



Winter Home Energy Efficiency Tips

free ways to save in the winter

- Set thermostat settings at 68 degrees or as low as possible while you are home.
- Set thermostats to 60 degrees when you're away from home or install a programmable thermostat to do that automatically. If you have a heat pump, make sure you install a programmable thermostat so that you can gradually warm the house back up before you return home.
 - If you have a heat pump, do not make a lot of changes in the thermostat temperature during heating season unless you are going to be away for several days. Otherwise, the auxiliary heat will come on which makes the system costlier.
- Wear layers of clothing and use extra blankets.
- Close fireplace damper when not in use.
- Don't block vents and radiators with furniture, curtains, or rugs.
- For windows that receive direct sunlight, keep shades open during the day and close them at night.
- Reduce the temperature setting on your water heater to 120 degrees or less.
- Clean the coils on the bottom or the back of your refrigerator regularly.
- Recommended temperature for your refrigerator is 37 to 40 degrees and 5 degrees for the freezer.
- Inspect and clean your dryer vent tube on your dryer periodically. Built up lint can lead to longer drying times and can be a fire hazard.
- Take 5-minute showers instead of baths.
- Run washer, dryer, and dishwasher only when you have full loads.
- Wash clothes in cool or cold water whenever possible.
- Since some appliances use electricity all the time, plug them into a power saving electric strip or turn a regular strip off when the appliances are not in use.
- Scrape your dishes rather than rinsing them before putting them in the dishwasher. Air dry dishes instead of using the drying cycle feature on your dishwasher.

low-cost ways to save

Heating

- Replace the system's filter every three months or more often if it gets clogged with items like pet hair.
- Schedule regular tune-ups for the heating and cooling system for optimum efficiency.

Windows/Doors

- Replace missing window putty or glazing as needed.
- Caulk window and door frames on the exterior side.
- Replace weatherstripping on exterior doors.
- Check door bottoms and thresholds to make sure air is not escaping. Replace when necessary.

Air Sealing

TIP: On a windy day, place a lit stick of incense to check for air leaks. A horizontal flow of the smoke means you have a leak. Dirt and spider webs can also indicate an air loss.

- Install foam gaskets behind light switches or outlets located on exterior walls.
- Magnetic kitchen exhaust fan covers can keep air from leaking when fan is not running.
- Seal holes in the exterior walls, crawl space or basement where air conditioning and plumbing pipes penetrate the building.
- Close off openings between a masonry chimney and surrounding wood framing in the attic with sheet metal or foil-faced foam board insulation.
- Install weatherstripping around the perimeter of attic access hatches and pull-down stairs.

Ductwork and Air Distribution

- Seal leaky duct connections with duct sealing mastic. Do not use duct tape, as it will dry out and come loose.



Winter Home Energy Efficiency Tips

low-cost ways to save continued...

Water Heating

- Install an insulation blanket around your water heater.
- Install low-flow showerheads in your bathrooms.

Lighting and Appliances

- Test your refrigerator gaskets by closing the door over a piece of paper. If you can easily remove it with the door closed, consider replacing either the gaskets or the appliance.
- Install timers, photocells, or motion switches on exterior lighting fixtures.

investments for larger savings

Insulation

Here are the minimum recommendations:

- Attic Insulation: R-38 (12 to 15 inches)
- Floor: R-19 above unheated areas (6 inches)
- Crawl Space Wall Insulation: R-10 with a vapor barrier (foam board)
- Duct Insulation: R-13 in unheated areas
- Rim Joist Insulation: R-13 (4 inches)

Windows

- Install storm windows to provide additional insulation and to reduce air leakage.
- Replace your old, leaky windows with new, energy-efficient double pane windows.

Ductwork and Air Distribution

- Insulate all uninsulated ductwork in unconditioned spaces (attics and crawl spaces).

Air Conditioning

- Replace your air conditioning unit with a new unit with a SEER rating of 14 or higher.

Heating

- Replace your furnace with a new unit with an AFUE rating of 95 percent or higher.

Water

- If your water heater is over 7 years old, consider replacing it with an energy-efficient model.

Appliances

- When replacing appliances, purchase Energy Star qualified models.

Winter 2021/2022 High Energy Prices and Supply Constraint Alert

As you might have heard in the news recently, winter energy prices and supply issues could hit utility customers again. Unfortunately, many of the items necessary to mitigate the causes of the February 2021 energy emergency will take time to implement so it is necessary to take precautions now. Some issues still need regulatory and legislative fixes. Plus, existing market conditions are not favorable. The natural gas market is already experiencing higher prices due to supply shortages which in turn could impact the electric grid. Since there are no quick and easy fixes to these issues, utilities need to prepare for the chance of another critical event this winter. The most important thing to do to mitigate negative impacts is to work with utility customers to reduce energy usage, especially during times with limited supplies and high prices.

