



AMERICAN  
ENERGY  
SOCIETY

The world's exclusive network for energy professionals;  
Connecting experts, thought leaders and decision-makers in pursuit of a sustainable energy future.

## *Energy Matters*

10 March 2015

### Members: Welcome to the e-Newsletter of the American Energy Society

Below you will find a rundown of what you need to know about energy right now. Topics include: conventional, renewables, funding, electricity, events, technology, policy, climate, jobs, featured organizations and experts ...

For more information about these and other stories please visit your account: [www.energysociety.org](http://www.energysociety.org).

### *Conventional*

**Saudi Arabia announced it will not slow down production of oil**, and it will continue to produce what it's customers demand, regardless of OPEC's strategy to defend market share, said Saudi Arabia Oil Minister Ali-al-Maimi.

A new Carnegie Mellon University [study](#) - the first peer-reviewed paper of its kind - says **exporting clean-burning U.S. liquefied natural gas (LNG) "would help reduce global GHG emissions"** and such policy will be "good for the climate."

Former Tonight Show Host, comedian and well-known car collector **Jay Leno** pummeled ethanol in an essay entitled, "[Jay Leno Hates Ethanol](#)." Leno says the ethanol in modern gasoline - about 10% in many states - is so corrosive that it eats through fuel-pump diaphragms, old rubber fuel lines, and pot metal parts. It also leaks on hot engines and can cause car fires. Leno: "Blame the Renewable Fuel Standard." This government-mandated rule requires certain amounts of ethanol and other biofuels blend with gasoline and diesel fuel. But when Congress first passed RFS as part of the Energy Policy Act in 2005, our demand for energy was increasing. Today, it's the opposite - total demand for fuel has decreased thanks to more-efficient vehicles, more hybrids, and increased environmental awareness. **The EPA is set to release the new 2015 standard in June.**

## *Renewables*

The "Water/Energy" Nexus. The oceans taunt those who thirst. Records dating to A.D. 200 show that sailors boiled seawater and used sponges to absorb fresh water from the steam. Today, desalination is more sophisticated: multistage flash distillation, reverse osmosis, electro dialysis, and more. But **the primary obstacle to desalination has always been the same: a substantial amount of energy (and/or money) is needed to squeeze drinkable water from salt water.** For more on the water/energy nexus, log into your AES account to see the article by Marianne Lavelle, National Geographic, (February 2, 2015).

## *Funding*

1) The [EERE announces a new FOA](#) for **fuel cells and hydrogen fuels** (i.e. hydrogen production, delivery and storage) and institutional barriers such as hydrogen codes and standards. In particular, the R&D areas of interest for this FOA include hydrogen production via microbial biomass conversion; low platinum group metals (PGM) catalyst development for polymer electrolyte membrane (PEM) fuel cell applications; development of an integrated intelligent hydrogen dispenser; and fuel cell and hydrogen manufacturing R&D focusing on hydrogen delivery pipeline manufacturing R&D. This FOA also seeks projects that accelerate adoption of hydrogen and fuel cell technologies with specific interest in mobile hydrogen refuelers, fuel cell powered range extenders for light-duty hybrid electric vehicles, and a Communities of Excellence subtopic featuring hydrogen and fuel cell technologies.

2) The DoE Loan Program Office ("LPO") maintains \$40.5 billion in loan guarantee authority for its Title XVII and ATVM programs for renewable energy and energy efficiency projects. **While the applications and fees are difficult to navigate, the vast amount of financing available through the DOE LPO is difficult for industry to ignore.** Log into your [AES account](#) to see more information or contact AES for an introduction to a DoE LPO expert.

## *Electricity*

The "CCA" Challenges Utilities. A number of counties are experimenting with a **new way to buy and consume electricity through local community-choice aggregation agencies. Called "CCA's,"** it is a simple strategy that allows cities and counties to pool the purchasing power of residents and businesses to buy electricity. In short, a CCA would become the provider of electrical power rather than local utilities.

