

A woman with long brown hair, wearing a white off-the-shoulder top and plaid pants, is sitting on a bed reading a book. The bed has a grey and white patterned blanket and a blue and white patterned pillow. In the foreground, a wooden crate holds a breakfast tray with a plate of food, a white mug of coffee, a glass of orange juice, a book, and a pair of glasses. The scene is set in a cozy, well-lit room.

District Heating The Warm Comfort of Home

Information Leaflet



VATTENFALL

District Heating Has Got You Covered

Easy, safe and environmentally friendly



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While this leaflet has been compiled with the utmost care, it is subject to change without notice. Errors and omissions excepted.

District heating is safe and easy to use: you don't need a boiler or natural gas, and it's as low maintenance as you can get. We supply hot water right to your home from a central point on a heat grid, so you can heat your home and have hot running water any time you like. District heating is also environmentally friendly, helping to reduce emissions of carbon, one of the greenhouse gases responsible for global warming. It's one of the ways in which you can help reverse climate change.

Easy

District heating provides you with continuous heating and hot water in your home. We facilitate this through a reliable network and make sure you get what you need – like extra hot water if you have a large bathtub or a power shower. And how perfect is it to never have to think or worry about boiler maintenance again?

Safe

District heating means having no gas pipes in your home: not even the smallest flame, as you don't need a boiler or geyser. Isn't that reassuring?

Environmentally friendly

District heating is very environmentally friendly: carbon emissions are at least 45% lower than if each individual home has its own boiler. Just how much lower depends on the heat source used. For example, we can use waste heat from a waste processing plant or power plant. There are even heat grids that reduce carbon emissions by around 85%. We will also continue to invest in renewable energy sources going forward.

Fossil-free within one generation

Join us as we move

towards a fossil-free future. We aim to create the conditions for making our lives fossil-free within a single generation. It's a pretty ambitious goal, but we're confident we can do it together.

Creating a cleaner and greener world together

Climate change is one of the greatest challenges of our time. We need to find alternative ways of generating energy and heat. That's why we're gradually phasing out fossil fuels, investing in wind and solar energy, and supporting our customers as they start transitioning to fossil-free lives, both at home and on the road. For starters, they have access to a network of charging posts. And since we operate in the Netherlands, Sweden, Germany, Denmark, Great Britain, France and Finland, we have the resources required to achieve our goal.



Where is your district heating sourced?

District heating originates from several environmentally friendly sources. For one, we use heat released during waste incineration or power generation. This heat is channelled from the heat grid to a distribution station in your area, and then to the heat exchanger in your home. We are working hard on developing heat sources such as geothermal energy, hydrogen, biomass and the use of waste heat from data centres.

On vattenfall.nl/warmte-etiket you can check what source(s) is/are used to generate your district heating.

And on vattenfall.nl/warmte-co2reductie you can view the carbon reduction achieved in each part of your country.



How we heat your home

District heating enters your home through a dedicated system. Referred to as a 'heat exchanger, this system is usually located inside your meter cabinet. The heat exchanger transmits the heat to the radiators or underfloor heating. It is also used to heat tap water – see an example of this type of unit below.

