



U.S. Department of Energy

Energy Efficiency and Renewable Energy *Bringing you a prosperous future where energy is clear, abundant, reliable, and affordable*

EERE Program News

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

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President Obama, in a Jan. 26 economic address, put energy efficiency and renewable energy front and foremost in his new direction for national policy.

His goals include increased funding for renewable energy R&D, improving energy efficiency in 75 percent of all federal facilities, weatherizing two million homes and building 3,000 miles of new electricity transmission lines to help carry clean solar and wind generated electricity to population centers.

Tall orders, but exciting times for the clean energy business.

[\(Presidential Agenda on Energy and Environment\)](#)

Elsewhere, at the annual Detroit auto show earlier this month, fuel economy was all the buzz. Crossover vehicles, smaller than SUVs, but still roomy inside were featured by almost every company. [\(Crossover Vehicle Video\)](#)

Also, Ford, General Motors, and Chrysler showed prototype electric cars, while Toyota and Renault both plan to roll out plug-in electric hybrids as early as 2011. [\(Electric Vehicle Video\)](#)

However, despite the general optimism about the nation's renewed focus on energy efficiency and renewable energy, some are asking where all the money is going come from to continue growth in these areas. [Features](#) sheds some light on the topic.



The first Ford Escape plug-in hybrid demonstration vehicle, capable of reaching 120 miles per gallon of fuel for the first 30 miles, was delivered to Southern California Edison late last year for testing. [\(see full article\)](#)

Photo courtesy of: Business Week

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News

DOE awards up to \$80 billion in new federal energy projects

[DOE announced in December that it will award 16 new Indefinite Delivery, Indefinite Quantity, Energy Savings Performance Contracts \(ESPCs\)](#). This could result in up to \$80 billion in energy efficiency, renewable energy and water conservation projects at federally-owned buildings and facilities.

The new awards provide for a maximum individual contract value of \$5 billion, eliminate technology-specific restrictions and allow federal agencies to use these contracts in national and international federal buildings.

The federal government is the nation's largest single user of energy. Legislative and executive branch goals require that federal agencies reduce energy intensity 30 percent from 2003 levels, and reduce water usage by 16 percent by 2015 from 2007 usage levels. Legislation and executive orders also require that at least 7.5 percent of all electrical needs at federal facilities be supplied by renewable energy by 2013.

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Learn to use alternative financing for energy improvements

Use Federal Energy Management Program (FEMP) online training to become familiar with

alternative financing tools to plan and implement energy efficiency, renewable energy systems and water saving measures in your federal facility.

[Alternative Finance Options \(Feb. 4 2009 - Web Cast: 11:00 ET\)](#)

Examine the elements of Super Energy Savings Performance Contracts and Utility Energy Services Contracts. Find out how to navigate the procurement process. Learn about Biomass/Alternative Methane Fuels and Power Purchase Agreements.

[Register online](#). For more information, please contact Susan Courtney at suscourtney@gmail.com or 703-250-2862.

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Cellulosic ethanol gets real

Start-up companies around the country are steadily [building the underpinnings of a new biofuels industry](#) that will first supplement and then possibly replace corn-based ethanol.



Edward Williams welds an elbow on a fermentation tank at Verenium's cellulosic ethanol facility in Jennings, La.

Photo courtesy of: Tim J. Mueller for USA Today

[Verenium Biofuels Corporation](#) cranked-up its cellulosic ethanol demonstration plant in Jennings, La. this month. According to its backers, the plant is the first of its kind to become operational, "kicking off a new era of clean transportation fuels that won't compete with the food supply."

Commissioned in May 2008, the Jennings demonstration plant is the culmination of a staged, 15-year effort to commercialize cellulosic ethanol. The facility was awarded \$10 million in September by DOE under a [competitive, small-scale biorefinery solicitation](#).

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Choosing an energy efficient TV

Today's new, high definition television sets (TVs) are larger, offer more vibrant pictures and are being viewed more hours per day, increasing the amount of electricity they use. In fact, some of the largest, high resolution TVs now consume up to 500 kilowatt-hours per year.

To help consumers become more aware of all this, the Environmental Protection Agency has released [new Energy Star specifications for TVs](#).

