

OCTOBER 1998 NEWSLETTER

“ACT TWO’S” NUMBERS EARN ENCORE FROM LOUISIANA LEGISLATURE

By almost any criteria used to judge the incentives created in Act Two of the 1994 Louisiana Legislature, they have been a major “hit.” The incentives were created by changing the State’s severance taxes to encourage the use of new technologies to extend the life of old oil or gas fields and to stimulate the exploration of and production from new ones.

At the request of the 1998 Legislature, CES’ Bob Baumann tracked down each of the wells benefitting from Act Two incentives and compared royalties, taxes, employment, and production attributable to them over the 1994-97 period to the previous 1991-94 period during which there were no such provisions in the State’s tax code.

The results are shown in the following table which compares performance in the two periods for all “Act II Wells” using four output or success measures. The percentage increases,

ranging from 155 percent to 740 percent, speak for themselves.

In addition to the results reported in the Table, Bob found that “Act II Wells” created about 4,000 new jobs which increased the State’s total payroll by about \$170 million. They also produced a *net direct* increase in the State’s tax and royalty take of more than \$20 million, with an associated increase in revenues from taxes on individuals and corporations of about \$20 million to the state, plus another \$16 million to local governments.

It is true, of course, that the incentives were not the only factor affecting the Act II wells. Continually improving technology, higher prices, lower costs and interest rates, as well as a host of other factors also influenced oil and gas investment decisions during the period. Nevertheless, the numbers were impressive enough that the Legislature renewed the incentives almost unanimously, without debate, during its 1998 session.

“Act II Wells” (Re-Entries, Horizontal, Deep, or New Discoveries) during 1994-97 Compared to Activity in Same Categories in the Previous Period (1991-94)

	Yearly Average 1991 to 1994	Yearly Average 1994 to 1997	Percent increase
Wells Attempted	205	522	155
Expenditures (\$ Millions)	32.9	276.2	740
Production (Mil boe)*	6.42	34.13	432
Royalties (\$ Millions)	5.03	24.31	380**

* Millions of Barrels of Oil or Oil Equivalent. **Adjusted for changes in prices.



ECONOMIC AND SOCIAL CONSEQUENCES OF 1997 LAKE BARRE OIL SPILL “MODEST”

Studies of natural disasters such as floods and hurricanes have often found that despite the widespread damage and disruption they inflict, such catastrophes often end up as an “economic plus” to the region inflicted as governmental relief programs and private insurance fuel new construction.

Apparently this sort of silver lining does not hold for oil spills. A CES study of the economic and social consequences of a May 1997 5,000-barrel oil spill in the saltwater Lake Barre concluded that *both* the negative disruptions to the local economy during the spill *and* the positive stimulus provided by the nearly \$10 million spent during the cleanup were quite modest.

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The spill resulted from the rupture of a 16-inch pipeline that brings to shore 170,000 barrels a day. The rupture occurred about six miles from the coast. The pipeline was shut down promptly, but southwestern winds pushed the slick into coastal marshes.

The daily reports on the people and other resources used in the cleanup effort; a detailed breakdown of expenditures by Texaco, the pipeline operator; and interviews with officials from businesses, government, and communities in the area were used to identify economic and social impacts.

Although by historical standards the spill was a significant one, twenty percent of the business, government, and community leaders selected for interviews were unaware a major oil spill had occurred. Thirty percent of the community and governmental leaders who were aware of the spill did not believe it had any impact on their community, and 57 percent of the business owners or operators said the spill had not affected their business.

Twenty-five percent of the civic leaders were afraid the spill could have a longer-run, negative impact on their community, as were 11 percent of the businesses, as a consequence of damage to fishing, shrimping, or oystering.

Analyses of employment at the spill site and Texaco's expenditures suggest reasons for the limited, positive economic and social effects.

- **No new jobs created in the spill region.** The oil spill cleanup industry operates as if it were a cooperative coalition rather than a group of competing firms when dealing with a large spill. Usually a local firm is designated as the lead subcontractor and it contracts at fixed rates with other firms, many of which it has worked with in the past. The report

concluded that this was the only way to get large numbers of trained and experienced workers at the spill fast enough to be effective.

- **Most expenditures outside the area.** More of the total expenditures for labor and cleanup supplies went to firms outside the spill area (broadly defined as Terrebonne, Lafourche, and St. Mary Parishes) than those in the area. The ratio of "outside/inside" was estimated to range between 60/40 to 70/30.