## *Events*

- **EPRI 2015 Spring Communications Council**, Wed. April 8 - Thur., April 9, 8:00 a.m. - noon, Brooklyn Bridge Marriott, 333 Adams St., Brooklyn, NY.

- **ACORE Renewable Energy Policy Forum** - April 22-23, Westin Washington, D.C. City Center.

- The **American Energy Society** proposes to help each region and every state optimize their current energy solutions. To do this, the American Energy Society will host a series of town-hall meetings designed to perfect state-specific energy clusters:

1) **Energy Expo at Georgia Tech, April 3** [TICKETS](#);

2) **Town Hall Energy Summit**, Charlottesville, Virginia, April 17 - [TICKETS](#)

## *Technology - "Three Under Thirty"*

The American Energy Society would like to recognize **three cutting-edge technologies developed by people who are 30 years old or less:**

**Katie Anderson, 29: Founder, Save Water Co**

Anderson has already saved half a billion gallons of water by fixing and retrofitting water systems in apartment buildings around Houston. Water conservation will be of increasing importance across the arid western states, particularly in places where water is in increasing demand due to severe drought conditions.

**Damian Beauchamp, 28, Xiaodi Ren, 27, Kate Fisher, 29: Cofounders, KAir Energy Systems**

KAir is commercializing a potassium-air battery that offers exceptional energy efficiency and three times the capacity of leading lithium-ion batteries at an expected cost of less than \$90 per kWh. This "air-powered" battery discharges by chemically reacting potassium with oxygen. The design won the \$100,000 clean energy prize from the U.S. Department of Energy in 2014.

**Reid Calhoon, 27: Cofounder, RunTitle**

RunTitle is the first online marketplace for oil and gas mineral title information. RunTitle provides previously inaccessible mineral title research to oil and gas professionals and mineral owners nationwide. This research allows oil and gas companies to make smarter acquisition decisions in a more timely manner.

## *Policy*

Iranian Foreign Minister Javad Zarif has said that **U.S. and Iranian negotiators are very close to a nuclear deal**. However, if reports are true that Iran's supreme leader, Ayatollah Ali Khamenei, has been hospitalized with a serious illness, that might slow decision-making on the Iranian side. To see five reasons why the chances this deal will happen, log into your AES account.

The EPA's Clean Power Plan proposal will require states to reduce their power sector carbon dioxide emissions by varying amounts by 2030. E&E has created **an easy-to-use, interactive resource that provides a state-by-state breakdown**. AES Members can [click on the map](#) to read an overview of state agency comments, find links to relevant documents, and read stories related to each state. The American Energy Society strongly endorses this resource.

## *Featured Organization: ACORE*

ACORE, which stands for "American Council On Renewable Energy," is a membership organization dedicated to building a secure and prosperous America with clean, renewable energy. Though ACORE tends to focus on DC/Beltway/policy, the Council effectively convenes a wide variety of virtual and traditional forums that communicate the economic, security and environmental benefits of renewable energy. Its range of members spans all constituencies in the renewable energy sector, including financial institutions, government leaders, educators, end-users, professional service providers and non-profit groups. **The American Energy Society applauds ACORE for its abundant programming schedule and its dedication to renewable energy.**

## *Featured Expert - Sheryl Grace*

The American Energy Society would like to recognize Sheryl Grace, professor of Mechanical Engineering at Boston University. Professor Grace's interests lie in the fields of unsteady aerodynamics and aeroacoustics. She focuses on creating analytical and computational models of the mechanics which create sound and vibration. She is most interested in applications in which the vibration and sound result from the interactions of unsteady flows past solid bodies, such as for aircraft external structures and marine and aircraft propulsion systems. Her analyses are intended to be used as predictive tools in the design of next generation systems. As important, AES deeply appreciates her patience and commitment as a Member - she has always been supportive of the AES, whether with time, advice, or encouragement. **Thank you Dr. Grace for all you do for the profession, the field, your students, and for the American Energy Society.**