Energy Star-rated sets will be up to 30



Today's new high definition TVs can be energy hogs. New Energy Star® ratings will help consumers

percent more energy efficient than conventional models. The new specifications require that TVs not only be energy efficient when turned on, but also when they are turned off or in "standby" mode.

choose energy efficient models.

Photo courtesy of: Darrell Sapp/Pittsburgh Post-Gazette

If all TVs sold in the U.S. were to meet the new Energy Star requirements, the energy cost savings would be about \$1 billion annually, and greenhouse gas emissions would be reduced by the equivalent of about 1 million cars.

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San Francisco's KGO flips for solar

To reduce dependency on the power grid, and also to showcase renewable energy, radio station [KGO\(AM\) in San Francisco has installed a solar power system](#) at its transmitter site.



Three arrays of concentrator photovoltaic cells at KGO, San Francisco, track the sun, gathering energy to help power the station.

Located on the eastern side of the Dumbarton Bridge, KGO's transmitter building is seen by 80,000 commuters every day, providing a high-visibility location that calls attention to the latest in solar power technology.

Photo courtesy of: Art Lebermann, KGO

KGO General Manager Mickey Luckoff said, "We have a partnership with [Pacific Gas & Electric Company \(PG&E\)](#) to communicate with their customers in emergencies. I visited them and asked what we could do to save energy at the transmitter site.

"They were very enthusiastic about solar and helped us assemble a team of contractors and suppliers, including [SolFocus](#), a Mountain View, Calif. company that develops and manufacturers concentrator photovoltaic (CPV) solar cells."

The flat-panel portion of KGO's solar installation consists of fifty 200 watt-peak solar modules, yielding a 10 kilowatt-peak system capacity. The SolFocus portion of the installation uses three 12-panel CPV arrays, each rated at 2.46 kilowatts (kw), for a total of 7.38 kw.

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Eleven states act to improve transportation fuels standard

Eleven Northeast and Mid-Atlantic states have agreed to cooperate in developing a [regional Low Carbon Fuel Standard](#). The 11 states — the 10 members of the [Regional Greenhouse Gas Initiative](#), plus Pennsylvania — will work together to create an [emissions-performance standard](#) that will eventually provide incentives for energy providers to use lower-carbon fuels.

[The new agreement](#) will encourage development of vehicles using low carbon transportation fuels. This will include cars powered by hydrogen fuel cells, electric cars, plug-in hybrids, ethanol-fueled cars and biodiesel-fueled cars.

The eastern states' commitment follows [California's Low-Carbon Fuel Standard](#), enacted last year by Executive Order. Midwestern states are contemplating a similar action.

The 11 states will collaborate with a regional group, the [Northeast States for Coordinated Air Use Management](#), that has been studying a low carbon fuel standard for the region. The eastern states have also agreed to work cooperatively with other states and the federal government, and to influence the design of any federal standard or other proposed fuel policy.

States signing the agreement include: Pennsylvania, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont. The 11 states are already partners in the Regional Greenhouse Gas Initiative, the first mandatory, market-based effort in the U.S. to reduce greenhouse gas emissions.

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EERE Research Support Facility to go platinum

After years of planning, EERE broke ground this month on a state-of-the-art LEED® Platinum workplace that will exceed the energy performance of many of today's best commercial buildings. Heavy equipment operators started moving earth, while interior designers met with managers to finalize the interior floor plan of the new DOE Research Support Facilities.

The office is designed around an open floor plan with few walls and will optimize use of natural daylight and natural air flow. The 218,000 square foot building will be completed in the summer of 2010 and will help point the way to increased energy efficiency for all federal facilities.



Ground preparation begins for the new DOE Research Support Facility to be located on the main campus of the National Renewable Energy Laboratory in Golden, Colo.

Photo courtesy of: Susan Carollo

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Features



The Bureau of Land Management has revised 114 of its resource management plans to encourage the construction of new geothermal power plants in the West, such as this 10 megawatt plant recently built in Utah.

Photo courtesy of: Raser Technologies, Inc.

Where's the money for clean energy?

