



BUDGET The United States Department of the Interior **JUSTIFICATIONS**

and Performance Information
Fiscal Year 2023

BUREAU OF OCEAN ENERGY MANAGEMENT

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BUREAU OF OCEAN ENERGY MANAGEMENT

FY 2023 BUDGET JUSTIFICATION

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Director's Preface

FISCAL YEAR 2023 BUDGET

Bureau of Ocean Energy Management

Director's Preface

“Climate change poses an existential threat to every one of us. Transitioning to clean energy will be critical to help the U.S. tackle this issue. BOEM will work with stakeholders, Tribes, and other ocean users to ensure that any future offshore energy development is done safely and responsibly and relies on the best available science and knowledge. Together, we can move forward with offshore energy development in a way that helps create a cleaner, more equitable energy future for our Nation.”

– *Bureau of Ocean Energy Management Director Amanda Lefton*

BOEM's Fiscal Year (FY) 2023 budget reflects its commitment to ongoing efforts and initiatives vital to BOEM's mission and critical to supporting the Administration's priorities, including creating good paying jobs as the Nation transitions to a clean energy future, advancing energy security, supporting economic prosperity, and ensuring the reliability and affordability of domestic clean energy. Proposed funding supports an emphasis on activities identified in several Executive Orders (EO), including: EO 14008, *Tackling the Climate Crisis at Home and Abroad*; EO 13990, *Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis*; EO 14017, *America's Supply Chains*; EO 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*; and EO 13988, *Preventing and Combating Discrimination on the Basis of Gender Identity or Sexual Orientation*. In support of these EOs and other Administration and Departmental priorities, BOEM's FY 2023 budget will continue: advancing the Nation's clean energy future; fostering climate change resilience and adaptation; supporting critical mineral science and environmental stewardship; championing environmental justice; utilizing environmental studies and analysis in support of conservation efforts; and fostering diversity and inclusion in the workplace. With this request, BOEM proposes to focus resources in the following areas:

- **Renewable Energy.** BOEM supports the Administration's commitment to deepening and diversifying the Nation's energy portfolio by advancing the acceleration of offshore renewable energy production in response to EO 14008. Renewable energy plays an increasing role in combating climate change, securing a reliable energy future for the Nation, spurring economic growth, and creating good-paying jobs for the American people. From the outset of FY 2022, BOEM has made considerable and foundational strides toward accomplishing the Administration's goal of achieving 30 gigawatts (GW) of offshore wind production by 2030. BOEM has demonstrated an all-of government approach in fostering offshore wind production by collaborating with multiple government agencies, consulting with Tribal nations, and signing an extensive interagency agreement with NOAA. BOEM seeks to administer an efficient review process and an inclusive, expeditious process to identify future lease sale areas. Expanding upon this work, BOEM plans to issue nine

environmental reviews in FY 2023 and hold up to three lease sales in FY 2022 and up to two lease sales in FY 2023. As BOEM furthers efforts to advance the Nation's clean energy future in FY 2023, it does so with the highest level of scientific and environmental integrity through substantial investments in scientific and technological research, and the incorporation of Indigenous traditional ecological knowledge to ensure that the development of offshore wind on the Outer Continental Shelf (OCS) occurs in an environmentally and socially conscientious manner.

- **Conventional Energy.** BOEM manages the development of OCS oil and gas resources in an environmentally and economically responsible manner. BOEM continues to meet its statutory obligations required by OCSLA, which include administering existing leases, permitting geological and geophysical surveys, evaluating resources, and developing the next National OCS Oil and Leasing Program. BOEM continues to work with BSEE to support all permitting decisions necessary to ensure the orderly development of OCS oil and gas resources that contribute to U.S. energy security. In response to direction in Executive Order 14008 and in light of the Secretary of the Interior's broad stewardship responsibilities, the Department conducted a review of its oil and gas program and published a report of its findings in November 2021. The report identifies key reforms necessary to ensure that the programs provide a fair return to taxpayers, discourage speculation, reduce environmental impacts, hold operators responsible for remediation, and create a more inclusive and just approach to managing public lands and waters. The Department's report makes a number of specific recommendations to restore balance to these programs, including adjusting royalty rates, pursuing adequate financial assurance for decommissioning liabilities, and prioritizing leasing in areas with known resource potential while avoiding conflicts with other uses. The Department is in the process of implementing administrative changes consistent with the report's findings and recommendations, including where necessary, updating regulations and agency policy guidance documents that apply to existing leases as well as any new leases that may be issued. The Administration is committed to the responsible and sustainable development of Federal energy resources as the Nation transitions to a low-carbon economy, and such reforms are a critical component of this effort.
- **Marine Minerals.** BOEM's marine minerals activities ensure the responsible management of the Nation's OCS mineral resources by considering environmental impacts and using the best available science to improve coastal resilience, enhance natural disaster preparedness, assess the availability of critical minerals, and protect shorelines essential to promote national security, the economy, and the environment. Per the Outer Continental Shelf Lands Act (OCSLA), BOEM may convey, on a non-competitive basis, the rights to OCS sediment resources to Federal, State, and local government for the purposes of coastal restoration projects, shore protection, and use in construction projects authorized or funded by the Federal Government. In this capacity, BOEM continues to engage with stakeholders and State and local governments to facilitate the procurement of sand and sediment resources for coastal restoration and beach nourishment upon request and when necessary to preserve infrastructure, defense facilities, and the Nation's coasts. In FY 2023, BOEM underscores the importance of increasing understanding of marine minerals to inform the management of OCS mineral resources, address environmental harms due to climate change, and avoid potential multiple-use conflicts and impacts by advancing the development of the National Offshore Sand Inventory, Marine Minerals Information System, and National Offshore Critical Mineral Inventory.

- **Environmental Programs.** Responsible environmental stewardship remains at the center of each activity BOEM undertakes to manage the Nation's OCS resources. BOEM's Environmental Programs provide essential support to the Bureau by ensuring that programmatic decision-making is guided by the best available science and Indigenous traditional ecological knowledge. Among its chief responsibilities, BOEM's Environmental Programs aim to inform the public, stakeholders, diverse ocean users, and external decision-makers about the potential impacts of OCS energy and mineral activities through transparent environmental analyses that identify risks and mitigation strategies to assist with ensuring environmental protection. In line with this work, fostering effective government-to-government relationships and improving Tribal Nations' consultation capacities with BOEM on the impacts of potential projects and decisions are critical components of the Environmental Programs' responsibilities. During FY 2023, BOEM will continue to prioritize its Environmental Programs to ensure scientific and Indigenous traditional knowledge inform BOEM's decision-making. BOEM will also promote environmental justice and the Administration's Justice40 initiative objective to deliver benefits to underserved communities.
- **Executive Direction.** The offices comprising BOEM's executive functions provide bureau-wide strategic leadership, management, budget, and administrative support to the entire Bureau. These offices oversee critical Bureau functions to ensure the effective internal and external communication and presentation of BOEM's mission in compliance with the Administration's and the Department's national and international initiatives. The offices also oversee the safety and health of BOEM's workforce, continuity of operations, emergency management, information technology, and internal control programs. BOEM will continue to advance key regulations related to renewable energy, financial assurances, civil penalties, marine archaeology, and carbon sequestration to mitigate harms emerging from climate change, damage to the environment, and financial risk to the American taxpayer. In FY 2023, BOEM will continue supporting Administration and Department-wide initiatives to promote Diversity, Equity, Inclusion, and Accessibility and will implement the Justice, Equality, Diversity, and Inclusion (JEDI) Charter to foster a stronger and more inclusive culture throughout the Bureau.
- **Carbon Sequestration.** Section 40307 of the Bipartisan Infrastructure Law (BIL) amends the Outer Continental Shelf Lands Act to authorize the Secretary of the Interior to grant a lease, easement, or right-of-way on the outer Continental Shelf for activities that "provide for, support, or are directly related to the injection of a carbon dioxide stream into sub-seabed geologic formations for the purpose of long-term carbon sequestration." Additionally, the law directs, "Not later than 1 year after the date of enactment of this Act, the Secretary of the Interior shall promulgate regulations to carry out the amendments made by this section." Implementation of these provisions are in support of the Administration's broader climate change efforts. BOEM makes major contributions to the Administration's climate priorities as the lead regulatory agency for offshore wind energy and is poised to use its significant technical expertise in offshore oil and gas, geology, environment, and economics to partner with the Bureau of Safety and Environmental Enforcement (BSEE) in advancing offshore carbon capture and sequestration (CCS) as directed by the BIL. During FY 2022 and FY 2023, BOEM and BSEE will develop a framework rulemaking to implement the BIL requirements.

The FY 2023 budget reflects a careful analysis of the resources needed to advance the Administration's priorities and develop BOEM's capacity to execute its functions responsibly and efficiently.

General Statement

FISCAL YEAR 2023 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.

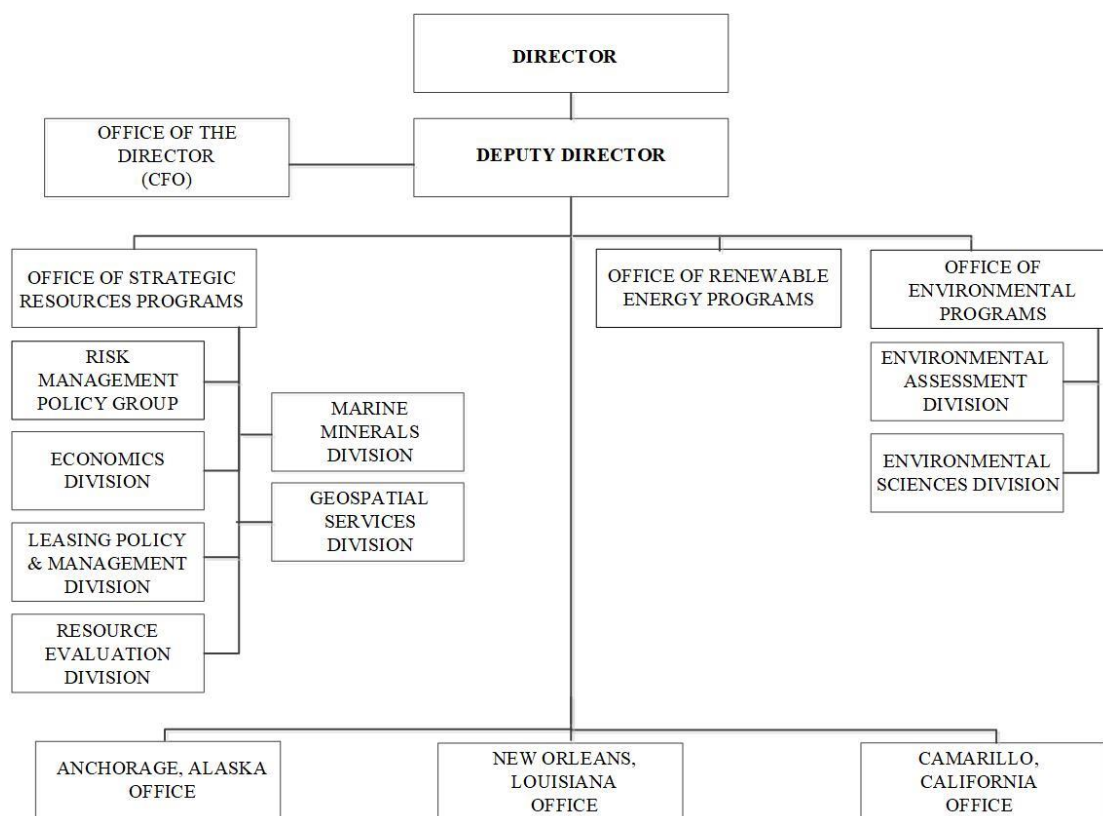
The core statutory mandate of the Bureau of Ocean Energy Management (BOEM) is provided by OCSLA, 43 U.S.C. § 1331 et seq. OCSLA, in conjunction with the Submerged Lands Act, 43 U.S.C. § 1301 et seq., defines the OCS as “all submerged lands lying seaward and outside” of the seaward boundaries of a State and “subject to the jurisdiction and control of the United States.” In practice, this means that the OCS extends from three nautical miles offshore a State (nine nautical miles in the case of Texas and Florida’s Gulf of Mexico coast) to at least the outer limits of the U.S. Exclusive Economic Zone. OCSLA gives the Secretary of the Interior responsibility and policy guidance for the protection and administration of mineral exploration and development of the OCS. The Energy Policy Act of 2005 (P.L. 109–58) amended OCSLA to authorize the Department to manage the development of renewable energy on the OCS. To carry out this mission, BOEM manages OCS energy and mineral resources, including: renewable energy leasing and development; OCS oil and gas planning, leasing and oversight, including inventories of oil and gas reserves, resource and economic evaluation, review and administration of oil and gas exploration and development plans, geological and geophysical (G&G) permitting, and financial assurance and risk management; conveyance of sand and gravel resources; and National Environmental Policy Act (NEPA) analyses and environmental studies. BOEM’s work supports Administration efforts to create good paying jobs as the Nation transitions to a clean energy future.

BUDGET AND ORGANIZATIONAL STRUCTURE

Budget activities for BOEM are funded through the Ocean Energy Management account and support resource evaluation, planning, and leasing of the Nation's OCS energy and mineral resources in a balanced way that supports economic development, energy security, and environmental protection. The Ocean Energy Management account comprises Renewable Energy, Conventional Energy, Environmental Programs, Marine Minerals, and Executive Direction budget activities.

Functions and funds within these activities are divided among program offices located at headquarters and regional offices, as shown in figure 1 below. Policy and administrative functions for each mission area (renewable energy, conventional energy, marine minerals, and environmental programs) are managed through three offices headquartered in the greater Washington, D.C., area and focus on national offshore leasing strategy and the development of comprehensive environmental analyses and science. BOEM’s regional offices in Anchorage, Alaska; New Orleans, Louisiana; and Camarillo, California implement Bureau policy, manage regional leasing activity, conduct region-specific analyses, and coordinate stakeholder outreach and engagement.

Figure 1: BOEM Organizational Chart



Headquarters and regional offices work together to implement BOEM’s various activities. In addition, strong partnerships with other Federal agencies, Tribal governments, 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 activities to fulfill its resource management responsibilities.

Fiscal Year (FY) 2023 BUDGET REQUEST

The Administration understands the urgency and magnitude of the climate challenge. The 2023 BOEM budget request reflects the appropriation needs for BOEM to accomplish the priorities of the President and the Department. This includes implementation of multiple EOs, such as EO 14008, “*Tackling the*

Climate Crisis at Home and Abroad,” to restore balance on public lands and waters, create jobs, and provide a path to align the management of America’s public lands and waters with our Nation’s climate, conservation, and clean energy goals while using the best available science and practices in the decision-making process and strengthening the government-to-government relationship with sovereign Tribal nations. The budget request supports EO 13990, “*Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis,*” and associated initiatives to address impacts related to climate change and environmental justice from energy development on public lands. Funding supports EO 14017, *America’s Supply Chains*, simultaneously supporting critical mineral science and environmental stewardship. BOEM’s budget request also supports EO 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*, and EO 13988, *Preventing and Combating Discrimination on the Basis of Gender Identity or Sexual Orientation*, by fostering diversity and inclusion in the workplace.

Funding for BOEM is requested through the Ocean Energy Management account, which consists of net discretionary appropriations and offsetting collections (comprising a portion of OCS rental receipts and cost recovery fees). In FY 2023, BOEM requests \$237.4 million in total budget authority. BOEM’s request includes \$192.8 million in net current appropriations and \$44.6 million in offsetting collections, as shown in table 1.

Table 1: Summary of BOEM Budget Request

Total FY 2023 Budget Request			
<i>Dollars in Thousands (\$000)</i>			
Appropriation: Ocean Energy Management	2021 Actual	2022 CR at Annual Rate	2023 Request
Net Current Appropriation	144,514	134,716	192,765
Offsetting Collections	46,301	58,099	44,642
TOTAL, Ocean Energy Management	190,815	192,815	237,407
Offsetting Collections			
Rental Receipts	44,301	56,270	42,758
Cost Recovery Fees	2,000	1,829	1,884
Total Offsetting Collections	46,301	58,099	44,642
Ocean Energy Management			
Renewable Energy	28,465	28,465	51,675
Conventional Energy	60,487	60,487	63,629
Marine Minerals	10,781	10,781	15,383
Environmental Programs	75,875	75,875	86,373
Executive Direction	17,207	17,207	20,347
SUBTOTAL, Ocean Energy Management	192,815	192,815	237,407
Rescission of Prior Year Balances	-2,000	-2,000	0
TOTAL, Ocean Energy Management	190,815	190,815	237,407
FTEs	575	610	677

FY 2023 BUDGET HIGHLIGHTS

The FY 2023 budget reflects funding needed for BOEM to carry out its mission and to support Administration priorities. Changes relative to the FY 2022 Continuing Resolution (CR) Budget are shown in table 2.

Table 2: List of Budgetary Changes in FY 2023

Summary of 2023 Program Changes for Bureau of Ocean Energy Management

Program Changes:	(\$000)	FTE
Bureau-Wide: Maintain Baseline Capacity	+3,710	+0
Bureau-Wide: FY 2023 Fixed Costs	+4,020	+0
Bureau-Wide: Technical Internal Transfers	[-13,457/+13,457]	+0
Bureau-Wide: Elimination of Prior Year Rescission	+2,000	+0
Renewable Energy: Foster Renewable Energy Research & Engagement	+8,600	+5
Renewable Energy: Advance Renewable Energy Related Studies	+5,000	+2
Renewable Energy: Extend Workforce Capacity to Support 30 Gigawatts of Offshore Wind by 2030	+6,800	+41
Renewable Energy: Expand Renewable Energy Research Initiative	+1,900	+0
Conventional Energy: Execute National OCS Program	-1,587	+0
Conventional Energy: Address GAO High Risk Issues	+1,000	+0
Marine Minerals: Develop National Offshore Sand Inventory	+4,056	+4
Marine Minerals: Support Responsible Stewardship of Critical Minerals	+263	+1
Environmental Programs: Execute National OCS Program	-1,812	+0
Environmental Programs: Conduct Environmental Studies Program	+10,000	+3
Environmental Programs: Further NEPA Coordination with CEQ	+500	+0
Executive Direction: Enhance Program Support Capacity	+1,240	+6
Executive Direction: Create Office of Equity and Inclusion	+789	+4
Executive Direction: Execute Justice40 Initiative	+113	+1
TOTAL Program Changes	+46,592	+67

* Changes listed in order of budget activity, not priority.

Maintain Baseline Capacity (+\$3,710,000). The FY 2023 budget includes important investments in programs needed to help strengthen America and increase competitiveness as the world continues to change. These investments include funding needed to maintain a strong, talented workforce and the core capacity needed to continue to fulfill the BOEM’s mission. The budget includes a total of \$3.71 million, which reflects the incremental amount needed to cover the fixed costs associated with mission operations in FY 2022. This request in combination with the FY 2023 fixed costs amounts will allow the program to sustain core capacity and avoid impacts to ongoing program activities.

FY 2023 Fixed Costs (+\$4,020,000). Fixed cost increases are fully funded in BOEM’s FY 2023 budget. These costs include increases to support changes in Federal health and retirement benefits and workers’

compensation, rent to the General Services Administration, and payments to the Department through its Working Capital Fund.

Technical Internal Transfers (-\$13,457,000/+13,457,000; 0 full time equivalents (FTE)). Technical adjustments in FY 2023 reflect a decrease in offsetting collections paired with a commensurate increase in net current appropriations. These changes are spread proportionally across budget activities. There are no programmatic changes associated with this shift.

Foster Renewable Energy Research and Engagement (+\$8,600,000; +5 FTE). These FTE and funds will enable BOEM to conduct valuable research and stakeholder outreach to support the growing demand for renewable energy activity. BOEM conducts environmental and technical reviews of renewable energy activity plans and decides whether to approve, approve with modification, or disapprove plans. The results of the research are used to inform policy decisions, environmental analyses, mitigation, and monitoring protocols on environmental and cultural issues. A portion of the funding supports renewable energy stakeholder engagement, statutorily required by the Energy Policy Act of 2005, and provides additional resources for BOEM to coordinate and consult with Federal, Tribal, State, and local agencies throughout the renewable energy development process. Funding also reflects resources to focus on how best to grow the offshore wind energy industry to ensure that related supply chains are established in the United States in a manner that supports job growth for disadvantaged communities and a just transition from traditional energy sectors.

Advance Renewable Energy Related Studies (+\$5,000,000; +2 FTE). This funding reflects resources requested to create additional capacity to undertake Bureau-wide renewable energy related environmental studies. Proposed funding will provide for studies across BOEM's regions to collect baseline environmental information; study potential impacts of renewable energy activities on environmental and cultural resources and other uses of the ocean, including fisheries; and develop measures to mitigate those impacts.

Extend Workforce Capacity to Support 30 Gigawatts of Offshore Wind by 2030 (+\$6,800,000; +41 FTE). BOEM proposes an increase in funding and FTE to support an increase in workforce capacity to manage renewable energy activities across the Bureau, including the review of construction and operations plans. Additionally, these positions will ensure BOEM has the capacity to work with Tribal and State governments, ocean users, and other stakeholders to identify new wind energy areas to help meet the growing demands for offshore wind energy. These positions are critical to achieving the Administration's goal to deploy 30 gigawatts of offshore wind energy by 2030 in an environmentally responsible manner.

Expand Renewable Energy Research Initiative (+\$1,900,000; 0 FTE). BOEM requests funding to support research related to other emerging forms of renewable energy, and planning for transmission. Results from this research are indispensable in BOEM's decision-making and to solve perceived barriers to offshore wind development.

Address GAO High Risk Issues (+\$1,000,000; 0 FTE). In FY 2023, BOEM proposes funding to address the Government Accountability Office's (GAO) high risk issues pertaining to BOEM's

conventional energy activities on the OCS. These funds would provide BOEM with the opportunity to implement GAO recommendations and improve the Bureau's capacity to address a wide array of risks associated with the production of conventional energy on the OCS.

Execute National OCS Program (-\$3,399,000; 0 FTE). In FY 2023, BOEM proposes a reduction to the National OCS Oil and Gas Leasing Program (National OCS Program) funding, taken from the Conventional Energy (-\$1,587,000) and Environmental Programs (-\$1,812,000) budget activities. This reduction reflects a funding decrease to the base Conventional Energy and Environmental Programs budget activities. The Bureau can sustain some levels of reduction to this funding, as some resources for National OCS Program implementation are not currently being utilized. Development of and decisions regarding the next National OCS Program are ongoing as the Department evaluates all options and determines the best pathway to accomplish its mission. The FY 2023 budget does not presume the Secretary's decision on the scope of the next National OCS Program. Planning for future leasing activities does not impact ongoing energy operations. BOEM continues to work with BSEE to support all permitting decisions necessary to ensure the orderly development of OCS oil and gas resources that contribute to U.S. energy security.

Develop National Offshore Sand Inventory (+\$4,056,000; +4 FTE). This funding supports further development of BOEM's National Offshore Sand Inventory (Sand Inventory), with a focus on needs identified along the Western Gulf of Mexico coast. Requested funds allow for acquisition of geophysical and geological data needed to support congressionally authorized Texas Coastal Storm Risk Management and Ecosystem Restoration projects and other State and local government restoration projects. Funding supports additional personnel needed for the continuing development of the Sand Inventory.

Support Responsible Stewardship of Critical Minerals (+\$263,000; +1 FTE). In FY 2023, BOEM requests a funding and FTE increase to aid its planning for potential future requests for authorizations to develop offshore critical minerals. The FTE (\$155,000) would help BOEM develop the needed in-house subject matter expertise pertinent to understanding the environmental impacts of proposed offshore critical mineral development, while the funding (\$108,000) would enable BOEM to conduct additional research on environmental impacts and prepare robust guidance documents and environmental assessments in order to further BOEM's responsible stewardship of offshore marine mineral resources.

Conduct Environmental Studies Program (+\$10,000,000; +3 FTE). This funding reflects resources to further support BOEM's Environmental Studies Program. The Environmental Studies Program supports the science that is the foundation for ensuring safe and sound operations, fostering conservation of resources, and minimizing impacts on the environment. All regulatory activities and oversight require associated science to conduct the highly detailed analyses necessary to support Bureau decisions and ensure environmentally responsible exploration and development. With these funds, BOEM will be better equipped to conduct the environmental studies that support clean energy development and inform BOEM's understanding and policy decisions in support of conservation and climate goals. The Environmental Studies Program supports the Administration's desire for environmentally and economically responsible development of energy and mineral resources while also considering climate science, conservation, and environmental justice.

Further NEPA Coordination with CEQ (+\$500,000; 0 FTE). In FY 2023, BOEM proposes funding for use in working with the Council on Environmental Quality (CEQ). Funding advances more effective NEPA environmental reviews and overall implementation by supporting technical assistance and coordination with the CEQ.

Enhance Program Support Capacity (+\$1,240,000; +6 FTE). In FY 2023, BOEM requests a funding and FTE increase to support the information technology and administrative needs associated with its expanding role and contributions toward the Administration's clean energy, climate change resilience and restoration, and conservation efforts. As programmatic responsibilities evolve and grow, a corresponding funding increase is necessary for critical support roles. Requested FTE add the needed capacity to support a range of technological and administrative needs, such as information technology project management, transactional budget duties, communications, and regulatory support. These specialists are intended to work closely with the program offices and ensure the Bureau's necessary administrative and legal requirements are met as BOEM advances the Administration's priorities. Additionally, by increasing BOEM's administrative and technical capacity, these FTE further BOEM's ongoing realignment efforts as it strives to create a more efficient organization. This funding also provides support for establishing regulations for a carbon sequestration program on the OCS – a new statutory mandate that is otherwise unfunded. Finally, funding enables BOEM to fund additional legal support, as needed, in response to the ongoing acceleration of clean energy development on the OCS.

Create Office of Equity and Inclusion (+\$789,000; +4 FTE). In support of the Administration's priorities described in EO 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*, and EO 13988, *Preventing and Combating Discrimination on the Basis of Gender Identity or Sexual Orientation*, BOEM proposes four FTE to establish an Office of Equity and Inclusion. The requested FTE would enable BOEM to advance the work of its Justice, Equality, Diversity, and Inclusion Committee and establish an equal employment opportunity program to ensure there is leadership capacity to holistically advance all aspects of equal opportunity, diversity, inclusion, and accessibility.

Execute Justice40 Initiative (+\$113,000; +1 FTE). The 2023 budget includes \$4.0 million Department-wide, including \$113,000 for BOEM, for dedicated staff resources to provide programmatic expertise, coordination, and outreach support to implement the Justice40 Initiative to increase environmental justice in Federal programs. Interior bureaus and offices are an important component of the Administration's objective for 40 percent of overall benefits of Federal investments that impact climate change and generate clean energy to be directed to disadvantaged communities. Interior has identified more than 50 programs with a budget totaling over \$3.0 billion that contribute to this forward-thinking initiative. Funding in 2023 will be used to develop methodologies to identify and quantify the benefits of Justice40 programs, demonstrate how and where covered programs distribute benefits, and pursue strategies for maximizing the benefits to vulnerable communities in the future. Agencies will also pursue and document stakeholder engagement in the initiative.

