



# Increase Your Winter Efficiency

Combat high winter bills by improving energy efficiency and conservation

With winter's cold temperatures come increased electric bills. Klickitat PUD wants our consumers to know what to expect, how the PUD keeps on track during winter weather and how you can help decrease your winter bill.

## **Weather Impacts Electric Bills**

When temperatures plummet, higher electric bills generally follow. Klickitat PUD urges customers to conserve energy. By alerting customers to weather-induced higher bills, Klickitat PUD hopes to avoid unexpected surprises.

## **Consistent Meter Reads**

Klickitat PUD strives to keep the time between meter reads consistent by keeping

within one to two days to the meter reading schedule. This keeps the number of billing days consistent.

The PUD recommends customers with self-read meters provide these reads consistently each month to avoid fluctuations in the number of days.

## **Heat Loss Factor Increases as Temperatures Drop**

The colder the weather, the more heat you use. Even a difference of just a few degrees in sustained colder temperatures can boost electricity use as heaters have to work harder to keep spaces warm.

Going from 40 degrees to 30 degrees, heat loss might be 10%, whereas going from 30 degrees to 20 degrees, the heat

loss might be 20%. This happens because heat loss through insulation, doors and windows is not proportionate and increases faster at lower temperatures.

## **Heat Pump Efficiency Decreases With Low Temperatures**

At around 37 degrees, many heat pumps reach what is called the balance point. At or near this temperature, the heat pump must run constantly to produce enough heat to maintain a comfortable, consistent indoor temperature.

The utility provides a list of tips for conserving energy in the winter to help customers save money on electricity bills. We encourage customers to call the utility if they have any questions or

concerns. Klickitat PUD is happy to work out payment plans to relieve temporary hardships and reduce the stress of higher-than-normal bills as a result of winter use.

Here are some low- or no-cost tips from the PUD for saving energy.

- Lower your thermostat when you go to bed or leave home. Use an Energy Star programmable thermostat. Every degree lowered can decrease the heating portion of your electric bill by 2% (assuming you have electric heat).

- Make it a habit to shut off lights, computers and other devices when not in use. Consider plugging electronic devices into an energy-smart strip.

- Close your fireplace damper when there is no fire. Leaving it open is like having a 48-square-inch hole in your house.

- Change furnace filters monthly to eliminate restricted airflow and increase energy efficiency.

- In winter, open south-facing drapes and blinds during the day to let heat in. Close all window drapes and blinds at night. Windows can cause some draft. If you keep your drapes closed, that will help insulate the cold from coming inside.

- Caulk or weatherstrip around windows to keep drafts out. Seal heavy-duty plastic film to the inside frame of your windows.

- Doors and windows may have cracks and cause a draft. You can stuff rags or towels in the cracks to keep the draft out.

- Water heating is the third-largest energy expense in your home. Set your water heater to 120 F, which is comfortable for most uses. Turn down your water heater temperature or set to vacation mode if you are going to be away for more than a week.

- Repair leaky faucets.

- Run only full loads in your dishwasher and clothes washers, and wash

clothes in cold water.

- Use the air-dry feature on your dishwasher. Use a clothesline to dry clothes when weather permits.

- Unplug laptop or cellphone battery chargers when not in use. Many draw power continuously, even when the device is not plugged into the charger.

- Set your refrigerator between 36 and 39 F.

- Vacuum the refrigerator condenser coils regularly to increase efficiency.

Consider using jugs of water to occupy the empty spaces in your fridge. It takes more energy to cool an empty refrigerator than a full one.

- Use a microwave or toaster oven for cooking and heating small portions.

- Use zonal-heat systems—baseboard, ceiling or wall heat—to your advantage by heating only rooms in use. ■

*Find a complete list of conservation tips at [www.klickitatpud.com/conservation](http://www.klickitatpud.com/conservation).*

## A Blanket of Protection

With an adequate level of insulation, you can create not only a comfortable living environment, but lower your utility bill. Insulation is your home's first line of defense against summer heat and winter cold.

### How Insulation Works

Heat flows naturally from a warmer space to a cooler space. By forming a barrier between air inside a home and air outside, insulation keeps heat inside during cold weather and outside during warm weather.

The effectiveness of insulation is measured in "R-value"—the insulation's ability to resist heat transfer. The higher the R-value, the better the insulating properties.

R-value varies with the type of insulating material, its thickness and its density—the number of fibers per square inch. Check the label for R-value and the insulation's fire-resistant properties, and to make sure the material meets standards of the federal government or the American Society for Testing and Materials.

### Types of Insulation

Insulation usually comes in four types: batts, rolls, loose-fill and rigid foam boards. Each fits a different part of your house.

It can be made from a number of materials, including fiberglass, cellulose (shredded paper), polystyrene, rock wool, silica, polyurethane, vermiculite, perlite, calcium silicate, diatomaceous earth and foamed plastic.

Fiberglass—the predominant insulating material used in the United States—has an R-value of about 3.1 per inch. Fiberglass or rock wool batts go between the studs in walls or the joists of ceilings or floors. Rolls or blankets—usually made of fiberglass—are convenient to use on an attic floor.

The R-value of cellulose—which is blown into attics and finished walls—depends on the thickness of the application, but can exceed more than 3 an inch. However, cellulose settles over time, reducing the R-value.

### Where to Begin

Check the insulation in your attic, ceilings, exterior and basement walls, floors and crawl spaces to see if it meets the R-value levels recommended for your particular area.

Consider an energy audit, which can help determine your insulation needs. Ask Klickitat PUD for recommendations, or consult your local building inspector or a reputable insulation dealer.

According to most energy experts, the best place to start adding insulation is in the attic. Measure the thickness of attic insulation. If there is less than R-22—7 inches of fiberglass or rock wool, or 6 inches of cellulose—you probably should add more.

Insulate floors over unheated spaces—such as crawl spaces and garages—and foundation walls.