Major factors mitigating the potential negative effects of the spill were:

- **A quick response.** The overnight response to the spill was guided by a fully developed and staffed oil-spill-response plan that enabled fifty percent of the oil spilled to be recovered, and
- **Relative geographical isolation** The spill impacted coastal areas that were not accessible by road and most marine coastal users had alternative locations or routes unaffected by the spill.

The project was undertaken at the request of, and funded by, the Louisiana Applied Oil Spill Research and Development Program (OSRADP) and the U.S. Department of Interior's Minerals Management Service. Allan Pulsipher was the Principal Investigator. Deborah Tootle of the LSU's Department of Sociology and Richard Pincomb of CES were coauthors of the report.

Copies of the report are available from the Center and, shortly, from the Minerals Management Service and the Louisiana Applied Oil Spill Research Program.



CES FELLOWS PROGRAM IS LAUNCHED

In order to recognize faculty and staff at LSU who are working with the Center and to try to involve faculty at other universities or individuals at other organizations in the state, an LSU Center for Energy Studies' Fellows program is being organized.

In addition to recognizing the important role of those who collaborate with the Center, the program will entail regular briefings for Fellows on energy issues and developments and on the Center's plans and projects.

ONLINE ENERGY DATA AVAILABLE

In September 1998 CES' Data and Information Services Division began a program to make energy information available online at <http://www.enrg.lsu.edu>, under **Louisiana Energy Statistics**. The first data series to be made accessible

in this way is the spot market prices for oil and gas as reported in the *Wall Street Journal*.

By using a query page, users can create a report from average, minimum and maximum prices for weekly, monthly, quarterly, or yearly time periods. Additional data series will be added to the Center's Internet site. If there are data series that you would like to see made available online, contact Barbara Kavanaugh at (225)388-4542.

Monthly statistics since 1977 have been collected and updated on approximately 700 variables by the Center to provide current information about trends in Louisiana's economy and energy production and consumption.

Data on electricity use and production in Louisiana is also available at the web site.

ELECTRICITY RESTRUCTURING

Louisiana's Public Service Commission, Legislature, investor-, municipal-, and cooperatively owned electric utilities, industrial, commercial and residential consumers continue to discuss how the "restructuring" of the electricity industry will or should affect the State's economy and consumers. The Center, with David Dismukes serving as the point man, has been trying to inform the ongoing restructuring discussion in several ways.

Over the past two years a series of seven seminars brought together national experts from academia and the industry to discuss specific issues and trends with Louisianans.

Currently, CES' efforts are focused on several research topics that bear directly on restructuring. David Dismukes and Bobby Cope have published a paper in the Proceedings of the International Association for Energy Economics on their model of electric power markets in Louisiana. The paper describes a non-linear programming model for estimating production decisions in an open access regional power market.

The model is unique because it considers multiple control areas and incorporates transmission interconnection capacity and line loss constraints. The Louisiana retail power market was modeled as a case study.

Other related studies are targeted at combined transmission and distribution modeling, measuring transmission cost and performance, and non-utility generation. Specific references are given in the staff activities section.



PTTC WORKSHOPS MULTIPLY

Along with its successful program of software development and dissemination, the Central Gulf Region Petroleum Technology Transfer Council (CGR PTTC)--which Bob Baumann and Keith Long manage through the Center for Energy Studies--continues a full schedule of workshops for Louisiana's oil and gas producers.

In June an enhanced production methods workshop titled *New Technologies in Gas Lift, Rod Design, and Unidraulic Lift Techniques* was held at the Petroleum Club in Lafayette. It is expected that this will be the first of an annual series addressing advances in enhanced production.

In August LSU's Petroleum Engineering Department conducted a "hands-on" workshop on Boast 3, DOE's Black Oil Simulator Software, to evaluate flow parameters in the reservoir at the CGR PTTC Lab in the Petroleum Engineering Department.

The next workshop is scheduled for Shreveport on

October 13, 1998. It is on "Power Cost Reduction Methods in Oil and Gas Operations." The thirty-five-dollar admission fee includes lunch. Contact Keith Long at (225) 388-4538 for more information.