## *What You Missed - First Direct Evidence of Link Between Man-Made CO<sub>2</sub> and Climate Change*

Last week the American Energy Society featured a pathbreaking article published in [Nature](#). There had been no direct link between man-made CO<sub>2</sub> and climate change ... until recently. A team of researchers led by the U.S. DOE Lawrence Berkeley National Laboratory has shown a **direct relationship between increasing atmospheric carbon dioxide (CO<sub>2</sub>) and the Earth getting hotter**. This is the first time that "global warming" has been experimentally confirmed outside a laboratory or computer model.

...

## *What's in store at AES - Town Hall Energy Series*

Spring Membership Drive - **encourage colleagues to join for FREE as a Basic Member; you and they will get a FREE upgrade to Premium level membership:** [www.energysociety.org](http://www.energysociety.org)

The American Energy Society is co-hosting the **Town Hall Energy Series**. Panelists and audiences will take a closer look at local and regional energy clusters, evaluating obstacles and opportunities. The next two events in the Series are:

- **Energy Expo** at **Georgia Tech**, April 3 [TICKETS](#)
- **Town Hall Energy Summit**, **Charlottesville, Virginia**, April 17 - [TICKETS](#)

Please respond by email for more information or to attend at a discounted rate.

## *Jobs*

**The energy industry is hiring! This week we feature new opportunities in "bioenergy":**

- **BioAmber**, Bioenergy Association. [Fermentation Analyst](#), BS Degree Minnesota.
- **Renewable Energy Group**, Bioenergy, [Project Engineer](#), BS Mechanical Engineering, Iowa.
- **LanzaTech**, Bioenergy, [FP&A Analyst](#), BS Finance, Illinois.
- **Abengoa**, Bioenergy, [Summer Internship](#), BS Degree, Kansas

# Climate News

In order to reduce the use of fossil fuels, we need to increase the use of renewable sources of energy. At least, so the theory goes. However, Richard York of the University of Oregon has published a [new study](#) in *Nature Climate Change* which challenges this assumption, demonstrating that, **rather than displacing fossil fuels, alternative sources of energy barely outpaced increasing demand over the last 50 years.** Summarizing the conclusion: despite all that has been accomplished thus far, not nearly enough is being done to combat climate change. Now there is direct evidence to support action: "global warming" has been experimentally confirmed. See the article in Nature.

## Thanks - Melanie Lyons

The American Energy Society would like to thank Melanie Lyons of the Woodrow Wilson International Center for Scholars for her support of and dedication to the American Energy Society. Her contributions make the Society better for its Members. Thank you Melanie for all that you've done and all that you do on behalf of energy and the AES.

## Please Encourage Colleagues To Join AES

We are a stronger network of experts if Members encourage their colleagues to **join the American Energy Society**. True to our commitment to sustainable energy, we offer FREE Basic membership, and the current Premium Membership rate is only \$27/year. **Please reply to this email if you know of a colleague who might be interested in Membership.**

### Contacts

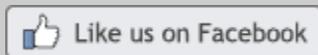
Dr. Sheryl Grace, prof. Mechanical Engineering  
<http://www.bu.edu/me/people/faculty/gn/grace/>

Woodrow Wilson International Center for Scholars  
<http://www.wilsoncenter.org/>

White House Budget Proposal  
<http://www.whitehouse.gov/omb/budget/>

Energy Jobs at Dayaway Careers  
[www.dayawaycareers.com](http://www.dayawaycareers.com)

Visit: [www.energysociety.org](http://www.energysociety.org)



### Quote of the month:

"It is unavoidable: any civilization that harvests energy ... will alter the chemical makeup of its atmosphere."

Prof. Dr. Werner Güth,  
Max Planck Institute,  
Jenna, Germany