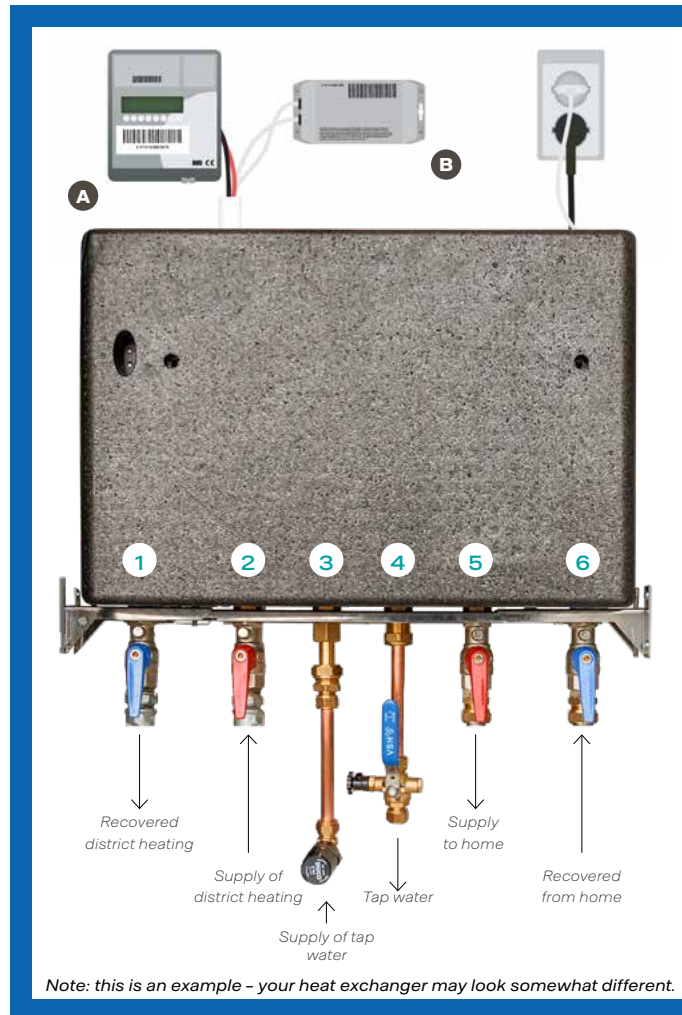
Regular ventilation is key

Since the heat exchanger must be properly ventilated, there are grids or ventilation grilles (openings) at the top and bottom of the door of the meter cabinet. Be sure to keep these openings clear. We recommend that you not use the meter cabinet as a storage space.

Make sure the heat exchanger is accessible

We must be able to quickly access the heat exchanger if we need to carry out repairs (emergency or otherwise) or for inspections. Sometimes there are also pipes in the crawl space that we must be able to reach.

Please note: the heat exchanger is the property of Vattenfall. Please phone us if there are any issues – do not attempt to repair it yourself. We are here to assist you.



Measuring your energy consumption

The heat meter records the amount of heat you consume. The device measures exactly:

- How many cubic metres of water flow through your heat exchanger
- The temperature of the hot water as it enters your home
- The temperature of the cooled water flowing out of the home

By aggregating all this data, the heat meter knows exactly how much energy you have consumed.

Smart heat meter

Most new heat exchangers are connected to a smart meter consisting of two small boxes: a heat meter and a WarmteLink box.

- You can tell the heat meter (A) by its display, which shows you how much heat you are consuming.
- The WarmteLink box (B) regularly transmits the meter readings to us across a secure broadband connection. This requires your consent. If you do not have the WarmteLink box installed, we have no access to your meter readings. You will then receive a request once a year to report the meter readings to us yourself.

Please note: The plugs must always remain in their sockets.

Breakdown of energy bill

We calculate your energy consumption per unit. For district heat, we refer to this unit as gigajoules (GJ). You pay for the gigajoules you consume, and in addition we charge fixed monthly payments.

Adjusting your monthly payment

We will set a new fixed monthly payment based on your annual consumption. This may turn out either higher or lower – you can check this in your annual statement and online in Mijn Vattenfall (My Vattenfall). You can also change your monthly payment there at any time. We will alert you any time we notice a change in your consumption or the charges you pay.

Temperature regulation

District heating makes it easy to control the temperature in your home. The most common types of thermostats are:



Room thermostat

A room thermostat (or room temperature controller) allows you to regulate the heat at a central point in your home. We recommend that you set the temperature to 15°C at night. This saves a lot of energy, while you can quickly get the heat going when you wake up on a chilly morning. If you have an underfloor heating system, you should set the nighttime temperature 2 degrees lower than the daytime temperature, or else it will take too long to heat up your home.



