



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 February 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, jobs, and featured organizations and experts. For more information about these and other stories please visit your account at [www.energysociety.org](http://www.energysociety.org).

### *Conventional*

AES Members at Oak Ridge National Laboratory (ORNL) along with the Canadian nuclear company Terrestrial Energy are **building a new Molten Salt Nuclear Power Plant**

**Reactor.** Molten-salt reactors are notable for:

- producing energy that is cheaper than coal
- producing much fewer long-lived radioactive elements
- not requiring external water for cooling
- buffering the intermittency of renewables
- inability to repurpose for military use

### *Renewables*

#### **Is Solar The Next Shale Boom?**

According to a new study by Wood MacKenzie, an international energy research and consulting company, just as shale extraction reconfigured oil and gas, no other technology is closer to transforming power markets than distributed and utility scale solar. Based on the study's persuasive analysis, it seems difficult to dispute that solar technology will transform - and in some states already is transforming - wholesale power markets. But there is whopper of a caveat. The scope of the solar-induced transformation will depend on political decisions made in the future.

## *Funding*

ENEA Consulting is asking non-profits, NGOs, technology developers, and social entrepreneurs to submit **funding proposals for projects that support energy access initiatives in AFRICA.**

### **New DoE funding (FOA'S) announced:**

- \$59 Million To Advance Solar Energy
- \$55 Million for Advanced Fuel Efficient Vehicle Technologies
- \$12.5 Billion federal loan program for Advanced Nuclear Energy Projects for construction of innovative nuclear energy projects in the U.S. The first deadline is March 18, 2015
- \$3.5 Million for Resilient Electricity Delivery Infrastructure (REDI) Initiatives

## *Electricity*

**Tax Deductions for Businesses with LED lighting extended.** Businesses have up to \$1.80 / sq. ft. in 179D Tax Deductions on properties that have been retrofitted with LED lighting or other energy initiatives. President Obama signed into law the Tax Increase Prevention Act of 2014 (HR 5771). This officially extends the section 179D Tax Deduction.

**Seeking an expert answer:** A Member of AES is in need of an electronic circuit.

Description: "We have been working on a 1500w generator and the issue we are facing is voltage spike up to 260v on no load and after load its 220. We need a circuit which can keep a constant voltage of 230v with/without load."

## *Events*

**The ARPA-e Summit has begun** - follow updates at [www.energysociety.org](http://www.energysociety.org)

**Attend the MIT Energy Conference, February 27 and 28.**

**ACORE Renewable Energy Policy Forum - April 22-23**, Westin Washington, D.C. City Center. Join the renewable energy industry as it mobilizes key policymakers and federal and state stakeholders. (Connect with the President's administration for the last 2 years in office, the new Congress, and some of the 2016 Presidential candidates.)

## *Technology*

**Deep-Fry Graphene to Improve Energy Storage Levels** - Spraying graphene oxide into hot solvent creates high-surface-area graphene particles suitable for building electrodes.

## *Policy*

**President Obama Proposes \$30 billion Budget Request for the Department of Energy**, a 9% increase over last years budget. This FY 2016 budget proposal appears to support an "all-of-the-above" approach, but greater emphasis on "climate" issues will upset Congressional Republicans, especially tax break incentives offered to the renewables industry and cut from O&G.

**Research labs might consider new funding opportunities in the FY 2016**

**budget:** energy security systems, grid modernization, clean-up (biomass, nuclear, waste, etc.), and \$7 billion for various clean-energy programs.

Much of President Obama's FY2016 budget request is probably d.o.a. in Congress. But **there are several line items in the budget that some Republicans will privately accept**. For instance, many think the E.P.A. rule to cut power-plant carbon emissions will not survive. However, AES Member and former Governor of Michigan, Jennifer Granholm told the Society that the \$4 Billion Clean Power State Incentive Fund is a significant incentive for states starving for cash.

## *Featured Organization - Cornell University*

Ithaca, New York is beautiful but somewhat isolated, especially in winter, and, with 11 colleges, priorities are often in danger of being diluted. But, in creating the Energy Institute, Cornell turned these organizational challenges into strengths. A key example is the Atkinson Center for a Sustainable Future, which focuses on enabling multi-disciplinary research that connects energy, environmental, and economic issues. The integrated research, educational, and outreach efforts of the Center's programs and members, combined with the strong commitment to practical solutions that is the hallmark of Land-Grant schools, has resulted in an exceptional energy program. **The American Energy Society recognizes Cornell and its Atkinson Center and Energy Institute as notable leaders in multiple energy fields.**

## *Featured Expert*

We would like to thank long-time Member, **Shannon Yee**, for his support of and advice for the American Energy Society. Following his contributions as a Hertz Fellow and then service at ARPA-e, Professor Yee is doing exceptional work in heat transfer and combustion energy systems at Georgia Tech. Just as important, his leadership with STEEL is helping make Georgia Tech the energy hub in the southeast United States.

## *What You Missed at AES*

**Budget Analysis** - Visit the American Energy Society ([www.energysociety.org](http://www.energysociety.org)) for more analysis of the proposed FY 2016 budget.

## *What's in store at AES - Energy Expo at GaTech*

AES is hosting the Townhall Energy Series, featuring the **Energy Expo at Georgia Tech on April 2 and 3**. Please don't hesitate to contact the AES for more information. We seek conference partners from the University of Georgia and Emory University as well.

## *Jobs*

The energy industry is hiring, but this week the AES highlights energy **jobs for electrical engineers**:

- [Consulting V](#)
- [Renewables IV](#)
- [Smart Grid and Energy Efficiency IX](#)
- [Solar III](#)
- [Solar VIII](#)

**FREE webinar for energy job-seekers**, hosted by AES partner organization, Dayaway. On February 12 at 7pm ET, participate in a FREE energy job-seekers webinar. Early stage professionals in Clean Energy Finance, Business Development & Policy Roles will discuss how they got jobs and will answer questions. Space is limited so [register](#) right away.

## *Thanks - Wilson Sonsini Goodrich Rosati*

There are many professional services available for the energy industry, but the full-service law firm Wilson, Sonsini, Goodrich and Rosati stands out. **The WSGR Energy Practice Group, led by Bob O'Conner as well as John Turner, Todd Glass, Peter Mostov, and Sean Moran, provide expert support for all fields of energy**, from large-scale utilities to small start-ups and non-profits. But more importantly, everyone in the WSGR Energy Group are exceptionally kind, thoughtful, and considerate people. (In the interest of full disclosure, WSGR is the AES's law firm, but this feature is unsolicited.)

And again, **Ted Larson** - this *second* edition of *Energy Matters* would not have been possible without your wisdom and guidance. Thank you - again!

## *Encourage Colleagues To Join AES*

Please encourage your colleagues to **join the American Energy Society**. Basic membership is free, and the current Premium Membership rate - \$27/year - won't last long!  
**Please reply to this email with suggestions.**

### Contacts

**Cornell EI**

<http://energyinstitute.engineering.cornell.edu/energyinstitute>

**ARPA-e**

<http://www.arpa-e-summit.com/>

**Shannon Yee**

<http://www.yeelab.gatech.edu/people/professor/>

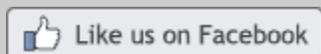
**White House Budget Proposal**

<http://www.whitehouse.gov/omb/budget/>

**Wilson Sonsini - Energy Practice Group**

<https://www.wsgr.com/WSGR/Display.aspx?SectionName=practice/energy-finance/index.htm>

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On the web at [www.energysociety.org](http://www.energysociety.org)



### Quote of the month:

"Everything is energy and that's all there is to it."

- Albert Einstein