



CES Newsletter

Fall 2008



www.enrg.lsu.edu

Louisiana State University

Energy, Coast and Environment Building

Baton Rouge, Louisiana 70803

Phone: 225-578-4400

Fax: 225-578-4541

E-mail: ces@lsu.edu

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Energy Summit 2008 Addresses Energy Independence

Can the U.S. achieve energy independence? What technological advances have been made toward that effort and how effective are they? How does the current economy affect the development of those technologies? The program for last fall's Energy Summit, "Energy Independence: Myth or Reality," attempted to address these questions and more.



Robert Bryce, freelance journalist and author, debunks "myths" of energy independence at the 2008 Energy Summit.

The conference opened with Robert Bryce, freelance journalist and author of the book *Gusher of Lies*, which challenges the concept of energy independence. In his provocative analysis of efforts to reduce oil imports, Bryce argued that ethanol could not significantly cut oil imports because it replaces only one product from a barrel of crude: gasoline. Ethanol cannot reduce demand for other products, such as middle distillates, like jet fuel and diesel. Demand for crude will not decline, Bryce said, until products are developed that can replace all products from a barrel of oil.

Richard Smead of Navigant Consulting Inc. provided an outlook for natural gas production. Smead showed that, as of June 2008, onshore natural gas production had reached pre-Katrina values for the lower 48 states. He cited the nation's major gas plays—Barnett, Fayetteville, Haynesville, Marcellus, and Woodford—stating that U.S. natural gas reserves amount to 2,247 tcf., enough to last more than 100 years.



Don LaVada of NYSERDA (left) and Mike Roberts of Gas Technology Institute spoke at Energy Summit 2008.

Following the morning break was Kim Harb, director of policy and government affairs at the National Ocean Industries Association (NOIA), who provided an update of legislative and regulatory issues affecting the offshore industry. NOIA represents more than 300

companies, including offshore drillers, producers, supply vessels, air transport, geophysical survey, shipyards, offshore construction, and more.

Pavel Molchanov, an equity research analyst for Raymond James & Associates, gave a thorough presentation on the global credit crisis and its effects on U.S. and global energy demand, capital spending, and alternative energy. He said capital spending would fall, reducing drilling budgets, new rig construction, and infrastructure development. Demand will also fall but will be offset by reduced supply caused by constrained capital spending, a function of tighter credit. Alternative energy development overall should withstand the crisis, but ethanol will be hit with both credit concerns and high corn prices. In the long run, Molchanov predicts "a structural imbalance between constrained energy supply and rising energy demand."

For the afternoon State Initiatives Roundtable, Don LaVada, director of external operations for the New York State Energy Research and Development Authority (NYSERDA) and Bill McNulty, an adviser with the Florida Public Service Commission, discussed their respective states' energy initiatives, including efforts to reduce consumption of electricity, natural gas and oil; the development of alternative energy programs; and reduction in air pollution, specifically CO2 from automobiles. LaVada stressed that NYSERDA's successful initiatives result from a focus on energy efficiency, load management, demand response, combined heat and power, and renewable energy. McNulty discussed Florida's nuclear power expansion projects. He reviewed cost recovery laws and bill impacts, plant siting, and the key issues impacting customer rates and bills.

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Coal-to-liquids technology was the topic of Anderson Global Innovation Group, Inc. president & CEO William C. "Bill" Anderson's presentation. Anderson argued that a transition to nuclear power electricity generation would free up U.S. coal supplies and allow for development of clean coal technologies for transportation fuel. In arguing the case for coal, Anderson cites known global coal reserves, the security advantages of lessening U.S. dependence on foreign oil, and the continuing demand for fossil fuel.

Mike Roberts, manager in gasification and gas processing at the Gas Technology Institute (GTI), discussed gasification technology, including processes already in use, feedstock options, and the outlook for the technology. Currently, GTI is involved in gasification projects worldwide using a variety of feedstocks, including biomass, coal, and wood.

Nitrogen gas injection for enhanced oil recovery was the topic of the day's final presentation by PraxAir, Inc.'s Doug Walker, who showed that the proven hydrocarbon recovery method is cost effective and practical, as nitrogen plants can be built almost anywhere. Praxair, a Fortune 500 company with operations in more than 40 countries, has 30 years of experience with gas displacement recovery using nitrogen, CO₂, and methane.

Energy Summit 2008 drew a large crowd of energy stakeholders, including petrochemical and refining industry representatives; state regulators; energy industry representatives; various state and federal agencies, and media representatives. Feedback on the conference was overwhelmingly positive.

