BUDGET JUSTIFICATIONS

The United States Department of the Interior

and Performance Information
Fiscal Year 2017

BUREAU OF OCEAN ENERGY MANAGEMENT

NOTICE: These budget justifications are prepared for the Interior, Environment and Related Agencies Appropriations Subcommittees. Approval for release of the justifications prior to their printing in the public record of the Subcommittee hearings may be obtained through the Office of Budget of the Department of the Interior.

BUREAU OF OCEAN ENERGY MANAGEMENT
FY 2017 PERFORMANCE BUDGET

Table of Contents

Table of Figures

Table of Tables

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FY 2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

Director's Preface

"Safe, reliable energy is the backbone of our economy and is critical to our nation's security. At BOEM, our priorities are to serve the American people through both conventional energy – the foundation for our bureau – and through renewable energy – an innovative and exciting energy frontier in the US offshore program. We are also committed to building and sustaining coastal resilience which is increasingly important as we face our world's changing climate. Our research, knowledge and dedication to science-based decision making will continue to provide an efficient, environmentally focused energy future for our Nation."

– Abigail Ross Hopper, BOEM Director

The Bureau of Ocean Energy Management (BOEM) is responsible for managing the Nation's offshore resources in a balanced way that promotes efficient and environmentally responsible energy and mineral development through oil and gas leasing, renewable energy development, and marine mineral leasing, all of which are guided by rigorous, science-based environmental review and study. BOEM plays an important role in advancing President Obama's comprehensive approach to expanding responsible development of domestic energy resources as part of a broad effort to secure the Nation's energy future, benefit the economy, and create jobs.

The FY 2017 budget will support ongoing efforts and important initiatives that are vital to BOEM's mission and critical to advancing Administration priorities. BOEM's FY 2017 request reflects a careful analysis of the resources needed to develop the Bureau's capacity and to execute its functions carefully, responsibly, and efficiently.

With this request, BOEM proposes to focus resources in the following areas:

- **Current Leasing Program.** Since the approval of the 2012-2017 Outer Continental Shelf (OCS) Oil and Gas Leasing Five Year Program in August 2012, BOEM has worked diligently to carry out its innovative, regionally-tailored approach to offshore oil and gas leasing. During calendar year 2015, BOEM held two lease sales and issued 194 leases, which generated more than $561 million in bonus bids. Three lease sales are planned for calendar year 2016, and two lease sales are planned for calendar year 2017 before the current Five Year program expires.
- **Development of the 2017-2022 OCS Oil and Gas Leasing Program.** BOEM is successfully moving forward with the development and publication of the 2017-2022 Five Year Program that will lay out the schedule of oil and gas lease sales that the Secretary of the

Interior determines will best meet national energy needs and address energy security for that five-year period. FY 2016 will be a critical year for the Program with publication of the Proposed Program and draft programmatic environmental impact statement anticipated during the first half of 2016 followed by a public comment opportunity and public meetings. The Proposed Final Program and final programmatic environmental impact statement are expected to be published in late 2016 so that the program can take effect in July 2017.

- **Risk Management.** In order to better align regulatory requirements with the realities of aging offshore infrastructure and ensure that lease obligations, such as decommissioning, do not fall to the taxpayer, BOEM is proactively developing a comprehensive Risk Management and Financial Assurance Program to modernize our regulatory regime. BOEM's efforts in this regard will continue throughout FY 2016 and FY 2017. The FY 2017 request, combined with full funding of BOEM's FY 2016 request for the Risk Management Program, should bring the Program to full staffing capacity and allow it to become fully operational.
- **Renewable Energy.** In recognition of the need to advance our domestic clean and low carbon energy future, BOEM continues to advance renewable energy through an aggressive leasing program. To date, BOEM has issued eleven commercial wind leases along the Atlantic coast, nine of which are competitively-issued leases and two of which are noncompetitively issued leases. The competitive lease sales generated $16.4 million in winning bids for more than 1.18 million acres in Federal waters. If fully developed, these eleven leases could generate enough energy to power over 4 million homes. BOEM has also received three commercial wind lease requests from two different companies for offshore Hawaii, as well as increased interest from potential wind developers offshore California. In FY 2015, $2.2 million in rent payments were collected on OCS renewable energy leases, and BOEM estimates annual rent payments of more than $3.5 million in FY 2016 and $4.7 million in FY 2017.
- **Science-Based Analysis.** Utilizing science as the foundation for sound policy decisions, and managing offshore energy and mineral resources in an environmentally and economically responsible way, BOEM facilitates top-quality research by talented scientists from a range of disciplines that is targeted to support policy needs and priorities. During FY 2015, BOEM partnered with the National Academies of Science, Engineering, and Medicine, and the National Research Council to establish a new standing committee that will provide guidance to the Bureau on environmental science and assessment for offshore energy and mineral resources.

Consistent with the overall contours of the FY 2017 budget, these initiatives will advance the Administration's priorities and will allow BOEM to effectively and efficiently manage responsible development of offshore energy resources.

FY 2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

General Statement

Bureau of Ocean Energy Management Mission

The mission of the Bureau of Ocean Energy Management is to manage development of the Nation's offshore energy and mineral resources in an environmentally and economically responsible way.

The authority and mission of the Bureau of Ocean Energy Management is derived from the Outer Continental Shelf (OCS) Lands Act, as amended. The OCS Lands Act, created on August 7, 1953, defines the OCS as all submerged lands lying seaward of state coastal waters which are under U.S. jurisdiction. Under the OCS Lands Act, the Secretary of the Interior is responsible for the administration of mineral exploration and development of the OCS. The Act, as amended, provides guidelines for implementing an OCS oil and gas exploration and development program. The Energy Policy Act of 2005 further amended the OCS Lands Act to authorize the Department to also manage the development of renewable energy.

To carry out this mission, BOEM manages offshore leasing, resource and economic evaluation, review and administration of oil and gas exploration and development plans, renewable energy development, National Environmental Policy Act (NEPA) analysis, and environmental studies. These functions are described in more detail in the following narrative.

Leasing. BOEM is responsible for conventional and renewable energy and marine mineral leasing policies and programs on the U.S. Outer Continental Shelf. This includes developing a Five Year Oil and Gas Leasing Program and designing individual oil and gas lease sales in a way that makes oil and gas resources available, protects communities and the environment, ensures fair value to the American taxpayer, and provides incentives for diligent development of leases. For renewable energy, BOEM manages offshore leasing and oversees all activities for renewable energy and alternate-use projects. BOEM also makes OCS sand and gravel resources available for coastal restoration and protection projects.

Plan Administration. BOEM conducts in-depth reviews of exploration plans, development and production plans, and development operations coordination documents to ensure that plan activities are conducted in accordance with applicable laws, regulations, and lease terms. BOEM is committed to ensuring that its process for reviewing and approving plans is rigorous, efficient,

and transparent to industry. BOEM works collaboratively with industry throughout the review of plans, with the goals of ensuring that operators comply with rigorous operational and environmental requirements and that the review process is efficient.

Environmental Science. BOEM is committed to ensuring that both conventional and renewable energy decisions are informed by the best available science. BOEM facilitates top-quality research by talented scientists from a range of disciplines and targeted to support policy needs and priorities. Applied research through the studies program informs the environmental reviews that BOEM prepares to support decision-making. To ensure their full integration, BOEM oversees both applied research and environmental review processes.

Economics. BOEM conducts economic, statistical, engineering, and cost-benefit analyses for Bureau and Departmental energy and minerals programs. The objective is to evaluate, recommend, design, and implement policies and statutory requirements relating to lease terms, bidding systems, auction designs, rulemaking, revenue forecasts, post-sale bid adequacy determinations, and revenue sharing with the states. This work involves broad interfaces with other bureaus and offices within the Department of the Interior (DOI), with other Federal departments and offices, and with Congressional energy resource committees.

Resource Evaluation. BOEM's resource evaluation program includes: fair market value determination, which is focused on thoroughly assessing the oil and gas potential and associated economic value of OCS tracts offered for lease; resource assessment, which is focused on identifying geologic plays on the OCS that offer the highest potential for hydrocarbon resources; and reserves inventory, or the development of independent estimates of economically recoverable amounts of oil and gas contained within discovered fields obtained by conducting field reserve studies. Program activities also include acquisition and analysis of geological and geophysical (G&G) data, as well as permitting of G&G activity to ensure that pre-lease exploration, prospecting, and scientific research operations in Federal waters are conducted in a balanced way that protects wildlife and the environment, as well as cultural and archaeological resources, and minimizes conflicts with other uses of the OCS – such as subsistence use and exploration and development on nearby leases.

Renewable Energy Development. The Energy Policy Act of 2005 authorizes DOI to issue leases, easements, or rights-of-way for activities on the OCS that produce or support production, transportation, or transmission of energy from renewable sources. Renewable energy and alternate-use projects can include wind, wave and ocean current energy, as well as projects that make alternative use of existing oil and gas platforms in Federal waters. The Department and BOEM have continued to advance renewable energy efforts, as part of the President's comprehensive energy strategy. This includes advancing the Smart from the Start initiative, which aims to facilitate efficient and environmentally responsible siting, leasing, and

construction of new wind energy projects in the Atlantic. BOEM is also working to facilitate renewable energy development off the Pacific Coast.

BUREAU BUDGET AND ORGANIZATIONAL STRUCTURE

Budget activities for BOEM are funded through the Ocean Energy Management (OEM) account and support resource evaluation, planning, and leasing of the Nation's offshore energy and mineral resources in an appropriately balanced way that promotes economic development, energy independence, and environmental protection. The OEM account is comprised of the following activities:

Renewable Energy. This activity funds renewable energy activities for the OCS, including program development; implementation and compliance work in support of competitive and noncompetitive leasing actions; review of site assessment and construction and operations plans; consultation with state and local governments, Federal agencies, tribes, and other stakeholders; and development of a multipurpose marine cadastre. The renewable energy activity supports the Smart from the Start initiative described above.

Conventional Energy. Activities funded through Conventional Energy include: OCS oil and gas leasing, and the development of the Five Year Program; implementing the lease sale process; administering leases; and reviewing exploration and development plans and G&G permit applications. Resource evaluation is a critical component of the program that provides the information needed to support program decision making. This includes technical and economic analysis; tract evaluation; assessment and modeling; conservation of resources; reserves inventories; G&G data acquisition; and fair market value determinations. The Risk Management Program is also funded through Conventional Energy. Additionally, activities involving marine minerals other than oil and gas are funded within this activity.

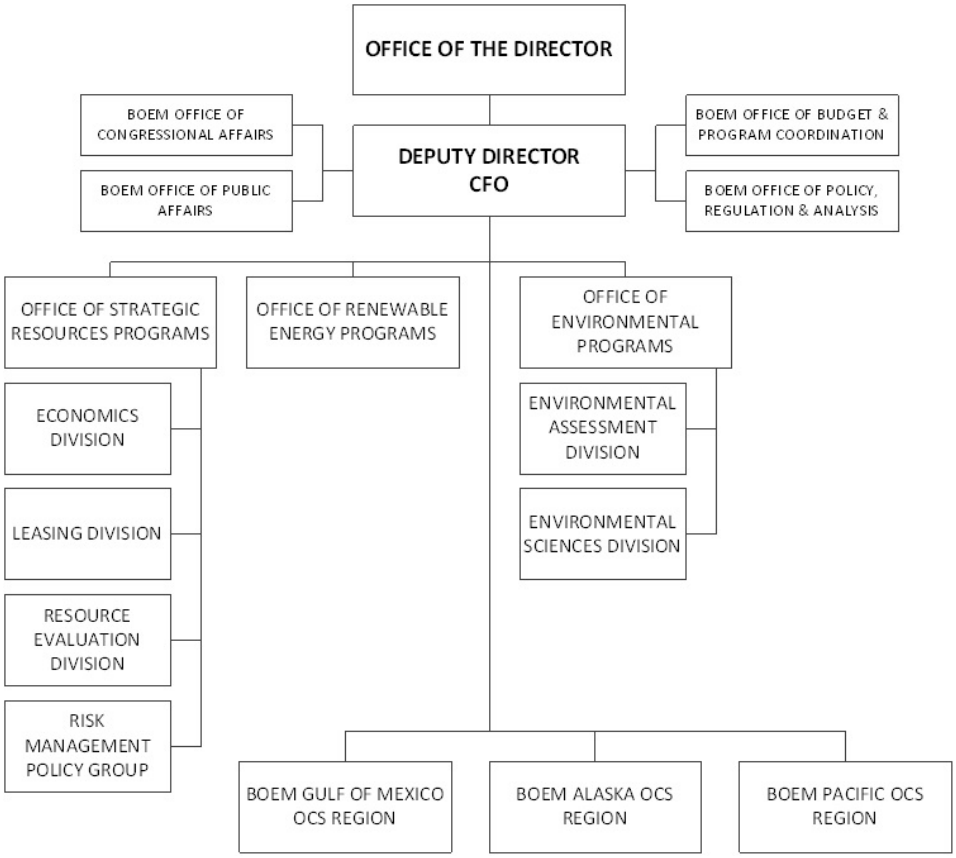
Environmental Programs. This activity funds environmental analyses such as environmental impact statements and environmental assessments needed to assess potential environmental impacts of proposed actions in accordance with NEPA and related regulations. It also supports applied research through the Environmental Studies Program, designed to support policy priorities and ensure that environmental reviews conducted in support of policy decisions incorporate rigorous scientific analysis.

General Support Services. In FY 2016, Congress approved BOEM’s proposal to eliminate this activity and realign the funding to the supported budget activities. Previously, this activity partially funded administrative and shared support services for the Bureau. While this activity no longer exists, it appears on budget tables in order to display prior year funding levels.

Executive Direction. This activity funds Bureau-wide leadership, direction, management, coordination, communications strategies, outreach, and regulatory development. It includes functions such as: managing the budget planning and execution processes, managing administrative services, bureau-wide information technology management and governance, congressional and public affairs, policy analysis, and regulations. The Office of the Director is funded within this activity and is responsible for providing policy guidance and overall leadership within the BOEM organization, managing official documents, international affairs, Freedom of Information Act, and litigation activities.

Functions and funds within these activities are divided among program offices located at headquarters and regional offices, which are described below. BOEM's organizational structure is designed to advance each of the elements of its mission. The national functions are grouped into three offices headquartered in the Greater Washington, D.C., area and focus on strategic resource development, environmental analysis and applied science, and offshore renewable energy development. Additionally, BOEM has three regional offices that handle a number of key agency responsibilities. This structure is summarized below and displayed in the organizational chart in Figure 1.

Figure 1: BOEM Organizational Chart



The Office of Strategic Resources Programs is committed to managing offshore resources to help meet the Nation's energy and resource needs by developing programs to provide access to resources and ensure a fair return to the American taxpayer for offshore energy and mineral resources through strategic planning and resource and economic evaluation. This includes: development of the Five Year Program; assessment of mineral resource potential, tracking of inventories of oil and gas reserves, and development of production projections; marine mineral resource management; economic evaluation to ensure the receipt of fair value through lease sales and lease terms; and protection of the American taxpayer through a comprehensive Risk Management Program designed to offer a mitigation plan for addressing contingent liabilities on the OCS.

The Office of Renewable Energy Programs advances a sustainable OCS renewable energy future through interactive site planning and environmentally responsible operations and energy generation. Among other things, this office supports the President's comprehensive energy strategy to facilitate siting, leasing, and construction of new projects, spurring the responsible development of offshore wind resources off the Atlantic coast.

The Office of Environmental Programs conducts and oversees applied science and environmental assessments at every stage of the offshore energy development planning process – for both conventional and renewable energy activities – in order to inform decisions for environmentally responsible ocean energy and mineral development. BOEM also ensures that it manages, mitigates, monitors, and adapts to the potential consequences of exploring for and developing these resources. As a responsible steward, BOEM must also meet its stakeholder engagement responsibilities. To fulfill these responsibilities, BOEM's environmental programs are comprised of a diverse team of scientists, policy specialists, and technical professionals, whose expertise spans archaeology, biology, oceanography, environmental, and social disciplines.

BOEM has three regional offices – Gulf of Mexico, Alaska, and the Pacific – which are located in New Orleans, Louisiana; Anchorage, Alaska; and Camarillo, California, respectively. The regional offices are integrated into the national programs and are integral to all aspects of each program's responsibilities, especially oil and gas resource evaluations, environmental studies and assessments, leasing activities, review of exploration and development plans, fair market value determinations, G&G permitting, and renewable energy development.

Headquarters and regional offices work together to implement BOEM's various activities. In addition, strong partnerships with other Federal agencies, state and local governments, environmental and other interest groups, the general public, and the oil and gas and renewable energy industries enable BOEM to coordinate development to fulfill its resource management responsibilities.

FY 2017 BUDGET REQUEST

Funding for BOEM is requested through the OEM appropriation account. The OEM appropriation is partially offset by a portion of OCS rental collections and cost recovery fees.

In FY 2017, BOEM requests $175.1 million in total budget authority, an increase of $4.3 million over the FY 2016 enacted level. BOEM's request includes $80.2 million in net current appropriations and $94.9 million in offsetting collections, as shown in Table 1.

Table 1: Summary of BOEM Budget Request

(Dollars in Thousands)

BOEM	2015 Actual	2016 Enacted	2017 Request	Change from 2016
Net Current Appropriation	**72,422**	**74,235**	**80,194**	**+5,959**
Offsetting Collections	**97,348**	**96,622**	**94,944**	**-1,678**
Total Budget Authority	**169,770**	**170,857**	**175,138**	**+4,281**
Offsetting Collections				
Rental Receipts	94,868	92,961	88,487	-4,474
Cost Recovery Fees	2,480	3,661	6,457	+2,796
Total, Offsetting Collections	**97,348**	**96,622**	**94,944**	**-1,678**
Ocean Energy Management				
Renewable Energy	23,104	24,278	23,887	-391
Conventional Energy	49,633	59,869	64,156	+4,287
Environmental Programs	65,712	68,045	68,399	+354
General Support Services	15,002	-	-	-
Executive Direction	16,319	18,665	18,696	+31
Total Budget Authority, BOEM	**169,770**	**170,857**	**175,138**	**+4,281**
Full Time Equivalents (FTE)	**566**	**574**	**592**	**+18**

FY 2017 BUDGET HIGHLIGHTS

The 2017 Request reflects funding and personnel increases needed for BOEM to carry out its mission, as well as help protect the Federal government from financial risks related to natural resource development on the OCS. Changes relative to the FY 2016 enacted level are shown in Table 2 and described in greater detail below.

Table 2: Crosswalk to FY 2017

Bureau of Ocean Energy Management
Crosswalk to 2017 Request

Activity	Program Change	Offsetting +	Approp =	Total BA	FTE
BOEM FY 2016 ENACTED		**96,622**	**74,235**	**170,857**	**574**
All Activities	2017 Fixed Costs		+205	+205	
Conventional Energy	Risk Management Program Implementation	+2,895		+2,895	+15
Conventional / Environmental	Staffing for Resource Development		+867	+867	+3
Conventional Energy	Increase to Fund Special Pay Authority		+1,632	+1,632	
Conventional Energy	Methane Hydrates Research		-400	-400	
Renewable Energy	Data Collection and Outreach		-412	-412	
Conventional Energy	General Programmatic Reduction	-4,573	+4,067	-506	
FY 2017 Budgetary Changes		**-1,678**	**+5,959**	**+4,281**	**+18**
BOEM 2017 REQUEST		**94,944**	**80,194**	**175,138**	**592**

Fixed Costs (+$205,000). Fixed costs are fully funded in BOEM's FY 2017 budget. These are non-programmatic, mandatory costs that bureaus incur as part of day-to-day operations and include employee pay, changes in Federal health benefits and workers' compensation, rent to the General Services Administration, and payments to the Department through its Working Capital Fund.

Risk Management Program Implementation (+$2,895,000; +15 FTE). Funding for this initiative includes a planned cost recovery fee to fully offset the request. These funds would enable BOEM to continue the implementation of a comprehensive Financial Assurance, Risk Management, and Loss Prevention Program (Risk Management Program) designed to effectively manage, mitigate, and monitor Federal contingent liabilities; specifically, the Risk Management Program is critical to protecting the American taxpayer from becoming financially responsible for liabilities associated with oil and gas and renewable energy operations on the OCS. BOEM requests funding for 15 FTE with specialized skill sets to ensure the Program is accurately assessing, controlling, mitigating, remediating, monitoring, and reporting risk. This initiative will aid in developing the capacity of BOEM – and the government as a whole – to identify,

analyze, and mitigate financial risk and liability. Combined with BOEM's FY 2016 request, the requested funding will bring the Program to full staffing capacity and allow it to become fully operational. BOEM plans to fully offset the additional funds requested in FY 2017 through the imposition of a new cost recovery fee to partially recoup funds for costs associated with the review of tailored financial plans.

Staffing for Resource Development (+$867,000; +3 FTE). Increases of $568,000 in Conventional Energy and $299,000 in Environmental Programs are requested to support critical resource evaluation and development activities and to enable BOEM's continued emphasis on environmental stewardship. Despite current economic trends with respect to oil and gas prices, BOEM's responsibilities and associated workload have not diminished. While activity in shallow water has decreased in recent years, deepwater activity has remained robust, and – according to the U.S. Energy Information Administration – deepwater oil and natural gas production will continue to increase over the coming decade. BOEM anticipates that, with this increase in deepwater production, there will also be a corresponding increase in associated plan reviews and environmental work. It is important to note that deepwater plans are much more complex and require significantly more work to review, which will have a compounding effect on BOEM's overall workload. Additionally, BOEM anticipates regulations designed to promote environmentally responsible development of offshore energy and mineral resources, to create an additional workload. All regulatory oversight and activities – whether for ensuring environmental stewardship, geological and geophysical permitting, exploration, or development and production – require a high level of detailed analysis to support Bureau decisions and the commensurate level of resources to effectively complete the activities. This request directly supports the Bureau's strategic goals to achieve fair market value, ensure safe and sound operations, foster conservation of resources, and minimize impact on the environment.

Special Pay: Oil and Gas (+$1,632,000). The competition with industry to attract and retain talented, skilled candidates is intense, and industry does not hesitate to compensate its mission-critical personnel at the highest levels possible. As a result, it is very difficult to compete for and retain top tier staff because BOEM's employment package is not competitive with that of industry. Authority provided by Congress since 2012 has allowed BOEM and BSEE to offer higher rates of pay to employees within specific job series (geophysicists, geologists, and petroleum engineers) in the Gulf of Mexico Region. In August 2015, OPM issued special salary tables expanding on this authority. The OPM salary tables applicable to BOEM and BSEE currently cover additional mission critical occupational series in the Gulf of Mexico Region, and the Department continues to work actively with OPM to expand this incentive in order to meet critical workforce gaps in other BOEM and BSEE regions and for DOI employees engaged in onshore energy development and inspection. BOEM's FY 2017 budget includes an increase of $1.6 million for increased rates of pay, consistent with OPM guidance.

Methane Hydrate Research (-$400,000). Additional funding is needed to address increased pay for certain oil and gas-related occupations in certain locations. In order to accommodate this high priority need, BOEM proposes to reduce funding for methane hydrate research, as described in the Conventional Energy chapter.

Data Collection and Outreach (-$412,000). Additional funding is needed to address increased pay for certain oil and gas-related occupations in certain locations. In order to accommodate this high priority need, BOEM proposes to reduce funding for renewable energy data collection and outreach, as described in the Renewable Energy chapter.

General Programmatic Reduction (-$506,000). In order to fund Bureau priorities with available resources, BOEM will reduce base program funding by $506,000. During FY 2017, BOEM will evaluate ongoing efforts and priorities and identify opportunities to achieve administrative efficiencies. This may include contracting reforms, reductions in travel and conference participation, and/or cancellation or deferral of low-priority contracts.

Changes to Offsetting Collections (-$4,573,000). BOEM's offsetting collections, which are comprised of rental receipts and cost recoveries, are projected to decrease by $4.6 million in FY 2017. BOEM anticipates a net change in existing cost recoveries of -$99,000. Also in FY 2017, BOEM, in coordination with the Department and BSEE, proposes to adjust the allocation of offsetting receipts credited to the BOEM and BSEE appropriations to allow BOEM to retain a greater portion of the rental receipts that offset appropriations for both bureaus. The larger share of the rental receipts credited to BOEM's appropriation partially offsets a projected 11 percent decline in rental revenue for FY 2017 relative to 2016 enacted levels, yielding a net decrease of $4.5 million in BOEM's offsetting rental receipts. Because this decline in rental receipts is not meaningfully correlated to BOEM's workload, the 2017 request proposes to offset most of this reduction through an increase of $4.1 million in direct appropriations. Nonetheless, the projected decline in offsetting rental receipts is expected to continue to present a significant fiscal challenge in the coming years. A detailed discussion of this issue is included in Appendix B, Proposals for Mandatory Accounts and Offsetting Collections.

Federal Oil and Gas Reforms. The 2017 President's Budget includes a package of legislative reforms to bolster and backstop administrative actions being taken to reform the management of Interior's onshore and offshore oil and gas programs, with a key focus on improving the return to taxpayers from the sale of these Federal resources. Proposed statutory and administrative changes fall into three general categories: advancing royalty reforms, encouraging diligent development of oil and gas leases, and improving revenue collection processes. More information on these proposals is provided in Appendix B.

SCIENCE COORDINATION

Science is critical to BOEM's mission to manage offshore energy and mineral resources in an environmentally and economically responsible way. A fundamental component of this mission is the direction set forth by numerous and diverse statutes. For instance, the OCS Lands Act requires BOEM to consider the impacts from OCS development on the marine, coastal, and human environments. BOEM's science is intended to inform decision-makers and the public about potential environmental impacts of OCS energy and mineral resource development, how to prevent or mitigate those impacts, and how to monitor impacts and measures for continued environmental protection. Therefore, the valuable data collected through BOEM's environmental programs is used not only within BOEM but also by stakeholders including other Federal agencies and state and local governments.

A piping plover scouts for food

Support for research – both basic and applied – and development, as well as science in general, remains a priority for the Administration. Basic research, which is defined within OMB Circular A-11 as the "systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind," may include activities with broad applications. OMB Circular A-11 defines applied research as the "systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met." As a key component of its Environmental Studies Program, BOEM utilizes partnerships, including those within the Department as well as other Federal, State and academic institutions, to conduct applied scientific work to support the Bureau's decision-making processes.

Science underpins decision-making at BOEM and across the Department. Therefore, coordination and strategic planning of scientific investments is critical to realizing the Department's strategic science vision. To that end, BOEM actively participates – and occasionally plays a leading role – in the Department's formalized Science Advisory Group, which discusses emerging issues and facilitates coordination and awareness among DOI bureaus. BOEM was also highly engaged in the development of the Scientific Integrity policy (updated in December 2014). This high level of engagement enabled BOEM to ensure that science investments and the associated justification materials are consistent with Departmental and Administration priorities and reflect coordination with other Federal partners (including other DOI bureaus).

BOEM's FY 2017 President's Budget builds on the work done on landscape-level and ecosystem-wide conservation, oceans policy, and climate adaptation and resilience, and moves toward institutionalizing these Administration priorities. Conservation, as applied to environmentally responsible offshore ocean energy development, is a key component of BOEM activities. In keeping with the BOEM mission, environmental impacts from oil and gas development, marine mineral activities, and renewable energy projects are taken into account prior to exploring and extracting resources.

The FY 2017 President's Budget continues to support these practices through important partnerships and collaborative efforts. BOEM leverages its funds and expertise with other Federal agencies, state and local governments, academia, and industry. By contributing personnel, equipment, facilities and funds, the partners are able to extend the scope of research to enable all partners involved to obtain maximum results from research efforts. BOEM funding enables critical environmental studies that not only support its mission, but also the missions and research efforts of other entities. The following are several examples of how BOEM partnerships provide funds for environmental work critical to both BOEM's and other entities' missions and research efforts.

From FY 2011 through FY 2015, BOEM provided over $67 million to Federal partners to conduct BOEM-designed scientific environmental work for the Bureau. Of that amount, over $40 million went to partnerships with NOAA and over $20 million to other bureaus within DOI. Additionally, BOEM and the U.S. Geological Survey (USGS) partner to leverage resources for OCS ecosystem studies. Each year, the USGS receives OCS ecosystem funds (approximately $2 million) which it leverages with BOEM to enable the two bureaus to extend the scope of their research. The extra funding enables BOEM to address additional studies requirements through USGS that it otherwise might not necessarily be able to fund. BOEM has also successfully partnered with other Federal partners including the National Aeronautics and Space Administration, U.S. Navy, U.S. Air Force, U.S. Army Corps of Engineers and the National Park Service to study, analyze, develop and conduct various conservation activities related to the strategic placement of dredged material from the OCS. BOEM is responsible for leasing OCS sediment resources for coastal restoration projects and, in addition to Federal partners, has active partnerships with coastal states, such as Louisiana, Florida and Virginia, as well as their environmental agencies. To date, BOEM has conveyed the rights to more than 112 million cubic yards of OCS sediment by executing 48 leases for projects in seven states and that have restored over 269 miles of coastline.

BOEM also fosters collaborative conservation activities with other entities through its work conducted under the auspices of the National Oceanographic Partnership Program (NOPP). The NOPP is a collaborative community of Federal agencies that partners with state and local governments, academia, and industry with the goal of increasing knowledge and understanding

of the ocean environment through research, including the areas of resource management, research and exploration, technology development, and ocean education. An independent peer review process is used to evaluate and recommend proposals submitted for the research projects solicited by NOPP members each year. NOPP encourages research that offers a component that benefits public education. NOPP also supports educational projects that directly and/or indirectly involve educators and students, and sponsors the National Ocean Sciences Bowl – a high school level national academic competition related to the study of oceans. This allows students the opportunity to learn through collaborative projects, thus helping to engage our youth in science-based careers.

SECRETARIAL INITIATIVES

Powering Our Future and Responsible Use of the Nation's Resources. Through early planning, thoughtful mitigation, and the application of sound science, the Department is working to ensure the Administration's comprehensive energy strategy is applied in a manner that fosters environmentally and economically responsible development of the Nation's offshore energy and mineral resources, while diligently seeking ways to improve efficiency through the use of technology, shared services, and best practices.

BOEM currently manages about 5,030 active oil and gas leases on over 27 million OCS acres. In FY 2015, OCS leases provided 553 million barrels of oil and 1,346 billion cubic feet of natural gas to energy markets, accounting for about 16 percent of domestic oil production and 4 percent of domestic natural gas production, almost all of which is produced in the Gulf of Mexico. Annually, this production generates billions of dollars in revenue for state and local governments, as well as U.S. taxpayers, while supporting hundreds of thousands of jobs. During FY 2015, OCS leasing and production generated $4.4 billion in revenue for the Federal Treasury and state governments. The overall level of activity on the OCS related to this production, drilling, and development of new projects is estimated to support employment of about 650,000 direct, indirect, and induced jobs.

The OCS Lands Act requires the Secretary of the Interior to prepare a five year program that includes a schedule of potential oil and gas lease sales and indicates the size, timing, and location of proposed leasing activity as determined to best meet national energy needs, while addressing a range of economic, environmental, and social considerations.

The Atlantis platform in the Gulf of Mexico

In January 2015, BOEM released its Draft Proposed Program, the first of three proposals required for the development of a new Five Year OCS Oil and Gas Leasing Program to cover the years 2017-2022. BOEM anticipates issuing the second proposal, the Proposed Program, in early 2016. The Draft Proposed Program takes into consideration oil and gas resources as well as economic, social, and environmental impacts. BOEM consults with stakeholders to develop a program that offers access to those areas of the OCS with the most promising potential for development of oil and gas resources in an environmentally responsible manner. Costs associated with the development of the Draft Proposed Program and the execution of BOEM's Five Year Program are presented within the "Powering Our Future" crosscut. The amounts presented reflect nearly all of BOEM's efforts (i.e., leasing and plans, resource evaluation, and all environmental analyses performed in support of these activities).

The Draft Proposed Program is designed to promote the diligent and responsible development of the Nation's offshore oil and gas resources. The offshore oil and gas leasing Program is an important component of the President's strategy to support safe and responsible domestic oil and natural gas production to support our economy and enhance energy security. The options in the Draft Proposed Program involve sales in offshore areas that have the highest oil and gas resource potential, highest industry interest, or are off the coasts of states that expressed a strong interest in potential energy exploration, while still considering potential environmental impacts, stakeholder concerns, and competing uses of ocean and coastal areas. The Draft Proposed Program provides the platform to foster the flexibility necessary for long-term planning.

In addition to considering public comment and input from other interested parties, BOEM also prepares a Programmatic Environmental Impact Statement (PEIS), which evaluates potential environmental impacts of OCS oil and gas leasing options within the Proposed Program. BOEM initiated work on the PEIS during FY 2015; information resulting from the PEIS will inform decisions within the Proposed Final Program.

BOEM also supports the President's comprehensive energy strategy through its significant progress on renewable energy leasing and development. To date, BOEM has issued eleven commercial wind energy leases off the Atlantic Coast. In FY 2015, BOEM issued four commercial leases – two offshore Massachusetts and two offshore Maryland. In March 2015, BOEM executed the first wind energy research lease in Federal offshore waters with the

Commonwealth of Virginia's Department of Mines, Minerals and Energy (DMME). "The data collected under this research lease will help us understand the wind potential, weather, and other conditions relevant to standing up wind power generation offshore Virginia," said BOEM Director Abigail Ross Hopper. "This data will be valuable not only to BOEM and DMME, but also to other government agencies, the offshore renewable energy industry, universities, environmental organizations, and others." The most recent example of BOEM's support for renewable energy infrastructure is the Block Island Wind Farm off the coast of Rhode Island. On July 27, 2015, the Secretary of the Interior, BOEM Director, and others celebrated a historic milestone: the first "steel in the water" for America's first commercial scale offshore wind farm. While the wind farm is in state waters, the transmission cables that will transport the project's energy from Block Island to the mainland required a right-of-way on the OCS issued by BOEM. The project, scheduled to be online in 2016, is expected to power about 17,000 homes. The lessons learned from the Block Island Wind Farm project will inform future OCS projects' facility design, fabrication, and installation.

Engaging the Next Generation. BOEM is actively engaged in youth initiatives and participates in the DOI Youth Task Force, Youth Alliance, and inter-agency working group for the development of the 21st Century Conservation Corps. The hiring of young people is integral to BOEM's efforts to identify and recruit high-performing candidates for the future workforce, and it has the added benefit of encouraging youth to pursue science-based studies. BOEM is also actively engaged in a number of recruitment and outreach activities that target younger generations.

Building a Landscape-Level Understanding of Our Resources. The Department of the Interior seeks to harness emerging technologies and work with partners to elevate the Nation's understanding of our resources on a landscape-level. In particular, BOEM is working to provide the science and tools for policy and decision-makers to effectively manage resources to address habitat characteristics, risk vulnerabilities, mineral resources, energy potential, and conservation priorities. Two examples of the investments follow:

- **MarineCadastre.gov Project.** The MarineCadastre.gov project, a joint initiative between BOEM and NOAA, is a web-based integrated marine information system that provides an authoritative source of ocean information, including offshore boundaries, infrastructure, ocean uses, habitat distribution data, energy potential, and other data sets important to large regional ocean planning efforts, as well as project-specific planning. Data is provided as immediately viewable map data, downloadable geographic information system (GIS) formatted data, and map services. Users inside and outside of BOEM have access to the most up to date versions of lease maps, protractions, lease blocks, boundaries, pipelines, wells, and other BOEM/BSEE generated GIS data important to BOEM's stakeholders for marine and energy development planning

purposes. The data and services provided through the MarineCadastre.gov project are used by a number of regional ocean portal projects, fulfilling BOEM's vision for the project to be the first place to find authoritative coastal and marine data.

- **Marine Minerals Geospatial Information Management System.** In recent years, the Marine Minerals Program has been rapidly expanding and so has the Bureau's need to access offshore mineral resource information data to meet BOEM's mission of managing offshore sand resources comprehensively and efficiently. Historically, geospatial data has been managed by BOEM on a project-specific or end-user basis without the benefit of an integrating geodatabase data model. To advance its geospatial efforts, BOEM entered into an interagency agreement with NOAA during FY 2014 to leverage up to $1.5 million between fiscal years 2015 and 2017. This project is providing a common geospatial regional database framework for much of the historic investment in resource evaluation, environmental studies, and project-specific geologic and environmental data. This project will allow BOEM to be fully transparent with Federal and state partners for sand resource delineations and share geophysical and geological data to include specific sand resource information (e.g., location, grain size, and volume).

Building a 21st Century Department of the Interior. BOEM strives to make program funding go further during this time of constrained resources. Below are two examples of efforts BOEM will continue to undertake during FY 2017.

- **Leveraging Technology to Reduce Administrative Overhead.** In support of the Department's continued efforts to reduce administrative spending, BOEM has applied rigorous oversight of high-priority areas, specifically travel expenses. BOEM continues to support this effort through the increased use of technology, including teleconferencing, video conferences, shared web sites, and web conferences, as well as enhanced management attention and internal controls.

- **Consolidation of Resources through Colocation with BSEE.** BSEE and BOEM co-locate office space within most headquarters and regional office locations. BSEE manages the GSA occupancy agreements on behalf of BOEM and is reimbursed by BOEM for its pro rata share of the space via a reimbursable service agreement. The co-location of office space enables BOEM to share special space needs (e.g., conference rooms), thereby reducing its physical footprint. The occupancy agreements where BOEM and BSEE are co-located include: Anchorage, Alaska (the lease expires in 2019); Camarillo, California (the lease expires in 2024); New Orleans, Louisiana (the lease expires in 2025) and two warehouses in the New Orleans area; and Sterling, VA (the lease expires in 2025).

PRESIDENT'S MANAGEMENT AGENDA

The Department of the Interior supports the President's Management Agenda to build a better government, one that delivers continually improving results for the American people and renews their faith in government. The Bureau of Ocean Energy Management is actively involved in the government-wide effort to bring forward the most promising ideas to improve government effectiveness, efficiency, spur economic growth, and promote people and culture. BOEM supports achievement of the President's Management Agenda objectives in these four pillars as described below.

Effectiveness. BOEM supports the Department's efforts to improve customer service, streamline and speed transactions, implement evidence-based policy, increase accountability and participation, and harness ingenuity of the American people to do more than government can do by itself.