PTTC BASIN RESEARCH INSTITUTE'S WELL LOG LIBRARY UPDATE

This summer the PTTC began to help LSU's Basin Research Institute to revamp its well log library, which will be updated in several stages. The first step, the sorting and removal of duplicate copies from Basin Research Institute's on-site collection of logs, is about fifty percent complete. The second stage, incorporating missing logs from the several thousand logs that have been recently donated and currently in off-site storage, will begin soon. Duplicate copies are available free of charge to any other organization.. The third phase, putting the log library online, is in the developmental stage. Data for 1450 logs from Acadia Parish have been entered into a database that includes the Louisiana serial and API well numbers based on the PARS information system, as well as basic information directly from the log -- well name and number, field, operator or company; location by section, township and range; total depth, log type, and first run date. The fourth stage will be to put other log libraries in the State online. CES Librarian, Versa Stickle, heads this project.



STAFF CHANGES

Robert Cope has completed his dissertation and been awarded a PhD. Bobby has joined the Business Administration faculty at Southeastern Louisiana University in Hammond and continues to participate in the Center's research and activities.

Amy Konopacky, a new graduate student in Environmental Studies from the University of Florida; James Njuguna, a new graduate student in Geography with an interest in economic geography from Kenya; and Qiaozhen (Lucy) Zhu, a PhD student in Economics from China, joined the Center's research staff this fall.

Although all have varied and impressive backgrounds, Lucy Zhu's experience doing the economic forecasting and feasibility studies for China's first shopping mall, in Shanghai, takes the "most unusual" award.



WILLIAM DANIEL GOES TO INDONESIA

Research Associate William Daniel is an invited speaker/participant in the Asia Pacific Economic Cooperation (APEC) Joint Workshop on the Decommissioning of Offshore Oil and Gas Platforms in Jakarta, Indonesia, in late October.

William's travel and living expenses will be covered by the U.S. Agency for International Development—not the Center or Louisiana's taxpayers. William's thesis dealt with decommissioning issues in the Gulf of Mexico. He will speak on the economics of platform disposition and international agreements in Jakarta.



STAFF ACTIVITIES AND PUBLICATIONS

Robert Baumann completed a study of the fiscal issues involved in increased seismic fees on state owned or managed lands. He presented his results and recommendations at a meeting of the "interested parties" that the Center convened at the Lod Cook Alumni Center and, subsequently, testified before the Louisiana House's Natural Resources Committee on his findings and the discussion. Bob also journeyed to Orange Beach, Alabama for the Louisiana Mid-Continent Oil and Gas Association's annual post-session legislative committee meeting.

David Dismukes has three articles in the academic journal pipeline. "Cogeneration and Electric Power Industry Restructuring," co-authored with Andy Klie (who recently left LSU's Economics Department to join the Pennsylvania State University's Department of Mineral and Resource Economics) will be published in *Resource and Energy Economics*; "Capacity and Economies of Scale in Electric Power Transmission," co-authored with **Robert Cope** and **Dmitry Mesyanzhinov** will be published in *Utilities Policy*; and "Modeling Electric Power Markets in a Restructured Environment," co-authored with **Robert Cope** and Dan Rinks, will be in the *Proceedings of the International Association for Energy Economics* in October. David, Bobby and Dmitry co-authored papers presented at the Western Economic Association meeting this past summer and to be presented at the Southern Economic Association meeting in October. David is also directing two grant-funded research projects. One will examine the impacts that electric restructuring will have on energy conservation for the Department of Natural Resources. The second will investigate the economic impact of offshore oil and gas activities on coastal Louisiana for the Minerals Management Service via the joint LSU/MMS Coastal Marine Institute program. David and his collaborators are constructing a regional economic model capable of measuring the impact of offshore oil and gas operations on regional economic activity. **Dmitry Mesyanzhinov** and David Hughes, an associate professor in LSU's Department of Agricultural Economics, will also work on the latter project. Copies of these papers and proposals are available at the Center.

Wumi Iledare presented three papers dealing with measuring the performance and trying to ascertain the prospects for the oil and gas industry. In May he presented a paper at the 21st meeting of the International Association for Energy Economics entitled "The State of Petroleum Resources and Supply: Some International Comparisons." In September he

presented a paper on "Safety and Environmental Performance Measures in Offshore E&P Operations: Empirical Indicators for Benchmarking," at the Society of Petroleum Engineers' annual technical conference. In October he will present "Operational Performance of the U.S. Petroleum Industry: A Comparative Analysis Over Space and Time," at the 19th meeting of the U.S. and International Energy Economists North American Conference. **Allan Pulsipher** was a coauthor on all three papers, **Dmitry Mesyanzhinov** was a coauthor on second and third, and **Richard Pincomb** coauthored the first and third. All three papers are published in the respective *Proceedings* volume for the meeting.

