Energy for Single-Family Homes:

What You Need to Know

IN THIS GUIDE

Savings Steps
Save energy and money with simple tips

Understand Bills
Learn about your utility bills and common charges

Contacts & Chat
Get energy related support and assistance

Learn how you can save energy and money at home, who to contact for assistance, and how to understand your utility bill.

FALCON HEIGHTS
THE CITY THAT SOARS

My Energy Contacts

Fill in the names and contact information for energy programs & providers

Electric and Natural Gas Utility

The utilities serving you may provide energy assessments, energy-saving devices, and rebates. They may also provide seasonal cost averaging, and refer you to local agencies for support.

Electric Utility: Find on bill, call city hall, or visit https://mn.gov/puc/consumers/utility/

Utility: Xcel Energy **Phone:** 800-895-4999

Website: http://www.xcelenergy.com/

Gas Utility or Delivered Fuel Vendor: Find gas at https://blueflame.org/whos-my-utility

Utility: Xcel Energy **Phone:** 800-895-4999

Website: http://www.xcelenergy.com/

Energy Assistance Program

If you are having trouble paying your energy bills, the state Energy Assistance Program may be able to help with your energy expenses. Find your provider at https://mn.gov/commerce/energy/consumer-assistance/eap-providers/

Provider: Community Action Partnership of Ramsey & Washington Counties **Phone:** 651-645-6445

Website: https://caprw.org/welcome.html

Weatherization Assistance

If you are having trouble paying your energy bills, Weatherization Assistance may be able to help reduce energy costs with insulation, heating, appliances, and more. Find your provider at https://mn.gov/commerce/energy/consumer-assistance/wap-providers/

Provider: Community Action Partnership of Ramsey & Washington Counties **Phone:** 651-645-6445

Website: https://caprw.org/welcome.html

Citizens Utility Board

CUB can help you understand your utility bill or address related questions or complaints.

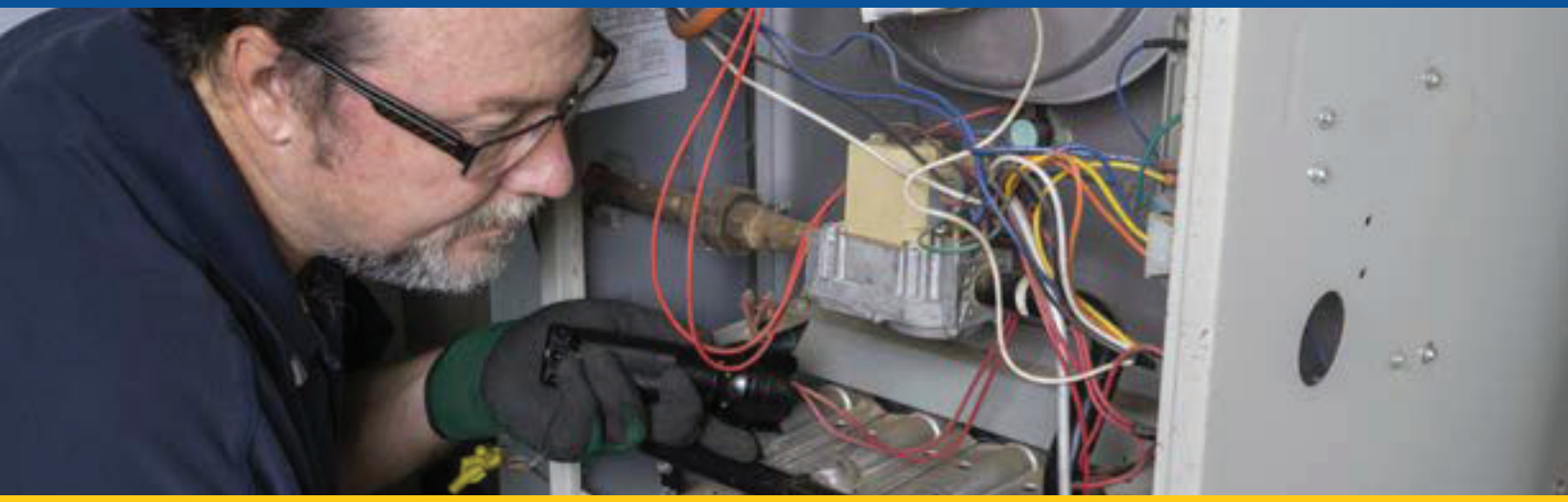
Phone number: 844-MINN-CUB (844-646-6282) **Website:** http://cubminnesota.org

Clean Energy Resource Teams (CERTs)

CERTs has a wide range of resources on energy efficiency and renewable energy.