BOEM's core programs are founded on rigorous analysis of evidence in order to increase accountability and provide the best possible return on taxpayer investments. The Five Year OCS Oil and Gas Leasing Program balances consideration of eight specific factors, including among others, oil and gas resource potential, environmental sensitivity and marine productivity, industry interest, regional and national energy needs, other uses of the OCS, and the policies of the coastal states. The renewable energy program relies on intergovernmental task forces to identify and review relevant data to identify sites suitable for renewable energy development while reducing potential conflicts. BOEM identifies what information the Bureau needs and then makes an effort to invest in the collection of that data, whether that is through the procurement of external studies and data; development of a new regulation or revision to an existing information collection (surveys, forms); participation in data sharing or publication of data on external sites; or through internal methods such as internal program, cost, and performance evaluation and analysis. BOEM relies on expertise inside and outside the Bureau to vet, verify, and analyze the information it collects and use it appropriately to inform actions to develop offshore natural resources and protect the environment. In particular, BOEM's environmental science program generates vast amounts of information that ultimately allows the Bureau to determine where to allow development and how to mitigate any potential environmental harm. The following are specific examples of how BOEM supports the Administration's efforts to include a renewed focus on evidence-based decision-making, customer service, and smarter IT delivery.

- **National Research Council (Supporting Accountability and Evidence-Based Decision-Making).** BOEM has initiated a contract with the National Academy of Sciences National Research Council (NRC) to provide scientifically credible, independent perspectives and information on issues of relevance to BOEM's environmental assessment and studies programs and to facilitate and support discussions

on those issues. The NRC work will provide independent and objective advice concerning the implications of science for decision-making. This includes initiating a standing committee to provide expert assessments of recent developments in selected fields of science and technology, including reviewing and providing expert advice at a high level on gaps and priorities for research. Results from this committee may lead to new research conducted by BOEM's Environmental Studies Program.

- **Modernizing BOEM's Technical Information Management System (Supporting Customer Service and IT Delivery).** BOEM, in coordination with BSEE, continues to modernize and enhance the Technical Information Management System (TIMS) by developing ePlans. TIMS is a web-based platform that supports online reporting and permitting functions and which is utilized by both BOEM and BSEE. Together, the bureaus are working to enhance functionality and service delivery. The ePlans portal will revolutionize the plan submittal and review process for both BOEM and industry. It will automate the plans process and ensure the consistency, transparency, efficiency and quality of BOEM's review and approval of industry plans. The system will be dynamic enough to record changes made at all phases of the process, allowing for proper record-keeping and the ability to respond to Congressional and managerial requests. It will also allow the plan submission to become part of the TIMS database which can be referenced for future BOEM and BSEE applications and components.

  This effort to modernize an important component of BOEM's IT infrastructure will achieve significant gains for both the rigor of analysis and the efficiency of plan review. The automation of this process will yield significant savings for industry and increase coordination and opportunities for data-sharing across Federal and state agencies. Not only will industry be able to log into the ePlans system to submit plans, but the states and Federal agencies will be able to log into ePlans to view plans and will receive electronic notifications for those plans affecting their states or agencies.

  Throughout this process, BOEM has coordinated closely with BSEE, which is simultaneously developing a complementary permit review platform called ePermits. The ePlans portal is a critical component of BOEM's efforts to improve and modernize its core mission processes, and to facilitate coordination and data-sharing between BOEM, BSEE and other state and Federal regulatory agencies.

Efficiency. The Department of the Interior supports the President's Management Agenda to cut waste and implement a government that is more responsive and open. The BOEM budget supports the Department's efforts through a set of integrated enterprise reforms designed to support collaborative, evidence-based resource management decisions; efficient IT Transformation; optimized programs, business processes, and facilities; and a network of

innovative cost controlling measures that leverage strategic workforce alignment to realize an effective 21st Century Interior organization. In addition to the efforts described above under the "Management Efficiencies" section, a specific BOEM effort to do this includes:

- **Shared Administrative Services (Supporting Shared Services).** BOEM receives administrative services provided by BSEE through a reimbursable service agreement. The services include: finance, human resources, procurement, facilities, information management, and physical and personnel security. Acquiring these critical services through BSEE minimizes the duplication of administrative functions in BOEM and BSEE, and optimizes efficiency through the consolidation of resources into a single service provider. The Department has strongly supported the expansion of business cross-servicing for more than 30 years. This latest effort between BOEM and BSEE is another step forward in this direction and has the added benefit of implementing standardized practices that further increase the productivity for highly skilled personnel in both bureaus. By utilizing the shared services model, BOEM and BSEE continue to improve their best practices.

- **Financial Assurance and Risk Management (Supporting Optimized Business Processes).** As a steward of OCS resources, BOEM manages a variety of risks associated with offshore activities. Some of these risks are intrinsically related to financial assurance and loss prevention to the U.S. Government and the American taxpayer. Robust and continuous risk monitoring is necessary to control impacts of financial uncertainty, credit risk, project failures, legal liability, accidents, and natural disasters. Standard mitigation strategies include risk transference, risk avoidance, risk reduction, and planned risk acceptance. The cost of decommissioning a facility is based on the type and number of various components (e.g., wells, platforms, pipelines), various environmental factors (e.g., water depth, location), condition of the facilities (e.g., age, rust, toppled, damaged), and market conditions (e.g., rig availability, supply and demand). Contingent liabilities associated with decommissioning of facilities are currently estimated to be in the tens of billions of dollars, but as assessments continue to be updated and revised, the estimates of total liabilities could increase significantly. The discussion of this program in the Conventional Energy chapter provides some specific examples of the conditions that have spurred the need for a more proactive approach to the development and management of a national risk policy and financial assurance program. BOEM's Risk Management Program, for which additional funds are requested in FY 2017, seeks to vastly improve the Government's ability to identify, analyze, and mitigate financial risk and liability.

Economic Growth. Through enhanced customer service, smarter IT delivery, and infrastructure permitting, the government can be a platform to fuel economic growth, increase the availability

of government data resources, open up Federal assets such as laboratories and spectrum to fuel private-sector innovations, streamline and speed transactions, and foster public-private collaborations to create jobs of the future.

- **Environmental Studies Program Information System (Supporting Open Data).** In coordination with BSEE, BOEM is overhauling the current Environmental Studies Program Information System (ESPIS). The ESPIS is a catalog of all of BOEM's environmental studies compiled over more than 40 years. This information is publicly available and used internally for environmental analyses. Through the ESPIS project, BOEM is working to improve public access to environmental information and studies results. This effort supports the Office of Management and Budget (OMB) Open Data Policy initiative, specifically by "building or modernizing information systems in a way that maximizes interoperability and information accessibility" (OMB Memo M-13-13). The ESPIS is being redesigned to (1) allow access to all study products (e.g. data, photos, and presentations)—not just reports, (2) make the system more functional and user-friendly, and (3) link to the Multipurpose Marine Cadastre. The NOAA Coastal Services Center in Charleston, SC, is handling the geospatial/data aspects of the project through an Interagency Agreement. The ESPIS search tool is currently being tested through an iterative development process internally, with planned internal and external reviews. On August 27, 2015, BOEM issued a Note to Stakeholders inviting them to try out the ESPIS and provide comments to BOEM. Final public release of ESPIS occurred in FY15. To date, all of BOEM's completed environmental studies have been entered into the database, along with more than 2000 publications and 800 data products. BOEM is making this information available to its stakeholders online to enable them access to research and to further expand their access to information and resources.

- **Renewable Energy Task Forces and Data Collection (Supporting Open Data).** BOEM recognizes the importance of coordinating and consulting with state, local, tribal, and Federal stakeholders to develop a comprehensive renewable energy program for the OCS. This is accomplished through intergovernmental task forces and cooperative agreements that leverage funds to collect important information about the offshore environment that meets the needs of both BOEM and the states.

People and Culture. The Department of the Interior seeks to innovate by unlocking the full potential of the existing workforce and building the workforce needed for tomorrow. To help the Department accomplish this, BOEM is working to attract, develop, and retain top talent, create a culture of creativity and scientific discovery, and enable the sharing of knowledge and information. Specific BOEM efforts to do this include:

- S**pecial Pay Rates for Critical Science/Engineering Professions.** Sustaining the Department's energy programs requires the ability to attract and retain qualified personnel in fields that are highly competitive for skilled professionals that are in scarce supply. The Department's ability to compete for talent in this dynamic sector of the economy is a problem across Interior's oil and gas development and inspection programs. The competition with industry to attract and retain talented, skilled candidates is intense, and industry does not hesitate to compensate its mission-critical personnel at the highest levels possible. As a result, it is very difficult to compete for and retain top tier staff because BOEM's employment package is not competitive with that of industry. Authority provided by Congress since 2012 has allowed BOEM and BSEE to offer higher rates of pay to employees within specific job series (geophysicists, geologists, and petroleum engineers) in the Gulf of Mexico Region. In August 2015, OPM issued special salary tables expanding on this authority. The OPM salary tables applicable to BOEM and BSEE currently cover additional mission critical occupational series in the Gulf of Mexico Region, and the Department continues to work actively with OPM to expand this incentive in order to meet critical workforce gaps in other BOEM and BSEE regions and for DOI employees engaged in onshore energy development and inspection. BOEM's FY 2017 budget includes an increase of $1.6 million for increased rates of pay, consistent with OPM guidance.

- **Recruitment and Retention of a Skilled Workforce.** BOEM strives to hire the best and brightest in all job series and utilizes a variety of financial incentives and work life balance tools to recruit and retain those individuals. In consultation with BSEE, comprehensive manager training materials have been developed on the hiring process and the tools and authorities that are available to better attract candidates and expedite the hiring process. To facilitate external outreach efforts, the Bureau has also developed an online calendar of recruitment and outreach events that is available to both hiring managers and the public. A centralized fund for travel and other related expenses has also been established in the Director's Office to further these efforts at the Program/Regional Office level. Additionally, a youth coordination team actively shares information on internship and volunteer opportunities, and develops strategies to better attract candidates and develop interest in career paths critical to BOEM's mission. To help retain new hires, new onboarding procedures have been put in place to provide new employees with a positive experience as they join the organization. BOEM is also exploring the feasibility of targeting funds to be allocated centrally specifically for relocation and retention incentives in areas where hiring and retention are most problematic. The Bureau has also initiated efforts to develop a comprehensive Strategic Workforce Plan that is targeted to be in place in the 3rd Quarter of FY 2016. Once completed, this Plan will provide the framework necessary for the development of

additional initiatives that will enable the Bureau to successfully recruit and retain an effective workforce.

STRATEGIC OBJECTIVE PERFORMANCE INFORMATION

The FY 2014-2018 DOI Strategic Plan, in compliance with the principles of the Government Performance and Results (GPRA) Modernization Act of 2010, provides a collection of mission objectives, goals, strategies and corresponding metrics that provide an integrated and focused approach for tracking performance across a wide range of DOI programs. While the DOI Strategic Plan for FY 2014-2018 is the foundational structure for the description of program performance measurement and planning for the FY 2017 President's budget, further details for achieving the Strategic Plan's goals are presented in the DOI Annual Performance Plan and Report. Bureau and program-specific plans for FY 2017 are fully consistent with the goals, outcomes, and measures described in the FY 2014-2018 version of the DOI Strategic Plan and related implementation information in the DOI Annual Performance Plan and Report.

Bureau Contribution. Within the DOI Strategic Plan for FY 2014–2018, BOEM is aligned under Mission Area Three: *Powering Our Future and Responsible Use of the Nation's Resources*. Both the conventional energy and renewable energy activities are focus areas within the DOI Strategic Plan, and environmental studies, assessments, and other activities conducted by BOEM support both of these strategies. BOEM tracks and reports a total of three GPRA measures, and associated supporting performance measures, to the Department under the three separate strategies noted below.

Implementation Strategy and Performance Metrics. The following narrative provides insight into the three DOI Strategic Plan strategies BOEM supports as well as the performance metrics associated with those strategies. Please reference the DOI Annual Performance Plan and Report for additional information.

BOEM's conventional energy activities support Goal One: *Secure American's Energy Resources* and Strategy Three: *Manage Conventional Energy Development*. The specific GPRA measure, *Number of offshore lease sales held consistent with the Secretary's Five Year Program*, tracks the quantity of lease sales conducted during the current Five Year Program. The conventional energy GPRA measures and their supporting performance measures are noted in the following table.

Table 3: Performance: Manage Conventional Energy Development

Outputs, Supporting Performance Measures, and/or Milestones	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Plan	2015 Actual	2016 Plan	2017 Plan
GPRA Measure: Number of offshore lease sales held consistent with the Secretary's Five-Year Oil and Gas Program	-	2	3	3	2	2	3	3
Number of blocks/tracts evaluated	24,870	14,612	12,200	9,184	15,000	33,977	15,000	15,000
Maintain the ratio of 1.8 to 1 (+/-0.4) of accepted high bids to BOEM's estimated value [1]	N/A	2.013 to 1	2.116 to 1	1.84 to 1	1.8 to 1 (+/- 0.4)	1.92 to 1 (+/- 0.4)	1.8 to 1 (+/- 0.4)	1.8 to 1 (+/- 0.4)
Percent of Environmental Studies Program (ESP) projects rated "Moderately Effective" or better by BOEM internal customers	91% (21/23)	95% (21/22)	96% (22/23)	100% 16/16	88% (16/16)	100% (16/16)	90% (N/A)	90% (N/A)

[1] This measure compares the accepted high bid on each tract to the government's estimated value for that tract. Industry corporate strategy with respect to acquiring specific acreage could lead to a company raising its bid above this analytical value to improve their chances of winning the lease. BOEM estimates are based on a discounted cash flow analysis of a tract and are not designed to predict the high bid. Therefore, the value of this indicator should always be greater than one to achieve fair value for OCS leases. The annual target ratio of 1.8 to 1 means that on average, the industry bids received are expected to be $1.80 (+/- 0.4) for every dollar of the estimated value for each tract.

BOEM's conventional energy activities also support Goal Two: *Sustainably Manage Timber, Forage, and Non-energy Minerals*, Strategy Three: *Manage Non-energy Mineral Development*. The specific GPRA measure, *Number of sand and gravel requests processed for coastal restoration projects*, tracks the number of non-energy minerals lease requests for OCS sand and gravel processed for purposes of coastal restoration and resilience projects. This is a newly established GPRA measure, and baseline results were collected starting in FY 2014 as reported in the following table.

Table 4: Performance: Manage Non-energy Mineral Development

Outputs, Supporting Performance Measures, and/or Milestones	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Plan	2015 Actual	2016 Plan	2017 Plan
GPRA Measure: Number of sand and gravel requests processed for coastal restoration projects	N/A	N/A	N/A	5	5	5	7	8

The renewable energy functions support Goal One, Strategy Two: *Develop Renewable Energy Potential*. The specific GPRA measure, *Number of megawatts of approved capacity authorized on public land and the OCS for renewable energy development while ensuring full environmental review*, is a cumulative measure that tracks the cumulative number of approved megawatts based on the total capacity of the equipment to be installed, as specified in an approved construction and operations plan. The renewable energy GPRA measure and its supporting performance measures, which are reported within the DOI Annual Performance Plan and Report, are noted in the following table:

Table 5: Performance: Develop Renewable Energy Potential

Outputs, Supporting Performance Measures, and/or Milestones	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Plan	2015 Actual	2016 Plan	2017 Plan
GPRA Measure: Number of megawatts of approved capacity authorized on public land and the OCS for renewable energy development while ensuring full environmental review (cumulative) [1]	468	468	468	468	498	498	554	554
Number of offshore renewable energy leasing or ROW/RUE grant processes initiated (i.e., first public notice issued)	4	4	5	2	2	0	2	1
Number of limited leases issued for offshore renewable energy testing and data collection, including §238 research leases	0	0	0	1	3	1	2	0
Number of commercial leases issued for offshore renewable energy generation	1	0	3	1	8	4	3	5
Number of right-of-way/right-of-use and easement grants issued for offshore renewable energy transmission	0	0	0	0	1	1	0	0
Number of offshore NEPA documents (EIS/EAs) finalized for Renewable Energy	1	1	4	5	8	5	8	7

[1] This measure is tracked as a part of the Department of the Interior Renewable Energy Priority Goal. The actuals and planned targets displayed within the table reflect BOEM's contribution toward the Department-wide Priority Goal.

BOEM is expanding on its use of activity-based costing (ABC) data that it provides its managers via internal management reports intended to keep management apprised of ABC code reporting, performance measurement targets and their associated results. The ABC codes are being updated and expanded to reflect organizational changes that have occurred in recent years. This ABC process refinement should further improve the quality of data available to managers in making decisions in such areas such as human capital management, cost recovery, cost control and workload allocation. BOEM is further strengthening the foundation for ABC Management within the Bureau to provide justifiable and defensible management information that support strategic and tactical decision-making moving the organization forward.

Use of Cost and Performance Information

BOEM continues to refine and to expand integrating its budget and performance data to inform decision-making. One example of BOEM integrating the two sets of information can be seen in the data reported for updated cost recovery efforts, which BOEM will identify via several newly established reports later this fiscal year. These reports will provide more definitive links between ABC codes that staff members utilize to report their payroll time and the various activities that BOEM has legislative authority to recover costs associated with those activities. The data for these reports are pulled from the Federal Business Management System and COGNOS data bases using specific search criteria that focus on a suite of ABC codes that, when utilized correctly, capture specific activities for cost recovery efforts. This methodology allows for repeatable, justifiable results to improve the accuracy and consistency of BOEM's cost recovery fees.

AGENCY PRIORITY GOALS

- **Renewable Energy Resource Development**

By September 30, 2017, increase approved capacity authorized for renewable (solar, wind, geothermal, and hydropower) energy resources affecting Department of the Interior managed lands, while ensuring full environmental review, to at least 16,600 megawatts (since end of FY 2009).

Bureau Contribution. BOEM supports the Renewable Energy Priority Goal primarily through its Office of Renewable Energy Programs, which advances a sustainable OCS renewable energy future through interactive site planning and environmentally responsible operations. Support for the Smart from the Start initiative to facilitate siting, commercial, and limited leasing, and construction of new projects will spur the responsible development of offshore wind resources, consistent with this Priority Goal.

Offshore wind farm

BOEM counts its contribution toward this Priority Goal via the Department's approval of construction and operations plans for renewable energy generation projects and the approval of transmission capacity for renewable energy on the OCS. Currently, the Cape Wind energy project off the coast of Massachusetts and the Block Island Transmission System off the coast of Rhode Island contribute to this Priority Goal. The construction and operations plan for Cape Wind, the Nation's first commercial lease for offshore wind energy, received Secretarial approval in April 2011. On July 27, 2015, the Block Island Wind Farm became America's first "steel in the water" offshore wind farm. Deepwater Wind, the project developer, is constructing a five-turbine, 30-megawatt wind farm in state waters about three nautical miles southeast of Block Island. At 589 feet above sea level, the turbines will be among the tallest in the world. The facility will provide electricity directly from the wind farm to Block Island. Because the island uses only one megawatt of power in the offseason and four megawatts in the summer peak season, the remaining energy produced will be sent to other state customers via a 25-mile bi-directional submerged transmission cable between Block Island and the Rhode Island mainland.

Implementation Strategy. As required by the Energy Policy Act of 2005, BOEM issues renewable energy leases and grants on a competitive basis unless it determines that no competitive interest exists. In either case, the developer must submit and receive approval of appropriate plans and, in the case of marine hydrokinetic energy, Federal Energy Regulatory Commission (FERC) license applications, prior to moving forward with its proposed activities. At the end of the lease or grant term, the developer must decommission facilities in compliance with BOEM regulations.

To issue leases, BOEM must conduct a multi-step process entailing information gathering, consultation with interested and affected parties, NEPA review and compliance, and analysis in light of other applicable Federal requirements for each affected state. BOEM finalized one offshore NEPA document (i.e., determination of NEPA adequacy, environmental impact statement or an environmental assessment) for Renewable Energy during FY 2012, four in FY 2013, and five each in FY 2014 and FY2015. BOEM anticipates finalizing eight during FY 2016 and seven during FY 2017. BOEM also tracks the number of offshore renewable energy leasing or right-of-way/right-of-use grant processes initiated (i.e., first public notice issued). BOEM initiated five offshore renewable energy leasing or right-of-way/right-of-use grant processes during FY 2013 and two in FY 2014. BOEM did not initiate any lease or grant processes during

FY 2015; however, BOEM anticipates initiating two lease or grant processes during FY 2016 and one lease or grant process during FY 2017.

A **commercial lease** is a lease with terms and conditions that allow a person or entity to conduct commercial activities.

Commercial Leases. BOEM continues to make strides on renewable energy leasing activities. In November 2010, Secretary Salazar signed the Nation's first commercial lease for wind energy development on the OCS for the Cape Wind energy project. In April 2011, the Cape Wind Energy Project construction and operations plan was approved and announced by the Secretary with an approved capacity of 468 megawatts. The Bureau reported the approval of the construction and operations plan toward the Renewable Energy Priority Goal metric, which focuses on the number of megawatts of approved capacity for renewable energy development and tracks the cumulative number of approved megawatts based on the total capacity of the equipment to be installed, as specified in an approved construction and operations plan. As of 2015, BOEM has approved 498 megawatts, increasing to 554 megawatts in FY 2016 and FY 2017.

To date, BOEM has issued a total of eleven commercial leases and anticipates issuing one more during FY 2016 and five during FY 2017, pending the required public consultation and environmental analyses.

Limited/Research Leases. A limited lease is a lease with terms and conditions that allow the lessee to conduct activities on the OCS that support the production of energy, but without actually producing energy for sale, distribution, or other commercial use. A research lease is a lease issued to a Federal agency or state for renewable energy research activities. The number of leases issued is highly dependent upon the amount of interest and demand for the leases, and this uncertainty can lead to variability in the issuance of leases from year to year. To date, BOEM has issued two limited research leases. BOEM did not issue any limited research leases during FY 2012 or FY 2013. In FY 2014 and FY 2015, BOEM issued one limited research lease each year and anticipates issuing two limited research leases during FY 2016 and none during FY 2017.

Federal/State Task Forces. BOEM established intergovernmental task forces in states where the Governor contacted BOEM to express interest in development of offshore renewable energy. Each task force collects and shares information for all stakeholders, including BOEM, for use in its decision-making process. As funding permits, BOEM will continue to respond to state interest in task forces along the East and West Coasts. During FY 2015, BOEM supported 13 Federal/state task forces for renewable energy development (Maine, Massachusetts, Rhode Island, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Oregon, Hawaii and established Florida during FY 2015). These task forces consist of

representatives of Federal agencies and state, local, and tribal governments to facilitate coordination throughout the OCS renewable energy leasing and development process. BOEM will continue to support these existing state task forces, as well as a newly established thirteenth task force (Florida), and support new stakeholder collaboration each year. In addition, both New Hampshire and California have discussed possible task force formation with BOEM.

Performance Metrics. One of the mechanisms used to monitor the renewable energy initiative and BOEM's contribution toward the renewable energy Priority Goal is through performance metrics. The Department employs a set of internal measures and milestones to monitor and track achievement of the Priority Goal. Progress is reported and reviewed throughout the year by the Department to identify and address any need for enhanced coordination or policy measures to address barriers to the achievement of the Priority Goal. This Goal is supported by funding from the Renewable Energy activity, as well as renewable energy studies and assessments funded through the Environmental Programs activity. BOEM's performance measures, metrics, and additional information are contained within the DOI Annual Performance Plan and Report.

- **Engaging the Next Generation**

By September 30, 2017, the Department of the Interior will provide 100,000 work and training opportunities over four fiscal years (FY 2014 through FY 2017) for individuals age 15 to 35 to support Interior's mission.

Bureau Contribution. BOEM supports the Engaging the Next Generation Priority Goal through myriad outreach efforts, including participation in the DOI Youth Initiative Coordination Team, the Generation Indigenous (GEN-I) Challenge, and the United National Indian Tribal Youth (UNITY) Conference. BOEM has also developed and maintains a "Recruitment and Outreach Calendar" on its BOEM.gov website to post recruitment and outreach events that BOEM is registered to attend. This calendar is available to the general public to identify activities that are taking place across the nation where BOEM will be represented. Through this feature, BOEM seeks not only to educate the public on its ocean science activities, but also to spark enthusiasm for science among young people. Fostering interest in scientific careers and recruiting the next generation of skilled professionals are integral to BOEM's efforts to strengthen its workforce and implement succession planning.

Sustaining the Department's energy programs requires the ability to attract and retain qualified personnel in fields that are highly competitive for skilled professionals that are in scarce supply. The Department's ability to compete for talent in this dynamic sector of the economy is a challenge across Interior's oil and gas development and inspection programs, so participation in youth initiatives is an important component of BOEM's recruitment strategy.

Implementation Strategy. BOEM is actively engaged in a number of recruitment, outreach, and engagement activities that target the next generation. To coordinate these efforts, BOEM created an internal Youth Coordination Team to improve communication, coordination, and the tracking of youth activities bureau-wide. The Youth Coordination Team plans to partner with a local elementary school in each of BOEM's locations by the end of 2016. The Youth Coordination Team distributes a monthly Youth Digest internally to highlight activities, profiles of interns and upcoming recruitment events. The Youth Coordination Team consists of representatives in each of the programs and regions to identify efficiencies and coordinate youth opportunities among the program and regional offices to advance the bureau's goals and fulfill departmental reporting requirements.

Performance Metrics. The Department of the Interior tracks youth engagement in four areas: Play, Learn, Serve, and Work. BOEM contributes to the Learn and Work targets, which are tracked through a combination of manual data collection (Learn and Work) and pay data captured centrally through the Federal Personnel Payroll System (Work). BOEM Learn data is collected by the Department annually, and Work data is collected by the Department quarterly.

- **Climate Change Adaptation**

By September 30, 2017, the Department of the Interior will mainstream climate change adaptation and resilience into program and regional planning, capacity building, training, infrastructure, and external programs, as measured by scoring at least 300 of 400 points through the Strategic Sustainability Performance Plan scorecard.

Bureau Contribution. Climate change is a leading threat to natural and cultural resources across the country. The effects exacerbate existing threats from drought, floods and wildfires, presenting a growing challenge to the resilience of communities. BOEM is on the front lines addressing climate challenges, including more extreme weather events such as Hurricane Sandy. BOEM supports the Climate Change Adaptation Priority Goal primarily through its marine mineral and environmental activities. BOEM's most significant opportunities to promote resilience to climate change include the following: identifying additional sand resources to provide protection against future storms, conducting research to better understand the physical and environmental characteristics of sand bodies so resource management can be enhanced and resources can be conserved, and continuing to work with Federal, state, and local government partners to facilitate the flow of information and data to support the continuing sustainability of coastal communities.

Implementation Strategy. BOEM supports climate change resiliency through multiple activities. BOEM identifies and assesses climate change related impacts on and risks to BOEM's ability to accomplish its missions, operations and programs. BOEM recognizes that ongoing sea level rise and the potential for increased storm frequency and/or intensity resulting

from climate change will translate into increased coastal erosion and the need for additional sand resources to combat or recover from coastal erosion. Therefore, BOEM is actively engaged in delineating additional resources, leading a pilot effort to consider regional leases with states (thereby streamlining the leasing process), and conducting environmental studies to support effective protection of sensitive resources. BOEM is also focusing on enhanced resource management by analyzing data, conducting studies, and using tools such as GIS to manage risks associated with climate change, which could include sand resource depletion through increased demand from coastal restoration projects. BOEM supports climate-resilient investments by states, tribes, and local communities through technical assistance and cooperative agreements. BOEM also contributes to coordinated interagency efforts to support climate change preparedness and resilience at all levels of government, including collaborative work across regional agency offices and hubs, and through coordination of information, data, and tools. BOEM initiated, manages and funds the Marine Cadastre in collaboration with NOAA. The Marine Cadastre is a collaborative effort among a number of Federal agencies, regional planning bodies, state entities, and non-governmental organizations that provides an integrated marine information system. Additionally, when appropriate, BOEM factors climate change risks into environmental analyses and also partners with other agencies to leverage resources in this area. Examples of BOEM's recent partnering to further environmental efforts related to climate change include: involvement in the Interagency Arctic Research and Policy Committee; contributing to the National Climate Assessment and the latest Intergovernmental Panel on Climate Change report; involvement with regional ocean councils and planning bodies; and partnering with the National Science Foundation and French agencies to co-fund the Arctic Science Education and Engineering for Sustainability program.

Performance Metrics. The DOI Climate Change Working group is responsible for the Climate Change Adaptation priority goal and reports directly to the Department of the Interior's Office of Policy Analysis.

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FY 2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

Bureau Budget Tables

Table 6 : Budget at a Glance

Bureau of Ocean Energy Management

Budget at a Glance

(Dollars in Thousands)

Bureau of Ocean Energy Management	2015 Actual	2016 Enacted	Fixed Costs (+/-)	Internal Transfers (+/-)	Changes from 2016 (+/-)	2017 Request
Net Current Appropriation	**72,422**	**74,235**			**+5,959**	**80,194**
Offsetting Collections	**97,348**	**96,622**			**-1,678**	**94,944**
Total Budget Authority	**169,770**	**170,857**	**+205**	**-**	**+4,076**	**175,138**
Offsetting Collections						
Rental Receipts	94,868	92,961	-	-	-4,474	88,487
Cost Recovery Fees	2,480	3,661	-	-	+2,796	6,457
Total Offsetting Collections	**97,348**	**96,622**	**-**	**-**	**-1,678**	**94,944**
Ocean Energy Management						
Renewable Energy	**23,104**	**24,278**	**+21**		**-412**	**23,887**
Data Collection and Outreach					*-412*	
Conventional Energy	**49,633**	**59,869**	**+98**		**+4,189**	**64,156**
Risk Management Program Implementation					*+2,895*	
Staffing for Resource Development					*+568*	
Special Pay: Oil and Gas					*+1,632*	
Methane Hydrates Research					*-400*	
General Programmatic Reduction					*-506*	
Environmental Programs	**65,712**	**68,045**	**+55**		**+299**	**68,399**
Staffing for Resource Development					*+299*	
General Support Services	**15,002**	**-**	**-**	**-**	**-**	**-**
Executive Direction	**16,319**	**18,665**	**+31**	**-**	**-**	**18,696**
Total Budget Authority	**169,770**	**170,857**	**+205**	**-**	**+4,076**	**175,138**
Full Time Equivalents (FTE)	**566**	**574**			**+18**	**592**

Table 7 : Summary of Requirements

Bureau of Ocean Energy Management
Summary of Requirements
(Dollars in Thousands)

	2016 Enacted		Fixed	Internal	Program Changes		2017 Request		Total Change from 2016	
	FTE	Amount	Costs	Transfers	*FTE*	Amount	*FTE*	Amount	*FTE*	Amount
Ocean Energy Management										
Renewable Energy	***47***	**24,278**	**+21**	**-**	**-**	**-412**	***47***	**23,887**	**-**	**-391**
Direct Appropriation		11,791	+21	-2,568				8,832		
Offsetting Collections		12,487		+2,568				15,055		
Conventional Energy	***285***	**59,869**	**+98**	**-**	***+17***	**+4,189**	***302***	**64,156**	***+17***	**+4,287**
Direct Appropriation		34,556	+98	-2,882				37,639		
Offsetting Collections		25,313	-	+2,882				26,517		
Environmental Programs	***154***	**68,045**	**+55**	**-**	***+1***	**+299**	***155***	**68,399**	***+1***	**+354**
Direct Appropriation		18,096	+55	+2,426				20,876		
Offsetting Collections		49,949	-	-2,426				47,523		
General Support Services	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Direct Appropriation		-								
Offsetting Collections		-								
Executive Direction	***88***	**18,665**	**+31**	**-**	**-**	**-**	***88***	**18,696**	**-**	**+31**
Direct Appropriation		9,792	+31	+3,024				12,847		
Offsetting Collections		8,873	-	-3,024				5,849		
Total, OEM	***574***	**170,857**	**+205**	**-**	***+18***	**+4,076**	***592***	**175,138**	***+18***	**+4,281**
Offsetting Collections		**-96,622**		**-**		**+1,678**		**-94,944**		**+1,678**
Rental Receipts		-92,961				+4,474		-88,487		+4,474
Cost Recovery Fees		-3,661				-2,796		-6,457		-2,796
Net Appropriation, BOEM	***574***	**74,235**	**+205**	**-**	***+18***	**+5,754**	***592***	**80,194**	***+18***	**+5,959**

Table 8: Program and Financing

Program and Financing (MAX Schedule P)
(dollars in millions)

Treasury Account ID: 14-1917		FY 2015	FY 2016	FY 2017
Obligations by program activity - Direct program				
0003	Appropriations	81	95	77
0004	Offsetting collections	95	110	98
0192	Total direct program	**176**	**205**	**175**
0799	**Total direct obligations**	**176**	**205**	**175**
0802	Reimbursable support agreements	5	4	4
0900	**Total new obligations (direct & reimbursable)**	**181**	**209**	**179**
Budgetary resources - Unobligated balance				
1000	Unobligated balance brought forward, Oct 1[1/]	36	29	-
1010	Unobligated balance transferred to other accts (14-1700)[1/]	-	-	-
1021	Recoveries of prior year unpaid obligations	2	3	3
1050	**Total unobligated balance**	**38**	**32**	**3**
Budgetary resources - Budget authority				
1100	Appropriations, discretionary	72	74	80
1160	**Appropriations, discretionary (total)**	**72**	**74**	**80**
1700	Collected - Offsetting collections	99	101	101
1701	Change in uncollected payments, Federal sources	1	2	2
1710	Offsetting collections transferred to other accounts (14-1700)[2/]	-	-	-
1750	**Offsetting collections, discretionary (total)**	**100**	**103**	**103**
1900	**Total budget authority**	**172**	**177**	**183**
1930	**Total budgetary resources available**	**210**	**209**	**186**
1941	**Unexpired unobligated balance, end of year**	**29**	-	**7**

Program and Financing (continued)

(dollars in millions)

Treasury Account ID: 14-1917		FY 2014	FY 2015	FY 2016
Change in obligated balance - Unpaid obligations				
3000	Unpaid obligations, brought forward Oct. 1	110	118	118
3010	Obligations incurred, unexpired accounts	181	209	179
3020	Outlays (gross)	-171	-206	-231
3040	Recoveries of prior year unpaid obligations, unexpired	-2	-3	-3
3050	**Unpaid obligations, end of year**	**118**	**118**	**63**
Change in obligated balance - Uncollected payments				
3060	Uncollected pymts, Federal sources, brought forward Oct.1	-2	-3	-5
3070	Change in uncollected payments, Federal sources, unexpired	-1	-2	-2
3090	**Uncollected pymts, Federal sources, end of year**	**-3**	**-5**	**-7**
3100	Obligated balance, start of year	108	115	113
3200	**Obligated balance, end of year**	**115**	**113**	**56**
Budget authority and outlays, net				
4000	**Budget authority, gross**	**172**	**177**	**183**
4010	Outlays from new discretionary authority	89	120	125
4011	Outlays from discretionary balances	82	86	106
4020	**Outlays, gross (total)**	**171**	**206**	**231**
4033	Offsetting collections from non-Federal sources (Rental receipts, cost recovery fees, royalty-in-kind)	-98	-99	-99
4050	Change in uncollected payments, Federal sources	-1	-2	-2
4040	**Total offsets against gross budget authority and outlays**	**-99**	**-101**	**-101**
4070	Budget authority, net discretionary	72	74	80
4080	Outlays, net discretionary	72	105	130
4180	**Total budget authority, net discretionary**	**72**	**74**	**80**
4190	**Total outlays, net discretionary**	**72**	**105**	**130**
Unexpired unavailable Balance: Offsetting Collections				
5090	Unavailable balance, start of year	[5]	[5]	[5]
5091	Unavailable balance, end of year	5	5	5

[1/] An unobligated balance of $108 million was brought forward from BOEMRE. In accordance with the reorganization of the former Minerals Management Service, funds were transferred to BSEE (account 14-1700) and ONRR (account 14-0102). FY 2012 was first year of independent BOEM operations.

[2/] Appropriations language in 2012 and 2013 required BOEM to collect BSEE's inspection fees and then transfer them from BOEM to BSEE. Public Law 113-76 amended this language beginning in 2014 so that the fees will be collected in BSEE's Offshore Safety and Environmental Enforcement account.

Table 9: Budget Object Class

Object Classification (MAX Schedule O)
(dollars in millions)

Treasury Account ID: 14-1917		FY 2015	FY 2016	FY 2017
Direct Obligations				
11.1	Personnel Compensation: Full-time permanent	57	66	66
12.1	Civilian personnel benefits	18	22	22
21.0	Travel and transportation of persons	2	2	2
24.0	Printing and reproduction	1	1	1
25.2	Other services from non-Federal sources	90	98	76
26.0	Supplies and materials	1	2	1
31.0	Equipment	2	5	2
41.0	Grants, subsidies, and contributions	7	9	5
99.0	**Subtotal, direct obligations**	**178**	**205**	**175**
Reimbursable Obligations				
41.0	Grants, subsidies, and contributions	3	4	4
99.0	**Subtotal, reimbursable obligations**	**3**	**4**	**4**
99.9	**Total new obligations**	**181**	**209**	**179**

Table 10: Fixed Costs and Internal Realignments

Bureau of Ocean Energy Management
Justification of Fixed Costs and Internal Realignments
(Dollars In Thousands)

Fixed Cost Changes and Projections	2016 Total	2017 Change
Change in Number of Paid Days	n/a	-572
This column reflects changes in pay associated with the change in the number of paid days between the 2016 and 2017.		
Pay Raise	n/a	+1,126
The change reflects the salary impact of the 1.6% programmed pay raise increases as provided in the June, 2015 Circular A-11.		
Departmental Working Capital Fund	2,043	-105
The change reflects expected changes in the charges for centrally billed Department services and other services through the Working Capital Fund. This includes an assessment for the Department's IT Transformation initiative. These charges are detailed in the Budget Justification for Department Management.		
Worker's Compensation Payments	160	+66
The amounts reflect projected changes in the costs of compensating injured employees and dependents of employees who suffer accidental deaths while on duty. Costs for 2017 will reimburse the Department of Labor, Federal Employees Compensation Fund, pursuant to 5 U.S.C. 8147(b) as amended by Public Law 94-273.		
Unemployment Compensation Payments	11	-1
The amounts reflect projected changes in the costs of unemployment compensation claims to be paid to the Department of Labor, Federal Employees Compensation Account, in the Unemployment Trust Fund, pursuant to Public Law 96-499.		
Rental Payments	7,774	-309
The amounts reflect changes in the costs payable to General Services Administration (GSA) and others for office and non-office space as estimated by GSA, as well as the rental costs of other currently occupied space. These costs include building security; in the case of GSA space, these are paid to Department of Homeland Security (DHS). Costs of mandatory office relocations, i.e. relocations in cases where due to external events there is no alternative but to vacate the currently occupied space, are also included.		
Baseline Adjustments for O&M Increases	n/a	0
In accordance with space maximization efforts across the Federal Government, this adjustment captures the associated increase to baseline operations and maintenance requirements resulting from movement out of GSA or direct-leased (commercial) space and into Bureau-owned space. While the GSA portion of fixed costs will go down as a result of these moves, Bureaus often encounter an increase to baseline O&M costs not otherwise captured in fixed costs. This category of funding properly adjusts the baseline fixed cost amount to maintain steady-state funding for these requirements.		

