

## SPRING 2013 CLEAN ENERGY

Energy Exchange is a seminar series hosted by the EMS Energy Institute as part of its outreach mission. The seminars focus on highly relevant energy topics especially in the area of fossil fuels. Energy topics discussed include new innovations in carbon dioxide utilization, clean coal, petroleum and natural gas, fuel cells, and more. Speakers include Penn State faculty as well as government and industry professionals.

The seminars are held every other Wednesday in C213 Coal Utilization Laboratory from 10 am to 11 am. Please join us a half hour before the lecture for refreshments. Seminars are open to everyone.

For more information about individual presentations and speakers, visit our website, [www.energy.psu.edu/energyoutreach/energyXchange](http://www.energy.psu.edu/energyoutreach/energyXchange).

### Organizing Committee

David Johnson  
*Research Assistant, EMS Energy Institute*

Shea Winton  
*Communications Specialist, EMS Energy Institute*

Daniel Ciolkosz  
*Senior Extension Associate, College of Agriculture*

James Freihaut  
*Professor, College of Engineering*

Bruce Miller  
*Associate Director, EMS Energy Institute*

Chunshan Song  
*Director, EMS Energy Institute*

This seminar series is co-sponsored by:

Wednesdays 10 - 11 am • Refreshments 9:30 - 10:00 am  
C213 Coal Utilization Laboratory • EMS Energy Institute

- January 16 James Freihaut**  
*Director, DOE Mid-Atlantic Clean Energy Application Center*  
Combined Heat and Power: Will Shale Gas and "Sandy" Lead to Exponential Growth in Application
- January 30 Rescheduled**  
*Siemens Energy, Inc.*
- February 13 Zuleima Karpyn**  
*Associate Professor, Petroleum and Natural Gas Engineering*  
Geo-sequestration of Carbon Dioxide in Saline Aquifers: Experiments on Capillary Trapping
- February 27 John R. Hellmann**  
*Associate Dean, Graduate Education and Research, College of Earth and Mineral Sciences*  
Development of Proppants for Hydrofracturing in Oil and Natural Gas Bearing Shales
- March 13 Bruce Rising**  
*Strategic Business Manager, Siemens Power Systems Sales*  
Technology Adaptation In Power Generation—  
The Evolution of the Gas Turbine
- March 27 Hamid Sarv**  
*Assistant Director, Babcock & Wilcox Research Center*  
Development of Commercial-Scale Clean Energy Technologies through Research
- April 10 Robert Romanosky**  
*Deputy Director, DOE/NETL Office of Coal and Power R&D*  
Fossil Energy Research and Development for Clean Power Production