FY 2023 LEGISLATIVE PROPOSAL

Decommissioning Account

BOEM requires OCS oil and gas and renewable energy lessees to provide financial assurance to cover lease obligations, primarily for decommissioning of facilities when they are no longer supporting production. Through regulations implementing OCSLA, BOEM is authorized to call for the forfeiture of that financial assurance and collect bond proceeds or other security forfeitures from an OCS permittee, lessee, or right-of-way holder that does not fulfill the requirements of its permit, lease, or right-of-way, or does not comply with the regulations or orders of the Secretary. *See* 30 CFR § 556.907. Such forfeitures cover the cost to the United States of any improvement, protection, or rehabilitation work rendered necessary by the action or inaction that led to the forfeiture. The determination to call for the forfeiture of a bond or security is made by the Regional Director for the BOEM regional office where the lease, permit, or right-of-way is managed. Because the statute identifies the Royalty and Offshore Minerals Management account (which is now BOEM's operating account, hereinafter referred to as the Ocean Energy Management (OEM) account) as the one in which funds will be collected, forfeited moneys are credited to the OEM account to remain available until expended, and any funds in excess of the amount expended in performing the necessary work are returned to the permittee, lessee, or right-of-way holder. *See* 43 U.S.C. 1338a.

Under OCSLA and Secretarial delegations, BOEM has the authority to collect bankruptcy settlements or disbursements on behalf of BSEE. BSEE may receive distributions in bankruptcy proceedings to reimburse it for actual, necessary costs and expenses incurred in performing decommissioning during the pendency of the bankruptcy that had been the responsibility of a debtor, or in correcting other regulatory violations. Additionally, BSEE may receive a pro rata distribution from the bankruptcy estate based on the proof of claim for the expected future costs of decommissioning. In both instances, the funds are received to remedy a specific problem and not for general governmental purposes. Similar to forfeited bonds or other securities, the bankruptcy settlements and distributions may be credited to BOEM's OEM account until expended.

During the reorganization of the Minerals Management Service into three separate entities, the specific authorities regarding bond forfeitures were not clearly assigned or updated. As a result, BOEM has the authority to call bonds and collect the associated funds, but BSEE receives bankruptcy settlements and distributions. However, although BSEE is responsible for ensuring the necessary decommissioning work is done, it has no clear authority to retain funds received in bankruptcy and therefore such funds are placed into BOEM's OEM account, to which BSEE has no access. While BOEM can utilize a reimbursable service agreement to effectively transfer funds – resulting from a bond forfeiture or a bankruptcy distribution – from the OEM account to BSEE, this is neither a practical nor efficient long-term solution.

BOEM proposes to separate collections of forfeitures (of bonds or other securities) and bankruptcy distributions or settlements (associated with failure to perform or noncompliance) from the appropriations in its OEM account and administer them through a new Treasury account. To accomplish this, BOEM requests authority to transfer such funds to this new account and to direct all future such funds to the new account as well. BOEM will work with the Department, the Office of Management and Budget, and the

Department of the Treasury to establish the Treasury account in which decommissioning funds can be managed, but in order to utilize this new account for the collection and administration of funds specific to decommissioning activities, the underlying statute will need to be amended. The Budget proposes this be accomplished via a general provision in the FY 2023 Interior appropriations act.

FY 2023 AREAS OF FOCUS

BOEM's FY 2023 budget reflects BOEM's accomplishments as a steward of America's resources on the OCS, its role as one of the top revenue generators for the United States, and its commitment to ongoing efforts and initiatives that are vital to BOEM's mission and critical to supporting the Administration's priorities, including creating good paying jobs as the Nation transitions to a clean energy future, advancing energy security, supporting economic prosperity, and ensuring the reliability and affordability of domestic clean energy.

ACCELERATING CLEAN ENERGY DEVELOPMENT

The outlook for offshore renewable energy is changing dramatically, with increasing interest in deploying clean energy to fight climate change and create good paying jobs. With the issuance of EO 14008 in January 2021, the President signaled his Administration's commitment to responsibly accelerating offshore renewable energy production. In March 2021, the Departments of the Interior, Energy, and Commerce established a goal to deploy 30 GW of offshore wind energy capacity by 2030. Many States have similarly established renewable energy procurement goals. As the lead regulatory agency for offshore wind energy, BOEM is central to implementing the President's commitment and meeting the 30 GW target. In recognition of the role renewable energy plays in securing the Nation's energy future, fighting climate change, and supporting economic growth, BOEM continues to advance offshore wind energy by creating greater clarity for Tribal, State, and local governments, industry, ocean users, and other stakeholders. This includes an efficient and effective process for reviewing plans to develop existing leases and an inclusive and expeditious process for identifying areas for potential future lease sales. As the prospects for offshore wind energy expand, robust stakeholder and ocean user outreach and scientific integrity will continue to be important components in our Nation's offshore renewable energy program. BOEM's FY 2023 budget reflects the emphasis on bringing renewable energy projects to fruition through an expeditious and responsible approach. To meet the increase in demand and reach the 30 GW goal, BOEM recognizes the need to build a robust renewable energy program to ensure adequate capacity to review projects, advance new lease areas, engage ocean users, and invest in developing science as the foundation for decision-making. Critically, BOEM's FY 2023 budget proposes an increase in workforce capacity to manage and address renewable energy activities. These positions will enable BOEM to increase renewable energy science and technology research and stakeholder outreach and will better inform policy decisions, environmental analyses, mitigation, and monitoring protocols for environmental and cultural issues.

Ultimately, the FY 2023 budget advances BOEM's efforts in moving the Nation's clean energy future forward in an informed and environmentally and socially conscientious manner.

STAKEHOLDER OUTREACH, ENGAGEMENT AND ENVIRONMENTAL JUSTICE

Stakeholder outreach and engagement on all BOEM activities are statutorily mandated and critically important and provide an opportunity for BOEM to strive for environmental justice throughout its activities. EO 14008 states, “Agencies shall make achieving environmental justice part of their missions by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts.” Through outreach efforts, BOEM provides an opportunity for local communities to learn about ongoing activities and engage in discussions about activities that may impact them. Through these interactions, BOEM strives to ensure environmental justice concerns are addressed throughout its activities. Under the Energy Policy Act of 2005, BOEM must coordinate and consult with Federal, Tribal, State, and local agencies throughout the offshore renewable energy development process. OCSLA calls for public involvement and comment at multiple points throughout the process of developing the 5-year National OCS Program. BOEM’s Marine Minerals Program also coordinates with governmental partners and stakeholders as it facilitates access to and manages the Nation’s OCS non-energy marine minerals. Effective stakeholder engagement throughout all activities enables BOEM to obtain additional perspectives and insights into research and monitoring related to the interaction between OCS energy and mineral development and other offshore activities and resources. Communication with local communities is necessary to ensure natural resource decisions reflect the input of citizens potentially affected by proposed activities.

ENVIRONMENTAL STEWARDSHIP

In the execution of its statutory mission, BOEM seeks to be a model for how the development of energy goes hand-in-hand with responsible stewardship of the environment. Environmental assessments and studies are critical to the successful management of offshore energy and mineral resources. BOEM’s Environmental Studies Program provides the environmental science used as the foundation for sound policy decisions and enables BOEM to manage offshore energy and mineral resources in an environmentally and economically responsible manner. BOEM focuses on environmental analyses conducted in a transparent, coordinated, and streamlined fashion to ensure that decisions are informed by the best available science. Consistent with that approach, BOEM’s FY 2023 budget supports additional renewable energy scientific and technology research, renewable energy related studies, and additional environmental studies in support of renewable energy, climate science, and conservation. BOEM’s scientific funding, along with leveraged resources, enables BOEM to collect valuable data useful not only to BOEM, but also to stakeholders, other Federal agencies, and State and local governments.

CLIMATE SCIENCE

BOEM provides baseline data required to measure progress toward meeting U.S. greenhouse gas reduction goals through assessments of greenhouse gas emissions data, including a greenhouse gas emissions inventory conducted every three years. This information, as well as analyses of new offshore activity, also helps BOEM plan mitigation strategies to reduce greenhouse gas emissions. In FY 2023, BOEM’s environmental programs will continue to provide robust scientific research, assessment, regulatory measures, products, and services for understanding, avoiding, and mitigating harm to ecosystems from OCS energy and mineral development. BOEM will continue to assess environmental impacts from climate change and undertake steps to redress associated adverse effects. Finally, BOEM

will strengthen oversight of OCS energy facilities to reduce emissions in support of the Administration’s goals for a carbon-pollution-free electric sector by 2035 and net-zero emissions economy-wide by 2050.

CLIMATE CHANGE RESILIENCE AND RESTORATION

BOEM fosters climate change resilience and ecosystem restoration in support of efforts to conserve and protect the natural and human environments. BOEM adopts a comprehensive approach to climate resilience and conservation activities across its programs, incorporating perspectives from stakeholders, scientific studies and assessments, and trends in acute and gradual impacts resulting from climate change. BOEM recognizes the impact of OCS energy and mineral activities on the human environment and will actively conduct its outreach and engagement with stakeholders to improve data collection, advance mapping and resource stewardship planning, and reduce harm arising from climate change to ecological and human communities. Ensuring that BOEM applies the best available science and meets legal requirements provides BOEM with an effective guide and standard to effectively maintain its progress in enhancing environmental adaptation and resilience.

In addition to BOEM’s environmental activities, BOEM’s marine mineral activities also foster climate change resilience and restoration. OCSLA authorizes BOEM to convey, on a noncompetitive basis, the rights to OCS sediment resources to Federal, State, and local government agencies for shore protection, beach or coastal wetlands restoration projects, or construction projects funded or authorized by the Federal Government. Facilitating restoration of coastal habitats and reducing risk to infrastructure along the coasts—such as roads, homes, businesses, and defense facilities—are vital to the Nation’s security, economy, and ecological well-being. BOEM’s marine minerals activities directly contribute to the Administration’s goal of climate change resilience through conservation. In FY 2023, BOEM will continue ongoing work to expand the OCS sand inventory, which will enable BOEM to better support areas that are at high risk due to potential coastal erosion and inundation, the presence of critical infrastructure, or other factors. By engaging with State and local governments and utilizing risk assessments and modeling results, BOEM can identify priority areas requiring additional information on sand availability. As BOEM collects and processes new geophysical and geological data each year, it is integrated into the existing sand inventory data repository: the Marine Minerals Information System. Ultimately, the sand inventory enables BOEM to proactively identify potential sand sources to shorten recovery efforts after hurricanes and other natural disasters, while managing this finite resource.

RESPONSIBLE MANAGEMENT OF THE NATION’S ENERGY RESOURCES

In response to direction in Executive Order 14008 and in light of the Secretary of the Interior’s broad stewardship responsibilities, the Department conducted a review of its oil and gas program and published a report of its findings in November 2021. The report identifies key reforms necessary to ensure that the programs provide a fair return to taxpayers, discourage speculation, reduce environmental impacts, hold operators responsible for remediation, and create a more inclusive and just approach to managing public lands and waters. The Department’s report makes a number of specific recommendations to restore balance to these programs, including adjusting royalty rates, pursuing adequate financial assurance for decommissioning liabilities, and prioritizing leasing in areas with known resource potential while avoiding conflicts with other uses. The Department is in the process of implementing administrative changes consistent with the report’s findings and recommendations, including where necessary, updating regulations and agency policy guidance documents that apply to existing leases as well as any new leases

that may be issued. The Administration is committed to the responsible and sustainable development of Federal energy resources as the Nation transitions to a low-carbon economy, and such reforms are a critical component of this effort.

As of February 1, 2022, BOEM manages 2,069 active oil and gas leases covering over 11 million OCS acres. All of these leases were awarded following completion of the post-sale bid evaluation process that seeks to ensure fair return is received for each lease. Offshore Federal production in FY 2021 totaled approximately 602.7 million barrels of oil and 766.8 million cubic feet of gas, almost all of which was produced in the Gulf of Mexico. This accounted for about 15 percent of all domestic oil production and 2 percent of domestic natural gas production. Annually, this production generates billions of dollars in revenue for U.S. taxpayers and State and local governments, while supporting hundreds of thousands of jobs. Offshore oil and gas leasing and production activities are a significant source of revenue for the Federal Government. In FY 2021, conventional energy generated \$88.6 million in rent, \$111.6 million in bonuses, and \$3.8 billion in royalties from production.

BOEM also seeks to ensure a fair return for U.S. taxpayers from its renewable energy activities. As required by section 8(p) of OCSLA, BOEM has established payment terms to ensure a fair return to the U.S. Treasury for the rights conveyed by OCS renewable energy leases and grants. In FY 2021, \$5.1 million in rent was collected on OCS renewable energy leases. Through FY 2021, BOEM has generated over \$473 million in bonus bids from renewable energy lease sales conducted through its competitive leasing process. Additionally, the New York Bight offshore wind sale in February 2022 generated \$4.37 billion in high bids, which are currently undergoing review. Revenue data is compiled by the Office of Natural Resources Revenue and can be found at <https://revenuedata.doi.gov/explore/>.

DIVERSITY, EQUITY, AND INCLUSION

BOEM activities support diversity, equity, inclusion, and accessibility efforts in alignment with EO 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*, and EO 13988, *Preventing and Combating Discrimination on the Basis of Gender Identity and Sexual Orientation*. To support activities in these critical areas, BOEM utilizes an RSA with BSEE and has formed a Justice, Equality, Diversity, and Inclusion (JEDI) Committee. The role of the JEDI Committee is to “advise the Bureau’s Senior Leadership Team, develop and periodically update a work plan with specific objectives and timelines, and otherwise advance justice, equality, diversity, and inclusion in BOEM and in the effects of BOEM’s programs on all people.” The JEDI Committee created a work plan to address the EO 13985 and EO 13988 priority areas, with a focus on BOEM’s workplace. During FY 2022, BOEM intends to hire an Inclusion Officer who will oversee BOEM’s JEDI functions. In FY 2023, BOEM proposes to further the JEDI goals by establishing a comprehensive program that also carries out equal employment opportunity functions.

GOOD ACCOUNTING OBLIGATION IN GOVERNMENT ACT REPORT

Good Accounting Obligation in Government Act Report

The Good Accounting Obligation in Government Act (GAO-IG Act, P.L. 115-414), enacted January 3, 2019, requires that Agencies report the status of each open audit recommendation issued more than one year prior to the submission of the Agency's annual budget justification to Congress. The Act requires Agencies to include the current target completion date, implementation status, and any discrepancies on closure determinations.

The Department of the Interior takes audit follow-up very seriously and considers our external auditors, to include the Government Accountability Office (GAO) and Office of the Inspector General, valued partners in not only improving the Department's management and compliance obligations but also enhancing its programmatic and administrative operations. As stewards of taxpayer resources, the Department applies cost-benefit analysis and enterprise risk management principles in implementing recommendation decisions.

The Department's GAO-IG Act Report will be available at the following link: <https://www.doi.gov/cj>

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Bureau Budget Tables

FISCAL YEAR 2023 BUDGET

Bureau of Ocean Energy Management

Bureau Budget Tables

Table 3: Budget at a Glance

Bureau of Ocean Energy Management Budget at a Glance

(Dollars in Thousands)

Appropriation: Ocean Energy Management	2021 Enacted	2022 CR at Annual Rate	Fixed Costs (+/-)	Internal Transfers (+/-)	2023 Program Changes (+/-)	2023 Request
Ocean Energy Management	192,815	192,815	+4,020	0	+40,572	237,407
Renewable Energy	28,465	28,465	+557	+0	+22,653	51,675
<i>Change in Appropriated Dollars</i>				+1,871		[1,871]
<i>Updated Offsetting Collections Estimates</i>				-1,871		[-1,871]
<i>Maintain Baseline Capacity</i>					[+353]	[353]
<i>Foster Renewable Energy Research & Engagement</i>	[3,657]	[3,657]			[+8,600]	[12,257]
<i>Advance Renewable Energy Related Studies</i>	[3,618]	[3,618]			[+5,000]	[8,618]
<i>Extend Workforce Capacity to Support 30 Gigawatts of Offshore Wind by 2030</i>					[+6,800]	[6,800]
<i>Expand Renewable Energy Research Initiative</i>	[1,462]	[1,462]			[+1,900]	[3,362]
Conventional Energy	60,487	60,487	+1,880	0	+1,262	63,629
<i>Change in Appropriated Dollars</i>				+6,264		[6,264]
<i>Updated Offsetting Collections Estimates</i>				-6,319		[-6,319]
<i>Updated Cost Recovery Estimates</i>				+55		[55]
<i>Maintain Baseline Capacity</i>					[+1,849]	[1,849]
<i>Address GAO High Risk Issues</i>					[+1,000]	[1,000]
<i>Execute National OCS Program</i>	[4,329]	[4,329]			[-1,587]	[2,742]
Marine Minerals	10,781	10,781	+155	0	+4,447	15,383
<i>Change in Appropriated Dollars</i>				+520		[520]
<i>Updated Offsetting Collections Estimates</i>				-520		[-520]
<i>Maintain Baseline Capacity</i>					[+128]	[128]
<i>Develop National Offshore Sand Inventory</i>	[3,751]	[3,751]			[+4,056]	[7,807]
<i>Support Responsible Stewardship of Critical Minerals</i>	[2,000]	[2,000]			[+263]	[2,263]
Environmental Programs	75,875	75,875	+922	0	+9,576	86,373
<i>Change in Appropriated Dollars</i>				+3,097		[3,097]

Bureau Budget Tables

<i>Updated Offsetting Collections Estimates</i>				-3,097		[-3,097]
<i>Maintain Baseline Capacity</i>					[+888]	[888]
<i>Conduct Environmental Studies Program</i>	[10,061]	[10,061]			[+10,000]	[20,061]
<i>Further NEPA Coordination with CEQ</i>					[+500]	[500]
<i>Execute National OCS Program</i>	[13,826]	[13,826]			[-1,812]	[12,014]
Executive Direction	17,207	17,207	+506	0	+2,634	20,347
<i>Change in Appropriated Dollars</i>				+1,705		[1,705]
<i>Updated Offsetting Collections Estimates</i>				-1,705		[-1,705]
<i>Maintain Baseline Capacity</i>					[+492]	[492]
<i>Enhance Program Support Capacity</i>					[+1,240]	[1,240]
<i>Create Office of Equity and Inclusion</i>	[297]	[297]			[+789]	[1,086]
<i>Execute Justice40 Initiative</i>					[+113]	[113]
SUBTOTAL, Ocean Energy Management	192,815	192,815	+4,020	0	+40,572	237,407
Rescission of Prior Year Balances	-2,000	-2,000			0	0
TOTAL, Ocean Energy Management	190,815	190,815	+4,020	0	+40,572	237,407

Table 4: Summary of Requirements

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

Ocean Energy Management	2021 Actual Amount	2021 Actual FTE	2022 CR at Annual Rate Amount	2022 CR at Annual Rate FTE	Fixed Costs (+/-)	Internal Transfers (+/-)	Program Changes (+/-) Amount	2023 Request Amount	2023 Request FTE	Change from 2022 CR (+/-) Amount	Change from 2022 CR (+/-) FTE
Ocean Energy Management											
Renewable Energy											
Direct Appropriation	23,011	71	22,917	58	+557	+1,871	+22,653	47,998	106	+25,081	+48
Rental Receipts	2,454		5,548	0		-1,871		3,677		-1,871	+0
Total, Renewable Energy	28,465	71	28,465	58	+557	-	+22,653	51,675	106	+23,210	+48
Conventional Energy											
Direct Appropriation	49,711	277	46,683	304	+1,880	+6,264	+1,262	56,089	304	+9,406	+0
Rental Receipts	8,776		11,975	0		-6,319		5,656		-6,319	+0
Cost Recoveries	2,000		1,829	0		+55		1,884		+55	+0
Total, Conventional Energy	60,487	277	60,487	304	+1,880	-	+1,262	63,629	304	+3,142	+0
Marine Minerals											
Direct Appropriation	8,987	18	9,097	21	+155	+520	+4,447	14,219	26	+5,122	+5
Rental Receipts	1,794		1,684	0		-520		1,164		-520	+0
Total, Marine Minerals	10,781	18	10,781	21	+155	-	+4,447	15,383	26	+4,602	+5
Environmental Programs											
Direct Appropriation	49,185	142	43,772	146	+922	+3,097	+9,576	57,367	149	+13,595	+3
Rental Receipts	26,690		32,103	0		-3,097		29,006		-3,097	+0
Total, Environmental Programs	75,875	142	75,875	146	+922	-	+9,576	86,373	149	+10,498	+3

Summary of Requirements for Bureau of Ocean Energy Management

(Dollars in Thousands)

Ocean Energy Management	2021 Actual Amount	2021 Actual FTE	2022 CR at Annual Rate Amount	2022 CR at Annual Rate FTE	Fixed Costs (+/-)	Internal Transfers (+/-)	Program Changes (+/-) Amount	2023 Request Amount	2023 Request FTE	Change from 2022 CR (+/-) Amount	Change from 2022 CR (+/-) FTE
Executive Direction											
Direct Appropriation	15,620	67	12,247	81	+506	+1,705	+2,634	17,092	92	+4,845	+11
Rental Receipts	1,587		4,960	0		-1,705		3,255		-1,705	+0
Total, Executive Direction	17,207	67	17,207	81	+506	-	+2,634	20,347	92	+3,140	+11
SUBTOTAL, OCEAN ENERGY MANAGEMENT	192,815	575	192,815	610	+4,020	+0	+40,572	237,407	677	+44,592	+67
Rescission of Prior Year Balances	(2,000)	0	(2,000)	0	+0	+0	+2,000	-	0	+2,000	+0
TOTAL, OCEAN ENERGY MANAGEMENT	190,815	575	190,815	610	+4,020	+0	+42,572	237,407	677	+46,592	+67

Table 5: Fixed Costs

Bureau of Ocean Energy Management**Justification of Fixed Costs***(Dollars In Thousands)*

Fixed Cost Changes and Projections	2022 CR at Annual Rate Change	2022 to 2023 Request Change	Description
Change in Number of Paid Days	+0	-424	This column reflects changes in pay associated with the change in the number of paid days between FY 2022 and FY 2023. The number of paid days in FY 2023 is one day less than FY 2022.
Pay Raise	+2,257	+4,411	The President's Budget for FY 2023 includes one quarter of a planned 2.7% pay raise for FY 2022 and three quarters of a planned 4.6% pay raise for FY 2023.
Employer Share of Federal Employee Retirement System	+788	+0	This column reflects no budgeted increase for the employer contribution to the Federal Employee Retirement System.
Departmental Working Capital Fund	+280	+5	The change reflects the final FY 2023 Central Bill approved by the Working Capital Fund Consortium.
Worker's Compensation Payments	+28	-9	The amounts reflect final chargeback costs of compensating injured employees and dependents of employees who suffer accidental deaths while on duty. Costs for FY 2023 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	-13	+0	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	+370	+37	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. 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	+0	+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.

Table 6: Internal Realignments

**Bureau of Ocean Energy
Management**

**Justification of Internal
Realignments**

(Dollars In Thousands)

Internal Realignments and Non-Policy/Program Changes (Net-Zero)	2023 (+/-)	Description
Renewable Energy - direct appropriations/offsetting collections	+1,871/-1,871	This is a technical adjustment to reflect a change in the composition of BOEM's budget, due mostly to a shift in the portion of the budget funded through direct appropriations versus offsetting collections.
Conventional Energy - direct appropriations/offsetting collections	+6,264/-6,264	This is a technical adjustment to reflect a change in the composition of BOEM's budget, due mostly to a shift in the portion of the budget funded through direct appropriations versus offsetting collections.
Marine Minerals - direct appropriations/offsetting collections	+520/-520	This is a technical adjustment to reflect a change in the composition of BOEM's budget, due mostly to a shift in the portion of the budget funded through direct appropriations versus offsetting collections.
Environmental Programs - direct appropriations/offsetting collections	+3,097/-3,097	This is a technical adjustment to reflect a change in the composition of BOEM's budget, due mostly to a shift in the portion of the budget funded through direct appropriations versus offsetting collections.
Executive Direction - direct appropriations/offsetting collections	+1,705/-1,705	This is a technical adjustment to reflect a change in the composition of BOEM's budget, due mostly to a shift in the portion of the budget funded through direct appropriations versus offsetting collections.

Renewable Energy

FISCAL YEAR 2023 BUDGET

Bureau of Ocean Energy Management

Renewable Energy

Table 7: Renewable Energy Budget Summary

Activity: Ocean Energy Management
Subactivity: Renewable Energy

Renewable Energy	2021 Actual	2022 CR at Annual Rate	Fixed Costs (+/-)	Internal Transfers (+/-)	Program Changes (+/-)	2023 Request	Change from 2022 CR at Annual Rate (+/-)
Renewable Energy	28,465	28,465	557	0	+22,653	51,675	+23,210
<i>FTE</i>	<i>71</i>	<i>58</i>	<i>0</i>	<i>0</i>	<i>+48</i>	<i>106</i>	<i>+48</i>

Fighting climate change and creating good paying jobs is a centerpiece of the Biden-Harris Administration's agenda. Offshore wind has the potential to play a critical role in transitioning the Nation to clean renewable energy and building a new domestic industry from the ground floor. As part of the Administration's efforts to fight climate change and create good paying jobs, the Departments of the Interior, Energy, and Commerce have established a goal to deploy 30 GW of offshore wind production capacity by 2030, which could support nearly 80,000 jobs. BOEM is central to achieving that target. To support the Administration's goal, BOEM plans to advance new lease sales and complete the review of at least 16 construction and operations plans by 2025. These 16 plans represent more than 22 GW of new clean energy for the Nation. Further, in the beginning of FY 2022, the Secretary of the Interior released an offshore wind leasing strategy, which includes up to 7 lease sales by 2025, to help create transparency and greater certainty to help spur domestic investments in offshore wind.

Renewable energy development activities include the siting and construction of offshore wind facilities on the OCS, as well as the development of other forms of offshore renewable energy resources such as wave and current energy. BOEM facilitates the responsible development of renewable energy resources on the OCS through conscientious planning; meaningful engagement with government entities, stakeholders, and ocean users; comprehensive environmental analysis; and sound technical review.

In FY 2023, BOEM will continue to advance its renewable energy program through identifying new Wind Energy Areas, an informed leasing effort, and improving its permitting and environmental review processes. This includes an efficient and effective process for reviewing plans to develop existing leases, and an inclusive and efficient process for identifying areas for potential future lease sales. BOEM will continue focusing on reviewing proposals for potential renewable energy projects spurred by the renewable energy goals of the Administration and Coastal States.