Internal Realignments and Non-Policy/Program Changes	**FY 2017**
Renewable Energy - direct appropriations/offsetting collections BOEM realigned direct appropriations and offsetting collections to more closely reflect the anticipated obligation of funds.	+2,568/-2,568
Conventional Energy - direct appropriations/offsetting collections BOEM realigned direct appropriations and offsetting collections to more closely reflect the anticipated obligation of funds.	+2,882/-2,882
Environmental Programs - direct appropriations/offsetting collections BOEM realigned direct appropriations and offsetting collections to more closely reflect the anticipated obligation of funds.	+2,426/-2,426
Executive Direction - direct appropriations/offsetting collections BOEM realigned direct appropriations and offsetting collections to more closely reflect the anticipated obligation of funds.	+3,024/-3,024

Total, Fixed Costs and Related Changes in 2017	**+205**

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FY 2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

Renewable Energy

Table 11: Renewable Energy Budget Summary

		2015 Actual	2016 Enacted	Internal Transfers (+/-)	Fixed Costs (+/-)	Program Changes (+/-)	2017 Request	Change from 2016 (+/-)
Renewable Energy	($000)	23,104	24,278	-	+21	-412	23,887	-391
	FTE	*58*	*47*				*47*	-

SUMMARY OF 2017 PROGRAM CHANGES

Program Changes from 2016 Enacted	($000)	FTE
Data Collection and Outreach	-412	-
Total Program Changes	**-412**	**-**

The FY 2017 President's Budget request for BOEM's Renewable Energy budget activity is $23.9 million and 47 FTE, a net decrease of $391,000 from the 2016 enacted level. This change is comprised of a programmatic reduction of $412,000 to fund special pay within the Conventional Energy activity and an increase in fixed costs of $21,000.

Data Collection and Outreach (-$412,000). Additional funding is needed to address other higher BOEM priorities, such as increased pay for certain oil and gas related occupations in certain locations. In order to accommodate this priority, BOEM proposes to reduce funding for renewable energy data collection and stakeholder outreach. This budget reduction would result in BOEM holding fewer task force meetings and decreasing the number of stakeholder workshops and other data gathering and analysis efforts in FY 2017 but is not expected to substantively impact program outcomes.

Program Performance Change. The FY 2017 budget request supports the accomplishment of the Department's strategic goals. BOEM is making great strides in moving towards the goals it establishes for itself as well as the supporting performance measures. Budgetary changes are not the sole influence on performance measures tracked within this activity. The reduction identified above does not affect programmatic performance, as depicted by the relatively steady targets for the performance measures contained within the table at the end of this chapter.

PROGRAM OVERVIEW

The OCS has significant potential as a source of new domestic energy generation from renewable energy resources. Section 388 of the Energy Policy Act of 2005 gave the Secretary of the Interior the authority to issue leases, easements, and rights-of-way on the OCS for activities that produce or support production, transportation, or transmission of energy from sources other than oil and gas. Section 388 also authorized the Secretary to permit OCS activities that repurpose facilities currently or previously used for activities authorized under the OCS Lands Act. Renewable energy and alternate use projects may include wind, wave energy, and ocean current projects, as well as projects that make alternative use of existing oil and gas platforms in Federal waters.

Offshore renewable energy wind farm

In 2009, President Obama and Secretary Salazar announced the promulgation of BOEM's renewable energy regulations. These regulations established a framework for the Renewable Energy Program's planning, leasing and operations authorization processes that would allow for orderly, safe and environmentally responsible OCS renewable energy development and provide for a fair return for use of OCS lands. Also in 2009, the MMS and the FERC signed a memorandum of understanding (MOU) that provided for joint regulation of potential OCS wave and ocean current projects. Following the reorganization of MMS, the Renewable Energy Program within BOEM continues to support these activities as part of the ongoing MOU. The agreement recognizes BOEM as having exclusive jurisdiction with regard to production, transportation, or transmission of energy from non-hydrokinetic renewable energy projects on the OCS as well as issuing leases, easements, and rights-of-way for marine hydrokinetic projects (e.g., facilities that generate energy from waves, tides, or currents in an ocean). According to the terms of the agreement, FERC has exclusive jurisdiction to issue licenses and exemptions for OCS hydrokinetic projects. BOEM and FERC will continue to work together in the coming years to regulate potential OCS wave and ocean current projects.

Since the regulations were put in place, BOEM has worked diligently to support the Administration's goal of promoting renewable energy development and respond to the rapidly growing state interest in pursuing offshore wind and wave development. To date, BOEM has

issued eleven commercial wind energy leases (offshore Massachusetts, Delaware, Rhode Island, Virginia, Maryland and New Jersey); conducted five competitive wind energy lease sales for areas offshore Rhode Island, Massachusetts, Virginia, Maryland, and New Jersey; and approved the construction and operations plan for the Cape Wind project offshore Massachusetts. Additionally, BOEM is in the planning stages for wind leasing offshore North Carolina, South Carolina, and New York. In 2014, BOEM issued the first OCS lease for marine hydrokinetic technology testing offshore Florida and executed its first transmission right-of-way grant offshore Rhode Island. In 2015, BOEM executed the first wind energy research lease in U.S. Federal waters with the Commonwealth of Virginia's Department of Mines, Minerals and Energy.

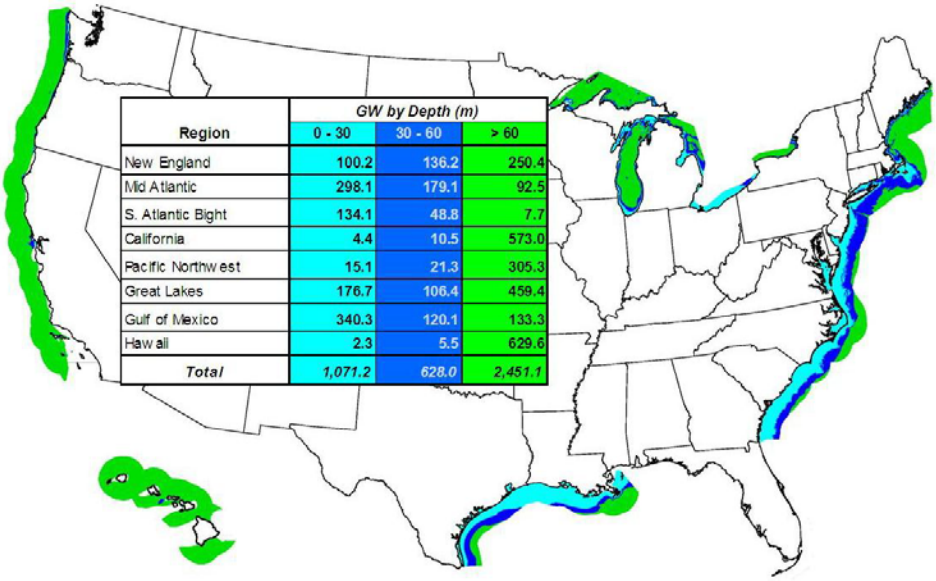
Along the Pacific coast, BOEM has established renewable energy task forces to consider areas offshore Oregon and Hawaii. BOEM is currently processing two unsolicited lease requests offshore Oregon: one commercial lease for an offshore wind demonstration project for floating turbines, and one research lease for a marine hydrokinetic technology testing facility. BOEM has also received three unsolicited lease requests for commercial scale floating wind developments offshore Oahu, Hawaii from two different companies.

In the foreseeable future, BOEM anticipates development of renewable energy on the OCS from three general sources: offshore wind, ocean waves, and ocean currents.

- **Offshore Wind Energy**

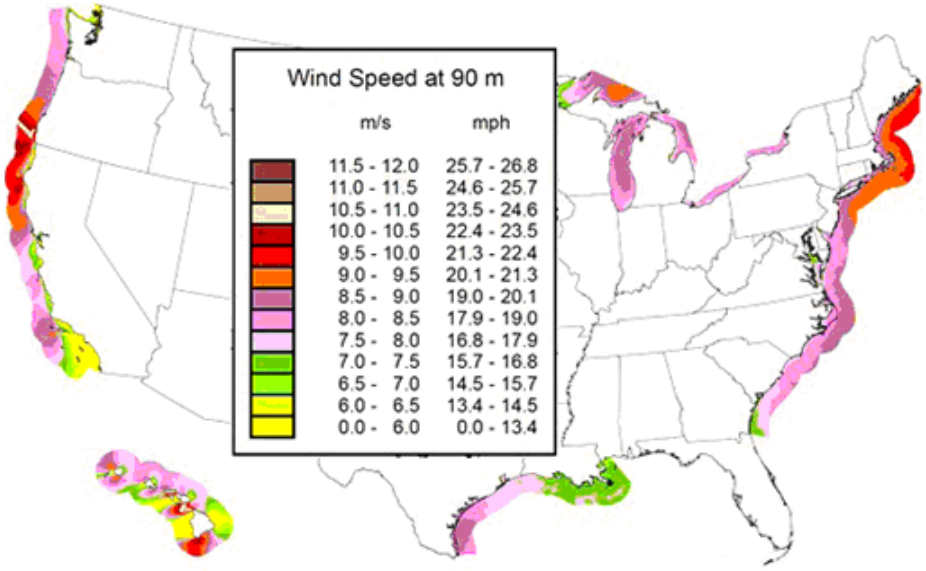
Offshore wind turbines are being used in a number of countries to harness the energy of the moving air over the oceans and convert it to electricity. Offshore winds tend to flow at higher sustained speeds than onshore winds, making turbines more efficient than their onshore counterparts. Figures 2 and 3 show those areas along the Atlantic and Pacific coasts that have the greatest technical potential for offshore wind energy production by water depths and wind speeds.

Figure 2: Offshore Wind Resource in Gigawatts by Depth in Coastal Areas



Source: National Renewable Energy Laboratory (http://www.nrel.gov/wind/pdfs/40745.pdf)

Figure 3: Offshore Wind Speeds in Coastal Areas



Source: National Renewable Energy Laboratory (https://www.eia.gov/todayinenergy/detail.cfm?id=4770)

In 2011, the Department of the Interior and the Department of Energy produced the report "A National Offshore Wind Strategy: Creating an Offshore Wind Energy Industry in the United States." The report announced a National Offshore Wind Strategy with a scenario for achieving 54 gigawatts of deployed offshore wind generating capacity by 2030 and an interim scenario of ten gigawatts of wind capacity in the OCS and Great Lakes by 2020 (potential renewable energy

development in the Great Lakes is under the jurisdiction of the adjacent states). Winds offshore the Atlantic coast alone have the technical potential to produce an estimated 1,000 gigawatts of energy, the equivalent of what could be used to power 225 million to 300 million average U.S. homes.

Given the market and technological changes since 2011, DOE and DOI are working together to deliver an updated offshore wind strategy in 2016. The updated strategy will address changes in technology, resource potential and electricity demand. The updated strategy will also outline potential initiatives to be implemented over the next five years that will help support the expansion of the offshore wind industry in the United States. Wind offshore the Hawaiian Islands is considered to be a promising option in Hawaii, which has the highest electricity costs in America. (Hawaii is almost exclusively dependent on oil/gas transported to the islands aboard ships and barges). Hawaii has also passed legislation requiring 100% of electricity generation from renewable resources by 2045. Due to favorable project economics and an aggressive renewable energy goal, the BOEM Pacific Region has received three unsolicited lease requests offshore Oahu, Hawaii in 2015. Additionally, developers are proposing to use areas offshore Oregon (see commercial leasing in the Pacific Region below) and Virginia to demonstrate new technologies to support deepwater wind energy generation. Both of these projects are recipients of DOE grants for Offshore Wind Demonstration projects, which seek to harness a small portion of this potential by driving down the cost of offshore wind production to make it competitive with other electricity generating sources.

- **Ocean Wave Energy (Marine Hydrokinetic)**

Ocean wave energy refers to the kinetic energy carried within ocean waves. There is tremendous energy in ocean waves, and technology and project developers are evaluating existing and developing wave technology to garner this energy. Wave power devices extract energy directly from the surface motion of ocean waves. A variety of technologies such as point absorbers, attenuators, overtopping devices, and terminators, suitable for deployment on the OCS, have been proposed to garner that energy. Some of the more promising designs are undergoing demonstration testing. Two sites on the West coast, one in California and one in Oregon, have received funding from DOE and are being evaluated as potential locations for a national wave energy testing facility. BOEM is currently evaluating a research lease request for the Oregon proposal.

- **Ocean Current Energy (Marine Hydrokinetic)**

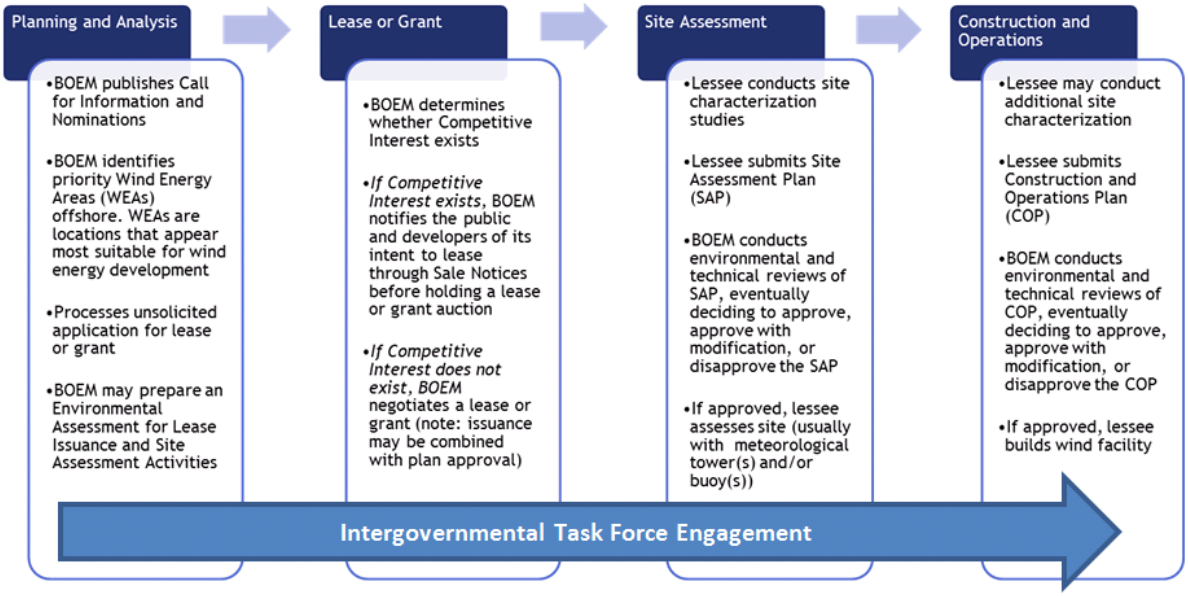
Ocean current energy refers to the kinetic energy carried within ocean currents. Ocean currents also contain an enormous amount of energy that can be garnered and converted to a usable form. Some of the ocean currents on the OCS are the Gulf Stream, Florida Straits Current, and

California Current. At this time, the area with the greatest potential for ocean current energy development is the Florida coast as a result of the relatively close proximity of the Gulf Stream and Florida Straits Current to the coast and the significant amount of energy potential they provide. Technology is still at an early stage of development, but it is likely that submerged water turbines conceptually similar to wind turbines may be employed to extract energy from ocean currents in the future. In December 2014, BOEM established the Florida Intergovernmental Renewable Energy Task Force to facilitate coordination among Federal, state, local and tribal government organizations for potential renewable energy leasing efforts in Federal waters offshore Florida's Atlantic coast. The task force was developed shortly after BOEM issued a lease focused on hydrokinetic technology testing offshore Florida (June 2014). The lessee is in the process of conducting seafloor surveys that will be used to develop a project plan during FY 2016.

RENEWABLE ENERGY AUTHORIZATION PROCESS

Current renewable energy activities on the OCS are focused on wind projects. Under the renewable energy regulations, the identification of Wind Energy Areas, the issuance of leases and subsequent review of energy development activities on the OCS is a staged decision-making process. BOEM's renewable energy leasing process is comprised of four distinct phases: (1) planning and analysis; (2) lease, right-of-way grant, or right-of-use and easement grant issuance; (3) site assessment; and (4) construction and operations plans. BOEM involves other Federal agencies (e.g., Department of Defense, U.S. Fish and Wildlife Service, U.S. Coast Guard, National Oceanic and Atmospheric Administration, Bureau of Safety and Environmental Enforcement, etc.) and state, local and tribal governments throughout all phases of renewable energy development. Figure 4 below outlines BOEM’s process for authorizing wind energy leases.

Figure 4: Phases of BOEM's Offshore Wind Energy Authorization Process



The Planning and Analysis phase seeks to identify suitable areas for wind energy leasing consideration through collaborative, consultative, and analytical processes that engage stakeholders, tribes, and state and Federal agencies. In this phase, BOEM conducts environmental compliance reviews and consultations with tribes, states, and natural resource agencies.

The Lease and Grant phase results in the issuance of a commercial wind energy lease or right-of-way grant for energy transmission projects. Right-of-way grants authorize the holder to install on the OCS cables, pipelines and associated facilities that involve the transportation or transmission of electricity or other energy products from renewable energy projects. Leases and grants may be issued either through a competitive or noncompetitive process. A commercial lease gives the lessee the exclusive right to subsequently seek BOEM approval for the development of the leasehold. The lease does not provide the lessee the right to construct any facilities; rather, the lease provides the right to use the leased area to develop its site assessment and construction and operations plans, which must be approved by BOEM before the lessee can move on to the next stage of the process.

The Site Assessment phase includes the submission of a site assessment plan, which contains the lessee's detailed proposal for the construction of a meteorological tower and/or the installation of meteorological buoys on the leasehold to conduct site assessment studies. The lessee's site assessment plan must be approved by BOEM before it conducts these activities on the leasehold. BOEM may approve, approve with modification, or disapprove a lessee's site assessment plan. It is during this phase that the lessee would conduct site characterization surveys to support the development of future plans.

The Construction and Operations phase consists of the submission of a construction and operations plan, which details the construction and operation of a wind energy project on the lease. BOEM requires a general activities plan, similar to a construction operations plan, for facilities constructed under a limited lease or right of way. BOEM conducts environmental and technical reviews of these plans and decides whether to approve, approve with modification, or disapprove the plan. At the end of the lease or grant term, the developer must decommission facilities in compliance with BOEM regulations.

PLANNING AND ANALYSIS

To help inform BOEM's planning and program decision-making processes, BOEM has established intergovernmental task forces in states where the Governor contacted BOEM to express interest in development of offshore renewable energy or at BOEM's suggestion after receipt of an unsolicited proposal offshore that state. Each task force collects and shares information for all stakeholders for use in its decision-making process. BOEM intergovernmental task forces have been established in Maine, Massachusetts, Rhode Island, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Oregon, Hawaii, and most recently in Florida. California has continued to express interest in forming an intergovernmental task force to start planning for future renewable energy development. Task forces have been extremely productive and have helped identify areas of significant promise and interest for offshore development, in addition to providing early identification and steps toward resolution of potential conflicts.

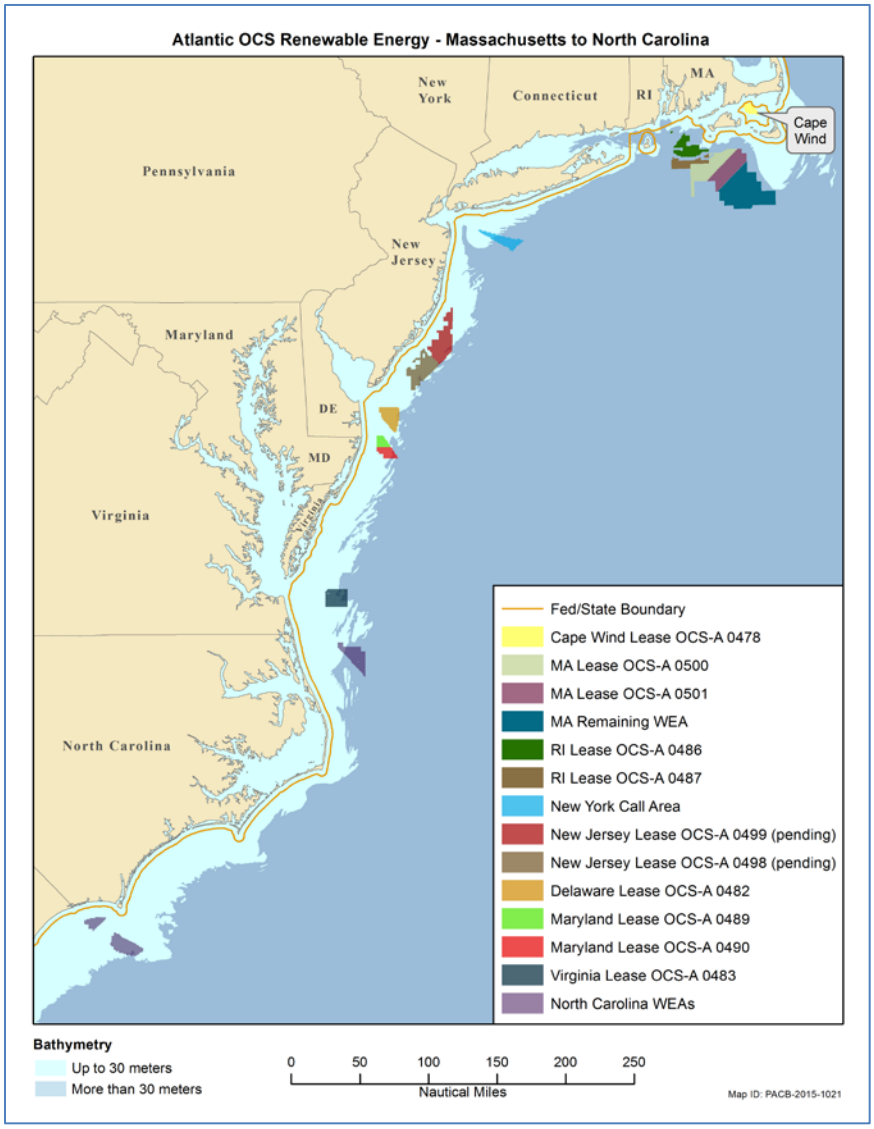
BOEM has established 13 intergovernmental task forces to enable representatives from state, local, and tribal governments and other Federal agencies to provide meaningful input into the OCS renewable energy planning process.

➢ Identification of Wind Energy Areas

A key element of the Planning and Analysis stage is the identification and refinement of Wind Energy Areas, which are areas on the OCS that appear to be particularly suitable for renewable energy development due to fewer potential multiple-use and environmental conflicts, such as conflicts from commercial vessel traffic or fisheries, and feeding or calving areas for endangered species. Through consultation with BOEM's intergovernmental task forces and its Call for Information and Nominations (Call) process, BOEM has identified Wind Energy Areas on the OCS offshore Massachusetts, Rhode Island, New Jersey, Delaware, Maryland, Virginia, and North Carolina. In FY 2016, BOEM expects to identify Wind Energy Areas offshore New York and South Carolina. The existing Wind Energy Areas and Call areas are shown in the

following map in Figure 5.

Figure 5: Identified Wind Energy and Call Areas along the Atlantic Coast



Source: National Renewable Energy Laboratory (www.boem.gov/BOEM-RE-Programs-Fact-Sheet/)

LEASE AND GRANT ISSUANCE

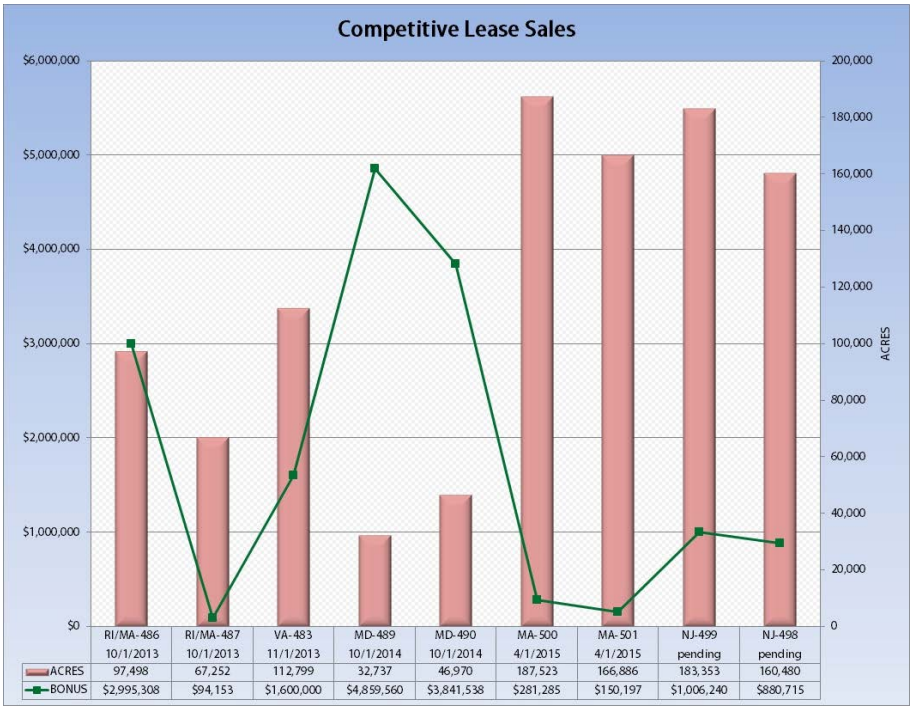
As required by the Energy Policy Act of 2005, BOEM will issue a renewable energy lease or grant on a competitive basis unless it determines that no competitive interest exists in obtaining that lease or grant. To issue competitive renewable energy leases and grants, BOEM will hold an auction, and the lease or grant is awarded to the winning bidder. In contrast, the noncompetitive process takes the form of a negotiation between BOEM and the one developer. In either case, the developer must be qualified to hold an OCS lease or grant. In order to be qualified,

developers must demonstrate their legal, technical and financial capability to construct, operate, maintain, and terminate/decommission the project.

- **Commercial Leasing on the Atlantic OCS**

As a result of collaboration and coordination with intergovernmental task forces and outreach efforts with relevant stakeholders, BOEM's Renewable Energy Program has made significant progress in its planning and leasing process to date. As of January 2016, BOEM has issued 11 commercial wind leases along the Atlantic coast, covering over 1.1 million acres on the OCS. If fully developed, these leases could generate enough energy to power over 4 million homes. On November 9, 2015, BOEM auctioned two additional leases offshore New Jersey, totaling over 343,000 acres. According to an analysis prepared by the U.S. Department of Energy's National Renewable Energy Laboratory, if fully developed, the New Jersey lease areas could support about 3,400 megawatts of commercial wind generation, enough electricity to power an additional 1.2 million homes. During FY 2017, BOEM anticipates offering another four commercial leases offshore North Carolina and New York. Figure 6 shows the acres leased and bonus bids received to-date through BOEM's competitive lease sale process. Winning bid amounts exhibit a wide range when compared on a per acre basis. Many factors may influence the revenue received per acre, such as water depth, distance from shore, adjacent coastal state power off-take policies, and other environmental considerations.

Figure 6: BOEM's Competitive Lease Sale Acres and Bonus Bids



Prior to issuing commercial wind energy leases, BOEM conducts an environmental review of reasonably foreseeable impacts associated with site characterization surveys and subsequent site assessment activities in a Wind Energy Area. If BOEM reaches a Finding of No Significant Impact, then it may proceed with issuing leases competitively or non-competitively in that Wind Energy Area without further environmental review. For example, BOEM's environmental assessment for the Wind Energy Areas offshore New Jersey, Delaware, Maryland, and Virginia supported the issuance of leases offshore Delaware, Maryland and Virginia, and allowed for a lease sale for areas offshore New Jersey to occur in early FY 2016. In FY 2013 and FY 2014, BOEM completed similar environmental assessments that supported lease sales for areas offshore Rhode Island on July 31, 2013 and Massachusetts on January 29, 2015, respectively, and another was completed in late FY 2015 for the North Carolina Wind Energy Areas. BOEM anticipates completing similar environmental assessments for areas offshore New York in FY 2016 and South Carolina in FY 2017.

- **Limited and Research Leasing on the Atlantic OCS**

In November 2007, the former MMS established an interim policy as a measure to jumpstart resource data collection and technology testing activities on the OCS prior to the promulgation of final regulations. BOEM's policy allows for limited leasing, resource data collection, and technology testing activities. A limited lease allows a person to conduct activities on the OCS that support the production of energy but do not result in the production of electricity or other energy product for sale, distribution, or other commercial use exceeding a limit specified in the lease. These limited leases have a five-year term, require fee payment and provide no subsequent rights to commercial development. To date, BOEM has issued five such limited leases, three offshore New Jersey, one offshore Delaware, and one offshore Florida. BOEM is currently processing a request for lease offshore Georgia. As a requirement of these limited leases, the lessee must submit for BOEM review a project plan that provides details on fabrication methods, engineering specifications, and safety systems for any facility to be installed in Federal waters. The following describes the status of BOEM's limited leases.

- **New Jersey:** Two Interim Policy lessees deployed meteorological buoys off the coast of New Jersey. These leases expired in November 2014. The other Interim Policy lease issued offshore New Jersey was relinquished in 2012.

- **Delaware:** BOEM issued one Interim Policy lease offshore Delaware. This lease was relinquished in 2012.

- **Florida:** In August 2011, Florida Atlantic University submitted its final application to BOEM for an Interim Policy lease to conduct marine hydrokinetic technology testing. Since that time, BOEM has published an environmental assessment for public review

that considers the environmental impacts of the University's proposed project, which would entail the installation and testing of submerged turbine generators; published a revised environmental assessment that addressed comments received; and as a result of the analysis in the revised environmental assessment, issued a Finding of No Significant Impact for the project. In June 2014, BOEM issued the Interim Policy lease. The next step is for Florida Atlantic University to submit a project plan, which is expected in 2016.

- **Georgia:** BOEM is processing an application from Southern Company for an Interim Policy lease approximately 3 to 11 nautical miles off the coast of Tybee Island, Georgia, which would authorize the installation and operation of a meteorological tower and/or buoy. In FY 2014, BOEM published the environmental assessment for public review and initiated associated consultations. Once consultation with the National Marine Fisheries Service under the Endangered Species Act is completed, BOEM will determine whether to issue a Finding of No Significant Impact or conduct additional NEPA analysis prior to offering a lease. BOEM anticipates completing the environmental assessment for the lease in 2016.

BOEM also has the authority to issue leases to other Federal agencies and to states for the purpose of conducting renewable energy research activities that support the future production, transportation, or transmission of renewable energy. Research leases require no fees and have a negotiated lease term. In FY 2014, BOEM offered two such research leases offshore Virginia, and executed one of them in FY 2015.

- **Virginia:** During FY 2012, BOEM received an unsolicited application for a research lease from the Virginia Department of Mines, Minerals and Energy, proposing to install meteorological towers to facilitate wind resource assessment within the Virginia Wind Energy Area. In FY 2013, BOEM sought public input on the research proposal and its potential environmental consequences and also determined, based on the responses, that there was no competitive interest in the project. Later that year, BOEM received a second application, also from Virginia, requesting another lease area outside of the western boundary of the Virginia Wind Energy Area to install two six-megawatt, grid-connected wind turbines as a demonstration project. In FY 2014, BOEM determined there was no competitive interest in the area where the Commonwealth proposed to conduct activities. The two determinations of no competitive interest cleared the way for BOEM to proceed with the noncompetitive research lease process for both of the state-proposed projects. Later in FY 2014, BOEM offered two leases to the Virginia Department of Mines, Minerals and Energy. BOEM executed one lease in March 2015.

  The Virginia Department of Mines, Minerals and Energy submitted a research activities

plan for the Virginia Offshore Wind Technology Assessment Project. The plan details the proposed location and schedule of activities and includes information and data collected to date in support of the planned design, construction, installation operation and maintenance of two 6 megawatt turbines offshore Virginia. The plan also provides information related to the installation of approximately 27 nautical miles of submarine transmission cable as well as other ancillary facilities and improvements to terrestrial substations required to support the project. On December 2, 2014, BOEM published an environmental assessment for public comment. In September 2015, BOEM announced completion of the environmental assessment, which analyzes potential impacts of approving the research activities plan.

- **Right-of-Way Grants on the Atlantic OCS**

BOEM has the authority to issue right-of-way grants that allow developers to build electricity transmission lines that connect renewable energy installations to the onshore electrical grid. In November 2014, after adopting the U.S. Army Corps of Engineers' environmental assessment, the Bureau offered a right-of-way grant for the Block Island Transmission System offshore Rhode Island. The cable project supports a wind project located in Rhode Island State waters, for which transmission lines must cross the OCS. BOEM executed the grant in December 2014. Construction of the foundations in state waters was completed in October 2015. Installations of the turbines and transmission line are expected to occur in the summer of 2016.

- **Commercial Leasing in the Pacific Region**

In the Pacific Region, BOEM has received interest in commercial leases for wind and wave projects. In 2013, BOEM received a commercial wind lease request from Principle Power Incorporated for the WindFloat Pacific project offshore Coos Bay, Oregon. BOEM has determined there is no competitive interest in the requested area and is moving forward with the noncompetitive lease process. BOEM received the construction and operations plan from Principle Power Incorporated in July 2015 and will move forward with the environmental and technical reviews once the construction and operations plan is determined to be complete and adequate for review. The lease issuance and plan approval decisions will be concurrent and are expected in late FY 2016.

Full-scale prototype of WindFloat device

In January 2015, BOEM received two commercial wind lease requests for areas on the OCS offshore the island of Oahu in Hawaii from AW Hawaii Wind, LLC. In October 2015, BOEM

received a third lease request offshore Oahu from Progression Hawaii Offshore Wind, Inc. Currently, the Department of Defense (DOD) and BOEM are coordinating to determine if development in the areas requested is compatible with national security and national defense activities offshore Oahu. Depending on the outcome of the DOD and BOEM coordination, BOEM may initiate the leasing process with a Request for Interest in FY 2016.

BOEM has received increased interest from potential wind developers offshore California, with one unsolicited lease request received in January 2016. In addition, BOEM has been actively coordinating with the Governor's office, the California Public Utilities Commission, the California Energy Commission, and the California Natural Resources Agency.

- **Research Leasing in the Pacific Region**

In November 2013, BOEM received a research lease request from the Northwest National Marine Renewable Energy Center, the research center at Oregon State University (NNMREC-OSU), for the Pacific Marine Energy Center-South Energy Test Site project. The proposed project is a grid-connected wave energy test site on the OCS offshore Newport, Oregon. BOEM has determined there is no competitive interest in the requested area and is moving forward with the noncompetitive lease process. Since the project is a wave energy test facility requiring a FERC license, BOEM is a cooperating agency with FERC on the environmental review of the proposal. BOEM is currently an active member of the Pacific Marine Energy Center-South Energy Test Site Collaborative Working Group, a group of Federal, state, and local representatives and stakeholders brought together to assess information needs and facilitate project review and permitting. FERC completed formal scoping in July 2014 and BOEM is continuing to cooperate with FERC as an environmental assessment is prepared. NNMREC-OSU anticipates submitting a draft license application and draft environmental assessment to FERC during 2016.

- **Right-of-Way Grants in the Pacific Region**

BOEM expects to receive requests for right-of-way grants in the future, including one to allow transmission through Federal waters between the islands of Oahu and Maui in Hawaii. One component of the state's Hawaii Clean Energy Initiative is an inter-island cable to transmit power from future renewable energy-producing installations on various islands to Oahu, the main demand center. A portion of this cable will be on the OCS. BOEM anticipates receiving a right-of-way/right-of-use grant request for a Hawaii inter-island cable as early as FY 2016, with a final decision on the grant request as soon as FY 2018.

BOEM will initiate the right-of-way grant process upon receiving a request for an inter-island cable right of way. BOEM will make a competitive interest determination and conduct the

appropriate environmental review prior to making a decision on the grant request.

- **Lease or Grant Payments**

As required by the Energy Policy Act of 2005, BOEM has established payment terms to ensure fair return to the U.S. Treasury for the rights conveyed by OCS renewable energy leases and grants. Companies pay a bonus for leases acquired in a BOEM auction, or an acquisition fee for leases issued noncompetitively. All lessees and grantees must pay rent, and lessees must pay an operating fee in lieu of rent when commercial electrical generation commences. The operating fee is based on the installed capacity of the wind turbine generators. In FY 2015, $2.2 million in rent payments were collected on OCS renewable energy leases. BOEM estimates annual rent payments of more than $3.5 million in FY 2016 and $4.7 million in FY 2017 in addition to bonus bids that may be collected from lease sales held in those years. To date, DOI has generated over $16.4 million in bonus bids for the renewable energy leases it has issued through the competitive leasing process. Actual data from FY 2014 and earlier is generated by the Office of Natural Resources Revenue (ONRR) and can be found at http://statistics.onrr.gov/ReportTool.aspx.

SITE ASSESSMENT

Commercial lease holders have up to five years after lease issuance to conduct site assessment activities and submit a construction and operations plan. When a site assessment plan is submitted, BOEM determines whether the environmental assessment for that Wind Energy Area adequately considers the environmental consequences of the activities proposed in the lessee's site assessment plan. If BOEM determines that the analysis in the environmental assessment adequately considers these consequences, then no further NEPA analysis would be required before the site assessment plan is approved. If, on the other hand, BOEM determines that the analysis in the environmental assessment is inadequate for that purpose, BOEM would prepare an additional NEPA analysis before approving the site assessment plan. If and when a lessee is prepared to propose wind energy generation on its lease, it will submit a construction and operations plan and BOEM would prepare a separate site- and project-specific NEPA analysis. This may take the form of an environmental assessment or environmental impact statement and would provide additional opportunities for public involvement.