Thermostatic radiator valves

These allow you to regulate the temperature in individual rooms. If there are several radiators in one room, be sure to adjust all the valves to the same position, as this ensures that heat is evenly distributed throughout the home. Thermostatic radiator valves are often combined with a central switch. Called a 'night storage heater switch', it enables you to regulate the heat for all radiators located in the home at the same time.



Smart thermostats

You can use your smartphone to operate a smart thermostat. This is very convenient if you're not at home or can't or don't want to get up to walk to the device. There are smart room thermostats and smart radiator valves available on the market.

Your only maintenance: bleeding your radiators

District heating is about as low maintenance as you can get. Since the heat exchanger is and remains the property of Vattenfall, we are responsible for maintaining and servicing this device. All you need to do is bleed the radiators and/or your underfloor heating system at semi-regular intervals. A bubbling sound in the pipes or radiators will tell you when it's time.

How to bleed your radiator:

1. Switch off valve 5 on the heat exchanger (horizontal; see page 6). The supply of heating water will discontinue. You can now bleed the radiators one by one, starting at the lowest level and working your way to the top.
2. Read the instructions for your heating system. We generally use a special key to open a valve on the radiator to release the air. Be careful, as some hot water will be released at the same time. You should therefore keep a cloth or container handy.
3. Turn off the valve as soon as water starts running again.
4. Repeat these steps for each radiator.
5. Switch on valve 5 on the heat exchanger. You can now start using your heating system again. Keep the radiator bleed key in a convenient place.

The valves of the heat exchanger should not be shut for extended periods of time during freezing temperatures, as this could potentially cause damage. If you're leaving your home for more than a few days during the winter months, you should take the following measures:

- Check that all radiators are working properly.
- If you have a room thermostat, be sure to set it to power-save mode (approx. 15°C) and switch all radiator valves on completely.
- If you don't have a room thermostat but do have thermostatic radiator valves, be sure to set these to frost protection mode (indicated by an asterisk).
- If you also have a central switch (night storage heater switch), set it to day mode.

Tips for enhancing comfort

✔ Distribute heat evenly around your home

If you have several radiators in the same room, set them to the same temperature. This ensures evenly distributed heat and greater comfort.

✔ Air your home thoroughly

Air (ventilate) your home at least 15 minutes every day. Regularly letting fresh air into your home ensures comfortable heating and the lowest possible energy waste.

✔ Keep room thermostats, radiator valves and central switches uncovered

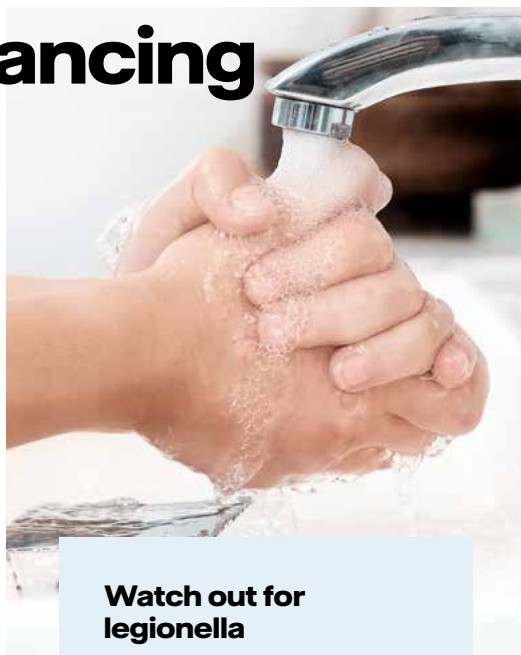
These devices work less effectively when you cover them up, for example with a curtain. This also applies if there is a heat source nearby, such as a lamp.

✔ Keep radiators uncovered

Do not enclose radiators and do not cover them – they will generate less heat and your energy bills will increase. Be sure to also not obstruct them by placing furniture, decorative screens or curtains in front of them.

