

**From:** Gil Masters (gmasters@stanford.edu)  
**To:** energyfolks@lists.stanford.edu  
**Date:** Tue, October 6, 2009 4:40:40 PM  
**Subject:** Energyfolks: Site energy, China nukes, Seminars, Jobs

**QUOTE OF THE DAY:**

. Peter Gleick (Pacific Institute) on climate mitigation and adaptation: We need to do two things simultaneously: both "avoid the unmanageable and manage the unavoidable."

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**INTERESTING STUFF:**

1. Energy Star: Source Energy vs Site Energy: New Aug '09 EPA Report
2. China Official warns on "too fast" nuclear plans:
3. Over the Summer, a Spread of Thicker Arctic Ice

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**STANFORD AND BAY AREA SEMINARS:**

1. Next Energy Seminar, Oct 14, 4:15-5:30: Sustainable Energy Future: Scale Tradeoffs and Co-Benefits
2. Sustainable Built Environment Seminar Series: Oct 15, Smart Grid/Smart Buildings
3. Ren Orans: Meeting CA Greenhouse Gas Reduction Goals, Oct 15, 2 pm
4. NAF Cleantech Speaker Series: #1 Smart Grid Energy Efficiency: Oct 22, 6-10pm in S.F.
5. Smart Grid: Vision, Opportunity and Effectiveness, Nov 13, SRI, noon - 7 pm

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**JOBS            JOBS            JOBS            JOBS**

1. Energy Resource Analyst: Alameda Municipal Power
2. Mechanical Engineer Intern: Tesla Motors
3. Postdoctoral positions: U. of Minn, Global Energy Leadership Fellows
4. Modeling Natural Lighting Solutions: Eindhoven U., Netherlands
5. Over 100 Openings at SunPower

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**AND A TOLES CARTOON AT THE END...**

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**INTERESTING STUFF:**

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**1. Energy Star: Source Energy vs Site Energy: New Aug '09 EPA Report**

Many building energy performance ratings are based on "site energy".. basically the energy content of the fuels arriving at the

building, which, for example, counts 1 unit of electricity the same as 1 unit of natural gas, even though it typically takes over 3 units of thermal energy into a power plant to deliver that 1 unit of electricity. "Source energy," on the other hand, accounts for the energy content of the original fuel, as well as the transmission and distribution energy required to deliver it to the building. Many (not all) folks think source energy should be the proper measure of building efficiency. This new EPA report spells out their recommended conversions from source energy to site energy for a number of fuels and concludes that a reasonable value for grid-purchased electricity is 3.34 units of fuel needed to deliver 1 unit of electricity; natural gas 1.047; steam 1.45, etc.

Energy Star Performance Ratings: Methodology for Incorporating Source Energy Use, Aug 2009 (<http://www.energystar.gov/ia/business/evaluate>)

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## 2. China Official warns on "too fast" nuclear plans:

<http://www.reuters.com/article/GCA-GreenBusiness/idUSTRE58Q1GR20090927>

Sun Sep 27, 2009 12:12pm EDT

By Eadie Chen and Lucy Hornby

QINGDAO, China (Reuters) - China may have to put the brakes on the construction of nuclear power plants to ensure the plants are safe, the country's top energy planning official told reporters on Sunday.

Zhang Guobao, head of the National Energy Administration, warned of signs of "improper" and "too fast" development of nuclear power in some regions.

China had previously set a goal of 40 gigawatts of nuclear power capacity by 2020, which would entail building about two reactors a year.

"We'd rather move slower and achieve less than incur potential safety concerns in terms of nuclear energy," Zhang told reporters on the sidelines of the Sino-U.S. Energy Summit.

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## 3. Over the Summer, a Spread of Thicker Arctic Ice

By [ANDREW C. REVKIN](#) NYTimes Oct 6, 2009

The National Snow and Ice Data Center released its summary of summer [sea-ice conditions](#) in the Arctic on Tuesday, noting a substantial expansion of the extent of "second-year ice" — floes thick enough to have persisted through two summers of melting. The result could be a reprieve, at least for a while, from the recent stretch of remarkable summer meltdowns.

