

### April Section Meeting: New Paradigms in Energy Sustainability

In a continuation of our theme of energy issues, April's meeting will discuss the United States energy sustainability. The U.S. currently depends on foreign imports to supply two-thirds of its demand of almost 24 million barrels of crude oil daily (bpd). By 2030, domestic consumption will approach 30 million bpd while domestic production of conventional crude will drop to around 4 million bpd. While energy is considered a fundamental denominator of peace and prosperity, carbon and water management has now been accepted as being important to population and environmental sustainability. It is therefore imperative that the U.S. develop alternative sources of energy to ensure continued security and environmental assurance. New paradigms are necessary to understand how energy resources can be used to achieve these objectives, both in the near and long term.

April's presentation will discuss greenhouse gas emissions associated with coal and biomass gasification and conversion to synthetic fuels in comparison with traditional crude oil production, conversion, and use as transportation fuels. Concepts for integrating wind power and nuclear power with coal-to-liquids plants will be discussed with respect to efficiency and emissions improvements. Finally, a comparison of benefits associated with implementing a new generation of hybrid electric/internal combustion vehicles will be presented with respect to renewable energy and coal-derived fuels and hybrid plants.

*(continued on page 2)*

### April Section Meeting

- Topic:** New Paradigms in Energy Sustainability
- Speaker:** Richard Boardman, Ph.D., Energy Security Initiative Lead, Idaho National Laboratory
- Date:** Tuesday, April 15<sup>th</sup>
- Time:** 6:00 – 7:15 Social Time & Dinner  
7:15 – 8:15 Presentation
- Location:** Rendezvous Room, Washakie Center, University of Wyoming Campus, Laramie, WY
- Menu:** Dinner is provided by the Washakie Hall catering service; choices include Mongolian Grill, Jambalaya, grilled beef or chicken, pasta, salad, and desserts.
- Cost:** Members: \$20  
(w/RSVP)\* Non-Members: \$25  
Students & Unemployed: \$10

No RSVP is required for this meeting! However, if you wish to carpool to Laramie from the Denver area, please contact Craig Turchi by phone at 303-874-8285 or email at [rockyaiche@yahoo.com](mailto:rockyaiche@yahoo.com). Please note if you are willing to drive or wish to ride. **See next page for carpool instructions.**

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Dr. Richard Boardman is the Team Lead of coal-to-liquids R&D within the Idaho National Laboratory (INL) and the INL Energy Security Initiative lead for establishing capabilities and resources to support clean, reliable, efficient, and secure energy. The INL coal-to-liquids research team is developing models to support process design and optimization with respect to co-generation of products while reducing greenhouse gas emissions and water use.

Dr. Boardman has a degree in chemical engineering with an emphasis in energy and environment applications. He was formerly a research assistant for the Advanced Combustion Research Engineering Center at Brigham Young University where he modeled formation and control of pollutants during coal combustion and gasification.

Dr. Boardman joined the INL in 1990 to help develop thermal treatment and off-gas cleanup operations for radioactive wastes. Since 2000, Dr. Boardman has been engaged in clean coal and biomass gasification research, including development of modular-based gasification and syngas process simulation tools and pilot plant design and testing.