The FY 2023 budget will support:

- **Fighting Climate Change Through Offshore Renewable Energy:** EO 14008, *Tackling the Climate Crisis at Home and Abroad*, tasks the Secretary of the Interior with reviewing siting and permitting processes on public lands and in offshore waters to identify “steps that can be taken, consistent with applicable law, to increase renewable energy production on those lands and in those waters.” As the lead regulatory agency for offshore wind, BOEM’s work is fundamental to the Administration’s efforts to advance the responsible development of renewable energy on the OCS. By contributing to the Nation’s clean energy future, BOEM activities align with the Administration’s priority to tackle the climate crisis. The Administration has set an ambitious goal of deploying 30 GW of offshore wind capacity on the OCS by 2030.
- **Competitive Lease Auctions/Sales:** A commercial lease gives the lessee the exclusive right to conduct site characterization surveys and submit plans to BOEM for approval (see Advancing Project Reviews below), but does not automatically give the lessee the right to construct any facilities. BOEM has conducted nine lease sales since 2013, including most recently a sale in New York Bight that generated over \$4.3 billion in high bids for the Treasury, and it manages over 2.2 million acres of commercial wind energy and research leases. BOEM is currently planning to hold up to two additional renewable energy lease sales in FY 2022: offshore the Carolinas and offshore California. BOEM is also planning sales in the Gulf of Mexico and offshore the U.S. Central Atlantic coast in FY 2023, and additional planning is underway for potential lease sales offshore Oregon, Hawaii, and in the Gulf of Maine.
- **Advancing Project Reviews:** A site assessment plan contains the lessee's detailed proposal for the construction and operation of a meteorological tower and/or the installation of meteorological buoys on the leasehold. In FY 2021, BOEM approved four site assessment plans. In FY 2022, BOEM plans to complete the review of one additional site assessment plan. A construction and operations plan is a detailed plan describing the lessee’s proposal to construct and operate one or more wind energy projects on its leasehold. BOEM must conduct environmental and technical reviews of any plan and decide whether to approve, approve with modification, or disapprove the plan. As of February 2022, BOEM has approved two construction and operations plans for active leases, is actively processing 11 additional plans, and expects to receive seven more new or significantly updated plans over the next 12 months. In FY 2021, BOEM published the *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement and Record of Decision*, and the *South Fork Wind Farm and South Fork Export Cable Project Final Environmental Impact Statement*, and initiated environmental impact statements for eight more offshore wind energy projects. In FY 2022, BOEM issued a record of decision on the South Fork project and has or will initiate environmental impact statements for an additional eight projects and a programmatic environmental impact statement for construction and operation of offshore wind projects in the New York Bight. In FY 2023, BOEM plans to issue nine final environmental impact statements. The number of additional environmental impact statements initiated in FY 2023 will depend on the number of construction and operations plans submitted to BOEM by the industry.

- **Environmental Justice:** BOEM will continue fostering environmental justice activities in line with the intent of EO 14008, *Tackling the Climate Crisis at Home and Abroad*. BOEM actively involves stakeholders throughout the renewable energy process and ensures that management of the OCS is “conducted in a manner which considers economic, social, and environmental values of the renewable and nonrenewable resources contained in the [OCS]...” (43 U.S.C. § 1344(a)(1)). BOEM is working with its Federal partners to identify areas of collaboration in creating an all-of-government approach to community engagement in offshore wind planning and environmental assessment. In addition, BOEM considers potential impacts to environmental justice communities in its NEPA analyses and plans to increase engagement with environmental justice communities on offshore wind activities.
- **Ocean User, Tribal Nation, and Stakeholder Engagement:** By meeting with and engaging ocean users, Tribal Nations, and stakeholders, BOEM ensures awareness of potential issues and uses the opportunity to resolve these issues in a timely manner, as well as improve efficiency in leasing and plan reviews. Through this outreach, the areas most suitable for renewable energy development can be identified while addressing mitigation of potential impacts and multiple-use conflicts within a specific area. Ocean users, including the commercial fishing industry, and Tribal Nations have important perspectives regarding the potential impacts of offshore wind energy development. BOEM is focused on further engaging and consulting with Tribal Nations and is developing strategies to better engage ocean users moving forward. Similarly, in FY 2022 BOEM improved communication by holding additional meetings throughout the leasing process; improved tools such as a re-designed fishing industry webpage and mapping products; as well as implemented a more holistic mitigation strategy to address fisheries’ concerns.
- **Intergovernmental Coordination and Collaboration:** To help inform BOEM’s planning and leasing process, BOEM has established intergovernmental renewable energy task forces along the Atlantic, Pacific, and Gulf coasts that consist of Federal agencies and Tribal, State, and local governments. Most recently, BOEM established the Gulf of Mexico Regional Task Force that met for the first time in June 2021 and then again in February 2022. Also, in FY 2021, BOEM held meetings for the California, New York Bight, and Carolina Long Bay Regional Task Forces. In FY 2022, BOEM established the Central Atlantic Regional Task Force, which held its first meeting in February 2022. Additionally in February 2022, BOEM hosted a virtual meeting with the Oregon Intergovernmental Renewable Energy Task Force. BOEM also chairs an interagency permitting workgroup to ensure a coordinated Federal approach to reviewing project plans. BOEM also utilizes Memoranda of agreement or understanding (MOA or MOU) with multiple Federal and State agencies to further the shared goal of advancing offshore renewable energy. Notably, in January 2022 BOEM finalized an “umbrella” MOU with the National Oceanic and Atmospheric Administration (NOAA) to responsibly advance offshore wind, focusing on areas of potential collaboration between both agencies. Lastly, given that multiple Federal agencies have jurisdictional responsibilities and interest in the development of offshore wind, BOEM has been collaborating with NOAA, the Department of Energy (DOE), and the Department of Transportation, along with several other Federal partners, to develop and implement an “All-of-Government” work plan for offshore wind. This plan will focus on ensuring robust interagency coordination and cooperation in taking the necessary steps to advance offshore wind development in the United States. Through these coordination and collaboration

activities, BOEM achieves efficiencies for agencies and applicants as they navigate the leasing and planning process.

- Science and Technology Research:** The Renewable Energy Program is supported by a substantial investment in research. Current projects involve developing design standards for offshore renewable energy facilities appropriate for the OCS. Recently completed projects studied axial cyclic loading of jacket piles, suction bucket foundation feasibility, corrosion and fatigue life, Pacific region geologic hazards, and wind density and wake effects. Projects underway as of February 2022 will study hydrogen production from offshore wind, corrosion inside monopiles, cable burial risks and methodologies, and prepare a desktop study of geological and geotechnical conditions on the Atlantic and Gulf of Mexico OCS.

SUMMARY OF 2023 PROGRAM CHANGES

Summary of 2023 Program Changes for Renewable Energy		
Program Changes:	(\$000)	FTE
Maintain Baseline Capacity	+353	+0
FY 2023 Fixed Costs	+557	+0
Technical Internal Transfers	[-1,871/+1,871]	+0
Foster Renewable Energy Research & Engagement	+8,600	+5
Advance Renewable Energy Related Studies	+5,000	+2
Extend Workforce Capacity to Support 30 Gigawatts of Offshore Wind by 2030	+6,800	+41
Expand Renewable Energy Research Initiative	+1,900	+0
TOTAL Program Changes	+23,210	+48

* Changes listed in order of budget activity, not priority.

Maintain Baseline Capacity (+\$353,000). The 2023 budget includes important investments in programs needed to help strengthen America and be more competitive as the world continues to change. These investments include funding needed to maintain a strong, talented workforce and the core capacity needed to continue to fulfill BOEM’s mission. The budget includes \$353,000 in this budget activity, which reflects the incremental amount needed to cover the fixed costs associated with mission operations in FY 2022. This request in combination with the FY 2023 fixed costs amounts will allow the program to sustain core capacity and avoid impacts to ongoing program activities.

FY 2023 Fixed Costs (+\$557,000). Fixed cost increases are fully funded in BOEM’s FY 2023 budget. These costs include increases to support changes in Federal health and retirement benefits and workers’ compensation, rent to the General Services Administration, and payments to the Department through its Working Capital Fund.

Technical Internal Transfers (-\$1,871,000/+1,871,000; 0 FTE). Technical adjustments in FY 2023 reflect decrease in offsetting collections paired with a commensurate increase in net current

appropriations. The amount cited above reflects the technical internal transfer associated with this budget activity. There are no programmatic changes associated with this shift.

Foster Renewable Energy Research & Stakeholder Engagement (+\$8,600,000; + 5 FTE). This funding would support a substantial investment in research and stakeholder engagement resources. Requested funding supports research and engagement, which are important components of BOEM’s Renewable Energy Program. The results of BOEM’s renewable energy scientific and technology research are used to inform policy decisions, environmental analyses, mitigation, and monitoring protocols on environmental and cultural issues. Funding also efforts to ensure that supply chains are established in the United States in a manner that supports job growth for disadvantaged communities and a just transition from traditional energy sectors. Additionally, BOEM works with a broad spectrum of agencies, universities, and stakeholders to identify and address critical data gaps. Requested funding would enable BOEM to further expand its technical studies and outreach efforts. Additional information — whether in the form of technical information or a better understanding of stakeholder needs and concerns — provides BOEM greater insight and a more well-rounded understanding as it reviews renewable energy plans.

Advance Renewable Energy Related Studies (+\$5,000,000; +2 FTE). This funding provides additional capacity to undertake renewable energy related environmental studies. In addition to environmental studies supported through the Environmental Programs budget activity, BOEM also funds renewable energy studies and cooperative agreements through the Renewable Energy budget activity. These studies provide scientifically-informed policy direction and often have either supported BOEM guidelines for industry or directly responded to issues raised during consultation with stakeholders. This funding would support additional Bureau-wide renewable energy studies. The studies provide information and guidance to BOEM subject matter experts in their review of renewable energy plans and designs; assist if the development of design standards; provide data on site conditions to assist in the planning of renewable energy lease areas.

Extend Workforce Capacity to Support 30 Gigawatts of Offshore Wind by 2030 (+\$6,800,000; +41 FTE). BOEM’s FY 2023 budget reflects its contribution toward meeting the Administration’s goal of deploying 30 GW of offshore wind energy capacity by 2030. The FY 2023 budget reflects the emphasis on bringing renewable energy projects to fruition through an expeditious and responsible approach. BOEM is proposing an increase in workforce capacity across the Bureau and its Regions to manage and address renewable energy activities, such as review of construction and operations plans and stakeholder outreach, through personnel with a variety of skill sets. Proposed FTEs cover a range of expertise, all designed to advance the Nation’s clean energy future and achieve the Administration’s 30 GW goal to fight climate change and create good paying jobs.

Expand Renewable Energy Research Initiative (+\$1,900,000; 0 FTE). BOEM’s renewable energy leasing program ensures that environmental assessments are informed by science and law. Requested funding would support research related to other emerging forms of renewable energy, alternative use of existing oil and gas platforms on the OCS, and transmission planning. Funding would support a study to assess the economic feasibility of green hydrogen production in the Gulf of Mexico and quantify its technical potential to inform strategic renewable energy planning over the next few years. Funding would also support alternate-use research, including projects that make alternative use of existing oil and gas

platforms. Finally, requested funding would expand and support the Department's and DOE's work in transmission planning and grid connection issues on the Atlantic Coast by identifying onshore and subsea cable corridors that can deliver offshore-generated power to the onshore electrical grid. The Department and DOE are formally collaborating in this work to ensure success in achieving the Administration's goal of 30 GW of offshore wind energy capacity deployed by 2030 and to facilitate offshore wind development beyond the 30 GW goal. This work also seeks to optimize the onshore transmission system by reducing congestion and supporting system interconnections. As a continuation of this effort, BOEM seeks funding to support coordination and facilitation efforts as well as funds to conduct research to help understand the transmission challenges and opportunities for the Pacific coast and the Gulf of Mexico.

PROGRAM OVERVIEW



Block Island Wind Farm

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 amended OCSLA (section 8(p)) to give 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 8(p) also authorized the Secretary to permit OCS activities that repurpose facilities currently or previously used for activities authorized under OCSLA. Renewable energy and alternate use projects may

include wind, wave, and ocean current energy projects, as well as projects that make alternative use of existing oil and gas or other platforms in Federal waters.

The Infrastructure Investment and Jobs Act of 2021 further amended OCSLA section 8(p) to authorize the Secretary of the Interior to issue leases, easements, or rights of way to provide for or support carbon sequestration on the OCS.

In 2009, BOEM published its renewable energy regulations, implementing section 8(p) of OCSLA. These regulations established a framework for orderly, safe, and environmentally responsible OCS renewable energy development and providing for a fair return for use of OCS lands. Also in 2009, DOI and the Federal Energy Regulatory Commission (FERC) signed an MOU that provided for joint regulation of potential OCS wave and ocean current projects.

Since these regulations were established, BOEM has worked diligently to facilitate renewable energy development spurred by renewable energy goals of coastal States. As of February 2022, BOEM has conducted nine competitive wind energy lease sales for areas offshore the Atlantic coast, representing over 2.2 million acres of commercial wind energy lease areas offshore of Delaware, Maryland, Massachusetts, New Jersey, New York, North Carolina, Rhode Island, and Virginia. Additionally, in FY

2021 BOEM identified Wind Energy Areas offshore California and is in the early planning stages to identify additional areas in the Gulf of Maine, Gulf of Mexico, and offshore the Central Atlantic, Hawaii, and Oregon.

BOEM also manages transmission and research projects related to wind energy development on the OCS. In 2014, BOEM executed its first transmission right-of-way grant offshore Rhode Island for the Block Island Wind Farm, which became the first operational wind facility offshore the U.S. in late 2016. In 2015, BOEM executed its first wind energy research lease in U.S. Federal waters with the Commonwealth of Virginia's Department of Mines, Minerals and Energy. Final action on the research lease was completed by BOEM in 2019 and the facility became fully operational in 2020. The two-turbine research project is the first installed on the OCS and will inform the development of an existing commercial lease offshore Virginia.



The two-turbine Coastal Virginia Offshore Wind pilot project

Along the Pacific coast, BOEM is engaged in planning for competitive leasing processes for wind development offshore California, Hawaii, and Oregon. In 2021, BOEM designated the Humboldt Wind Energy Area offshore northern California and the Morro Bay Wind Energy Area offshore central California. BOEM plans to issue one Proposed Sale Notice for both areas and conduct a lease sale in FY 2022. On February 16, 2021, BOEM issued a lease for the first wave energy research project in Federal waters offshore the U.S. West Coast. The research lease was issued to Oregon State University for the project, a proposed open ocean wave energy test center, to be located approximately six nautical miles off Newport, Oregon. The project area is approximately 1,696 acres, or 2.65 square miles. Marine hydrokinetic technology harnesses energy from ocean waves, tides, and currents and converts it into electricity.

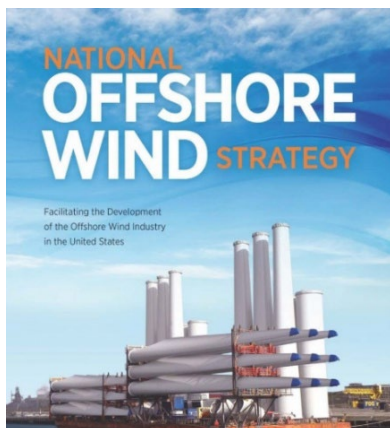
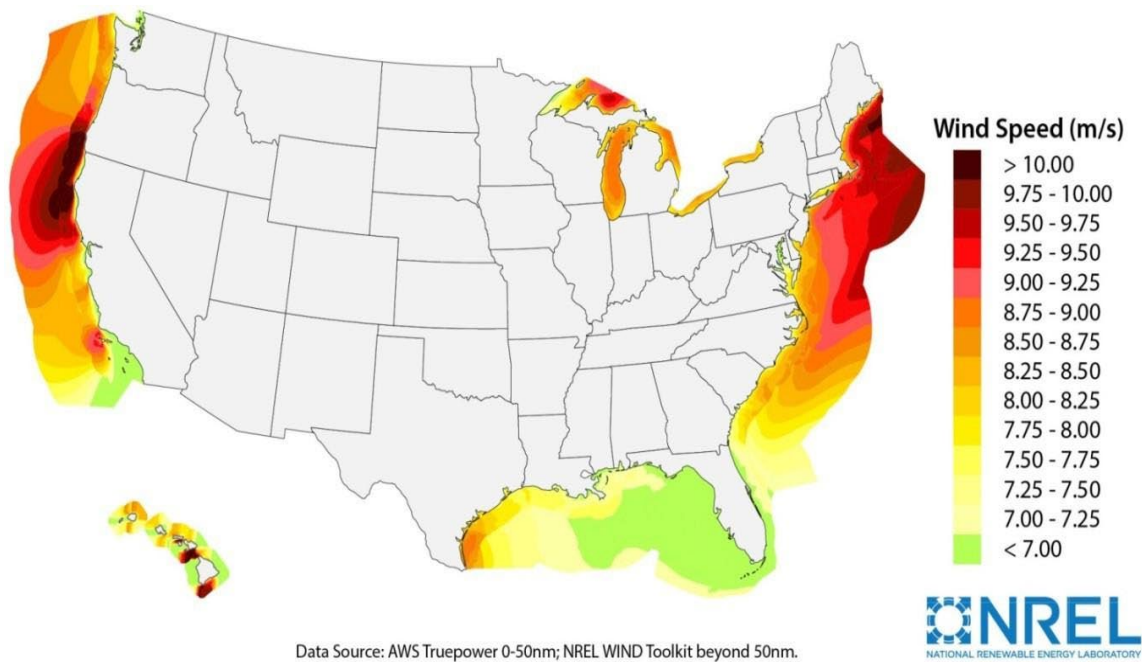
In the Gulf of Mexico, BOEM is planning for a competitive lease sale for offshore wind development offshore Louisiana and Texas. In 2022, BOEM will designate the Gulf of Mexico Wind Energy Areas. BOEM plans to issue a Proposed Sale Notice in mid-2022 and conduct a lease sale in early 2023. BOEM seeks to ensure the American taxpayer receives fair return for the use of OCS resources. As required by section 8(p) of OCSLA, BOEM has established payment terms to ensure a fair return to the U.S. Treasury for the rights conveyed by OCS renewable energy leases and grants. In FY 2021, \$5.1 million in rent was collected on OCS renewable energy leases. Through FY 2021, BOEM generated over \$473 million in bonus bids from renewable energy lease sales conducted through the competitive leasing process. Additionally, BOEM held the New York Bight offshore wind sale on February 23, 2022. The sale resulted in winning bids from six companies totaling approximately \$4.37 billion, the Nation's highest-grossing competitive offshore energy lease sale in history, including oil and gas lease sales. Winning bids are currently undergoing review. Before the leases are finalized, the Department of Justice and Federal Trade Commission will conduct an anti-competitiveness review of the auction, and the provisional winners will be required to pay the winning bids and provide financial assurance to BOEM.

Revenue data is compiled by the Office of Natural Resources Revenue and can be found at <https://revenue.data.doi.gov/>.

➤ **Offshore Energy Sources**

Wind is the predominant source of offshore renewable energy being developed in the United States. Offshore winds tend to flow at higher sustained speeds than onshore winds, making offshore turbines more efficient than their onshore counterparts. The following figure shows areas along the coasts of the Atlantic, Pacific, and Gulf of Mexico that have the greatest technical potential for offshore wind energy production based on wind speeds.

Figure 2: Wind Speed Map for the U.S. Technical Resource Area (100m Height)



Joint DOI and DOE National Offshore Wind Strategy

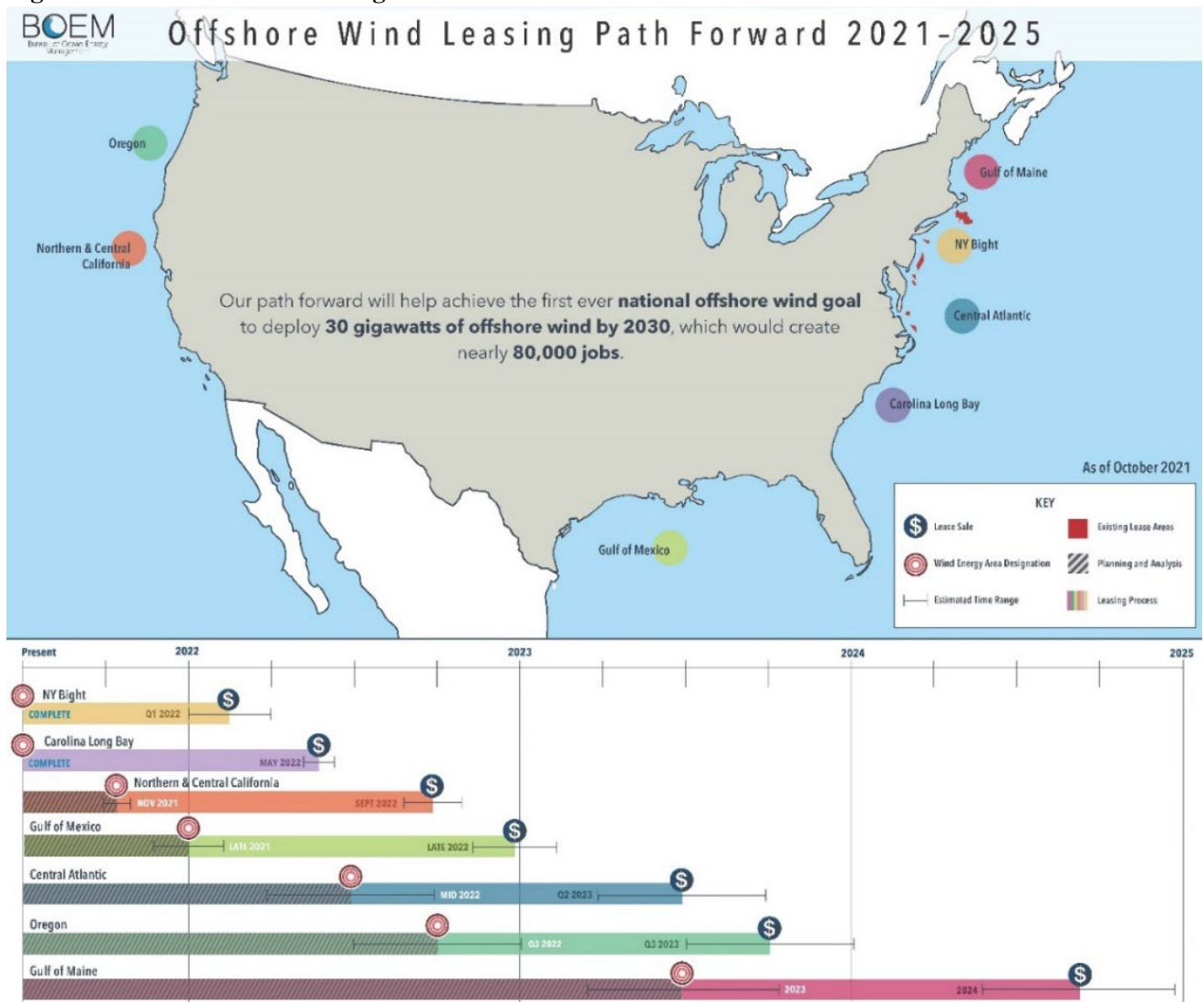
According to the National Renewable Energy Laboratory’s 2021 Offshore Wind Market Report for the United States, recent growth in the offshore wind energy project development and operational pipeline has increased the potential generating capacity of offshore wind to 35.3 GW for the United States. This represents a 24 percent, or nearly 7 GW, increase in project pipeline capacity from 2019 to 2020.

Additionally, the joint 2016 DOI and DOE National Offshore Wind Strategy identified significant potential public benefits associated with offshore wind development, including an estimated \$440 million in annual lease payments into the U.S. Treasury, approximately \$680 million in annual property tax revenues, and 160,000 gross jobs in coastal regions.

In the future, BOEM anticipates development of renewable energy on the OCS could also come from ocean waves and ocean currents. In February 2021, BOEM issued a lease to support the testing of wave energy equipment on the OCS offshore Oregon, which could help advance the development of marine hydrokinetic technologies.

In FY 2022, BOEM identified an Offshore Wind Leasing Path Forward for sales through 2025. The path forward will help achieve the Administration’s goal to deploy 30 GW of offshore wind energy by 2030 and is illustrated in the following graphic.