Flying in the face of tight economic times, interest in renewable energy and energy efficiency continues to pick up momentum. But the question for 2009 is, "Where is the money going to come from?"

Fortunately, the answer is, "From just about everywhere."



Photo courtesy of:
ISTOCKPHOTO, Ryan Kelly,
Mother Earth News

The [*Wall Street Journal*](#) reported earlier this month that, "While many small businesses continue to struggle with tight credit and declining sales, one fledgling industry is seeing a boom in investment and sales growth: alternative energy.

"Alternative-energy firms are reporting an influx of inquiries and business from a wide range of companies looking to increase their energy efficiency, especially from those that believe the Obama administration will impose stricter regulations requiring them to conserve energy. President-elect Obama has spoken often of the importance of alternative energy, also known as clean technology, and his federal stimulus package is expected to include plans to beef up alternative-energy infrastructure and improve energy efficiency in government buildings. In a speech last week (Jan. 9), he called for the U.S. to double the production of alternative energy in three years.

"Start-ups across a variety of areas; solar power, biofuels and energy conservation among them," the *Journal* reported, "are getting increased financing from venture capitalists and lenders at a time when other small companies are cutting back and being turned away by investors."

Features explores some of the innovative financing packages starting to show up for renewables and energy efficiency, much of it a combination of private/public partnerships.

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City of Berkeley spurs residential solar installations

The City of Berkeley, Calif. is offering a [solar financing program](#) that provides property owners an opportunity to borrow money from the city's Sustainable Energy Financing District to install solar photovoltaic electric systems. The program, [Berkeley FIRST](#), will allow the cost to be repaid over 20 years through an annual special tax on their property tax bill. The tax will only be paid by Berkeley property owners who voluntarily participate in the program.

Berkeley FIRST is intended to solve many of the financial hurdles facing property owners who want to install solar systems. A homeowner wanting to calculate the cost benefit of the Berkeley FIRST program can go to a web-based [calculator](#) to see if the program makes sense for their particular situation.



Berkeley, Calif. now offers property owners an opportunity to borrow money from the City's Sustainable Energy Financing District to install solar PV systems, allowing the cost to be repaid over 20 years through an annual special tax on their property tax bill.

Photo courtesy of: Moron Beebe/Corbis

The advantages of the Berkeley FIRST program are:

- There is relatively little up-front cost to the property owner
- The cost for the solar system is paid for through a special tax on the property, and is spread over 20 years
- The financing costs are comparable to a traditional equity line or mortgage
- Since the solar system stays with the property, so does the tax obligation—if the property is transferred or sold, the new owners will pay the remaining tax obligation

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Keep money in your pocket with clean energy tax credits

A lot of talk is circulating these days about possible new or revised energy tax credits in the national legislation now being considered on Capitol Hill. Until that is finalized, here's a [review of the federal incentives currently available](#).

Most were updated or increased in the Emergency Economic Stabilization Act of 2008 passed last Fall, including [tax incentives for businesses, utilities and government](#).

A good starting point to sort it all out is the [Summary chart of energy tax incentives in the Emergency Economic Stabilization Act of 2008](#).

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Jump-starting the grid with new energy investments

The massive government stimulus plan that will likely top more than \$825 billion to jump-start the economy could dramatically change the way we use electricity and create jobs. President Obama calls for developing a [smart electric grid](#) that can deliver clean, alternative forms of energy to replace the country's old, fragmented and inefficient system.

The American Recovery and Reinvestment Bill of 2009 introduced in the House of Representatives earlier this month includes \$32 billion to begin transforming the nation's energy transmission, distribution and production systems centering on smart grid and renewable energy technologies.

Some sources believe that, ultimately, [investment in clean energy could reach \\$2 trillion](#). This would include building new power plants, transmission lines and focusing on energy efficiency and conservation.