✔ Showering: be considerate of others

When two hot water taps are switched on at the same time, one will inevitably be hotter than the other. You should therefore check to see if someone else is in the shower. If you find this too much of a hassle, you can contact us to request a higher CW category. You can read more about this on vattenfall.nl/cw-klasse



Watch out for legionella

Legionella bacteria may surface in tap water that remains still for an extended period of time at a temperature of between 20 and 50°C. You can get very sick from breathing in small droplets containing legionella, for example while taking a shower or using your garden sprinkler system.

If you're going to be away from home for more than one week or are not using a tap for a longer period of time (like the outdoor tap), you should run your cold-water and hot-water taps for a full minute. Make sure to avoid spraying. For example, remove the shower head from the hose and immerse it in water.

Smart use – save more money and energy

We can also create a fossil-free future by making smarter choices in the way we consume energy. As a bonus, you also cut down your energy bill.

Smarter heating

- Summer? Turn down the thermostat. The radiator will then not be turned on unnecessarily if it does cool down somewhat at night.
- Winter? Heading away for a while? Set the thermostat to 15°C.
- Going to bed? Set the radiator to night mode one hour before tucking in for the night.
- Ventilating with the rooms and doors open? Adjust your thermostat to the lowest setting to prevent radiators from switching on unnecessarily.
- Your radiators will work more effectively if you ventilate properly, as it takes less time to heat dry air than humid air.
- Not using a room? Switch off the heat in this room, making sure the pipes don't freeze over.
- Insulate the heating pipes.

Save on hot water

- Take short, hot showers instead of baths and use a water-saving shower head to save both water and energy.
- A thermostatic shower tap ensures the water is the right temperature as soon as you step into the stall. This prevents water waste.
- Repair any dripping taps – thousands of litres of water could just be flowing away every year while you don't even notice.

Manage your energy needs in Mijn Vattenfall

You will find all your personal details – and a lot more – in your own online portal. You will also receive advice on your monthly amount and can keep track of your energy consumption. View your contract, annual statements and bills. Change your monthly amount or choose a different pay day. You can do it all in no time at all. If you don't have an account yet, it takes just three steps to create one in your Mijn Vattenfall portal. We'll make sure only you have access to your details, as Mijn Vattenfall is secured with your personal username and password. Go to vattenfall.nl/mijnvattenfall

You can rely on us



We're always glad to go the extra mile for you. As a Vattenfall customer, you can therefore always rely on our six trusted services.

Win-win every year



Fossil-free within one generation. Since you're helping us to achieve this goal, we'll be happy to reward you for your efforts. For example, there's our Blijven Loont ('Loyalty Reward') option: a discount of up to 25% on the variable costs of power supply. We also offer Exclusief ('Exclusive'), a feature which allows you to earn points towards fun days out and sustainable products.

Our alerts prevent unpleasant surprises



We will send you regular alerts so you can easily check whether your monthly amount is still appropriate for your energy consumption and whether you might like to make any changes. This way, you won't be unpleasantly surprised when you receive your annual statement.

More clean energy



We need to generate large quantities of clean energy if we are to really make an impact, including electric power sourced from wind generation, sun and water. We will therefore continue to invest in sustainable energy solutions in the future.

Check your consumption at any time



Energy-efficiency starts with knowing how much you consume. If you have a smart meter, we will make sure you can keep track of your energy consumption. It is easy to keep track using Mijn Verbruik ('My Consumption') in the Mijn Vattenfall portal.