NEPA compliance determinations of site assessment plans for activities offshore Virginia and Maryland are also expected to be completed in FY 2016 and offshore Rhode Island and Massachusetts in FY 2016 and 2017, respectively, pending plan submittals.

INTERGOVERNMENTAL COORDINATION AND COLLABORATION

Offshore wind has the potential to play an integral role in our future energy portfolio. It is therefore critical that Federal Government agencies work together, along with states and other key stakeholders, to ensure the responsible development of this technology. In addition to the establishment of BOEM intergovernmental task forces, the Department and BOEM are taking additional steps to ensure efficient and effective coordination.

- Memorandums of Understanding relevant to offshore renewable energy coordination have been created with the Department of Energy, FERC, Bureau of Safety and Environmental Enforcement, U.S. Fish and Wildlife Service, Department of Defense, U.S. Coast Guard, and NOAA. BOEM and FERC responsibilities intersect for marine hydrokinetic projects, with BOEM issuing commercial marine hydrokinetic leases and FERC issuing licenses for construction and operation of these projects. The agencies have worked together to achieve efficiencies for both the agencies and potential applicants.

- BOEM is leading the BOEM Ocean Action Team to coordinate Federal, state and local permitting processes for the proposed WindFloat Pacific project (offshore Coos Bay, OR) in an effort to ensure that the permitting decisions can be made efficiently and in a coordinated fashion to allow the project to meet the terms of its Department of Energy grant. This grant is contingent on the project being operational by the end of 2017.

- On September 28, 2015, the White House hosted a Summit on Offshore Wind, gathering leading Federal, state and industry stakeholders committed to the long-term and sustainable development of offshore wind in the United States. As a result of the Summit, the White House Council on Environmental Quality and Domestic Policy Council will co-chair a Working Group with participation from the Department of the Interior (including BOEM, NPS, and FWS), Department of Energy, Department of Defense, Department of Transportation, Department of Commerce, Environmental Protection Agency, Department of Homeland Security, and the Advisory Council on Historic Preservation.

REGULATORY AUTHORITY

The Secretarial Order that created BOEM and BSEE (S.O. 3299A2) did not transfer to BSEE the safety and environmental enforcement functions for renewable energy at the time of the reorganization, delaying that transfer until such time as the Assistant Secretary for Land and Minerals Management "determines that an increase in activity justifies transferring the inspection

and enforcement functions" to BSEE. The initial construction of projects on the OCS is expected to commence in 2016, and BOEM and BSEE are working together to plan and implement this transition. A BSEE/BOEM transition team is managing the effort to re-designate the renewable energy regulations in 30 Code of Federal Regulations (CFR) Part 585 between the two bureaus. The transition team is also developing a high-level flowchart to reflect the interactions and division of responsibilities between BSEE and BOEM on renewable energy projects after the re-designation. After the re-designation, BOEM and BSEE will revise the renewable energy regulations for OCS operations and update existing interagency MOUs accordingly. As part of the transition, BOEM and BSEE collaborated in the review of the Facility Design Report and Fabrication and Installation Report for the Cape Wind project and are currently collaborating on the review of the Wind Float and VOWTAP project plans.

On September 29, 2015, BOEM published a “Request for Feedback” inviting comment on its overall renewable energy program and regulations. Specifically, BOEM asked which aspects of the program have stakeholders found to be successful, and where may there be opportunities for improvement. BOEM will use the information submitted to inform strategic planning efforts and to determine if changes to its existing renewable energy processes and regulations are warranted.

RESEARCH, DATA COLLECTION AND STAKEHOLDER ENGAGEMENT

BOEM’s Renewable Energy Program is supported by a substantial investment in research, data collection and stakeholder engagement. In some cases, areas that are appropriate for renewable energy development have likely never been studied for such development; and for some areas, there is a dearth of information about the physical and biological environment. BOEM has worked closely with a broad spectrum of agencies, universities and stakeholders to identify the critical data gaps and independently or through partnerships sought to fund studies to increase our knowledge about the marine environment in and around potential renewable energy development locations. To benefit from lessons learned, BOEM has also reached out to European countries with more mature renewable energy programs.

The continued need to pursue information to ensure access to the OCS for renewable energy development and to ensure that such development is environmentally appropriate is a high priority for BOEM. BOEM’s Environmental Studies Program has broadened its research since the Energy Policy Act of 2005 gave BOEM the authority to develop renewable energy resources on the OCS. This research augments what had been done previously for offshore oil and gas and marine minerals, but with an extra interest in renewable energy applications. To ensure full environmental review, BOEM has spent more than $47 million since FY 2007 on environmental studies that address renewable energy issues, either solely or in addition to other OCS resource activities, with an additional $4 million planned for FY 2016. These studies address the issues of

the effects of renewable energy development on birds, marine mammals, and seafloor habitats and specific concerns about electromagnetic fields and sound. In FY 2016, studies will focus on the collection of data about birds and marine mammals along the southeast coast and tracking of important fish species. Efforts funded through BOEM's Environmental Studies Program are described in more detail in the Environmental Programs activity.

- **Data Collection through Cooperative and Interagency Agreements**

In accordance with the OCS Lands Act, BOEM is working cooperatively with states by leveraging funds to collect important information about the offshore environment that meets both the needs of BOEM and the states. In FY 2015, BOEM continued or executed the following cooperative agreements with state partners, through matching funds, to inform future planning and decision-making:

- BOEM continued a cooperative agreement with the Commonwealth of Virginia to analyze baseline information about the surface and near surface geology of the Virginia Wind Energy Area and to produce fine-scale maps of important commercial and recreational fishing areas in and around the Virginia Wind Energy Area;
- BOEM continued a cooperative agreement with the Commonwealth of Massachusetts to collect baseline information on marine mammals, sea turtles, and birds in the Massachusetts and Rhode Island/ Massachusetts Wind Energy Areas;
- BOEM executed an executive agreement with the University of Rhode Island to support the collection of information about lobsters in the Rhode Island/ Massachusetts and Massachusetts Wind Energy Areas;
- BOEM executed an executive agreement with the University of North Carolina - Chapel Hill for fishing stakeholder meetings to identify access routes and fishing grounds in the three North Carolina Call Areas and hard bottom habitat surveys in Call Area Wilmington East to identify artificial reefs and archaeological sites;
- BOEM executed a cooperative agreement with the State of South Carolina through Coastal Carolina University for geophysical mapping and identification of paleolandscapes and historic shipwrecks offshore South Carolina in and near potential Wind Energy Areas; and
- BOEM and the State of New York may enter into a cooperative agreement for collection of information about the endangered Atlantic Sturgeon in the New York Bight in FY 2016.

- **Renewable Energy Workshops and Conferences**

Stakeholder engagement is integral to BOEM's renewable energy planning and leasing efforts. Following are some highlights of recent and upcoming outreach events.

- **Lighting, Marking, and Paint Color Meeting.** The Bureau held a meeting of Federal agencies in January2015 to consolidate and update existing guidance for offshore wind developers on the lighting, marking, and paint color for offshore wind facilities. The goal is to provide developers and Federal agencies with a standardized set of requirements that will result in greater efficiencies for the developers and reviewers of construction and operations plans through agreed to requirements.

- **Renewable Energy Atlantic Tribal Conference.** In 2016, the Bureau will host a Renewable Energy Atlantic Tribal Conference focusing on its activities on the Atlantic Outer Continental Shelf. The conference will provide a tribal-only forum for learning about BOEM's renewable energy program activities in the Atlantic Region. The conference also will allow for tribal input and discussion on BOEM's consultation practices under the Department of the Interior Tribal Consultation Policy. The discussions and feedback received at the conference will be incorporated into BOEM's decision-making for various programs, as well as BOEM's Atlantic Renewable Energy Tribal Consultation Plan.

- **Pacific Region California Ocean Renewable Energy (CORE) Conference.** Due to increased interest in renewable energy development offshore California, BOEM plans to hold a conference, open to all stakeholders, in California in 2016. The workshop will provide California stakeholders knowledge of the status of offshore renewable energy technologies and will share information the Pacific Region has gathered from our environmental studies program. The Region also conducts numerous stakeholder engagements on a project-specific basis with targeted stakeholders such as commercial fishermen and other state and Federal agencies with permitting and consultation responsibilities.

➢ **Guidelines for Developers and Applicants**

In FY 2013, BOEM posted guidelines for providing survey information on avian resources, spatial data, benthic habitats, fish, marine mammals, and sea turtles on the Atlantic OCS. The purpose is to clarify and provide a general understanding of the information that BOEM requires in order to adequately address the impacts of offshore renewable energy projects to the environment. The guidelines were developed with input from FWS, NOAA and the Marine Mammal Commission. The guidelines for avian and benthic habitat surveys were updated in November 2013.

In October 2014, BOEM revised its "Guidelines for Information Requirements for a Renewable Energy Construction and Operations Plan (COP)." This document provides updated guidance on information requirements for a construction and operations plan for renewable energy activities

related to a commercial lease on the Outer Continental Shelf. The updated guidelines replace those originally published in December 2010 and address project-specific information, supporting data requirements and information to provide the basis for the analysis of environmental and socioeconomic effects and operational integrity of proposed construction, operation, and decommissioning activities and to assist BOEM in complying with NEPA and other relevant laws when reviewing a construction and operations plan. A lessee's construction and operations plan must demonstrate that the project is being conducted in a manner that conforms to responsible offshore development per 30 CFR 585.621; this includes the demonstration of best management practices. BOEM plans to update the COP guidelines again in FY 2016.

In FY 2015, BOEM updated its "Guidelines for Providing Geological and Geophysical, Hazards, and Archaeological Information" and new guidance to lessees in BOEM Atlantic planning areas to help comply with fishery information requirements in renewable energy plans. In FY 2016, BOEM anticipates publishing guidance on information requirements for site assessment plans.

- **Technology Assessment and Research Studies**

Recent projects continue to build on the lessons learned from developers of commercial wind projects offshore Europe while focusing on the unique operating environment of the U.S. OCS. International structural design standards have been reviewed and research gaps have been identified that include the anticipated effects of hurricanes and open-ocean breaking waves, as well as the structural integrity of floating wind turbines under reasonably foreseeable ocean conditions.

Much is known about the meteorological and oceanographic conditions in the Gulf of Mexico, but this data needs to be obtained in both the Atlantic and Pacific regions to ensure that these new structures are designed to the appropriate parameters. There are six studies currently being performed under this program and studies for five new topics were solicited in FY 2015.

- In FY 2013 two studies were funded; *Design of Wind Turbine Monopiles for Lateral Loads*, and *Fatigue Design Methodologies Applicable to Fixed and Floating Offshore Wind Turbines.* Both of these projects have been completed.
- The four studies awarded in FY 2014 include: *Offshore Wind Submarine Cable Spacing Guidance, Offshore Substation Design Standards, Model Testing to Evaluate Degradation of Axial Capacity from Cyclic Loading,* and *Development Met-Ocean Data and Hazard Curves for Wind Energy Areas off the Atlantic Seaboard*. The first two of these studies are complete, with the remaining two studies scheduled for completion in 2016.

- In FY 2015 proposals were reviewed for an additional five topics: *Laboratory Testing of Lateral Load Response for Monopiles in Sand, Development of Guidelines for Structural Health Monitoring for Offshore Wind Turbine Towers and Foundations, Breaking Wave Loads on Offshore Wind Turbines, Cyclic Loading on Suction Bucket Foundations,* and *Assessment of Partially verses Fully Coupled Dynamic Analysis of Offshore Wind Turbines*. Awards are expected in early FY 2016.

OUTLOOK FOR RENEWABLE ENERGY

Through detailed planning and analysis and partnerships with other governmental agencies and stakeholders, BOEM has advanced the Renewable Energy Program nationwide and will continue to do so in 2017. Offshore wind leasing activities, including commercial leases, research leases and right-of-way grants, have increased, contributing to meeting the Administration's goal of promoting clean energy development. BOEM continues to demonstrate science-informed decision-making by initiating and funding research studies. The studies directly benefit BOEM, other energy and mineral programs, renewable energy stakeholders and individual states. State interest in pursuing offshore renewable energy development is readily apparent in the increased involvement by the states through BOEM's intergovernmental renewable energy task forces. BOEM anticipates the Renewable Energy Program will continue to grow and is prepared to support this valuable effort in response to the Nation's energy needs.

2017 PROGRAM PERFORMANCE

The FY 2017 request provides the resources needed to carry out the mission of BOEM, including renewable, conventional, and environmental program activities, and is in support of the FY 2014-2018 DOI Strategic Plan. The FY 2014-2018 DOI Strategic Plan is the foundational structure for the description of BOEM program performance measurement and planning for the FY 2017 President's Budget. The BOEM budget and program plans for FY 2017 are fully consistent with the goals, outcomes, and measures described within the DOI Strategic Plan. The following page contains the BOEM Program Performance Overview table. Further details for achieving the Strategic Plan's goals are contained within the DOI Annual Performance Plan and Report.

Table 12: Program Performance Overview

Mission Area 3, Goal 1: Secure America's Energy Resources								
Strategic Objective Metrics **Strategic Plan Measure / Efficiency or other Bureau-Specific Measure**	**2011 Actual**	**2012 Actual**	**2013 Actual**	**2014 Actual**	**2015 Actual**	**2016 Enacted**	**2017 Pres. Budget Request**
Strategic Plan Measures							
Number of megawatts of approved capacity authorized on public land and the OCS for renewable energy development while ensuring full environmental review (cumulative)	468	468	468	468	498	554	554
Comments: This measure is tracked as a part of the Department of Interior Renewable Energy Priority Goal. The actuals and planned targets displayed within the table reflect BOEM's contribution toward the Department-wide Priority Goal.							
Contributing Programs: Office of Renewable Energy Programs							
Efficiency or other Bureau-Specific Measures							
Number of offshore renewable energy leasing or ROW/RUE grant processes initiated (i.e., first public notice issued)	4	4	5	2	0	2	1
Comments: This metric quantifies the number of leasing processes initiated for Renewable Energy development. Leasing processes are initiated by publishing either Call/Request for Information or Call for Nominations in the Federal Register.							
Contributing Programs: Office of Renewable Energy Programs							
Number of limited leases issued for offshore renewable energy testing and data collection, including § 238 research leases	0	0	0	1	1	2	0
Comments: A limited lease is a lease with terms and conditions which allow the lessee to conduct activities on the OCS that support the production of energy but without actually producing energy for sale, distribution, or other commercial use.							
Contributing Programs: Office of Renewable Energy Programs							
Number of commercial leases issued for offshore renewable energy generation	1	0	3	1	4	3	5
Comments: A commercial lease is a lease with terms and conditions that allow a person or entity to conduct commercial activities.							
Contributing Programs: Office of Renewable Energy Programs							
Number of right-of-way/right-of-use and easement grants issued for offshore renewable energy transmission	0	0	0	0	1	0	0
Comments: This metric quantifies the number of competitive or noncompetitive right-of-way (ROW)/ right-of-use (RUE) grants for transmission of renewable energy from the OCS.							
Contributing Programs: Office of Renewable Energy Programs							
Number of offshore NEPA documents (CX Reviews/DNA/EIS/EAs) finalized for Renewable Energy	1	1	4	5	5	8	7
Comments: Comprehensive environmental analyses are an essential but lengthy part of the overall OCS lease planning process.							
Contributing Programs: Office of Renewable Energy Programs							

2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

Conventional Energy

Table 13: Conventional Energy Budget Summary

		2015 Actual	2016 Enacted	Internal Transfers (+/-)	Fixed Costs (+/-)	Program Changes (+/-)	2017 Request	Change from 2016 (+/-)
Conventional Energy	($000)	49,633	59,869	-	+98	+4,189	64,156	+4,287
[TIMS]		[8,094]	[7,971]			[+242]	[8,213]	[+242]
	FTE	*271*	*285*			*+17*	*302*	*+17*

SUMMARY OF 2017 PROGRAM CHANGES

Program Changes from 2016 Enacted	($000)	FTE
Risk Management Program Implementation	+2,895	+15
Staffing for Resource Development	+568	+2
Special Pay: Oil and Gas	+1,632	
Methane Hydrates Research	-400	
General Programmatic Reduction	-506	
Total Program Changes	**+4,189**	**+17**

The FY 2017 President's Budget request for BOEM's Conventional Energy budget activity is $64.2 million and 302 FTE, a net increase of +$4.3 million from the 2016 enacted level. This change is comprised of an increase $98,000 for fixed costs and the following:

Risk Management Program Implementation (+$2,895,000; +15 FTE). The Risk Management Program is critical to protecting the American taxpayer from becoming financially responsible for liabilities associated with oil and gas and renewable energy operations on the OCS. BOEM requests funding for 15 FTE with specialized skill sets to ensure the Program is accurately assessing, controlling, mitigating, remediating, monitoring, and reporting risk. The proposed increase is discussed in greater detail later in this chapter.

Staffing for Resource Development (+$568,000; +2 FTE). Personnel resources are requested to support critical resource evaluation and development activities. Despite current economic trends with respect to oil and gas prices, BOEM's responsibilities and associated workload have not diminished. While activity in shallow water has decreased in recent years, deepwater activity

has remained robust, and – according to the U.S. Energy Information Administration – deepwater oil and natural gas production will continue to increase over the coming decade. BOEM anticipates that, with this increase in deepwater production, there will also be a corresponding increase in associated plan reviews and environmental work. It should also be noted that deepwater plans are much more complex and require significantly more work to review them, which will have a compounding effect on BOEM's overall workload. Additionally, BOEM anticipates regulations, designed to promote environmentally responsible development of offshore energy and mineral resources, to create an additional workload. All regulatory oversight and activities – whether for ensuring environmental stewardship, geological and geophysical permitting, exploration, or development and production – require a high level of detailed analysis to support Bureau decisions and the commensurate level of resources to effectively complete the activities. This request directly supports the Bureau's strategic goals to achieve fair market value, ensure safe and sound operations, foster conservation of resources, and minimize impact on the environment.

Special Pay: Oil and Gas (+$1,632,000). The competition with industry to attract and retain talented, skilled candidates is intense, and industry does not hesitate to compensate its mission-critical personnel at the highest levels possible. As a result, it is very difficult to compete for and retain top tier staff because BOEM's employment package is not competitive with that of industry. Authority provided by Congress since 2012 has allowed BOEM and BSEE to offer higher rates of pay to employees within specific job series (geophysicists, geologists, and petroleum engineers) in the Gulf of Mexico Region. In August 2015, OPM issued special salary tables expanding on this authority. The OPM salary tables applicable to BOEM and BSEE currently cover additional mission critical occupational series in the Gulf of Mexico Region, and the Department continues to work actively with OPM to expand this incentive in order to meet critical workforce gaps in other BOEM and BSEE regions and for DOI employees engaged in onshore energy development and inspection. BOEM's FY 2017 budget includes an increase of $1.6 million for increased rates of pay, consistent with OPM guidance.

Methane Hydrates Research (-$400,000; 0 FTE). To offset increases for other BOEM priorities, including the aforementioned special pay rates, BOEM proposes to reduce funding in lower-priority areas, such as research on long-term energy sources like methane hydrates.

General Programmatic Reduction (-$506,000). In order to fund Bureau priorities with available resources, BOEM will reduce base program funding by $506,000. During FY 2017, BOEM will evaluate ongoing efforts and priorities and identify opportunities to achieve administrative efficiencies. This may include contracting reforms, reductions in travel and conference participation, and/or cancellation or deferral of low-prirotiy contracts.

Program Performance Change. The FY 2017 budget request supports the accomplishment of

the Department's strategic goals. BOEM is making great strides in moving towards the goals it establishes for itself as well as the supporting performance measures. Budgetary changes are not the sole influence on performance measures tracked within this activity. The reduction identified above does not affect programmatic performance, as depicted by the relatively steady targets for the performance measures contained within the table at the end of this chapter.

PROGRAM OVERVIEW

BOEM promotes energy security, environmental protection and economic development through responsible, science-informed management of offshore conventional and renewable energy and marine mineral resources. Conventional energy development begins with BOEM's commitment to the responsible development of the Five Year Outer Continental Shelf Oil and Gas Leasing Program (Five Year Program) that includes assessments of the oil and gas resource potential on the OCS, inventories of oil and gas reserves, and economic evaluations of OCS submerged lands to ensure the receipt of fair market value for U.S. taxpayers on OCS leases. Carrying out these responsibilities requires balancing the energy demands and mineral needs of the Nation with the protection of the human, marine, and coastal environments.

As the Nation's OCS energy and mineral resource manager, BOEM administers a comprehensive oil and gas leasing program that requires a progressive cycle of resource, economic, and environmental analyses that provide decision makers with key information necessary for making informed decisions on the size, timing, and location of OCS conventional energy leasing. BOEM's responsibilities are broad, beginning with identifying and calculating appropriate boundaries and legal descriptions; identifying, inventorying, and assessing the Nation's OCS energy and mineral endowment; developing a transparent, systematic, and comprehensive schedule for oil and gas resource offerings; developing appropriate financial terms to ensure the Nation receives fair market value for its OCS resources; and carefully reviewing requests for approval of industry plans to explore, develop, and produce leased resources. BOEM also is responsible for the management of all OCS minerals other than oil and gas and plays a unique role in providing coastal resources protection and sustainable management through the conveyance of sand and gravel resources.

BOEM conducts a range of activities in order to successfully manage OCS oil and gas resources. A key initial step is the assessment of undiscovered technically and economically recoverable oil and gas resources of the Nation's OCS. The objective of this assessment is to identify areas on the OCS that offer the highest potential for the occurrence of oil and natural gas resources that may be considered for exploration and development. BOEM utilizes the most up-to-date resource assessment information in the preparation of a five-year schedule of proposed lease sales, which includes establishing the size, timing, and location of lease sales and balancing the

The Na Kika platform in deepwater Gulf of Mexico

potential for environmental impacts, discovery of oil and gas, and impacts on the coastal zone. BOEM also researches, analyzes, and establishes lease terms and conditions that foster competition and ensure receipt of fair market value for the Nation's OCS resources.

BOEM authorizes industry to collect geological and geophysical (G&G) data, which BOEM then may obtain and interpret to inform oil and gas resource assessments and to determine fair market value. Analysis of G&G data also allows BOEM to estimate discovered oil and gas reserves, undiscovered resources, and to forecast industry activity levels in a particular region. This supports BOEM's fair market value analysis and determinations of the adequacy of high bids received for individual tracts offered in a lease sale.

As of January 2016, BOEM administers more than 5,030 active oil and gas leases on over 27 million OCS acres. Energy revenues generated from BOEM leasing actions and collected by ONRR are a significant source of revenue for the Federal Government. Production from these leases generated $4.4 billion of dollars in leasing revenue for the Federal Treasury (a portion of which is shared with state governments) in fiscal year 2015. The overall level of activity on the OCS related to this production, leasing revenue, drilling, and development of new projects is estimated to support employment associated with about 650,000 direct, indirect and induced jobs. In fiscal year 2015, OCS leases provided 553 million barrels of oil and 1,346 billion cubic feet of natural gas, almost all of which was produced in the Gulf of Mexico, accounting for about 16 percent of domestic oil production and four percent of domestic natural gas production.

LEASING

BOEM's leasing and planning activities include preparing the Five Year OCS Oil and Gas Leasing Program, leasing marine minerals, creating maps of the OCS boundaries, implementing the lease sale process, administering leases, and reviewing and approving (when appropriate) exploration and development and production plans.

➢ Five Year OCS Oil and Gas Leasing Program

Under the Outer Continental Shelf Lands Act, the Secretary of the Interior has the responsibility to "prepare and periodically revise, and maintain an oil and gas leasing program" in order to

"best meet national energy needs" while still balancing other important factors. The Department must prepare a long-range program that indicates "as precisely as possible, the size, timing, and location" of Federal offshore oil and gas leasing activity to be considered for the five-year period following its approval. The Five Year Program identifies the program areas, which are delineated areas of leasing interest where potential leases may be offered, and establishes a schedule of potential lease sales over the five-year period. Ultimately, the Five Year Program is designed to achieve the careful balance required under the OCS Lands Act. The effort ensures that "management of the Outer Continental Shelf shall be conducted in a manner which considers economic, social, and environmental values of the renewable and nonrenewable resources contained in the OCS, and the potential impact of oil and gas exploration on other resource values of the Outer Continental Shelf and the marine, coastal, and human environments." BOEM requests comments from partners and stakeholders (including Federal and state agencies, local communities, federally recognized tribes, energy and non-energy private industry, public interest groups, and the public) to develop a program that offers access to those areas of the OCS with the most promising potential for development of oil and gas resources in an environmentally responsible manner. These steps result in a targeted leasing approach, which identifies areas for leasing that have high resource potential and clear indications of industry interest, while appropriately weighting environmental protection and subsistence use needs. The overall goal is to focus oil and gas leasing on the most promising blocks, while protecting important habitats and critical subsistence activities.

The 2012-2017 Five Year Program, as approved by the Secretary in August 2012, scheduled 15 lease sales in six offshore planning areas with active leases and/or activity currently underway. Twelve of the fifteen scheduled lease sales are within the Gulf of Mexico, which remains the area of greatest interest and known potential. This is also where the infrastructure supporting the oil and gas industry, including resources to respond in the event of an emergency, are the most mature and well developed. The Central and Western Gulf of Mexico remain the two offshore areas with the highest levels of resource potential and industry interest. Of the 12 Gulf of Mexico sales, eight have been held and four remain on the schedule.

The 2012-2017 Five Year Program also includes three sales in Alaska: Chukchi Sea Lease Sale 237, Cook Inlet Lease Sale 244, and Beaufort Sea Lease Sale 242. However, on October 16, 2015, due to current market conditions and low industry interest, the Secretary cancelled Lease Sale 242, which was scheduled for the first half of 2017, and Lease Sale 237, which was scheduled for 2016. BOEM published a Call for Information and Nominations for each sale but received only one nomination for the Beaufort Sea and no nominations for the Chukchi Sea sale, thereby raising concerns about the competitiveness of any such lease sale at this time. The remaining Cook Inlet Lease Sale 244 is scheduled for 2017 and BOEM has begun the pre-lease sale process. Lease Sale 244 will use the targeted leasing model, as described in the June 2012 Proposed Final Five Year Program.

The current 2012-2017 Five Year Program does not include a scheduled sale in any Atlantic areas, but areas of the Mid- and South Atlantic are being considered in the 2017-2022 Five Year Program. In working toward the goal of supporting future decision-making, BOEM completed a final programmatic environmental impact statement in 2014 related to G&G surveys in the Mid- and South Atlantic Planning Areas. The programmatic environmental impact statement will facilitate decision-making and update resource evaluation in areas where current estimates are based on older data collected in the 1970's and 1980's. As of November 2015, one permit to conduct G&G surveys in the Atlantic has been approved, seven are pending and three have been withdrawn. Information garnered from new G&G surveys will provide valuable data to inform the development and implementation of future Five Year Programs.

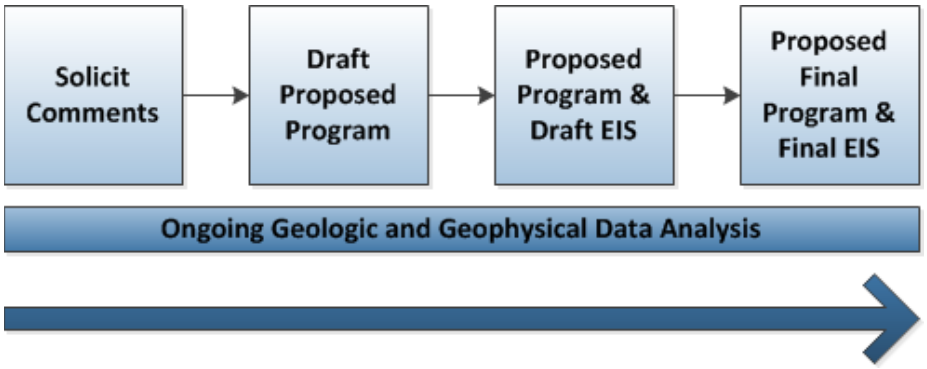
Additionally, BOEM will continue to work with the Department of Defense on complex issues relating to minimizing spatial conflicts on the OCS. In January 2013, BOEM and the Department of Defense signed charters creating the Interagency Working Group on South and Mid-Atlantic OCS Planning Areas Spatial Conflict Minimization and the Interagency Working Group on Passive Acoustic Monitoring in U.S. Atlantic OCS Waters. These groups are working to minimize potential conflicts in these areas when, and if, seismic surveying activities are approved. BOEM continues to collaborate with these groups to ensure that all potential oil and gas related activities are coordinated through specific points of contacts who are responsible for overseeing ongoing and future activities on the OCS for the purpose of minimizing multiple use conflicts.

Preparation of the next Five Year Program, to encompass the 2017-2022 time period and beginning July 2017, commenced with a request for information and comments in June 2014. BOEM received almost half a million comments from various stakeholders, including Federal, state, local and tribal governments; energy and non-energy industry; public interest groups; and members of the general public. Following the request for information and comments, Secretary Jewell released the Draft Proposed Program on January 27, 2015. The Draft Proposed Program is the first of three proposals that must be prepared before finalizing the next Five Year Program. Comments received during the request for information played a crucial role in the Draft Proposed Program. A total of 14 potential lease sales in eight planning areas (10 within the Gulf of Mexico, three off the coast of Alaska, and one in a portion of the Mid- and South Atlantic) are included in the Draft Proposed Program decision. Nearly 80 percent of the undiscovered technically recoverable resources estimated to be on the entire OCS are in the planning areas being considered for leasing under the Draft Proposed Program. BOEM received approximately a million comments on the Draft Proposed Program; these comments were incorporated into the analyses in the Proposed Program, which is the second of three proposals required under the OCS Lands Act. BOEM anticipates publication of the Proposed Program in early 2016. The complexity of the program development process necessitates that BOEM begin planning for the

next Program several years in advance. This includes an updated assessment of undiscovered technically recoverable oil and gas resources of the Nation's OCS, to be formally released in early 2016. The information from the assessment will be used to inform estimates of undiscovered resource volumes, anticipated production, and associated exploration and development activities. This information is necessary to inform decisions for subsequent iterations of the Program, including the Proposed Final Program, which BOEM anticipates publishing in late 2016.

The development of a Five Year Program began with the initial request for information and comment, to be followed by three program proposals, a draft and final programmatic environmental impact statement, culminating in approval of the Proposed Final Program by the Secretary. Pursuant to the OCS Lands Act, BOEM consults with all interested parties throughout the process, with particular consideration given to suggestions of affected state Governors and interested Federal agencies.

Figure 7: Five Year Program Development Process



As a result of this coordination and partnering, the entire process normally takes approximately two-and-a-half to three years. FY 2016 will be a critical year for Program development with publication of the Proposed Program with a 90-day comment period and publication of the draft environmental impact statement.

- **Oil and Gas Lease Sales**

BOEM held two lease sales during calendar year 2015: Central Gulf of Mexico Lease Sale 235 held on March 18, and Western Gulf of Mexico Lease Sale 246 on August 19. From these lease sales, BOEM issued 194 leases with bonus bids of over $561 million. Five lease sales remain on the lease sale schedule through mid-2017. The next lease sales scheduled are Eastern Gulf of Mexico Lease Sale 226, Central Gulf of Mexico Lease Sale 241, and Western Gulf of Mexico Lease Sale 248, scheduled to be held during calendar year 2016. The following table shows the lease sales scheduled as part of the current Five Year Program. Upcoming sales are listed by

calendar year. Lease sale numbers may not be listed in numerical order, as they are chosen as an administrative tool to identify individual proposals. Once a number has been assigned to a lease sale under a Draft Proposed Program, it cannot be reused in any subsequent revisions of that Five Year Program.

Table 14: Lease Sales in the 2012-2017 Five Year Program

Date of Sale	Area	Sale #*	Amt. High Bids Received
11/28/2012	Western Gulf of Mexico	229	$133,767,974
3/20/2013	Central Gulf of Mexico	227	$1,214,675,536
8/28/2013	Western Gulf of Mexico	233	$102,351,712
3/19/2014	Eastern Gulf of Mexico*	225	$0
3/19/2014	Central Gulf of Mexico	231	$850,809,921
8/20/2014	Western Gulf of Mexico	238	$109,951,644
3/18/2015	Central Gulf of Mexico	235	$538,780,056
8/19/2015	Western Gulf of Mexico	246	$22,675,212
2016	Eastern Gulf of Mexico	226	-
	Central Gulf of Mexico	241	-
	Chukchi Sea	237	**
	Western Gulf of Mexico	248	-
	Cook Inlet	244	-
2017	Central Gulf of Mexico	247	-
	Beaufort Sea	242	**

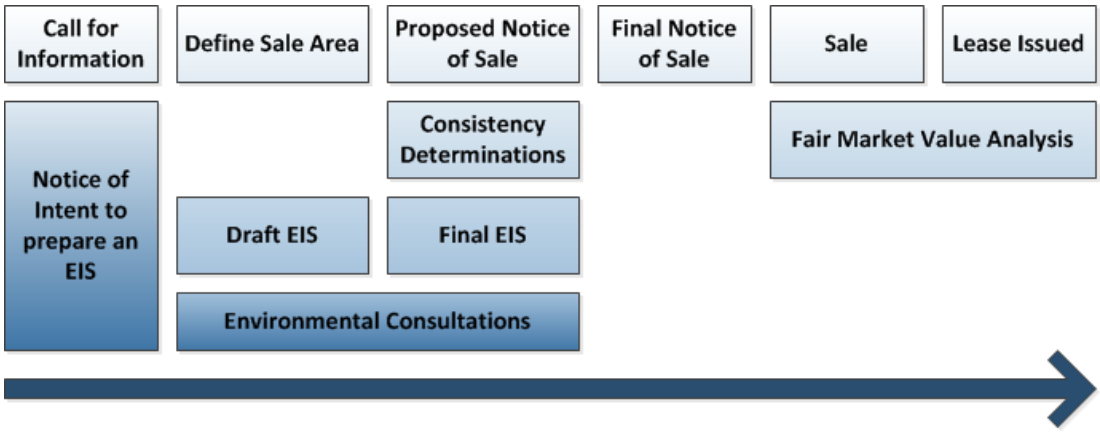
* Eastern Gulf of Mexico sales only include those areas that are not currently subject to moratorium under the Gulf of Mexico Energy Security Act of 2006. Additionally, the Eastern Gulf of Mexico Lease Sale 225 did not receive any bids.
** Chukchi Sea Lease Sale 237 and Beaufort Sea Lease Sale 242 were cancelled on October 16, 2015 due to low industry interest and current market conditions.

- **Lease Sale Planning Process**

The lease sale planning process includes activities ranging from outreach to stakeholders and government-to-government consultations with tribal governments to environmental analyses and fulfilling numerous statutory requirements. BOEM conducts a detailed planning process for each lease sale scheduled. This may take two or more years, and thus, the planning process for a lease sale may start in parallel with the development process for the Five Year Program in which that lease sale is included. These multi-tiered planning steps allow BOEM to meet multiple overlapping statutory requirements, including those of the OCS Lands Act, National Environmental Policy Act, and Coastal Zone Management Act.

The initial steps in the lease sale process vary slightly within the Gulf of Mexico Region and the Alaska Region. In the Gulf of Mexico Region, the first step in the lease sale process for an individual area is to publish a call for information and nominations (Call) and a notice of intent (NOI) to prepare an environmental impact statement (EIS). In the Alaska Region, the first step is divided into two, the Call comes first, followed by the NOI. Subsequent steps in both Regions include publishing the proposed and final notice of sale, providing lease sale notifications to the affected states, and developing an EIS. An overview of the general process for conducting a lease sale is shown below in Figure 8. Although the basic requirements for lease sale planning are specified in the OCS Lands Act and the Code of Federal Regulations (30 CFR part 556), the specific timing and preliminary steps in the process may vary depending on the previous history of leasing within a sale area. The lease sale process in some areas such as Cook Inlet, Alaska, has started with a request for industry interest. Staggering steps allows industry to indicate interest in the specific portions of the lease sale area before BOEM decides to proceed further with the lease sale process. Other modifications to the lease sale process may be appropriate for future lease sales in different frontier areas.

Figure 8: Planning for a Specific Lease Sale



- **Lease Administration**

The lease administration process encompasses a set of discrete business processes, which manage a lease from issuance to relinquishment, termination, or expiration. Once the lease has been officially awarded, lease administration covers the legal modification of the lease contract, its supporting analysis, and services provided by BOEM under the lease contract. Also included within these processes are the qualification of corporate entities and individuals before they can acquire properties or do business on the OCS; the review and acceptance of corporate mergers, corporate changes-of-name, and business conversions; and the assignment of lease interests among qualified entities.

- **Risk Management Program**

As a steward of OCS resources, BOEM manages a variety of risks associated with offshore activities. Some of these risks are intrinsically related to financial assurance and loss prevention to the U.S. Government and the American taxpayer. Robust and continuous risk monitoring is necessary to control impacts of financial uncertainty, credit risk, project failures, legal liability, accidents, and natural disasters. Standard mitigation strategies include risk transference, risk avoidance, risk reduction, and planned risk acceptance.

Emerging conditions on the OCS have prompted BOEM to develop enhanced risk management capabilities. Technological advances are outpacing programs, policies, and regulations. In addition, characteristics of the companies operating on the OCS have changed over the years, with large companies transferring sunset properties to small and less experienced companies, and these less experienced companies are now entering the decommissioning market.

The cost of decommissioning a facility is based on the type and number of various components (e.g., wells, platforms, pipelines), various environmental factors (e.g., water depth, location), condition of the facilities (e.g., age, rust, toppled, damaged), and market conditions (e.g., rig availability, supply and demand). For instance, contingent liabilities associated with the decommissioning of all facilities in the Gulf of Mexico are estimated to be approximately $39 billion. However, as assessments continue to be updated and revised, the estimate of total liabilities could increase to $50 billion. The current estimate for decommissioning all facilities in the Pacific is almost $1.5 billion. In frontier territories, such as the Arctic, the cost of decommissioning a single platform may be twice that of a Gulf of Mexico facility in comparable depth due to climate, sea ice, and remoteness. Meanwhile, a single offshore renewable energy project may include more than 100 offshore structures and many miles of buried cable that will be subject to site clearance and costly decommissioning requirements. These are just some examples of the conditions that have spurred the need for the Government to take a more proactive approach to the development and management of a national risk policy and financial assurance program.