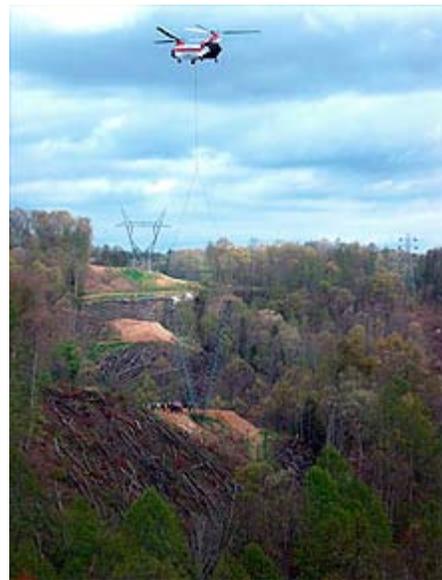
It could cost \$900 billion over the next two decades just to digitize the grid, including lines, towers, meters, substations, computers, meters and software.

Most electricity is currently sold at a fixed price, no matter when it's used. In contrast, a smart electric grid will encourage consumers to use power at different times, through varied pricing throughout the day. Utilities could then better manage power consumption.

Pilot programs using smart electric meters — meters that look like computer screens and constantly monitor energy consumption inside the home — are currently underway in several communities; [Boulder, Colo.](#) being one of the first. The stimulus plan will likely encourage even more pilot programs and accelerate the push for a "smart" electric grid.

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A helicopter lowers a high voltage power line tower into place. New transmission lines will be critical in moving renewable energy into the mainstream.

Photo courtesy of: American Electric Power

Learn about clean energy incentives in your state

Individual states and utilities offer an on-going, ever-shifting set of clean energy and energy efficiency incentives. One of the best ways to track what is available locally is to consult the [Database of State Incentives for Renewables and Efficiency \(DSIRE\)](#).

DSIRE is an easy-to-use web site covering state, local, utility and federal incentives that promote renewable energy and energy efficiency.

Established in 1995, DSIRE is an ongoing, DOE-funded project of the [North Carolina Solar Center](#) and the [Interstate Renewable Energy Council](#).

The DSIRE Web site is updated each week; and on average, about 60 programs each month are verified or updated through contact with program administrators and other stakeholders throughout the U.S.



Homeowners can often receive a variety of tax breaks by installing energy efficiency options such as this window film.

Photo courtesy of: SolarControlFilms

Here are some examples of the type of incentives recently listed on DSIRE:

Alabama: [JWEMC - Residential Heat Pump Loan Program](#)

California: [Alameda Power & Telecom - Solar Photovoltaics Rebates Program](#)

Connecticut: [Sales and Use Tax Exemption for Energy-Efficient Products](#)

Florida: [City of Tallahassee Utilities - Solar Water Heating Rebate](#)

Illinois: [City WL&P - Residential Energy Efficiency Rebate Programs](#)

Montana: [Montana Electric Cooperatives - Net Metering](#)

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U.S. solar panel manufacturing capacity set to soar

U.S. solar panel manufacturing capacity is rapidly growing, and while not technically a "source of funding" for renewables, it does point to efficiencies of scale that should help bring down the cost of photovoltaic (PV) installations in the years ahead — effectively making more power available at less cost per unit.

Not only are more panels being manufactured in the U.S., but new lower cost manufacturing technologies are coming online as well. PV continues pushing into the mainstream.

MotherEarthNews.com presents a [good roundup of what's currently happening](#) in PV manufacturing.

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U.S. DEPARTMENT OF
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EERE News Releases

Jan. 9, 2009

[Annual Progress Report Highlights Hydrogen Program Activities](#)

Jan. 7, 2009

[BLM Finalizes Plans to Open 190 Million Acres to Geothermal Power](#)

Jan. 5, 2009

[Geothermal Developers Remain Optimistic](#)

Dec. 31, 2008

[ENERGY STAR® Residential Water Heaters to Save Americans Up to \\$823 Million in the Next Five Years](#)

Dec. 22, 2008

[DOE Announces Funding Opportunity of up to \\$200 Million for Pilot and Demonstration Scale Biorefinery Projects](#)

Dec. 19, 2008

[DOE Partners with New Orleans Developer to Meet Builders Challenge Benchmark](#)

Dec. 18, 2008

[DOE Awards Sixteen Contracts for up to \\$80 Billion in Energy Efficiency, Renewable Energy, and Water Conservation Projects at Federal Facilities](#)

