

Energy Update

Bi-weekly newsletter from the SDSU Energy Analysis Lab

- Any questions and/or comments can be directed to: sdsu.energy.analysis@gmail.com
- The City of Sioux Falls is hosting a "Green-ival" on Saturday Sept. 19th from 10am – 2pm. To become a vendor or for more information contact Drew Price at dprice@siouxfalls.org.

Current News

Tower Marks Start of Area Wind Farm

(Excerpted from Randy Dockendorf)
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North of Avon along SD highway 46, the Kennebec Telephone Company crew erected a 60-meter tall meteorological (or "MET") tower for tracking wind data for proposed area wind farms on Tuesday, July 22nd. The towers are measuring wind speed at four levels and wind direction at two levels for the proposed Bon Homme-Hutchinson (B&H) wind farm on the ridge between Avon and Tripp.

The Kennebec Telephone crews have erected about 370 towers in Nevada, Utah, Oklahoma, Kansas, Nebraska and Minnesota. Each tower costs \$25,000 for equipment and installation. For more information on the B&H project, contact one of the board members. For more information about the wind industry in general, visit the American Wind Energy Association's Web site at www.awea.org.

Energy Saving Tips & Tools

Use a toaster oven for smaller meals. They use one-third to half as much energy as turning on the oven. Microwave cooking uses even less.

To keep your refrigerator from wasting un-needed energy set it between 37 and 40° F. Keep your freezer at or slightly above zero, it will keep food frozen and use less energy.

A flow restrictor typically costs less than a dollar but can cut the cost of taking a hot shower in half.

Ventilation fans can blow out heated or cooled air so be sure to turn them off after they've done their job.

Just like the electronics in your living room and home office, curling irons, hair dryers and other bathroom gadgets consume energy even when turned off, so unplug your bathroom appliances when finished using them.

Renewable Energy

Hydro Power - Subtle Movements Create Current

Conventional hydroelectric power provides 7% of the electricity in the U.S., but the only way to increase that number without damming more rivers is to use nonconventional hydropower sources that capture energy from the movement of waves, rivers and tides.

Installed in Hastings, MN last winter in -30° weather and switched on in January, the Houston-based Hydro Green Energy's plant is the first federally licensed hydrokinetic project in the U.S. Like an underwater wind turbine, it will produce electricity by using the high-velocity current gushing out of an existing hydroelectric dam to turn a 12-foot, three-blade fan. Known as "run-of-river" hydrokinetic, Hydro Green's technology is similar to turbines that are being used to harness tidal power in Europe, except it's optimized to work in water flowing just one direction (tidal turbines use water flowing both in and out). Hydro Green says that its technology can create power much more cheaply than a wind turbine can (4 to 7 cents per kilowatt-hour, compared with 10 cents per kilowatt-hour for wind).

<http://www.popsi.com/environment/article/2009-06/hydro-power>

Did You Know?

List of Countries by Electricity Production (numbers approximate) (kW·h): (from <http://www.bp.com>)

1.	United States	4,367,874,939,000
2.	China	3,277,720,000,000
3.	Japan	1,160,042,169,000
4.	Russia	1,014,870,000,000
5.	India	774,660,000,000
6.	Germany	636,500,000,000
7.	Canada	602,406,000,000
8.	France	566,531,000,000
9.	South Korea	439,984,000,000
10.	Brazil	433,594,000,000
11.	United Kingdom	397,516,000,000
12.	Spain	322,307,000,000