

# ENERGY ANALYSIS AND POLICY ALUMNI NEWSLETTER

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## NEW EAP ENROLLMENTS HIT AN ALL-TIME RECORD IN 2008-2009

Over the years, many of us at the Nelson Institute have joked that EAP applications are directly related to the price of gasoline. Perhaps last summer's \$4.00/gallon prices have had such an impact!

During the 2008-2009 academic year, EAP has enjoyed the largest wave of new enrollment in the 29-year history of the program. Twenty-eight students have enrolled in the program since August 2008.

The newest enrollments may also be connected to the completion of the Energy Systems Cluster hire, which over the past 9 years has brought four new faculty to the University, focused on energy-related teaching and research.

Prof. Paul Wilson (*Chair of EAP, NEEP*) joined the faculty as the first Energy Cluster hire, in year 2001. He was

joined by Tracey Holloway (*Nelson, AOS, SAGE*) in 2003.

Over the past two years Profs. Bernie Lesieutre (ECE) and Greg Nemet (*Nelson, La Follette*) have completed the quartet. Greg and Bernie have encouraged a number of graduate students to pursue the EAP certificate. Their home departments — ECE and La Follette — account for 16 of the 28 newest EAP students.

The EAP program welcomes the following new students:

Daniel Spitzburg (E&R \*)  
Amy Klusmeier (Pub Aff)  
Mitch Myhre (E&R)  
Diana Husmann (E&R)  
Rachel Slaybaugh (NEEP)  
John Koliner (Physics)  
Evan Johnson (Pub Aff)  
Emily Plagman (Pub Aff)  
Adam Felts (Pub Aff)

Krista Charipar (CBSD/Law)  
Tim Miller (CEE)  
Kevin Meyers (ME)  
Holden Weisman (Pub Aff)  
Andrew Kell (Pub Aff)  
Michelle Chou (Pub Aff)  
Phillip Kollmeyer (ECE)  
Brian Bak (ECE)  
Daniel Molzan (ECE)  
Corey Singletary (Pub Aff)  
Daniel Schwarting (ECE)  
Tae Wook Ahn (NEEP)  
Liese Dart (E&R)  
Stephanie Chase (Pub Aff)  
Claus Moberg (AOS/ E&R)  
Megan Mallette (ECE)  
Scott Williams (Pub Aff)  
Travis Clemmens (URPL)  
Michael Barahona (CEE)

\* Note: E & R stand for "Environment and Resources" which is the Nelson Institute degree formerly known as "Land Resources"

Download information about the upcoming conference: Wisconsin's Energy Future, at

[www.nelson.wisc.edu/outreach/energy\\_future/](http://www.nelson.wisc.edu/outreach/energy_future/)

## WISCONSIN'S ENERGY FUTURE NELSON INSTITUTES'S 2009 EARTH DAY CONFERENCE

On Wednesday, April 22 the Nelson Institute will host its third annual Earth Day conference. This year's event is dedicated to Wisconsin's Energy Future. The all-day conference includes lectures and workshops at the Monona Terrace Convention Center.

Download conference information at the Nelson Institute website.

A number of individuals with ties to EAP will be among the presenters at the conference, including: Tracey Holloway (EAP Faculty), Paul Wilson (EAP Faculty), Bernie Lesieutre (EAP Faculty), Greg Nemet (EAP Faculty), Don Wickert (EAP/1987, currently at WECC), Paul Meier (EAP/2002, currently at UW Energy Institute), Mark Hanson (former EAP Faculty, currently with Hoffman), Dan York (EAP/1987, currently at ACEEE) and Wes Foell (Faculty Alum, currently with RMA).

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## ALUMNI

Since May, 2008 eight graduate students have completed the EAP certificate and joined the ranks of alumni. Congratulations go out to our newest alumni. (Home departments are noted, and current employment status is included):

Mike Carlson (Land Resources, UW Law) is a program coordinator for Gathering Waters Conservancy.

Katherine Reif (La Follette School of Public Affairs) - Katherine continues to work at Alliant Energy.

Scott Hackel (Mechanical Engineering) - Scott accepted a job with the Energy Center of Wisconsin.

Jeannette LeBoyer (Environment & Resources) - Jeannette has recently joined Affiliated Engineers.

Megan Sharrow (Engineering Physics) - Megan now works for Dominion Energy.

Ben Jones (La Follette School of Public Affairs) - Ben accepted a position with KEMA.

