



**Potential Job Creation, Economic Benefits and
Revenue Sharing from Oil and Natural Gas
Exploration and Production in South Carolina**

September 16, 2009



Introduction

In January 2009, the US Department of the Interior published a Draft Proposed Outer Continental Shelf (OCS) Oil and Gas Leasing Program for 2010-2015 that, if implemented, would allow one lease sale in the South Atlantic Region — which includes South Carolina. As a potentially affected state, the input from South Carolina into the development of the Five-Year Plan will play a significant role in whether this lease sale is included in the final version of the OCS Oil and Gas Leasing Program for 2010-2015.

In deciding whether to support inclusion of South Carolina in the 2010-2015 Program, state officials must consider the tremendous economic impacts and potential revenues that could be generated for South Carolina should offshore energy exploration and production take place. A recent report¹ estimates by going forward with offshore Atlantic oil and gas leasing and with South Carolina participating in the development of offshore Atlantic resources, that the state's activity could:

- Create approximately 2,250 new jobs in South Carolina;
- Add \$413 million annually to the Gross Domestic Product (GDP); and
- Generate over \$45 billion in government revenues at all levels of government (federal, state and local).

In addition to the direct economic impacts of offshore energy exploration and development, the state may be able to receive tens of millions of dollars annually in

royalty revenue sharing receipts that would be generated by OCS exploration and production.

Under current laws, all revenue — except for certain leases in the Gulf of Mexico covered by the Gulf of Mexico Energy Security Act (GOMESA) of 2006 — generated from offshore oil and gas production is directed to the federal government. Some revenue is returned to the states for land and water conservation efforts and coastal impact assistance, while the rest is channeled into the federal government's general operating budget.

However, if current laws were amended to allow South Carolina to receive the same royalty revenue sharing treatment that is currently granted to the Gulf Coast states, the state could receive up to \$250 million annually from offshore exploration and production revenue sharing receipts.

¹The ICF International report is discussed below and can be found at http://www.api.org/Newsroom/icf_study.cfm



South Carolina OCS Resources

The Atlantic OCS Region is made up of an area of 269.13 million acres which cover the Atlantic offshore area from Canada to the offshore territorial waters of the Bahamas and Cuba. The area begins three miles off the coastal states where water depths range from approximately 80 feet to more than 10,000 feet. The Atlantic OCS area is divided into four planning areas — the North Atlantic, the Mid-Atlantic, the South Atlantic (which includes South Carolina) and the Straits of Florida.

In 2006, the Minerals Management Service (MMS) conducted a regional assessment of the entire US OCS — including the Atlantic OCS Region. According to MMS, the assessment represents the results of a thorough investigation of the petroleum geology of each area within the OCS, based on available data, to estimate hydrocarbon potential.

The 2006 assessment provides estimates of the undiscovered, technically recoverable (UTRR) oil and natural gas resources located outside of known oil and gas fields on the OCS. The assessment considered recent geophysical, geological, technological and economic information and utilized a probabilistic play-based approach to estimate the UTRR of oil and gas for individual plays. The UTRR estimates are presented as a range of estimates and include the mean estimate and the 95th and 5th percentile level — which are considered reasonable minimum and maximum values for the estimated level of UTRR resources.

Estimates of UTRR for the entire OCS range from 66.6 billion barrels of oil at the 95th percentile to 115.1 billion barrels of oil at the fifth percentile with a mean of 85.9 billion barrels of oil. Similarly, natural gas estimates range

from 326.4 to 565.9 trillion cubic feet of gas (tcf), with a mean of 419.9 tcf.

The estimates of the UTRR for the Atlantic OCS range from 7.57 billion barrels of oil at the fifth percentile to 1.12 billion barrels of oil with a mean estimate of 3.82 billion barrels of oil and from 66.46 to 14.30 trillion cubic feet of natural gas with a mean of 36.99 tcf.

Based on the current MMS maps and the analysis of the OCS Assessment, the South Carolina adjacent waters — which make up approximately ten percent of the total Atlantic Resource base — are projected to contain as much as 750 million barrels of oil and 6.65 trillion cubic feet of natural gas.

