keep its doors shut so the warmth doesn't escape.
- **Still air the room:** regularly open the windows wide for a few minutes, then close them again.
- **Hot-water bottles** can be filled with water from a camping stove that you use outdoors or on the balcony.
- **Stove or fireplace:** If you have one, keep a supply of wood, briquettes or coal.
- **Alternative heaters:** There are gas heaters, bioethanol fires and paraffin heaters approved for indoor use that work without electricity. Only use such devices indoors – and with gas devices, make sure they have oxygen-depletion and flame-

failure safety devices. The BBK explicitly recommends a tested **carbon monoxide alarm**.

In detail: the Warmth without heating guide.

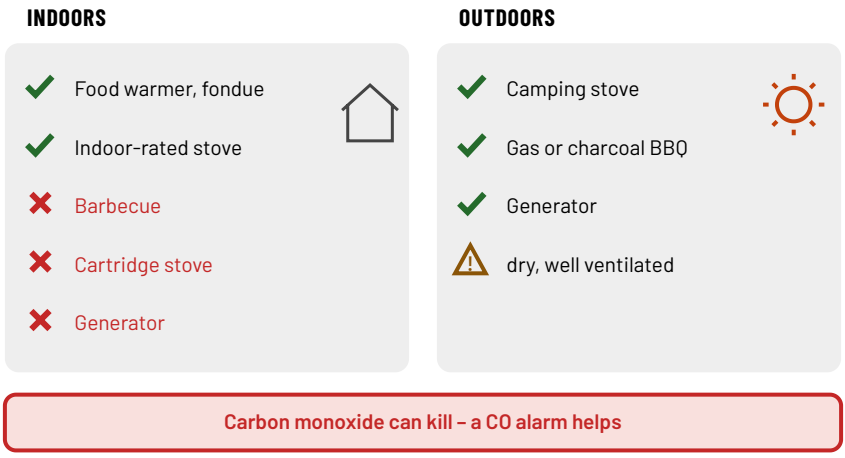


One room becomes the warm room: everyone in one room, door shut, clothes in layers, blankets and sleeping bags, air briefly but fully at regular intervals

Food and cooking

- **Supplies that need no fridge:** Food that doesn't need chilling won't spoil. Food that doesn't need cooking (for example from tins and jars, UHT milk) can be eaten without a cooker. Food with a short cooking time saves fuel.
- **Cooking without power:** A gas hob often keeps working. A tealight food warmer can heat food up, and a fondue set with fuel gel can bring small amounts to the boil. Only use a gas stove indoors if it is approved for indoor use.

- **Outdoors only:** camping stoves with a gas cartridge, gas or charcoal barbecues. Ideally cook on the balcony or terrace, not inside. If you use a device indoors that is only approved for outdoor use, you risk carbon monoxide poisoning – and in Germany it may count as gross negligence if there is damage.
- **Stock fuel** to match your stove (gas cartridges, methylated spirit, fuel gel). Gas does not belong in the cellar.
- The BBK has collected recipes for cooking without power in its "Notfallkochbuch" (emergency cookbook, in German).



Safe cooking and heating: indoors only devices approved for indoor use, such as a food warmer or fondue; barbecue, cartridge camping stove and generator outdoors only – indoors there is a risk of carbon monoxide

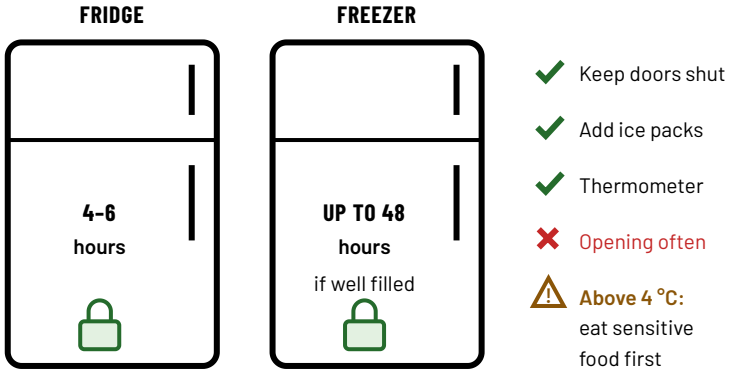
Why carbon monoxide is so dangerous: When there is too little oxygen during burning, carbon monoxide (CO) forms. Carbon monoxide poisoning is life-threatening. So: never run barbecues, cartridge camping stoves or generators in the flat, cellar or garage – outdoors only.