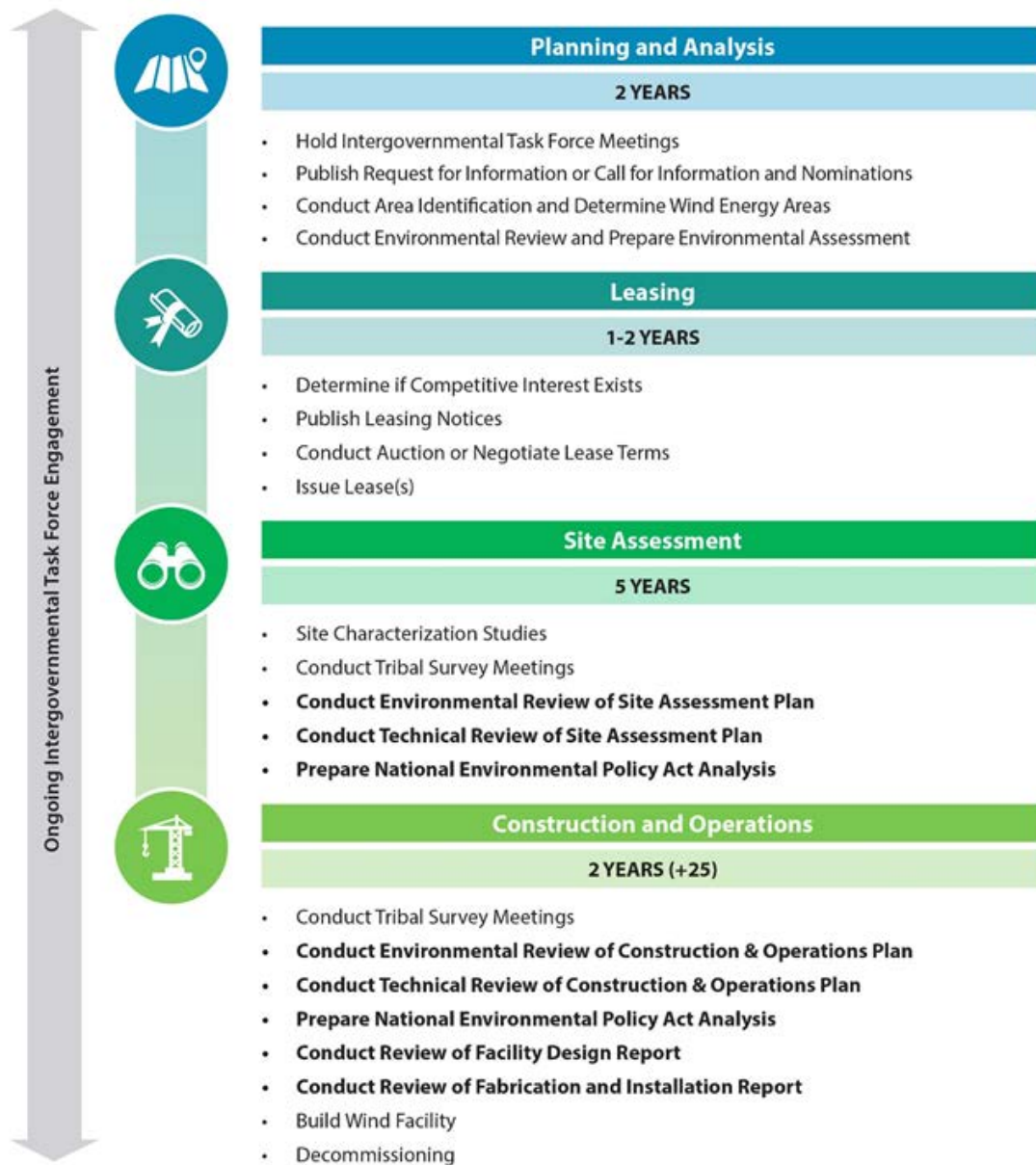
Figure 3: Offshore Wind Leasing Path Forward 2021 – 2025



RENEWABLE ENERGY AUTHORIZATION PROCESS

The identification of Wind Energy Areas, the issuance of leases, and the subsequent review of energy development activities on the OCS is a staged decision-making process comprised of four distinct phases: (1) planning and analysis; (2) issuance of a lease or grant; (3) site assessment; and (4) construction and operations. BOEM involves other Federal agencies (e.g., BSEE, the U.S. Fish and Wildlife Service (FWS), NOAA), and State, local, and Tribal governments throughout all phases of renewable energy development. Figure 4 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 ocean users, stakeholders, Tribal governments, and State and Federal agencies. In this phase, BOEM coordinates with stakeholders and ocean users to deconflict potential renewable energy lease areas with existing uses on the OCS. After identifying Wind Energy Areas, BOEM conducts environmental reviews and consultations with Tribes, States, and natural resource agencies to consider reasonably foreseeable impacts associated with leasing (e.g., site characterization surveys and site assessment activities). Once the environmental review and consultations are completed for a Wind Energy Area, BOEM may proceed to the leasing phase.
- The **Leasing phase** results in the issuance of a commercial wind energy lease or right-of-way grant for energy transmission projects. Leases and grants may be issued either through a competitive or noncompetitive process. BOEM will publish a notice in the *Federal Register* to announce potential future leasing and solicit interest in leasing a specific area of the OCS. If more than one qualified entity is interested in leasing the area identified in the notice, BOEM will move forward with its competitive leasing process, otherwise BOEM may proceed non-competitively. A commercial lease gives the lessee the exclusive right to seek BOEM approval for the development of the leasehold. The lease does not provide the lessee the right to construct particular facilities; rather, the lease provides the right to use the leased area to conduct surveys and 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 lease includes stipulations related to rental and operating fees, noncompliance, indemnification, financial assurance requirements, environmental protection operating conditions for conducting surveys, and national security and military operations. Right-of-way grants authorize the holder to install cables, pipelines, and associated facilities that involve the transportation or transmission of electricity or other energy products from renewable energy projects.
- The **Site Assessment phase** includes the submission of a site assessment plan, which contains the lessee's detailed proposal for the construction and operation 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 the lessee conducts these activities. BOEM may approve, approve with modification, or disapprove a lessee's site assessment plan. During this phase the lessee conducts site characterization surveys to support the development of its construction and operations plan.
- The **Construction and Operations phase** includes the submission of a construction and operations plan detailing the lessee's proposal to construct and operate a wind energy project on the lease. BOEM requires a general activities plan, similar to a construction operations plan, for facilities constructed under a research 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

Under OCSLA, as amended, BOEM is statutorily required to coordinate and consult with Federal, Tribal, State, and local agencies throughout the renewable energy development process. BOEM establishes renewable energy task forces as a critical component of its planning and outreach activities. The task forces facilitate intergovernmental communications regarding OCS renewable energy activities to ensure that information needs, multiple-use concerns, and associated solutions are identified early in the leasing process.



Gulf of Maine Task Force Meeting

The task forces continue to be a useful tool in helping to inform decision-making as BOEM considers areas of the OCS for renewable energy leasing and development and as BOEM evaluates project plans on existing leases. Such task forces are established in States or regions where the Governor(s) 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. To date, BOEM has established intergovernmental task forces in Maine, Massachusetts, Rhode Island,

New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Florida, Oregon, Hawaii, California, and regional task forces for the New York Bight, Carolina Long Bay, Gulf of Maine, and the Gulf of Mexico. These task forces 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. Where appropriate, BOEM is combining many of the State task forces into regional task forces to better facilitate coordination on regional issues. In FY 2021, in response to a request from the Governor of Louisiana, BOEM formed a Gulf of Mexico Regional Task Force. BOEM convened the Carolina Long Bay and New York Bight Regional Task Forces in FY 2021 and the Central Atlantic Regional Task Force in FY 2022.

During FY 2020, BOEM responded to the COVID-19 global pandemic by increasing the use of webinars while in-person meetings were not feasible. In addition, BOEM created virtual meeting rooms with targeted information stations focused on key issues so that those who could not attend a virtual public hearing session could still access the meeting materials. BOEM has continued this practice in FY 2021 and FY 2022, holding virtual public hearings to ensure the health and safety of BOEM staff and the public and to reduce cost and time demands that frequent in-person meetings place upon the government and the stakeholder community. As of March 2022, during FY 2021 and FY 2022 BOEM held 34 virtual meetings to solicit public input on environmental reviews for proposed leasing and development on the Atlantic OCS, with the potential for an additional 30 or more virtual and in person public meetings in FY 2022. The Gulf of Mexico and the Oregon task forces are examples of task forces that conducted virtual meetings during FY 2022.

In 2022, BOEM held its second Gulf of Mexico task force meeting in a virtual setting and provided

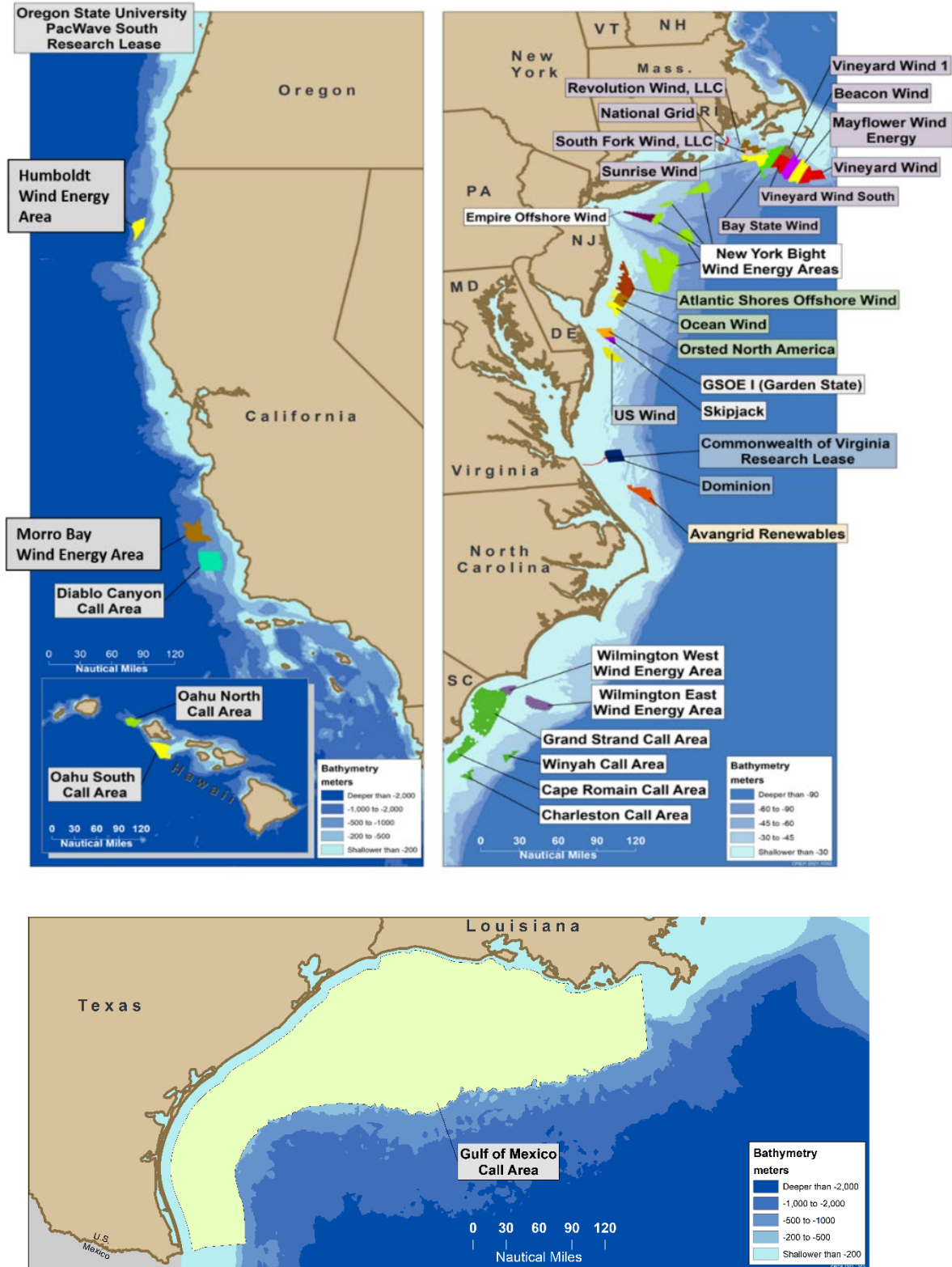
presentations to the Gulf States Marine Fisheries Commission, the Gulf of Mexico Fishery Management Council, and Louisiana Fisheries Task Force Meeting. In FY 2022, BOEM plans to hold several public engagement meetings for the Gulf of Mexico region throughout the year. Also in 2021, BOEM held several virtual meetings in its Pacific Region, including a BOEM California Intergovernmental Renewable Energy Task Force meeting and public scoping meetings for the Humboldt Wind Energy Area environmental assessment. BOEM also coordinated with the Pacific Fishery Management Council, which provided several virtual presentations. To advance towards an FY 2022 California lease sale, BOEM may hold more virtual public meetings in FY 2022.

In Oregon, following the virtual June 2020 task force meeting, BOEM and the State of Oregon conducted 60 engagement meetings with Tribes, coastal communities, the general public, research organizations, and ocean users in a virtual setting. BOEM created a virtual meeting room for all six of the BOEM Oregon public webinars held in 2021. In February 2022, BOEM hosted the tenth BOEM Oregon Intergovernmental Renewable Energy Task Force meeting virtually. BOEM continued engagement meetings in FY 2022.

➤ **Identification of Wind Energy Areas**

A key element of the Planning and Analysis phase is the identification and refinement of Wind Energy Areas, which are areas on the OCS that appear to be most suitable for renewable energy development due to fewer potential multiple-use and environmental conflicts, such as commercial vessel traffic, fishing or other uses, feeding or calving areas for endangered species, and high concentrations of birds. Through consultation with BOEM's intergovernmental task forces, existing ocean users, and other stakeholders, BOEM identifies Wind Energy Areas through its Area Identification process. The Wind Energy Areas serve as the basis for further environmental review of where lease areas may be identified for sale. In FY 2021, BOEM initiated a review of its Area Identification process to ensure lessons learned from prior planning and leasing efforts are appropriately integrated into the process; this review continues in FY 2022. The existing leases, Wind Energy Areas, and Call for Information and Nominations Areas along the Atlantic and Pacific coasts and in the Gulf of Mexico are shown in the following maps.

Figure 5: Renewable Energy Leases and Wind Energy Areas

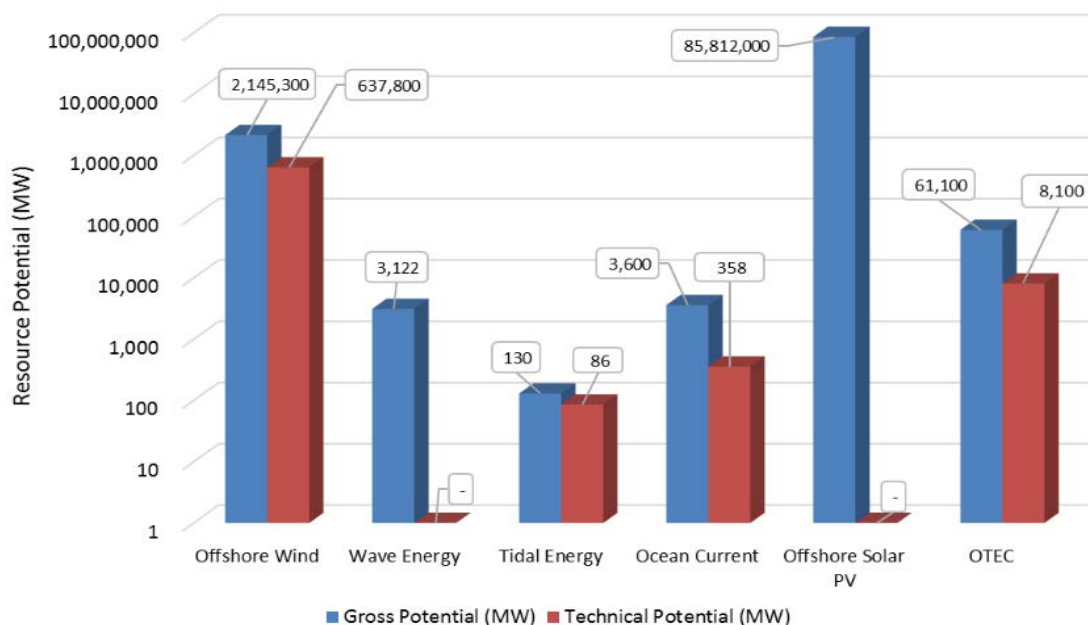


Graphic as of November 2021. BOEM, Office of Renewable Energy Programs and Office of Environmental Programs.

➤ BOEM's New Orleans, Louisiana Office

BOEM's New Orleans, Louisiana Office is moving ahead for future offshore renewable energy leasing and development in the Gulf of Mexico in FY 2022 and 2023. On October 21, 2020, the State of Louisiana sent a request to BOEM to establish a State task force. The first Gulf of Mexico Regional Task Force meeting was held on June 15, 2021, and included the States of Louisiana, Texas, Mississippi, and Alabama. BOEM published the Request for Interest in Commercial Leasing for Wind Power Development on the Gulf of Mexico OCS on June 11, 2021. Based on the expressions of interest received in response to the Request for Interest, BOEM determined that competitive interest exists in the area identified. BOEM initiated the Wind Energy Area planning process and anticipates a lease sale in early FY 2023. In January 2022, BOEM announced it is preparing an environmental assessment for public input and comment and will complete the environmental assessment process prior to the release of a Final Sale Notice. In FY 2022, BOEM received an unsolicited lease request for wind projects offshore Texas. Due to the request being the Call Area where BOEM determined that competitive interest exists, BOEM will consider the request in the competitive leasing process.

Figure 6: Gulf of Mexico Renewable Energy Gross and Technical Potential



In FY 2020, BOEM sponsored and published two studies conducted by DOE's National Renewable Energy Laboratory. The report "*Offshore Renewable Energy Technologies in the Gulf of Mexico*" determined that offshore wind in the Gulf of Mexico has a technical resource potential of 638 GW. When considering all U.S. States and only sites with average wind speeds of greater than 7 meters per second (m/s) (15.7 miles per hour [mph]) and water depths less than 1,000 m (3,280 ft), two of the top four States with the highest offshore wind resource capacity are within the Gulf of Mexico: Louisiana and Texas. The report "*Offshore Wind in the U.S. Gulf of Mexico: Regional Economic Modeling and Site-specific*

Analysis” focuses on offshore wind and incorporates regional economic modeling and site-specific analysis. A “*Jobs and Economic Development Impact*” modeling analysis was also performed to determine the economic impact of developing and operating a single 600 MW offshore wind farm in the Gulf of Mexico. The results show up to 4,470 total jobs created during construction and 150 annual jobs during operating years. Construction would contribute \$445 million in gross domestic product, and another \$14 million annually during operating years, to the economy. In FY 2022, BOEM worked on updating the technologies and economic assessment and analyzing hurricane risk associated with offshore wind development.

Figure 7: Gulf of Mexico Jobs and Economic Development Impact Model – Analysis of Hypothetical 600 MW Offshore Wind Farm Potential



Fabrication of Block Island Foundations by Gulf Island Fabricators, in Houma, LA

Meanwhile, BOEM continues to work with industry on concepts relating to alternative uses of existing oil and gas infrastructure. Section 388 of the Energy Policy Act of 2005 provides the Secretary of the Interior with authority to allow an offshore oil and gas structure, previously permitted under OCSLA, to remain in place after oil and gas activities have ceased so that the structure can be used for other energy and marine-related activities such as research, renewable energy production, and aquaculture.

As of November, 2021, the Gulf of Mexico OCS contained over 1,710 offshore oil and gas facilities, making this a possible option to continue the use of existing infrastructure. BOEM continues to meet with industry on various alternative use ideas and is currently reviewing three right-of-use requests for alternative use of existing platforms. Industry is working towards providing power to oil and gas production facilities using offshore wind resources, which could create greater opportunities for the Gulf of Mexico.

The Gulf of Mexico has many offshore oil and gas support services companies (boat yards, fabrication yards, etc.) that are utilized or could be utilized to support the U.S. offshore renewable energy industry. The New Orleans Office continues to work with industry to better understand workforce development needs, potential port facility upgrades, and challenges with the supply chain.

➤ **BOEM's Anchorage, Alaska Office**

In Alaska, BOEM initiated a new partnership with DOE's National Renewable Energy Laboratory in FY 2022 for a *Feasibility Study for Renewable Energy Technologies in Alaska Offshore Waters*. The goal is to provide an understanding of the potential for ocean based renewable energy sources on the Alaska OCS and in State waters relating to offshore wind, ocean wave, and tidal sources. In addition, it will also consider practical methods for delivering energy from these sources to end users, including the potential for green hydrogen fuel production, distribution, and end use adoption opportunities.

LEASE AND GRANT ISSUANCE

➤ **Activity on the Atlantic OCS**

Although BOEM has jurisdiction over various types of offshore renewable energy, the major interest offshore the Atlantic coast lies in the development of offshore wind energy. As of February 2022, BOEM is managing 18 active commercial wind leases along the Atlantic coast, covering over 1.7 million acres on the OCS. If fully developed, these 18 leases could support approximately 27 GW of power to supply nearly 9.5 million homes.

On March 29, 2021, BOEM identified Wind Energy Areas in the New York Bight, and held the New York Bight offshore wind sale on February 23, 2022, offering six lease areas totaling over 488,000 acres. The sale resulted in winning bids from six companies totaling approximately \$4.37 billion, the Nation's highest-grossing competitive offshore energy lease sale in history, including oil and gas lease sales.

In FY 2022, BOEM also intends to hold a lease sale within the Carolina Long Bay area. BOEM issued a draft supplemental environmental assessment for public review and comment and will complete the environmental assessment process prior to the release of a Final Sale Notice. BOEM initiated the Wind Energy Area planning process for the Central Atlantic in FY 2021 and anticipates a potential lease sale in FY 2023. Planning will also continue in the Gulf of Maine and will include consideration of commercial lease areas as well as an unsolicited research lease application filed by the State of Maine on October 1, 2021, proposing a floating research wind facility. A lease sale in the Gulf of Maine is targeted for calendar year 2024.

BOEM has the authority within its existing regulations to issue limited leases to other Federal agencies and to States for the purpose of conducting research that supports the future production, transportation, or transmission of renewable energy. Research leases require no fees and have a negotiated lease term. BOEM has an active research lease offshore the Virginia coast. BOEM's review of the facility design report and installation report for this project was completed in FY 2019, with construction and operations of two wind turbines completed in FY 2020. Completion of this two-turbine project is significant, as they are the first offshore wind turbines installed on the OCS. BOEM will continue to evaluate the State of Maine's research lease proposal through the Gulf of Maine planning process.

Figure 8: BOEM Research Lease OCS-A 0497 - Installation of the Coastal Virginia Offshore Wind Pilot



Photo Credit – Dominion Energy

➤ **Leasing for Offshore Transmission**

BOEM is authorized to issue right-of-way grants that allow developers to build electricity transmission lines that connect renewable energy installations to the onshore electrical grid. The first producing offshore wind project in the U.S. is in Rhode Island State waters and includes transmission lines that cross the Federal OCS. BOEM believes a coordinated approach to transmission is needed in the Atlantic, and in FY 2021 worked with Federal and State partners, industry, and stakeholder groups to obtain additional input on the best way to move forward with transmission for offshore wind development. BOEM will use this planning effort to help inform how it processes existing and future unsolicited right-of-way grant requests proposing the transmission of renewable energy on the Atlantic OCS, as well as transmission solutions proposed for individual facilities by offshore wind lessees.

➤ **BOEM's Camarillo, California Office**

BOEM's Camarillo Office processes offshore wind requests for California, Oregon, Washington, and Hawaii. With several unsolicited lease requests received in Hawaii, BOEM published a Call for Information and Nominations in 2016 to initiate the planning and competitive leasing process. In FY 2022, BOEM continues to work with the State of Hawaii and the Department of Defense to identify potential wind lease areas offshore Oahu that are compatible with military uses and may be suitable for possible future offshore wind development. BOEM also funded work by the National Renewable Energy Laboratory to provide offshore wind energy generation potential and costs to inform Hawaii Electric Company's current grid planning process.

BOEM received two unsolicited lease requests for wind projects offshore California, one near Morro Bay on the central coast, and one on the north coast near Humboldt Bay. BOEM initiated the competitive leasing and planning process offshore California with publication of a Call for Information and Nominations in October 2018 and received 14 nominations on three Call Areas, two offshore central California and one offshore northern California. On July 29, 2021, BOEM published a Call for Information and Nominations for two new areas within a 399-square-mile area located off central California, identified as the Morro Bay Call Area East and West Extensions. The new areas are adjacent

to the Morro Bay Call Area, originally identified by BOEM in 2018. There is competitive interest in all of the Call Areas, and BOEM completed the Area Identification process in FY 2021 for the Humboldt Wind Energy Area and FY 2022 for the Morro Bay Wind Energy Area, with a lease sale targeted for late FY 2022.

In Oregon, BOEM cooperated with FERC to review a research lease request for a grid-connected wave energy test site on the OCS offshore Newport. Since the project is a wave energy test facility requiring a FERC license, BOEM was a cooperating agency on the environmental review of the proposal. The environmental review included BOEM's action of issuing a research lease and easement for five subsea transmission cables. Lease issuance by BOEM is a prerequisite for a FERC license. BOEM determined there was no competitive interest in the requested area and issued a research lease noncompetitively in February 2021. FERC issued the license order in March 2021. BOEM is also in the initial stages of planning for potential future leasing for offshore wind energy development. BOEM and the State of Oregon have developed and implemented a Stakeholder and Data Gathering Plan in FY 2021 and collected data and solicited information to inform designation of one or more Call Areas offshore Oregon by mid 2022.

SITE ASSESSMENT

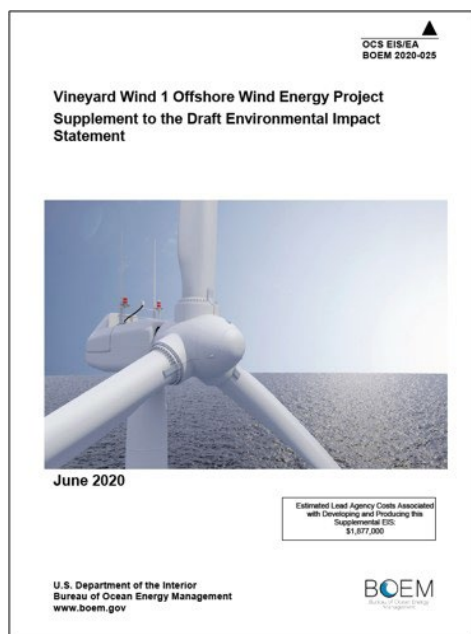
Commercial lease holders have up to approximately five years after lease issuance to conduct site assessment activities and submit a construction and operations plan. When a site assessment plan is submitted, BOEM determines whether the previous environmental assessment conducted to inform BOEM's leasing decision also adequately considered 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 issuing a decision on the site assessment plan. For instance, if a proposed meteorological buoy(s) is found to have no individually or cumulatively significant effect on the human environment, and BOEM determines that no extraordinary circumstances exist under which the buoy may have a significant environmental impact, BOEM may comply with its NEPA obligations using an existing Departmental categorical exclusion for nondestructive data collection. In some cases, additional consultation may be necessary, such as consultation under Section 106 of the National Historic Preservation Act for some areas of the Atlantic OCS.

As of February 2022, BOEM has approved 14 site assessment plans for areas offshore Massachusetts, Rhode Island, Maryland, Virginia, New Jersey, New York, Delaware, and North Carolina, with an additional plan under review for additional activities offshore Massachusetts.

CONSTRUCTION AND OPERATIONS PLANS

Before any wind energy facility can be built on an OCS lease, the lessee must submit a detailed plan for the construction and operation of the project, along with supporting data. BOEM will then conduct environmental and technical reviews of the construction and operations plan and mandated consultations, before deciding whether to approve, approve with modification, or disapprove the plan.

As illustrated in Figure 3, “Phases of BOEM’s Offshore Wind Energy Authorization Process,” at any given time multiple projects exist in each phase concurrently, with the greatest workload occurring at the construction and operations phase. As of November 2021, there are 18 active commercial wind energy leases offshore the Atlantic coast. Currently, these leases are rapidly moving toward the development phase, requiring labor-intensive plan reviews, as well as extensive outreach and stakeholder engagement at each step. Each construction and operations plan review requires as many as 16 subject matter experts to conduct in-depth environmental and technical assessments and takes approximately two years to complete. As of February 2022, BOEM has approved two construction and operations plans for active leases, is actively processing 11 additional plans, and expects to receive seven new or significantly updated plans over the next 12 months.



Supplement to the Draft Environmental Impact Statement

The environmental review of these plans takes the form of an environmental impact statement, which provide additional opportunities for public involvement. BOEM initiated environmental impact statements for the Vineyard Wind 1 Project and South Fork Wind Farm in FY 2018 and FY 2019, respectively. BOEM announced completion of the Vineyard Wind 1 offshore wind energy project and South Fork Wind Farm environmental impact statements with issuance of records of decision on May 10, 2021, and November 24, 2021, respectively. The environmental impact statements consider the reasonably foreseeable impacts on physical, biological, and socioeconomic resources from the construction, operation, maintenance, and decommissioning of these projects.

Preparation of nine environmental impact statements began in 2021 with the issuance of Notices of Intent to Prepare an Environmental Impact Statement for the proposed Ocean Wind, and Revolution Wind, Empire Wind, New England Wind (formerly Vineyard Wind South), Coastal Virginia Offshore

Wind, Kitty Hawk Offshore Wind, Sunrise Wind, Atlantic Shores 1, and Mayflower Wind projects. Subsequent Notices of Intent could also be issued later in FY 2022 and FY 2023 for other submitted plans including: Bay State Wind, Beacon Wind, US Wind, Skipjack, Kitty Hawk Offshore Wind South, Liberty Wind, Atlantic Shores 2, Ocean Wind 2, and a programmatic environmental impact statement considering development in the New York Bight.

