EERE Program News

The business, programs and policies of moving new energy products into the marketplace

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April 2010

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News reports on developments in plug-in hybrid electric vehicles as well as a "growing" new trend: green roofs on federal government facilities. Another trend we highlight is the designing of "Extreme Makeover" homes now with energy efficiency in mind.

A renewed focus on energy is also on the minds of Stoddert Elementary administrators, who included a geothermal ground source heat pump into upgrades at their Washington, D.C. school. As more schools like Stoddert turn to renewable energy projects, new tracking tools become even more valuable.



Developing an algae-based fuel for cars of the future is the goal of Solazyme, a small business using a DOE grant to build a biorefinery in Pennsylvania. The company aims to produce millions of gallons of the algal-based biodiesel in a few years.

Photo courtesy of: Solazyme

This month's <u>Features</u> section highlights the importance of small businesses on job recovery and energy-related innovations and how DOE is providing support.

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Chevy Volt gets a charge from Obama's promised purchase

When General Motors' new hybrid called the <u>Chevy Volt</u> debuts in November, some familiar faces could be behind the wheel, including President Obama's staff. Obama promised his Administration would purchase the first 100 plug-in hybrid electric vehicles (PHEV) to "practice what we preach: cutting waste, saving energy, and reducing our reliance on foreign oil," he said to the <u>Detroit Free Press.</u> Two other plug-in <u>hybrids</u>—General Motors' <u>Buick</u> and <u>Hummer</u>—are expected to roll out in 2011.

What makes these <u>hybrids different</u> are powerful batteries made from lithium-ion chemistry—similar to those used in cell phones and laptops—and the ability to be charged using a home electrical outlet. The <u>Chevy Volt</u> can be charged for eight hours using a standard 120-volt electrical outlet or for three hours with a special 240-volt outlet. The cars's driving range is up to 40 miles on one electric charge or up to 400 miles using the alternate gas-powered electric generator.



The Chevy Volt makes its market debut this fall.

The potential for electric-only vehicles is huge—one reason why there are numerous research projects

Courtesy of: wikipedia.com

within DOE, including the <u>FreedomCAR and Fuel Partnership</u> that are currently examining such issues as how to make the <u>plug-in reversible</u> so it can deliver stored energy back into the electrical grid.

While the Volt is expected to debut at a cost of \$30,000 to \$40,000, a <u>tax credit</u> will help make it more affordable. However, a <u>new study (PDF 1.10 MB)</u> by DOE's National Renewable Energy Laboratory showed that under four different scenarios, both PHEVs and pure, battery EVs are not yet cost effective compared to a mid-level, conventional vehicle. The study, presented April 13-15 at the SAE World Conference in Detroit (an association of automotive engineers), summarized that if an acceptable method for plugging in while traveling along the roadway could be devised, electrified vehicles may gain prominence.



The Volt has a gas-powered generator (at right) and an electric motor (at left) that propels the car.

Help may come from the software and auto industries. At the New York International Auto Show this month, Microsoft and Ford unveiled plans to develop software to help consumers manage charging times for electric vehicles, as well as to help utilities manage the added load, reported <u>USA Today</u>.

In the meantime, the <u>New York Times</u> predicts that gasoline-powered cars will dominate the market, but increases in the efficiency of gas-powered engines will help cut carbon emissions until such factors as cost, limited range and charging can be overcome.

Courtesy of wikipedia.com

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Growing a green roof

If you want to see an environmental commitment that's "growing," look at the green roof above the U.S. Postal Service's New York City mail-processing facility.

The green roof, which was installed on the Postal Service's 1933 Morgan distribution center in Manhattan, consists of insulation, an overlay board, a roof membrane, drainage and water retention mats, 4 inches of soil and maintenance-free native grasses and plants including Calamagrostis (or Bush grass), nine 3-inch caliber trees in planters and ground-covering chives.