Announcing

Alternative Energy 2009: Sustainable Development in a Challenging Economy

April 22, 2009

LSU Center for Energy Studies
Energy, Coast & Environment Building

Topics:

- *Current Financial Challenges to Renewable Energy Development*
 - *University Sustainability Programs*
 - *Offshore Wind, Wave, and Tidal* • *Biomass Cofiring*

Look for more information soon at www.enrg.lsu.edu/conferences

Center Plays Host to USAEE/IAEE North American Conference

The Center for Energy Studies served as a host to the 28th Annual North American Conference of the U.S. Association for Energy Economics (USAEE) and International Association for Energy Economics (IAEE), held in New Orleans December 3-6. As USAEE president, Wumi Iledare served as moderator for several sessions during the four-day event and provided presentations on "The Economics of Offshore Petroleum Lease Development and Energy Security and Geopolitics." David Dismukes served as a co-chair and primary coordinator for the conference and was recognized for his expertise in Gulf Coast energy production and expansion.

CES intern Christopher Peters gave a presentation during the opening concurrent session on oil and gas resource development. His analysis demonstrated the difference in well drilling levels between states once major economic variables were controlled. The results showed that although dramatic increases in cost have had significant downward pressure on well drilling in Louisiana between 1987 and 2002, Louisiana still remained one of the most attractive states in which to drill, holding all other factors constant during that time period.

Jordan Gilmore, CES research associate, co-hosted a tour of the post-Katrina sustainable development projects in the New Orleans 9th Ward. He extends his appreciation to Paula Ridgeway, Buddy Justice, and Diana Brown at the Louisiana Department of Natural Resources, in addition to Charles Allen, president of the Holy Cross Neighborhood Association, for coordinating a seamless operation.

Dismukes Testifies before Senate Republican Conference

David Dismukes testified at the September 18, 2008, Senate Republican Conference hearing on offshore oil and gas drilling. Dismukes discussed the potential opportunities and challenges associated with opening restricted areas of the Outer Continental Shelf (OCS).

As of September, the offshore federal OCS was producing about 27 percent of total oil production, and 14 percent of all U.S. natural production, with most of that production coming from the Gulf of Mexico region. Dismukes described promising projects within the federal OCS, particularly in the deepwater areas of the Gulf, but warned that without expanded access, the federal OCS would likely decline in terms of the contribution it makes to overall U.S. energy supplies.

"Such decline will cause a greater reliance on imported sources of energy without corresponding increases in unconventional resources here at home," he said. "The areas of the federal OCS that are currently restricted to drilling could provide substantial and very meaningful contributions to overall resource levels."

Dismukes identified three challenges to opening restricted areas: recognizing the significant capital investments and risks; understanding the need for a long-run view in examining the necessity and timing for opening these restricted areas; and the need for policy and regulatory consistency in establishing rules for operating in these restricted areas once they become available.

The forum, presided over by Sen. Jeff Sessions, R-Alabama, was held to question experts on steps the United States should take to increase production of oil and gas, reduce oil imports, and stabilize consumer prices. Other panelists included Don Briggs, president of Louisiana Oil & Gas Association, and Doug Morris, group director for upstream and industry operations with the American Petroleum Institute.

SPE Awards Iledare

The Society of Petroleum Engineers (SPE) has honored Wumi Iledare with SPE Regional Technical Award for Management and Information (Africa). The SPE award acknowledges the contributions of Iledare to the Society of Petroleum Engineers at the regional level and recognizes the devotion of his time and effort to the development of technical expertise in the management and information discipline, especially in Africa.

Over the past ten years, Iledare has volunteered his time to advance technical proficiency of graduate students in petroleum economics by serving as a visiting professor of petroleum economics to tertiary institutions in Africa, including the Institute of Petroleum Studies, African University of Science and Technology, and the University of Ibadan. He has presented and published several research papers on petroleum economics in conference proceedings of the SPE Nigeria Annual International Conferences and Exhibitions in Abuja, Nigeria, and also the SPE Annual Technical Conferences in the U.S. He has served as a facilitator for workshops on oil and gas economics and policy in Nigeria, and taught short courses at SPE conferences organized by the SPE Nigeria Council to advance technical competency of professional engineers in the management and information discipline of SPE.