INTERGOVERNMENTAL COORDINATION AND COLLABORATION

The Administration has set an ambitious goal for offshore wind as part of our future energy portfolio. It is therefore critical that Federal Government agencies work together, along with Tribal Nations, 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. For instance, BOEM has MOAs or MOUs with the Department of Defense, the U.S. Army Corps of Engineers, the U.S. Coast Guard, DOE, FERC, NOAA, BSEE, and FWS, and the State of California. Additionally, BOEM is developing an MOU with the Federal Aviation Administration.

Each MOU provides an opportunity for enhanced coordination to achieve a common goal of advancing offshore renewable energy. BOEM and FERC responsibilities intersect for marine hydrokinetic projects, with BOEM issuing marine hydrokinetic leases and FERC issuing licenses for construction and operation of these projects. Meanwhile, as part of the current efforts under Section 207 of EO 14008, BOEM is working with support from the Department of Transportation's Volpe Center and in coordination with cooperating agencies to standardize environmental impact statement processes and content, which will allow for more efficient environmental review of up to 17 construction and operations plans expected to be under review in FY 2023. BOEM has developed an MOU with NOAA that will facilitate the development of subsequent agreements to coordinate resources, input, and associated responsibilities in relation to advancing offshore wind energy. BOEM is also developing an MOU with NOAA's National Marine Fisheries Service (NMFS) to coordinate the environmental review of construction and operations plans and associated preparation of environmental impact statements for North and Mid-Atlantic offshore wind energy projects. BOEM and NMFS plan to finalize this MOU in early 2022. BOEM has also hosted dozens of project-specific interagency meetings at various stages of the construction and operations plan and environmental review process to coordinate on project schedules, purpose and need statements, and development of alternatives.

In FY 2022, DOI and BOEM led development of an All of Government Workplan for offshore wind in collaboration with the Departments of Commerce, Energy, and Transportation. The purpose of the workplan is to work collaboratively to achieve 30 GW of offshore wind by 2030 and set the stage for a more ambitious 2050 target, while protecting biodiversity and marine habitats and promoting ocean co-use. The workplan also seeks to incorporate energy equity and environmental justice, drive the economic benefits of offshore wind to disadvantaged/underserved communities, develop a robust union workforce within the U.S. for offshore wind, expand Tribal, State, and local partnerships, and work as a united and coordinated Federal interagency team to provide maximum support and market certainty to developers, suppliers, and other key stakeholders and ocean users. BOEM also developed a mechanism to track milestones identified by the various agency participants and in FY 2022 convened staff-level meetings to further facilitate progress on the workplan.

BOEM and BSEE developed guidance regarding processes to select certified verification agents, create and review facility design reports and plans for fabrication and installation of renewable energy facilities; estimation of decommissioning costs; and processes for oversight of lease obligations and regulatory

compliance. In FY 2021, BOEM and BSEE signed an MOA that provides a framework for coordinating OCS renewable energy activities and clarifies the Bureaus' roles and responsibilities, including BSEE's safety and environmental compliance functions and BOEM's planning and development responsibilities. Additionally, BOEM and BSEE coordinate on the selection and review of renewable energy technology research projects; the results will be critical in creating design standards for offshore renewable energy facilities based on the unique atmospheric and oceanographic conditions of the U.S. offshore areas.

BOEM also leads the Offshore Wind Permitting Subgroup, which was established in 2016 to identify opportunities to improve interagency coordination regarding permitting of offshore wind projects. The Subgroup is focused on more effective and efficient collaboration around the Federal review and approval of construction and operating plans. Information shared in the group allowed BOEM to develop a detailed regulatory roadmap for the development of offshore wind and streamline the review and approval process. Since 2016, participation in the monthly Subgroup meetings has grown from approximately 40 representatives to almost 200.

To ensure the Bureau's activities are informed by the latest developments in the sector, BOEM also coordinates extensively with foreign governments, international organizations, and other U.S. government agencies with jurisdiction over international matters, in a manner consistent with broader U.S. foreign policy interests. BOEM aligns its international engagement activities with domestic mission needs and carries out objective-driven activities throughout the year, by hosting or participating in meetings, knowledge exchanges, and other bilateral and multilateral collaborative initiatives focused on priority topics in the offshore renewable energy sector.

RESEARCH, DATA COLLECTION, AND STAKEHOLDER ENGAGEMENT

BOEM's Renewable Energy Program is supported by investments in research, data collection, and stakeholder engagement. BOEM works closely with a broad spectrum of agencies, universities, and stakeholders to identify critical information needs and independently, or through partnerships, funds studies to increase our knowledge about the marine environment in and around potential and existing renewable energy development locations. BOEM has actively studied the first turbines installed and will continue to assess impacts as the first commercial projects are built in FY 2023. To benefit from lessons learned, BOEM has also reached out to European countries with more mature renewable energy programs to learn from their experience.

Additionally, BOEM has continued to engage commercial and recreational stakeholders regularly in recent years and will continue these efforts in FY 2023. In FY 2021 BOEM held a series of meetings targeting fisheries groups for the leasing in the New York Bight, and in FY 2022 began fisheries meetings regarding Call Area development in the Central Atlantic. Additionally, BOEM engages the fishing community around policy and guidance development. In FY 2022, BOEM kicked off a National-level effort to develop guidance for lessees around fisheries mitigation. BOEM developed this guidance in response to comments from the fishing community and coastal States.

➤ Tribal Consultation

BOEM also consults with federally recognized Tribal Nations. Throughout FY 2019 and through FY 2021, BOEM conducted formal government-to-government consultations with the Mashpee Wampanoag Tribe, the Narragansett Indian Tribe, the Shinnecock Indian Nation, the Mashantucket Pequot Tribal Nation, the Mohegan Tribe of Indians of Connecticut, the Wampanoag Tribe of Gay Head (Aquinnah), the Delaware Tribe of Indians, the Delaware Nation, the Rappahannock Indian Tribe, the Nansmond Indian Nation, the Chickahominy Indian Tribe, the Upper Mattaponi Indian Tribe, the Monacan Indian Nation, and the Eastern Band of Cherokee Indians. BOEM will continue developing its government-to-government relationship with these Tribes, and initiate formal consultations with the Aroostook Band of Micmacs, the Houlton Band of Maliseet Indians, the Passamaquoddy Tribe-Indian Township, the Passamaquoddy Tribe-Pleasant Point, and the Penobscot Nation as planning for offshore wind continues for the Gulf of Maine.

BOEM has been engaging with Tribes on offshore wind planning in California in partnership with the State of California since FY 2017. In FY 2021, BOEM invited government-to-government consultation with 65 federally recognized Tribes potentially affected by offshore renewable energy leasing in California upon announcements of offshore wind leasing advancement in California, area identification on the northern California coast, and publication of a Call for Information and Nominations on the central California coast. BOEM invited 11 federally recognized Tribes to participate as cooperating agencies in the environmental review of the Humboldt Wind Energy Area and to engage in Section 106 consultation. BOEM notified eight federally recognized Tribes in the Pacific Northwest of the issuance of a marine hydrokinetic energy research lease offshore Oregon, invited engagement with 11 federally recognized Tribes potentially affected by offshore wind energy leasing in Oregon during the data gathering and engagement phase, and invited Section 106 consultation with six Tribes for Section 106 Programmatic Agreement development for Oregon offshore wind.

Following the earlier outreach to 65 Federally recognized Tribes in FY 2021, BOEM held a consultation meeting with one federally recognized Tribe and informational meetings with three federally recognized Tribes and two non-recognized Tribes on California offshore wind energy activities. BOEM initiated scheduling for additional meetings requested by Tribes in FY 2021 on California offshore wind: one Tribe requested government-to-government consultation, three Tribes requested Section 106 consultation, one Tribe agreed to participate as a cooperating agency under NEPA, and two Tribes requested informational meetings. BOEM held informational meetings with two Tribes on Oregon offshore wind planning and with four Tribes on an ongoing submerged landforms study. BOEM held an informational meeting with the Makah Tribe on west coast offshore wind activities and the Makah Tribe's treaty rights and ocean policy.

In FY 2022, the New Orleans Office held a Tribal consultation meeting with three federally recognized Tribes on Gulf of Mexico offshore wind energy activities.

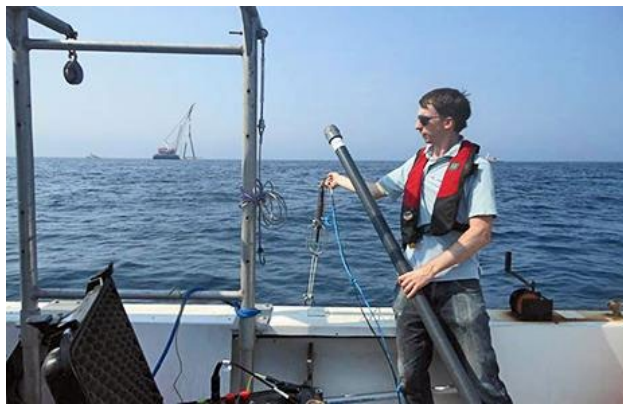
BOEM's Tribal outreach also includes Tribal participation in consultations under Section 106 of the National Historic Preservation Act and NEPA. BOEM consults with Tribes, local governments, States, and other individuals and organizations with a demonstrated interest to identify the potential effects to

historic and traditional cultural properties, and develop means to avoid, minimize, and mitigate adverse effects to those properties. Tribes are invited to be cooperating agencies under NEPA due to their knowledge of the natural and historic environment that may be affected by offshore wind development.

For Atlantic OCS renewable energy activities, federally recognized Tribes are engaged in multiple ways throughout leasing and development of offshore wind. In calendar year 2021, BOEM invited about 20 federally recognized Tribes to consult on proposed offshore wind projects and nearly 20 government-to-government meetings have been held. In addition, Tribes are consulting parties under National Historic Preservation Act Section 106 and have been invited to be cooperating agencies under NEPA for all construction and operations plan environmental impact statements. BOEM is actively working on capacity building efforts in response to Tribal requests. Finally, Tribes are represented on BOEM's renewable energy intergovernmental efforts.

➤ **Environmental and Scientific Research**

The continued need to pursue information to facilitate access to the OCS for renewable energy development and to ensure that such development is environmentally appropriate is a high priority for BOEM. Environmental and scientific research supporting BOEM's renewable energy efforts are funded through both BOEM's Renewable Energy and Environmental Programs budget activities. Renewable energy environmental research – funded through the Renewable Energy activity – supplements the studies funded through BOEM's Environmental Studies Program. This research augments what had been done previously for offshore oil and gas and marine minerals, but with specific focus on renewable energy applications.



Information gathering through the Real-time Opportunity for Development Environmental Observations program

To ensure full environmental review, BOEM has spent approximately \$95 million since FY 2008 on environmental studies that address renewable energy issues, either solely or in addition to other OCS resource activities. BOEM continues to study impacts of offshore wind at the Block Island Wind Farm, which will be used to inform future environmental reviews of construction and operations plans. With the addition of two turbines off the coast of Virginia, BOEM is monitoring the local environmental changes from the presence of structures in the marine environment. Through FY 2022, BOEM continues to address key topics

concerning impacts to fishing, marine mammals, and baseline information about the Gulf of Maine. BOEM is partnering with DOE, NOAA, and FWS to develop decision support tools for wildlife impacts. In partnership with the DOE and Pacific Northwest National Laboratory, BOEM funded the deployment of LiDAR buoys off the coast of Eureka, California, within BOEM's Humboldt Call Area and off Morro Bay, California, within the Morro Bay Call Area. The buoys are equipped with a suite of meteorological and oceanographic instrumentation to collect the offshore data needed to validate numerical weather prediction models, improve the understanding of how the air and sea interact, and reduce uncertainty and

risk in characterizing offshore wind resources. The buoys were deployed in October 2020 and have been saving detailed data on hard drives stored on the buoys. The Morro Bay buoy has been hauled back to shore and the buoy offshore Eureka will be collecting data through Q1 2022. While deployed, the buoys send a subset of data to shore via satellite. The data is available to the public at <https://a2e.energy.gov/data#>. BOEM is also partnering with NMFS on the development of a North Atlantic right whale and offshore wind science and management strategy. BOEM is currently working on two activities to inform this effort, including a summary of all existing management, research, and monitoring actions related to North Atlantic right whales, and an offshore wind and a technical document that describes the pathway toward understanding the cumulative effects of offshore wind on North Atlantic right whales.

Additionally, BOEM has continued to engage commercial and recreational stakeholders regularly in recent years, including with respect to policy and guidance development, and will continue these efforts in FY 2023. In FY 2021 BOEM held a series of meetings targeting fisheries groups for the leasing in the New York Bight and in FY 2022 began fisheries meetings regarding Call Area development in the Central Atlantic. In FY 2022 BOEM kicked off a national-level effort to develop guidance for lessees around fisheries mitigation. BOEM developed this guidance in response to comments from the fishing community and coastal States.

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

In accordance with OCSLA, 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 2021, BOEM continued cooperative agreements with State partners through matching funds and interagency agreements to inform future planning and decision-making. For instance, BOEM and the Commonwealth of Massachusetts are continuing to monitor marine mammals and other marine life off the coast of Massachusetts to establish a pre-construction baseline in anticipation of construction beginning in FY 2023. Additionally, BOEM is continuing to work with NOAA and FWS to collect necessary baseline information about wildlife to inform the consultation process for endangered species.

➤ **Renewable Energy Workshops and Conferences**

Stakeholder and Tribal engagement is integral to BOEM's renewable energy planning and leasing efforts. When input from stakeholders and experts is needed on a specific topic, BOEM hosts a workshop to bring together representatives from industry and from academic and government sectors. The following are some highlights of recent events.

- BOEM hosted two virtual workshops in June of 2021 to develop a regional approach to managing research data and addressing changing patterns of use by marine mammals and birds in response to offshore wind development. One workshop focused on passive acoustic monitoring of marine mammals and the other on satellite tracking of birds. The workshops resulted in a plan for participation in monitoring by the Federal government, State agencies, and industry to build a holistic evaluation of the impacts from offshore wind development.

- BOEM, in collaboration with the U.S. Coast Guard, held the first Offshore Wind and Commercial Vessel Traffic Industry Knowledge Exchange in March 2018, which assembled Federal and State agencies, vessel operators, harbor and port administrators, industry associations, and offshore wind energy developers to develop a common understanding of operational challenges facing both industries and the potential for beneficial coexistence. The workshop materials and summary report are both available on BOEM’s website (<https://www.boem.gov/Offshore-Wind-and-Maritime-Industry-Knowledge-Exchange/>). BOEM held three virtual Knowledge Exchanges in 2021 to build on lessons learned from the first workshop as well as the subsequent experience gained through reviews of submitted Navigational Safety Risk Assessments. The 2021 Knowledge Exchanges materials are also available on BOEM’s website (<https://www.boem.gov/renewable-energy/stakeholder-engagement/boem-offshore-wind-and-maritime-industry-knowledge-exchange>).

In addition to these events, BOEM partners with State governments to keep them engaged and apprised of potential and upcoming activities off their coasts. Partnerships ensure the inclusion of all appropriate stakeholder groups when moving through various stages of development.

➤ **Guidelines for Developers and Applicants**

BOEM issues guidelines to clarify and provide a general understanding of the information required to adequately address the impacts of offshore renewable energy projects to the environment. The guidelines for survey information on avian resources, spatial data, benthic habitats, fish, marine mammals, and sea turtles on the Atlantic OCS were developed with input from FWS, NOAA, and the Marine Mammal Commission. BOEM published updates to the benthic habitat, fisheries, marine mammal, and sea turtle guidelines in June 2019. BOEM has also published guidance to lessees on providing information on fisheries and social and economic conditions for renewable energy development on the Atlantic OCS (last revised May 2020). In FY 2022, BOEM evaluated the publication of additional guidance to lessees on mitigation measures to reduce impacts to commercial and recreational fisheries.

BOEM is revising the draft Project Design Envelope Guidance to incorporate lessons learned since the guidance was first made available to lessees in January 2018. Further clarification on topic areas including pre-submittal stakeholder coordination; the size, scope, and reasonableness of the Project Design Envelope; and changes to the Project Design Envelope in the updated guidance will improve the quality of the information provided by lessees in their construction and operations plan, which will ultimately result in faster sufficiency reviews, less comments on the construction and operations plan, and a more efficient environmental review process.

In FY 2019, BOEM developed updates for site assessment plans and several of its survey guidelines to address specific data requirements for meteorological buoys, and on April 28, 2021, published final guidelines for lighting and marking renewable energy structures offshore.

In the past, BOEM started the review of construction and operations plan in draft form, to expedite what can be a lengthy and detailed review process. However, BOEM has found it unproductive to move forward with a review before verifying the presence of certain components. Accordingly, BOEM is now developing guidance that will identify for lessees which construction and operations plans components

should not be deferred and are needed before BOEM will begin the review process by publishing a Notice of Intent to prepare a NEPA document for the project.

➤ **Technology Assessment and Research Studies**

BOEM has partnered with BSEE to select and fund appropriate research in operational safety and pollution prevention related to offshore renewable energy development through the Technology Assessment Program. 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. Data on meteorological and oceanographic (“metocean”) conditions need to be obtained across U.S. regions to ensure that these new structures are designed to the appropriate parameters.

Technology Assessment Program projects conducted between 2018 and 2021 involved wind turbine foundation studies of axial cyclic capacity of jacket piles, feasibility of suction bucket foundation in undrained sands, corrosion and fatigue life, geologic hazards of the Pacific Region, and wind density and wake effects of wind farm design. Awards made in 2021 include the effect on BOEM reviews of wind farms that produce hydrogen from electricity, a desktop geologic study for proposed wind energy areas on the Atlantic and Gulf of Mexico OCS, assessment of cable burial methodology issues, and corrosion inside monopiles. These projects will conclude in calendar year 2022 or early calendar year 2023. Additional topics for 2022 and beyond are now being developed together with subject matter experts from BSEE and the Pacific Region with possible input from industry through upcoming workshops.



A full-scale prototype of the WindFloat device

Results of BOEM’s technology assessment and research projects provide guidance to BOEM subject matter experts and industry regarding data collection activities in support of project development and assist the industry in refining engineering designs for offshore structure foundations for the varying geologic and oceanographic conditions that exist offshore the U.S. and ensure greater long-term stability and survivability of wind farm facilities. These projects also provide information and guidance for BOEM and program stakeholders on wind resource measurement, marking and lighting for offshore structures to aid air and vessel navigation, and mitigation of potential impacts on coastal, military, and vessel radar instrumentation. This increased reliability enhances BOEM’s ability to achieve mission goals of safe and reliable production of offshore wind energy.

Metocean data measurement studies are necessary to develop a U.S. based standard for wind farm facility design. BOEM’s work with the National Renewable Energy Laboratory updates existing recommended

practices (American Wind Energy Association Offshore Compliance Recommended Practices 2012) and develops new recommended practices for the following areas of offshore wind farm design: metocean data measurement, geotechnical and geophysical data collection, and floating technologies. This multi-year effort, initiated in October 2017, assembles over 100 experts across the spectrum of the offshore wind industry for collaboration throughout the year.

BOEM is also collaborating on a comprehensive set of roadmaps under American National Standards Institute (ANSI) rules that incorporate existing offshore wind energy facility design standards and guidelines. These roadmaps will facilitate the safe design and deployment of offshore wind energy, account for the unique conditions of the U.S. OCS and state waterways, and provide the Department of the Interior with ANSI-recommended best practices.

This effort consists of five modules that will be submitted to ANSI through the American Clean Power Association, an ANSI-approved standard setting organization. The first module is scheduled for submission to ANSI in 2022. The other four modules will follow and BOEM projects this effort will culminate in late calendar year 2023.

Alaska represents an important proving ground for developing cost effective wave and tidal renewable energy technologies. In FY 2018, the “*Alaska Wave Energy Converter Impact Assessment*” study was awarded and involves BOEM, in partnership with the University of Alaska, Fairbanks, assisting the State of Alaska in its effort to assess the feasibility and potential environmental effects of a wave energy converter project in the Gulf of Alaska. This work will be completed in FY 2022.

OUTLOOK FOR RENEWABLE ENERGY

Through detailed planning and analysis and partnerships with Federal and State government agencies, Tribal Nations, ocean users, and other stakeholders, BOEM’s Renewable Energy Program is well positioned to support the Administration in meeting its priority to take swift action to tackle the climate emergency in FY 2023 and beyond. Offshore wind energy is poised to generate significant benefits for the U.S. and help the Nation create jobs and achieve energy security. Located close to major coastal load centers, offshore wind provides an alternative to long-distance transmission or development of onshore electricity generation in land-constrained regions. It is an abundant domestic energy resource that could contribute significantly to meeting State Renewable Portfolio Standards and to economic growth and job creation.

Offshore wind leasing activities, including commercial leases, research leases, and right-of-way grants, have increased, and will contribute domestic renewable energy to the Nation’s energy portfolio and enhance economic activity in a diverse array of sectors that will supply and support the construction, service, and maintenance of the facilities. Developers broke ground on the first two commercial offshore wind facilities on the Federal OCS (i.e., the Vineyard Wind 1 and South Fork Wind projects) in November 2021 and February 2022, respectively, and BOEM is actively reviewing construction and operations plans for 11 other projects. State interest in pursuing offshore renewable energy development also continues to grow as evidenced by requests for additional leasing with new lease planning efforts

underway along the Atlantic and Pacific coasts as well as in the Gulfs of Mexico and Maine. The recent technological advances and successful deployment of floating wind turbines have spurred increased interest in deeper water areas and BOEM expects to hold the first competitive lease sale for such an area offshore the Pacific coast in FY 2022. BOEM continues to be committed to science-informed decision-making through robust environmental research and studies, which directly benefit BOEM, other Federal agencies, renewable energy stakeholders, and individual States. The combination of all these factors, as well as a coordinated All-of-Government approach for advancing this important resource, point to a bright and sustainable future for offshore renewable energy development in the United States.

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Conventional Energy

FISCAL YEAR 2023 BUDGET

Bureau of Ocean Energy Management

Conventional Energy

Table 8: Conventional Energy Budget Summary**Activity: Ocean Energy Management****Subactivity: Conventional Energy**

Conventional Energy	2021 Actual	2022 CR at Annual Rate	Fixed Costs (+/-)	Internal Transfers (+/-)	Program Changes (+/-)	2023 Request	Change from 2022 CR at Annual Rate (+/-)
Conventional Energy	60,487	60,487	1,880	0	+1,262	63,629	+3,142
<i>FTE</i>	<i>277</i>	<i>304</i>	<i>0</i>	<i>0</i>	<i>+0</i>	<i>304</i>	<i>+0</i>
Major Program IT Investments:							
BOEM Technical Information Management Contribution ^{1/}	[7,508]	[7,508]	[0]	[0]	[+100]	[7608]	[+100]

^{1/} TIMS is a BSEE owned system, which BOEM shares with BSEE. Amounts are BOEM's contribution.

Management of the oil and gas resources of the OCS is governed by OCSLA (43 U.S.C. § 1331 *et seq.*), which sets forth procedures for OCS conventional energy (oil and gas) leasing, exploration, development, and production. BOEM seeks to manage the development of offshore energy resources in an environmentally and economically responsible manner. BOEM's work supports energy security, environmental protection, and economic development through responsible management of these offshore resources informed by the best available science.

Foundational to the conventional energy program is the preparation of the National OCS Oil and Gas Leasing Program (National OCS Program). BOEM's work 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 for leasing and development activities.

The Administration has made addressing the climate challenge a top priority while continuing to support all permitting decisions necessary to ensure the orderly development of OCS oil and gas resources that contribute to U.S. energy security. The FY 2023 BOEM budget request reflects the appropriation needs for BOEM to accomplish the priorities of the President and the Department. This includes implementation

of EO 14008, *Tackling the Climate Crisis at Home and Abroad*, to restore balance on public lands and waters, create jobs, and provide a path to align the management of America’s public lands and waters with our Nation’s climate, conservation, and clean energy goals; while using the best available science and practices in the decision-making process; and strengthening the government-to-government relationship with Tribal Nations. The budget request also supports EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*, and associated initiatives to address impacts related to climate change and environmental justice from energy development on public lands.

The FY 2023 budget will support:

- **Environmental Justice:** BOEM will continue fostering environmental justice activities in line with the intent of EO 14008. BOEM actively involves Tribes and other stakeholders in its oil and gas activities and ensures that management of the OCS is “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 [OCS] and the marine, coastal, and human environments” (43 U.S.C. § 1344(a)(1)).
- **Implementing the Review of Oil and Gas Program:** In response to direction in Executive Order 14008 and in light of the Secretary of the Interior’s broad stewardship responsibilities, the Department conducted a review of its oil and gas program and published a report of its findings in November 2021. The report identifies key reforms necessary to ensure that the programs provide a fair return to taxpayers, discourage speculation, reduce environmental impacts, hold operators responsible for remediation, and create a more inclusive and just approach to managing public lands and waters. The Department’s report makes a number of specific recommendations to restore balance to these programs, including adjusting royalty rates, pursuing adequate financial assurance for decommissioning liabilities, and prioritizing leasing in areas with known resource potential while avoiding conflicts with other uses. The Department is in the process of implementing administrative changes consistent with the report's findings and recommendations, including where necessary, updating regulations and agency policy guidance documents that apply to existing leases as well as any new leases that may be issued. The Administration is committed to the responsible and sustainable development of Federal energy resources as the Nation transitions to a low-carbon economy, and such reforms are a critical component of this effort.
- **National OCS Oil and Gas Leasing Program:** As required by section 18 of OCSLA, BOEM prepares the National OCS Program, which sets forth a schedule for proposed offshore oil and gas lease sales over a 5-year period. The National OCS Program is designed in a manner to best meet the Nation’s energy needs while carefully considering factors to balance the potential for accessing oil and gas resources with the potential for adverse impacts from such activity.
- **Lease Administration:** BOEM is responsible for administering more than 11 million OCS acres for active leases (as of February 1, 2022). Currently, producing leases on the OCS account for about 15 percent of all domestic oil production and 2 percent of domestic natural gas production.