Fridge and freezer

You can't save food forever, but you can buy time:

- **Keep ice packs or frozen bottles of water** in the freezer compartment; during an outage they help keep the fridge cold for longer.
- **A simple fridge thermometer** tells you the temperature when the digital display is off.
- **Well-filled freezers** stay cold for longer.
- Sensitive foods (dairy, meat, fish, egg dishes, ready-made salads) belong at the bottom of the fridge just above the vegetable drawer – that's where it's coldest.

When the power goes off: **keep the door shut.** Above 4 °C, bacteria multiply faster. So eat sensitive foods first, while the fridge is still below 7 °C.



Frozen food up to –12 °C: still safe

Keep fridge and freezer shut: the fridge stays cold for about four to six hours, a well-filled freezer often up to 48 hours; eat sensitive food first while it is below 7 degrees

Water and toilet

- **Drinking water:** 2 litres per person per day, for as many days as you can manage (aim for ten). Plus water for cooking and hygiene.
- While water is still running, you can fill **the bath, buckets and watering cans**.
- **Prepare an emergency toilet:** strong bin bags, cat litter or sawdust, disinfectant. Instructions: Hygiene and emergency toilet.

Cash, car, papers

- **Cash** in small notes and coins.
- **Keep the car's tank full** if you have one – then you can still get around when petrol stations fail. The car radio makes a good emergency radio.
- **Important documents** (ID, insurance, list of numbers) kept handy and protected.

Generating your own power?

A small generator or a battery system can help, but it isn't a must – and there are rules:

- **Never run a generator indoors** – the exhaust fumes can suffocate you. A well-ventilated, dry spot outdoors is suitable. Refuelling and hot parts are a fire risk.
- **Storing fuel:** In Germany, no more than 10 kilograms of petrol or 20 kilograms of diesel may be kept in a cellar, in suitable cans (technical rule TRGS 510).

- **Don't feed into the house wiring without an electrician:** If you want a generator to supply your house or flat's distribution board, get advice from a registered electrical contractor. Work on the house wiring may only be done by electrical contractors. The BBK also recommends informing your grid operator and electricity supplier; in a block of flats, the owners as well.
- **Plan the load:** Anything that makes heat (kettle, fan heater, hotplate) quickly needs 1,500 to 2,000 watts per device. Sensitive devices such as computers or heating controls need a generator with stable voltage and frequency.
- **Neighbours:** Generators are loud; cables through open windows and doors let the heat out and make your home easier to break into.
- **Quiet alternatives:** battery systems with an inverter, or a solar PV system designed for off-grid (island) operation. Here too: changes only by an electrical contractor.

Fire safety

- Keep smoke alarms, a fire extinguisher or a fire blanket ready.
- Gas lights and candles only under supervision, with enough ventilation.

Variations

Flat in a block: On upper floors the water may fail sooner – storing water is especially important here. Lifts and electric door openers stop; think about how older neighbours or those with limited mobility will be looked after. A generator is not an option in a flat.

House: If you have a sewage pump in the cellar, it won't work without power. In hard frost, water pipes can freeze and burst – keep an eye on pipes and heating after the outage. If flooding threatens, switch off the power to rooms at risk and don't enter flooded rooms with electrical installations.

With children: Stock baby food that can be given without heating or warmed with little energy. A child's torch by the bed, a game for the evening in the dark. More: the Children guide.

With pets: Plan a supply of pet food; aquariums and terrariums need power for pumps and heat. More: the Care & pets guide.

With care needs and medical devices: This is the most important point in this section.

- Check early which devices or aids in the household need power continuously (for example a ventilator) and how long their batteries last.
- Clarify **in advance** with your doctor, care service or manufacturer what emergency solutions there are.
- Ask your care service how it will keep working during a longer power cut. Personal alarm services and meals on wheels may also stop.
- If someone lives in a care home, ask about its back-up power plans.
- Plan how you could look after relatives yourself for a while if necessary, and keep a supply of regular medicines.