The vegetation layer shades the roofing membrane, significantly reducing heat gain through the roof, which covers 109,000 square feet or nearly 2.5 acres. The Postal Service estimates it will reduce annual heating and cooling costs by \$30,000, as well as 75 percent of the summer and 35 percent of the winter pollution runoff into the city's water system. It requires six maintenance visits in each of the first two years and three visits annually after that.

It's one of many ways the agency is committed to sustainability. (See its GreenKit facts (PDF 1.2 MB.)) "The Morgan green roof is part of the Postal Service's successful greener facilities strategy," said



A green roof consists of seven layers, from the insulation board to the plant material.

Courtesy of USPS

Sam Pulcrano, vice president of sustainability. The Postal Services' goal is to reduce the agency's energy <u>use 30 percent by 2015</u>, he said.

The total cost, including design and construction support, was \$4.9 million, and the payback timeframe is estimated to be 10 years or less. "To date, in combination with window replacement and air handler unit replacement projects, the overall energy savings is approximately 40 percent more than prior to the green roof's existence," said Tom Samra, vice president of facilities, who initiated the green roof concept and construction.

Installed in 2009, the extensive roof is expected to last 50 years—double that of the previous roof. Other benefits are that nearly 90 percent of the original roof was recycled and the roof's vegetation cover adds green space to areas that might otherwise be

uninhabitable to small wildlife. Plus, benches installed on the roof provide a scenic spot for employees at break time.



The New York City skyline provides a scenic backdrop for the U.S. Postal Service's green roof.

"We have seen some wild vultures, and some migratory birds, and we believe some New York City squirrels may be enjoying the green roof, as well," Samra said. "The Morgan facility's neighbors are very happy to know it reduces the 'heat island effect' in the immediate area."

He noted the considerable interest from roofing companies, architectural publications (including one in Dubai), postal service organizations in Europe and Australia, a Japanese school group and national and international media, even nine months after the green roof opened.

Courtesy of: USPS According to the DOE Federal Energy Management Program's *Federal Technology Alert (FTA)*, green roof technology is promising given the number of suitable low-rise federal office buildings and facilities within districts governed by strict stormwater regulations.

The cost of a green roof also appears to be decreasing. While costs vary by region, type of materials and the builder, <u>greenroofs.com</u> notes that extensive green roofs cost about \$14 to \$25 per square foot.

Despite the "growing" interest in green roof technology, the fear of leaks is the single greatest barrier to implementation, according to the FTA. However, Samra stated that hasn't been an issue at all on the Morgan roof. Another challenge can be inconsistent structural and load requirements for designing and installing a green roof. However, the U.S. Green Building Council has now incorporated green roofs into the Leadership in Energy & Environmental Design (LEED™) program. The Postal Service is pursuing LEED certification for the Morgan facility.

Green roof technology continues to evolve in other arenas as well. At the American Chemical Society's annual meeting in March, scientists unveiled the development of a light-colored "cool roof" made from waste cooking oil from fast food restaurants that's controlled by a thermometer, reported *ScienceBlog.com*. When the outdoor temperature reaches certain levels, the coating can either reflect or transmit solar heat.

You could say that scientists and builders are continuing to "raise the roof" on new ways to save energy.

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'Extreme Makeover': Energy-saving edition

Energy efficiency is the newest focus for ABC's reality show "Extreme Makeover: Home Edition" since higher utility bills and tax assessments have led some homeowners to foreclose.

According to the <u>Wall Street Journal</u>, those foreclosures have led the show's producers to reverse the trend of designing bigger homes—upwards of 5,400 square-feet with heated

pools or other energy-intensive backyard features—and instead focus on more energy-efficient units. While the average size of current makeovers is 2,800 to 3,000 square feet, lately the homebuilders have begun eschewing "over-the-top amenities," the *Journal* reported.



While nicely rebuilt in 2006, the Koepke family home in Wisconsin now has higher utility bills.