Dec. 8, 2008

[Departments of State and Energy Establish Global Partnership to Green U.S. Embassies and Consulates](#)

Dec. 3, 2008

[DOE Announces up to \\$29.3 Million in Projects for Research, Development, and Demonstration of Alternative Vehicle Technologies](#)

Nov. 19, 2008

[DOE Announces Expansion and Solicitation for Entrepreneur in Residence Program](#)

Nov. 18, 2008

[Changing the Climate: Looking Toward a More Cost Effective, Energy Efficient Future](#)

Nov. 14, 2008

[DOE Reaches Agreement with LG Electronics, USA, On Refrigerator Energy Matter](#)

Nov. 5, 2008

[U.S. Department of Energy Issues Rules for Auto Loan Program](#)

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Reader Comments

December issue

LEDs glisten this holiday season

"LED holiday lights are an energy saver particularly in restaurants and shops that use them year round. Replacing the larger C-9 lights with LEDs is particularly good at saving energy quickly."

— **B.S.**

LEDs glisten this holiday season

"LED lights offer far more potential than just replacement of Christmas decorations. They are the ultimate replacement for all incandescent and fluorescent lights.

It is time for DOE and EPA to switch incentives from CFLs, which contain mercury, to LEDs, which offer more efficiency, longer life, and no hazardous substances."

— **W.V.**

International analysts see stress in solar manufacturing market

"The federal government needs to purchase and install solar panels on all federal buildings.

Production exceeds demand,[and] by purchasing solar panels (PV and Direct Heating) the surplus production would be utilized and keep private investment flowing to this industry.

PV and Direct Solar heating can be combined with earth-coupled heat pumps to provide high efficiency heating to federal buildings."

— **D.P.**

Outlook for renewable energy development in 2009

"I think prospects are bleak, as always. The Census bureau said yesterday there'll be no solar power plants out to 2030, and I see no reason not to agree.

Obama had it right the other day, soon as oil prices go down, everyone goes back to filling their SUV and when they go up the demand for renewables and their price goes up so then they become too expensive.

We have to legislate renewables or spend heavily on public works: there's just no easy way to do it."

— **B.R.**

\$29.3 million for alternative vehicle technologies

"Why aren't States allowing the small 70 miles-per-gallon, or three wheel cars to be used on local Roads. Get ford to make them. Buy the rights to build them. Lets get going. "

— **D.M.**

November issue

Reader's comment on establishing a national energy library

"I am in enthusiastic agreement with DW, calling for a national library of energy.

I've been thinking of ways that the whole field might be made totally accessible, and D.W.'s suggestion would be the almost perfect solution." — **K.D.**

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Speeches, Op-Eds and Testimony

Jan. 8, 2009

[Remarks on the U.S. economy](#), delivered by President-elect Barack Obama at George Mason University.

"...To finally spark the creation of a clean energy economy, we will double the production of alternative energy in the next three years. We will modernize more than 75 percent of federal buildings and improve the energy efficiency of two million American homes, saving consumers and taxpayers billions on our energy bills. In the process, we will put Americans to work in new jobs that pay well and can't be outsourced – jobs building solar panels and wind turbines; constructing fuel-efficient cars and buildings; and developing the new energy technologies that will lead to even more jobs, more savings, and a cleaner, safer planet in the bargain...."

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Events

If you have an event scheduled in the next year 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. — [Jack Jenkins](#), [John Horst](#), [Mariel Sala](#)

[6th Annual Biodiesel Conference](#) — Feb. 1-4, San Francisco, Calif.

The National Biodiesel Board will host a rich educational program featuring presentations and discussions from industry leaders.

[NASEO 2009 Energy Outlook Conference](#) — Feb. 1-4, Washington, D.C.

The National Association of State Energy Officials annual outlook conference will cover U.S. energy policy, legislative outlook and international issues for the coming year.

[34th Stanford Geothermal Workshop](#) — Feb. 9-11, Stanford, Calif.

The 34th annual Stanford workshop brings together engineers, scientists and managers involved in geothermal reservoir studies and developments in a forum for the exchange of ideas on the exploration, development and use of geothermal resources.