IN AN EMERGENCY

The first hour

1. **Stay calm and check who is affected.** Look in the fuse box, ask the neighbours, look at the street lights. If only your home is dark, the cause is probably your own installation or a fuse.
2. **Get light** – a torch or head torch, not a candle in the first rush.
3. **Switch on the battery radio.** Local stations give information about the situation, how long it may last and help points. Listen for official announcements.
4. **Switch off devices** that were running when the power went: above all anything that gets hot (cooker, oven, iron, coffee machine, kettle, electric blanket, fan heater), and sensitive devices such as computers and TVs. Leave **one lamp** switched on so you notice when the power is back.
5. **Keep the fridge and freezer closed.**
6. **Don't use lifts.** If someone is stuck in a lift, get help.
7. **Save your phone:** battery saver on, screen dimmer, only make essential calls. A short text – "We're fine" – instead of a long call.

The first few hours

1. **Check on others:** children, older people, neighbours with care needs. Agree who will call the grid operator's fault line – not everyone at once.
2. **Collect water** while it's still running: bath, buckets, watering cans.
3. **Eat chilled food first:** the most perishable things in the fridge get used first – while they are still cold.

4. **Stay at home** unless there's a reason not to. Avoid unnecessary journeys: traffic lights are out, petrol stations aren't working.
5. **In winter, put warm clothes on in good time** – don't wait until you're cold. Set up the warm room.

If it goes on longer

1. **Cook only with suitable devices** – outdoors or on the balcony; indoors only approved devices.
2. **Keep the warm room going:** doors shut, blankets, sleeping bags, huddle together; air briefly but fully at regular intervals.
3. **Set up the emergency toilet** when the flush stops working (Hygiene).
4. **Switch on the radio at set times** to save batteries. Pass on information – not everyone has a radio.
5. **Go to the help point** if you need help or have to make an emergency call and the phone doesn't work. The radio and your local authority will tell you where it is.
6. **Ration supplies:** water, food, batteries, fuel.
7. If possible, stay for a while with relatives or friends who are not affected.

Emergency calls – emergencies only

A power cut on its own is **not an emergency**. Only call 110 or 112 (the German emergency numbers) in a real emergency – during past power cuts the emergency number was often dialled for information, and real emergency calls got through late. If the emergency numbers don't work, go to the nearest police station, hospital or your local help point in an emergency.

Everything you need right now, in brief: Emergency mode: power cut.

EMP AND SOLAR STORMS

When people hear "blackout", some think of an electromagnetic pulse or a huge solar storm. Both are real, but often exaggerated. Here are the essentials, calmly.

Solar storms – the natural event

The Sun regularly has violent eruptions. They can throw a cloud of charged particles into space. If it reaches Earth after about one to two days, it disturbs Earth's magnetic field – a **geomagnetic storm**. This can drive strong currents through very long conductors such as overhead power lines. These currents can damage large transformers and lead to power cuts. The effects are strongest near the poles, but the northern lights can then be seen much further south.

Well-known examples:

- **1859, the "Carrington event":** northern lights almost as far as the equator, severe disruption to telegraphs.
- **13 March 1989, Québec (Canada):** a solar storm overloaded the power grid; around six million people were without power for nine hours, at minus 15 degrees. A transformer was also lost.
- **October 2003:** the regional grid failed in Malmö, Sweden.
- **May 2024:** the strongest storm since 1989, with northern lights much further south than usual – but without significant consequences for the public.

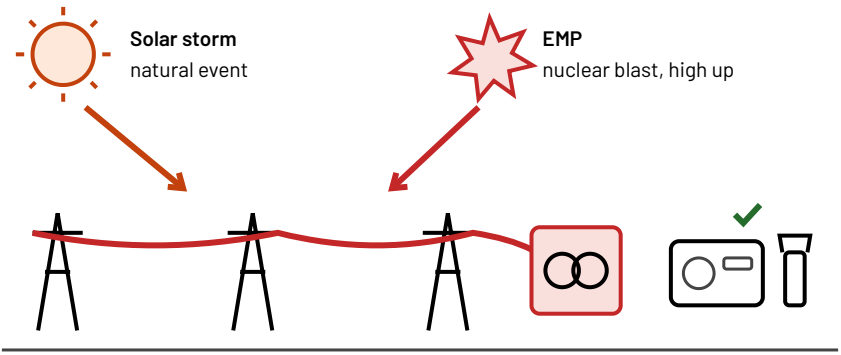
The European Space Agency (ESA) stresses that most solar events have little or no effect on most people's daily lives. Space weather services watch the Sun constantly; before a strong storm, grid operators usually get hours to days of warning.