- **Plan Review:** When a lessee submits an Exploration Plan, Development Operations Coordination Document, or Development and Production Plan, BOEM conducts a thorough review of the plan. Exploration Plans describe all exploration activities planned by an operator as well as the timing of these activities. Development Operations Coordination Documents¹ and Development and Production Plans both describe the lessee's proposed activities, the location of each proposed well or structure, a proposed schedule of activities, and an analysis of any offshore and onshore impacts that may occur.
- **Geological and Geophysical Surveys:** Conventional energy geological and geophysical (G&G) surveys are conducted to obtain data for oil and gas exploration and production and aid in siting offshore structures. The data are also used in bid evaluation as BOEM seeks to ensure the receipt of fair market value for the leasing of the OCS.
- **Resource Evaluation:** The resource evaluation program supports BOEM's conventional energy program through technical and economic analysis. The primary program objective is to provide an assessment of discovered and undiscovered oil and gas resources on the OCS and to assure receipt of fair market value for OCS resources as mandated by OCSLA.
- **Comprehensive Inventory of OCS Resources:** Section 357 of the Energy Policy Act of 2005 directs the Secretary of the Interior to update the *Report to Congress for the Comprehensive Inventory of OCS Resources* at least once every 5 years. BOEM maintains these up-to-date resource assessments and reserves estimates across the OCS and is responsible for generating this periodic report to Congress, the next of which is anticipated to be published in 2023.
- **Ensuring Fair Market Value:** As mandated by OCSLA, BOEM seeks to ensure receipt of fair market value for oil and gas leases. Once a lease sale is completed and the high bidders for each tract are publicly announced, BOEM follows specific bid adequacy procedures as it seeks to ensure the Government receives fair market value. A determination of bid adequacy is made within 90 days after the lease sale is held.
- **Mapping:** Accurate OCS boundary lines are a foundational requirement for BOEM's OCS planning and leasing activities. Pursuant to OMB Circular A-16 (*Coordination of Geographic Information and Related Spatial Data Activities*), which provides direction for Federal agencies that produce, maintain, or use geospatial data either directly or indirectly in the fulfillment of their missions, BOEM is responsible for producing and maintaining the official offshore cadastre for the OCS of the United States as well as contributing electronic records supporting water, ocean, coast, and geology topics.
- **Marine Cadastre:** The Energy Policy Act of 2005 (P.L. 109-58), section 388(b), directs the Department to cooperate with other Federal departments and agencies to establish an interagency comprehensive digital mapping initiative for the OCS to assist in decision-making relating to the

¹ Development Operations Coordination Documents are used in the Central and Western Gulf of Mexico in lieu of Development and Production Plans, as allowed by the 1978 amendments to the OCSLA (43 U.S.C. § 1351 (a) and (l)).

siting of activities under section 8(p) of OCSLA, which includes renewable energy. To accomplish this, BOEM and NOAA jointly manage the MarineCadastre.gov portal, which provides authoritative and regularly updated ocean information to users, including offshore boundaries, infrastructure, human use, energy potential, and other data. This system is widely used by the public, environmental groups, Federal regulatory agencies, State and regional marine planners, intergovernmental task forces, and other government organizations involved in ocean planning issues.

- Carbon Sequestration:** Section 40307 of the Bipartisan Infrastructure Law (BIL) amends OCSLA to authorize the Secretary of the Interior to grant a lease, easement, or right-of-way on the OCS for activities that “provide for, support, or are directly related to the injection of a carbon dioxide stream into sub-seabed geologic formations for the purpose of long-term carbon sequestration.” Additionally, the law directs, “Not later than 1 year after the date of enactment of this Act, the Secretary of the Interior shall promulgate regulations to carry out the amendments made by this section.” Implementation of these provisions is in support of the Administration’s broader climate change efforts. BOEM is poised to use its significant technical expertise in offshore oil and gas, geology, the environment, and economics to partner with BSEE on offshore carbon capture and sequestration (CCS) as directed by the BIL. During FY 2022 and FY 2023, BOEM will work jointly with BSEE to develop a framework rulemaking to implement the BIL requirements. Development of the full regulatory structure for the new CCS authority and development of a new Departmental CCS program is expected to take multiple years.

SUMMARY OF 2023 PROGRAM CHANGES

Summary of 2023 Program Changes for Conventional Energy

Program Changes:	(\$000)	FTE
Maintain Baseline Capacity	+1,849	+0
FY 2023 Fixed Costs	+1,880	+0
Technical Internal Transfers	[-6,264/+6,264]	+0
Execute National OCS Program	-1,587	+0
Address GAO High Risk Issues	+1,000	+0
TOTAL Program Changes	+3,142	+0

* Changes listed in order of budget activity, not priority.

Maintain Baseline Capacity (+\$1,849,000). The 2023 budget includes important investments in programs needed to help strengthen America and be more competitive as the world continues to change. These investments include funding needed to maintain a strong, talented workforce and the core capacity needed to continue to fulfill BOEM’s mission. The budget includes \$1.849 million in this budget activity, which reflects the incremental amount needed to cover the fixed costs associated with mission operations in FY 2022. This request in combination with the FY 2023 fixed costs amounts will allow the program to sustain core capacity and avoid impacts to ongoing program activities.

Fixed Costs (+\$1,880,000). Fixed cost increases are fully funded in BOEM's FY 2023 budget. These costs include increases to support changes in Federal health and retirement benefits and workers' compensation, rent to the General Services Administration, and payments to the Department through its Working Capital Fund.

Technical Internal Transfers (-\$6,264,000/ +\$6,264,000; 0 FTE). Technical adjustments in FY 2023 reflect a decrease in offsetting collections paired with a commensurate increase in net current appropriations. The amount cited above reflects the technical internal transfer associated with this budget activity. There are no programmatic changes associated with this shift.

Execute National OCS Program (-\$1,587,000; 0 FTE). In FY 2023, BOEM proposes a reduction to the National OCS Oil and Gas Leasing Program (National OCS Program) funding, taken from the Conventional Energy (-\$1,587,000) and Environmental Programs (-\$1,812,000) budget activities. Development of and decisions regarding the next National OCS Program are ongoing, as the Department evaluates all options and determines the best pathway to accomplish its mission. The FY 2023 budget does not presume the Secretary's decision on the scope of the next National OCS Program. Therefore, the funding needed to implement it will need to be reevaluated once decisions are made. Planning for future leasing activities does not impact ongoing energy operations. BOEM continues to work with BSEE to support all permitting decisions necessary to ensure the orderly development of OCS oil and gas resources that contribute to U.S. energy security.

Address GAO High Risk Issues (+\$1,000,000; 0 FTE). In FY 2023, additional resources are requested to address GAO high risk issues relating to BOEM's conventional energy activities on the OCS. These funds would provide BOEM with the opportunity to implement GAO recommendations and improve the Bureau's capacity to address a wide array of risks associated with the production of conventional energy on the OCS. In accordance with the GAO recommendations, BOEM will conduct a thorough evaluation of its use of delayed valuations to determine the extent to which current processes result in the receipt of fair market value for OCS leases. In addition, BOEM will assess present practices to identify any bias in valuation of bids should it exist. BOEM continues to enhance its management and oversight of the Nation's conventional energy resources on the OCS. This work intends to mitigate environmental and financial risks emerging as a result of the development of offshore oil and gas production and associated decommissioning of facilities. Together, these components will help BOEM identify areas for improved decision-making regarding the management of offshore oil and gas activities. Ultimately, this examination assists BOEM with meeting its obligation to ensure fair market value for the taxpayer.

PROGRAM OVERVIEW

As the Nation's OCS energy resource manager, BOEM administers a comprehensive national oil and gas leasing program that requires a progressive cycle of resource, economic, and environmental analyses, providing the Secretary with the information needed to make informed decisions. This work includes: developing the National OCS Oil and Gas Leasing Program; identifying and delineating appropriate boundaries and legal descriptions; inventorying and assessing the Nation's OCS energy endowment;

developing a proposed schedule for oil and gas lease sale offerings; developing financial terms that seek to ensure the receipt of fair market value; reviewing industry plans to explore, develop, and produce oil and gas resources; ensuring lease holders have sufficient financial resources to fulfill lease obligations, such as decommissioning facilities at the end of their productive life; and ensuring that oil and gas activities are conducted in compliance with environmental laws and regulations. These activities support U.S. domestic oil and gas supplies and implementing regulatory and oversight efficiencies, and create a more accessible, efficient, and predictable oil and gas leasing process for government, industry, and other stakeholders.



The Na Kika platform in deepwater Gulf of Mexico.

As of February 1, 2022, BOEM manages 2,069 active oil and gas leases on approximately 11 million OCS acres. Offshore Federal production in FY 2021 reached approximately 602.7 million barrels of oil and 766.8 million cubic feet of gas, almost all of which was produced in the Gulf of Mexico. Revenues generated from OCS conventional energy leasing and production activities are a significant source of revenue for the Federal Government. In FY 2021, conventional energy generated \$88.6 million in rent, \$111.6 million in bonuses, and \$3.8 billion in royalties from production.

LEASING

BOEM’s leasing activities include the development of the National OCS Program; the planning, preparation, and holding of individual lease sales; and the administration of oil and gas leases.

➤ National OCS Oil and Gas Leasing Program

Under OCSLA, the Secretary of the Interior has the responsibility to prepare, periodically revise, and maintain an oil and gas leasing program to “best meet national energy needs” while balancing other important factors. The Department must prepare a national 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 5-year period it covers. The National OCS Program identifies program areas, which are delineated areas of leasing interest where leases potentially may be offered, and establishes a proposed schedule of lease sales over a 5-year period.

Per section 18(a)(3) of OCSLA, the National OCS Program is designed to achieve a balance of “the potential for environmental damage, the potential for the discovery of oil and gas, and the potential for adverse impact on the coastal zone.” During development of the National OCS Program, BOEM requests comments from intergovernmental partners and stakeholders (including governors, Federal and State agencies, local communities, federally recognized Tribes, energy and non-energy private industry, public interest groups, and the public) to help BOEM determine which areas of the OCS have the most potential

for oil and gas development and the measures that should be implemented to ensure that development is accomplished in an environmentally responsible manner. This effort ensures that management of the OCS is “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 OCS and the marine, coastal, and human environments” (43 U.S.C. § 1344(a)(1)).

BOEM published the 2019-2024 National OCS Oil and Gas Leasing Draft Proposed Program (2019-2024 Draft Proposed Program) on January 4, 2018. The Draft Proposed Program is the first in a series of three documents issued by the Department before the Secretary takes final action to approve a National OCS Program. The breadth of the 2019-2024 Draft Proposed Program allowed for maximum flexibility, and areas being considered for leasing may be narrowed at later stages of the process, such as after additional technical and environmental analysis, public comment, and critical input and coordination with key stakeholders and intergovernmental partners is complete. Public comments received on the 2019-2024 Draft Proposed Program are being considered as the next stage of the National OCS Program is under development: the Proposed Program and the associated Draft Programmatic Environmental Impact Statement (PEIS). Following publication of the Proposed Program and the Draft PEIS, public comments received during a mandatory 90-day comment period would be considered in the development of the Proposed Final Program and Final PEIS. At least 60 days following publication of the Proposed Final Program and its submission to Congress and the President, the Secretary may approve the National OCS Program, at which point BOEM may begin to implement it.

➤ **Oil and Gas Lease Sales**

BOEM held one lease sale in FY 2021: Gulf of Mexico region-wide Sale 256. This was the seventh sale in the 2017-2022 Program. Sale 256 resulted in 86 new leases covering over 477,413 acres and generated over \$111 million in bonus payments.

In the first quarter of FY 2022, BOEM published a Notice of Availability of the Alaska Cook Inlet Lease Sale 258 Draft Environmental Impact Statement, which included a 45-day public comment period and three virtual public hearings. Also, in the first quarter of FY 2022, BOEM held Gulf of Mexico Sale 257. Subsequently, the United States District Court for the District of Columbia vacated and remanded the Record of Decision for Sale 257. As a result, BOEM did not issue any leases related to Sale 257, and any future actions related to Sale 257 are pending the outcome of litigation.

The following table includes information on lease sales held under the 2017-2022 OCS Oil and Gas Leasing Program. Information on sales in previous Programs can be found on BOEM’s website at <https://www.boem.gov/Past-Five-Year-Programs/>.

Table 9: Lease Sales Completed to Date Under the 2017-2022 National OCS Program

Sale #	Date of Sale	Area	Number of Leases Issued	Number of Acres Leased	Total Bonus for Leased Tracts
249	8/16/2017	Gulf of Mexico	81	456,256	\$110,878,165
250	3/21/2018	Gulf of Mexico	139	764,924	\$115,329,139
251	8/15/2018	Gulf of Mexico	141	784,009	\$175,489,464
252	3/20/2019	Gulf of Mexico	211	1,171,260	\$231,790,063
253	8/21/2019	Gulf of Mexico	147	811,967	\$154,994,527
254	3/18/2020	Gulf of Mexico	63	351,206	\$86,240,453
256	11/18/2020	Gulf of Mexico	86	477,413	\$111,559,312

The National OCS Program provides a schedule of potential lease sales. As part of the planning process for individual lease sales, the Secretary decides whether to hold a particular lease sale.

➤ **Lease Sale Planning Process**

Each lease sale in an approved OCS Oil and Gas Leasing Program is subject to an established pre-lease evaluation and decision-making process during which interested and affected parties have opportunities to comment and provide input. Each approved lease sale is considered on a case-by-case basis over the course of required *Federal Register* publications, sale notices, comment periods, environmental reviews, and consultations. Through this extensive planning process, a proposed sale undergoes evaluations that consider reasonable alternatives, modifications, and/or restrictions to the area under leasing consideration. The Final Notice of Sale, which BOEM publishes at least 30 days prior to holding the sale, documents the Department’s final decision on a sale’s size, timing, and location, as well as decisions on environmental mitigation measures and lease sale fiscal terms.

The pre-leasing process takes approximately a year and a half to two years to complete, depending on the nature of the lease sale and the complexities encountered during the planning process.

The following figure and narrative provide an overview of the major steps and decision points in planning for a typical oil and gas lease sale.

Figure 9: Typical Planning for a Specific Oil and Gas Lease Sale



1. **Call for Information and Nominations:** BOEM requests comments from the public on the area being considered for leasing and solicits information on environmental issues that should be analyzed. In addition, potential bidders are invited to nominate areas of interest within those areas identified for leasing consideration.
2. **Area Identification:** Based on information received in response to the Call for Information and Nominations, BOEM identifies an area for further leasing consideration and environmental analysis. BOEM is required to announce its Area Identification decision publicly in the *Federal Register*.
3. **Notice of Intent:** BOEM issues a Notice of Intent to alert the public that it will conduct an environmental impact statement review pursuant to NEPA. The notice provides a description of the Proposed Action and possible alternatives, as well as a description of the scoping process and any scheduled meetings for the scoping of the NEPA document. A Notice of Intent may not be issued if BOEM determines that another form of NEPA review is sufficient (i.e., supplemental Environmental Impact Statement, environmental assessment, or Determination of NEPA Adequacy/Memorandum for the Record).
4. **NEPA Review:** BOEM prepares a Determination of NEPA Adequacy based on existing NEPA documents or prepares a new NEPA document, either an environmental impact statement or environmental assessment, to evaluate the potential environmental impacts of the Proposed Action, alternatives, and the potential effectiveness of mitigation measures.
5. **Public Involvement and Comment:** For environmental impact statements or environmental assessments, BOEM requests public comment on issues that should be addressed in the NEPA document. For lease sale environmental assessments, BOEM typically solicits public comments for 30 days. For an environmental impact statement, the public is invited to participate in the NEPA scoping process, and the draft document is available for public comment for 45 days.
6. **Government-to-Government Consultations:** BOEM consults with federally recognized Tribes and, in Alaska, with Alaska Native Claims Settlement Act Corporations. These consultations are conducted throughout the stages of the OCS oil and gas leasing process or anytime upon request.
7. **Environmental Consultations:** BOEM conducts required consultations with Federal agencies, such as the U.S. Fish and Wildlife Service and National Marine Fisheries Service, to comply with environmental laws such as the Endangered Species Act, the Marine Mammal Protection Act, the Magnuson-Stevens Fishery Conservation and Management Act, and others. BOEM also consults with State and Tribal historic preservation officers under the National Historic Preservation Act.
8. **Final NEPA Document:** BOEM addresses substantive Tribal and public comments and, if necessary, updates its analysis prior to issuing a final NEPA document.
9. **Proposed Notice of Sale:** BOEM publishes a Notice of Availability of the Proposed Notice of Sale in the *Federal Register*. This notice includes information on the sale's proposed size, timing,

and location, as well as a description of proposed blocks being offered, environmental mitigations being considered, and proposed fiscal terms and conditions of the sale.

10. **Letters to the Governors:** BOEM sends copies of the Proposed Notice of Sale to governors of affected States for their review. Pursuant to section 19 of OCSLA, BOEM requests their comment on the proposed sale's size, timing, and location.
11. **Consistency Determination:** As required by the Coastal Zone Management Act, BOEM will provide affected States that have a federally approved State Coastal Zone Management Plan with a determination on whether the proposed lease sale is consistent, to the maximum extent practicable, with the enforceable policies of their respective Coastal Zone Management Act Plans.
12. **Record of Decision (for an environmental impact statement) or Finding of No Significant Impact (for an environmental assessment):** This is the final step in the NEPA process regarding BOEM's decision to hold a lease sale. The Record of Decision, or the Finding of No Significant Impact, is signed in conjunction with the Final Notice of Sale and published in the *Federal Register* at least 30 days prior to the lease sale date.
13. **Final Notice of Sale:** BOEM publishes a Final Notice of Sale in the *Federal Register* at least 30 days before the sale is held. This notice includes information on the sale's size, timing and location, bid opening, a description of the blocks being offered, applicable environmental mitigations, and fiscal terms and conditions of the sale. Pursuant to section 19 of OCSLA, BOEM also sends letters to governors of affected States providing written reasons for accepting or rejecting each governor's recommendations and/or implementing any alternative means to provide for a reasonable balance between the National interest and the well-being of the citizens of the State.
14. **Lease Sale:** BOEM opens and publicly reads sealed bids submitted by qualified bidders on the day of the sale. The venue is not open to the public; rather, bids are read aloud and broadcast on the internet via live-stream.
15. **Fair Market Value Analysis:** Ensuring the receipt of fair market value for OCS resources is mandated by OCSLA and is one of BOEM's critical responsibilities. Under its bid adequacy procedures for oil and gas leases, BOEM reviews all high bids received as it seeks to ensure a bid on a specific OCS block meets fair market value criteria prior to lease issuance.
16. **Lease Issuance:** BOEM issues a lease to the highest qualified bidder if the high bid meets BOEM's fair market value criteria following required antitrust review by the Department of Justice and the Federal Trade Commission.

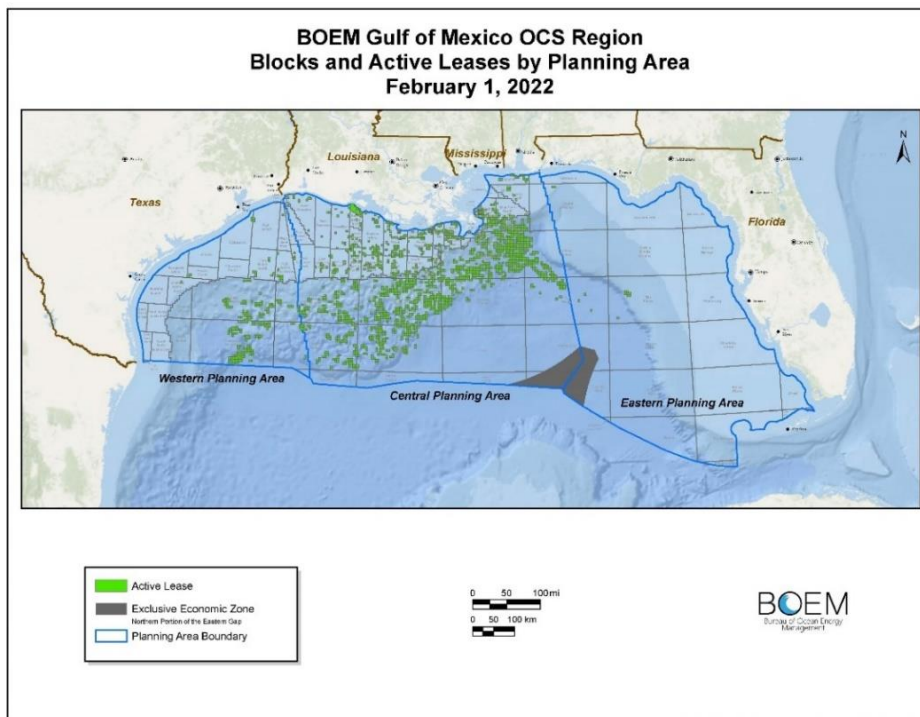
➤ **Lease Administration**

The lease administration process encompasses a set of discrete business processes, which manage a lease from issuance to relinquishment, termination, cancellation, or expiration. Once the lease has been

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.

BOEM’s New Orleans, Louisiana Office (New Orleans Office): BOEM oversees 29,186 blocks in the Gulf of Mexico. As of February 1, 2022, 2,006 blocks are leased, including 213 in the Western Planning Area, 1,780 in the Central Planning Area, and 13 in the Eastern Planning Area. The following figure provides a snapshot of the blocks and active leases within the Gulf of Mexico.

Figure 10: Gulf of Mexico Blocks and Active Leases by Planning Area



BOEM’s Anchorage, Alaska Office (Anchorage Office): As of February 15, 2022, the Alaska OCS has 33 active oil and gas leases encompassing approximately 155,916 acres, including 19 leases in the Beaufort Sea and 14 in the Cook Inlet.

Figure 11: Cook Inlet Active Leases

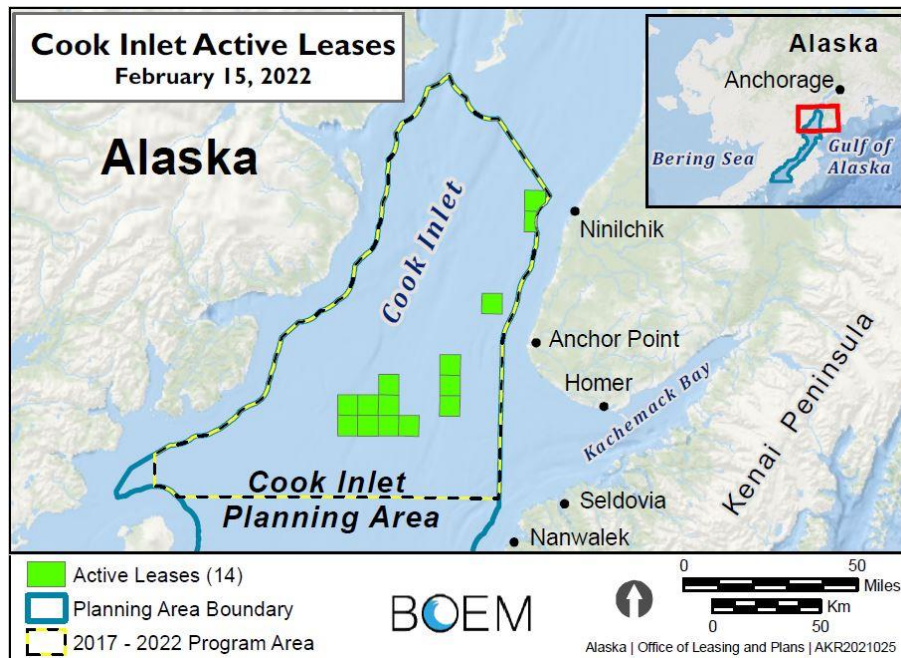
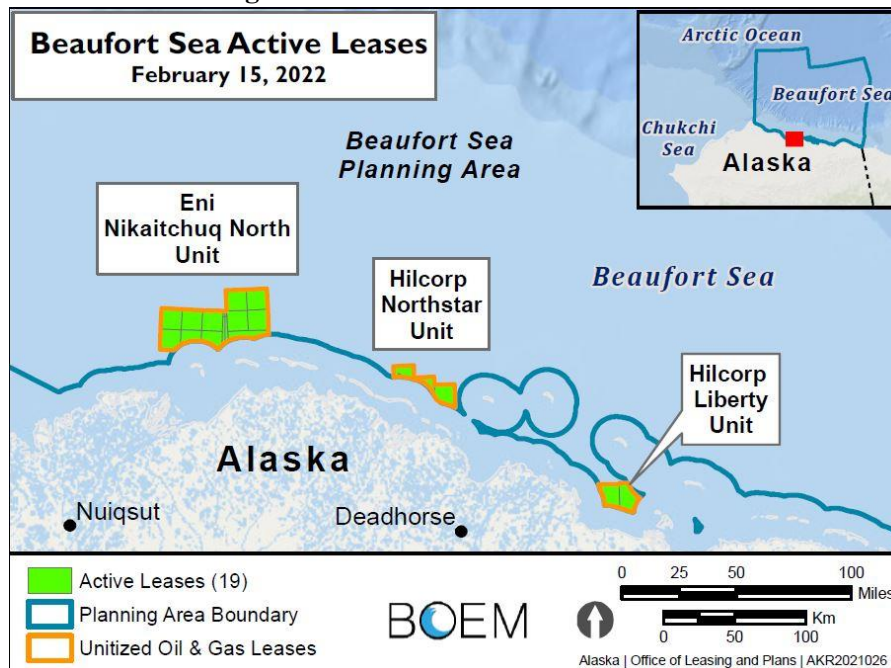


Figure 12: Beaufort Sea Active Leases

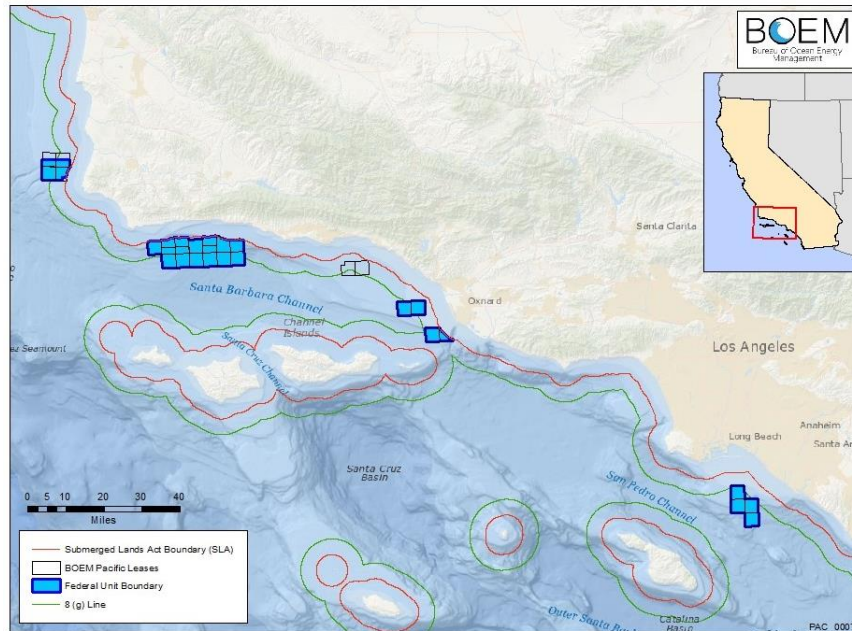


The Beaufort Sea leases include three leases in the Liberty Unit; 13 leases in the Harrison Bay Block 6423 Unit (also known as Nikaitchuq North Prospect) north of the Nikaitchuq development in eastern Harrison Bay; and three leases in the Northstar Unit (a joint State/Federal unit that is currently in production). There are significant challenges associated with offshore oil and gas development activities

in the Arctic, such as unique and sensitive environmental conditions, remote location, and limited access to infrastructure.

BOEM’s Camarillo, California Office (Camarillo Office): As of February 1, 2022, BOEM manages activity on 30 active leases covering 152,578 acres. The following map shows the location of the leases off the coast of Southern California.