Greenhouse Gases Inventory Kicks-Off with Project Advisory Team Meeting

CES professional-in-residence Mike McDaniel presented an overview of the Louisiana Economic Development (LED)-supported greenhouse gases (GHG) inventory project to members of the Project Advisory Team (PAT). The PAT includes representatives from broad stakeholder groups such as electric utilities, conservation/NGOs, oil and gas industry, chemical manufacturing, business and commerce, agriculture and forestry, and affected state agencies such as the Louisiana Department of Natural Resources, the Louisiana Department of Environmental Quality, and LED. PAT members will offer technical and



In September, David Dismukes traveled to Washington, D.C., to advise Senate Republicans on potential deepwater OCS oil production.



The Society of Petroleum Engineers has recognized Wumi Iledare for his dedication to the technical competency of students in petroleum economics.

outreach assistance for the GHG inventory project as it progresses toward the completion date, which is set for June 2009.

This GHG inventory will be the second completed by CES and is intended to be a comprehensive state-wide inventory of sources and sinks of greenhouse gases. The project has been designed to help assess potential impacts of expected federal GHG emissions regulations on the state of Louisiana and to help strategically position the state to accommodate challenges and opportunities brought by the federal regulations. The overarching purpose of the LED GHG Inventory Project is to assure that Louisiana's economic competitiveness is not compromised by possible federal regulation of greenhouse gases and that any associated economic development opportunities are recognized.

The planned Scope of Work for the project reaches beyond the development of a comprehensive state-wide GHG Inventory to include

- review and evaluation of activities undertaken by other states to accommodate possible greenhouse gas regulation and/or climate change concerns;
- high-level assessment of the impacts of the most likely federal GHG regulatory schemes on Louisiana's economy;
- development of recommendations for potential state and industry strategies.

Methods used will be derived primarily from U.S. Environmental Protection Agency (EPA) guidance documents.

The principle investigators for the project are Mike McDaniel and David Dismukes. Additional CES staff involved in the project includes Elizabeth Dieterich, Kathryn Perry, and Lauren Stuart. A copy of the PAT presentation, including a list of Project Advisory Team members, can be found on the CES Web site. References and important documents related to the LED GHG Inventory Project will also be posted online.

Bossier-Haynesville Shale Potential Assessed

The Bossier-Haynesville gas shale play in northwestern Louisiana and northeast Texas is one of the more economically attractive plays in the country. Although much information about how to best use these naturally fractured shale reservoirs is proprietary, there is data available from a five-year (2003-2008) DOE project focused on basin analysis and petroleum systems characterization of northern Louisiana and Mississippi salt basins.

Principal investigators Don Goddard of CES and Ernie Mancini from the University of Alabama, along with others, looked at geological and geochemical aspects of the Upper Jurassic Cotton Valley-Bossier and Haynesville complex in core samples in the North Louisiana Salt Basin to assess the thermal maturity and the hydrocarbon-generating potential of the shales.

The results from this work have been presented in PTTC workshops, geological society meetings, and professional seminars and published in the literature listed below:

2008. Mesozoic (Upper Jurassic–Lower Cretaceous) deep gas reservoir play, central and eastern Gulf coastal plain: AAPG Bulletin, v. 92, no. 3, p. 283–308.

2006. Characterization of Jurassic and Cretaceous facies and petroleum reservoirs in the interior salt basins, central and eastern Gulf Coastal Plain, East Texas Geological Society Symposium Volume, p. 11-1 to 11-27.

2005. Petroleum source rocks of the onshore interior salt basins, north central and northeastern: GCAGS Trans., v. 55, p. 486-504.

To view a presentation on the Bossier-Haynesville Shale, visit www.enrg.lsu.edu/presentations

CES Hosts Ridesharing Software Demonstration

CES Professional-in-Residence Mike McDaniel and research associate Lauren Stuart hosted a demonstration of the ridesharing management software GreenRide October 27. The goal of the demonstration was to introduce the system to LSU, city, and state organizations to begin assessing its feasibility for the region. In attendance were staff from the Louisiana Department of Environmental Quality, the Capital Region Planning Commission, Louisiana Department of Transportation and Development, the Baton Rouge Area Chamber, LSU Facility Development, and *The Advocate*.

The Web- and geographic-information-system-based tool allows organizations and municipalities to manage ride-matching and trip-planning programs in an effort to reduce traffic congestion, fuel costs, and transportation-related emissions. The program tracks usage as well as emissions reduction.

"The system could help commuters find alternatives to driving and offer our region assistance in addressing the overlapping concerns of traffic congestion and air quality," said Stuart. "Based on the demo, the program appears easy to use and valuable to both participants and administrators."

The Center will continue to assess the feasibility and possible funding opportunities for the program.