Saving energy - step by step

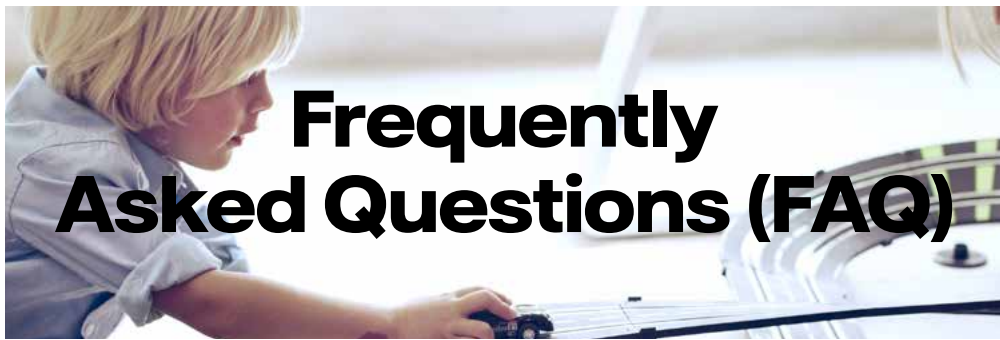


Small steps can often make a big difference. We will help make this easier for you, for example by running an energy scan or giving personal advice on energy-efficient living.

Be in control of your payments



You can set your monthly amount yourself - and choose the day of the month you would like to pay this amount. We will suggest an amount based on your consumption and our experience. If you think you'll be consuming less or more energy, it's easy to change the monthly amount.



Frequently Asked Questions (FAQ)

Below you will find some Frequently Asked Questions (FAQ) about district heating. If you don't see your question listed, feel free to contact us.

1. For which part of the heating system is Vattenfall responsible?

We ensure the supply of heat to your heat exchanger and make sure the device works properly.

2. For which part of the heat system is Vattenfall not responsible?

We are not responsible for the part of the system beyond the valves of the heat exchanger, including the thermostat, radiators and underfloor heating. These are the homeowner's responsibility.

3. I can't seem to get my home to heat up

You should check the following three items:

- Are all the valves of the heat exchanger switched on?
- Are the radiator valves switched on?
- Are the central switch or the room thermostat adjusted to the right setting?

If you think there is something wrong with the heat exchanger, run through the online incident check on vattenfall.nl/warmtestoring. You can ask any other questions you may have to your approved qualified servicing company (heating engineers) or your landlord.

4. It is very cold outside and the living room just won't heat up

Turn on the heating in rooms where the radiator is normally switched off, to prevent the walls and floors from getting too cold.

5. Only the tops of the radiators appear to be warm

It is normal for a radiator to remain cold at the bottom; this is related to how your system is configured.

6. One of the radiators fails to heat up

Check that the radiator valve is switched on. Switch the valve on completely. If nothing happens after five minutes, bleed the radiator. If this does not help, switch off all the other radiators. If this also makes no difference, contact your approved qualified servicing company (heating engineers) or your landlord.

7. The tap water is too hot, too cold or its temperature keeps changing

Run through the online incident check on vattenfall.nl/warmtestoring. If you're experiencing problems, call our Technical Support line: 0800 0513 (toll-free number, available 24/7).

8. I only have cold water coming out of my hot water taps

Go to the heat exchanger to check that the taps (see page 6) are switched on. If not, turn the taps on. If they are switched on, perform the online technical check on vattenfall.nl/warmtestoring. Alternatively, you can also phone our Technical Support line 0800 0513 (toll-free number, available 24/7).

9. The heating system is producing a bubbling sound

You need to bleed the radiators. Check page 9.

10. My radiators are emitting other noises

Contact an approved qualified servicing company (heating engineers) or your landlord.

11. When I switch off one of the hot water taps, I hear a thumping or thudding sound

Switch the tap off more slowly. You can also choose to have a pulsation dampener installed. Contact an approved qualified servicing company (heating engineers) or your landlord.

12. The heat exchanger is leaking

Switch off all the taps of the heat exchanger and call our Technical Support line, 0800 0513 (toll-free number, available 24/7).



13. A radiator, heating pipe or water pipe is leaking inside my home

Please contact your qualified service company or your landlord. If your home is at risk of flooding, go to the heat exchanger and switch off valves 3, 5 and 6 (see page 6).