Courtesy of: wikipedia.com

That's largely because the amenities lead to higher utility bills, which astonish some makeover recipients like Christine Koepke, a single mom of four who lives in her new 4,500-square-foot Wisconsin home after her husband died of cancer, reported TV station WISN. Koepke said while the house was donated, "The utilities are more. The taxes are definitely more."

To help combat the increase in energy costs associated with bigger residences, architects are incorporating energy management monitoring systems into the home's design. As *Electronic House* pointed out, such systems—which control lighting, entertainment, heating,

ventilation and air conditioning—allow the homeowner to better monitor real-time energy use.

<u>Partnerships</u> with local utilities may provide another remedy. For example, producers collaborated with <u>First Choice Power</u> to deliver two years' worth of free <u>"green" power</u> and two energy audits to the 15-member Beach family of Kemah, Texas, who appeared on the <u>show's</u> April 4 episode. The family's <u>new home</u> replaces the primary residence destroyed in a hurricane.

On the company's blog, Catherine Carlton of First Choice said, "This sponsorship is more than a donation, it's a partnership with the Kemah and surrounding community."

Partnerships with renewable energy developers are also beginning to emerge. Producers collaborated with Mariah Power to install a 30-foot, propeller-free, vertical axis wind turbine on an Indianapolis residence to provide 1 kilowatt of capacity for the McFarland family. Installation was featured on the show's season finale, May 17, 2009.

There's no telling to what "extreme" the producers will go to next to make renewable energy and energy efficiency standard home design features.

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First Choice workers hold a mock utility bill for the Beaches that shows it's paid in full through 2011.

Courtesy of: First Choice Power

New twist on Earth Day: DC school taps geothermal

A grade school in Washington, D.C. is digging deep to show its commitment to sustainability. <u>Stoddert Elementary</u> is tapping geothermal energy for its 48,000 square-foot <u>campus upgrade</u> to be completed this fall.

To "make a world of difference in the global environment," a Green Team of parents and staff included a geothermal heat pump in renovation plans. Ground source heat pumps require burying loops of pipes—either vertically or horizontally which connect to a heat pump that circulates water and biodegradable antifreeze. As it flows through the loop, the liquid mixture absorbs heat from the ground and then the pump delivers it above ground for air circulation. For summer cooling, the system takes the warm air out of the building and back into the ground. The ground acts as a heat source in winter and a heat sink in summer.



Washington D.C. Mayor Adrian Fenty gets a warm welcome at the June 2009 groundbreaking for Stoddert's campus upgrade.

Courtesy of: Vikrum Aiyer, Mayor's Executive Office

Because it requires <u>less energy</u> to maintain the proper indoor air temperature—44 percent less than air source heat pumps and 72 percent less than electric resistance heating, says the Environmental Protection Agency—ground source geothermal heat pumps result in lower energy costs. Admittedly, they cost more, but payback times average four to six years. The benefits have led to more than 1 million U.S. geothermal heat pump installations and 50,000 more are installed annually.

The geothermal system is one reason the school's updated \$23 million campus qualified as sustainable. Renovations include the complete demolition of a building that houses the school's library and several classrooms for a two-story multi-purpose addition. "Next year the school will be a LEED Gold-certified facility, which will be emulated by other schools in the upcoming years," said staff on the school's Web site.



Military families who work at the Naval Observatory, near Stoddert Elementary, contribute to the school's diverse population.

Courtesy of: wikipedia commons

Besides using the geothermal energy, Stoddert staff have an opportunity to teach about the technology and how it relates to global interdependence on energy—a subject that fits in well with the school's unique location and diverse student population. The school is near the Russian Embassy and the visa office of the Chinese Embassy, the Naval Observatory and Bolling Air Force Base. Plus, the 250-plus students come from 26 different nations and well-traveled military families.

"This combination of people and resources offers us the opportunity to create an international perspective on our environmental and energy themes," said Principal Dr. Marjorie Cuthbert in her March 19 school blog.