Energy Leadership Speaker Series Features John, Richard

The Center hosted two seminars in the fall as part of its Energy Leadership Speaker Series (ELSS). In September, Chris John, president and CEO of the Louisiana Mid-Continent Oil & Gas Association (LMOGA), discussed current issues facing the oil & gas industry, including the development of alternative sources of energy as a means of reducing U.S. dependence on foreign oil.

In December, LSU alumnus Oliver G. "Rick" Richard, chairman of CleanFUEL USA, discussed the need for incentives for the development of alternative energy and conservation. CleanFUEL USA delivers ethanol throughout the Gulf region and manufactures clean-burning propane engines for buses and trucks.

The ELSS invites current and former energy industry leaders to share their experiences and knowledge of the industry with the LSU community and the general public. In particular, the forum provides a unique opportunity for students interested in energy-related careers or research to interact with industry representatives, including executives, policymakers, and regulators.



Mike McDaniel discusses the benefits of the GreenRide ridesharing tool during the October 27 demonstration of the software.



CleanFUEL USA chairman Rick Richard discussed alternative energy and conservation at the December ELSS.

Spring ELSS to feature LSU Alum Hébert

LSU alumnus Quinn Hébert, chairman of Cal Dive International, Inc., will be the guest speaker for the Energy Leadership Speaker Series (ELSS), hosted by the Center for Energy Studies, Tuesday, March 24, at 3 p.m. in the Woods Auditorium of the Energy, Coast & Environment Building.

For more information, visit <http://www.enrg.lsu.edu/elss/>

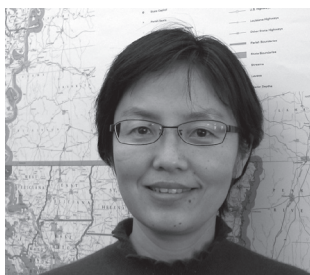
2008 In-House Research Seminars Get Staff Talking

In early 2008, the Center initiated an in-house monthly seminar series on current energy policy research and industry issues.

"The series provides a forum for our researchers to report on their projects and invite input from other researchers," said Wumi Iledare, series coordinator.

The 2008 seminar series included

- "A Review of Unconventional Hydrocarbon Resources," by Mark Kaiser;
- "Underground Hydrocarbon Storage: Issues & Trends," by David Dismukes;
- "Global Petroleum Supply & Pricing: Perspectives on Key Actors and Players," by Wumi Iledare;
- "Tax Incentives for Oil Drilling in Louisiana -- Some Tentative Thoughts," by guest speaker Manfred Dix, staff economist with the La. Department of Natural Resources;
- "Bossier-Haynesville Shale in the North Louisiana Salt Basin: Geological, Geochemical & Reservoir Characterization," by Don Goddard;
- "Transportation Control Measures and Demand Forecasting: LSU Road Closure Case Study," by Lauren Stuart, CES research associate;
- "Legacy Litigation Regulation and Other Determinants of Interstate Drilling Activity Differentials," by Chris Peters, CES student intern.



Professor Hong Hao, who will spend the year performing petroleum fiscal terms analysis, arrived in Louisiana in time for Hurricane Gustav and the December 11 snowfall.

CES Welcomes Visiting Professor

In the fall the Center welcomed visiting professor Hong Hao of China University of Petroleum, Beijing. Professor Hao, whose research interests include valuation on oil and gas assets, is working with Mark Kaiser on an analysis of petroleum fiscal terms.

A native of Beijing, she and her son arrived in the states in early August, just before the opening of the summer Olympics. She will be with CES until August of this year.



*Baton Rouge Geological Society,
Louisiana Geological Survey,
LSU Center for Energy Studies,
Louisiana Oil and Gas Association, and PTTC present*

Louisiana Oil & Gas Symposium

May 19-20, 2009

Dalton Woods Auditorium
Energy, Coast & Environment Building
Louisiana State University
Baton Rouge, Louisiana

Featured topics:
Louisiana shale plays and oil and gas regulation

Potential speakers:

Abstracts due April 1, 2009
Expanded abstracts due April 18, 2009

For more information visit BRGS website <http://www.brgs-la.org>

The Center for Energy Studies conducts, encourages, and facilitates research and analysis to address energy-related problems or issues affecting Louisiana's economy, environment, and citizenry. Whether conducted by its staff or by others it supports, the Center's goal is to provide a balanced, objective, and timely treatment of issues with potentially important consequences for Louisiana.

Visit www.enrg.lsu.edu to read about the latest news and events at the CES.

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Produced by the LSU Center for Energy Studies
Printed by LSU Graphic Services
1/09