



Excerpts from Feb 12, 2007 WSJ Special Report on Alternative Energy and Energy Efficiency

In 1980, **wind-power electricity** cost 80 cents per kilowatt-hour; by 1991 it cost 10 cents, according to the International Energy Agency. ... Today, production costs at the best on-shore sites have dropped as low as 3 cents to 4 cents per kilowatt-hour, but are more typically 6 cents to 9 cents, not counting subsidies.

It costs 9 cents to 12 cents to generate one kilowatt hour of electricity by **Concentrating Solar Power** -- not counting any subsidies -- compared with about 3 cents to 5 cents to generate the same amount of electricity by burning coal.

Biomass is the biggest source of renewable electricity in the U.S. today -- producing more electricity than wind, solar and geothermal sources combined. ... Biomass power currently costs about 5 cents to 10 cents a kilowatt-hour without subsidies.

Biomass has gotten a jolt from **renewable-portfolio standards** embraced by nearly half the states, which require utilities to get electricity from renewable resources. In California, for instance, the state's energy agencies have set a rough goal of having biomass sources generate 4% of the state's power by 2010.

States are considering **two major regulatory changes**. ... The first is **decoupling**, in which utilities receive a predetermined profit each year -- thereby separating their earnings from the volume of electricity they deliver. ... Which means a utility's profits won't suffer if it decreases the amount of electricity it delivers through **increased efficiency**. Decoupling is currently more popular for natural-gas utilities, with about seven programs nationwide. But Washington, Idaho, New Mexico and New York are considering it for their electric companies as well.

Under current rules in most states, utilities can't earn a return on their efficiency spending -- they can only recover the cost. That's where the second proposed regulatory change comes in: **making efficiency spending as lucrative as infrastructure spending**. ... Texas utilities are now required to account for 10% of an-

nual demand growth through energy efficiency, but the state may increase that figure significantly as part of a regulatory proceeding begun in late January.

In June, more than a dozen of the nation's largest utilities, including Exelon Corp., Duke Energy Corp., Southern Co. and American Electric Power Co., signed on to a "**National Action Plan For Energy Efficiency**," which calls for new regulatory policies to encourage reduced power use.

Major oil companies have stationed key alternative-energy divisions here (in Houston), newer ventures in **wind energy** and **biofuels** are emerging, and Texas universities are pushing hard to develop **carbon-free energy**. ... Chevron is conducting **biodiesel research** at a couple of laboratories in Houston that have been used for decades in the conventional energy business. ... Houston is home to **research on hydrogen, nanotechnology**, and other areas that could have a dramatic impact on energy in the years ahead. ... Researchers (at Rice University) are working on steps to align **millions of nanotubes into carbon fibers**. The hope is that one day, the fibers can be used in power transmission instead of aluminum, which has high resistance and wastes vast amounts of power.

Mascoma Corp is building a demonstration plant in Rochester, NY, with \$414.8 million in grants from the New York State Department of Agriculture. The plant will be one of three in North America working on **cellulosic-ethanol** production.

In 2006, there were 88 plants in the U.S. producing an estimated 200 million to 250 million gallons of **biodiesel**, according to the National Biodiesel Board -- about triple the 2005 production capacity of 75 million gallons. Last year **venture capitalists** invested approximately \$261 million in biodiesel companies.

Two things matter (in curbing fossil fuel emissions linked to global warming): **coal and cars**. Two countries matter: **China and the U.S.** ... Whatever the U.S. and Europe do to curb emissions is likely to make little atmospheric difference unless China and other developing countries slow the growth in their CO₂ output as well.

Read the entire WSJ Special Report on Energy at
http://online.wsj.com/page/past/2_0333-20070212.html

EVENTS

U.S. DOE ITP Steam System Assessment Tool Webcast will be held March 15, 2007. This Webcast will provide an overview of the Steam System Assessment tools to help plant personnel prepare for a successful Energy Savings Assessment. To register visit: <https://www.gotomeeting.com/register/329973437>.

Polymer Composites Conference IV is being sponsored by the West Virginia Department of Transportation, the Federal Highway Administration and the Constructed Facilities Center at WVU. This event will be held March 20-22, 2007 at Lakeview Golf Resort and Spa in Morgantown, WV. For more information, please call (304) 293-7608, or request a preliminary program at CFC@mail.wvu.edu.

Leadership Conference The 5th annual WV Leadership Conference will be held Tuesday, April 17 and Wednesday, April 18, 2007, at Waterfront Place Hotel, Morgantown.

West Virginia Venture Capital Expo sponsored by INNOVA Commercialization Group will be held April 19, 2007 at the I-79 Technology Park Research Center in Fairmont, WV. For more information or to register, please call Connie Runyon at (304) 333-6767 or log on to www.INNOVAwv.org.

Marble King

will be featured on

John Razenberger's "Made in America" show

on the Travel Channel on March 6, 2007 at 9:00 pm.

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The IOF-WV Monthly Update

March 2007

<http://iofwv.nrcce.wvu.edu>

Vol. 8.3

Co-Funding Opportunities for IOF-WV Research Teams

Announcement	Due Dates	Funding
U.S. Department of Defense STTR www.sbirworld.com	Now Open (Request for Proposals) March 21, 2007 (Proposal Due)	\$100,000 for Phase I proposals \$750,000 for Phase II proposals
U.S. U.S. Department of Energy Hydrogen and Fuel Cell Analysis: Environmental Impacts of Hydrogen Systems http://e-center.doe.gov	Now Open (Request for Proposals) April 18, 2007 (Proposal Due)	\$600,000 in total funding anticipated
U.S. U.S. Department of Energy Hydrogen and Fuel Cell Analysis: Lessons Learned from Stationary Power Generation http://e-center.doe.gov	Now Open (Request for Proposals) April 18, 2007 (Proposal Due)	\$500,000 in total funding anticipated
U.S. Department of Transportation SBIR/STTR www.sbirworld.com	Now Open (Request for Proposals) May 1, 2007 (Proposal Due)	\$100,000 for Phase I SBIR \$500,000 for Phase II SBIR \$100,000 for Phase I STTR \$500,000 for Phase II STTR \$38,000,000 for the completion of Phase I


Announcements

New IOF-WV website is now on-line. The IOF-WV website has been redone and you can visit it at <http://iofwv.nrcce.wvu.edu>.

U.S. DOE Industrial Technologies Program continuing to accept applications for Save Energy Now Assessment Opportunities. To apply visit: www1.eere.energy.gov/industry/saveenergynow/:

- Did your company complete an ESA in 2006 in steam or process heating? Build on your success by assessing a different system, and sharing the cost of the assessment with DOE.
- Does your plant consume less than 1 trillion Btu annually? Then, partner with other plants, share the assessment cost and keep the savings!
- Are you a utility, trade organization, or state energy office? Apply on behalf of a plant; share the cost of the ESA with DOE, and help your industrial partner find ways to reduce energy demand while becoming more profitable.

The U.S. DOE Industrial Technologies Program is offering a series of 2-hour Webcasts, facilitated by experts. These sessions will the DOE's software tools and help you learn the basics—and the benefits—of using them to target opportunities for energy savings in your plant. For more information on the software tools visit <http://www1.eere.energy.gov/industry/bestpractices/software.html> and for the webcast schedule visit: http://www1.eere.energy.gov/industry/bestpractices/events_calendar.asp.

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