

# CapX2020

Delivering electricity you can rely on

Central Minnesota Municipal Power Agency  
Dairyland Power Cooperative  
Great River Energy  
Minnesota Power  
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Missouri River Energy Services  
Otter Tail Power Company  
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Southern Minnesota Municipal Power Agency  
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## Electricity usage continues to climb Plus, thirteen simple ways to save both energy and money

**W**hy does the electric transmission grid need to be expanded? The simple answer: Because we're using more electricity than we did just a few years ago – and it's expected to grow another 40 percent by 2030 (U.S. Energy Information Administration).

In the Midwest, for example, sub-zero temperatures pushed electricity demand to an all-time winter peak of 103,254 megawatts in mid-December 2008.

Our electricity demand has risen in proportion both to the growing number of electronic items and appliances we depend on and to the increasing size of our homes. While our electricity usage has increased, our expectations have remained constant: We expect reliable power when we need it.

Meanwhile, the electric transmission grid in the Upper Midwest hasn't had a major upgrade in nearly 30 years. The CapX2020 proposed transmission lines would address these growing electric needs.

### Americans are using more electricity

- In 2007, the average household had 25 consumer electronic products, such as computers, DVD players, video game consoles, cordless phones, digital cameras and high-definition televisions. In 1975, the average household had less than two (Consumer Electronics Association).
- More than 80 percent of Americans have a cell phone and most are recharged daily (CEA consumer survey).

- Statistics aren't necessary to show the dramatic increase in the number of appliances and electronics found in American homes. Consumers just need to look at their monthly utility bills. According to the U.S. Department of Energy, washers and dryers, computers, water heaters and other appliances and electronics account for 20 percent of the total energy bill in an average American home.
- "Phantom loads" refers to the energy used by appliances and electronic devices – TVs, DVD players, microwaves and computers, to name a few – when they're plugged in but not turned on. In the average U.S. home, 75 percent of the energy used to power electronics is consumed while the devices are turned off (U.S. Department of Energy), costing the average household up to \$1,000 annually.
- Computer always on? If so, it uses as much power as an energy efficient refrigerator, 70 to 250 watts.

### Larger homes use more electricity

- The average single-family home in the Midwest is nearly 45 percent larger today than it was in 1980 (2008 Buildings Energy Data Book).
- The percentage of homes with central air conditioning in Minnesota more than doubled in the past 25 years – jumping from just 27 percent in 1983 to 66 percent in 2006 (2006 Xcel Energy Minnesota Home Use Study).
- All homes – both new and existing – have more electric appliances than ever before. Thirty percent of homes in 1970 had an electric clothes dryer; in 2007, that number nearly tripled to 80 percent of households.

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## Average homes have more TVs than people

- Today, 99 percent of U.S. households own a TV; two-thirds have three or more.
- Computers and televisions now account for 10 percent of a home's electricity use. The average household energy bill is expected to grow between 12 and 15 percent by 2015 because consumers are switching to plasma, LCD and projection televisions.
- A 42-inch plasma television also uses two-and-a-half times more electricity than a standard 27-inch TV.
- Entertainment centers – TVs, cable or satellite boxes, DVD players and game consoles – can have an energy price tag of \$200 annually. Compare that to the \$30 price tag to operate a regular 28-inch TV each year.
- In January 2007, 41 million U.S. households owned a home theater system, more than double January 1998's 18 million (Consumer Electronics Association).

## WAYS TO SAVE ENERGY

Looking for ways to save energy and a little money doing so? Follow these tips.

- Turn lights off when they're not needed. The average household spends 10 percent of its budget on lighting (U.S. Department of Energy). Switching to compact fluorescent lamps (CFLs) could save between 50 and 75 percent on monthly lighting costs, or \$30 per bulb over a CFL's life. Changing out just five 100-watt incandescent light bulbs can save \$7.50 per month.
- Water heating can account for up to 30 percent of your energy bill. Save up to 10 percent by lowering your water heater temperature 20 degrees, from 140 to 120 degrees.
- Shave up to 20 percent off your energy bill annually by installing a programmable thermostat. Set it back 10 to 15 percent for eight hours a day. Your best bet: Install it away from drafty areas, like windows and doors, so your heating system doesn't run too often.
- During heating season, clean or replace your furnace filters monthly.
- Open window coverings during the day to let warm sunshine in; close them at night to keep the heat in and the cold out.
- Plug air leaks in your home using inexpensive foam strips or caulking, which can cut heating and cooling costs by 5 to 30 percent.
- Washing clothes? Opt for the cold-water cycle – 90 percent of the energy used for washing is for heating water – and save up to \$60 per year.
- Install energy and water-saving showerheads and aerators.
- Turn off the digital photo frame – it costs about \$9 per year to power – and the cable or satellite set-top box, which costs another \$27. That's about half of what an Energy Star refrigerator consumes.
- Turn off your computer, which loses about 50 percent of its energy as heat. Even simply putting it to "sleep" can save about \$60 per year.
- Plug home electronics into powerstrips, and turn them off when the equipment isn't in use.
- Unplug your microwave. It uses more energy when it's not in use than it does when it is.
- Get rid of the second refrigerator or freezer.

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### For other energy-saving tips, visit the following Web sites:

<http://www.xcelenergy.com/SiteCollectionDocuments/docs/UsingElectricityAtHome.pdf>

[www.responsiblebynature.com](http://www.responsiblebynature.com)

<http://xeenergysmart.xcelenergy.com.evohst.org/flash-page>

[http://www.mnpower.com/powerofone/one\\_home/do\\_at\\_home/index.htm](http://www.mnpower.com/powerofone/one_home/do_at_home/index.htm)

<http://apps1.eere.energy.gov/consumer/>

<http://www.energysavers.gov/>