Stoddert is joining other schools across the country that are applying this technology. A high school in Iowa demolished by a tornado in 2008 opted for ground source geothermal heat pumps for its new building since other local schools paved the way. In *Distributed Energy*, Aplington–Parkersburg Superintendent Jon Thompson said, "We conducted energy audits, plus we visited with other schools in our area that have had success with geothermal. A geothermal system was the most economical and cost-efficient for the majority of the new building."

As more schools apply the technology, administrators and students will learn its effectiveness as a renewable energy source. "We want to learn more to teach more," Cuthbert said.

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Tools track wind, solar installations, energy use

Wind Powering America launched a <u>new tool</u> to track the myriad wind and solar projects at schools nationwide. You can find school wind projects at Kindergarten through 12th-grade schools, community colleges and universities or add your school's project to the map. <u>Another tool</u> is now available to help you find the location of wind energy educational programs and training at various schools and training institutions.

The DOE National Renewable Energy Laboratory's Open PV Project shines the light on all the solar growth across the nation from 2000 to the present. The map lets you see solar installations through time, in bright bursts across the states. You can also access data on the number and size of installations, solar capacity and cost per watt for solar for the various states—all over time.

If you're looking for data on U.S. renewables and alternative fuel consumption, generation or capacity, the <u>Energy Information Administration</u> is loaded with statistics and facts. For quick links to energy costs, consumption facts and cost



At Nellis Air Force Base, 70,000 solar arrays generate 15 megawatts of power.

Courtesy of: wikipedia.com

projections by region and state, go to <u>energysavers.gov</u> for a list of specific pages or tables on EIA's site related to those topics.

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Features



Driptech founder Peter Frykman, center, and team member Anna Petersons stand in an irrigated field in India with an Indian farmer. Small businesses like driptech are learning how to market their technologies from Green Technology Entrepreneurship Academy.

Courtesy of: Peter Frykman

DOE helps small businesses make big impact on job growth

Sometimes it's better to think small when it comes to creating jobs and achieving energy independence. That's just what DOE is doing in allocating Recovery Act funds to small businesses to fuel job growth and energy-efficient technologies.

In March, DOE released a <u>report</u> touting the benefits of \$5.4 billion in Recovery Act funds directed toward small businesses—those with fewer than 500 employees. In addition, Recovery Act funding opportunities, including grants, contracts, loans/loan guarantees and tax incentives, complemented 2,800 Small Business Administration (SBA) loans worth \$656 million for renewable energy businesses from 2006 to 2009.



A scientist samples algae oil production at a fermentation lab at Solazyme, a small business benefiting from the Recovery Act.

DOE is also working to make existing programs more accessible to small businesses while introducing new programs that specifically target small businesses. For example, \$37 million in Recovery Act funds are helping the Small Business Industry Research program and Small Business Technology Transfer programs expand their focus on stimulating technological innovation in small businesses to meet federal research needs.

Because small businesses accounted for 64 percent (or 14.5 million) of the 22.5 million net new jobs (gains minus losses) between 1993

Courtesy of: Solazyme

on job growth. Energy Secretary Steven Chu said, "Small businesses are the backbone of job creation in this country and have been a spring board for innovation in the clean energy sector."

Many of the jobs he is referring to will be created indirectly through companies that support Recovery Act awardees or benefit from increased opportunities in clean technology. For example, small businesses are seeing substantial benefits from the energy efficiency community block grant, weatherization assistance and state energy grant programs through subcontracts, the report noted. States and territories receiving funds under the Weatherization Assistance Program use a pool of about 2,500-3,000 private contractors, over 50 percent of which have five to 25 employees.

DOE also provides an abundance of support to small businesses, including <u>a conference</u> May 10-12 in Atlanta that will provide guidance on writing winning proposals, doing business with DOE and finding mentors. DOE also holds an annual <u>Business Opportunity Session</u> that gives participants an idea of what prime and subcontracting opportunities are currently available. DOE's <u>Small Business site</u> lists a state-by-state directory of contacts.