BOEM responded to this need by initiating a comprehensive Risk Management and Financial Assurance Program to effectively manage, mitigate, and monitor Federal contingent liabilities related to energy and natural resource development on the OCS. During FY 2016, BOEM continues to transition the Program from a reactive to a proactive approach to identifying and mitigating financial liabilities on the OCS. BOEM is in the process of the development and subsequent implementation of a revised Supplemental Financial Assurance Notice to Lessees and Operators (NTL), which includes new requirements that will generate significant additional workload that did not previously exist – evaluating financial strength and reliability, processing lease assignments, assessing company mergers, and negotiating financial risk mitigation plans

for nearly 500 companies – for which the Risk Program does not yet have sufficient staffing. BOEM anticipates publishing the NTL during FY 2016. BOEM also plans to conduct a workshop regarding the NTL to instruct industry on BOEM's processes as well as details associated with the phased implementation of a tailored plan. The anticipated increase in workload associated with the NTL will necessitate personnel with expertise in multiple areas, such as financial analysis. Current staffing and resource levels do not allow BOEM to respond adequately to emerging conditions, nor do they allow BOEM to be proactive in identifying and assessing associated risks.

BOEM's current bonding regulations and guidance have been in place since the mid-1990s and are in the process of being modernized to incorporate current industry and financial institution best practices. Under BOEM's revised guidance companies will be able to utilize multiple types of financial assurance instruments to create a tailored plan that uniquely fits their needs to meet their additional security requirements. BOEM anticipates a significant increase in workload as it works with companies to tailor specific plans to address total outstanding decommissioning liabilities and ascertain the gap in their financial assurance requirements.

As BOEM implements its revised Supplemental Financial Assurance NTL, over a phased-in compliance period, it will require additional staff due to the significant increase in the volume of work in processing lease assignments, processing company mergers, evaluating financial strength and reliability, and negotiating financial risk mitigation plans of nearly every company on the OCS. Additionally, management of the potential liabilities associated with these activities is challenging due to the complexity of offshore ownership rights and responsibilities. The initial start-up phase from mid FY 2016, through late FY 2017 and a steady state phase in the following years. During the initial startup phase BOEM anticipates reviewing well over 100 assurance plans that will be submitted as a result of the new NTL. This new workload, which includes evaluating the legal documents associated with the individualized financial risk mitigation plans covering about 5,000 leases with nearly 3,300 structures by approximately 470 business entities, requires very specialized expertise. During steady state, BOEM anticipates reviewing approximately 20 new assurance plans per year and approximately 125 financial plan renewals and updates (i.e., reviewing changes to existing financial assurance plans).

The workload impact to BOEM will be significant and the requested funds will enable BOEM to acquire 15 FTE with specialized skill sets to ensure the Program is accurately assessing, controlling, mitigating, remediating, monitoring, and reporting risk. This increase in workload will necessitate personnel with expertise in multiple areas, such as financial analysis; legal analysis and regulatory development; insurance analysis to assess coverage and support complex case resolution, loss mitigation, and project-specific loss control mechanisms; forensic accounting and risk analysis; and program analysis to carry out functional and operational responsibilities. These staff will support and be assigned to headquarters as well as all three

regions. To fully offset the FY 2017 costs associated with the FTE and anticipated program and personnel development costs, BOEM plans to institute a fee associated with the submission of tailored financial plans. The FY 2017 request, combined with full funding of BOEM's FY 2016 request for the Risk Management Program, should bring the Program to full staffing capacity and allow it to become fully operational. This initiative will aid in developing the capacity of BOEM – and the government as a whole – to identify, analyze, and mitigate financial risk and liability.

PLANS

For existing leases, BOEM conducts in-depth reviews of exploration plans (EPs), development and production plans (DPPs), and development operations coordination documents (DOCDs) for potential approval within required time frames to ensure that planned activities are conducted in accordance with applicable laws, regulations, and lease terms. BOEM works to ensure that the review process is rigorous, efficient, and transparent, while also being predictable to industry. BOEM designates specific plan coordinators to ensure consistency throughout the review process and is currently developing electronic systems to make the process more user-friendly and the status more transparent.

In conducting plan reviews, BOEM examines a broad spectrum of issues and resources and evaluates the environmental impacts of the proposed activities as required by NEPA. Analyses include reviews of shallow hazards and seafloor features, resource conservation, supplemental bonding, worst case discharge, air quality, water quality, archaeological concerns, environmental resource concerns, subsistence use concerns, and military and security issues. These analyses provide information that is needed to support plan decisions and aid in the development of approval conditions to help protect the environment and facilitate multiple use of the OCS.

BOEM's regional offices coordinate and manage the plan review process between the Conventional Energy and Environmental Programs activities while working closely with the Office of Strategic Resources and the Office of Environmental Programs. BOEM also coordinates its review of plans with BSEE, as well as with states that have approved Coastal Zone Management Programs, and with other appropriate state and Federal agencies.

Figures 9 and 10 illustrate typical processes for exploration and development of OCS oil and gas resources. For development activities proposed for a lease or unit in the Gulf of Mexico west of 87.5° longitude, a DOCD is submitted. Figure 8 is a representation of these development activities. For any other OCS area, a DPP is submitted for proposed development activities.

Figure 9: Processes for Exploration Activities

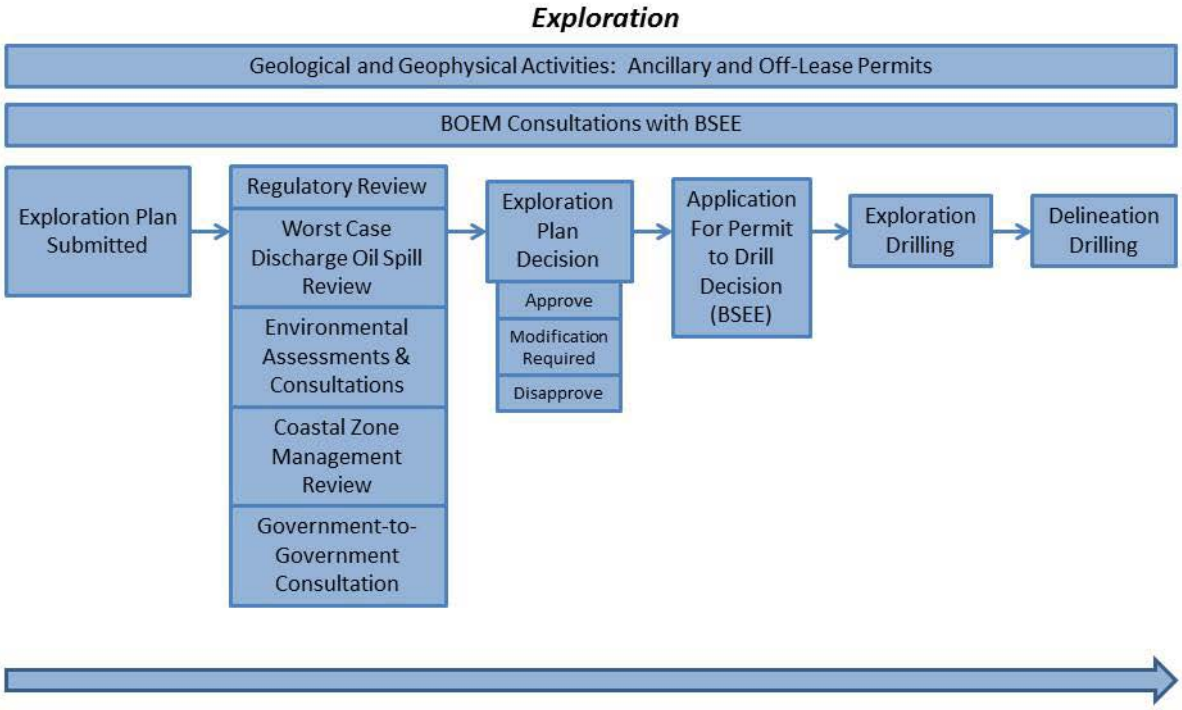
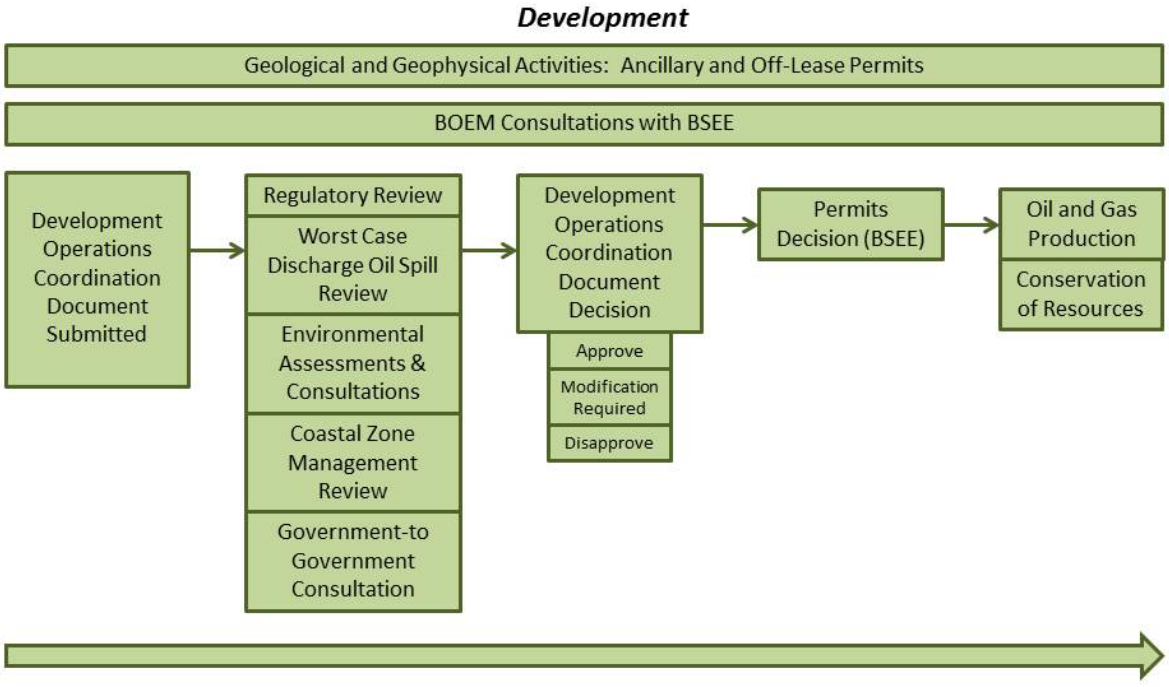


Figure 10: Processes for Development Activities



Note: This figure reflects the process for development plans in the Gulf of Mexico Region. The Alaska Region follows a similar process for development plans and receives DPPs rather than DOCDs.

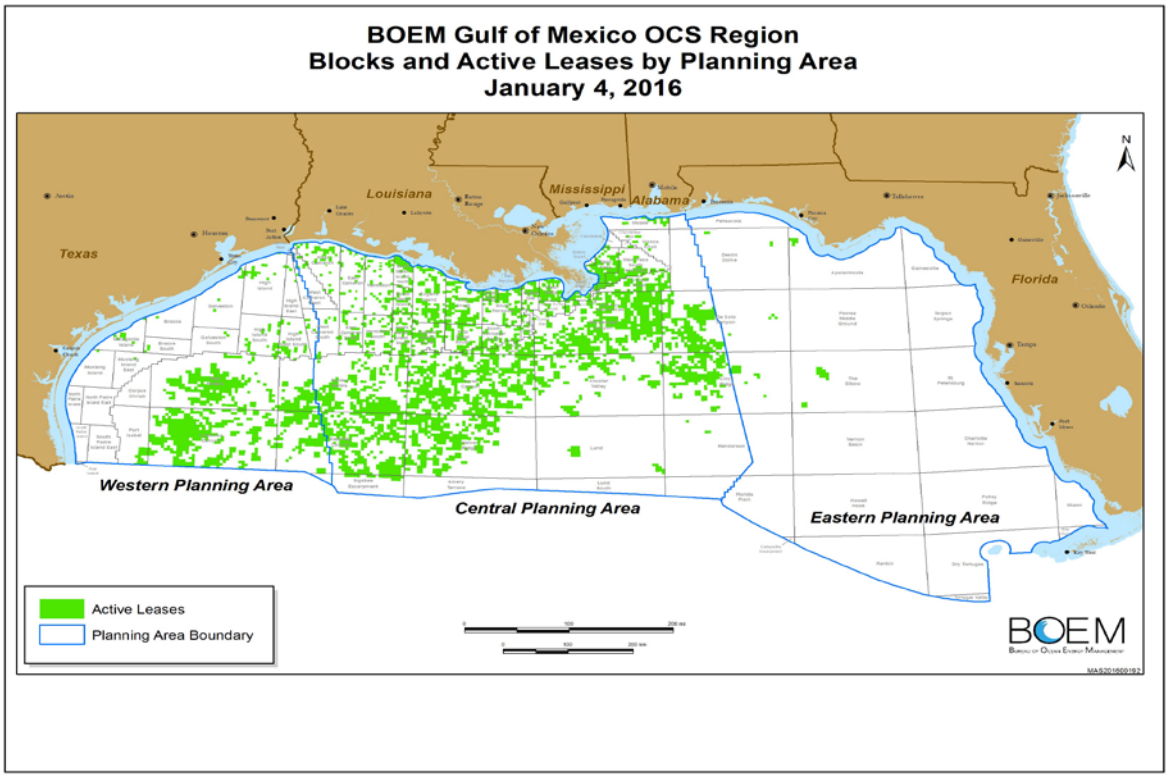
BOEM, in coordination with BSEE, continues to modernize and enhance the Technical Information Management Systems (TIMS) by developing ePlans. TIMS is a web-based platform that supports online reporting and permitting functions and which is utilized by both BOEM and BSEE. Together, the bureaus are working to enhance functionality and service delivery. The ePlans portal will revolutionize the plan submittal and review process for both BOEM and industry. It will automate the plans process and ensure the consistency, transparency, and efficiency of BOEM's review and approval of industry plans. The system will be dynamic enough to record changes made at all phases of the process, allowing for proper record-keeping and the ability to respond to managerial and Congressional requests. It will also allow the plan submission to become part of the TIMS database which can be referenced for future BOEM and BSEE applications and components.

This effort to modernize an important component of BOEM's IT infrastructure will achieve significant gains for both the rigor and the efficiency of plan review. The automation of this process will yield significant savings for industry and increase coordination and opportunities for data-sharing across Federal and state agencies. Not only will industry be able to log into the ePlans system to submit plans, but the states and Federal agencies will be able to log into ePlans to view plans and will receive electronic notifications for those plans affecting their states or agencies. Development of the first two modules (Initial Exploration Plan and Review Exploration Plan) is expected to be completed in 2016.

Throughout this process, BOEM has coordinated closely with BSEE, which is simultaneously developing a complementary permit review platform called ePermits. The ePlans portal is a critical component of BOEM's efforts to improve and modernize its core mission processes, and to facilitate coordination and data-sharing between BOEM, BSEE and other state and Federal regulatory agencies.

Gulf of Mexico Region: As of January 2016, BOEM oversees 29,100 blocks in the Gulf of Mexico Region. Of these, 4,460 blocks are leased including 907 in the Western Planning Area, 3,505 in the Central Planning Area, and 48 in the Eastern Planning Area. Three active leases are shared between the Central and Eastern Planning Areas, yielding a net total of 4,457 active leases within the Gulf of Mexico. A snapshot of the blocks and active leases within the Gulf of Mexico is provided below in Figure 11.

Figure 11: Gulf of Mexico Region Blocks and Active Leases by Planning Area



BOEM also reviews and processes all right-of-use and easement applications. Rights-of-use and easements are granted to operators to construct or maintain platforms and other installations at OCS sites on which the operator does not have an OCS lease. In FY 2015, the Gulf of Mexico Region completed 22 right-of-use and easement requests and received 24 requests during this time period. BOEM anticipates approximately 25 requests in each FY 2016 and FY 2017.

The number of plans reviewed in 2015 decreased slightly from the previous year. This decrease was in the plans submitted for proposed activities in shallow water areas of the Gulf of Mexico; however, for proposed deepwater activities, the number of plans increased in CY 2015. BOEM has seen deepwater drilling rig activity remain at record levels in recent years. Although there has been a significant decrease in shallow water activity, this has not occured in the deepwater, and the long term outlook for deepwater projects remains favorable. Deepwater plans are more complex than shallow water plans, and thus result in a greater workload.

The following table shows all plan submittals – initial, supplemental, revised, modifications, amendments, and post approval – received from 2008 through 2015, as well as plans estimated to be received in calendar years 2016 and 2017.

Table 15: Plan Review Activities in the Gulf of Mexico 2008-2017

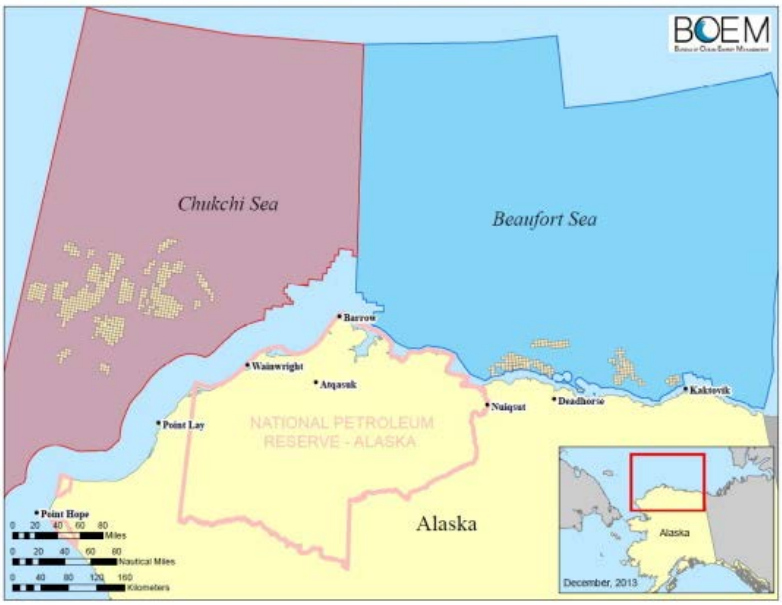
Calendar Year	# EPs	# DOCDs
2008	516	444
2009	619	350
2010	408	431
2011*	907	837
2012	170	327
2013	504	616
2014	509	601
2015	542	473
2016**	500	500
2017**	500	500

* The increase in 2011 is due to heightened standards on information requirements on Exploration Plans (EP) and Development Operation Coordination Documents (DOCD) in the OCS.
** The number of plans noted in 2016 and 2017 are estimated.

Alaska Region: As of January 2016, the Alaska OCS contains 527 active oil and gas leases encompassing approximately 2.93 million acres in the Beaufort Sea (77 leases) and Chukchi Sea (450 leases). The decline in the number of active leases from the previous year is the result of leases either expiring or the operator relinquishing the leases. The location of the Alaska OCS leases are shown in the following map. Prior to expiration of the leases in 2017 and 2020, BOEM anticipates receiving requests to conduct ancillary activities and exploratory drilling on a few of these leases. Activities on these leases are challenging because of the extreme Arctic conditions, remote location, and lack of infrastructure.

As a result of these and other challenges, especially low oil prices, industry interest in exploration and development in the U. S. Arctic OCS will likely be uncertain in the coming years. However, even with this uncertainty, future interest in Arctic development is likely to remain high given the area's resource potential. BOEM may require additional staff to review and oversee OCS oil and gas exploration plans for the Beaufort and Chukchi Seas. Exploratory drilling during the 2012 and 2015 open water seasons demonstrated the importance of rigorous upfront planning and ongoing oversight to ensure that industry meets high standards for operating in the Arctic.

Figure 12: Alaska Region Active Leases



On March 31, 2015, Shell filed an updated version of the Chukchi Sea EP Revision 2; BOEM deemed the EP submitted on April 10, 2015. On May 11, 2015, BOEM conditionally approved the Shell Chukchi Sea EP Revision 2 after a comprehensive review; consideration of comments received from the public, stakeholders, and Federal and state partnering agencies and tribes; and robust interagency coordination. Under the EP, Shell conducted drilling operations at its Burger J well site during the 2015 open water season. On September 28, 2015, Shell announced that insufficient oil and gas was found in the Burger J exploration well to warrant further exploration at the Burger Prospect and that it would cease further exploration activity in the OCS offshore the State of Alaska for the foreseeable future. The Burger J exploration well was sealed and abandoned in accordance with BOEM and BSEE regulations.

In November 2014, Hilcorp Alaska, LLC (Hilcorp) acquired 50 percent ownership and assumed operatorship of the Liberty Prospect from BP Exploration (Alaska), Inc. On December 30, 2014, Hilcorp submitted a Development and Production Plan (DPP) for the Liberty Prospect, which is located in OCS waters northeast of Prudhoe Bay. This area covers two leases that were issued in 1991 and 1996. On February 4, 2015, after completing a preliminary review of the DPP, BOEM requested additional information about the project from Hilcorp. BOEM reviewed additional information submitted by Hilcorp, and on September 18, 2015, BOEM deemed the DPP submitted. On September 25, 2015, BOEM published a Notice of Intent to prepare an EIS in the Federal Register, initiating a 60-day public comment period ending on November 24, 2015. BOEM held public scoping meetings in Alaska (Fairbanks, Kaktovik, Nuiqsut, Barrow, and Anchorage) and accepted comments through Regulations.gov. In addition, BOEM conducted government-to-government consultations with federally recognized tribes and government-to-

Alaska Native Claims Settlement Act (ANCSA) corporation consultations. In response to comments received during public meetings, BOEM extended the scoping comment period for 60 days to to January 26, 2016. It is anticipated that the environmental analysis of the DPP will be completed by the fall of 2017. The analysis will be closely coordinated with a number of cooperating agencies, including the State of Alaska, the Army Corps of Engineers, the Environmental Protection Agency, the Fish and Wildlife Service, the National Marines Fisheries Service and several federally recognized tribes.

The Liberty Prospect DPP, if approved and executed, will be the first solely Federal offshore oil and gas complex in the U.S. Arctic OCS, and its development is expected to help lay the foundations for all future OCS oil and gas activity in the U.S. portion of the Beaufort Sea. Responsible and safe development of Liberty will require rigorous oversight by BOEM, BSEE and other Federal agencies.

Review of exploration and development and production plans requires additional environmental consultation with the U.S. Fish and Wildlife Service (FWS) and NOAA to ensure compliance with the Endangered Species Act and Marine Mammal Protection Act, as well as other laws protecting the environment. BOEM also consults with NOAA on essential fish habitat, and with the State Historic Preservation Offices on archaeology and historic preservation requirements.

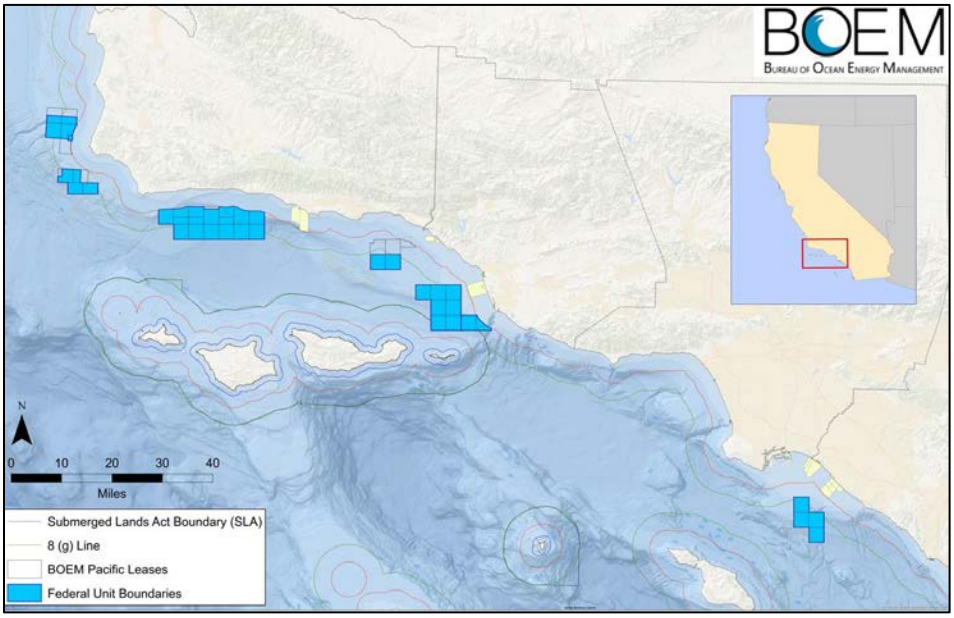
Per Executive Order and DOI policy, BOEM initiates and engages in government-to-government consultations with federally recognized tribes and government-to-ANCSA corporations in planning activities that may have a substantial direct effect on those entities.

In Alaska, BOEM has been involved with BSEE on a joint rule to provide for new and revised regulations on Arctic exploration drilling. On February 20, 2015, the proposed Arctic-specific regulations were released for public comment. The proposed regulations focus solely on OCS exploration drilling operations within the Beaufort Sea and Chukchi Sea Planning Areas. Using a combination of performance-based and presecriptive standards, the proposed regulations codify and further develop current Arctic-specific operation standards that seek to ensure operators take the necessary steps to plan through all phases of OCS exploration in the Arctic, including mobilization, drilling, maritime transport and emergency response, and conduct safe drilling operations while in theater. Public meetings were held in commuties in Alaska as well as government-to-government consultations with federally recognized tribes and government-to-ANCSA corporations. BOEM and BSEE received thousands of comments on the proposed regulations. The Bureau is in the process of reviewing comments received and anticipates publishing a final rule in the near future.

Pacific Region: While neither the current Five Year Program nor the 2017-2022 Program include lease sales in the Pacific Region, BOEM continues to oversee activity on 43 existing

leases from previous lease sales. Proposed activities on these active leases periodically require an update or revision to development and production plans. During FY 2015, BOEM reviewed one development and production plan update, and expects one more in each FY 2016 and FY 2017. Figure 13 below shows the location of these leases off the coast of Southern California.

Figure 13: Pacific Region Active Leases



- **Oil Spill Financial Responsibility Program**

The financial responsibilities associated with the development of OCS resources are enormous. Just as BOEM must protect the American taxpayer from entities that fail to meet their lease, grant, or permit obligations, the Bureau must also ensure that these same entities have the financial resources to pay for cleanup and damages that could be caused by oil discharges from their OCS facilities.

Under the Oil Pollution Act, BOEM is authorized to adjust for inflation the limit of liability for OCS facilities, including pipelines. In December 2014, BOEM published a final rule that increases this cap, based on adjustments for inflation. The new limit of liability for damages from OCS facility spills is capped at $133.65 million effective January 12, 2015 – the maximum allowed under the Oil Pollution Act. The liability cap will be periodically adjusted for inflation. The liability for damages from offshore facility spills will be limited to the current cap amount unless it can be shown that the responsible party was guilty of willful misconduct, gross negligence, a willful failure to report the oil spill incident or to cooperate with removal activities, or that the responsible party violated applicable Federal safety regulations, in which case there

would be no limit to any liability for damages. BOEM performs a thorough review and oversight of industry oil spill financial responsibility filings, which are required before any drilling activities are approved. BOEM uses the information to (1) ensure Oil Pollution Act compliance by offshore lessees and owners and operators of covered facilities, (2) establish eligibility of designated applicants for oil spill financial responsibility certification, and (3) establish reference and contact information for potentially responsible parties, their designated agents and guarantors. The program currently oversees approximately 160 companies covering 7,500 facilities with financial coverage in excess of $11 billion.

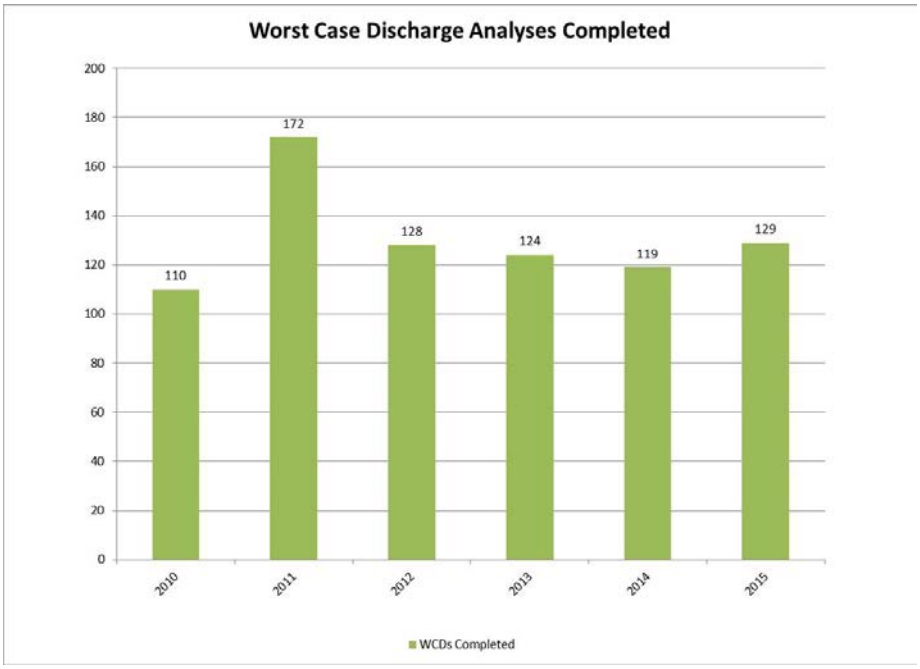
- **Worst Case Discharge**

Following the Deepwater Horizon oil spill, and the subsequent reorganization of MMS, BOEM instituted new regulations that require operators and lessees to submit worst case discharge (WCD) calculated volumes and associated data as part of every exploration plan and development plan. BOEM defines a WCD for exploratory and development drilling operations as the daily rate of an uncontrolled flow of oil and gas from all producible reservoirs through the open wellbore. The package of reservoirs exposed to an open borehole with the greatest discharge potential is considered the worst case discharge scenario.

Each Region is responsible for worst case discharge verifications and decision documentation associated with plans under their jurisdictions. BOEM geoscientists and engineers independently verify the validity of the volume calculations, assumptions, and analogs used by the operator for the worst case discharge. BOEM's worst case discharge model outputs are used by BSEE in reviewing oil spill response plans and making Application for Permit to Drill (APD) decisions.

Gulf of Mexico Region: BOEM made determinations on 129 WCD verifications in FY 2015. During 2016 and 2017, BOEM anticipates the number of worst case discharge analyses to remain the same, though the workload will depend on the level of drilling activity in deepwater. Figure 14 below depicts the number of WCD analyses completed since 2010.

Figure 14: Worst Case Discharge Analyses Completed



BOEM continues to develop trend parameters for deepwater exploration and development drilling for critical reservoir and fluid properties for the worst case discharge analysis in order to enhance the efficiency of the process while maintaining the regulatory oversight needed to ensure an adequate response to an uncontrolled blowout. In FY 2015, BOEM awarded a research contract on Flow Correlation Validation for worst case discharge to improve the accuracy of calculating an uncontrolled blowout volume. The study should be completed at the end of FY 2016.

Alaska Region: The worst case discharge estimates have heightened importance in Alaska because there is limited oil spill response capabilities for the Arctic marine environment that operators can access and allow sharing of costs. Currently in Alaska, each operator must provide its own response capability to cover the estimated worst case discharge volume. Operators requested numerous meetings with BOEM staff to clarify the various input parameters and assumptions in reservoir flow simulation software models used to produce their worst case discharge estimates. During September 2015, the BOEM staff certified the submitted worst case discharge for the Liberty DPP and presented its findings to BSEE on September 21, 2015, for oil spill plan response evaluation.

Pacific Region: Since there is no new leasing, the Region's worst case discharge analyses are for mature fields only. In FY 2015, the Region completed one worst case discharge verification and anticipates a similar level of activity in both fiscal years 2016 and 2017. The Region participated in the Gemini Solutions Annual User Meeting (BOEM WCD software vendor) held

in Galveston, October 6-8, 2015. This meeting provides a forum to discuss improvements to the software workflow and complex issues encountered in various modeling cases, and share lessons learned. BOEM anticipates participating in this meeting in FY 2016 and FY 2017.

- **G&G Reviews**

Regulatory reviews using G&G ancillary data are performed to evaluate drilling hazards posed by surface and subsurface geologic conditions and man-made obstructions (30 CFR 550.201-207). In addition, geophysical reviews are performed to evaluate shallow hazards (seafloor and near seafloor) associated with operators' applications for pipeline rights-of-way and associated permits (30 CFR 250.1007 (5)). These reviews include evaluation and verification of operators' interpretations, identification and assessment of potential geohazards in the area affected by exploratory and development drilling, installation of structures, laying pipelines, and other ancillary activities related to the plans. Based on G&G surveys from operators, BOEM geoscientists identify and evaluate potential risk of shallow faulting, shallow gas zones, shallow water flows, abnormal pressure zones, lost circulation zones, and other natural and manmade hazards. In addition, geoscientists evaluate the potential risk of encountering hydrogen sulfide (H2S). The G&G reviews provide a detailed evaluation of operators' geohazards analyses and shallow hazards assessment and determine mitigations to be applied to plan and permit approvals.

BOEM geoscientists conduct G&G evaluations that include broaching analyses that support BSEE reviews and approvals of operators' APDs for wells. The integrity of the well design is evaluated by BSEE, and if a determination is made that the well may fail at a certain casing point, a broaching analysis is conducted by geoscientists. Typically it takes 1 to 2 weeks, depending on the complexity of the geology, for the geoscientists to evaluate subsurface stratigraphic and structural conditions to determine if escaping hydrocarbons from a failed casing shoe will be trapped in the formations or potentially reach the seafloor at some point in time.

Gulf of Mexico Region: In FY 2015, BOEM conducted approximately 358 geological and 299 geophysical reviews in support of plans and BSEE APD and pipeline responsibilities. Moving forward, increasingly complex analyses will be required for geohazard reviews due to higher resolution data collected for complex projects, especially those occurring in deepwater, and the additional workload of broaching analyses in support of BSEE well integrity analyses. In FY 2015, broaching analyses were completed on 29 proposed wells in support of BSEE. BOEM anticipates completing approximately the same number of broaching analyses in FY 2016 and FY 2017.

Alaska Region: In Alaska, the Resource Evaluation staff provides the subsurface expertise to BSEE for regulatory review of applications for drilling permits. In 2015, BOEM geoscientists

and petroleum engineers reviewed geological and geophysical information and advised BSEE concerning the approval of two APDs to drill associated with Shell's exploration drilling program in 2015. The BOEM geoscientists also provided on-call reviews during actual drilling operations when requested by the BSEE Alaska Region. BOEM is currently reviewing geological and geophysical information, including shallow hazards information, for the Liberty Development and Production Plan in the Beaufort Sea. The analysis done by BOEM will be instrumental in evaluating the reservoir development plan for Liberty consistent with resource conservation principles, and for the shallow hazards assessment to determine the appropriate location of the man-made gravel island and pipeline corridor.

RESOURCE EVALUATION

BOEM's resource evaluation program conducts analyses to identify areas of the OCS that are the most promising for oil and gas and mineral development (including methane hydrates). To accomplish this, BOEM:

- Acquires G&G data/information through the regulation of pre-lease exploration of the OCS;
- Delineates and develops estimates of the quantities of undiscovered technically and economically recoverable resources that may exist and the volume of reserves discovered and likely to be produced;
- Tracks the volume of discovered reserves, produced reserves, and the remaining reserves by field;
- Forecasts future industry activity levels and develops scenarios for the leasing program; and,
- Determines the adequacy of high bids received for individual tracts offered for lease to ensure the Nation receives fair market value for the tracts.

BOEM's evaluation of geological, engineering, and geophysical data and information provides the inputs to the economic and statistical analyses that inform leasing policies and program decisions, such as the design of financial terms for lease sales. Program analyses assist in exploration and development plan decisions and help reduce the risk of safety and environmental concerns in OCS development decision-making.

➢ Resource Assessment

As one of the first steps in the leasing process, BOEM must identify resources associated with geologic plays and areas on the OCS that offer the highest potential for oil and gas development

and production. Following the identification of hydrocarbon plays, BOEM assesses the play's hydrocarbon potential and its economic viability with complex computer models and methodologies. The assessment process incorporates specific geologic, petroleum engineering, and economic data and information. In addition to the estimation of undiscovered hydrocarbon resources, these studies help identify environmental and operational constraints and assist in making leasing decisions. Comparing the data for acreage and resources offered illustrates that BOEM offers access to geologic areas on the OCS that have the highest potential for development of oil and gas. Table 16 shows that approximately 13 percent of the total OCS acreage (219 million acres out of 1.7 billion acres) is available for leasing in the 2012-2017 Program. However, the acreage offered represents 75 percent of BOEM's estimated Undiscovered Technically Recoverable Resources on the OCS.

Table 16: Comparison: Total OCS Resources vs. the 2012-2017 Five Year Program

	Total OCS Acreage	Acreage Offered for Leasing in the 2012-2017 Five Year Program	Percentage of Total Acreage Offered	Total OCS Undiscovered Technically Recoverable Resources (BOE-Barrels of Oil Equivalent)*	Undiscovered Technically Recoverable Resources Offered for Leasing in the 2012-2017 Five Year Program	Percentage of Total Undiscovered Technically Recoverable Resources Offered
TOTAL	1.7 billion	219 million	13%	162 Billion BOE	122 Billion BOE	75%
Alaska	1.0 billion	125 million	13%	50 Billion BOE	43 Billion BOE	86%
GOM	169 million	94 million	56%	87 Billion BOE	79 Billion BOE	91%
Atlantic	259 million			11 Billion BOE		
Pacific	248 million			13 Billion BOE		

* Resource estimates based on BOEM 2011 National Resource Assessment (2014 Atlantic Update). Total values may not equal sum of the component values due to rounding.

BOEM also estimates the amounts of oil and gas likely to be discovered and produced; and, generates potential scenarios of future exploration, development, and production activities. BOEM measures both the resources and acres offered annually compared to what was planned for the year and analyzes the results to inform the Five Year Program and sale decisions. Resource estimates support analyses of potential impacts of policy options, legislative proposals, NEPA analyses, and industry activities affecting OCS oil and gas activities — both current and future.