In addition to being the Center's most productive co-author, **Dmitry Mesyanzhinov** is the coordinator of the Center's Greenhouse Gas Inventory for Louisiana and is teaching an Economic Geography class for the Geography Department.

Allan Pulsipher with his co-authors **Richard Pincomb** and Deborah Tootle completed the report on the *Economic and Social Consequences of the Lake Barre Oil Spill*, which will be published by the Minerals Management Service and the Louisiana Applied Oil Spill Research and Development Program. He was an invited participant to a "Year of the Ocean Workshop" organized by the H. John Heinz Center for Science, Economics and the Environment entitled "The Challenge of Sustainable Coasts," held in Charleston, South Carolina. He also gave a presentation on the Lake Barre Oil Spill to the OSRADP annual meeting.

Mike Surman explained the millenium bug, also known as the Y2k problem, to the Statewide conference of the Louisiana Support Staff Association of Libraries at their sixth annual meeting in Lafayette in September.



PRESENTATIONS AND PUBLICATIONS

SEPTEMBER 1997-SEPTEMBER 1998

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Dismukes, David E. (with Andrew N. Kleit). Cogeneration and electric power industry restructuring. *Resource and Energy Economics*, in press.

Dismukes, David E. (with Fred I. Denny). Power systems operations, control, and environmental protection in a restructured electric power industry. In *Powering Up to 2000: Conference Proceedings of IEEE* (Institute for Electrical and Electronic Engineers) 1998 Large Engineering Systems Conference on Power Engineering. Halifax, Nova Scotia, June 7-9, 1998: 294-298.

Dismukes, David E. (with Fred I. Denny). Reliability or profit? Why Entergy quit the Southwest Power Pool. *Public Utilities Fortnightly* 136(3): 30-33.

Dismukes, David E., and Dmitry V. Mesyanzhinov (with Robert F. Cope III). Capacity and economies of scale in electric power transmission. *Utilities Policy*, in press.

Dismukes, David E., and Dmitry V. Mesyanzhinov (with Robert F. Cope III). Benchmarking electric utility distribution performance. Presented at 73rd Annual Western Economic Association Conference, Lake Tahoe, Nevada, June 1998.

Dismukes, David E. (with Robert F. Cope III and Dan Rinks). Modeling electric power markets in a restructured environment. *Proceedings of the International Association for Energy Economics: Technology's Critical Role in Energy and Environmental Markets*, in press.

Iledare, O. O., Allan G. Pulsipher, Dmitry Mesyanzhinov, and Richard E. Pincomb. Operational performance of the U. S. petroleum industry: a comparative analysis over space and time. *Proceedings of the International Association for Energy Economics: Technology's Critical Role in Energy and Environmental Markets*, in press.

Iledare, O. O., Allan G. Pulsipher and Dmitry V. Mesyanzhinov. Safety and environmental performance measures in offshore E&P operations: empirical indicators for benchmarking. SPE 49153. Society of Petroleum Engineers, Inc., Richardson, TX. Prepared for presentation at the 1998 SPE Annual Technical Conference and Exhibition in New Orleans, September 27-30, 1998.

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Dismukes, David E. Review of *Electricity transmission pricing and technology*, edited by Michael Einhorn and Riaz Siddiqi. (Kluwer Academic Publishers, 1996) *The Energy Journal* 18(4):146-148.

Dismukes, David E. (with Robert F. Cope and Dan B. Rinks). A nonlinear programming model to estimate stranded generation investments in a deregulated electric utility industry. Presented at Institute for Operations Research and Management Science Annual Conference, October 1997.

Dismukes, David E. (with Fred I. Denny). New paradigms for power engineering education. In *Proceedings of the International Association of Science and Technology for Development*, October 1997.

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Long, Keith (with Brian Harder and Reed Bourgeois). *Mississippi oil & gas environmental handbook*. [CD-ROM] (Baton Rouge: Petroleum Technology Transfer Council, Central Gulf Region, January 1997).

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