

energizer



Minnesota Power 30 West Superior Street Duluth, Minnesota 55802 www.mnpower.com Kelley Eldien, Editor Winter 2008

Be safe when using standby generators

Standby generators are powerful appliances and require extreme caution in installation and use.

Emergency standby generators can supply electricity to your home or business in the event of a power outage. Operating a standby generator can be a lifesaver during a power outage, but only if properly installed and maintained. Understand the hazards and familiarize yourself with these important safety precautions before you buy or begin to use one.

It's essential to understand that improper installation and use of standby generators may violate state or local electrical codes and can severely endanger those working to restore your power. On our distribution system, crews work with voltages from 120 volts up to 46,000 volts. While the crews take measures to insure their safety, it is possible for a customer's improperly connected 120 volt generator to feed back into our system and energize our high voltage lines.

This creates a dangerous situation for both the employees working on the line and for the generator feeding the line. Always be sure your generating system is disconnected from the MP system.

There are two basic types of standby generators:

Portable, gas-powered generators:

You can purchase a small, portable, gasoline-powered outdoor unit and run extension cords from the generator directly to appliances. Always run such generators outside where there is adequate ventilation; never inside the house.

Generators that are permanently connected to your main electrical supply:

Larger backup generators can be connected to a building's main wiring panel, then used during

electric service outages to power essential medical devices, furnaces, air conditioners, or well pumps for those not connected to a municipal water supply. *To hook up this kind of generator, you must conform to the National Electrical Code and receive inspection from the state or local electrical inspector.* The electrical code will require that your generator not be able to feed into the electrical grid. In special cases where the generator will run in parallel with our system, special equipment will be required by Minnesota Power.

Always follow manufacturer's safety instructions when using a backup generator. Your vendor, retailer or electrician can help you determine what size generator is most suitable for your home or business and whether the equipment or appliances you want connected to your generator can be operated safely.



The "Minnesota Power Minute" is a weekly broadcast intended to inform you about your electric utility. Watch the most recent episodes online at www.mnpower.com; click on "MP Minute."

Minnesota Power is investing approximately \$300 million in environmental initiatives at three of its energy generation facilities in northeastern Minnesota. The projects – which will in total take 8 to 10 years to complete – are expected to improve Minnesota Power's already excellent record of environmental stewardship, while creating hundreds of construction jobs. At the same time, Minnesota Power is planning for the projected future electric growth needs of its customers. These planning activities are expected to be featured on future broadcasts.

Do homework when shopping for electric space heaters

With the cold winter months upon us, there have been a number of advertisements for electric space heaters that claim significant savings in heating costs. While there is savings potential with space heaters, it's important to understand the circumstances necessary to reap those savings and consider potential safety hazards that come with using a portable heater.

Space heaters can effectively take the chill out of the air in a single room and even maintain the desired temperature, dependent on the model and assuming you keep doors to other rooms closed. The cost savings may occur if you turn off the heat or turn down the temperature in other rooms. The size of the room and the outdoor temperature will also affect the performance of a space heater.

There is some basic functionality common to all electric space heaters. For example:

- They all efficiently turn electricity into heat.
- They convert one watt of electricity into 3.4 British thermal units (Btu) of heat.

- Plug-in space heaters are limited to 1,500 watts or 5,120 Btu/hour.

A 1,500 watt heater, based on current electric prices, costs approximately \$0.11/hour to operate. Based on these figures, running it eight hours per day for 30 days would cost \$26.40/month.

Features such as resistance coils or quartz lights shining on a "cured copper element" or "ceramic quartz tubes" do not change the amount of heat a space heater can produce. The wattage consumed determines heat production. A 1,500 watt heater will produce the same amount of heat regardless of its cost or other unique features.

If you're in the market for a space heater, there are a number of factors to consider when making your selection including temperature control, safety features, convection versus radiant, portability, and cost. For more information about space heaters and their ratings, you are encouraged to log on to consumerreports.org, search for "space heaters" and click on the first article listed.



Feb. 26 & 27—Duluth Entertainment and Convention Center

New in 2008—Preconference Workshops on Monday, Feb. 25.

Interested in learning about the latest innovations in energy technologies, efficient building concepts or sustainable development? This conference is for you.

Homeowners, builders, contractors, Realtors, architects, engineers, utility representatives and others will benefit from this two-day Expo featuring more than 75 exhibits as well as workshops and seminars.

Register online at www.duluthenergydesign.com (view detailed agenda and fees) or call (800) 228-4966 ext. 2796.

Fun-filled learning experiences at



This educational site is filled with creative activities, scientific and historical information, fun games, useful videos, and electrical safety tips. Learn how to integrate lesson plans into the classroom or at home and increase your knowledge about the world of electricity at www.mp.electricuniverse.com.

Flat-screen TVs are energy guzzlers

The Edison Electric Institute, U.S. Environmental Protection Agency and Oxford University have independently found that flat-screen TVs use significantly more energy than conventional sets, NBC News reported. A conventional TV uses about 100 watts, an LCD screen about twice that amount, and plasma screens up to 600 watts. ENERGY STAR® ratings for flat screens are not due out until mid-year.

Rocky Mountain Power spokesman Dave Eskelsen said, "Electrical use has gone up about 25 percent since the mid-'80s, and that's mostly due to more electrical appliances."

Do you generate your own electricity and produce more than you need?

The Minnesota Public Utilities Commission (MPUC) requires Minnesota Power to buy all electric energy that qualified facilities offer for sale. The rules apply to small power producers who use renewable resources and co-generators who produce electricity and steam. Disputes

that might arise over interconnections, sales or purchases of power will be resolved by the MPUC.

You may obtain more information by contacting Minnesota Power at 218-722-2625.