According to the center, second-year ice this summer made up 32 percent of the total ice cover on the Arctic Ocean, compared with 21 percent in 2007 and 9 percent in 2008. The percentage of ice that was many years old, forming thick pancaked expanses, was at its lowest since satellite observations began 30 years ago. But that could change next year as the second-year ice adds mass through the long winter freeze.

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**STANFORD AND BAY AREA SEMINARS:**

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**1. Next Energy Seminar, Oct 14, 4:15-5:30: Sustainable Energy Future: Scale Tradeoffs and Co-Benefits**

There is no Energy Seminar this week, October 7. Please join your colleagues for a special panel of Stanford experts on October 14, followed by an Energy Social:

October 14, 4:15-5:30, Building 420, Room 40, [Sustainable Energy Future: Scale, Tradeoffs, and Co-Benefits Energy Seminar](#) panel with Stanford professors:

- Professor Sally Benson, Director, Global Climate and Energy Project (GCEP)
  - Professor Lynn Orr, Director, Precourt Energy Institute
  - Dean Pamela Matson, Dean of the School of Earth Sciences
  - Professor Steven Schneider, Melvin & Joan Lane Professor for Interdisciplinary Environmental Studies
  - Professor Jim Sweeney, Director, Precourt Energy Efficiency Center
  - Professor Buzz Thompson, Co-director, Woods Institute for the Environment
- Followed by an Energy Social, 5:45-7:00, Yang and Yamazaki Environment and Energy Building, Social Entry

For more information, see the new [Energy Seminar](#) website: [energyseminar.stanford.edu](http://energyseminar.stanford.edu)

Thank you to Chevron for sponsoring the Energy Seminar (no logo this time !!)  
Thank you to MAP for sponsoring the Energy Social

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**2. Sustainable Built Environment Seminar Series: Oct 15, Smart Grid/Smart Buildings**

Oct 15 (noon, Y2E2 299): Collaborative Innovation Network and Smart Grid/Smart Buildings Opportunity

Dr. Osman Ohmed, Head of Global Research and Innovation, Siemens Building Technologies

Oct 22 (noon, Y2E2 270): CoHousing: Sustainable Neighborhoods for the Future

Charles Durrett, Principal Architect, McCamant & Durrett Architects

Nov 12 (noon, Y2E2 299): Energy Analysis of the first year of the Stanford Y2E2 building and its implications for design and practice.

John Kunz, Executive Director Center for Integrated Facilities Engineering, Stanford

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**3. Ren Orans: Meeting CA Greenhouse Gas Reduction Goals, Oct 15, 2 pm**

Policy & Economics Research Roundtable  
Ren Orans, Environmental Economics, Inc. (E3)  
Meeting California's Greenhouse Gas Reduction Goals in 2050  
FRIDAY, October 9th at 2pm  
Y2E2 Room 105

Meeting California's Greenhouse Gas Reduction Goals in 2050 by Energy

THIS talk describes results from a model developed by E3 to explore the changes in technology and physical infrastructure required for California to meet its 2050 greenhouse gas reduction goal of 80% below 1990 levels. This work moves beyond previous generalized "stabilization wedges" proposals to determine the specific mix of measures required in California's economy in the long term. Unlike general equilibrium models, the emissions reductions in this model are driven by technology assumptions and physical constraints rather than price assumptions and market behavior. The model includes a power

system dispatch that tests the operability of different generation scenarios, including high renewables, high nuclear, and high carbon capture and storage (CCS) cases. The talk concludes with a discussion of the many interesting policy implications that flow from the model results.

Dr. Orans is a managing partner at E3 and expert in the energy industry. He received his Ph.D. in Civil & Environmental Engineering from Stanford.

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#### **4. NAF Cleantech Speaker Series: #1 Smart Grid Energy Efficiency: Oct 22, 6-10pm in S.F.**

Leveraging Smart Grid Innovation: Exploring Local Partnership Models between the Public and Private Sector

Matt Rogers, Senior Advisor to the Obama Administration's Dept. of Energy rocked the boat recently by stating that the success of cleantech in America hinges on the private sector, not the government.