What is going on?

- Natural gas prices will be higher this winter. The natural gas market is based on supply and demand. Demand for natural gas has been high both domestically and internationally. Additionally, supplies are down from last year based mainly on storage withdrawals which occurred during February's extreme winter weather. The market price of natural gas last winter was roughly \$2.82 per million British Thermal Unit (BTU). Current forecasts show winter prices around \$4.80 per million BTU. This wholesale cost increase means an average homeowner's monthly bill could double.
- Electricity could also have supply and demand issues resulting in high prices and pleas for conservation. Less natural gas could be available to generate electricity since it is also used for heating. Extreme, prolonged winter weather could make the situation even worse. To maintain grid reliability, alerts for reducing electric consumption could occur if demand outpaces supply. Another part of the equation is an overwhelmed transmission system which could hamper large amounts of electricity being transferred from one region to another. The electric grid is more complicated than the natural gas market since there is not a feasible way to store large amounts of electricity. The instantaneous nature of this service means that demand can't outpace electric supplies or catastrophic grid failure with blackouts could occur.

What has been done since the February 2021 energy emergency to prevent it from happening again?

- Natural Gas: as mentioned above high demand and depleted storage mean the United States is not in better shape to deal with another extreme cold weather event. Both MPUA and the American Public Gas Association support [federal Natural Gas Policy Act amendments](#). Consumer protection items like wholesale price caps are at the top of the list. Expanding the powers of the President to call a natural gas price emergency needs to occur. Winterization requirements could ensure that supply facilities can operate in prolonged, extremely cold weather. Pipeline penalties for storage withdrawal and interstate tariffs tied to natural gas index prices also need to be addressed with price caps. Alignment of the natural gas market with the electric marketplace could address the inherent problems of natural gas causing electric grid instability and cascading price hikes.
- Electric: the Federal Energy Regulatory Commission (FERC), working with the North American Electric Reliability Corporation (NERC) and its regional entities, has reported its [preliminary findings and recommendations from the February 2021 event](#). There are 28 recommendations but most of the solutions are not expected to be implemented this winter and some fixes could come as late as the winter of 2023/2024. The recommendations center around these main themes: standards for weatherization of generating units, compensation for weatherizing, a FERC natural gas-electric reliability forum to address problems, better forecasting during extreme weather, load shedding operations, and enhancements of grid-related electrical equipment. The final recommendations to alleviate the problems that occurred in February 2021 are expected to be issued this winter.

What should utilities be doing to prepare for high energy prices and limited supplies?

Regulatory fixes will not come quickly. MPUA and hometown utilities need to continue advocacy work with other energy-related associations, regulators, and legislators. City utilities need to notify their customers about high energy prices and ways to conserve. Conservation techniques will come in handy if another energy emergency is declared again this year.

Suggested action items:

- **Educate everyone in your community.** Cast a wide net and repeat messages throughout the winter. People will be more ready to act in a time of crisis if they already understand why their participation in saving energy is important.
- **Community leaders** like city administrators, utility boards, city council, emergency management, school systems, Chamber of Commerce, and others need to be aware of what is going on. Plan meetings to discuss the problem or forward information from this document about the situation. People in your community can help brainstorm ways to help reduce energy loads but also can help you plan for emergencies like required reduction in energy consumption.
- **Large industries and commercial enterprises** are key members of your local economy and can help shed large amounts of electric and natural gas during a crisis. High energy prices can also impact their bottom line, so they need to be aware of high price events. Meet with the local management of these businesses to determine the best way to notify them of high prices or required electric or natural gas load shedding. Your utility team members can also help them identify ways within their business that have the largest savings potential.
- **Residential and small businesses** can make the biggest dent in their energy use by reducing the need for heating. Some items to lower energy use are free or easy do-it-yourself projects.

See our list of energy efficiency suggestions here:

https://cdn.ymaws.com/mpua.org/resource/resmgr/docs/WinterEnergyEfficiencyTips_M.pdf

Consider sending a letter to customers or including messages with the utility bill. Sample customer letter can be found here:

https://cdn.ymaws.com/mpua.org/resource/resmgr/docs/CustomerLetter_HighUtilityPr.pdf

Team up with local heating and cooling contractors and insulation companies on how you can work together to better serve your community. Check with social service agencies, like community action agencies, who can help with home weatherization or utility bill assistance for low-income members in your city. Civic groups and churches can also be valuable partners in helping the economically challenged.

MPUA is your partner and ready to help hometown utilities through challenges. Our advocacy team members will continue to engage and educate regulators and legislators to bring about solutions. The energy operations and analytics division are constantly optimizing resources for a reliable and economical supply. As part of MPUA's strategic plan, energy efficiency and demand side management programs are being researched. MPUA is by your side during these critical times in the natural gas and electric industry. We're ready to help!