EMP – the weapon effect

In emergency preparedness, an **EMP** (electromagnetic pulse) usually means the pulse from a **nuclear explosion at high altitude**. Depending on the altitude, it can hit a whole region, up to a continent, at once. According to an action plan by the US Department of Energy (2017), it can disrupt electrical and electronic systems in general, but the greatest risk is to **long-line networks** – the power grid and long-distance communication lines. Part of the pulse affects transformers in a similar way to a solar storm. In 1984 the German federal government wrote that it could not be ruled out with certainty that the German interconnected grid might temporarily split apart, but it expected disruption to stay limited in area and time.

An EMP requires the use of a nuclear weapon. Solar storms, on the other hand, have happened again and again – they are the event to realistically plan for.

What is realistically affected



Most at risk:	grid, long lines, transformers
EMP only:	electronics can be upset too
Less at risk:	small, unplugged devices

For you, that means: a long power cut

EMP and solar storm compared: both mainly hit long lines and large transformers in the power grid; an EMP can also upset electronics; small, unplugged devices without long cables are much less at risk

- **Most at risk:** large power grids, long lines, large transformers. If transformers are damaged, repairs can take time – that is what makes the power cut long.
- **Can also be disrupted:** satellites, GPS positioning, shortwave radio, mobile networks; with an EMP, also electronics and control systems.
- **Less at risk:** small devices without long cables that aren't plugged in – such as a pocket radio or a torch in a drawer. There is no guarantee, but the specialist reports clearly see the main risk in the long lines.

Why the preparation is the same

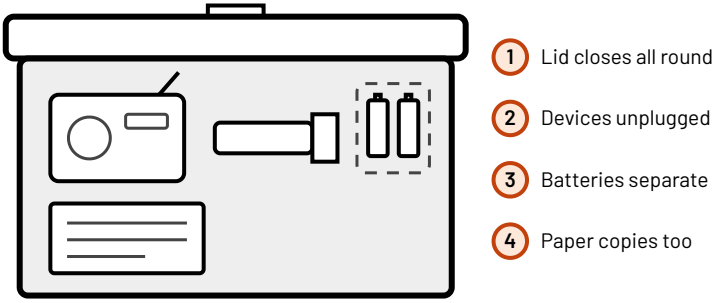
For you at home, the result of an EMP or solar storm would above all be one thing: **a long, widespread power cut** – with everything described in this guide. That's why you need no special equipment. Water, food, light, warmth, a radio, cash and paper lists are the right preparation, whatever the reason the power is off.

A few simple extras

If you like, you can do a little more for very little money:

1. **Get a spare radio and a spare torch** that stay unplugged and unused.
2. **Store the batteries separately** so nothing leaks.
3. Put everything together in a **closed metal box with a lid** (for example a biscuit tin or a metal toolbox). Metal that completely surrounds a device shields it from electromagnetic fields – this principle (a tight metal casing, a "Faraday cage") is used, for example, to protect nuclear power stations. For a household tin, it is **a low-cost precaution, not a promise**.
4. **Paper copies:** phone numbers, meeting points, important documents, a printed map. See Grab bag and the Document folder guide.
5. **Cash** – as for any power cut.

That's all you need. Expensive "EMP protection" products, bunkers or home remedies such as using the microwave as a shielding box are not part of it.