Indeed cleantech has become a significant category for investors in recent years – just last year, venture capitalists spent over \$4B on clean technology investments. Yet to catalyze innovation and commercialize emerging technologies to create a viable industry, what's needed is 40 times the amount in venture money than what's available today, says Ian Copeland, head of Bechtel's renewable energy group. It will take a solid partnership, he believes, between private and public sectors to overcome the climate crisis, and create an industry that's viable all at once.

On this first gathering of the NAF Cleantech Speaker Series we will focus on the smart grid industry. Our panel will explore how startups, utilities and public sectors can best work together to provide the best opportunity to drive smart grid innovation. What are some of the best practices today (or should be) that are creating new standards that will transform the smart grid industry? Are there lessons to learn from our European counterparts?

Speakers:

- Joris Jonker, CEO [Home Automation Europe](#)
- Tony de Rijk, President and CEO, [iDo Technology](#)
- Eric Wesoff, [Greentech Media](#)
- San Francisco Public Utilities Association (TBD)
- Silicon Valley Investment Community (TBD)

Please visit our website [www.thenaf.org](http://www.thenaf.org) to see a full program. If you're interested and would like to participate, then please send an e-mail to Geert van der Zalm [geertvanderzalm@gmail.com](mailto:geertvanderzalm@gmail.com) or contact Anne Donker [anne.donker@hubtech21.com](mailto:anne.donker@hubtech21.com).

When: 22 Oct 2009

Time: 6:00pm - 10:00pm

Venue: This event is a collaboration between the [NAF NorCal](#) and [HubTech21](#) and is generously hosted by HubTech21 San Francisco office, 2415 Third Street, San Francisco, CA, 94107.

Register before Monday October 19, 2009

To register for this event please click [here](#) or visit our website <http://www.thenafnorcal.org>

#### ABOUT THE NETHERLAND-AMERICA FOUNDATION

Founded in 1921, the Netherland-America Foundation (NAF) is the leading bilateral foundation initiating and supporting high-impact exchange between the Netherlands and the United States, including the NAF/Fulbright Fellowships and programs in the arts, business, public policy and historic preservation. Visionary leaders such as Edward Bok, celebrated publisher of the Ladies' Home journal, Thomas J. Watson, founder of IBM and Franklin D. Roosevelt served as its presidents.

The NAF Northern California Chapter was founded in 2006. The NorCal chapter has as its mission to foster exchange in

technology, education, business, and the arts among the members of the Dutch & American communities in the San Francisco Bay Area.

## ABOUT HUBTECH21

Hubtech21 is a professional service provider based in Boston with offices in Paris and San Francisco. The company specializes in helping European technology companies establish a presence and operations in the US market as quickly and effectively as possible. HubTech21 provide clients in the Life Sciences, Optics/Photonics and Software sectors with a range of customizable service packages, from pre-market entry prospecting and logistics support to full service operations support.

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### 5. Smart Grid: Vision, Opportunity and Effectiveness, Nov 13, SRI, noon - 7 pm

Save-the-date for Berkeley Stanford CleanTech Conference on Smart Grid. Berkeley-Stanford CleanTech Conference organizing team is happy to announce our next conference in our CleanTech Conference Series.

#### "Smart Grid: Vision, Opportunity, and Effectiveness"

This is the fourth in a continuing series of focused conferences highlighting clean technology solutions to address the planet's multifaceted energy challenges. This fourth installment is made possible through the Stanford University Energy Crossroads. This conference will provide information on:

- What is the Smart Grid today? Where is it going?
- How can innovators make the most of Smart Grid opportunities?
- What policies will enable the Smart Grid? What are the constraints in the system?

Date: 13 Nov 2009

Location: SRI Auditorium, [333 Ravenswood Avenue, Menlo Park, CA 94025-3493](http://www.sri.stanford.edu)

Time: noon - 7pm

You will get a chance to hear from distinguished speakers like Andrew Tang and Andrew Campbell.

For more details please visit our website <http://cleantech.stanford.edu/>

Registration will be open soon.