The scale of the assessment activities range from large (regional or OCS-wide) to lease sale specific, such as individual prospects and lease tracts. In the early stages of this process, the focus is on regional areas, but as more data and information are acquired, the focus shifts to lease sales and prospect-specific areas to be offered for lease, or that are related to a specific issue, (i.e., moratoria, marine sanctuaries, quantitative analysis of legislative proposals). Once a lease sale area has been identified, BOEM's geologists and geophysicists perform detailed subsurface mapping and analyses needed to estimate the resource potential of individual prospects within that area. These prospect-specific data, maps, and analyses are also used to determine parameters for post-sale bid analyses in support of fair market value evaluations.

The 2011 Assessment of Undiscovered Technically Recoverable Oil and Gas Resources of the Nation's Outer Continental Shelf was developed to support the 2012-2017 Five Year Program. In FY 2015, BOEM initiated the 2016 National Assessment of Undiscovered Technically Recoverable resources (2016 Assessment). BOEM anticipates completion of the assessment by early 2016. The assessment will provide the foundation to support activities related to the development of the 2017-2022 Five Year Program and forms the basis of the anticipated production which is used in the economic analysis.

***Gulf of Mexico Region and Atlantic OCS*:** During FY 2014, BOEM completed its analyses and updated its estimates of the undiscovered resource potential of the Atlantic OCS. BOEM's most recent comprehensive assessment of the undiscovered resource potential of the Gulf of Mexico was completed in 2011. An up-to-date resource assessment of the Gulf of Mexico is necessary to ensure that BOEM will be in a position to provide the best resource information available for upcoming analyses and decisions regarding the 2017-2022 OCS Oil and Gas Leasing Program. In FY 2015, the Region initiated the 2016 Undiscovered Resource Assessment of the Atlantic and Gulf of Mexico OCS. The assessment is expected to be completed in early 2016. The assessment will include exploration and development activity scenarios for both the Atlantic OCS and Gulf of Mexico OCS.

Alaska Region: In FY 2015, BOEM reassessed the oil and gas potential, but did not make any changes related to the Cook Inlet Planning Area, where new seismic surveys are planned. The seismic data will be critical for fair market value determinations for the planned OCS lease sale in 2017. BOEM's Alaska Region is responsible for all reservoir and field analyses for BOEM and BSEE in Alaska, and also all the shallow hazard reviews for exploration and development plans and subsequent applications for permit to drill.

Pacific Region: In FY 2015, the Pacific Region commenced work on the 2016 Pacific OCS Assessment for Oil and Gas Resources, completing preliminary undiscovered economically recoverable resource calculations. The 2016 resource assessment is anticipated to be completed in FY 2016.

- **Reserves Inventory Program**

The OCS Lands Act requires the Department to "conduct a continuing investigation…for the purpose of determining the availability of all oil and gas produced or located on the Outer Continental Shelf." In order to meet this requirement, BOEM is required to develop independent estimates of economically recoverable amounts of oil and gas contained within discovered fields by conducting field reserve studies. The reserve estimates undergo continuous revisions to reflect new information obtained from development and production activities. As

activity increases on the OCS, so does the workload associated with the reserves inventory program. BOEM is responsible for continually updating volumetric estimates on over 1,200 fields in the Gulf of Mexico. During FY 2015, nearly 8,000 reservoirs were interpreted, revised, and added to the inventory.

Reserve studies are critical inputs to determining the Nation's oil and gas endowment on the OCS, conducting resource assessments, generating analog information for bid adequacy determinations, and in the review of industry plans and requests. The geologic and engineering information supports other program activities within the Department, including the development and preparation of the Five Year OCS Oil and Gas Leasing Program for 2017-2022 as well as through cooperative efforts with the Department of Energy and its Energy Information Administration (EIA). For example, BOEM's reserves inventory and resource assessment information serves to support EIA's National Energy Modeling System (NEMS) which is used for preparation of forecasts in EIA's Annual Energy Outlook. In addition, the information is also used by the USGS for the Lower Tertiary assessment.

Gulf of Mexico Region: At the Regional level, reserves inventory personnel review conservation information document submissions. Conservation information documents are required to ensure operators exploit all economic reservoir accumulations discovered rather than producing only the most prolific zones and bypassing marginally economic zones. The review and analysis of company-submitted conservation information documents allows for the maximum ultimate recovery and full development of economic reserves and resources, while ensuring fair monetary compensation for the Federal Government. During FY 2015, BOEM evaluated 28 initial and supplemental CIDs and 18 revised CIDs resulting in a commitment to develop an additional 13.03 MMBOE in recoverable hydrocarbons that would otherwise not be developed. BOEM anticipates evaluating approximately 48 requests during FY 2016 and 50 during FY 2017.

During FY 2016, BOEM anticipates issuing reports summarizing oil and gas reserves and production from Gulf of Mexico discovered fields. The calendar year 2014 reports on "Estimated Oil and Gas Reserves Gulf of Mexico OCS Region" and the associated 2014 "Atlas of Gulf of Mexico Gas and Oil Sands Data" will be published on the BOEM website in FY 2016. In FY 2015, the calendar year 2012 and 2013 reports along with the associated calendar year 2012 and 2013 "Atlas of Gulf of Mexico Gas and Oil Sands Data" reports were published on the BOEM website.

Alaska Region: BOEM continues to support BSEE in the oversight of production allocation issues for the Northstar field production unit operated by Hilcorp Alaska, which produces oil from both State of Alaska and OCS leases. For example, BOEM participates in quarterly meetings with Hilcorp Alaska and BSEE to discuss and resolve production allocation issues.

Pacific Region: During FY2015, BOEM generated its annual Field Reservoir and Reserve Estimates report, breaking down the Pacific Region's reserves and known resources by field and productive zone. BOEM published a public version of the report on BOEM.gov. Work on this annual report begins once production data is submitted by companies, which is typically received by BOEM in the late spring or early summer. BOEM then must verify the data and perform a variety of analyses, which typically takes months to complete. The Field Reservoir and Reserve Estimates report provides a brief update on reserves and production between releases of the more comprehensive Estimated Oil and Gas Reserves report. BOEM anticipates publishing an annual Field Reservoir and Reserve Estimate report during FY 2016 and also FY 2017. Also in FY 2015, the Region generated the "Pacific Outer Continental Shelf Production Projections" forecast for 2015-2026 to be used by BOEM to estimate Federal OCS royalty receipts for the 2016 Presidential Budget. BOEM will complete similar forecasts for the 2017 and 2018 President's Budgets during FY 2016 and FY 2017.

- **Regulation of Prelease Exploration**

Through regulation, BOEM works to ensure that energy related prelease exploration, prospecting, and scientific research operations in Federal waters do not interfere with each other, with lease operations, or with other permitted uses of the area. Permits to acquire prelease geological and geophysical data identify specific parameters for each activity, including the area of interest, the timing of acquisition, the use of approved equipment and methods, and required environmental compliance measures. For each approved application, the operator receives a signed copy of the permit that outlines policies regarding reporting, submission, inspection and selection of data, reimbursement, disclosure of information, possible sharing of data with affected states, contact information for coordinating activities with affected stakeholders, and policies regarding permit modifications. Adherence to these regulations ensures that exploration and research activities will be conducted in a safe and environmentally sound manner.

Gulf of Mexico Region: BOEM will continue to issue permits for both oil and gas exploration and marine minerals prospecting activities. During FY 2015, BOEM evaluated and issued 90 permits. During FY 2016, the BOEM anticipates evaluating and issuing approximately 100 permits, as well as various permit modifications, with the majority of the permits issued for high resolution and deep penetration seismic surveys. BOEM estimates it will evaluate and issue approximately 125 permits during FY 2017. The challenge is to complete NEPA and other environmental reviews while providing the permittee with timely access to permits to meet their business operation needs.

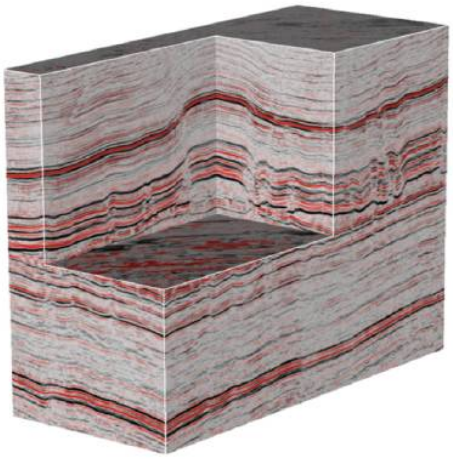
Alaska Region: BOEM will continue to issue permits for both oil and gas exploration and marine minerals prospecting activities (e.g. gold). In FY 2015, BOEM issued two G&G seismic

permits – one in the Cook Inlet OCS and one in the Beaufort Sea OCS. Permit activity is expected to remain at one to three permits submitted per year for FY 2016 and FY 2017, primarily seismic surveys for off-lease exploration. In addition to ensuring that all permittees adhere to statutory requirements (including the Marine Mammal Protection Act and the Endangered Species Act), BOEM also conducts government-to-government consultations (e.g., tribal and Alaska Native Claims Settlement Act Corporations). BOEM anticipates requests to conduct seismic surveys for pre-lease exploration in the Cook Inlet area where future lease sales are planned. BOEM received one geophysical permit request to conduct a seismic activity in the Cook Inlet OCS planning area during 2015 and expects more permit requests will be received in 2016. BOEM will acquire any new data and information as a result of the seismic activities for BOEM geoscientists to use for resource assessment and fair market value evaluation of any bids received in lease sales in the Cook Inlet planning area.

- **G&G Data Acquisition and Analysis**

The acquisition and analysis of G&G data are critical to identifying potential resources on the OCS. This enables BOEM to identify areas favorable for the accumulation of hydrocarbons and develop estimates of resource volumes and economic values of these accumulations. These estimates are used to focus OCS leasing on areas of high potential, as well as to help ensure fair market value in lease sale bid evaluations.

The majority of BOEM business processes where oil and gas resources are assessed – such as the reserve inventory program, fair market value analysis, and resource assessment – are based on the analysis of large volumes of G&G data. The primary source of the G&G data BOEM uses is physically acquired by the oil and gas industry. As a condition of the permit that BOEM issues prior to each industry activity (such as seismic data acquisition), companies are required to provide a copy of the G&G data to BOEM upon request after completion of data acquisition. BOEM uses these data internally, while maintaining them in a proprietary term that generally ranges from 2 to 25 years. The extensive amount of data and information acquired are used by BOEM and BSEE geologists, geophysicists, and petroleum engineers to perform a variety of analyses leading to resource estimates, reserve inventories, and determining fair market value of the leased tracts.



Processed 3D seismic data showing oil and gas reservoirs below salt formations in the Gulf of Mexico

In order to mitigate potential effects of seismic surverys on marine animals, BOEM has put in place a Notice to Lessees (2012-G02) that describes mitigation measures,

including ramp-up procedures, the use of a minimum sound source, airgun testing and protected species observation and reporting. To summarize, at least two trained visual observers are required on all seismic vessels to ensure the area within 500 meters of the sound source is clear of protected species for at least 30 minutes prior to beginning activities. Additionally, sound producing activity will be ramped up, meaning a gradual increase in emitted sound levels intended to warn marine mammals and sea turtles of pending seismic operations and to allow sufficient time for those animals to leave the immediate vicinity. The NTL describes in detail how to implement the mitigation measures.

Atlantic OCS: In support of the strategy laid out in the Five Year Program approved by the Secretary in August 2012, BOEM is facilitating resource evaluation in the Mid- and South Atlantic planning areas. To date, one Atlantic G&G permit has been issued and eight applications are pending.

BOEM's strategy will support development of modern, robust scientific information about the scope and location of potential oil and gas resources in the Mid- and South Atlantic and to facilitate resolution of significant potential conflicts between oil and gas activity and other important OCS uses in these areas, including military, fishing, and vessel traffic uses as well as environmental and infrastructure concerns.

Gulf of Mexico Region: Both BOEM and industry are expanding their use of three-dimensional technology to study and evaluate the complex geologic picture of the Gulf of Mexico OCS. The data provided by this technology is used by decision-makers to inform policies regarding offshore resource development in the Gulf of Mexico.

Because it oversees such a large number of active leases, the Gulf of Mexico Region acquires, analyzes and manages a vast collection of G&G data. BOEM currently manages data from approximately 2,312 three-dimensional surveys, 507 two-dimensional surveys, and other critical data encompassing a total volume of 158 terabytes of 32 bit SEGY data. The volume of seismic data managed by BOEM increased by 28 terabytes during FY 2015. To effectively manage the growing volumes, BOEM actively invests in data management solutions (servers, disk space, Hierarchical Storage Management, database development) needed to effectively store, archive, manage, and deliver geophysical data to BOEM and BSEE users, as well as other stakeholders (e.g., other Federal agencies and the public). These activities support the Deparment's efforts within the President's Management Agenda to improve effectiveness by improving customer service, and streamlining and increasing the speed of transactions through smarter IT delivery, as discussed within the General Statement.

Alaska Region: BOEM continues to acquire and manage critical G&G data needed to support mission functions, such as the development of lease sale environmental impact statement

scenarios, Five Year Program scenarios, and lease sale fair market value determinations and review of exploration and development and prodution plans. As of January 2016, BOEM manages data from approximately 23 three-dimensional seismic surveys, 550 two-dimensional seismic surveys and other critical G&G data, with a total volume of 960 gigabytes of SEGY data plus TIFF images of historical 2-D seismic data.

- **Fair Market Value Determination**

Ensuring the receipt of fair market value on the OCS is mandated by the OCS Lands Act and is one of BOEM's critical responsibilities. Regional offices, with headquarters coordination and oversight, perform the functions necessary to thoroughly assess the oil and gas potential and fair market value of OCS tracts offered for lease. Only tracts located within leasing areas identified in the Five Year Program are available for lease. The bid review process incorporates G&G data along with reserve, resource, engineering, and economic information, which is provided by BOEM economists, into a sophisticated discounted cash flow computer model that estimates economic value of the corresponding tract. The goal of that model is to achieve independent estimates of fair market value on tracts receiving bids.

Since 1984, **bid adequacy** reviews and fair market value determinations have resulted in an average rejection rate of bids of approximately 3.7 percent. Bid adequacy procedures have consistently resulted in higher returns in subsequent sales for tracts bid on in previous sales that have had their high bids rejected on grounds of bid insufficiency. From 1984 through 2015, BOEM rejected total high bids of approximately $630 million. Subsequently, the same blocks were re-offered and drew high bids of about $1.8 billion, for a total net dollar gain of about $1.2 billion, and for a return on rejected high bid amounts of almost 189 percent.

Gulf of Mexico Region: Under the current Five Year Program, two OCS oil and gas lease sales were scheduled during calendar year 2015. These were Central Gulf of Mexico Sale 235 and Western Gulf of Mexico Sale 246. In 2016, BOEM will conduct three sales as indicated earlier in Table 14. The sales include: Central Gulf of Mexico Sale 241, Western Gulf of Mexico Sale 248, and Eastern Gulf of Mexico Sale 226. Bids received during these lease sales will undergo rigorous fair market value determinations.

Alaska Region: The 2012-2017 Five Year Program included three lease sales, but only one lease sale in the Cook Inlet Planning Area (Lease Sale 244) is still planned (scheduled for 2017). Beaufort Sea Lease Sale 242 and Chukchi Sea Lease Sale 237 were cancelled by the Secretary of the Interior in October 2015. Although no lease sales are planned in the Alaska Region until

2017, the Region still conducts valuable analyses for other Federal agencies. For instance, BOEM continues to provide the Bureau of Land Management (BLM) with fair market value analyses on National Petroleum Reserve–Alaska lease sales. It is estimated that this level of activity will continue as a result of single sales in the National Petroleum Reserve–Alaska in 2016 and 2017. To improve efficiency in these efforts and mitigate potential staffing shortages, BOEM is evaluating sophisticated software options to replace existing, cash flow modeling programs.

ECONOMIC EVALUATION

A critical component of BOEM's mission is to ensure the receipt of fair market value for OCS natural resources. To accomplish this, BOEM employs an interdisciplinary team that provides economic analyses for the Department of the Interior, other Federal agencies, and Congress. To ensure fair market value, BOEM develops various resource-economic evaluation approaches and bid adequacy guidelines, determines economic inputs for tract evaluation, and coordinates reviews of appeals of bid rejection. BOEM's economic analysis expertise is often called upon to analyze and implement regulatory and legislative actions affecting OCS leasing, exploration, development, and production activities which generate significant supplies of domestic oil and gas and which result in the receipt of billions of dollars each year to the U.S. Treasury. BOEM also undertakes studies, as needed, to address specific policies and compilations of data required to analyze overall OCS program responsibilities and initiatives. BOEM's economic functions support all programmatic activities, conventional oil and gas, renewable energy, and mineral leasing.

➢ Fair Market Value

BOEM's geoscientists, engineers and economists develop, evaluate, and identify models, policies and parameters designed to ensure receipt of fair market value for the rights to explore and produce offshore energy and mineral resources.

➢ Bid Evaluation

BOEM conducts analyses to support development of regulations and evaluation of policies for lease terms, conditions, and bidding systems for individual oil and gas lease sales, the Five Year Program, the Renewable Energy Program, and for the use of sites for construction of liquefied natural gas ports upon request of the U.S. Coast Guard. Under

The Bureau uses a post-sale **bid evaluation** process to ensure that fair market value is received for each OCS lease issued. The Bureau reviews all high bids received and evaluates all blocks using either tract-specific bidding factors or detailed tract-specific analytical factors. This bid adequacy process relies on both evidence of market competition and in-house estimates of tract value.

its bid adequacy procedures, BOEM reviews all high bids received and evaluates all blocks using either tract-specific bidding factors or detailed tract-specific analytic factors to ensure that fair market value is received for each OCS lease issued. The bid adequacy process relies on both evidence of market competition and in-house estimates of tract value. If a bid is rejected and a company appeals the rejection, the staff reviews the appeal and makes a recommendation to the Director regarding the appeal. In addition to the fiscal terms and bid adequacy process, the Bureau establishes terms and conditions to assure diligent development of leases and environmentally safe and clean operations. BOEM applied bid adequacy procedures in two lease sales held in FY 2015.

- **Receipt Estimates**

BOEM's economic experts review and design policies and methods for forecasting receipts from the offshore energy programs, including the estimation of the manner and rate at which reserves and resources of oil and gas are discovered and produced. Through the economics function, BOEM generates the receipt estimates used to project revenue and offsetting collections amounts identified in the President's annual budget and mid-year review process. These estimates also provide a means for forecasting the comparative share of receipts from offshore oil and gas that will be owed to the states under various revenue sharing programs, assist in assessing alternative operator diligence requirements, and contribute to policies for setting timely and efficient requirements for drilling initial wells and the decommissioning of existing wells and structures.

- **Economic Modeling for Policy and Decision-Making**

BOEM's efforts contribute significantly to the development of national energy strategies. The Bureau develops and maintains economic and statistical models and databases that are the basis for lease sale design, Five Year Program formulation, resource evaluation, post-sale and operational activities, rulemaking, revenue sharing, and royalty relief programs. The economic assumptions and scenarios BOEM generates are used in post-sale tract evaluations, national resource assessment studies, and in applications submitted for royalty relief. BOEM also provides economic analyses and fiscal forecasts for energy leasing policies, legal and legislative alternatives, and national energy strategies. Finally, BOEM's economic models inform BOEM's resource needs by projecting rental receipt estimates, which contribute toward BOEM's offsetting collection total.

MAPPING AND BOUNDARY

The Secretary of the Interior is charged by law with the administration of offshore submerged lands on the OCS for offshore energy and minerals leasing purposes. Various court decisions,

treaties, laws, policies, and procedures guide the boundary making process on the OCS. The offshore submerged lands of the OCS are subdivided into parcels referred to as OCS blocks. No submerged lands may be offered for lease that are not owned by the Federal Government, and no submerged federally-owned lands may be offered for lease or sale by either a foreign country or a U.S. Coastal State. For these reasons, accurate OCS boundary lines are a foundational requirement for all BOEM OCS leasing activities. Through its mapping and boundary functions, both in headquarters and in the regions, BOEM is responsible for producing and maintaining the official marine cadastre for the Federal OCS areas of the United States.

The current focus of this work is to modernize the tools and methods used to update block and boundary data in support of leasing for OCS energy and marine mineral purposes. Using Geographic Information System (GIS) software, block and boundary data that is curently stored in TIMS will be transferred to a geodatabase, where it can be updated and maintained. Any revisions to block and boundary data currently stored in TIMS will also be updated. All official mapping products will be produced using GIS tools, and a customized tool will be used to delineate the Submerged Lands Act and Section 8(g) Zone boundaries. Using GIS for these processes will greatly reduce the time and effort that are required when using the antiquated TIMS mapping tools. These changes in methodology will also allow BOEM to map previously unmapped areas of the Pacific Region, such as Hawaii. BOEM plans to generate the first official maps of the Federal waters surrounding the principal islands of Hawaii in 2016. The new maps will support leasing activities for renewable energy projects.

On December 15, 2014, the U.S. Supreme Court approved a supplemental decree in United States v. California, No. 5 Original, which permanently immobilized ("fixed") the Submerged Lands Act (SLA) boundary, located three nautical miles offshore of California. Fixing the SLA boundary provides certainty to lessors, regulators, lessees, and operators of Federal and state mineral and renewable energy leases and will prevent future litigation concerning the submerged lands rights of both parties. The SLA boundary was previously fixed for the north coast of Alaska and all of the Gulf of Mexico states except for Florida. A number of states are interested in fixing the SLA boundary. Alaska is interested in fixing the SLA boundary of the Cook Inlet Planning Area, and several Atlantic coast states, including Virginia, North Carolina, and South Carolina are also interested in fixing their SLA boundaries. The recent action by the Supreme Court will hopefully render subsequent requests easier and faster to complete. BOEM is working with all interested coastal states to reach agreement on the location of their respective SLA boundary in anticipation of future efforts to fix other SLA boundaries.

MARINE CADASTRE

The MarineCadastre.gov project, a joint initiative between BOEM and NOAA, is a web-based,

MarineCadastre.gov products were designed for use by Federal regulatory agencies, regional marine planners, state intergovernmental task forces, the offshore wind energy industry and other users of the ocean.

integrated marine information system that provides an authoritative source of ocean information, including offshore boundaries, infrastructure, ocean uses, habitat distribution data, energy potential, and other data sets important to large regional ocean planning efforts, as well as project-specific planning. Data is provided as immediate viewable map data, downloadable GIS formatted data, and as map services. Most data are available directly from the authoritative source, or are updated regularly from the source(s). MarineCadastre.gov was created to comply with Section 388 of the Energy Policy Act of 2005, which mandated a comprehensive digital mapping initiative for decision-making on the OCS, and is also providing the geospatial framework needed for broader ocean planning efforts. MarineCadastre.gov has three primary focus areas: web map viewers and ocean planning tools; spatial data registry; and technical support and regional capacity building. Both the primary website and the spatial data registry were redesigned at the end of 2014. The National viewer was completely overhauled in FY 2015. These changes allow for searchable layers, flexibility of data viewing, and the use on mobile devices.

In addition to the data sets provided by other authoritative data providers – such as NOAA, FWS, U.S. Geological Survey, U.S. Coast Guard, U.S. Navy, and others – the MarineCadastre.gov includes a variety of BOEM/BSEE data sets. Users inside and outside of BOEM have access to the most up to date versions of lease maps, protraction diagrams, leased blocks, OCS blocks, boundaries, pipelines, wells, and other BOEM/BSEE generated GIS data important to BOEM's stakeholders for marine and energy development planning purposes. The data and services provided through the MarineCadastre.gov project are used by a number of regional ocean portal projects, fulfilling BOEM's vision for the project to be the first place to find authoritative coastal and marine data.

Efforts on the MarineCadastre.gov have been recognized by the Center for Environmental Innovation and Leadership (CEIL) for "Success through Collaboration" with the NOAA's Coastal Services Center. The CEIL Awards recognize military and Federal teams and programs that have demonstrated exemplary performance in integrating environmental stewardship into day-to-day activities and turned sustainability ideas into reality. Awards highlight excellence in developing and implementing innovative environmental programs to improve environmental quality, reduce greenhouse gas emissions, or increase the use of renewable energy and bio-preferred products. MarineCadastre.gov also received an honorable mention for the Team category of the Environmental Achievment Awards for 2014. It is also highlighted in the spring 2015 edition of DOI NewsWave magazine.

MarineCadastre.gov is constantly evolving and growing to include relevant issue-driven data and tools. Specialized maps in the "Maps" page of the project are available. Ocean planners can create custom data viewers by combining authoritative data from the Marine Cadastre Data Registry with more locally relevant web map services. BOEM is currently focusing on strengthening biodiversity and ocean use data by helping provide access to data from authoritative sources, educating the users about the data and its uses, and building decision support tools to support coastal and marine planning. In 2015, many new West Coast data layers were included covering mainly ocean uses, fisheries, fishery closures, and benthic layers. Also individual high resolution bathymetric layers are now available in many regions, as well as fisheries, undersea cables, Automatic Identification System data to identify and locate vessels, and updates to wells, to name just a few. There are currently 263 data layers available. In 2016, in addition to regular updates and additional layers, a new pilot project showing South Atlantic data in a reporting tool will be developed and if successful will be expanded to other regions.

MARINE MINERALS PROGRAM

BOEM is responsible for the policy and guidance for the development of all OCS minerals other than oil, gas, and sulphur under Section 8(k) of the OCS Lands Act and is the sole responsible steward of OCS sand and gravel resources critical for the long-term success and cost-effectiveness of many shore protection, beach nourishment, and wetlands restoration projects along the Gulf and Atlantic coasts. The OCS Lands Act, as amended, authorizes BOEM to convey, on a noncompetitive basis, the rights to OCS sediment resources to Federal, state, and local entities for shore protection, beach or wetlands restoration projects, or for use in construction projects funded or authorized by the Federal Government. In addition to being a statutory responsibility, activities of the Marine Minerals Program also reflect a strategic investment in advance planning, sand resource evaluation, sand resource database development, data sharing, stakeholder coordination, and environmental assessment and study so that, when they are needed, OCS sand resources can be made available in a responsible way.

Coastal Resilience and the Impacts of Storms and Erosion

Natural and developed coasts are frequently subject to major storm damage and severe erosion. OCS sand resources are often needed under urgent circumstances to restore damaged shorelines and wetlands to pre-storm condition, or are needed more strategically to protect coastal areas in advance of a storm, or to re-establish important biological habitat and ecological function.

BOEM is responsible for managing the use of mineral resources and ensuring that the conveyance of OCS sand resources does not result in adverse environmental impacts on the marine, coastal, or human environment. Each negotiated lease requires a NEPA analysis,

including endangered species and essential fish habitat consultations with the National Marine Fisheries Service (NMFS) and the FWS, as well as coastal consistency and archaeological resources reviews. BOEM plans to continue to initiate studies to provide information to evaluate the effects of specific proposed dredging operations, as required under current environmental laws, and design mitigation measures that are incorporated, as appropriate, in lease requirements and stipulations for the dredging of OCS sands.

The Marine Minerals Program provides the Bureau with the capability to provide sand and gravel resources to protect and improve coastal resources and the environment locally, regionally and nationally. To date, BOEM has conveyed the rights to more than 112 million cubic yards of OCS sediment by executing 48 leases for projects in seven states and that have restored over 269 miles of coastline.

BOEM processed five requests for OCS sand in FY 2015 that included: a lease with the State of Louisiana for 13.4 million cubic yards of OCS sand for restoration of beach dune and marsh habitat on Whiskey Island (also known as Caillou Lake Headlands); a Memorandum of Agreement (MOA) with Collier County, FL, for 500,000 cubic yards of OCS sand for beach nourishment; an amendment for a lease with the South Carolina Ports Authority for 6 million cubic yards of OCS sand for construction of a new terminal at the Port of Charleston; an amendment with Longboat Key, FL for 466,500 cubic yards of OCS sand; and an amendment of an MOA with Patrick Air Force Base, FL, for 350,000 cubic yards of OCS sand for beach nourishment.

BOEM anticipates a similar number of leases in FY 2016 and a slight increase in FY 2017 as a result of current pending requests from Florida and North Carolina, as well as projects in the Gulf of Mexico. In addition, New York and states in the New England region have expressed a future interest in OCS sand. In the Gulf of Mexico, increased availability of funds associated with fines and penalties from the Deepwater Horizon oil spill has increased the number of coastal restoration projects, many of which are barrier island restoration projects that will use OCS sand to help mitigate the damages to the ecosystem from that oil spill. BOEM is presently partnering with Lousiana on three of these projects that collectively will use approximately 20 million cubic yards of OCS sand in FY 2016. Both the Caminada Headland Restoration Project and the Caillou Lakes Headland Project will be under construction during FY 2016.

Caminda Headland Restoration Project

In Louisiana, the Caminada Headland in Jefferson and Lafourche Parishes, Louisiana, is experiencing the highest shoreline retreat rates in the Nation, and attendant barrier headland erosion has resulted in decreased geomorphic and hydrodynamic functions, including protecting wetlands from storm wave attack, regulating estuarine conditions, and providing storm surge reduction inland. The Caminada Headland Restoration Project will protect and preserve the integrity of the Caminada Headland from Belle Pass east to the Bay Champagne shoreline and will provide for the restoration of hydrology, ecosystem processes, and habitats for the restored coastal segment. The project will also provide a sediment source to sustain barrier beaches along the headland and barrier islands flanking the headland, protect the shore from erosion, and reestablish the eroded headland/beach through the creation of a continuous beach and dune system. Restoration efforts have targeted ecologically distinct, critical, high-priority areas that would increase sustainability with essential form and function of the natural barrier ecosystem.

The completed Caminada Increment 1 project involved dredging approximately 5,121,000 cubic yards of sand from the South Pelto borrow area to create approximately 31,000 linear feet of shoreline on the Caminada Headland from Belle Pass eastward to Bayou Moreau. The Increment 2 extension is on-going and involves dredging up to 8.8 million cubic yards of sand from the South Pelto borrow area to create approximately 38,500 linear feet of shoreline (approximately 448 acres of beach and dune habitat). Dredging activities started in March 2015; at present, a cutterhead dredge is being used within the approved borrow site.

Caminada Headlands Increment 2

Cutterhead dredge operating at Ship Shoal

Many of the completed projects used sand from OCS borrow areas that were identified by the highly successful state cooperative offshore sand agreements that were in place from the mid-1990s to 2005. Sand deposits previously identified and evaluated by the program have been used for 18 beach nourishment projects in New Jersey, Maryland, Virginia, Louisiana, and Florida. Sand sources identified through the cooperative effort with Louisiana are the major source of material for restoration of barrier islands located in the southwestern and central Louisiana coastal area.

Sand resource identification and delineation is critically important because identifying marine mineral resources and determining the sand deposit characteristics (sufficient quantity, appropriate grain size, environmental conditions or proximity to the placement site) enables the responsible management of these resources. Moreover, G&G data with sufficient spatial coverage are important to define OCS sand deposits and effectively manage potential conflicts with other OCS surface activites such as oil and gas or renewable energy infrastructure installation that could make the sand unavailable. Maintaining and expanding the inventory of OCS sand resources is critical to the Nation's coastal restoration and resiliency efforts. As the demand for these resources evolves, BOEM will seek to acquire new information about the availability and location of marine mineral resources on the OCS, as well as information on the environmental impacts associated with the removal of OCS sand.

OUTLOOK ON CONVENTIONAL ENERGY

In FY 2017, BOEM will continue to effectively and responsibly manage OCS oil, gas, and mineral resources. The management of these resources includes allowing for access to those resources, safeguarding a fair return to taxpayers, and applying the necessary environmental protection. Access to OCS energy and mineral resources will continue to be a priority within BOEM, particularly the focused efforts to develop the 2017-2022 Five Year Program, the execution of scheduled oil and gas lease sales, and addressing the increasing need for OCS sand and gravel for the purposes of coastal restoration. Financial responsibilities, reduction of risks, and economic evaluation and analysis of offshore natural resources will continue to be used to ensure the public receives a fair return for OCS energy resources. In addition, BOEM will continue to ensure the appropriate environmental protection measures are included in OCS activities including leasing of oil and gas and marine minerals. Looking forward, BOEM's Conventional Energy activities will continue to meet the high standards set forth by the Administration, Congress and the public through successful planning, execution and protection of the Nation's offshore resources in response to the Nation's energy needs.

2017 PROGRAM PERFORMANCE

The FY 2017 budget request provides the resources needed to carry out the mission of BOEM, including renewable, conventional, and environmental program activities, and is in support of the FY 2014-2018 DOI Strategic Plan. The FY 2014-2018 DOI Strategic Plan is the foundational structure for the description of BOEM program performance measurement and planning for the FY 2017 President's Budget. The BOEM budget and program plans for FY 2017 are fully consistent with the goals, outcomes, and measures described within the DOI Strategic Plan. The following pages contain the BOEM Program Performance Overview tables. Further details for

achieving the Strategic Plan's goals are contained within the DOI Annual Performance Plan and Report.

Table 17: Program Performance Overview

Mission Area 3, Goal 1: Secure America's Energy Resources								
Strategic Objective Metrics **Strategic Plan Measure / Efficiency or other Bureau-Specific Measure**	**2011 Actual**	**2012 Actual**	**2013 Actual**	**2014 Actual**	**2015 Actual**	**2016 Enacted**	**2017 Pres. Budget Request**
Strategic Plan Measures							
Number of offshore lease sales held consistent with the Secretary's Five-Year Oil and Gas Program	-	2	3	3	2	3	3
Comments: This measure tracks the quantity of lease sales conducted during the current Five Year Program.							
Contributing Programs: Office of Strategic Resources							
Efficiency or other Bureau-Specific Measures							
Number of blocks/tracts evaluated	24,870	14,612	12,200	9,184	33,977	15,000	15,000
Comments: To determine the potential resources on the OCS and the fair market value of those resources, BOEM must conduct detailed evaluation of the blocks and tracts offered for lease each year as well as conduct regular resource assessment activities.							
Contributing Programs: Office of Strategic Resources							
Maintain the ratio of 1.8 to 1 (+/-0.4) of accepted high bids to BOEM's estimated value	N/A	2.013 to 1	2.116 to 1	1.84 to 1	1.8 to 1 (+/- 0.4)	1.8 to 1 (+/- 0.4)	1.8 to 1 (+/- 0.4)
Comments: This measure compares the accepted high bid on each tract to the government's estimated value for that tract. Industry corporate strategy with respect to acquiring specific acreage could lead to a company raising its bid above this analytical value to improve their chances of winning the lease. BOEM estimates are based on a discounted cash flow analysis of a tract and are not designed to predict the high bid. Therefore, the value of this indicator should always be greater than one to achieve fair value for OCS leases. The annual target ratio of 1.8 to 1 means that on average, the industry bids received are expected to be $1.80 (+/- 0.4) for every dollar of the estimated value for each tract.							
Contributing Programs: Office of Strategic Resources							
Mission Area 3, Goal 2: Sustainably Manage Timber, Forage, and Non-energy Minerals							
Strategic Objective Metrics **Strategic Plan Measure / Efficiency or other Bureau-Specific Measure**	**2011 Actual**	**2012 Actual**	**2013 Actual**	**2014 Actual**	**2015 Actual**	**2016 Enacted**	**2017 Pres. Budget Request**
Strategic Plan Measures							
Number of sand and gravel requests processed for coastal restoration projects	N/A	N/A	N/A	5	5	7	8
Comments: This measure tracks the number of non-energy minerals lease requests for OCS sand and gravel processed for purposes of coastal restoration and resilience projects. This is a newly established GPRA measure, and baseline results were collected starting in FY 2014.							
Contributing Programs: Office of Strategic Resources							

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FY 2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

Environmental Programs

Table 18: Environmental Programs Budget Summary

		2015 Actual	2016 Enacted	Internal Transfers (+/-)	Fixed Costs (+/-)	Program Changes (+/-)	2017 Request	Change from 2016 (+/-)
Environmental Programs	($000)	65,712	68,045	-	+55	+299	68,399	+354
	FTE	*152*	*154*			*+1*	*155*	*+1*

SUMMARY OF 2017 PROGRAM CHANGES

Program Changes from 2016 Enacted	($000)	FTE
Staffing for Resource Development	+299	+1
Total Program Changes	**+299**	**+1**

The FY 2017 President's Budget request for BOEM's Environmental Programs budget activity is $68.4 million and 155 FTE, a net increase of +$354,000 from the 2016 enacted level. This is comprised of an increase in fixed costs of $55,000 and the following program change:

Staffing for Resource Development (+$299,000; +1 FTE). Personnel resources are requested to support the research and analysis that underpin the Bureau's environmental science programs and critical decision-making processes. Despite current economic trends with respect to oil and gas prices, BOEM's responsibilities and associated workload have not diminished. Additionally, forthcoming regulations designed to promote environmentally responsible development of offshore energy and mineral resources are anticipated to increase BOEM's workload. All regulatory oversight and activities – whether for ensuring environmental stewardship, geological and geophysical permitting, exploration, or development and production – require personnel and associated resources to conduct the highly detailed analyses necessary to support Bureau decisions and ensure environmentally responsible exploration and development. To keep pace with current and anticipated workload, BOEM seeks one additional FTE to fill one of several specialization gaps, such as air or water quality science. With additional staff to provide analysis and input, BOEM will be better equipped to review and process a higher volume of more complex exploration and development plans while ensuring safe and sound operations, fostering conservation resources, and minimizing impacts on the environment.

Program Performance Change. The FY 2017 budget request supports the accomplishment of the Department's strategic goals. BOEM is making great strides in moving towards the goals it establishes for itself as well as the supporting performance measures. Budgetary changes are not the sole influence on performance measures tracked within this activity. The reduction identified above does not affect programmatic performance, as depicted by the relatively steady targets for the performance measures contained within the table at the end of this chapter.

PROGRAM OVERVIEW

BOEM is responsible for assessing the impacts of and providing effective environmental safeguards for the exploration and development of energy and mineral resources on the OCS. This includes oil and gas, renewable energy resources (e.g., wind, wave, and current energy), and non-energy minerals such as sand and gravel.

BOEM's environmental work on the OCS is guided by key laws such as:

National Environmental Policy Act
Coastal Zone Management Act
Endangered Species Act
Magnuson-Stevens Fishery Conservation & Management Act
Marine Mammal Protection Act
Clean Air Act
Clean Water Act
National Historic Preservation Act
Migratory Bird Treaty Act

These responsibilities require BOEM to assess the environmental impacts of planned and proposed OCS exploration and development and to provide guidance to industry and other stakeholders concerning the place, time, and nature of activities to be authorized. BOEM addresses these requirements through the Environmental Programs Activity. This Activity is intended to inform decision-makers and the public about potential environmental impacts of OCS energy and mineral resource exploration and development, how to prevent or mitigate those impacts, and how to monitor impacts and measures for environmental protection. This information supports and guides decision-making not just within BOEM, but also by other government authorities.