Hopefully, these small steps are helping small business make giant leaps into the energy-related economy.

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Small business success stories

Recovery Act funding has led to many small business <u>success stories</u>, including those highlighted in DOE's <u>March overview</u> entitled "Small Businesses Helping Drive Economy: Clean Energy, Clean Sites."

Here are a few of those stories:

Universal Display Corporation was awarded a \$4 million Recovery Act grant under the Building Technologies Program to provide prototype, organic light-emitting diodes (OLED) to U.S. luminare manufacturers. OLEDs are thin, efficient solid-state devices that emit light suitable for full-color displays and for lighting products such as cell phones, MP3 players, laptops and televisions but consume less power. Employing a team of more than 80 scientists, engineers and business professionals, Universal Display is based in Ewing, N.J. and is currently hiring.



OLED technology lights laptops but consumes less power.

Solazyme is a San Francisco-based company using a \$21.8 million Recovery Act grant under the Biomass Program to

Courtesy of: wikipedia.com

produce biodiesel and green diesel from algae oil. Recovery Act funds are allowing the company to build its first integrated algae fuel refinery in Riverside, Penn., to commercialize its biofuel product. CEO Jonathan Wolfson joined with Congressman Pete Stark at a jobs forum April 9 to discuss what Solazyme is doing to create jobs in California and Pennsylvania. Currently, they have 12 positions posted.

<u>FloDesign Wind Turbine Corporation</u> is using its substantial private financing as well as a \$8.3 million DOE grant to develop a high-efficiency, shrouded wind turbine that will deliver significantly more energy per unit of swept area. The grant, provided via DOE's Advanced Research Projects Agency-Energy

(ARPA-E) program that supports "transformational" energy technologies, will help FloDesign open a new headquarters in Massachusetts. The company expects to create or retain 150 jobs in the next three years and maintain them for at least an additional two years.

For more small business success stories, check out those featured on the <u>Energy Empowers Web site</u>.

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FloDesign's new energy-efficient wind turbine.

Courtesy of: FloDesign

Green Academy helps academia, businesses market products

Where can budding entrepreneurs go to successfully market a new energy-related product? They can enroll at the University of California at Davis' <u>Green Technology</u> <u>Entrepreneurship Academy</u> (GTEA), a five-day workshop that helps researchers or startups move their inventions out of the lab and into the marketplace.



Green Technology Entrepreneurship Academy participants give each other a hive-five to celebrate a small success.

With instruction from venture capitalists, entrepreneurs, university faculty, lawyers and industry sponsors, participants learn in one week what steps to take during the first six to nine months to make their products commercially viable. For example, they identify five potential customers and then ask them how they might use the product being marketed. They also determine what skills they desire in their workforce, such as marketing or manufacturing, and ask five potential hires about their expertise.

Participants, most of whom are faculty, Ph.D. students and post-doctoral fellows, learn marketing techniques and how to pursue patents and licensing, write

Courtesy of: GTEA

business plans, work with teams and find funding. On the last day, they pitch their business plans to venture capitalists and industry executives who critique it. They leave with a list of mentors, a business plan and strategies to cope with the inevitable roadblocks.

"While they are conducting great research and getting published, those tasks aren't automatically setting in motion the commercialization process," said Professor Andrew Hargadon, founding director. "They need a good understanding of how innovation happens—how to engage corporate research, do business development and licensing or start a company." He added, "At the same time we teach them the knowledge of commercialization, we give them a network so they immediately have a set of people to engage with."

The <u>Academy's Web site</u> features numerous alumni who attest to the Academy's value. For example, 2008 Alumnus Peter Frykman said the automated manufacturing technology for his drip irrigation company (<u>driptech</u>) was well developed, but not its business model

or network of potential employees or experts. "We had many questions about how to structure our company and what sources of funding to pursue," he said. "The students and coaches I met at GTEA have put me in touch with others who can help. We were able to retain one of the GTEA speakers as our primary legal counsel, and hired our first employee through the GTEA network."