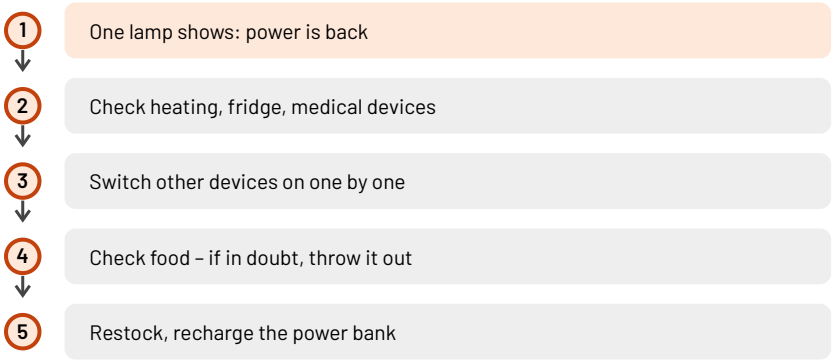
Low-cost precaution – no guarantee

Metal box for spare devices: radio and torch unplugged, batteries kept separately, paper copies included, lid closes all round – a low-cost precaution with no guarantee

AFTERWARDS

Things don't go back to normal the moment the power returns. It can take a while until all systems are running and shops are restocked.

WHEN THE POWER COMES BACK



When the power comes back: a lamp shows power is back, first check heating, fridge and medical devices, then switch devices on one by one, check food, restock supplies

1. **Switch devices back on one by one.** First check that the heating, fridge, freezer and medically necessary devices are working properly. Anything not urgent stays off for now or is switched on later – this avoids load peaks on the grid.
2. **Reset clocks, heating and other devices.**
3. **Keep an eye on pipes and heating,** especially after frost – damage often shows up later. Also check hot water, smoke alarms and any sewage pump.
4. **Check food:**
    - Frozen food that warmed from –18 °C to no more than –12 °C is safe to eat, according to the German Federal Institute for Risk Assessment (BfR).
    - Use thawed cooked dishes and raw plant foods soon. Cook raw animal products all the way through after thawing.

    - Throw away ice cream that has started to thaw.
    - Anything that was unchilled for a long time or looks or smells spoiled: throw it out. If in doubt, throw it out.
5. **Keep listening to the radio:** there may still be notices about drinking water, traffic and supplies.
6. **Stay frugal:** food, medicines, cash and fuel may be short for a while yet.
7. **Document damage** (photos of broken devices or spoiled food) – it helps with insurance or warranty claims.
8. **Restock:** batteries, gas cartridges, water, cash; recharge the power bank.
9. **Learn from it:** What was missing, what was unnecessary? Write it down and add it to the supplies calculator or the shopping list.

COMMON MISTAKES

- **Barbecuing, cooking on a camping stove or running a generator – in the flat, cellar or garage.** Danger to life from carbon monoxide.
- **Leaving candles burning unattended.**
- **Opening the fridge and freezer "just for a second"**, again and again.
- **Calling the emergency number for information.** It blocks the line for real emergencies.
- **Leaving the cooker, iron and fan heater switched on** – they come back on when the power returns.

- **Connecting a generator to the house wiring yourself.** Only an electrical contractor may do that.
- **Relying only on your phone.** No network means no warning app and no internet radio.
- **Waiting until you're cold before wrapping up.**
- **Driving around to see "what it's like elsewhere".** Traffic lights are out, fuel is short.
- **Using the lift** while the power supply is uncertain.
- **Buying expensive special products for EMP** instead of water, light and a radio.

CHECKLIST

- [ ] Torches or head torches with spare batteries, kept in a fixed place
- [ ] Battery, solar or wind-up radio with spare batteries
- [ ] Power bank, charged, with cable
- [ ] List of important phone numbers on paper
- [ ] Drinking water: 2 litres per person per day (aim: ten days)
- [ ] Food that needs neither fridge nor cooking
- [ ] Camping stove (for outdoors) or food warmer/fondue (for indoors) and fuel
- [ ] Warm clothes, blankets, sleeping bags
- [ ] Cash in small notes
- [ ] Smoke alarms and carbon monoxide alarm
- [ ] Fire extinguisher or fire blanket
- [ ] Bin bags and cat litter for the emergency toilet

- [ ] Ice packs in the freezer, fridge thermometer
- [ ] Location of the fuse box and the grid operator's fault number noted
- [ ] Know where your nearest help point ("lighthouse") is
- [ ] Medical devices: emergency solution agreed with doctor or care service
- [ ] Personal medicines, baby food, pet food
- [ ] Spare radio and torch unplugged in a metal box, batteries kept separately
- [ ] Important documents and meeting points on paper

SOURCES

All links checked on 5 November 2026. Most sources are in German.