The Program includes the environmental assessment and the environmental studies functions described below. The environmental staff incorporates diverse expertise including marine and coastal biology; chemical, biological, and physical oceanography; avian and marine mammal

biology; acoustic science; geology; meteorology; risk modeling; sociology; archaeology; environmental policy; and management. BOEM's environmental functions are organized administratively into the Office of Environmental Programs in the Washington, DC area, including the Environmental Studies and Environmental Assessment Divisions; the Office of Renewable Energy Programs, also in the DC area; and the three BOEM regions: the Gulf of Mexico, Alaska, and the Pacific. While BOEM's science is managed as a single account through the Environmental Programs budget activity, it is the aim and practice of BOEM environmental staff to work in teams, with leadership provided by those whose backgrounds and capabilities best address the issues at hand. Furthermore, the Environmental Program is committed to continuous staff improvement through training and feedback and to recruitment and retention of the best available talent. The Program is also committed to partnerships and to genuine, continuing interaction with all partners (Federal, state, and local governments; tribes and other organizations of indigenous peoples) and stakeholders (academia; non-profits; civil society; and business).

ENVIRONMENTAL ASSESSMENTS

BOEM's science and assessment has a well-developed structure and process, but the core, essential purpose of the program, to which BOEM closely hews, is straightforward: to fulfill the direction of Congress for protecting the Nation's environment as energy resources are developed. To accomplish this, BOEM's environmental assessment function addresses environmental requirements as defined by statutory mandates, coordinates with other Federal agencies, and performs major cross-cutting and regional assessments. Its work is informed by the best available science, drawing from the BOEM Environmental Studies Program and other research. The actions reviewed include authorization of geological and geophysical exploration activities; preparing for the next Five Year Program; plans for leasing; lease sales; exploration plans; development and production plans; and development operations coordination documents. The activity also reviews more specific authorizations and permits, including facility decommissioning, which may be approved and enforced by BSEE, but whose environmental assessment is supported by BOEM. BOEM's environmental assessments not only take a hard look at potential environmental impacts and alternatives to proposed actions, but also identify measures to mitigate impacts which can be translated into requirements for operators through regulatory vehicles such as permit stipulations, lease stipulations, and notices to lessees.

➢ Statutory Mandates

At the very core of BOEM's Environmental Program is its mission to carry out the direction set forth by numerous and diverse statutes. Under the Outer Continental Shelf lands Act, BOEM considers impacts from OCS development on the marine, coastal, and human environments. The

impacts include not only the area within the OCS where energy and minerals resources are explored and produced, but also geographic areas well beyond the OCS that may be directly or indirectly impacted by OCS development. The marine environment extends landward to salt marshes and wetlands. The coastal environments include the terrestrial ecosystem from the shoreline inward to the boundaries of the coastal zone, while the human environment includes the physical, social, and economic components that determine the state, condition, and quality of living conditions, employment, and health of those affected.

The OCS Lands Act establishes the overall framework for BOEM's studies, assessments, and standards for environmental protection in resource development on the OCS. Environmental standards established by the OCS Lands Act differ with activity, but include various key responsibilities for which BOEM and BSEE are now responsible. Among these is the responsibility to ensure that geological and geophysical activities will not be unduly harmful to aquatic life; exploration for, and production of, oil and gas and marine minerals will not cause serious harm to the environment which cannot be modified to avoid the harm; renewable energy production will be carried out in a manner that provides for protection of the environment; and there is compliance with all applicable laws.

A cormorant perches near a Pacific OCS platform.

The National Environmental Policy Act (NEPA) is BOEM's principal vehicle for reviewing environmental impacts and engaging public participation in the process. In accordance with NEPA and implementing regulations of the Council on Environmental Quality, BOEM prepares environmental documents to include environmental assessments and environmental impact statements (EISs). An EIS evaluates alternatives before taking a major Federal action that will significantly affect the quality of the natural and physical environment and the relationship of people with that environment. Programmatic EISs may be prepared initially if a proposed action is broad in nature (e.g. approval of a Five Year Program) and then followed by more specific subsequent environmental reviews (e.g. environmental assessments) that are "tiered" to the programmatic statement. While NEPA is one of the principle statutes that guide BOEM's environmental activities, other Federal laws give protection to specific resources that may be impacted by OCS activities authorized by BOEM. The Endangered Species Act and the Marine Mammal Protection Act provide an important framework for ensuring the health and safety of marine and coastal wildlife and habitats.

The Endangered Species Act requires that BOEM not take any action likely to jeopardize the continued existence of any species listed as endangered or threatened or to destroy or adversely modify critical habitat of listed species. If an action by BOEM may affect a listed species, BOEM is required to consult with either NMFS, for primarily marine species, or FWS, for species whose lives are more closely tied to land. As is the case for NEPA assessments, an Endangered Species Act consultation may be specific or programmatic. If any of the agencies involved believe that a formal consultation is warranted under the Act, then BOEM will prepare a biological assessment to inform itself and provide to the appropriate resource agency for them to render a Biological Opinion. NMFS or FWS then replies with a biological opinion, which gives an opinion on whether the action is likely to jeopardize a listed species or adversely modify its critical habitat. Carrying out the principles espoused by the Endangered Species Act requires the highest level of scientific depth and quality, clarity in assessment, and coordination with the NMFS and FWS.

The Marine Mammal Protection Act requires BOEM and other agencies to avoid injuring marine mammals or disrupting their behavior if there is more than "negligible impact" on the species. BOEM utilizes the best available science and assessments to accomplish its mission. Avoiding and mitigating the potential harm from acoustic surveys for oil and gas resources is an area of key focus for BOEM. Recent efforts have focused specifically on the effects of air guns in seismic acoustic exploration on cetacean behavior.

A diver studies the shipwreck and ecosystem surrounding the World War II era German U-701 submarine off the coast of North Carolina.

BOEM's environmental assessment function also addresses the complex requirements of other laws including the Coastal Zone Management Act, with state program consistency generally required; the Magnuson-Stevens Fishery Conservation and Management Act, which requires review and protection of "essential fish habitat"; and the Clean Air Act, which nationwide is regulated by the U.S. Environmental Protection Agency (EPA) at the Federal level but for which the OCS in parts of the Gulf of Mexico and in the OCS off the state of Alaska's North Slope is regulated by BOEM and BSEE. Other laws addressed include the Clean Water Act, administered by EPA at the Federal level; the National Historic Preservation Act, with particular focus on identifying and protecting shipwrecks and submerged settlements on the OCS; and, the Migratory Bird Treaty Act, whose restrictions on taking migratory birds are implemented by the FWS.

- **Coordination with BSEE**

BOEM's environmental assessment staff also coordinates with BSEE. BOEM is responsible for approval of leasing programs, conducting lease sales (includes stipulations for lessees), approving exploration plans, approving development and production plans, and approving development operations coordination documents. Consistent with BOEM's decisions, BSEE is responsible for the issuance of permits to drill and other specific authorizations, and conditions for operators, as well as enforcement of BOEM's requirements and stipulations.

Both BOEM and BSEE must comply with the laws, including NEPA, the Endangered Species Act, and the Marine Mammal Protection Act. To ensure maximum efficiency, BOEM and BSEE coordinate to avoid redundant reviews. As such, where there is common interest and the efforts lie within BOEM's scope and mission, BOEM will undertake or supplement studies, environmental assessments, and consultations with a view to providing the information and guidance needed for decisions by both BOEM and BSEE. BOEM prepares environmental documents to support BSEE decisions concerning pipeline applications and applications for structure removals and pipeline decommissioning. BOEM completes environmental documents such as environmental assessments and categorical exclusions for BSEE's decisions on permit applications. In FY 2015, BOEM prepared the following environmental documents (environmental assessments/categorical exclusions) for BSEE: approximately 167 for structure removals, 29 for pipeline decommissioning, and 70 for pipeline applications. BOEM also led, working closely with BSEE, Endangered Species Act consultations in the Gulf of Mexico and Alaska Regions. This interagency relationship requires an enhanced level of effort for coordination and procedural integration.

- **Major Cross-Cutting and Regional Assessments**

BOEM's environmental reviews include the development of programmatic environmental impact statements for the Bureau's Five Year Program, for renewable energy, and for G&G activities. BOEM's growing role in marine planning is likely to increase the use of programmatic EISs and comprehensive planning. Marine planning identifies areas most suitable for various types of OCS activities to reduce conflicts among uses, reduce environmental impacts, facilitate compatible uses, and preserve critical ecosystem services to meet economic, environmental, security, and social objectives.

BOEM follows programmatic EISs with individual EISs, environmental assessments and findings of no significant impact, or determinations that a categorical exclusion applies. In this phased process, BOEM prepares hundreds of additional site-specific NEPA documents annually for decisions on proposed oil and gas operations, including operators' plans for exploration and development, pipeline permit applications, geophysical survey and geological sampling permit

applications, structure removal, and other related industry activities. In FY 2015, BOEM completed over 350 environmental assessment documents for such activities, and completed three final EISs and two draft EISs.

The programmatic EIS for the Five Year Program supports development of a new oil and gas leasing program by providing a concise review that addresses key issues throughout program implementation and provides information pertaining to environmental issues and Program alternatives. Additionally, the programmatic EIS provides insight and consideration regarding frontier areas in a Five Year Program. The current funding supports contractor preparation of the programmatic EIS and also contractor facilitation of scoping meetings, public hearings, and government-to-government consultations. BOEM will enhance the established programmatic EIS format through use of a new format in 2016 to improve the EIS's accessibility and use in decision-making. The EIS will be presented to portray a more focused analysis of potential environmental impacts using a geospatial analytical approach that presents impacts and issues largely through illustrative maps. This will allow BOEM to succinctly and effectively frame the most important issues related to the program decisions. The programmatic EIS will allow BOEM to more meaningfully communicate and interact with decision-makers and the public. Beginning in FY2017, BOEM will begin analyzing key environmental issues and developing products to support balanced and environmentally-responsible decisions for the Five Year Program for 2022-2027.

Assessments in the Atlantic: BOEM conducts environmental assessments in the Atlantic for conventional and renewable energy activities, as well as marine mineral activities. In July 2014, BOEM issued a record of decision establishing environmental mitigation measures and safeguards for G&G survey activities off the Mid- and South Atlantic coast to update 30-year old data on the region's OCS resources. With this framework in place, BOEM is reviewing permit applications for G&G activities throughout the Mid-Atlantic and South Atlantic Planning Areas. To date, after conducting a site-specific environmental review, BOEM has issued one G&G non-seismic permit in the Atlantic and is currently reviewing seven completed permit applications. Atlantic G&G applicants must first receive Incidental Harassment Authorizations from NOAA prior to BOEM making a final determination on each application.

Much of BOEM's renewable energy efforts has centered on potential wind energy and hydrokinetic power development in the Atlantic. When a site assessment plan is submitted, BOEM determines whether the environmental assessment for that Wind Energy Area adequately considers the environmental consequences of the activities proposed in the lessee's site assessment plan. If and when a lessee is prepared to propose wind energy generation on its lease, it will submit a Construction and Operations Plan and BOEM would prepare a separate site- and project-specific NEPA analysis. This may take the form of an environmental assessment or environmental impact statement and would provide additional opportunities for

public involvement. NEPA compliance determinations of site assessment plans for activities offshore Virginia and Maryland are also expected to be completed in FY 2016 and offshore Rhode Island and Massachusetts in FY 2016 and 2017, respectively, pending plan submittals.

In FY 2015, the Marine Minerals Program worked cooperatively with the U.S. Army Corps of Engineers to prepare environmental assessments to evaluate the potential impacts from dredging OCS sand for beach nourishment projects in Duval and Miami-Dade Counties, FL, as well as in Dare County, NC. In FY 2016, BOEM will continue to support environmental reviews for projects along the Mid- and South Atlantic coasts, from New Jersey to Florida, including Bogue Banks, NC, Folly Beach and Myrtle Beach, SC and St. Johns and St. Lucie Counties, FL. During FY 2017, BOEM anticipates increased levels of activity due to additional usage of offshore borrow areas for beach renourishment efforts. For example, recently the Army Corps' New York District has expressed interest in accessing OCS sand for projects on Long Island, NY.

Assessments in the Gulf of Mexico Region: In the Gulf of Mexico, BOEM finalized four major NEPA documents in FY 2015: four supplemental EISs for lease sales considering new studies following the Deepwater Horizon explosion and oil spill, including available data from the Natural Resource Damage Assessment and Restoration process. In FY 2016, BOEM also expects to prepare four NEPA documents for decisions on Central, Eastern, and Western Gulf Planning Area lease operations, including G&G permit applications, pipeline applications, exploration plans, development operations coordination documents (including deep- and ultra-deep water activity), and facility decommissioning. In FY 2016, the Gulf programmatic environmental impact statement on G&G activities will continue to be developed with NOAA as a cooperating agency. The draft is expected to be published in early 2016. In FY 2015, BOEM prepared NEPA documents for 345 plans, of which 127 required a site-specific environmental assessment; 99 pipeline applications; 92 G&G permit applications, of which 48 required a site-specific environmental assessment; applications for 33 ancillary activities (all site-specific environmental assessments); and, applications for 166 structure removals. In FY 2016 and FY 2017, BOEM anticipates the number of environmental reviews to increase slightly each year.

Assessments in the Alaska Region: The Alaska Region is conducting NEPA and other environmental reviews as appropriate to support decisions regarding the lease sale in the Cook Inlet Planning Area. In FY 2015 BOEM conducted NEPA and other analyses for decisions regarding exploration drilling activities in the Chukchi Sea and seismic activities in the Cook Inlet planning area.

In FY 2015 BOEM also conducted NEPA analysis for Chukchi Sea OCS Lease Sale 193 with a Second Supplemental Environmental Impact Statement. On January 22, 2014, the U.S. Court of Appeals for the Ninth Circuit remanded Lease Sale 193 NEPA analysis because the 2007 EIS relied on a one million barrel estimate of total economically recoverable oil which the court ruled

as arbitrary and capricious. BOEM undertook a robust environmental analysis using the best available science and data to estimate the highest amount of production that could reasonably result from Lease Sale 193, analyses of alternatives and potential environmental impacts, and provided substantial opportunity for public comment.

In FY 2016 BOEM began the NEPA process for the Liberty Development and Production Plan. BOEM will be preparing an EIS to include at least five cooperating agencies which have subsequent permit authorities to enable the NEPA process to provide the framework of having a "holistic" approach and acceptance by other Federal agencies for their NEPA process. This NEPA process will continue into FY 2017.

Additionally, during FY 2017 BOEM will conduct NEPA analysis in Alaska to support decision making on an estimated three to four G&G permits.

More generally, BOEM is working with other agencies, partners, and stakeholders to understand the impacts of OCS activities on the Arctic marine environment. BOEM continues to be a cooperating agency on environmental documents (e.g., NMFS's programmatic EIS for Arctic G&G activities and exploratory drilling). The Alaska Region is committed to close interaction with Alaska Natives and the integration of traditional knowledge into interpretive documents and decision-making. To implement the National Strategy of the Arctic Region and to implement an integrated approach to Arctic management, BOEM works with other Federal agencies and is responsive to environmental reviews of other agencies' actions.

Assessments in the Pacific Region: BOEM's Pacific Region conducts environmental assessments for conventional and renewable energy activities. Here, BOEM's conventional energy assessments focus on development and production from 23 existing OCS facilities, largely in support of BSEE. Support for BSEE includes NEPA documents, assisting in enforcement of mitigation measures, and review of the measures' effectiveness.

Orange basket star on top of chemosynthetic *Lophelia* coral.

BOEM will also continue working with agencies and other stakeholders to advance research and commercial renewable energy projects on the Oregon and Hawaii OCS. Principle Power, Inc. has requested a commercial wind lease for a project offshore Coos Bay, Oregon, and BOEM received a Construction and Operations Plan (COP) from the applicant in July 2015. The bureau will move forward with the environmental and technical reviews once the COP is determined to be complete and adequate for review. The lease issuance and plan approval decisions will be concurrent and are expected in late FY 2016.

BOEM has also received a research lease request for a grid-connected wave energy test facility on the OCS offshore Newport, Oregon. The lease requires a FERC license in addition to BOEM approval, and the Bureau plans to cooperate with FERC on the environmental review before making a leasing decision. BOEM joined with FERC as a cooperating agency for the environmental assessment that will be written for the project, with analysis continuing throughout FY 2016.

BOEM has also received three unsolicited lease requests for commercial scale floating wind developments offshore Oahu, Hawaii from two different companies. Currently, the Department of Defense (DOD) and BOEM are coordinating to determine if the areas requested are compatible with national security and national defense assets. Depending on the outcome of the DOD and BOEM coordination, BOEM may start the leasing process, which would include conducting appropriate environmental reviews.

ENVIRONMENTAL STUDIES PROGRAM

The Environmental Studies Program was first established in 1973 by the OCS Lands Act, which directed the Secretary of the Interior to –

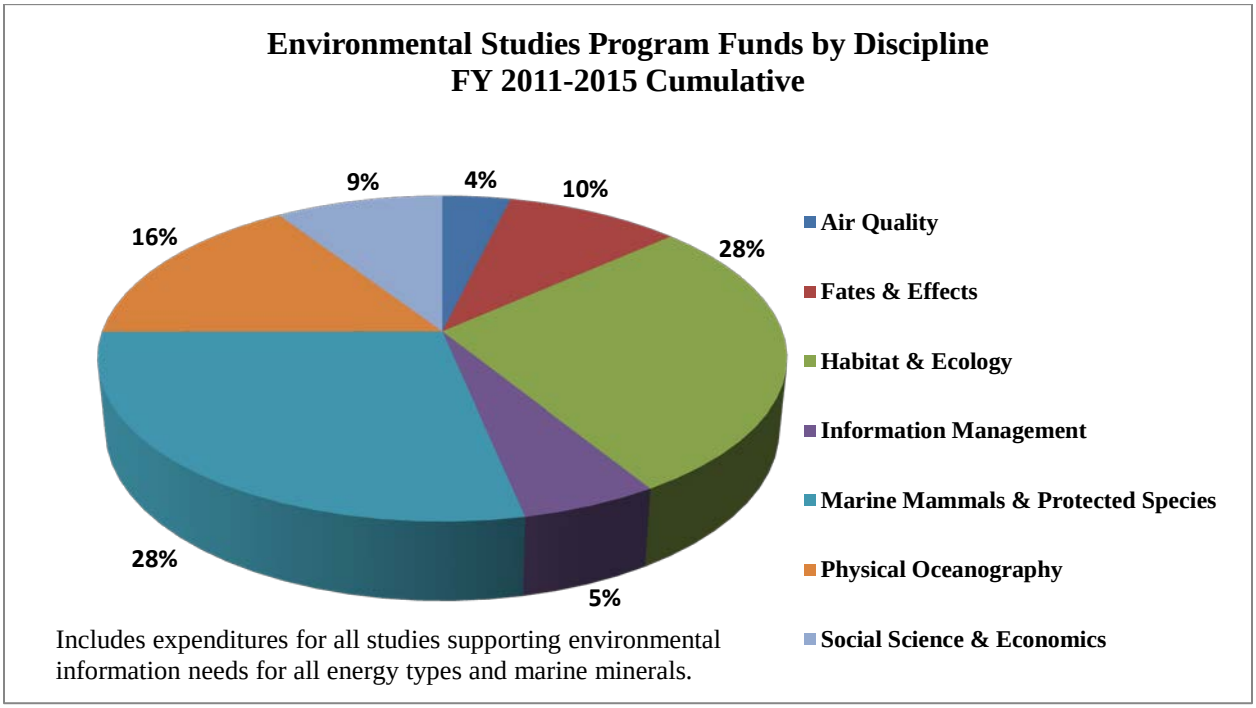
- Establish information needed for the assessment and management of impacts on the human, marine, and coastal environments of the OCS and potentially affected coastal areas.
- Predict impacts on marine organisms resulting from a variety of factors: chronic low level pollution or large spills associated with OCS production; discharge of drilling muds and cuttings, as well as pipeline emplacement; and onshore development.
- Monitor human, marine, and coastal environments to provide time-series and data trend information for identification of significant changes in the quality and productivity of these environments.

BOEM administers the Environmental Studies Program, and the research it supports addresses each of these mandates. The discoveries and information generated through the Environmental Studies Program inform decisions by BOEM and BSEE concerning implementation of the OCS Lands Act, NEPA, the Endangered Species Act, the Marine Mammal Protection Act, the National Historic Preservation Act, and other applicable laws discussed above. The decisions include actions on regulations, measures for impact mitigation, stipulations to leases, notices to lessees, permits, and enforcement.

BOEM works to integrate science needs from multiple disciplines with respect to OCS energy

and mineral resources (see Figure 15, below). In addition, BOEM considers studies independently underway to design and implement effective research for decision-making. A major, continuing emphasis is on studies related to the impacts of conventional and renewable energy and mineral development, as well as monitoring efforts and analyses to improve baseline characterizations and conduct analyses of trends. Research to understand the release, transport, fate, and effects of oil and other materials that may be discharged or spilled in the marine environment and on spill response is also a priority, conducted in close cooperation with BSEE's oil spill program.

Figure 15: Environmental Studies Program Funds by Discipline



In FY 2015, BOEM partnered with the National Academy of Sciences to establish a new, standing Academy committee on environmental science and assessment for offshore energy and mineral resources. The committee will provide independent information on issues relevant to BOEM's environmental studies and assessment activities and support discussions on relevant issues. The committee's functions may include periodic comprehensive review of BOEM's programs; addressing questions of particular interest to the Bureau; conducting annual environmental study program reviews; providing peer review; facilitating stakeholder discussions of controversial issues; and informally advising on recruitment. The committee may also conduct workshops relevant to BOEM's environmental programs. The committee held its first organizational and introductory meeting in December 2015, and in FY 2016 it plans to review the FY 2017-2019 Studies Development Plan, which is the annually prepared document describing the environmental studies BOEM will consider during that time.

Because of its quality, scale, and duration, BOEM's Environmental Studies Program is a leading contributor to the growing body of scientific knowledge about the Nation's marine and coastal environment. BOEM is committed to the highest level of scientific and scholarly integrity, as set forth by the Department of the Interior's Scientific and Scholarly Integrity Policy, by the Office of Science and Technology Policy, and by the President.

➢ Research Partnerships

Many BOEM studies are partnerships, including, for example, research addressing seismic noise impacts on marine mammals, environmental effects of sand and gravel extraction, real-time monitoring of environmental parameters, and long-term ecosystem monitoring in the Gulf of Mexico and in Alaska. Partnerships with Federal partners are typically established through memoranda of understanding or agreements with individual agencies and also through the National Oceanographic Partnership Program (NOPP), a collaborative community of Federal agencies working to improve knowledge of the ocean environment. For example, BOEM is currently supporting ship-based marine mammal and bird studies in cooperation with the FWS and NOAA. The Atlantic Marine Assessment Program for Protected Species is in its second five-year cycle. The program focuses on collecting seasonal data on the abundance, distribution, ecology, and behavior of marine mammals, sea turtles, and seabirds throughout the U.S. Atlantic Exclusive Economic Zone and providing spatially explicit information in a format that can be used by Federal decision makers with living marine resource responsibilities. Data are collected using a combination of direct aerial and shipboard surveys, visual and acoustic survey techniques, and animal tagging efforts. The information collected will provide enhanced data to managers by addressing data gaps that are essential to supporting conservation initiatives mandated under NEPA, Marine Mammal Protection Act, Migratory Bird Treaty Act, and Endangered Species Act.

A night time mid-water trawl offshore Rhode Island revealed deep-sea fish, including viper fish, hatchet fish, snipe eel, and Ilex squid.

In FY 2016, BOEM, through NOPP, plans to initiate the Atlantic Deepwater Ecosystem Observatory Network, an integrated system for long-term monitoring of ecological and human factors on the OCS, with NOAA and the Office of Naval Research as partners. BOEM requires a mechanistic understanding of variable biological, physicochemical, and human use dynamics in Atlantic deep waters to address the potential impacts of oil and gas exploration and development activities. This study will establish an ecosystem observatory

network in Mid- and South Atlantic deep waters to provide baseline measurements and environmental monitoring capabilities across multiple disciplines.

Collaborations with the academic community are undertaken through BOEM-supported Coastal Marine Institutes located at the University of Alaska-Fairbanks and at Louisiana State University, as well as through several units within the Cooperative Ecosystem Studies Unit (CESU) Network. For example, the University of Alaska-Fairbanks launched a new study in 2015 called "Fate and Persistence of Oil Spill Response Chemicals in Arctic Seawater." This study will provide information regarding the fate and effects of oil spills and of oil spill response methods on the arctic marine environment. Timely information regarding the fate, biodegradation, persistence, and effects of chemical dispersants in the arctic marine environment will be valuable to regulators, industry, stakeholders, the scientific community, and the public. Another study through the Louisiana State University will provide a better understanding and quantification of the economic, ecologic, and geomorphic long-term benefits and costs of using OCS sediment vs. nearshore sediment for coastal restoration projects on the basis of: 1) sediment textural properties, 2) value of supplementing the coastal sediment budget, and 3) capital required to employ the various construction methods. Additionally, Coastal Marine Institute research in Louisiana is developing new economic models for understanding the impact of conventional energy activity on the human communities for FY 2016 and FY 2017.

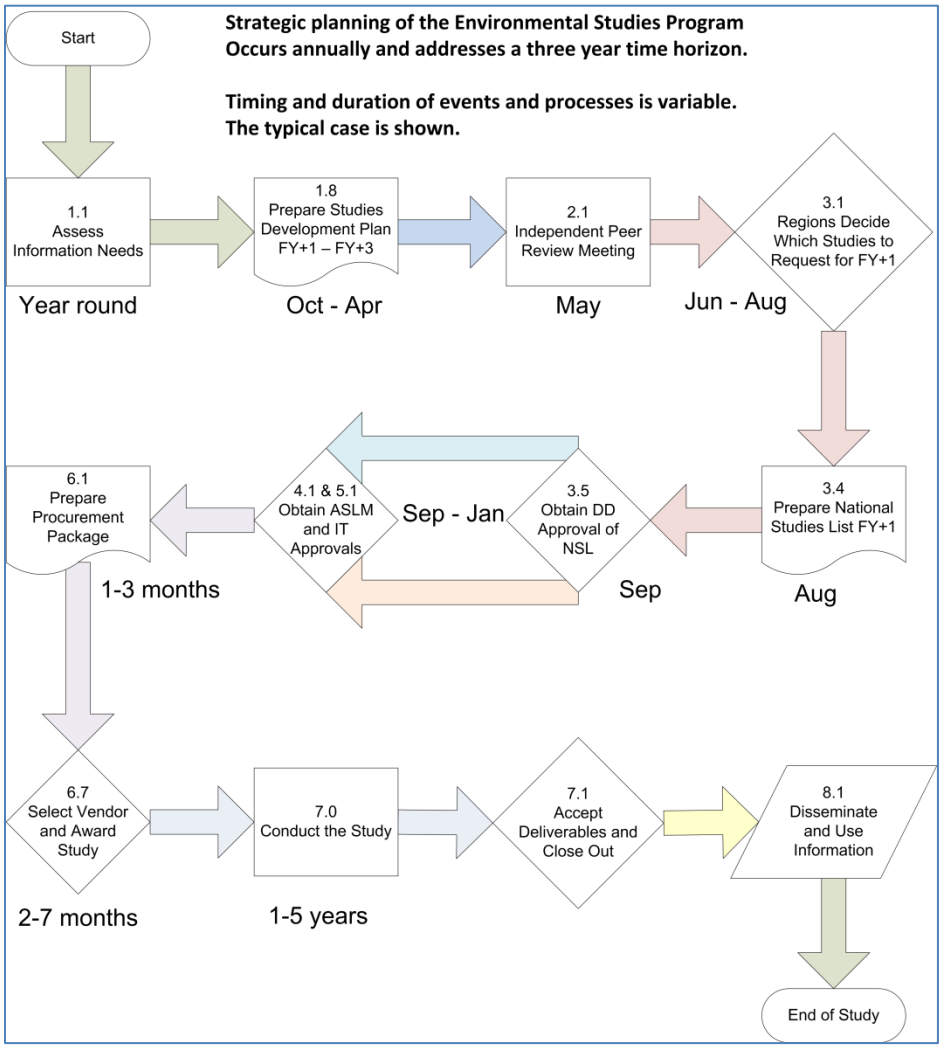
Through the CESU Network, BOEM is able to improve the scientific base for managing the OCS through access to a collaborative network of Federal and academic researchers and technical experts. These partnerships allow the contributing parties to leverage resources, extend the scope (both duration and area) of the research, and maximize the utility of results. Partners bring funds, equipment, facilities, and personnel to support collaborative efforts. Many projects include opportunities to train students and contribute to the next generation of environmental science leaders. In FY 2015, BOEM awarded several studies to CESU institutions to accomplish work ranging from understanding whale presence in the Virginia offshore wind energy area to continuing the ongoing monitoring of rocky intertidal sites adjacent to OCS production facilities along the Pacific coast, which allows BOEM to directly assess potential and real impacts to the coastline from OCS operations. Another example of BOEM collaborating with a CESU-affiliated institution is within the Gulf of Mexico, where a CESU university is assisting BOEM in organizing a workshop on transboundary studies between Mexico and BOEM. In FY 2016, BOEM is considering approximately $2.5 to $3.5 million in new cooperative agreements to CESU institutions.

- **The Studies Development Process**

BOEM's environmental studies include multiple layers of review to ensure that the best projects are selected. Each year BOEM environmental staff solicit input from partners and stakeholders,

and identify priority studies based on relevance to decision-making (including timing), scientific merit, feasibility, and cost. Potential studies are presented in an annual studies development plan that addresses a three-year time horizon. The diagram in Figure 16 shows the step-by-step process the Environmental Studies Program follows in putting together and carrying out the annual Studies Development Plan.

Figure 16: Environmental Studies Program Process



The plan is reviewed internally through "subject matter expert" teams and others, and external review is provided by the committee established by the National Academy of Sciences to support BOEM. Once proposed studies are critiqued by this committee for their feasibility, appropriateness, and scientific value, they are evaluated again before funding by program staff leadership, principally with reference to decision-making relevance, timing, and budget constraints. The study program is designed to be flexible and dynamic in order to accommodate changing circumstances or requirements. New information needs routinely arise outside the

annual planning process, and, in response, proposed studies can be added, removed, or otherwise adjusted. This process of coordination ensures the acceptability of program products in the broader community and the applicability of the results to BOEM information needs, as well as those of BOEM's contributors and partners.

- **National Studies**

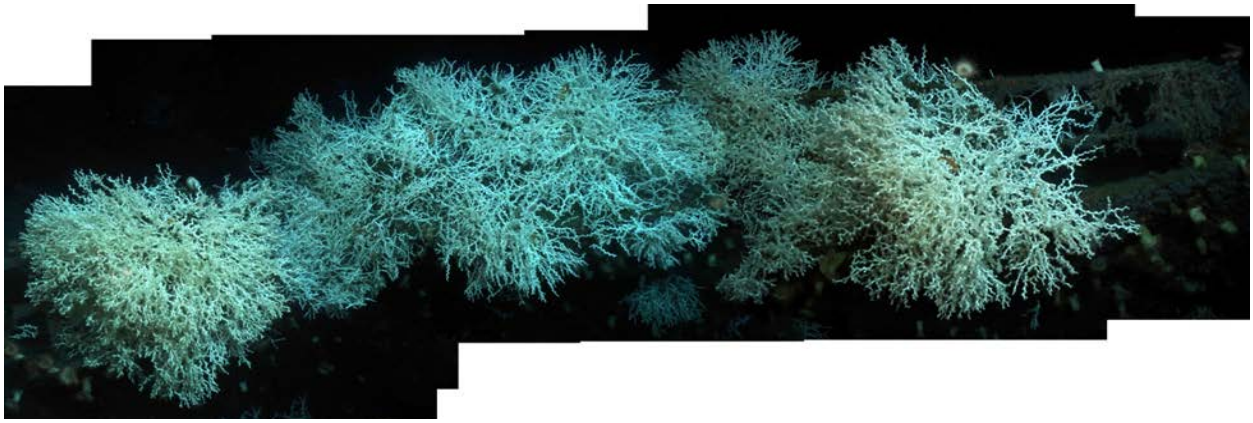
The Studies Development Plan includes research relevant to knowledge and decision-making at all levels of government organization, and many studies are of global interest. These studies are currently grouped under the heading of "National Studies" in the development plan and are managed centrally by BOEM's Office of Environmental Programs, although BOEM's regional offices and Office of Renewable Energy Programs staff participate and may lead projects. The fundamental distinction of national studies is that they are intended to address issues of recognized broad interest rather than of more specific interest to a region or program.

BOEM's national studies include a long-term partnership with the Smithsonian's National Museum of Natural History to preserve biological specimens from federally-funded research, including sequenceable DNA, and to maintain and provide quality assurance for the research databases associated with the specimens. In collaboration with NOAA, BOEM also supports MarineCadastre.gov – a website that allows visitors to view information concerning marine waters of the United States by geospatial units, including information on boundaries, infrastructure, human uses, energy potential, and other data sets. BOEM is specifically supporting work to enhance the website's public dissemination of environmental data sets, reports, and other study products maintained by BOEM in its Environmental Studies Program Information System and in other systems. These efforts and others support the government-wide Open Data Initiative to make data from research available to the public. BOEM has a long-standing commitment to ensuring that publications and samples are archived so that future information needs benefit from these archival efforts.

Information on the studies BOEM will undertake in FY 2016 is available through the BOEM website (http://www.boem.gov/Environmental-Studies-Planning/). Studies planned in FY 2016 will examine the impacts of conventional and renewable energy and mineral development, improve baseline characterizations, and conduct analyses of trends. Special focus this year is given to the transmission and effects of sound, air quality, and assessments and monitoring of biological (avian, piscine, and mammalian) resources.

BOEM's renewable energy program works with many agencies, universities and other partners and stakeholders to identify critical data gaps in assessing the environmental impacts of renewable energy development in areas where it is likely to occur. In FY 2015, BOEM initiated 21 new studies to address Atlantic and Pacific coast science needs for renewable energy

development in whole or in part, and 20 additional studies are planned in FY 2016. Current priorities are marine wildlife and avian distribution and movement along the Atlantic and Pacific coasts. Several ongoing studies are expected to be completed in FY 2016 addressing ocean circulation in the Gulf of Mexico; submerged paleocultural and archaeological sites in the Atlantic; distributions of fish in the Arctic; and the behaviors of seabirds in the main Hawaiian islands. The results of these studies will be used to inform policy decisions, environmental analysis, mitigation and monitoring protocols on environmental and cultural issues.

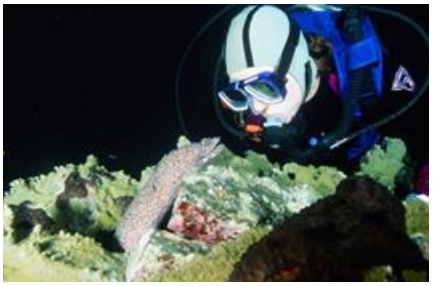


Photomosaic of extensive Lophelia coral growth on the side of the WWII shipwreck Gulfpenn, sunk in 1942.

Gulf of Mexico Region Studies: Long-term environmental monitoring is combined with experimental research to give Gulf of Mexico OCS decisions a firm scientific base. Studies in the Gulf of Mexico Region analyze and explore the ecology of every ocean province – from coastal marsh to ocean abyss – recognizing that oil and gas activities affect all habitats and that new technologies are facilitating activities in deeper waters. BOEM is especially challenged to provide the information and oversight needed for developing these new frontiers where biological and other environmental information currently is sparse and often outdated, and the Bureau emphasizes studies addressing deep waters of the Gulf offshore both the U.S. and Mexico.

A number of studies to be conducted by the Region in FY 2016 will focus on air quality, including the Fugitive Emission Inventory for offshore Gulf of Mexico platforms and the new Gulf-wide Emissions Inventory. These new air quality studies are in support of EPA's updated air quality standards and will provide information for assessing air quality impacts on offshore Gulf of Mexico. For FY 2016, a new study will inventory the chemical products used in the Gulf of Mexico offshore operations and examine disposal practices and their risk. Another ongoing study that will be completed in FY 2016 is examining microbial response to hydrocarbon and dispersant exposure on shipwrecks, demonstrated as important artificial reefs in the deepwater environment, in their surrounding sediments, and how the natural processes of wood degradation and metal corrosion may be impacted, in turn, potentially affecting their resident biological

communities. Other long-term monitoring efforts include a new study in partnership with the U.S. Geological Survey, which will quantify changes to infaunal communities associated with deepwater coral habitats and examine their potential recovery from the Deepwater Horizon spill over time.



A moray eel and diver come face-to-face in the Gulf of Mexico's Stetson Bank.

Post-Deepwater Horizon, the proliferation of damage assessments, recovery studies, and restoration projects provides a unique opportunity to develop a long-term comprehensive monitoring network that unifies existing monitoring programs and fills gaps in current monitoring. The challenge is to meet the needs of multiple ocean uses with a large-scale, integrated monitoring system that operates under common scientific goals to protect the environment, detect natural and anthropogenic change, and assess recovery.

In the Mid- and South Atlantic planning areas, BOEM studies are underway and being developed. Baseline studies are of especial importance in this frontier region and need to span the relevant geographic area of interest, all the way out to ultra-deep waters, and the variety of biological, chemical/physical, and socioeconomic issues of relevance to BOEM environmental assessments. Partnerships with other Federal agencies play an important role in ongoing baseline studies, including the Atlantic Marine Assessment Program for Protected Species, now in its second phase, and the Mid-Atlantic Deepwater Canyons and Shipwrecks study, involving agencies such as NOAA, FWS, Navy, and U.S. Geological Survey (USGS). In the future, BOEM plans to implement long-term environmental monitoring capabilities in Atlantic deep waters to assess the present state of the environment and possible trends over time, related to natural and/or human-induced variability. An interdisciplinary monitoring approach will be adopted to understand biological species densities and distributions, the physicochemical mechanisms driving change, and human use of the environment. These measurements will test the efficacy of mitigations, such as for minimizing noise impacts on marine mammals, and will contribute to oil spill risk analysis, air quality, and predictive-fisheries modeling.