## NEW MEXICO CORNER

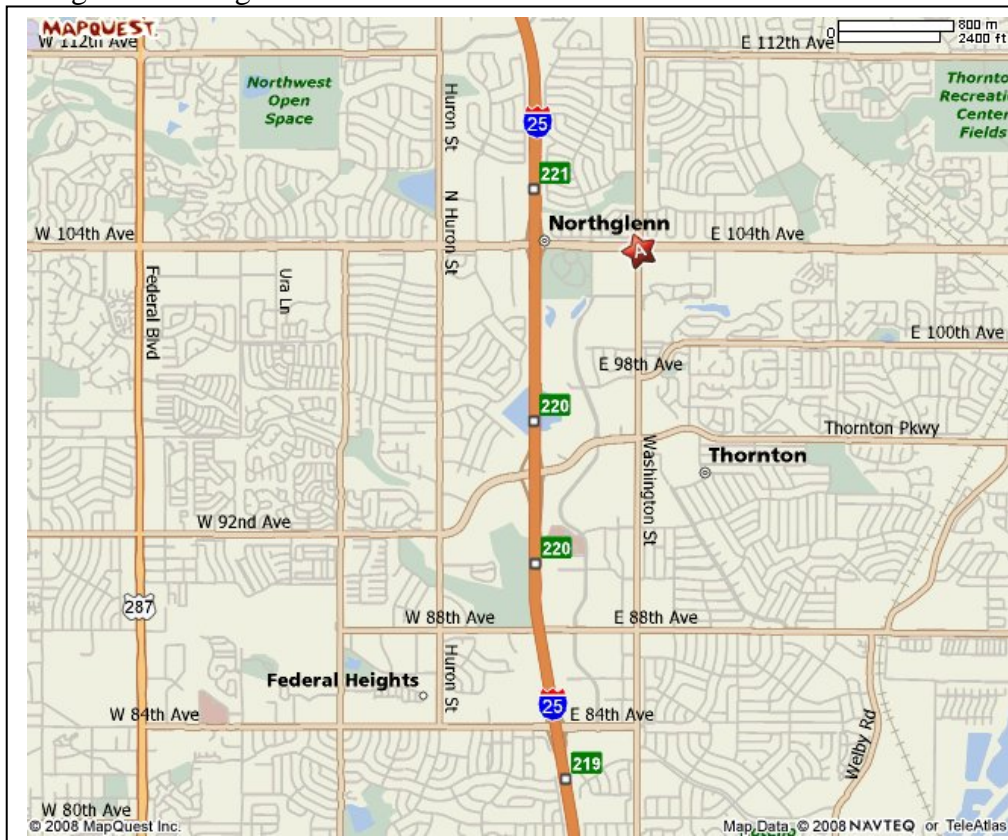
*If you'd like to volunteer to speak at a future meeting or if you have any meeting/activity ideas, please let me know! Participation in the Albuquerque area has increased over the last year and I'd like to keep this trend going! Again, a warm "Thank You" to all of the AIChE-NM members for making our little subsection a great one! See you soon!*

*Kerrie Greenfelder, New Mexico Liaison  
[GreenfelderKL@cdm.com](mailto:GreenfelderKL@cdm.com)*

## CARPOOL TO APRIL MEETING IN WYOMING

Denver carpoolers will meet at the 104th & Washington Park-n-Ride, north of downtown at 4:00 pm.

Directions: From 104th Ave & I-25 continue East on 104th Ave. Past Grant Street on your right-hand side is the Appliance Factory Outlet parking lot that serves as the Park-n-Ride. This is a smaller Park-n-Ride so we should be able to find one another.



## *AIChE Meetings*

### **2008**

- June 22-25      2008 Process  
Development  
Symposium  
Hancock, MA
- July 22-24      SBE's 4<sup>th</sup> Int'l  
Conference on  
Bioengineering and  
Nanotechnology  
Dublin, Ireland
- Sept 7-11        2008 Ammonia  
Symposium  
San Antonio, TX
- Nov 16-21       AIChE Annual Mtg.  
Philadelphia, PA

For further information, contact  
National AIChE.

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The objectives of AIChE are to advance chemical engineering in theory and practice, to maintain a high professional standard among its members, and to serve society, particularly where chemical, engineering can contribute to the public interest.

## **Rocky Mountain AIChE News Publication Schedule**

### May 2008 issue

Articles due Wednesday, May 7<sup>th</sup>  
Publish on Friday, May 9<sup>th</sup>  
Meeting on Tuesday, May 20<sup>th</sup>

## **MEETING SCHEDULE**

*The Rocky Mountain District of AIChE generally meets the third Tuesday of every month, September through November and January through May.*

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[mмоes@ekiconsult.com](mailto:mмоes@ekiconsult.com) to receive  
this newsletter electronically!

## CAMPUS PARKING

Holders of "D" and "TD" permits may park in any "A," "C," "R," or "Accessible" parking space.



**Directions:** Starting at I-25 and 104th Avenue. North on I-25, crossing into Wyoming, 86.8 miles. Merge onto I-80 W via Exit 8B toward Laramie, 42.8 miles. Merge onto I-80 BL/US-30 W/E Grand Ave via Exit 316, 3.3 miles. Continue on Grand Avenue to 16th Street. Washakie Hall is on the north side of Grand Ave at 16th Street. No permits required for parking after 5pm.

Estimated Time: 1 hour, 54 minutes: Estimated Distance: 134 miles