Amanda Corrigan (Mechanical Engineering) - Amanda accepted a job with Exelon.

Andy Mendyk (Agriculture and Applied Economics) - Andy now works for the Energy Center of Wisconsin.

## FACULTY HIGHLIGHTS

Prof. Paul Wilson (Engineering Physics – EAP Faculty Chair) and his students are using VISION, a piece of software developed at Idaho National Laboratory, to simulate how the nuclear fuel cycle will develop over the next 100 years. In particular, they are interested in how current nuclear waste policy might affect the amount and cost of space in the proposed Yucca Mountain long-term storage facility. Using a calculation they applied to the VISION code, Wilson and his students can follow spent fuel (and other material) through the fuel cycle and quickly determine, based on heat load, how much space it will need in the repository. In addition, given the current waste fee and amount of stored waste, they can study the economics of different fuel cycle choices based on the value of available space in Yucca Mountain. “Right now, we’ve got the capability to take whatever pricing scheme you want to use and see what it does to the economics of the nuclear fuel cycle,” says Wilson. The group’s research may help inform an upcoming decision by the U.S. Secretary of Energy about whether to propose a second nuclear waste repository and where to site it..”

On March 5, 2009, Prof. Mike Corradini (Engineering Physics, former Chair of EAP) testified before the US Senate Committee on Energy and Natural Resources, on the topic of “FUTURE NUCLEAR ENERGY RESEARCH & DEVELOPMENT”. Download the text of his testimony at: <http://energy.senate.gov/public/files/CorradiniTestimony030509.pdf>

Professors Wilson, Holloway, Lesieutre, and Nemet were awarded funding from the World Affairs and the Global Economy (WAGE) Program, to establish an initiative on Governing Global Energy. The three-year project will advance understanding on international governance issues associated with energy production, distribution, and use. Specifically, the project will identify case studies relevant to the new competition between energy, food and water, impacts of global environmental agreements on energy policy development, and security concerns driven by inequities in energy resource and technology distribution. To date, the group has engaged a wide community of UW- Madison researchers interested in energy issues to meet on a biweekly basis to build our cross-disciplinary knowledge of these complex issues.

Prof. Doug Reinemann (BSE, former Chair of EAP) is working on “The Green Cheese Project - Energy Intensity and Environmental Impact of Integrated Dairy/Bio-Energy”. “We are developing a decision aid for dairy farmers, dairy processors and policy makers, to quantify the energy intensity and environmental impacts of integrating dairy and bio-fuels production systems as well as the implications of implementing selected new technologies and management practices on the energy, green-house-gas (GHG) and nutrient balance of individual farms and aggregated for the state of Wisconsin. Dairy production is the backbone of Wisconsin's rural economy. The development of renewable energy sources, particularly bio-fuels and other bio-feedstock for energy production will need to be incorporated into the dairy production infrastructure of the state so that it is both economically viable and practical.”

Prof. Reinemann is also involved in a GLBRC project modeling bio-energy production systems and opportunities for process efficiency by integration of biofuels production with agricultural and forest products production systems as well as energy supply and distribution infrastructures. Paul Meier (EAP/LR 2002, UW Energy Institute) is the UW Liaison to the GLBRC for this activity.

Prof. Reinemann is also collaborating with Prof. Pat Walsh (BSE) and Prof. Sandy Klein (ME, Solar Lab) [as well as other scientists] on a NCRS Conservation Innovation Grant to develop a comprehensive farm energy self-assessment tool and provide an on-line resource center, Energy.A.Syst, so agricultural producers can conduct customized energy analyses. The development of self-assessment tools will allow producers to conduct energy analyses of their current farming practices and production facilities with emphasis on electrical energy, natural gas, propane, and fossil fuel consumption.

Professors Holloway and Nemet have launched the Climate Leadership Challenge (CLC), a major initiative of the Center for Sustainability and the Global Environment (SAGE), where both faculty are based within the Nelson Institute. The CLC is a new, campus-wide competition modeled on the “X-Prize” to spur innovation on high-impact climate mitigation and adaptation strategies. The CLC engages the entire student body - undergraduates, graduate students, and continuing students from every department and college - to design innovative solutions to climate change, by competing to win \$50,000 in prize money.

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## E SEMINAR

### “FEED-IN TARIFF POLICIES”

As part of the EAP certificate requirements, all EAP students participate in a Capstone Project. The Capstone project must go beyond the format of a traditional academic report. There must be a “real-life” project culminating in a deliverable product presented to a client.