- Federal Office of Civil Protection and Disaster Assistance (BBK): Stromausfall – Vorsorge und Selbsthilfe, edition 4 (2026), https://www.bbk.bund.de/SharedDocs/Downloads/DE/Mediathek/Publikationen/Buergerinformationen/stromausfall-vorsorge-selbsthilfe.pdf
- BBK: Vorsorgen für Krisen und Katastrophen, 2nd edition (11/2025), https://www.bbk.bund.de/SharedDocs/Downloads/DE/Mediathek/Publikationen/Buergerinformationen/Ratgeber/ratgeber-notfallvorsorge.pdf
- BBK: Vorsorge und Handeln bei Stromausfall (web page, accessed 11/2026), https://www.bbk.bund.de/DE/Warnung-Vorsorge/Vorsorge/Stromausfall/stromausfall_node.html

- BBK: Stromausfall – KRITIS-Gefahrenlagen (web page, accessed 11/2026), https://www.bbk.bund.de/DE/Themen/Kritische-Infrastrukturen/KRITIS-Gefahrenlagen/Stromausfall/stromausfall_node.html
- German Bundestag / Office of Technology Assessment (TAB): Gefährdung und Verletzbarkeit moderner Gesellschaften – am Beispiel eines großräumigen und langandauernden Ausfalls der Stromversorgung, printed paper 17/5672 (2011), https://dserver.bundestag.de/btd/17/056/1705672.pdf
- German Bundestag: Federal government answer "Atombombenexplosion in großer Höhe", printed paper 10/1272 (1984), https://dserver.bundestag.de/btd/10/012/1001272.pdf
- Federation of German Consumer Organisations (Verbraucherzentrale Bundesverband): Was tun bei Stromausfall? Gut vorbereitet und richtig handeln (19 Jan 2026), https://www.verbraucherzentrale.de/energie/was-tun-bei-stromausfall-gut-vorbereitet-und-richtig-handeln-116320
- Verbraucherzentrale Niedersachsen: Verpflegung bei Stromausfall – Vorräte sichern, Tiefkühlkost retten und ohne Strom kochen (4 Aug 2026), https://www.verbraucherzentrale-niedersachsen.de/wissen/lebensmittel/auswaehlen-zubereiten-aufbewahren/verpflegung-bei-stromausfall-vorraete-sichern-tiefkuehlkost-retten-und-ohne-strom-kochen-124714
- Spandau District Office, Berlin, Civil Protection: Stromausfall (web page, accessed 11/2026), https://www.berlin.de/ba-spandau/service/katastrophenschutz/stromausfall-1631493.php
- State of Berlin, Civil Protection: Informationen zu Vorsorge und Verhalten bei Stromausfall (web page, accessed 11/2026),

https://www.berlin.de/bevoelkerungsschutz/notfallvorsorge/stromausfall/artikel.1653256.php

- City of Dresden, Fire and Civil Protection Office: Stromausfall – wie vorsorgen und handeln?, 3rd edition (11/2024), https://www.dresden.de/media/pdf/feuerwehr/katastrophenschutz/pdfHZStromausfall_DEUTSCH_2024.pdf
- Swiss Federal Office for Civil Protection (BABS): Gefährdungsdossier Sonnensturm, Katastrophen und Notlagen Schweiz (02/2026), https://www.babs.admin.ch/dam/de/sd-web/ymfgdFTRDIQ1/16-Sonnensturm-GD-de.pdf
- NOAA Space Weather Prediction Center: Electric Power Transmission (web page, accessed 11/2026), https://www.spaceweather.gov/impacts/electric-power-transmission
- NOAA Space Weather Prediction Center: Geomagnetic Storms (web page, accessed 11/2026), https://www.spaceweather.gov/phenomena/geomagnetic-storms
- European Space Agency (ESA): Space weather and its hazards (web page, accessed 11/2026), https://www.esa.int/Space_Safety/Space_weather/Space_weather_and_its_hazards
- U.S. Department of Energy: DOE Electromagnetic Pulse Resilience Action Plan (01/2017), https://www.energy.gov/sites/prod/files/2017/01/f34/DOE%20EMP%20Resilience%20Action%20Plan%20January%202017.pdf