The Academy helped John Bissell, Kristin Matsumura and Casey McGrath, also 2008 alumni, incorporate its company called MicroMidas and secure venture capital. "GTEA provided us with a wealth of resources that were absolutely necessary for our progression as a commercially viable entity," Bissell said of their biodegradable plastics company.

Another success story is E2 Lighting, which provides a patented LED-based streetlight that's maintenance-free. Hargadon said, "We put them through an experiment of calling the customer long before they were ready to market. We found that the City of Oakland had just installed a pilot LED project on



Peter Frykman, third from left, shows Indian farmers how his irrigation system works.

streetlights. They called the city manager and told them about their technology to adjust the beam (to cool the lights). Almost immediately, he said while the lights cost him \$400 bucks, to replace them cost him \$800. He told them that a good quality light is nice, but so is not rolling out a truck to replace them. They had developed a new technology to cool the LED lights to keep the lights extended and they didn't think that was a valuable piece of the technology, but in talking to a potential customer, it was. A lot of what we are doing is helping them get the tools to test the idea and gain confidence and move forward."

The Academy is gearing up for its <u>fourth annual workshop</u> June 28-July 2 in Incline Village, Nev. Applications are due May 14. Usually about 50 participants attend each workshop, which is \$150 for those in academia and \$3,000 for corporate participants (based on space availability).

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News Releases

April 26, 2010

U.S. and UAE sign agreement to strengthen cooperation on clean energy

April 23, 2010

Department of Energy announces closing of \$529 million loan to Fisker Automotive

April 23, 2010

Department of Energy announces 20th Annual National Science Bowl

April 22, 2010

Secretary Chu Webchat with the Washington Post

April 22, 2010

Secretary Chu announces more than \$200 million for solar and water power technologies

April 21, 2010

<u>Vice President Biden kicks off five days of Earth Day activities with announcement of major new energy efficiency effort</u>

April 15, 2010

U.S. Department of Energy announces student teams to compete in 2011 Solar Decathlon

April 15, 2010

<u>Secretary Chu announces new partnerships under the Energy and Climate Partnership of the Americas</u>

April 14, 2010

Department of Energy issues federal fleet management guidance

April 14, 2010

U.S. EPA, DOE announce changes to bolster ENERGY STAR program

April 8, 2010

Obama Administration announces nearly \$100 million for Smart Grid workforce training and development

April 7, 2010

Department of Energy releases Open Government Plan

April 7, 2010

Department of Energy awards \$9 million in grants for science and technical research to historically Black colleges and universities in South Carolina and Georgia

April 6, 2010

<u>University of Central Florida students' energy-saving work showcased in new Department of Energy video</u>

April 1, 2010

Secretary Chu announces more stringent appliance standards for home water heaters and other heating products

March 31, 2010

GSA doubles the federal hybrid fleet, DOE takes the lead in updating to hybrids

March 31, 2010

Department of Energy to invest nearly \$18 million for advanced biofuels user facility

March 30, 2010

DOE Orders AeroSys to halt distribution of inefficient air conditioner and heat pump models shown to violate minimum efficiency standards

March 29, 2010

Secretary Chu announces \$37.5 million available for Joint U.S.-Chinese Clean Energy Research

March 26, 2010

<u>Department of Energy opens appliance standards investigation for certain Air Con</u> <u>International air conditioners and heat pumps</u> March 26, 2010

<u>Secretary Chu highlights Recovery Act tax credits for home energy efficiency improvements</u>

March 24, 2010

<u>DOE</u>, <u>DOI</u> and <u>Army Corps of Engineers sign Memorandum of Understanding on hydropower</u>

March 24, 2010

Department of Energy opens investigation into alleged lighting efficiency violations