[14th Annual National Ethanol Conference](#) — Feb. 23-25, San Antonio, Texas

The Renewable Fuels Association will hold its annual ethanol conference with industry leaders discussing state of the industry.

[RETECH 2009](#) — Feb. 25-27, Las Vegas, Nev.

RETECH 2009 is a trade show and business conference; an attendance of over 5,000 people is expected, from all areas of renewable energy production, use and marketing.

[Renewable Energy World Conference & Expo North America](#) — March 10-12, Las Vegas, Nev.

The 6th annual conference will offer papers, panel discussions and presentations related to technology, markets, business strategies and policy covering the wind, solar, biomass, hydro, geothermal, ocean/tidal/wave, bio-power, bio-fuels, hydrogen and energy sectors.

[Americana 2009](#) — March 17-19, Montreal, Canada

The 8th biennial International Environmental Technology Trade Show and Conference for exchange of knowledge and know-how and the dissemination of economic and environmental solutions.

[Biomass 2009: Fueling Our Future](#) — March 17-18, Baltimore, Md.

This conference will explore the future role of biofuels in our nation's energy portfolio and the technology, market, and policy advances needed to move toward energy independence and meet aggressive biofuels targets.

[National Hydrogen Association Conference](#) — March 30 - April 3, Columbia, S.C.

Meeting explores work by the Savannah River National Laboratory and the Center for Hydrogen Research to address hydrogen production and storage, and by South Carolina's research universities to tackle automotive integration, fuel cell research and future transportation needs.

[Solar America Cities Second Annual Meeting](#) — March 30-April 2, San Antonio, Texas

Join Solar America City teams from around the country to network, share lessons learned, and gather new ideas for your program.

[Surviving the Solar Shakeout: Solar Industry Summit](#) — April 14-15, Phoenix, Ariz.

Greentech Media's Solar Industry Summit participants will debate the solar industry's future with leading analysts, utilities leaders, and policy makers.

[Renewable Energy in Africa, Latin America and the Caribbean](#) — April 27-29, San Francisco, Calif.

Conference will explore successes/challenges/solutions to creating sustainable renewable energy environments in the emerging markets. Optional site visits to see solar sites, wind farms, and/or biofuel plants. Match-making opportunities to create renewable energy partnerships between U.S. entities and emerging market consumers.

[2009 Nanotech Conference and Expo](#) — May 3-7, Houston, Texas

Conference will bring together over 5,000 technology and business leaders, along with experts from academia, government, startups and Fortune 1,000 companies. Meeting will showcase advanced research and best practices, along with the latest tools and equipment.

[Bio 2009 Annual International Convention](#) — May 18-21, Atlanta, Ga.

This event is billed as the world's largest annual nanotechnology conference and expo. Now in its 12th year, organizers expect over 5,000 attendees and 250 exhibitors.

[34th IEEE Photovoltaic Specialists Conference](#) — June 7-12, Philadelphia, Pa.

Conference will present groundbreaking research papers on all aspects of photovoltaic-relevant materials, devices, systems and applications. The deadline for electronic abstract submission is Jan. 14, 2009.

[2009 International Fuel Ethanol Workshop & Expo](#) — June 15-18, Denver, Colo.

The ethanol industry has developed significantly in recent years. Join industry leaders and participate in business development and networking opportunities.

[2009 Annual NACO Conference & Exposition](#) — July 24-28, Nashville, Tenn.

Registration for the 2009 Annual Conference & Exposition will open in late January 2009.

[GovEnergy 2009](#) — Aug. 9-12, Providence, R. I.

A forum to educate, inspire and motivate people and organizations to be more energy efficient in their facilities and to raise awareness and knowledge of latest energy-saving strategies and products.

[GRC 2009 Annual Meeting and GEA Expo](#) — Oct. 4-7, Reno, Nev.

The geothermal energy industry's largest gathering of professionals participating in conference sessions, educational seminars, a trade show exhibition and tours of local geothermal projects.

[2009 Solar Decathlon](#) — Oct. 9-18, Washington, D.C.

Next edition of this popular DOE sponsored showcase for solar-powered, energy efficient homes designed and constructed by university teams from North America and Europe.

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