Although MMS has noted that “it is important to recognize that estimates of undiscovered oil and natural gas resources are just that: estimates,” the 2006 Resource Assessment represents the government scientists’ best estimate of what quantities of oil and natural gas remain undiscovered given the current state of geologic knowledge and reasonably foreseeable technology.



Support for a South Atlantic Lease Sale in the Five-Year Plan Development Process

The process for the development of a Five-Year Plan includes the sequential publication of four different documents — a Call for Information, a Draft Proposed Plan, a Proposed Final Plan, and a Proposed Environmental Impact Statement — with each triggering a period for public comment. Once public comments have been accepted on the Proposed Final Plan, the Plan will be implemented upon Secretarial approval and submission to the President and Congress.

The current Five-Year Plan, for 2007-2012, includes twenty-one lease sales in eight areas, including eight lease sales in four areas of Alaska, 12 lease sales in three areas of the Gulf of Mexico and one lease sale in Virginia's adjacent waters. The 2007-2012 program was developed while federal moratoria were in place prohibiting any leasing (or pre-leasing) activities in the Atlantic or Pacific Oceans.

In response to high crude oil, gasoline and diesel prices, President Bush lifted the Executive Moratorium on July 14, 2008 and instructed his Interior Secretary, Dirk Kempthorne, to initiate the process to develop a new Five-Year Plan which would cover 2010-2015 (if approved, this plan would supersede the current Five-Year Plan.) Two months later, Congress did not move to renew the congressional leasing moratorium — meaning that it is now possible for lease sales to take place in the Atlantic and the Pacific for the first time since 1983.

Pursuant to President Bush's directive, the Department of the Interior (DOI) published a Call for Information on August 1, 2008, soliciting comments from interested and affected parties on whether to begin a new five year program for 2010-2015. The Notice specifically requested comments on areas that had been restricted from leasing prior to the revocation of the Executive Moratorium on

July 14, 2008. DOI received over 152,000 comments during the comment period — with over 60 percent of the comments supporting the creation of a new Five-Year Plan.

On January 21, 2009, DOI published a Draft Proposed Outer Continental Shelf (OCS) Leasing Program for 2010-2015 (DPP) that proposed a total of 31 lease sales in 12 areas, including 14 lease sales in three areas of the Gulf of Mexico, nine lease sales in four areas offshore Alaska, three lease sales in two areas offshore California and five lease sales in three areas of the Atlantic — including one in the South Atlantic Region, which includes South Carolina.

DOI opened a 60-day comment period and requested comments from states, local governments, Native groups, tribes, the oil and gas industry, federal agencies, environmental and other interest organizations and all other interested parties. On February 10, 2009, Secretary Salazar announced that DOI was extending the comment period for the DPP by 180 days — meaning that the Department will accept public comments through September 21, 2009.

As in previous comment periods, the Department has specifically requested comments from the governors and other state officials from potentially affected states — which will be given great deference as the final Five-Year Plan is developed. The secretary will consider the recommendations of the governor and any executives of affected local governments if he determines that they provide for a reasonable balance between the national interest and the well-being of the citizens of the affected state.



Achieving Federal Revenue Sharing

The federal government collects revenues from oil and gas leases on public lands in the form of bonus bids, annual rents, and royalties. Bonus bids are upfront payments made to secure a lease in a competitive lease sale. Leases are awarded to the highest bidder. Royalties are based on the value of production. Annual rental payments are made by lessees on a per acre basis. Once commercial production begins, rental payments are no longer required.

For offshore leases the primary term is five years for shallow water (<400 meters), eight years for mid-depth water (400-800 meters) and 10 years for deep water (>800 meters). Leases continue as long as commercial production takes place. The Bureau of Land Management (BLM) administers the onshore leasing program and the Minerals Management Service (MMS) administers the offshore leasing program. MMS collects and disburses all revenues from federal leases.

In Fiscal Year (FY) 2007, MMS collected about \$11.5 billion from leasing activity on public lands (both onshore and offshore). About 90 percent came from royalty payments. A royalty rate of 12.5 percent applies to onshore federal leases and up to 18.75 percent applies to offshore leases. Revenues from offshore leases are statutorily allocated among the coastal states, the Land and Water Conservation Fund (LWCF), the National Historic Preservation Fund (NHPF) and the general treasury. Despite the statutory allocations, the vast majority of revenues from offshore leases go to the general treasury.