Website: https://www.cleanenergyresourceteams.org

Energy Emergencies



What to Do if Your Furnace Isn't Working and You Can't Afford Repairs

Contact the Energy Assistance Program. This is usually your local Community Action Agency, which you can find here:
https://mn.gov/commerce/energy/consumer-assistance/eap-providers/

What to Do if Your Utilities are Shut Off (or you are behind on payments)

Contact your utility. Minnesota's Cold Weather Rule (CWR) is a state law that protects you from having your electric or natural gas service shut off between October 15 and April 15. If you are behind in paying your electric or natural gas bill, contact your utility company to find out if you qualify for CWR protection, and to sign up. CWR protection is only available to residential customers. All natural gas and electric utilities must offer CWR protection. To have CWR protection, you must set up a payment plan and keep it. If you don't keep the payment plan you may be disconnected. You can set up a CWR payment plan any time during the CWR season. The utility must set up a payment plan that is reasonable for your household circumstances. If you and your utility can't agree on a payment plan, contact the Minnesota Public Utilities Commission at 800-657-3782, or email consumer.puc@state.mn.us and they can help you work with your utility.

Website: https://mn.gov/puc/consumers/shut-off-protection

You can also contact your local Energy Assistance Program to help with energy bills. Follow the link below to see if you qualify for the Low Income Home Energy Assistance Program (LIHEAP). If your income is too high to qualify, you should still work with your utility to establish a payment plan. You must stick to the payment plan. If your situation changes and you are not able to keep up, you must contact your utility again to make a new payment plan.

Website: https://mn.gov/commerce/energy/consumer-assistance/energy-assistance-program/

Know Before You Buy

Inspect the Home

Assume that the home is being sold "as is." Get it inspected by a professional who is a member of ASHI or InterNACHI. It can also be a good idea to request previous utility bills to estimate heating and cooling costs in the home, as high bills could indicate that energy improvements need to be made.

There are four areas in a home with the highest opportunity for energy savings in Minnesota's climate—in priority order below—that you should inspect before buying.

1. **Attic Insulation:** Air leaks allow air from inside a house to enter the attic, potentially causing comfort issues, ice dams, and moisture issues. Sealing these leaks and adding insulation will improve a home's durability and save energy. Recommended R-Value: R-50.
2. **Heating System:** Forced air furnaces typically have a 20 year life, and boilers should be replaced after 25 years. To maximize energy savings, a furnace should be replaced with a model that has an efficiency (AFUE) of at least 96% and an electronically commutated motor (ECM), and a boiler should be upgraded to a condensing model with at least 90% AFUE.
3. **Wall Insulation:** Walls with little insulation are cold and drafty. Dense packing walls with insulation reduces home drafts and improves home comfort. This will also reduce energy waste and save money. Recommended R-Value: R-11.
4. **Windows:** Windows should be double-pane, or single-pane with storm windows. Storm windows can be installed on the exterior of single-pane windows to cost effectively reduce energy usage, reduce drafts, and improve comfort.

For more information about making energy-saving improvements, consult the Home Energy Guide from the Minnesota Department of Commerce (https://mn.gov/commerce/energy/conserving-energy/home-energy-guide/) and the Home Energy Hub from Center for Energy and Environment (https://homeenergyhub.org).

Your Utility Bill

What's on Your Utility Bill?

Your electric and natural gas bills have several types of charges. Actual energy costs and items on bills can be different depending on your utility, but here are the basics.

Service Charge

The service charge is a flat monthly fee that you pay every month to have access to energy. Even if you do not use any energy in a given month, you will still be charged for access under the service charge.

Energy Charge

The energy charge on your bill is the cost of the electricity or gas you used. It is billed by kilowatt-hour (kWh) for electricity and therms for natural gas. Your utility reads your meter to determine the amount of electricity or natural gas used. You reduce your energy charge by using less energy!

1. **Understanding kilowatts (kW) and kilowatt-hours (kWh):** kilowatts are a rate of energy use; kilowatt-hours are a quantity of energy used. For example, a microwave might use electricity at a rate of 1 kilowatt (kW). If that microwave is used for 2 hours, it will use 2 kilowatt-hours (kWh) of electricity.
2. **Understanding therms:** therms are a unit of heat. One therm is equal to approximately 29 kWh and can be provided by about 97 cubic feet of natural gas.

Riders

Many utilities also include "riders" on your bill. Riders are charges for specific aspects of your utility service, such as the cost of fuel. Riders may be based on how much energy you use or they may be a flat monthly fee.

Taxes

Finally, taxes on your bill vary based on where you live. Taxes may be flat fees or variable.