Figure 13: Camarillo Office Active Leases



➤ **Official Boundaries**

The OCSLA gives the Secretary of the Interior the authority to administer the submerged lands of the OCS for energy and minerals leasing purposes. Various court decisions, treaties, laws, policies, and procedures guide the boundary making process on the OCS. The 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 under the jurisdiction of the Federal Government, and no such submerged Federal lands may be offered for lease or sale by either a foreign country or a U.S. State. The development and maintenance of 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 regional offices, BOEM is responsible for producing and maintaining the official offshore cadastre for the OCS of the United States.

BOEM’s mapping activities are subject to the Foundations for Evidence-Based Policymaking Act of 2018, which requires information-driven decisions with transparency back to the underlying data; the OPEN Government Data Act of 2018, which makes open data a key part of every agency’s Information Resources Management Plan; and the Geospatial Data Act of 2018, which ensures that geospatial data

from multiple sources is available and easily integrated to enhance the understanding of the physical and cultural world.

Using Geographic Information System (GIS) software tools, block and boundary data previously stored in BOEM's Technical Information Management System has been transferred to multiple geodatabases, where it can be updated more efficiently (e.g., when new boundaries are established) and maintained in the Boundary Delineation System Database. Using GIS for these processes has reduced the required time and effort dramatically compared to using legacy mapping tools. The Boundary Delineation System Database is used to perform mathematical offshore boundary computations in preparation of OCS leasing maps, official protraction diagrams, and supplemental official OCS block diagrams depicting OCS block information, the Submerged Lands Act boundary, limits of the "8(g) and 8(p) Zones," and corresponding area measurements. The current focus of this work is enhancing existing tools to support renewable energy plans in the Gulf of Mexico Region and to develop new tools to support future datum conversion projects. The tools are expected to be ready for use by April 2022 and data produced from the tools will be ready for leasing activities by July 2022.

➤ **Geospatial Services Coordination**

To engage in effective planning, leasing, and permitting activities that result in sound ocean management decisions, BOEM programs need geospatial data that describe the uses and resources that collectively make up the ocean space. U.S. coastal zones and offshore areas provide the backdrop for a wide spectrum of marine activities including mining sand for beach nourishment, facilitating aquaculture projects, military training, protection of important species, vessel transit, commercial fishing and fisheries management, and energy development. Ocean users and activities have the potential to affect each other, and these interactions need to be understood and considered. Coordination of mission-critical geospatial data that informs decision making brings clarity to the crowded marine space and supports America's most pressing ocean economic, security, and environmental interests. Ocean-based geospatial data has thus emerged as a Federal priority in recent years, while at the same time BOEM is experiencing rapid changes in technology and a growing demand for data of all types.

BOEM has completed the first phase of a comprehensive information technology business planning effort that started on August 13, 2020 and was completed on September 31, 2021. Phase I laid the groundwork for implementing new enterprise-wide GIS technologies, infrastructure, and data storage. The Phase I business plan focuses on leveraging the Department's existing cloud services contracts, commercially available off the shelf GIS software, and software license agreements as the agency's GIS Base Deployment. This milestone is a vital step towards BOEM's goal to support section 211(d) of EO 14008 and to develop a consolidated Federal geographic mapping service that can facilitate public access to climate-related information to assist Federal, State, local, and Tribal governments in climate planning and resilience activities. Phase II of this planning effort, which was launched October 1, 2021, and will continue through end of the fiscal year, further positions BOEM to leverage data from all BOEM mission areas to fuel increasingly sophisticated analytical tools to support the Administration in solving new ocean management and conservation problems.

During Phase II, BOEM will develop refined cost information to facilitate future decisions regarding the transition from the Base GIS Deployment to an enhanced deployment capable of meeting the unique requirements of individual BOEM programs and offices. The Enhanced GIS Deployment is intended to meet the requirements of robust program adoption, including expanded processing capabilities, storage needs, custom application support, staffing, and improved support to Federal partners such as NOAA for consuming BOEM data shared on the MarineCadastre.gov portal.

Modern enterprise geospatial information technology will function as the backbone of how BOEM supports mission operations, serves the public in the digital age, and partners with other agencies such as NOAA in the deployment of MarineCadastre.gov. Data, accountability, and transparency are improved with the modern tools to deliver visibly better results to the public, increasing accountability to taxpayers for sound fiscal stewardship and mission results. Further, this ensures the adequacy of supporting technologies and infrastructures, developing and implementing appropriate mapping/data/metadata standards, and ensuring compliance with applicable Federal directives and requirements, including provisions of the OPEN Government Data Act, the Foundations for Evidence-Based Policymaking Act, the Information Quality Act, and the Geospatial Data Act. Implementing the terms of the OPEN Government Data Act and Federal Data Strategy, the BOEM geospatial program treats data as an asset, requiring and prioritizing new data for public disclosure, machine readability, open licensing, and discoverability through data.gov and MarineCadastre.gov. Similarly, as prescribed by the Geospatial Data Act, BOEM promotes greater access and use of government data, establishing enforceable standards for geospatial data, and working to better coordinate among Federal, State, local, and Tribal governments, the private sector, and institutions of higher learning.

➤ **MarineCadastre.gov**

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 both large regional ocean planning efforts and project-specific planning.

While originally 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, MarineCadastre.gov now provides the geospatial framework needed for broader ocean planning. BOEM's MarineCadastre.gov program has been recognized repeatedly for its collaborative stewardship efforts and is evolving and expanding to include relevant issue-driven data and tools. For example, the project's NOAA staff representatives received the 2019 NOAA Administrator's



The MarineCadastre.gov website provides comprehensive geospatial data and information to facilitate ocean planning efforts.

Award and the BOEM staff received the 2019 DOI Natural Resource Conservation Achievement Award in the Trailblazer category for the work the Marine Cadastre team has done to make Automated Identification System (AIS) data and tools available to the public and government sectors. BOEM worked with the White House Ocean Policy Committee, Resource Management Subcommittee to develop the “Implementation Plan to Increase Public Access to Marine Data and Information.” The plan informs the Ocean Policy Committee’s efforts to guide agency data providers in implementing its recommendations for making the most-needed geospatial data available to the public so that these data can be searched via MarineCadastre.gov or other regional data providers. Furthermore, the MarineCadastre.gov OceanReports tool is a major component of the agencies’ “Implementation Plan for the Recommendations for Increasing the Efficiency of Permitting for Ocean Exploration, Mapping, and Research Activities.” Under this task, OceanReports was evaluated for its potential utility in helping to modernize ocean permitting and NEPA review for any Federal offshore and coastal permitting actions. The report was delivered to the White House Ocean Policy Committee/Ocean Resource Management Subcommittee in August 2021. The MarineCadastre.gov project and its tools have also been mentioned as examples of widely accessible and authoritative data sources by several recent reports put together by interagency working groups. These include:

- Open Geospatial Consortium (2019). Development of Spatial Data Infrastructures for Marine Data Management. Open Geospatial Consortium.
- U.S. Committee on the Marine Transportation System (2019). Enhancing Accessibility and Usability of Automatic Identification System Data: Across the Federal Government and for the Benefit of Public Stakeholders. Washington, D.C., 40p.
- OceanReports was highlighted in a chapter of the Esri book GIS for Science. (*Citation: Wickliffe et al. (2020). Unlocking Ocean Intelligence. In: GIS for Science: Applying Mapping and Spatial Analytics, Volume 2. Wright, D. and C. Harder (eds.), Esri Press, ISBN: 9781589485877; 250 pp.*)

MarineCadastre.gov information is provided as immediately viewable map data, downloadable GIS formatted data, and as map services. MarineCadastre.gov has three primary focus areas: web map viewers and ocean planning tools; spatial data registry; and technical support and regional capacity building. In addition to the data provided by other authoritative providers – such as NOAA, FWS, the U.S. Geological Survey, and the U.S. Coast Guard – the MarineCadastre.gov includes a variety of BOEM and 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. Several regional ocean portal projects use the data and services provided through the MarineCadastre.gov project, fulfilling BOEM’s vision for the project to be the first place to find authoritative coastal and marine data.

The MarineCadastre.gov project created widely used data tools. OceanReports provides quick dashboard statistics for more than 95 data layers, most of which are available in MarineCadastre.gov’s viewer or data registry. MarineCadastre.gov also provides historical AIS data for all areas monitored by the U.S. Coast Guard and U.S. Army Corps of Engineers from 2009-2021 and collects data quarterly. A suite of

free user tools accompanies the data to make it easier for users to build density and trackline map products. A new AIS tool is set to launch in FY 2022, which will allow users to draw an area around the AIS data they want to download and get a downloadable file delivered for those areas.

In FY 2022, the MarineCadastre.gov manages 26 data collections and 316 individual data layers. Additionally, 28 data layers were developed and/or maintained in FY 2021. FY 2020 AIS data, critical to informing BOEM's renewable energy leasing and plan approval processes, has been collected and analyzed. The 2021 data is collected quarterly and available within a month of delivery. Vessel counts and trackline analysis for 2020 are currently available, and second quarter 2021 data will become available in conjunction with the release of the [AccessAIS](#), a new interactive mapping application available on the MarineCadastre.gov portal that provides direct, custom access to over 15 billion vessel locations in U.S. waters. This is a major advancement in AIS data provisioning and will provide the ocean planning community a much faster and more efficient way to access data for their custom areas of interest. The MarineCadastre.gov team is currently conducting a limited release with a complete and formal roll-out scheduled for the third quarter of FY 2022. Currently AIS data spanning the years 2009-2020 are fully available, with 2021 data being incorporated with the release.

Story maps and special purpose maps are live online maps with surrounding narratives to help explain the details and uses of the maps for their intended audiences. Currently, the Marine Cadastre program maintains 16 special maps, including three thematic, five regional, and eight story maps. They can all be found at: <https://marinecadastre.gov/viewers/>. Reflective of the demand for this data, during FY 2021, there were a total of 22,975,950 hits on all Marine Cadastre services under the NOAA/Office for Coastal Management, BOEM, and Geoplatform domains. There were likely many more hits that were not recorded at NOAA during a 3-month period while they switched to a new cloud-based service platform. There was a total of 1,787,112 successful downloads of AIS data by users.

PLANS

Each of BOEM's regional offices manages the review and approval process for all exploration plans, development and production plans, or development operations coordination documents within their respective OCS waters. In conducting plan reviews, BOEM examines the proposed exploration, development, and production activities to ensure they conform to regulatory performance standards, comply with Federal laws, are safe, adhere to sound conservation practices, protect the rights of the U.S. Government, do not unreasonably interfere with other OCS uses, and do not cause undue harm to the human, marine, or coastal environments. This oversight ensures that industry follows all applicable laws, regulations, and lease terms when exploring for and developing oil and gas resources on the OCS.

For existing leases, BOEM conducts in-depth reviews of plans within required timeframes to ensure that planned activities are approved and conducted in a timely manner, in accordance with applicable laws, regulations, and lease terms. BOEM works to ensure the review process is rigorous, efficient, and predictable. BOEM designates specific plan coordinators to ensure consistency throughout the review process. During plan review, BOEM evaluates the potential environmental impacts of the proposed activities pursuant to OCSLA and NEPA. Analyses include reviews of shallow hazards and seafloor

features, resource conservation, financial assurance, worst-case discharge, air quality, water quality, archaeological concerns, environmental resource concerns, subsistence use concerns, and military and security issues. The analyses provide information to support plan decisions and development of approval conditions to help protect the environment and facilitate multiple uses of the OCS.

The following figures illustrate typical plan review and approval processes for exploration and development of OCS oil and gas resources.

Figure 14: Processes for Oil and Gas Exploration Activities

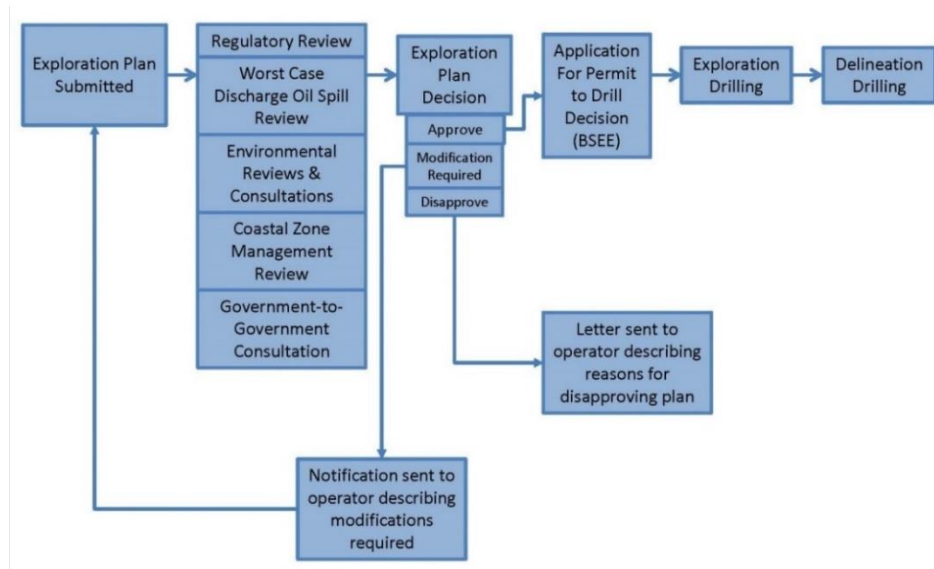
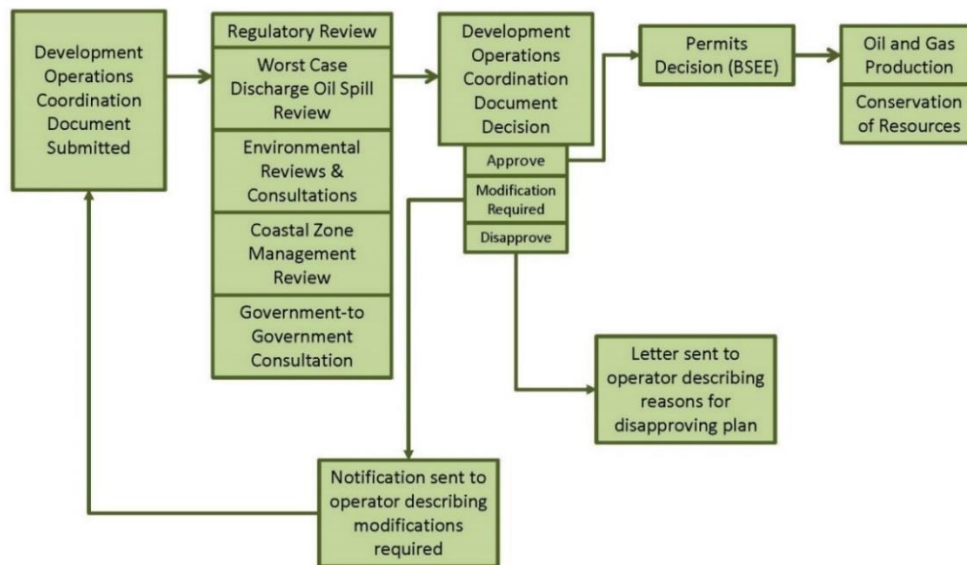


Figure 15: Processes for Oil and Gas Development Activities



Note: This figure reflects the process for development operations coordination documents in the New Orleans Office. The Anchorage Office and the Camarillo Office follow a similar process for development plans and receive development and production plans rather than development operations coordination documents.

New Orleans Office: The number of plans reviewed in calendar year 2021 was at a slightly lower level than the previous year. The price of oil had been increasing through the year, and BOEM has seen activity start to rebound as the year progressed. The following table shows all plan submittals – initial, supplemental, revised, modifications, amendments, and post-approval – received from 2012 through 2021, as well as plans estimated to be received in calendar years 2022 and 2023.

Table 10: Recent and Projected Plan Review Activities in the Gulf of Mexico

Calendar Year	# EPs	# DOCDs
2012	170	327
2013	504	616
2014	509	601
2015	542	473
2016	336	248
2017	305	423
2018	293	448
2019	336	401
2020	325	407
2021	237	343
2022*	325	425
2023*	325	425

* The number of plans noted in 2022 and 2023 are estimated.

BOEM also reviews and processes applications for rights-of-use and easement. Rights-of-use and easement 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, if the proposed activities would facilitate the development of leased resources. Prior to granting a right-of-use and easement request, BOEM must review and approve a plan outlining the proposed activities to ensure these activities conform to sound conservation practices and are carried out in a safe and environmentally sound manner to prevent harm or damage to any natural resource or the human, marine, or coastal environments. In FY 2021, BOEM received 14 right-of-use and easement requests and completed 24 reviews. BOEM anticipates receiving approximately 20 such requests in both FY 2022 and FY 2023.

Anchorage Office: In FY 2020, BOEM received an exploration plan for Lower Cook Inlet and initiated a plan completeness review. After review, BOEM determined additional information was needed to deem the exploration plan submitted. The exploration program is structured to evaluate the oil and gas potential of some of the 14 leases acquired in the 2017 Cook Inlet Lease Sale 244. In FY 2021, BOEM approved the operator’s application to conduct geohazard and cultural surveys on and near proposed drill sites. The operator completed all permitted activities ahead of the October 31, 2021 permit expiration date.

In October 2018, BOEM approved the development and production plan for the Liberty Prospect, located in the Beaufort Sea in the OCS waters northeast of Prudhoe Bay. Activities described in the approved development and production plan, if executed, will result in the first solely Federal OCS oil and gas development in the U.S. Arctic. Responsible and safe development of the Liberty Prospect will require

continued engagement by BOEM, BSEE, and other Federal agencies. In August 2019, BP announced it had agreed to sell all Alaska operations and interests to Hilcorp for \$5.6 billion, including BP's interest on the Liberty Prospect. The sale of BP's Alaskan upstream assets to Hilcorp was finalized on July 1, 2020. The Ninth Circuit's judgment in *Center for Biological Diversity v. Bernhardt*, 982 F.3d 723 (2020), took effect on January 29, 2021. As a result of the litigation, the previous approval of the development and production plan for the Liberty Prospect was vacated and the action was remanded to BOEM for further proceedings. In FY 2020, Hilcorp received a Suspension of Production (SOP) from BSEE that was set to expire at the end of December 2021. On December 22, 2021, Hilcorp received a second SOP from BSEE that could remain in effect for up to three years.

Northstar is a joint Federal/State of Alaska unit located in the Beaufort Sea about 12 miles northwest of Prudhoe Bay that has been producing since 2001. BP was the original lessee and operator of Northstar. Hilcorp has operated the field since 2014, which produces about 4,600 barrels of oil per day and 3,100 barrels of natural gas liquids per day. BOEM will continue to review and monitor Federal production activities at Northstar and may need to conduct additional NEPA analysis if operations expand.

In July 2017, BOEM approved Eni US Operating Co. Inc.'s (Eni) Beaufort Sea exploration plan. This exploration plan proposed up to two mainbore and two sidetrack wells targeting its Federal OCS leases from an existing drilling and production island facility (Spy Island) in State of Alaska waters. Drilling for the first well commenced in December 2017. In April 2018, BOEM approved a revision to the exploration plan, which augmented the multi-year, winter-only OCS drilling schedule with additional drilling and related activities allowed to take place in the summer of 2018. Eni completed drilling the first well in April 2019. In FY 2020, BOEM approved a deviation to Eni's exploration plan for the drilling of a second well. Eni postponed this drilling and received a Suspension of Operations from BSEE that expires April 2022.

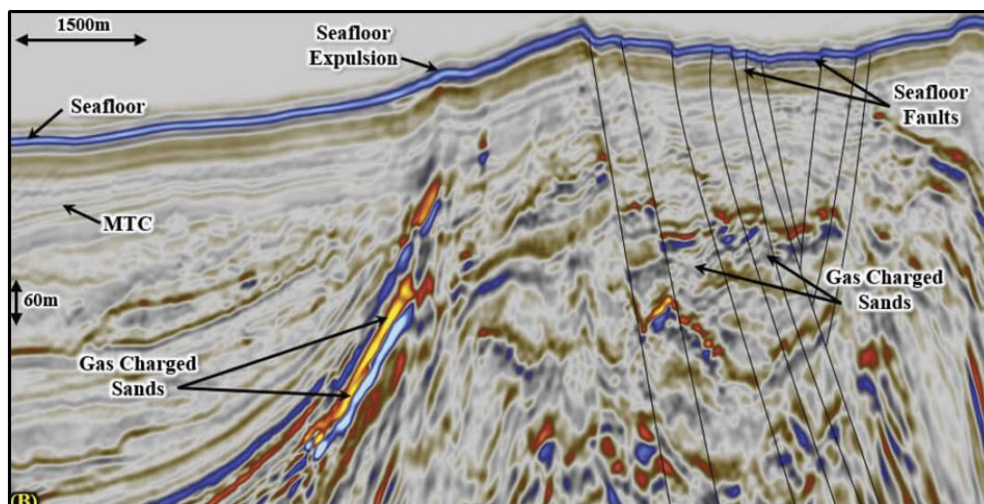
Per Department policy, BOEM initiates and engages in government-to-government consultations with federally recognized Tribes and government-to-Alaska Native Claims Settlement Act corporations in planning activities that may have a substantial direct effect on those entities.

Camarillo Office: Proposed activities on active leases periodically require updates or revisions to approved development and production plans. One right-of-use and easement plan was approved in FY 2020. BOEM did not have any plan activity in FY 2021. BOEM expects to receive one revised or supplemental development and production plan in FY 2022. BOEM assists BSEE in the preparation of environmental analyses associated with conventional energy leases but has no role in approving decommissioning projects. To this end, BOEM expects to assist BSEE in releasing a programmatic EIS for decommissioning of oil and gas platforms in FY 2022.

➤ **Geological & Geophysical Reviews**

BOEM is responsible for reviewing all oil and gas exploration and development plans for potential hazards that may be encountered in conducting the proposed drilling activity. BOEM geoscientists identify and evaluate the potential risks of surface and subsurface geologic hazards (e.g., shallow faults, shallow gas pockets, shallow water flows, abnormal pressure zones, etc.) and man-made obstructions

(e.g., pipelines, cables, shipwrecks, etc.). Geophysical reviews are performed to evaluate shallow hazards (seafloor and near seafloor) associated with operators' applications for pipeline rights-of-way and associated permits. To analyze these applications and requests, BOEM uses G&G data (e.g., 2D and 3D seismic data, and high-resolution side scan sonar data) to understand the geologic and geophysical environment in the area. BOEM evaluates and verifies operators' submissions and interpretations, such as their identification and assessment of potential geohazards and archaeological resources that may be affected by exploratory and development drilling, installation of structures, laying pipelines, and other ancillary activities related to the plans. In addition, geoscientists evaluate the potential risk of encountering hydrogen sulfide. The G&G reviews provide a detailed evaluation of operators' geohazards analyses, shallow hazards assessment, and archaeological resources, and are used to determine mitigations to be applied to plan and permit approvals.



Seismic Data Showing Shallow Geohazards

Source: <https://ncs-subsea.com/seismic/applications/>

BOEM provides BSEE, upon request, with subsurface expertise and assistance with regulatory review of applications for drilling permits. For example, BOEM geoscientists conduct G&G evaluations that include broaching analyses that support BSEE's review and approval of operators' applications for permits to drill 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, geoscientists conduct a broaching analysis. A typical broaching analysis takes one to two weeks, depending on the complexity of the geology, and involves the evaluation of subsurface stratigraphic and structural conditions. The purpose of the analysis is to determine if escaping hydrocarbons from a failed casing shoe (a short steel sleeve attached to the bottom of a string of casing to help guide and protect the casing) will be trapped in the formations, or potentially reach the seafloor.

New Orleans Office: In FY 2021, BOEM conducted 102 geological and 108 geophysical reviews in support of exploration plan and development operations coordination document reviews; 12 high-resolution survey reviews; 104 reviews of applications for permits to drill; and 86 pipeline reviews for BSEE. In the future, increasingly complex analyses will need to be conducted to identify potential geohazards because of the higher resolution data that is being collected for complex projects, especially

those occurring in deep water. BOEM anticipates the number of reviews to remain the same in FY 2022 and increase by 10 to 20 percent in FY 2023. In FY 2021, BOEM completed broaching analyses on 4 proposed wells to help support BSEE's reviews. BOEM anticipates approximately five broaching analyses each in FY 2022 and FY 2023.

Anchorage Office: In FY 2021, BOEM conducted one geophysical survey regulatory review and reviewed two volumes of reprocessed priority legacy survey data in preparation for a Cook Inlet OCS lease sale scheduled for June 2022.

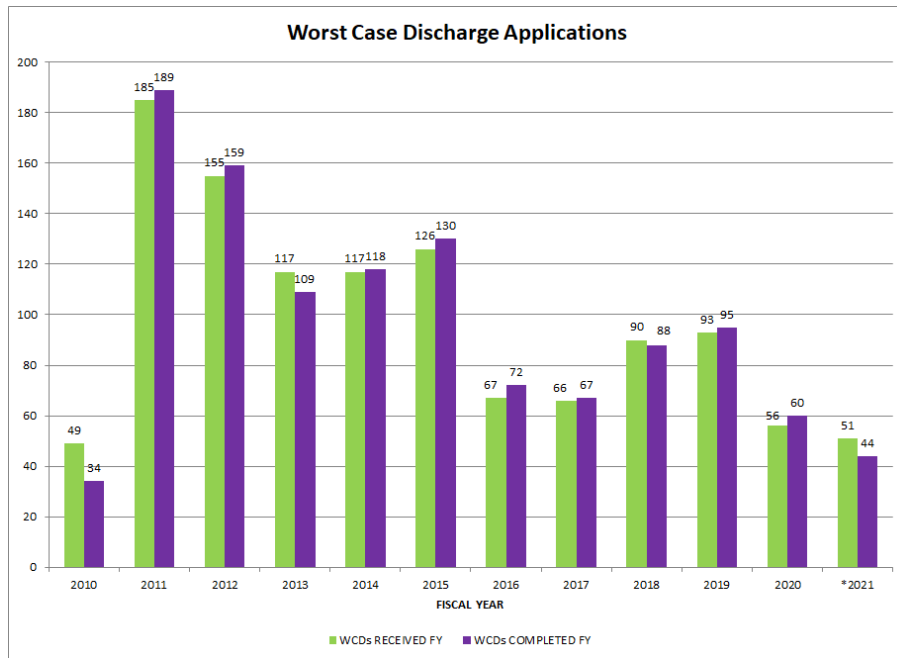
➤ **Worst-Case Discharge**

Operators and lessees are required to submit worst-case discharge calculated volumes and associated data as part of every exploration plan, development and production plan, and development operations coordination document. BOEM defines a worst-case discharge for exploratory and development drilling operations as the daily rate of an uncontrolled flow of oil and gas from all producible reservoirs that are simultaneously exposed to an open wellbore. The package of reservoirs exposed to an open borehole with the greatest discharge potential is considered the worst-case discharge scenario.

Each regional office is responsible for worst-case discharge verifications and decision documentation associated with plans in their respective regional areas. 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 decisions on applications for permits to drill.