There are 5 students enrolled in the Spring 2009 Capstone:

Thais Fonseca (BSE)  
Seth Novak (Pub Aff)  
Sean Stalpes (Pub Aff)  
Phil Kolmeyer (ECE)  
Tae Wook Ahn (NEEP)

The 2009 Capstone team has chosen a project related to generation cost-based advanced renewable tariff (ART) structures. They are presenting their report to a group of client-stakeholders, including the Wisconsin Public Service Commission, Wisconsin Department of Agriculture, Citizen’s Utility Board (Charley

Higley, (EAP/URPL 1993), the Wisconsin Legislative Council and the Wisconsin Public Utility Institute.

The project proposal points out that “tariffs priced from avoided cost have not proven to drive renewable development or create the intended economic and environmental benefits. Generation cost-based ART structures have a track record of developing renewable capacity, creating jobs, and cutting carbon emissions. Evidence suggests that ARTs can be useful complements to existing Renewable Portfolio Standard policies.”

The Capstone group has been collecting data on current and potential capacity and generation in Wisconsin, and reviewing comments from the PSC Docket 5-EI-148 to understand stakeholder concerns.

“Our overall research goal is to quantify and assess how a

range of tariff structures will impact the costs and benefits of biogas digesters, solid biomass, small wind, and photovoltaics to the people of Wisconsin. We will simulate the financial and environmental outcomes of photovoltaic and wind systems with RETScreen software modeling and of biomass and biogas systems by analyzing existing case studies. We will extrapolate from these to build a policy assessment model under multiple ART scenarios. For example, how much solar electric capacity will result from various fixed buyback rates? What will be the impact on utility rates? What are the carbon savings?”

“We will also address: Who pays and why? What are the impacts of tariff costs being borne by utility ratepayers compared with taxpayers overall?”

The Capstone project team will present their results at two seminars:

### Student Presentation

Wednesday May 6

4:30 PM

Room 140

Science Hall

EAP Alumni

Welcome

Wednesday May 6, 4:30–6:00 an open seminar for EAP students, faculty and alumni in room 140 Science Hall.

Friday June 5, as part of a seminar series hosted by the Wisconsin Public Utilities Institute: “Meeting Baseload in a Carbon Constrained World, Part II— Renewables and Baseload”. This event will be in the Tong Auditorium, in the engineering research building on the UW Campus.

## Alumni Notes

Matt Johnston (EAP/LR 2006) has become a major contributor to international dialog on sustainable biofuels production. His M.S. thesis work on the potential of developing countries to expand biodiesel refining capacity earned praise as one of the Best Papers of 2007 in the prestigious journal *Environmental Science & Technology* (ES&T); he served as co-lead author in 2008 evaluating the net carbon impacts of using tropical lands to grow biofuels, a study cited as one of the Best Papers of 2008 in the journal *Environmental Research Letters* (ERL); and he recently led a study examining global

patterns in biofuel crop yields – published in January 2009 in ERL, and already

one of the most-downloaded papers of the journal. Matt interned earlier this year with the Bioenergy and Food Security Programme of the United Nations Food and Agricultural Organization (UN FAO) in Rome, and has been active in a range of global and national bioenergy analysis projects. Matt is on track to earn his Ph.D. in Environment & Resources in Fall 2009, working with advisor Tracey Holloway.

Scott Spak (EAP/AOS 1997) completed his Ph.D. in Atmospheric and Oceanic Sciences in January 2009, and is now a post-doctoral

researcher at the Center for Global and Regional Environmental Research (CGRER) at the University of Iowa. Scott’s thesis research, supported by the Bunn Fellowship and the U.S. EPA, focused on the impact of energy use and climate on air quality, especially changes in transportation behavior and technology over the next 50 years. While at UW-Madison, Scott served as EAP student representative, and advanced a range of initiatives to connect research and teaching on energy and environment. One of his most significant projects was serving as a climate scientist in support of the “Paradise Lost?” art exhibit, an innovative art project in which Wisconsin artists, scientists and educators met to learn about

climate change and the potential role of art in increasing public awareness of science. Scott’s Ph.D. was advised by Tracey Holloway, working at SAGE.

Please share your professional and/or personal highlights with fellow EAP alumni. Send in a paragraph (like those in this section) to the editor of the newsletter:

Dr. Richard Shaten  
rjshaten@wisc.edu

## JOB Announcements

AP alumni are invited to submit job postings.