March 22, 2010

DOE, USDA, and NSF launch Joint Climate Change Prediction Research Program

March 19, 2010

EPA, DOE announce new steps to strengthen ENERGY STAR

March 17, 2010

DOE releases new report on benefits of Recovery Act for small businesses in clean energy

March 10, 2010

Treasury, Energy announce guidance for tax treatment of smart grid investment grants

March 9, 2010

Secretary Chu announces up to \$154 million for NRG energy's carbon capture and storage project in Texas

March 5, 2010

DOE offers \$117 million conditional commitment for Hawaii wind power project

March 5, 2010

DOE offers \$72 million conditional loan guarantee to SAGE Electrochromics

Feb. 23, 2010

Department of Energy announces technology transfer coordinator

Feb. 22, 2010

DOE announces nearly \$1.4 billion in conditional loan guarantees for BrightSource Energy

Feb. 19, 2010

Secretary Chu announces over \$8 million to support local energy assurance planning initiatives

Feb. 12, 2010

Obama administration launches \$130 million building energy efficiency effort

Feb. 3, 2010

Obama announces steps to boost biofuels, clean coal

Feb. 2, 2010

EPA and DOE join states to speed energy efficiency progress in the United States

Feb. 1, 2010

<u>President's energy budget invests in innovation, clean energy, and national security priorities</u>

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Reader Comments

March

Energy storage: key to U.S. renewable energy goals?

"ARPA-E seems to want to ignore what the late Peter Drucker noted about all 'effective' innovations: that they are 'breathtakingly simple.' And in the case of energy storage—counter-intuitive. We have submitted to ARPA-E, and they have discouraged the elegant and simple idea of devising a system that required NO STORAGE and NO DISTRIBUTION of hydrogen fuel for an internal combustion engine or a fuel cell.

"In essence, since hydrogen is 'hostile' to handle and store, our system produces hydrogen from atmospheric heat and humidity by a process that minimizes the time and space devoted to diatomic hydrogen gas. The 'just-in-time' and 'on-the-spot' features of our process allow us to repeatedly recycle all waste matter and energy, whereby we have adopted the three key precepts of biomimicry: closed process loops, no waste, no toxicity. Since ARPA-E isn't interested in this transformational technology, which is patent pending, we are introducing it to other much more interested and enlightened parties."

— B.B.

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Speeches, Op-Eds and Testimony

April 16, 2010

Readout of Secretary Chu's bilateral meetings at the Energy and Climate Partnership of the Americas

Subject: Energy issues affecting the United States and Canada

April 16, 2010

Secretaries Chu and Clinton praise energy cooperation across the Americas in joint op-ed Subject: Praise for growing cooperation on energy and climate issues among Western Hemisphere nations

March 17, 2010

<u>Deputy Secretary Daniel Poneman's remarks as prepared for delivery to the Washington Institute for near east policy</u>

Subject: Strengthening energy partnerships with the Middle East

March 16, 2010

Secretary Chu Op-Ed on energy efficiency from the World Economic Forum

Subject: Achieving the potential of energy efficiency

Feb. 24, 2010

Readout of Secretary Chu's Middle East trip

Subject: The United States' commitment to build a close relationship with the United Arab Emirates on clean energy issues.

Feb. 19, 2010

Secretary Chu's remarks on the anniversary of the Recovery Act

Subject: The Recovery Act's impact on our clean energy future.

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Events

If you have an event scheduled of regional or national interest to the energy efficiency and renewable energy communities, please contact us with pertinent information and a Web link and we will include it in EERE Program News. — Carolyn Hinkley

<u>Federal Energy Management Program (FEMP)</u> — holds technical workshops around the nation throughout the year, plus webinars; check this link for continuously updated

information on these events.

<u>Industrial Technologies Program</u> — holds specialized workshops and on-line webinars year-around. Check this link for a continuously updated schedule.

National Hydrogen Association Conference & Expo — May 3-6, Long Beach, Calif. The NHA Conference Expo is the largest hydrogen conference in the United States and the longest running annual hydrogen conference in the world.