Prior to passage of the GOMESA, revenue sharing among all coastal states was limited to revenues generated within an area three miles beyond the state's boundary.

GOMESA requires that 8.3 million acres be offered for oil and gas leases in the Central Gulf Planning Area and the Eastern Gulf Planning Area. Approximately two million acres in the Central Gulf were offered for lease after enactment of the law and was included in Lease Sale 205 in October 2007 and an additional 500,000 acres were offered in Lease Sale 224 in March 2008. The remaining 5.8 million acres in the Central Gulf are expected to be offered in Lease Sale 208 in 2009.

The Act also created revenue sharing provisions for four Gulf Coast oil and gas producing states — Alabama, Louisiana, Mississippi and Texas, and their coastal political subdivisions. There are two timeframes involved in revenue sharing. From FY 2007 through FY 2016, 37.5 percent of all revenue including bonus bids, rentals and production royalty will be shared among the four States and subdivisions for those new leases in the 0.5 million acres in the Eastern Gulf and the 5.8 million acres in the Central Gulf. From FY 2017 and beyond, the four states and subdivisions will share 37.5 percent of revenues from all Gulf leases issued after December 20, 2006.

In addition to the direct payments made to the Gulf Coast states, GOMESA also directs an additional 12.5 percent of the revenues to the Land and Water Conservation Fund State Assistance program for distribution to all states.

Because federal royalty collections are governed by federal law, Congress will need to enact legislation extending revenue sharing to South Carolina before the state will be eligible to receive any share of the revenues collected for exploration and production in its adjacent waters.



Potential Revenues for South Carolina

There are two key potential revenue streams for South Carolina: tax revenues derived directly and indirectly from OCS exploration and production, as well as related jobs created and economic growth, and non-tax government revenues that could be directed to South Carolina if the state were granted the same revenue share that is currently given to Texas, Louisiana, Mississippi and Alabama for exploration and production in the Gulf of Mexico.

Economic Impacts and Tax Receipts

ICF International has recently completed a report that analyzes the potential impact on future US oil and gas production from opening offshore areas in the Eastern Gulf of Mexico, the Atlantic, the Pacific, as well as ANWR in Alaska and a portion of the currently unavailable federal lands in the Rockies for exploration and development. The full ICF Report can be found at http://www.api.org/Newsroom/icf_study.cfm.

The ICF study summarizes the current federal government estimates of oil and gas resources in each of these areas and presents an alternative, higher resource scenario based upon analysis of how oil and gas assessments have evolved in the US over the past thirty years. ICF incorporates learning from the observed historical trend that government oil and gas assessments generally increase over time as more knowledge is gained in geological areas under development, such as the Gulf of Mexico, which indicates that initial government resource assessments are generally conservative.

As part of its report, ICF presents results for the amount of oil and gas production that would be expected from each producing state — including South Carolina — and the

economic impacts in those states that would be expected to supply goods and services directly and indirectly to the oil and gas industry.

ICF also presents government sector impacts in terms of government revenue that would be expected by production in the state's adjacent waters. The estimated future government revenues are the sum of bonuses, severance tax, property tax and income tax at the federal, state and local levels. The revenue going to each level of government is combined and ICF did not break out state versus federal revenues.

According to the ICF study, new OCS exploration and production would provide the following economic impacts in South Carolina:

- Create approximately 2,250 new jobs in South Carolina;
- Add over \$413 million annually to GDP by 2030; and
- Generate approximately \$45 billion in federal, state and local revenues, including \$2.96 billion in government revenues by 2030 — an average of \$148 million per year between 2010 and 2030.

Royalty Share Revenues

As discussed above, the MMS 2006 resource assessment estimated that there are up to 7.57 billion barrels of oil and 66.46 trillion cubic feet of natural gas in the Atlantic Region. This evaluation does not include methane hydrates, which may be found in North Carolina. As discussed above, the MMS 2006 resource assessment estimated that there are up to 7.57 billion barrels of oil and 66.46 trillion cubic feet of natural gas in the Atlantic Region. This evaluation does not include

methane hydrates, which may be found in South Carolina waters and would add to these totals.