Contact the newsletter editor: [rjshaten@wisc.edu](mailto:rjshaten@wisc.edu)

For most current listings go to [www.nelson.wisc.edu/grad/eap/jobs.doc](http://www.nelson.wisc.edu/grad/eap/jobs.doc)

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Send relevant information:

Professional Updates  
Job Announcements  
Meetings/Activities  
Info about missing alumni to:

Dr. Richard Shaten (EAP 1996)  
Newsletter Editor  
Academic Coordinator EAP  
[rjshaten@wisc.edu](mailto:rjshaten@wisc.edu)  
608-265-0521

Do you have an email address for any of these "missing" EAP alumni? Please reconnect them via the newsletter:

Alan North  
Audrey O'Brien  
Brian Haltinner  
Brian Lavoie  
Brian Majestic  
Carsten Croff  
Charlene Drumm  
Christopher Hansen  
David Behler  
David Charvat  
Dedy Priatna  
Diane Hennessey  
Douglas Mitchell  
Flora Flygt  
Francis Johnson  
Nancy Rendall  
Nathanael Greene  
Patricia Blankenberger  
Patricia Monahan  
Paul Oblander  
Peter Jung  
Sanya Carleyolsen  
Shannon Fenner  
Greg Dalhoff  
Greg Schlegel  
Helge Kluckow

Position Announcement: Energy Analyst (Full or Part time)

Clearspring Energy Advisors is seeking an Energy Analyst to join our growing consulting business. The ideal candidate will have basic/working knowledge of economics, statistics, econometric modeling, market research, energy analysis and policy, or related fields. Excellent quantitative and writing skills are required along with experience using Microsoft Excel and Word. Knowledge of the utility industry and energy-related topics is preferred. Experience using Microsoft PowerPoint, EViews, and SPSS are helpful.

Send a resume and cover letter to: [info@clearspringenergy.com](mailto:info@clearspringenergy.com) with a subject line of "Energy Analyst Position". NO PHONE CALLS OR DROP-INS PLEASE. For candidates seeking a part-time or internship position, please also include the number of hours per week you are requesting during the school year and summer.

## ACTIVITIES CALENDAR

Daniel Chiefetz, CEO of Indie Energy, will discuss Urban Geothermal projects.  
Thursday April 9, Noon, 202 Bradley Memorial Building, UW Campus

Iman Santoso  
Jeanine Knapp  
Jeffrey Kjos  
Jenny Brinker  
John Jenkins  
Jordan Hantman  
Joshua Dukelow  
Julie Simon  
Jun Wang  
Justin Storch  
Kathleen Standen  
Keith Kempiski  
Kimberly Herb  
Lane Jorgensen  
Michael Schofield  
Steven Rosenblum  
Susan Mudd  
Susan Runge  
Susan Stein  
Terry Johansen  
Timothy Diehl  
Aashish Mehta  
Abdul Irwanto  
Ali Jailli

AESP Chapter Planning Meeting. First Monday of each month, 5:30 PM  
Madison Peak Oil Group. First Thursday of each month.

2009 Nelson Institute Earth Day Conference.  
Wednesday April 26, all-day. Monona Terrace Convention Center.

2009 EAP Capstone Student Presentation.  
Wednesday May 6. 4:30–6:00. Room 140 Science Hall  
Friday June 5. Tong Auditorium.

Jeff Riggert (EAP/LR 1997) continues the tradition started by Nelson Institute grads Rob Morreau and Linda Baynam, (EAP/LR 1997), with the 13<sup>th</sup> Annual Crawfish Boil. The party starts at 4:30 p.m., Saturday, May 30<sup>th</sup> with the first of 4 batches of LIVE, premium, large, LOUISSIANA CRAWFISH. 160 pounds of LIVE CAJUN CRAWFISH boiled with 300 pounds of corn-on-the-cob, fresh mushrooms, onions, potatoes, garlic, lemons and the best French Cajun crab-boil spice. Wash it all down with a variety of home brew beers! LIVE BANDS: Pagee Go Gos and Cousteau & the Cosmonauts - start around 7:00 p.m. You can provide a donation to keep the party alive for another year! Call Jeff with questions, or for directions, at: 608-240-9511

2009 Midwest Renewable Energy Association  
Renewable Energy Fair . June 19–21. Custer, Wisconsin

EAP alumni are invited to submit events to be listed in the Alumni Newsletter Activities Calendar.

Newsletter editor: [rjshaten@wisc.edu](mailto:rjshaten@wisc.edu)