14. I would like to replace a radiator or install underfloor heating

You should contact an approved qualified service company (heating engineers) experienced in district heating. Make sure the new radiator and/or pipes are not made from aluminium, as this is incompatible with district heating.

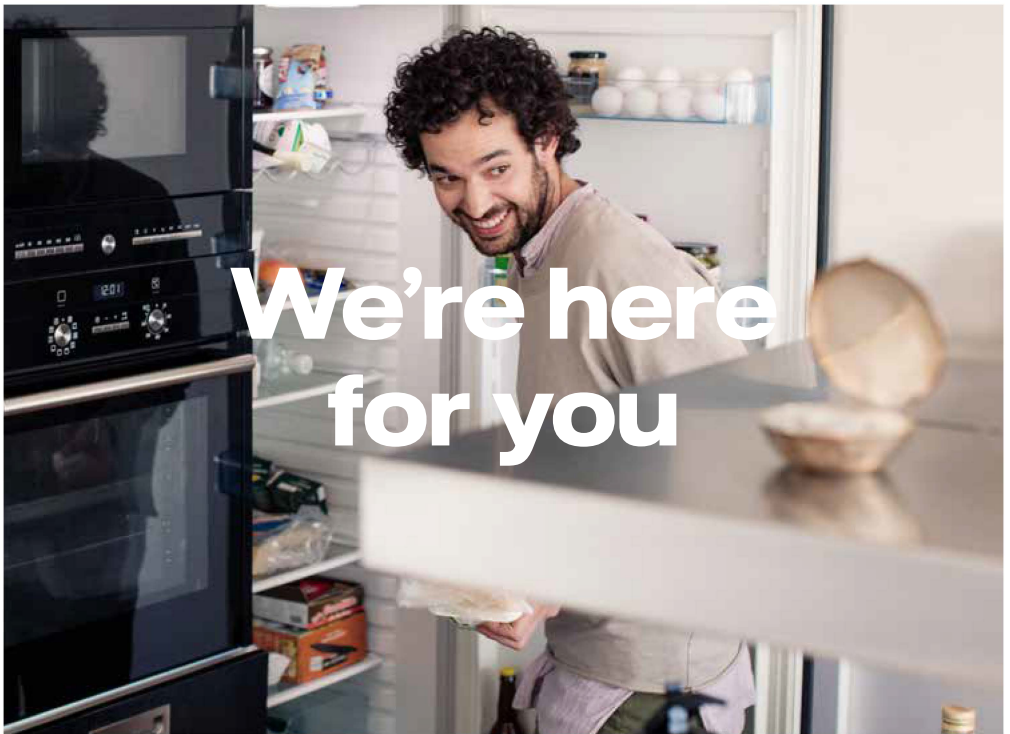
15. If two hot water taps are switched on at the same time, the water jet will be less powerful

Your CW category ('Comfort Warm Water') is probably inadequate in this case. You can choose to request a higher CW category. For more information, see vattenfall.nl/cw-klasse

16. The light on my heat exchanger is flashing red. What should I do?

Some heat exchangers include an LED indicator. If the red LED light is switched on/flashing, something is wrong.

- If the red LED light is on the whole time, this means there is a technical issue with your heat exchanger. Call our Technical Support department at 0800 0513 (toll-free number, available 24/7).
- If the red LED light is on, the pressure in your boiler system is too low and you need to replenish the water (or have someone do this for you).



We're here
for you

Customer Service

If you have any questions or comments, or would you like to report a change of address, check vattenfall.nl/service for contact options.

Technical issues?

Use our self-service tool to identify the problem. You will find this convenient tool at www.vattenfall.nl/warmtestoring

Still experiencing problems?

Our Technical Support department is available 24/7 at 0800 0513 (toll-free number).

Please note: to report technical problems involving your indoor system (this includes everything beyond the heat exchanger), you should contact an approved qualified servicing company (heating engineers) or your landlord.

For more information about district heating,

check vattenfall.nl/warmte