

BOEM ENVIRONMENTAL STUDIES PROGRAM: ONGOING STUDIES

BOEM OCS Region: [Gulf of Mexico](#)

Planning Area: Central and Western

Title: OCS Studies Review: (1) Geographical Units for Observing and Modeling Socioeconomic Impact of Offshore Activity; (2) LA and TX Oil and Gas Activity Review and Production Forecast: and (3) Pipeline Paper (GM-92-42-142)

Total Cost: \$377,917

Period of Performance: FY 2008-2012

Conducting Organization: [Coastal Marine Institute](#), Louisiana State University

BOEM Contact: [Kristen Strellec](#)

Description:

Background: Louisiana and Texas are the most energy consuming and producing states in the country, and over the past century, a significant amount of infrastructure has been developed in Louisiana and Texas in support of oil and gas development. These assets have led Texas and Louisiana to become energy hubs linking the Gulf Coast with the rest of the U.S., and increasingly, the world.

Texas produces more oil and gas than any state in the nation, and Louisiana is ranked second in refinery capacity and petrochemical production. If the federal offshore areas are considered, Louisiana ranks first in the nation in oil production and second in gas production.

The natural gas pipeline network located along the Texas Gulf coast and southern Louisiana is a highly integrated system of intrastate and interstate connections. Large volumes of natural gas enter the region from the OCS and state production, and leave the region for other markets. Significant volumes of natural gas are also consumed in the region for industrial purposes and for the electric generation market. A number of high-capacity gas pipelines and gathering systems have been built over the last decade to bring offshore production onshore (e.g., East Breaks, Okeanos, Cleopatra, Nautilus, Discovery, Destin) to be processed in the Gulf coast region.

Socioeconomic impact assessment for OCS activities does not conform to the typical, traditional mental model of “boom town” effects. Impact analyses operate within the context of a mature industrial and economic context that is both very technology- and capital-intensive and impacts are likely to occur in all of the Gulf states, as well as nationally and internationally. The specification of the geographical unit for impact analysis (the area where the impact is hypothesized to be experienced) is complex and can dictate the estimated magnitude and nature of such impacts and, in fact, whether they

are perceived to occur at all.

Objectives: For the geographical units study: formulate an annotated list of issues and opportunities related to the methodologies and models used to estimate socioeconomic effects of offshore oil and gas activities. Focus on selecting the appropriate geographical unit for analysis and conceptual and methodological problems of relevance.

For the state oil and gas activity review and forecast: (1) provide a historical perspective on the birth of the oil and gas industry in TX and LA, and the evolution of the statutes and regulations governing the industry; (2) describe the current regulatory requirements for oil and gas production in each state, including the onshore and offshore leasing programs, fiscal systems, incentive programs, and current tax structure; (3) describe and summarize drilling, completion, and rig activity; drilling cost and rig rates; and gas processing trends for each state; (4) describe and summarize oil and gas production for onshore and state waters, and the sources of mineral incomes for each state, including royalties, severance taxes, bonuses, rentals, and overriding royalties; and (5) develop a short term oil and gas production forecast for the onshore lands and offshore waters for each state, either through original model development or a review of existent models.

For pipeline, develop a position paper on the pipeline infrastructure, oil and gas storage, and future trends in the region, including a discussion of issues and disputes, a comparison between state and federal regulations, and a review of construction activity and expansion trends.

Methods: The methodologies will be tailored to the three individual topics and will be developed in detail as part of the study effort. Each effort will include: detailed literature review, data collection, methodology development and description, data analysis, and summary of findings.

Products: A final report publication as well as individual interim reports on each topic.

Importance to BOEM: This project will help BOEM identify the trends and issues affecting state energy activity levels and infrastructure requirements and help better define appropriate units of observation for socioeconomic impact studies. The study is to ascertain if using traditional or externally defined geographic impact areas distort impact assessment. This will improve BOEM's capability in socioeconomic impact assessment.

Current Status: BOEM expects to receive a draft report in early 2012. A 12-month no cost extension request is currently being processed.

Final Report Due: January 2012

Publications: Mark J. Kaiser, "Economic Limit of Field Production in Louisiana," *Energy – The International Journal*, 35(8): 3399-3416, 2010.

Mark J. Kaiser and Yunke Yu, "Economic Limit of Field

Production in Texas," Applied Energy, 87(10): 3235-3254, 2010.

Mark J. Kaiser and Yunke Yu, "Gulf Coast Economic Limits – 1: Economic Limits Estimated for US Gulf Coastal Fields," Oil and Gas Journal, 108(20): 42-51, June 7, 2010.

Mark J. Kaiser and Yunke Yu, "Gulf Coast Economic Limits – 2: Limits Compared for Texas Coast, Bays-Estuaries, State Waters," Oil and Gas Journal, 108(21): 31-37, June 14, 2010.

Mark J. Kaiser and Yunke Yu, "Gulf Coast Economic Limits - 3: Louisiana Economic Limits for Fields," Oil and Gas Journal, 108(22): 35-42, June 21, 2010.

Affiliated WWW Sites:

[Coastal Marine Institute, Louisiana State University](#)

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