How Much Is Your Utility Bill?

The average Minnesota family of four uses about 800 kWh of electricity each month and pays around $100. Natural gas bills vary more widely but are typically $100-$200 per month.

If you are paying a lot more than this, you may be able to find ways to become more efficient and save money. There may also be an error on your bill.

Saving Energy at Home

Simple tips for saving energy and money at home

To do: Swap in LED light bulbs

Lighting

Replace old-style incandescent bulbs and CFLs with LEDs and turn off lights when you are not in the room or when you can use natural light. Find the right bulbs using lighting guides available at cleanenergyresourceteams.org/lighting

To do: Program the thermostat

Heating and Cooling

- In winter, set your thermostat at 68°F during the day, and lower it at night and when you are away. Open window curtains/shades during the day to let the sun help warm your home, and close them at night.
- In summer, set your thermostat at 78°F and use a simple box fan when in the room to reduce air conditioning costs. Close curtains and shades during the day and open windows at night to take advantage of "free cooling."
- Remember, don't try to heat or cool the outdoors! Close windows and doors when running the furnace or air conditioner. Also, make sure your air registers are clear of furniture or other obstructions so that air can circulate.
- Get your heating system tuned up annually and replace furnace filters monthly.
- Seal your home from cold winter drafts with plastic film on the windows and draft snakes, sweeps, and weatherstripping for doors. Close storm windows on doors and windows, too.

Avoid using electric space heaters. They are an expensive way to heat your home, and some are a fire hazard. If it's difficult to heat your home to 68°F without one, contact your utility or the Weatherization Assistance Program to explore improvements to your heating system or insulation.

Saving Energy at Home

Simple tips for saving energy and money at home

Steps you can take to save more energy

- Install a programmable or smart thermostat.
- Consider replacing your furnace or boiler if it's nearing the end of its expected life (15-20 years for furnaces, 20-30 for boilers), requires repairs, or is inefficient.
- Install ENERGY STAR equipment and appliances.
- Reduce water heating costs with water-efficient faucet aerators and showerheads. Look for the WaterSense label.
- Turn down the thermostat on your water heater to 120°F to reduce energy use and prevent burns.

Find and seal air leaks and add insulation

- Adding insulation combined with sealing air leaks, also called weatherization, can cut heating and cooling costs by 15 percent or more.
- Get a home energy assessment to find air leaks and see how much insulation you have.
- Common symptoms of a leaky, poorly insulated house include chilly drafts near windows and doors and in your basement, and ice dams on the roof.

What is the Weatherization Assistance Program?

WAP improves the energy efficiency of homes of income-qualified households, including renters. From insulation to heating systems to appliances and more, WAP takes a "whole-house" approach to reducing families' energy costs and improving health and safety for renters and owners.

More tips

- Wash your clothes with cold water and clean the dryer lint trap every load.
- Unplug electronics when not in use or use a smart power strip.

Ready to Take the Next Step?

1. Find out if your utility provides energy assessments, rebates, or free energy-saving items.
2. See if you qualify for weatherization assistance. Find your provider at https://mn.gov/commerce/energy/consumer-assistance/wap/

Consider Solar

Could solar energy work for your home?

If you have an unshaded roof or area of land that gets a lot of sun throughout the year, solar energy might be a good fit for you and your home. Other technologies like air source heat pumps, ground source heat pumps, and insulation might better reduce demand for fuels needed to heat your home. Any one of these technologies might be right for you depending on your energy use or the solar resource available at your site. You can also contact your electric utility to see about other options like community solar and green pricing.
https://www.cleanenergyresourceteams.org/simple-steps-solar

More Resources

Minnesota Department of Commerce

Their in-depth Home Energy Guide explores the full range energy-savings opportunities.
https://mn.gov/commerce/energy/conserving-energy/home-energy-guide/

Center for Energy and Environment

This Minnesota-based nonprofit offers a Home Energy Hub (https://homeenergyhub.org) and several financing options for energy improvements (https://www.mncee.org/loans/homes).

Clean Energy Resource Teams (CERTs)

CERTs is a statewide partnership with a mission to connect people and their communities to the resources they need to identify and implement community-based energy efficiency, renewable energy, and electric vehicle projects. More at https://www.cleanenergyresourceteams.org

About This Series

CERTs
CLEAN ENERGY RESOURCE TEAMS

This guide is part of a series designed to answer common home energy questions.

- Energy for Renters: What You Need to Know
- Energy for Landlords: What You Need to Know
- Energy for Manufactured Homes: What You Need to Know
- Energy for Single-Family Homes: What You Need to Know

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CleanEnergyResourceTeams.org/Home