We are also looking for volunteers to help with fund raising, marketing, day-of-event setup etc. If you are interested, contact us at [malaki@bscleantech.org](mailto:malaki@bscleantech.org)

-Berkeley Stanford CleanTech Conference Core Team

Amy, David, Hrishu and Yohei

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## JOBS JOBS JOBS JOBS

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### 1. Energy Resource Analyst: Alameda Municipal Power

Alameda Municipal Power has a job posting available for an Energy Resources Analyst. This is an entry level position. Under direct supervision, the Energy Resources Analyst will assist the Energy Resources Planning Division with resource planning and acquisition, cost-of-service analysis, rate design, energy usage and demand analyses, contract negotiation and administration, and other related work as required. Please click on the following link for a detailed job description as well as application instructions <http://www.ci.alameda.ca.us/hr/recruitments.html> The deadline for applying is October 15, 2009. Alameda Municipal Power is the municipal electric utility serving the City of Alameda. Approximately 64% of the City's electric load is sourced from a diversified mix of CEC eligible renewables, including: geothermal, wind, solar PV, landfill gas, and small hydro.

Analyzes system and customer load data for use in forecasting, ratemaking and demand-side activities; assists with utility supply and demand-side management and planning studies including generation, transmission and/or distribution;.... etc.

Brad Wetstone  
Energy Resources Division  
Alameda Municipal Power  
510-814-6412  
[wetstone@alamedamp.com](mailto:wetstone@alamedamp.com)

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## 2. Mechanical Engineer Intern: Tesla Motors

Mechanical Engineer Intern - Charging Systems

- Hours: Full or Part-time, available to start immediately
- Pays: 15/hr
- Send resume and brief coverletter to: David Lu, [david@teslamotors.com](mailto:david@teslamotors.com),  
cc Lyuba Wolf [lyuba@teslamotors.com](mailto:lyuba@teslamotors.com)

Ideal candidate would have extensive experience designing and drawing 3d assemblies using Solidworks or Catia V5.

### Job Requirements

- Product Development Responsibilities
  - o CAD
    - § Design mechanical enclosures using 3D solid modeling CAD software (Solidworks / Catia V5).
  - o Documentation
    - § Create detailed drawings from solid models for various fabrication techniques (CNC/Manual Machining, Welding, sheet metal forming, injection molding, stamping, extrusions, die casting ...).
    - § PLM software experience recommended (Arena / SAP)
  - o Hands On
    - § Hands-on prototyping of new designs.
    - § Support the building and testing of prototypes.
  - o Communications
    - § Strong verbal and written communication skills, along with the ability to present data clearly in both formal and informal settings.
    - § Strong analytic problem solving skills.
  - o General
    - § Work closely with supply, quality and manufacturing engineers.
    - § Supply technical support to Tesla supply chain and quality.
- Qualifications:
  - o Significant progress or (recent graduate), BS or MS Mechanical Engineering.
  - o Experience designing packaging for electromechanical systems.
  - o Strong understanding of engineering fundamentals.
  - o Strong interpersonal and communication skills.

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## 3. Postdoctoral positions: U. of Minn, Global Energy Leadership Fellows

The new Institute on the Environment (IonE) at the University of Minnesota has 4 immediate openings for Global Energy Leadership Fellows.

These postdoctoral positions are intended to support work on finding solutions to our international energy challenges, particularly those in developing countries. This is part of a much larger portfolio of investments the University of Minnesota is

making in renewable energy and global environmental solutions.

Search has been extended until November 15.

Prof. Jonathan Foley, Director  
Institute on the Environment (IonE)  
University of Minnesota

612.626.9553

<http://www.environment.umn.edu>

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**4. Modeling Natural Lighting Solutions: Eindhoven U., Netherlands**

**5. Over 100 Openings at SunPower**

Sunpower currently has over 100 positions listed at  
<http://us.sunpowercorp.com/about/careers.php>

This is a fully funded PhD position in building energy and lighting simulation -

see <http://vacatures-v2.tue.nl/Vacature.aspx?Vacaturenummer=V38.555&Taal=English>

prof. dr. ir. Jan L.M. Hensen | [www.bwk.tue.nl/bps/hensen](http://www.bwk.tue.nl/bps/hensen) | +31 (0)40 247 2988 | Building Physics &  
Systems | Eindhoven University of Technology | P.O. Box 513 - VRT6.18 | 5600 MB EINDHOVEN, Netherlands

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**And a Toles Cartoon...**