For FY 2016, a series of studies will be implemented beginning with an Atlantic Offshore Science Forum, where the research needs for human and environmental resources will be assessed. In FY 2016, a new Atlantic Deepwater Ecosystems Observatory Network will be implemented as an integrated system for long-term monitoring of ecological and human factors on the Mid-Atlantic offshore. Also for FY 2016, Atlantic OCS alternate oil spill occurrences will be estimated in order to support the Oil Spill Risk Assessment Model. For the Southeast Atlantic, a new advanced predictive modeling of deep coral and hard bottom habitats will protect sensitive bottom benthic areas.

Alaska Region Studies: BOEM's study efforts in the Alaska Region currently focus on foundational research in the Beaufort and Chukchi Seas Planning Areas and new research in the Cook Inlet Planning Area. For example, one new study launched in 2015 is the Arctic Marine Biodiversity Observation Network, an oceanographic sampling array conducted in partnership with the University of Alaska-Fairbanks, NOAA, and industry. A new study anticipated to begin in 2016 involves collaboration with the Alaska Native Tribal Health Consortium to expand a community-based monitoring program in the Arctic, known as the Local Environmental Observation Network. Strengthening collaborative research opportunities is a priority, including the incorporation of traditional knowledge in decision-making and interpretive materials. Other priorities are data synthesis; updating and improving oil spill risk analysis models; enhancing spill detection technologies and "nowcast" instrumentation; improving baseline monitoring of shore-zone habitats; improving ice forecast modeling; and generating a revised baseline for social indicators in North Slope communities.

Researchers came across this pod of orca whales in Alaska's Beaufort Sea during a BOEM-funded study.

Increasingly, Alaska Region studies are taking an integrated approach and using new technologies that facilitate research in harsh Arctic environments to examine the interdependence of biological, physical, and social systems. The need to separate effects of development from other changes, especially the greater effect of climate change in the U.S. Arctic, requires BOEM to establish monitoring baselines for the fish and lower trophic levels that support birds, marine mammals and the people who depend on them and update impact monitoring for contaminants in development areas. The transfer to BOEM of the authority to regulate industrial air emission in the OCS areas of the Beaufort and Chukchi Seas has necessitated an increased focus on Arctic OCS air quality considerations and defining emission thresholds to ensure OCS facilities will not produce significant onshore ambient air concentrations.

Pacific Region Studies: In the Pacific Region, the BOEM studies program has continued to evolve in response to (1) change in the geographic areas of concern and study, (2) change in the emphasis of disciplines highlighted for research, (3) change in the status of the Region from a frontier to a mature oil and gas producing area, and (4) change to a frontier area for renewable energy production. The Region's responsibility now encompasses ongoing oil and gas operations and potential renewable energy development from both wave and wind energy. The area covered includes the OCS offshore California, Oregon, Washington, and Hawaii. Partners play a key role in the Pacific Region studies: for FY 2016, BOEM Pacific Region reached out to 27 major stakeholders for input. They included Federal and state agencies, Tribal governments,

and representatives of Native Hawaiian interests. The Pacific Region received eight study ideas from stakeholders, including NOAA, National Park Service (NPS), Bureau of Land Management, FWS, USGS, and the states of California, Oregon, Washington, and Hawaii.

BOEM participates in the Pacific Rocky Intertidal Survey and Monitoring of shorelines along southern California.

For conventional energy, the Pacific Region's priorities are to acquire better information for oil spill trajectory modeling and a synthesis of 30 years of research concerning how fish and invertebrate populations at oil and gas production platforms influence the marine ecology of the Pacific coast. Studies priorities also include the need for information to regulate future renewable energy projects that may be proposed and implemented in the Pacific Region. These energy projects require studying areas well outside the oil and gas production area of southern California, as interest and resource potential for deepwater wind and wave energy facilities exist along the entire U.S. West Coast and offshore Hawaii. Renewable energy study priorities include several issues for the OCS offshore Hawaii and Oregon. In Hawaii, BOEM's focus is locating submerged and shoreline cultural sites, determining seabird presence and ecolo.gy, performing a biogeographic assessment of marine species, and mapping human uses from the shore to the exclusive economic zone limit. In FY 2016, a large study documenting biogeographical information offshore of Hawaii will be completed, providing baseline information on over one hundred physical and biological resources. In Oregon, priorities include observing the effect of power cables on species sensitive to electromagnetic fields, assessing benthic environments where facilities may be installed, and improving understanding of seabird oceanic flight behavior.

OUTLOOK FOR SCIENCE AND ENVIRONMENTAL PROGRAMS

BOEM decisions and management of OCS oil and gas, marine minerals and renewable energy development will continue to be informed through the environmental analyses, studies and partnerships conducted through BOEM's Environmental Programs. These efforts are vital to ensuring that the impacts of OCS activities on the environment are understood and that the appropriate protective measures are put to use effectively. In direct support of BOEM activities, the Environmental Program will continue to focus the use of cross-cutting and regional environmental analyses for all OCS regions and activities including renewable energy, conventional energy, and marine minerals. Through its environmental analyses and environmental studies, BOEM will continue to integrate science needs across programs and resources in order to effectively and timely inform decision makers. To these ends, BOEM will

continue to utilize partnerships and will align and develop those partnerships to create an informed collaborative community with interest in OCS resources and a desire to protect the environment. Looking forward, BOEM's focus and dedication to using the most informative and up-to-date environmental information will continue, providing effective environmental safeguards for the development of OCS resources.

2017 PROGRAM PERFORMANCE

The FY 2017 request provides the resources needed to carry out the mission of BOEM, including renewable, conventional, and environmental program activities, and is in support of the FY 2014-2018 DOI Strategic Plan. The FY 2014-2018 DOI Strategic Plan is the foundational structure for the description of BOEM program performance measurement and planning for the FY 2017 President's Budget. The BOEM budget and program plans for FY 2017 are fully consistent with the goals, outcomes, and measures described within the DOI Strategic Plan. The following page contains the BOEM Program Performance Overview table. Further details for achieving the Strategic Plan's goals are contained within the DOI Annual Performance Plan and Report.

Table 19: Program Performance Overview Table

Mission Area 3, Goal 1: Secure America's Energy Resources								
Strategic Objective Metrics **Strategic Plan Measure / Efficiency or other Bureau-Specific Measure**	**2011 Actual**	**2012 Actual**	**2013 Actual**	**2014 Actual**	**2015 Actual**	**2016 Enacted**	**2017 Pres. Budget Request**
Efficiency or other Bureau-Specific Measures							
Percent of Environmental Studies Program (ESP) projects rated "Moderately Effective" or better by BOEM internal customers	91% (21/23)	95% (21/22)	96% (22/23)	100% 16/16	100% 16/16	90% (N/A)	90% (N/A)
Comments: This measure evaluates the effectiveness and timeliness of the Environmental Studies Program's projects. Performance results are very sensitive to the number and types of projects evaluated.							
Contributing Programs: Office of Environmental Programs							

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FY 2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

General Administration

Table 20: General Administration Budget Summary

		2015 Actual	2016 Enacted	Internal Transfers (+/-)	Fixed Costs (+/-)	Program Changes (+/-)	2017 Request	Change from 2016 (+/-)
General Support Services	($000)	15,002	0	0	-	-	0	-
	FTE							
Executive Direction	($000)	16,319	18,665	-	+31	-	18,696	+31
	FTE	*85*	*88*			-	*88*	-
TOTAL, General Administration	**($000)**	**31,321**	**18,665**	**0**	**+31**	**-**	**18,696**	**+31**
	FTE	***85***	***88***			**-**	***88***	**-**

General Administration previously included funding for two activities: General Support Services and Executive Direction. In FY 2016, Congress approved BOEM's proposal to eliminate this activity and realign the funding to the supported budget activities. Previously, this activity partially funded administrative and shared support services for the Bureau. Currently, administrative needs are funded by the activities they support. While this activity no longer exists, it appears on budget tables in order to display prior year funding levels.

FY 2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

Executive Direction

Table 21: Executive Direction Budget Summary

		2015 Actual	2016 Enacted	Internal Transfers (+/-)	Fixed Costs (+/-)	Program Changes (+/-)	2017 Request	Change from 2016 (+/-)
Executive Direction	($000)	16,319	18,665	-	+31	-	18,696	+31
	FTE	*85*	*88*			-	*88*	-

The FY 2017 President's Budget request for the Executive Direction budget activity is $18.7 million and supports 88 FTE. This is $31,000 above the 2016 enacted level and is comprised solely of an increase for fixed costs.

PROGRAM OVERVIEW

The Executive Direction Activity comprises the following: the Office of the Director; Office of Public Affairs; Office of Congressional Affairs; Office of Policy, Regulation and Analysis; and Office of Budget and Program Coordination.

- **Office of the Director**

The Office of the Director includes the BOEM Director and Deputy Director and their immediate staff, as well as the offices of the Regional Directors and their immediate staff. These components of the BOEM staff are responsible for providing policy guidance and overall leadership within the BOEM organization, managing official documents, international affairs, Freedom of Information Act, and litigation activities.

- **Office of Public Affairs**

The Office of Public Affairs is responsible for BOEM's media relations, communication strategies and outreach. The Office of Public Affairs coordinates the implementation of an effective and inclusive outreach program to numerous target audiences, including state and local governments, the energy industry, related trade associations, the environmental community, tribes, energy consumer groups, and the public.

- **Office of Congressional Affairs**

The Office of Congressional Affairs serves as the primary point of contact with Congress and is responsible for the coordination of all communication and outreach with Congressional offices, as well as ensuring the effective exchange of information. The Office of Congressional Affairs serves as the liaison for BOEM on all Congressional and legislative matters that relate to BOEM's programs, including managing coordination with the Department of the Interior and other Federal executive agencies.

- **Office of Policy, Regulation and Analysis**

The Office of Policy, Regulation and Analysis serves as the principal office to lead and manage BOEM's national regulatory and policy programs and provides the Director with independent review and analysis of programmatic and management issues. Additionally, the Office of Policy, Regulation and Analysis leads, coordinates, and monitors many cross-program initiatives, assuring consistent BOEM-wide implementation that directly supports Congressional, Presidential, Departmental and Bureau directives, laws, mandates, and guidance. The office also fulfills the Director's responsibilities in several critical areas including regulatory management, activity-based costing, strategic and performance planning, policy, internal controls and program evaluation.

- **Office of Budget and Program Coordination**

The Office of Budget and Program Coordination (OBPC) is responsible for managing the budget formulation and execution processes, as well as administrative services. The organization assesses current budgetary resources, provides recommendations for program and budget initiatives to senior BOEM executive staff, manages the personnel allocation system, and formulates and assists in the defense of BOEM's budget submissions to the Department, OMB, and Congress. The organization is responsible for overseeing coordination with administrative service providers in the management of BOEM administrative activities and serves as the point of contact for any service-related questions. In addition, the office is responsible for emergency management, strategic human capital, administrative policies and procedures, youth engagement, and records. OBPC is also responsible for bureau-wide information technology (IT) management and governance ensuring that technology aligns with mission delivery requirements. Responsibilities in this area include the oversight of new and ongoing IT initiatives, improved service delivery through application development, technology refresh and Records management.

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FY 2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

FY 2017 Appropriations Language

In FY 2017, BOEM does not propose any significant changes to the Appropriations language included in the FY 2016 President's Budget. The language provided below reflects changes from the Public Law 114-113, Consolidated Appropriations Act, 2016. As a general note, brackets indicate language to be deleted, and italics represent new language.

OCEAN ENERGY MANAGEMENT

For expenses necessary for granting leases, easements, rights-of-way and agreements for use for oil and gas, other minerals, energy, and marine-related purposes on the Outer Continental Shelf and approving operations related thereto, as authorized by law; for environmental studies, as authorized by law; for implementing other laws and to the extent provided by Presidential or Secretarial delegation; and for matching grants or cooperative agreements, **[**$170,857,000**]** *$175,138,000*, of which **[**$74,235,000**]** *$80,194,000*, is to remain available until September 30, **[**2017**]** *2018* and of which **[**$96,622,000**]** *$94,944,000* is to remain available until expended: *Provided*, That this total appropriation shall be reduced by amounts collected by the Secretary and credited to this appropriation from additions to receipts resulting from increases to lease rental rates in effect on August 5, 1993, and from cost recovery fees from activities conducted by the Bureau of Ocean Energy Management pursuant to the Outer Continental Shelf Lands Act, including studies, assessments, analysis, and miscellaneous administrative activities: *Provided further*, That the sum herein appropriated shall be reduced as such collections are received during the fiscal year, so as to result in a final fiscal year **[**2016**]** *2017* appropriation estimated at not more than **[**$74,235,000**]** *$80,194,000*: *Provided further*, That not to exceed $3,000 shall be available for reasonable expenses related to promoting volunteer beach and marine cleanup activities. *(Department of the Interior, Environment, and Related Agencies Appropriations Act, 2016)*

Justification of Proposed Language Changes

BOEM does not propose any language changes in FY 2017.

Explanation of Appropriations Language
The following provides a provision-by-provision explanation and citation of authority for each component of the appropriations language.

1. ***For expenses necessary for granting leases, easements, rights-of-way and agreements for use for oil and gas, other minerals, energy, and marine-related purposes on the Outer Continental Shelf and approving operations related thereto, as authorized by law;***

This provision authorizes BOEM to expend funds for specific, mission-related purposes pursuant to BOEM's primary authorization, the OCS Lands Act (as amended), as well as myriad additional statutes that guide its activities, such as the National Environmental Policy Act of 1969 (NEPA), the Submerged Lands Act of 1953, the Energy Policy Act of 2005, and others.

2. ***…for environmental studies, as authorized by law;***

This provision authorizes BOEM to expend funds for environmental studies, pursuant to law. Specifically, BOEM's Environmental Studies Program function was established in 1973 by the OCS Lands Act, which directed the Secretary of the Interior, now through BOEM, to –

". . . conduct a study of any area or region included in any oil and gas lease sale or other lease in order to establish information needed for assessment and management of environmental impacts on the human, marine, and coastal environments of the Outer Continental Shelf and the coastal areas which may be affected by oil and gas or other mineral development in such area or region." 43 U.S.C. §1346(a)(1).

". . . to predict impacts on the marine biota which may result from chronic low level pollution or large spills associated with Outer Continental Shelf production, from the introduction of drill cuttings and drilling muds in the area, and from the laying of pipe to serve the offshore production area, and the impacts of development offshore on the affected and coastal areas." 43 U.S.C. §1346(a)(3).

"Subsequent to the leasing and developing of any area or region, [to conduct] such additional studies as he deems necessary and shall monitor the human, marine, and coastal environments of such area or region in a manner designed to provide time-series and data trend information which can be used for comparison with any previously collected data for the purpose of identifying any significant changes in the quality and productivity of such environments, for establishing trends in the areas studied and monitored, and for designing experiments to identify the causes of such changes." 43 U.S.C. §1346(b).

3. *…For implementing other laws and to the extent provided by Presidential or Secretarial delegation;*

This provision authorizes BOEM to expend funds on activities related to its mission that are delegated to the Bureau by either the President of the United States or the Secretary of the Interior. For instance, Section 388 of the Energy Policy Act of 2005 gives the Secretary of the Interior the authority to issue leases, easements, and rights-of-way on the OCS for activities that produce or support production, transportation, or transmission of energy from sources other than oil and gas. The Secretary has delegated this responsibility to BOEM, and this provision allows BOEM to fund renewable energy activities on the OCS on behalf of the Secretary.

4. *…and for matching grants or cooperative agreements,*

This language provides authority for BOEM to utilize matching grants or cooperative agreements to carry out mission-related functions. BOEM uses cooperative agreements with Federal and non-Federal partners to conduct environmental studies and to implement renewable energy and OCS sand projects.

5. *…$175,138,000, of which $80,194,000 is to remain available until September 30, 2018 and of which $94,944,000 is to remain available until expended:*

This provision identifies the amount of BOEM's total budget authority for FY 2017 ($175,138,000). Of this total budget authority, $80,194,000 is designated as two-year money, to be available from FY 2017 through the end of FY 2018. Meanwhile, $94,944,000 of BOEM's budget authority – the amount associated with offsetting collections – is designated as no-year money with no expiration date. This enables BOEM to use no-year money to fund long-term projects like environmental studies.

6. *…Provided, That this total appropriation shall be reduced by amounts collected by the Secretary and credited to this appropriation from additions to receipts resulting from increases to lease rental rates in effect on August 5, 1993, and from cost recovery fees from activities conducted by the Bureau of Ocean Energy Management pursuant to the Outer Continental Shelf Lands Act, including studies, assessments, analysis, and miscellaneous administrative activities:*

Since 1995, annual appropriations language has provided BOEM (and previously, MMS and BOEMRE) authority to keep rental revenues above the $3.00/acre rate in effect on August 5, 1993, up to an annual cap, to fund current operations. This provision allows BOEM to use these rental receipts – as well as cost recovery fees authorized by the OCS Lands Act – to partially fund mission-related activities. A listing of the specific cost recovery services and associated fees

can be found on BOEM's website in the "Fees for Services" section (http://www.boem.gov/Fees-for-Services/).

7. *…Provided further, That the sum herein appropriated shall be reduced as such collections are received during the fiscal year, so as to result in a final fiscal year 2017 appropriation estimated at not more than $80,194,000:*

This provision pertains to the availability of offsetting collections. The timing difference between the collection of rents and cost recovery fees and the availability of the funding for use as offsetting collections created significant operational challenges for the Bureau, so the language was amended to include this "safety clause" in FY 2014. The language is modeled after the Bureau of Land Management offsetting collections language in the Management of Lands and Resources Account. The language allows BOEM to derive initial funding from the general fund of the Treasury, with amounts returned to the general fund at the end of the year once all collections have been received.

8. *…Provided further, That not to exceed $3,000 shall be available for reasonable expenses related to promoting volunteer beach and marine cleanup activities.*

This provision has been included annually since 1998 (P.L. 105-83) and authorizes BOEM (and previously, MMS and BOEMRE) to expend up to a certain amount for the promotion of volunteer beach and marine clean-up activities.

The language provided below reflects General Provisions that are directly applicable to BOEM. For a complete, detailed discussion of the Department's proposed General Provisions, please refer to the General Provision chapter of the Office of the Secretary FY 2017 budget justification.

GENERAL PROVISIONS

BUREAU OF OCEAN ENERGY MANAGEMENT, REGULATION AND ENFORCEMENT REORGANIZATION

SEC. 108. The Secretary of the Interior, in order to implement a reorganization of the Bureau of Ocean Energy Management, Regulation and Enforcement, may transfer funds among and between the successor offices and bureaus affected by the reorganization only in conformance with the reprogramming guidelines described in the **[**explanatory statement described in section 4 (in the matter preceding division A of this consolidated Act)**]** *report accompanying this Act*.

Purpose: The 2017 Request carries forward this provision, which authorizes the Secretary to transfer funds among and between the successor offices and bureaus affected by the reorganization of the Bureau of Ocean Energy Management, Regulation and Enforcement. Specifically, this enables BOEM to continue to execute the transfer of no-year fund prior year recoveries to BSEE from the Royalty and Offshore Minerals Management (ROMM) appropriations account. Until these legacy accounts are fully closed out, BOEM needs the authority to execute these transfers. Once all transfers from the ROMM account are complete, BOEM will be able to function independently without this special transfer provision.

Explanation of change: The Department proposes to modify the provision to ensure consistency with language in the Consolidated Appropriations Act, 2016, which requires reporting in accordance with the reprogramming guidelines provided by the Appropriations Committees.

OUTER CONTINENTAL SHELF LEASING REVIEW PERIOD

*SEC.**[**424**]** 418. Section 11(c)(1) of the Outer Continental Shelf Lands Act (43 U.S.C. 1340(c)(1)) is amended in the fourth sentence by striking "thirty" and inserting "ninety".*

Purpose: The Department proposes to include this provision, which would extend the review period for OCS exploration plans from 30 days to 90 days. The proposed extension is consistent

with recommendations on strengthening leasing practices made by the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling and the Government Accountability Office, among others.

FY 2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

Proposals for Mandatory Accounts and Offsetting Collections

This chapter describes legislative proposals included in the budget submission that would impact receipts and mandatory spending levels. For a complete, detailed discussion of the Department's proposals, please refer to the General Provision section of the Office of the Secretary FY 2017 Budget Justification. The FY 2017 budget assumes oil and gas reforms proposed for 2016 will continue into 2017. Also discussed below are trends in offsetting collections, including the projected future decline in offsetting rental receipts, which if realized, has the potential to significantly impact future budgets for both BOEM and BSEE.

FEDERAL OIL AND GAS REFORMS

The 2017 budget includes a package of legislative reforms to bolster and backstop administrative actions being taken to reform the management of Interior's onshore and offshore oil and gas programs, with a key focus on improving the return to taxpayers from the sale of these Federal resources. Proposed statutory and administrative changes fall into three general categories: advancing royalty reforms, encouraging diligent development of oil and gas leases, and improving revenue collection processes.

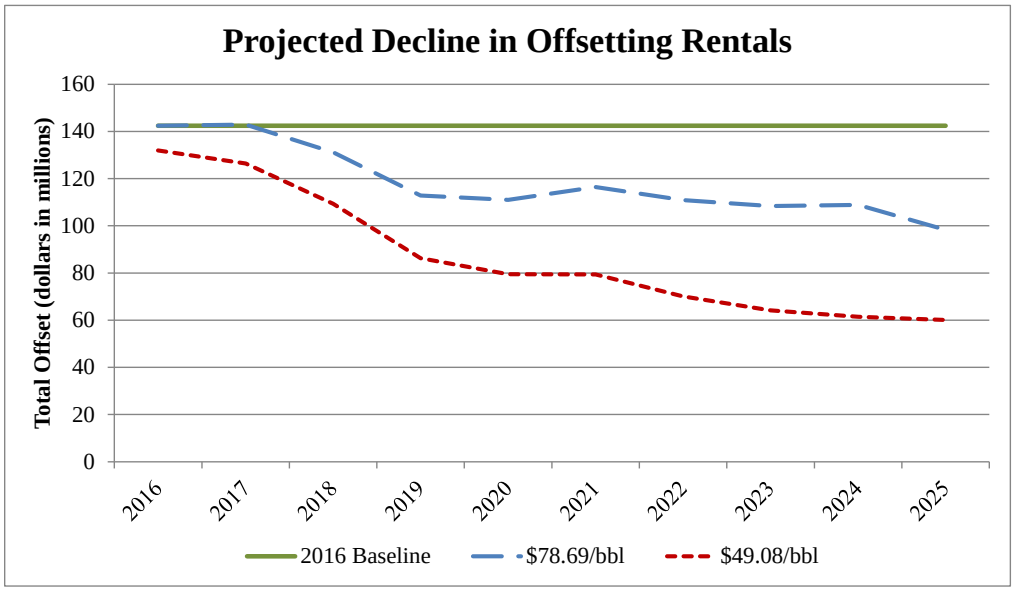
Royalty reforms include establishing minimum royalty rates for oil, gas, and similar products; adjusting the standard onshore oil and gas royalty rate; analyzing a price-based tiered royalty rate, and repealing legislatively-mandated royalty relief for "deep gas" wells. Diligent development requirements include shorter primary lease terms, stricter enforcement of lease terms, and monetary incentives to move leases into production (for example, a new statutory per-acre fee on nonproducing leases). Revenue collection improvements include simplification of the royalty valuation process and permanent repeal of Interior's authority to accept in-kind royalty payments. Collectively, these reforms will generate roughly $1.7 billion in revenue to the Treasury over ten years, of which about $1.2 billion would result from statutory changes. Many states also will benefit from higher Federal revenue sharing payments as a result of these reforms.

PROJECTED DECLINES IN OFFSETTING RENTAL RECEIPTS

Significant portions of the total budgets for BOEM and BSEE are offset by revenue from rental receipts, cost recoveries, and – for BSEE – inspection fees. However, based on current economic assumptions, projected declines in rental revenue are predicted to create budgetary shortfalls over the next decade.

Specifically, the FY 2016 President's Budget, released in February 2015, included offsetting rental projections that assumed higher oil and gas prices (estimates for FY 2016 assumed oil prices of $79 per barrel of oil). Using those assumptions, the offsetting rentals were projected to begin a steady decline between FY 2017 and FY 2018. However, the outlook one year later has changed significantly, and updated projections are for much lower oil and gas prices ($49 per barrel for FY 2016), suggesting a more immediate and substantial decline is likely beginning in FY 2016. The projected decline is illustrated in the chart below.

Figure 17: Projected Decline in Offsetting Rentals



Using the offsetting rental amount included in the FY 2016 President's Budget as a baseline (the solid line in the graph above), the updated offsetting rental projections reflect growing shortfalls are likely between 2016 and 2025, as demonstrated in Table 22 below. If oil and gas prices recover and exceed current projections in future years, this trend may change.

Table 22: Comparison of Offsetting Rental Receipt Projections

Comparison of Offsetting Rental Receipt Projections *(dollars in millions)*										
	2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
FY 2016 Baseline	142.36	142.36	142.36	142.36	142.36	142.36	142.36	142.36	142.36	142.36
2016 President's Budget ($78.69/bbl)	142.36	142.86	131.16	112.82	111.00	116.38	110.93	108.36	108.86	98.32
Surplus/Shortfall (vs. 2016 Baseline)	*0.00*	*0.50*	*-11.20*	*-29.54*	*-31.36*	*-25.98*	*-31.43*	*-34.00*	*-33.50*	*-44.04*
2017 President's Budget ($49.08/bbl)	131.94	126.41	109.34	86.27	79.45	79.37	70.05	64.19	61.47	60.06
Surplus/Shortfall (vs. 2016 Baseline)	*-10.42*	*-15.95*	*-33.02*	*-56.09*	*-62.91*	*-62.99*	*-72.31*	*-78.17*	*-80.89*	*-82.30*

Total rental receipts in a given year are based on the number of active leases subject to rent and the rental terms that apply to those leases. These terms vary based on the water depth of the lease and the age of the lease. Beginning with Sale 208 in 2009, BOEM established rental rates in the Gulf of Mexico at $7/acre in water depths less than 200 meters and $11/acre in water depths of 200+ meters. The offsetting rental receipts are calculated by subtracting the total annual rental receipts collected on active leases from the amount that would have been paid by these same leases in the same year at rental rates in effect on August 5, 1993 ($3/acre).

Several factors contribute to the projected accelerating downward trend in rental receipts. First, fewer leases are being sold in the Gulf of Mexico as the area matures and world oil prices decline. The Gulf of Mexico as an oil and natural gas resource basin has been heavily leased and developed for over 50 years. While there are still abundant estimated undiscovered oil and gas resources, finding and developing them is becoming technologically and economically more challenging. For this reason, fewer tracts are expected to be leased. Second, a decline in the number of leases subject to rentals is expected to accelerate because, beginning in 2010, primary terms for leases in 800-1600 meters were shortened from ten years to a "7+3" year approach, wherein a lessee receives an extended initial period (i.e., ten years) if a well is drilled within the first seven years. BOEM anticipates approximately 90 percent of these leases to be returned after the primary seven year term, resulting in fewer deepwater rent-generating leases around FY 2017. Although many of those are likely to be re-leased, their re-acquisition may not keep pace with relinquishment. Third, the downturn is, in some respects, a result of the success of BOEM's leasing strategy. BOEM modified its fiscal policies in the Gulf of Mexico five times since 2007 to encourage industry to lease and hold fewer non-producing leases, consistent with the Administration's policy on encouraging diligent development of leases.

MEASURES TO ADDRESS THE DECLINE IN OFFSETTING RENTAL RECEIPTS

As noted above, in FY 2017, offsetting rental revenue for BOEM and BSEE is projected to be $15.9 million below FY 2016 levels. For FY 2017, the Department proposes to change the existing allocation of offsetting rental receipt revenue between the two bureaus and provide

additional appropriated dollars to fill most of the remaining shortfall for both bureaus. Instead of 65 percent of rental receipt revenues going to BOEM and 35 percent going to BSEE, the revenues would be split 70 / 30 percent between BOEM and BSEE, respectively, as shown below.

Table 23: Allocation of Offsetting Rentals to BOEM and BSEE

(dollars in millions)

	2016		2017	
Offsetting Rentals	142.360		126.408	
BOEM Share	*65%*	92.961	*70%*	88.486
BSEE Share	*35%*	49.399	*30%*	37.922

Because this change still results in a decrease of nearly $4.5 million to BOEM's budget, this 2017 budget request proposes to offset most of this reduction through an increase of $4.1 million in direct appropriations. Separately, the impact to BSEE is also largely mitigated by requested additional appropriations along with proposed changes to the inspection fees the agency anticipates collecting. Additional information on how these changes affect BSEE can be found in the BSEE budget justification.

It is important to note that while rent-producing leases are declining, overall OCS activity does not necessarily follow the same trend. The Gulf of Mexico OCS, as a geologic province, is quite mature in terms of exploration prospects. While activity in shallow water has decreased in recent years, deepwater activity has remained robust, and – according to the U.S. Energy Information Administration – deepwater oil and natural gas production will continue to increase over the coming decade. BOEM anticipates that, with this increase in deepwater production, there will also be a corresponding increase in associated plan reviews and environmental work. While the 2017 Request proposes a solution to address the projected 2017 shortfall for BOEM and BSEE, further changes will be necessary in 2018 and beyond if the projected rental receipt trend continues. BOEM and BSEE will continue to work with the Department and OMB to assess future revenue trends and funding options.

CHANGES TO COST RECOVERIES

As indicated, BOEM's offsetting collections also include cost recovery fees. BOEM collects a range of these fees as reimbursement from identifiable applicants/beneficiaries for the costs of performing certain activities. Based on what the Bureau processed in FY 2015 and factoring in anticipated future activity, BOEM estimates application of existing cost recovery fees would generate $3.6 million in FY 2017, approximately $99,000 less than projected in FY 2016.

In FY 2017, BOEM also proposes a new cost recovery fee to recoup funds for costs associated with BOEM's Risk Management Program. Specifically, this fee would require applicants to pay a processing fee when they submit their tailored financial plans. BOEM estimates the fee will generate $2.9 million annually, which will fully offset the requested programmatic increase in FY 2017.

Factoring in the anticipated $99,000 decline in cost recoveries and the new Risk Management service fee, BOEM estimates a net change of $2.8 million in cost recoveries for FY 2017.

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FY 2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

Disclosure of Administrative Expenses

This appendix is provided in compliance with Section 403 of Public Law 114-113, the Consolidated Appropriations Act of 2016, which states:

> *DISCLOSURE OF ADMINISTRATIVE EXPENSES*
>
> *SEC. 403. The amount and basis of estimated overhead charges, deductions, reserves or holdbacks, including working capital fund and cost pool charges, from programs, projects, activities and subactivities to support government-wide, departmental, agency, or bureau administrative functions or headquarters, regional, or central operations shall be presented in annual budget justifications and subject to approval by the Committees on Appropriations of the House of Representatives and the Senate. Changes to such estimates shall be presented to the Committees on Appropriations for approval.*

The majority of BOEM's external assessments are associated with the costs of the shared services approach that allow the Bureau to meet its administrative and information technology needs. BOEM implements this approach through reimbursable services agreements with BSEE, which are identified in the table below. Under this arrangement, BSEE provides a full suite of administrative services including acquisition management, equal employment opportunity, finance, human resources, information technology management, management support, personnel security, and support services. Maintaining these critical administrative functions within the Department provides the following benefits:

- Minimizing duplication of administrative entities across multiple organizations and optimizing efficiency.
- Providing a centralized administrative function that can, over time, allow the Department to pursue additional efficiencies.

The Department has strongly supported the expansion of business cross-servicing as a means to strategically expand high-quality, high-value shared services to improve performance and efficiency throughout the government. An emphasis on efficiency through shared services is, in fact, one of the pillars of the President's Management Agenda.

Through this effort, BOEM and BSEE support the Department's and the President's efforts to increase the efficiency of core operations, reduce duplication and waste, enable investments in innovation, use shared services and common infrastructure, facilitate agency collaboration and co-funding, and implement innovative approaches to budgeting and resource management.

Specifically, this arrangement has the added benefit of implementing standardized practices that further increase the productivity for highly skilled resources in both bureaus. By utilizing the shared services model, BOEM and BSEE continue to improve their best practices and maximize the use of administrative funds.

BOEM and BSEE regularly evaluate these support arrangements in joint quarterly meetings, and final costs are determined at the end of the year based on FTE levels and hours billed. BSEE's costs to provide these services are also carefully managed and jointly approved by the respective agencies. Because these costs are regularly reevaluated, estimated outyear costs are based on prior year actuals and billing from the First Quarter of the current year (FY 2016). As such, amounts shown in the table below are estimates only and may not reflect final agreements or end of year obligations.

Table 24: Disclosure of Administrative Expenses

Bureau of Ocean Energy Management
Disclosure of Administrative Expenses
(dollars in thousands)

Deductions, Reserves, or Holdbacks	FY 2017 Estimate
External Bureau Assessments	
Administrative RSA with BSEE	18,735
IT RSA with BSEE	13,896
ASLM Support	180
Working Capital Fund Centralized Billing	1,938
Working Capital Fund Direct Billing	353
IT Transformation	68
Zantas	35
NARA	65
Subtotal, External Assessments	$ 35,270
Internal Bureau Assessments*	
Renewable Energy	2,648
Conventional Energy	15,984
Environmental Programs	9,061
Executive Direction	7,577
Subtotal, Internal Assessments	$ 35,270

* Amounts shown reflect estimated obligations of both new budget authority and carryover.

IT costs are anticipated to increase slightly in FY 2017 due to increased costs for the Bureaus' Mission IT Support Contract. The enhanced contract will continue to manage, operate, maintain and enhance the TIMS investment, and it will also benefit customer agencies through an enhanced service catalog, granular control of development, modernization and enhancement work and detailed financial reporting. The contract will be based on a firm fixed price model, which transfers operational risk to the contractor and provides a means to limit out-of-scope changes to the system.

In FY 2017, BOEM no longer has a dedicated activity to pay for its administrative overhead (General Support Services), so all external assessments are paid for by internal assessments to the remaining activities.

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FY 2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

Employee Count by Grade

(Total Employment)

Table 25: Employee Count by Grade

	2015 Actuals	2016 Estimate	2017 Estimate
Executive Level V	0	0	0
SES	6	6	6
Subtotal	**5**	**6**	**6**
SL - 00	1	1	1
ST - 00	0	0	0
Subtotal	**1**	**1**	**1**
GS/GM -15	42	41	41
GS/GM -14	131	135	137
GS/GM -13	193	192	207
GS -12	84	107	108
GS -11	41	33	33
GS -10	3	3	3
GS - 9	28	27	27
GS - 8	8	9	9
GS - 7	17	19	19
GS - 6	4	2	2
GS - 5	8	9	9
GS - 4	1	2	2
GS - 3	3	3	3
GS - 2	0	0	0
GS - 1	0	0	0
Subtotal	**563**	**582**	**600**
Other Pay Schedule Systems	0	0	0
Total employment (actuals & estimates)	**569**	**589**	**607**

Notes on this table:

- Amounts shown in this table are consistent with amounts reported by the Department of the Interior as of September 19, 2015.

- BOEM is working diligently to fill mission-essential positions as part of a broader human capital and workforce planning effort. The employee count for FY 2016 is only an estimate.
- All grades presented in this table include career, career-conditional, temporary, and political employees.
- GS refers to employees covered by the General Schedule classification and pay system established under the Classification Act of 1949, as amended. (5 U.S.C. chapter 53, subchapter III, and 5 CFR part 531)
- GM refers to employees covered by the General Schedule classification and pay system who are covered by the Performance Management and Recognition System (PMRS) termination provisions of Public Law 103-89 (former PMRS employees).

FY 2017 PERFORMANCE BUDGET

Bureau of Ocean Energy Management

List of Acronyms

ABC	Activity Based Costing
ANCSA	Alaska Native Claims Settlement Act
AMBON	Arctic Marine Biodiversity Observing Network
APD	Application for Permit to Drill
BLM	Bureau of Land Management
BOEM	Bureau of Ocean Energy Management
BOEMRE	Bureau of Ocean Energy Management, Regulation & Enforcement
BSEE	Bureau of Safety and Environmental Enforcement
CEIL	Center for Environmental Innovation and Leadership
CESU	Cooperative Ecosystem Studies Unit
CFR	Code of Federal Regulations
COP	Construction and Operations Plan
CR	Continuing Resolution
DMME	Department of Mines, Minerals and Energy
DOD	Department of Defense
DOCD	Development Operations Coordination Document
DOE	Department of Energy
DOI	Department of the Interior
DPP	Development and Production Plan
EIA	Energy Information Administration
EIS	Environmental Impact Statement
EP	Exploration Plan
EPA	Environmental Protection Agency
ESPIS	Environmental Studies Program Information System
FERC	Federal Energy Regulatory Commission
FTE	Full Time Equivalent
FWS	U.S. Fish and Wildlife Service
FY	Fiscal Year
G&G	Geological and Geophysical
GHG	Greenhouse Gas
GIS	Geographic Information System
GPRA	Government Performance and Results Act
GSA	General Services Administration
GSS	General Support Services
IRU	Investigations and Review Unit
IT	Information Technology

MBON	Marine Biodiversity Observing Network
MMS	Minerals Management Service
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NASA	National Aeronautics and Space Administration
NEMS	National Energy Modeling System
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NNMREC-OSU	Northwest National Marine Renewable Energy Center at Oregon State University
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NOPP	National Oceanographic Partnership Program
NPS	National Park Service
NRC	National Research Council
NTL	Notice to Lessees and Operators
OBPC	Office of Budget and Program Coordination
OCS	Outer Continental Shelf
OEM	Ocean Energy Management
OMB	Office of Management and Budget
ONRR	Office of Natural Resources Revenue
OPM	Office of Personnel Management
PEIS	Programmatic Environmental Impact Statement
P.L.	Public Law
R&D	Research and Development
RFI	Request for Information
ROW	Right-of-Way
RSA	Reimbursable Service Agreement
RUE	Right-of-Use and Easement
SEGY	Society of Exploration Geophysicists Y (type of file format)
SLA	Submerged Lands Act
SLC	State Lands Commission
TIFF	Tagged Image File Format
TIMS	Technical Information Management System
U.S.C.	United States Code
USGS	U.S. Geological Survey
VOWTAP	Virginia Offshore Wind Technology Advancement Project
WCD	Worst Case Discharge