In order to assess the value of these resources, we use the same average forecast price from the Energy Information Administration's Annual Energy Outlook as used in the ICF International study — this price forecast in constant dollars was made before the price spikes of summer 2008 and projected a value for oil at \$66.76 per barrel and natural gas at \$6.99 per thousand cubic feet. We use this to estimate the following rough values for the total resources in the Atlantic²:

	Value of Oil	Value of Natural Gas	Total Value of Resources
95 th Percentile	\$74.8 billion	\$100.0 billion	\$174.8 billion
Mean	\$255.0 billion	\$258.6 billion	\$513.6 billion
5 th Percentile	\$505.4 billion	\$464.6 billion	\$970.0 billion

Table 1 | Atlantic Region Resource Value

Under the Outer Continental Shelf Lands Act (OCSLA), there is an 18.75 percent royalty rate on the value of OCS production, meaning that the federal government would expect to receive from \$32.8 billion to \$181.9 billion in total royalty revenues for the Atlantic resource base over a 30 year period — with a mean of \$96.3 billion, assuming that all resources were actually produced.

Historically, companies have paid bonus bids during a lease sale — for example, last year companies paid over \$10 billion in bonus bids for oil and natural gas leases. If we assume that the bonus bids will equal approximately ten percent of the royalty revenues, then the federal government would expect to receive an additional \$3.28 billion to \$18.19 billion (with a mean of \$9.63) for the Atlantic resources base over a 30 year period.

Based on current MMS maps, federally governed waters off South Carolina contain approximately ten percent of the total Atlantic resources base, providing a value of the resources in the state's waters of:

² Note – this is a rough estimate; the value of a resource ultimately depends on the market price and production costs at the time the resource is produced.

	Value of Oil	Value of Natural Gas	Total Value of Resources
95 th Percentile	\$7.5 billion	\$10.0 billion	\$17.5 billion
Mean	\$25.5 billion	\$25.9 billion	\$51.4 billion
5 th Percentile	\$50.5 billion	\$46.5 billion	\$97.0 billion

Table 2 | South Carolina Resource Value

Given the assumptions above, including the production of all resources, the federal government could receive \$18.19 billion in royalty payments (18.75 percent x \$97.0 billion) and \$1.82 billion in bonus bids (ten percent x \$18.19 billion) from production in waters offshore of South Carolina.

	Royalty Revenues	Bonus Bids	Total Federal Revenues
95 th Percentile	\$3.3 billion	\$1.3 billion	\$4.6 billion
Mean	\$9.6 billion	\$1.8 billion	\$11.4 billion
5 th Percentile	\$18.2 billion	\$1.8 billion	\$20.0 billion

Table 3 | Federal Revenues from Potential South Carolina Resources

If South Carolina were to receive the same 37.5 percent revenue share provided to the Gulf Coast States in the GOMESA legislation, the State could potentially receive:

	Royalty Revenues	Bonus Bids	Total NC Revenues
95 th Percentile	\$1.2 billion	\$1.1 billion	\$2.3 billion
Mean	\$3.6 billion	\$1.4 billion	\$5.0 billion
5 th Percentile	\$6.8 billion	\$1.7 billion	\$8.5 billion

Table 4 | Potential South Carolina Revenue Share

MMS assumes that production will take place over a 30-40 year period once exploration and production is commenced. If we assume that production in waters offshore of South Carolina would be produced over 30 years, then we can estimate that South Carolina could receive up to \$250 million annual in federal revenue sharing dollars.

About the Southeast Energy Alliance

The Southeast Energy Alliance (SEA) is a non-partisan organization of businesses, trade associations and non-profit organizations — including Farm Bureaus, Electric Cooperative Associations, Chambers of Commerce and Manufacturing Associations — across the Southeastern United States that understand the importance of the development of sound energy policies to ensure the economic viability of their organization. Utilizing grassroots, grass-tops, public advocacy and education at both the state and federal levels, SEA is dedicated to projects and activities that will ensure access to affordable and reliable energy for families, farms and businesses across the Southeast. SEA is the Southeastern regional affiliate of the Consumer Energy Alliance.

Southeast Energy Alliance

120 Summer Breeze Lane
Fredericksburg, VA 22406

P: 202-674-1750

F: 202-315-3063

www.SoutheastEnergyAlliance.org
info@southeastenergyalliance.org