5th annual Photovoltaics Summit — May 3-5, San Diego, Calif.

Participants will address latest issues and current progress and offer viable ways to move forward in the photovoltaics industry.

<u>2nd Annual Concentrating Solar Thermal Power Conference</u> — May 5-7, San Diego, Calif. Conference will feature 18 expert presentations assessing market trends, technical development and application related advances.

<u>DOE's Small Business Conference and Expo</u> — May 10-12, Atlanta, Ga.

The event will feature plenaries, educational workshops such as how to write winning proposals, how to do business with DOE and a teaming workshop.

National Green Building Conference — May 16-18, Raleigh, N.C.

Sponsored by the National Association of Home Builders, this conference will feature a variety of speakers and companies involved in green building technologies and sustainable living.

National Solar Conference — May 17-22, Phoenix, Ariz.

The American Solar Energy Society's annual conference features the emerging trends, technology, and opportunities shaping the new energy economy for solar professionals.

<u>Utility Solar Conference</u> — May 18-19, Denver, Colo.

Conference is open only to utility company employees interested in exploring and developing a viable long-term solar strategy of benefit to the utility, its customers, and its shareholders. It will allow sharing information about the details of various strategies and business models.

12th Annual SolWest Renewable Energy Fair — May 23-25, John Day, Ore.

More than 50 free workshops on renewable energy and sustainable living topics. In-depth pre-fair workshops will cover renewable energy technology and natural building.

WINDPOWER 2010 - May 23-26, Dallas, Texas

Produced by the American Wind Energy Association, WINDPOWER is the premier wind energy event in North America. Featured speakers include former President George W. Bush, Seinfeld's Jason Alexander, U.S. Sen. Byron Dorgan and Kathy Zoi, DOE assistant secretary for energy efficiency and renewable energy.

Wind Powering America All-States Summit — May 27, Dallas, Texas

This summit provides Wind Powering America's network of state wind groups, state energy officials, DOE and national lab Wind Powering America representatives a chance to review successes, opportunities and challenges for wind energy at the state level.

<u>Pacific Coast Building Conference</u> — June 9-11, San Francisco, Calif.

The show is designed to revolutionize the concept of trade shows by breaking down the walls between learning, exploring, practicing and doing. Exhibit floor seminars will help transform exhibitors from sellers to educators.

AIA National Convention and Design Expo — June 10-12, Miami, Fla.

Among other speakers and displays, the American Institute of Architects convention will feature DOE and National Renewable Energy Laboratory building technologies experts, who will host a two-hour workshop on OpenStudio and EnergyPlus.

13th Annual Nanotech 2010 — June 21-25, Anaheim, Calif.

The world's largest nanotechnology event, Nanotech 2010, delivers application-focused research from the top international academic, government and private industry labs.

ASHRAE Summer Meeting — June 26-27, Albuquerque, N.M.

Attend the American Society of Heating, Refrigerating and Air-Conditioning Engineers' summer meeting to learn about high performance buildings, efficient heating and cooling systems and emerging energy efficiency building codes.

GovEnergy 2010 — Aug. 15-18, Dallas, Texas

GovEnergy 2010 will provide effective energy management training to federal employees and their associated stakeholders, encouraging application of best practices, products, and services within the federal sector.

2010 IEEE Conference — Sept. 27-28, Waltham, Mass.

Conference will provide a forum to discuss new technologies and innovative applications of current technologies for generation, transmission, storage, monitoring and demand management.

<u>2010 Excellence in Building Conference and Expo</u> — Oct. 12-14, Portland, Ore. The conference will feature timely, relevant resources and education about energy efficient houses that work.

Geothermal Energy Expo 2010 — Oct. 24-27, 2010, Sacramento, Calif.

The expo hosts the world's largest gathering of vendors providing support for geothermal resource exploration, characterization, development, production and management. It will be held in tandem with the Geothermal Resources Council's <u>Annual Meeting</u>.

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