New Orleans Office: BOEM made determinations on 44 worst-case discharge verifications in FY 2021. During FY 2022 and FY 2023, BOEM anticipates the number of worst-case discharge analyses to increase to 55 and 65 respectively, although the workload will depend on the drilling activity in the Gulf of Mexico. With drilling on the shelf reaching a plateau, the activity level is expected to be driven primarily by deepwater drilling. The following figure depicts the number of worst-case discharge determination requests received and reviewed for completeness, and the number of analyses completed in each year since the program's inception in 2010.

Figure 16: Worst-Case Discharge Analyses Completed in the New Orleans Office



BOEM continues to develop trend parameters for deepwater exploration and development drilling for critical reservoir and fluid properties for the worst-case discharge analysis to enhance the efficiency of the process while maintaining the regulatory oversight needed to ensure an adequate response to an uncontrolled blowout.

BOEM continues to review its worst-case discharge analysis methodology and work is ongoing to incorporate the *LSU Flow Model*, developed by Louisiana State University, into BOEM’s worst-case discharge modeling software. This model provides BOEM with a wellbore flow diagnostic formula exclusively developed for multiphase flows in large-diameter pipes and high-velocity flows experienced in worst-case discharge analyses.

Anchorage Office: BOEM regularly works with operators to clarify the various input parameters and assumptions in reservoir flow simulation models used to produce their worst-case discharge estimates. In FY 2022, BOEM anticipates completing at least one worst-case discharge analysis for proposed exploratory drilling of leases issued under Cook Inlet Lease Sale 244 in 2017.

Camarillo Office: With no new recent leasing offshore the Pacific, the worst-case discharge analyses are conducted over mature fields only. A standard operating document was adopted for the worst-case discharge analyses conducted in FY 2019. BOEM completed two worst-case discharge analyses in FY 2020. During FY 2021, BOEM commenced a detailed analysis of a mature field. BOEM expects to complete this analysis in FY 2022 and will use it to update the recently adopted standard operating document. BOEM anticipates a similar level of activity in FY 2022 and FY 2023.

➤ **Oil Spill Financial Responsibility Program**

The financial responsibilities associated with the development of OCS resources are enormous. Just as BOEM must protect the U.S. taxpayer from entities that fail to meet their lease, grant, or permit obligations, BOEM 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. The limit of liability for damages from OCS facility spills under the Oil Pollution Act is capped at \$137.66 million with respect to each incident plus the total of all removal costs. BOEM performs a thorough review 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 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 and their designated agents and guarantors. The program currently oversees approximately 90 companies covering 3,795 facilities with financial coverage in excess of \$7.1 billion.

RISK MANAGEMENT PROGRAM

BOEM continues to work to strengthen its financial risk management capabilities to address changing market conditions by tracking the financial profiles of companies in distress and obtaining financial assurance on specific leases as necessary. BOEM conducted a full review of the existing financial assurance framework and engaged with BSEE and industry to discuss relevant issues and concerns to develop a draft financial assurance rule. BOEM will further enhance its comprehensive risk management and financial assurance regulatory framework with the goal of ensuring U.S. taxpayers will not have to pay for liabilities related to noncompliance by lessees and grant holders, including the decommissioning of OCS facilities.

Characteristics of the companies operating on the OCS have changed over the years, with large companies transferring older properties to small companies. Since 2009, there have been 35 bankruptcies of corporations with OCS activities. Accordingly, one potential risk is that a company becomes financially insolvent, and the U.S. Government and taxpayers are forced to pay for decommissioning a facility.

The cost of decommissioning a facility is based on the type and number of various components (e.g., pipelines, structures, wells), water depth, location, the condition of the facilities, market conditions (e.g., rig availability and cost), and other factors. Contingent liabilities associated with the decommissioning of all facilities on the OCS are currently estimated to be approximately \$37.3 billion to \$51.3 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 water depth due to climate, sea ice, and remoteness. These are some examples of the conditions that spurred the need for the U.S. Government to take a more proactive approach to the development and management of a national risk policy and financial assurance program.

As a steward of OCS resources, BOEM manages a variety of financial and physical risks associated with OCS activities. Some of these risks intrinsically relate to financial assurance and loss prevention to the U.S. Government and taxpayers. BOEM performs robust, continuous risk monitoring to help mitigate impacts of financial uncertainty, credit risk, project failures, legal liability, accidents, and natural disasters.

RESOURCE EVALUATION

BOEM conducts analyses to identify areas of the OCS that are the most likely to support conventional energy development based on technical and economic factors. To accomplish this, BOEM:

- Acquires G&G data and information through the regulation of pre-lease permitted 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 as it seeks 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

BOEM identifies 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 each play's hydrocarbon potential and its economic viability with complex computer modelling and methodologies. The assessment process incorporates specific geologic, petroleum engineering, and economic data and information. In addition to helping BOEM estimate undiscovered hydrocarbon resources, these studies help BOEM identify environmental and operational constraints, assisting in lease sale decision-making. 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 tracks the resources and acres offered annually, compared to what was planned for the year, and analyzes the results to inform the National OCS Program and individual lease sale decisions. Resource estimates support analyses of potential impacts of policy decisions, legislative proposals, and industry activities, as well as informing NEPA analyses.

The scale of the assessment activities ranges from large (i.e., regional or OCS-wide) to small (i.e., lease sale specific, such as individual prospects and lease tracts). In the early stages of this process, the focus is on regional areas. 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 (e.g., moratoria). Once a lease sale area has been identified, BOEM's geologists and geophysicists perform detailed subsurface mapping and analyses 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.

BOEM provides a comprehensive national assessment of undiscovered oil and gas resources in five-year intervals. BOEM's most recent National Assessment, the *2021 National Assessment of Undiscovered Oil and Gas Resources of the U.S. Outer Continental Shelf* (2021 National Assessment), represents a thorough appraisal that considers relevant data and the best available information and builds upon previous assessment efforts on the OCS. In its 2021 Assessment, BOEM estimates that the United States OCS contains a mean of 68.79 billion barrels of undiscovered technically recoverable oil and a mean of 229.03 trillion cubic feet of undiscovered technically recoverable natural gas. The resource information and analysis included in the 2021 National Assessment is critical to informing BOEM's leasing efforts, specifically the development of the next National OCS Oil and Gas Leasing Program. Additional information is available online at: <https://www.boem.gov/oil-gas-energy/resource-evaluation/undiscovered-resources>.

The 2021 National Assessment was developed by compiling pricing and economic information, updating cost databases and taxation assumptions, finalizing geologic play-level estimates, and aggregating resource estimates to the National level. Analysis of geologic history, regional stratigraphy, major geologic trends, major structural features, source rocks, reservoir rocks, seals and trapping mechanisms, and petroleum exploration history was conducted. In addition, the application of risk and probability theory and statistical analysis was used to develop resource estimates for the 2021 assessment. The 2021 National Assessment also included the development of an improved corporate approach to geologic risk assessment. This work continued into FY 2022 with the expected publication of national and regional reports supporting the 2021 National Assessment, with additional work dedicated to the preparation of future assessments.

New Orleans Office: To support the development of the 2021 National Assessment, the Gulf of Mexico Region assessed resources located in the Atlantic OCS and Gulf of Mexico OCS. BOEM formed teams of geoscientists and engineers for both basins. BOEM created work plan and project management documents and developed and adopted a standardized methodology for assessing play and prospect risk, which all BOEM regions adopted. The work includes identifying and determining if geologic conditions exist for the accumulation of oil and gas, and if a basin may be oil- or gas-prone.

Anchorage Office: In FY 2021, staff prepared and published the 2021 Alaska OCS Region Assessment Report. Staff began re-evaluating the geologic interpretations of Alaska's priority OCS areas from the ground up using the newest interpretive tools complemented by both freshly reprocessed legacy data and newly acquired geophysical data to lay the groundwork for the 2026 National Assessment. In FY 2022, BOEM began to digitally assess key components of geologic plays and prospects across priority OCS

areas, integrating new data using highly evolved interpretive techniques developed in recent years to perform a comprehensive update to the regional assessment. This update will be the first major, regionally extensive geologically focused update since the last comprehensive assessment of Alaska OCS resources in 1995. In FY 2022, BOEM will also prioritize a series of data management initiatives to create, populate, and maintain an authoritative database of key geologic parameters vital to resource assessment activities to ensure assessors have efficient access to these valuable datasets.

Camarillo Office: In FY 2021, the BOEM Pacific Region published the Pacific Region’s Assessment Report using the bureau’s newly adopted methodology. For FY 2022 and FY 2023, the Pacific Region will begin the implementation of probabilistic approaches to capture the geologic uncertainties for the 2026 National Assessment. In FY 2023, the Pacific Region plans to use its G&G database to re-evaluate play risk and geologic uncertainties supporting resource evaluation.

➤ Reserves Inventory Program

The OCSLA 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.” To meet this requirement, BOEM develops 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. BOEM is responsible for continually updating volumetric estimates on over 1,300 fields in the Gulf of Mexico. During FY 2021, approximately 5,600 reservoirs were interpreted, revised, or added to the inventory. Due to the reservoir data conversion from deterministic to probabilistic, and the challenges that follow launching a new program, BOEM anticipates fewer reserves inventory updates in FY 2022 and FY 2023.

Reserve studies are critical inputs to determining the Nation’s OCS oil and gas endowment, conducting resource assessments, generating analog information for bid adequacy determinations, and informing the review of industry plans and requests. The geologic and engineering information supports other program activities within the Department, including development and preparation of the National OCS Program and cooperative efforts with the Department of Energy and the Energy Information Administration. For example, BOEM’s reserves inventory and resource assessment information support the Energy Information Administration’s National Energy Modeling System, used for preparation of forecasts within its Annual Energy Outlook.

New Orleans Office: Reserves inventory personnel review conservation information document submissions, which BOEM requires 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 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. In FY 2021, BOEM evaluated 16 initial and supplemental conservation information documents and 9 revised conservation information documents. During FY 2022, BOEM anticipates evaluating approximately 15 initial and supplemental conservation information documents and 10 revised conservation information documents.

In FY 2021, BOEM published the *Estimated Oil and Gas Reserves, Gulf of Mexico OCS Region, December 31, 2019* (OCS Report BOEM 2021-052) report. This report provides estimates of oil and gas reserves in the Gulf of Mexico OCS, considering reserves additions and revisions and produced volumes. Reserves estimates are derived from individual reservoirs, based on geologic, geophysical, and engineering data, and aggregated to the field, protraction, and planning area levels.

Anchorage Office: BOEM continues to support BSEE in the oversight of production allocation issues for the Northstar field production unit, which produces oil from both State of Alaska and Federal OCS leases. In FY 2022, BOEM completed and provided the Alaska OCS Region 10-year Oil and Gas Production Forecast that contributes to BOEM's 10-year estimate of Federal OCS royalty receipts. This estimate includes future production forecasts from developments that are thought likely to occur within the next 10 years. In FY 2022, BOEM engineers and geoscientists began an inventory of Alaska OCS contingent resources. This inventory will provide decision makers and the public with an assessment of oil and gas resources previously discovered but no longer leased. This effort will take two to three years to complete, but Alaska anticipates having new estimates to publish in the 2023 Report to Congress of the Comprehensive Inventory of OCS Resources. Staff have developed a process for modeling probabilistic resources and reserves and are currently analyzing this process for input sensitivities.

Camarillo Office: BOEM's annual Field Reservoir and Reserve Estimates report, which breaks down the area's reserves and known resources by field and productive zones, provides a brief update on reserves and production between releases of the more comprehensive Estimated Oil and Gas Reserves report. During FY 2021, BOEM completed evaluation of the calendar year 2020 Field Reservoir and Reserve Estimates report, which is published on the BOEM webpage. Typically, reports of preceding calendar year oil and gas production volumes lag by six months. BOEM anticipates that reporting of the calendar year 2021 production volumes will be complete by the third quarter of FY 2022. Therefore, BOEM anticipates the calendar year 2021 reserves report will be completed and published in fourth quarter FY 2022. The Camarillo Office also provides the Pacific OCS Region 10-year Oil and Gas Production forecast, which is used to estimate 10-year Federal OCS royalty receipts for budget submissions.

➤ **Permitting of Prelease/Off-Lease Exploration**

BOEM works to ensure that OCS energy-related prelease exploration, prospecting, and scientific research operations do not interfere with other ocean users, lease operations, or other permitted uses of the area. Permits to acquire pre-lease G&G 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 requirements 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. BOEM is considering approaches to streamline permitting for seismic data collection. Adherence to BOEM's processes and regulations ensures exploration and research activities are conducted in a safe and environmentally sound manner.

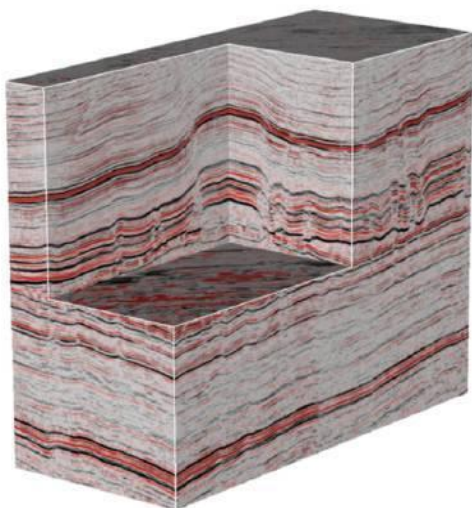
New Orleans Office: BOEM continues to process permits for oil and gas exploration activities. During FY 2021, BOEM evaluated and issued 38 permits. During FY 2022, BOEM anticipates evaluating and issuing approximately 40 permits, and various permit modifications, with most of the permits issued for high-resolution and deep penetration seismic surveys. BOEM estimates it will evaluate and issue approximately 42 permits during FY 2023.

Anchorage Office: BOEM will continue to process permits for oil and gas exploration activities. In FY 2021, BOEM approved a geohazard permit for data collection in the Cook Inlet OCS. That permit allowed for data collection over four leased blocks and the surrounding area and was completed in October 2021. Future permit activity is expected at up to two permits per year, primarily for seismic surveys for off-lease exploration. BOEM ensures that all permittees adhere to statutory requirements (including the Marine Mammal Protection Act and the Endangered Species Act) and conducts required government-to-government consultations (e.g., Tribal and Alaska Native Claims Settlement Act Corporations). BOEM will inspect and select any new data as a result of future seismic surveys for BOEM geoscientists to use for resource assessment and fair market value evaluation. In FY 2022, BOEM prioritizes the creation, population, and implementation of an Esri Portal-enabled geologic and geophysical lifecycle tracking toolkit and back-end database that will manage the issuance of permits, enable automation assisted operations tracking, and document all permit administration activities through the tool environment. This toolkit will also allow for automated identification of data eligible for release under regulations, capture use restrictions of individual BOEM-managed data, and provide metadata and document links capturing important information about BOEM-managed data.

Camarillo Office: BOEM continues to monitor an operator's activities associated with a seismic permit application submitted in December 2017. During FY 2019, the operator conducted high-resolution geophysical surveys to investigate potential archeological impacts associated with the proposed seismic survey. In FY 2020, the operator chose to reconsider acquisition parameters in light of site conditions revealed by their benthic surveys. The permit is on hold pending the operator's decision on the mode of acquisition.

➤ **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 BOEM as it seeks to ensure fair market value in lease sale bid evaluations.



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

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 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 and information to BOEM upon request after completion of data acquisition. BOEM uses the data internally, while maintaining them in a proprietary term that generally ranges from 2 to 25 years. The extensive amount of acquired data and information 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 leased tract fair market value.

Atlantic OCS: BOEM supports both the acquisition of modern, robust scientific information about the scope and location of potential oil and gas resources in the Atlantic and the 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.

In recent years, three Atlantic G&G permits for airborne gravity/magnetic surveys have been issued. They were issued in FY 2015, FY 2016, and November of FY 2020. All permits expired with no data collection. NOAA issued Incidental Harassment Authorizations on November 30, 2018, for five deep penetration seismic surveys proposed off the Atlantic coast. The Incidental Harassment Authorizations expired on November 30, 2020, and the associated G&G permits were not issued. Permittees will have to reapply if they wish to pursue data acquisition on the Atlantic OCS. One G&G permit application for oil and gas exploration on the Atlantic OCS is currently pending — all others were cancelled by the permittees.

New Orleans Office: Both BOEM and industry are expanding their use of 3D technology to study and evaluate the complex geologic picture of the Gulf of Mexico. The data provided by this technology is used to inform decisions regarding offshore resource development. Because it oversees many active leases, BOEM acquires, analyzes, and manages a vast collection of G&G data. BOEM currently manages data from approximately 2,810 three-dimensional surveys, 601 two-dimensional surveys, and other critical data sources encompassing a total volume of 249 terabytes of 32-bit SEG-Y data. The volume of seismic data managed by BOEM increased by 17.6 terabytes during FY 2021. To manage all of this data effectively, BOEM invests in data management solutions (servers, disk space, hierarchical storage management, database development) needed to 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).

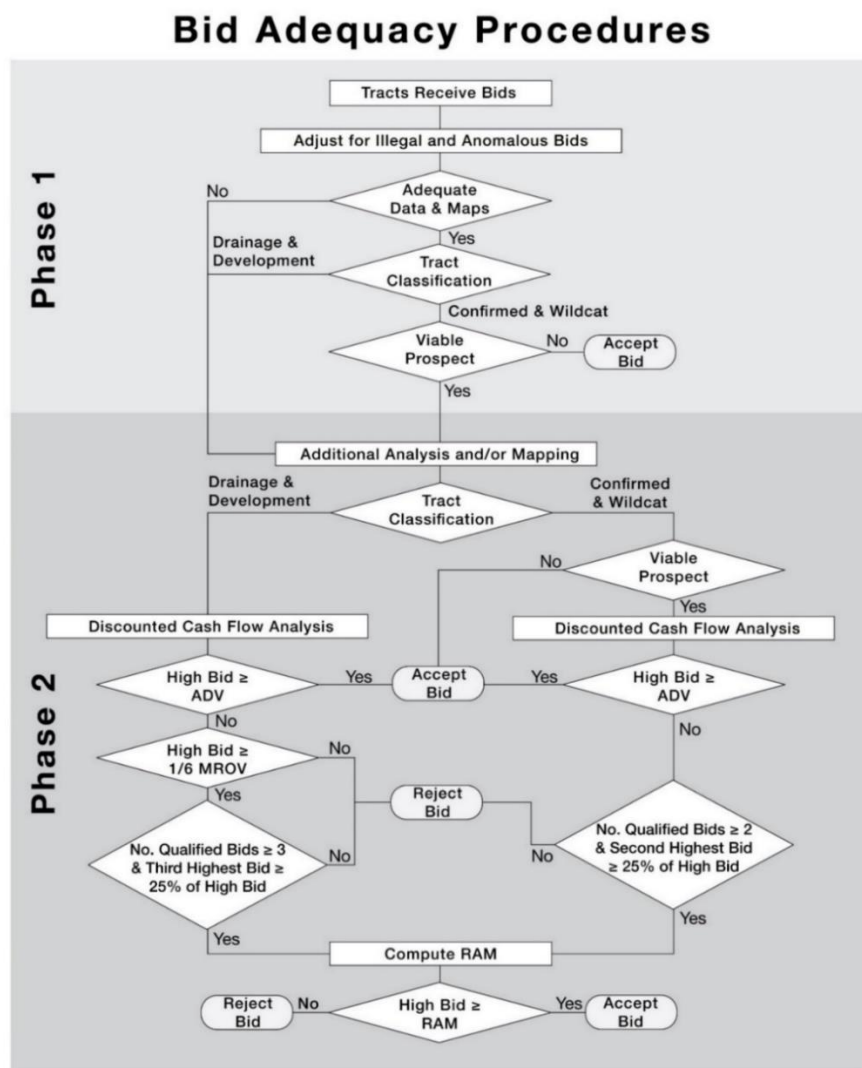
Anchorage Office: BOEM continues to acquire and manage G&G data needed to support mission functions, such as the review of exploration and development and production plans, the development of the National Assessment, lease sale environmental impact statement scenarios, National OCS Program scenarios, lease sale fair market value determinations, and worst-case discharge determinations. As of November 2021, BOEM's Anchorage office manages data from approximately 24 3D seismic surveys, 236 2D seismic surveys, and other critical G&G data sources, with a total volume of 1.3 TB of SEG-Y data plus TIFF images of historical 2D seismic data. In FY 2021, BOEM identified raw data gathered from 24 legacy OCS surveys throughout the Gulf of Alaska, Cook Inlet, Kodiak, Shumagin, and Aleutian Arc areas that were well suited for modernization. Third party reprocessing and reformatting services were contracted to significantly improve data quality and accessibility to provide far clearer insight into areas with sparse data coverage to serve as the framework for a regional basin modeling project. Additionally, Cook Inlet OCS G&G Survey No. 21-01 was permitted and data collection operations commenced in FY 2021; operations conducted under this permit concluded in early FY 2022. BOEM will select and acquire those permitted shallow hazards data in FY 2022 when processing is complete in anticipation of an exploration plan submission. Further reprocessing efforts will proceed as necessary appropriations and budget prioritization are enacted.

Camarillo Office: In FY 2019, BOEM set up a multi-year cooperative agreement with California State University Northridge's Center for Geospatial Science and Technology (CGST). This cooperative agreement helps BOEM explore innovative ways to make data readily useable and accessible. Workflows are being developed for data visualization and machine learning with a previously created G&G database. In FY 2020, CGST expanded the database to include more than 20,000 entries. For FY 2021, the enlarged database was used to perform more robust machine learning analysis to inform resource evaluation efforts. For FY 2022, BOEM is expanding its existing database to incorporate G&G and engineering data covering the entire OCS Region.

➤ **Fair Market Value and Bid Adequacy**

Ensuring the receipt of fair market value for OCS resources is mandated by OCSLA and is one of BOEM's critical responsibilities for oil and gas leasing. Under its bid adequacy procedures, BOEM reviews all oil and gas lease sale bids and evaluates all blocks using either tract-specific bidding factors or detailed tract-specific analytic factors as it seeks to ensure that fair market value is received for each OCS lease issued. The bid adequacy process relies on evidence of market competition and in-house estimates of tract value. The bid review process incorporates G&G data along with reserve, resource, engineering, and economic information 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. If a bid is rejected and a company appeals the rejection, BOEM's experts review the appeal and make a recommendation to the Director.

Figure 17: Flow Chart for Post-Sale Evaluation Procedures in Areawide Sales



Since 1983, bid adequacy reviews and fair market value determinations have resulted in an average bid rejection rate of 4.3 percent. Bid adequacy procedures have consistently resulted in higher returns in subsequent sales for tracts bid on and rejected in previous sales. From 1983 through 2021, BOEM rejected approximately \$738 million in total high bids. Subsequently, the same blocks were re-offered and drew high bids of \$1.95 billion, a total net dollar gain of \$1.28 billion and a return on rejected high bid amounts of 170 percent. The fair market value determinations from bids received in BOEM’s Gulf of Mexico Sale 256, held in November 2020, resulted in rejecting \$9 million dollars in high bids.

New Orleans Office: In FY 2021, BOEM conducted one sale: Gulf of Mexico region-wide Sale 256, held in the first quarter of FY 2021. Gulf of Mexico Lease Sale 257 was held on November 17, 2021. Subsequently, the United States District Court for the District of Columbia vacated and remanded the Record of Decision for lease sale 257. As a result, BOEM did not issue any leases related to Sale 257, and any future actions related to Sale 257 are pending the outcome of litigation.

Anchorage Office: The approved 2017-2022 National OCS Program scheduled one lease sale in Alaska, in the Cook Inlet Planning Area (Lease Sale 258 in 2022). In FY 2022, BOEM staff conducted a practice post-lease bid adequacy exercise to ensure that all data and information is up to date and that modeling software and staff are capable of ensuring all lease blocks receive fair market value in anticipation for Lease Sale 258, should the sale be held. In FY 2022, BOEM also will create, populate, and begin to integrate a spatially referenced, Esri Portal-enabled prospect database capturing the results of historic prospect-based fair market value analysis. This database will be used to inform future sales and as a resource for the National Resource Assessment.

ECONOMIC EVALUATION

As mentioned above, a critical component of BOEM's mission is seeking 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 aid in receipt of fair market value, BOEM designs fiscal and lease terms for OCS lease sales; develops various resource and economic evaluation approaches; prepares bid adequacy guidelines, procedures, and economic inputs; and coordinates reviews of appeals of bid rejection decisions. 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 that generate significant supplies of domestic oil and gas, resulting in the receipt of billions of dollars each year to the U.S. Treasury. BOEM also undertakes studies, as needed, to analyze and address specific policies and compilations of data affecting overall OCS program responsibilities and initiatives.

➤ Economic Analysis and Revenue Estimates

BOEM conducts economic analyses to support the development of regulations, evaluation of policies for lease terms, and conditions and bidding systems for oil and gas and renewable energy lease sales. BOEM's work supports internal and Department-wide projects, such as the development of the National OCS Program, and other Federal agency projects, such as the U.S. Department of Transportation's assessment of fair market rental value for construction of offshore liquefied natural gas ports. BOEM's economic experts review and design policies and methods for forecasting receipts from offshore energy programs, including the estimation of the manner and rate at which reserves and resources of oil and gas are discovered and produced. BOEM generates the receipt estimates used to project revenue and offsetting collections amounts identified in the President's annual budget process and mid-year review process. BOEM's economists also annually assess the present value of the future Federal royalty stream of OCS proven reserves for use in the Nation's accounting statements.

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

BOEM's efforts contribute significantly to the development of national energy strategies. BOEM develops and maintains economic and statistical models and databases that are the basis for lease sale design, National OCS Program formulation, resource evaluation, post-sale and operational activities, rulemaking, revenue sharing, and royalty relief programs. The economic assumptions and scenarios that BOEM generates are used in post-sale tract evaluations, national resource assessment studies, and in applications submitted to BSEE for royalty relief. BOEM also provides economic analyses and fiscal forecasts for energy leasing policies, regulatory 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 collections total.

OUTLOOK FOR CONVENTIONAL ENERGY

BOEM continues to work with BSEE to support all permitting decisions necessary to ensure the orderly development of OCS oil and gas resources that contribute to U.S. energy security, and BOEM will continue to meet its statutory and regulatory mandates to oversee OCS oil and gas resource development. This includes: allowing for appropriate access to those resources; safeguarding a fair return to taxpayers through economic evaluation and analysis of offshore natural resources; enhancing its risk management program; and ensuring that exploration and development take place in an environmentally responsible manner. In response to direction in Executive Order 14008 and in light of the Secretary of the Interior's broad stewardship responsibilities, the Department conducted a review of its oil and gas program and published a report of its findings in November 2021. The report identifies key reforms necessary to ensure that the programs provide a fair return to taxpayers, discourage speculation, reduce environmental impacts, hold operators responsible for remediation, and create a more inclusive and just approach to managing public lands and waters. The Department's report makes a number of specific recommendations to restore balance to these programs, including adjusting royalty rates, pursuing adequate financial assurance for decommissioning liabilities, and prioritizing leasing in areas with known resource potential while avoiding conflicts with other uses. The Department is in the process of implementing administrative changes consistent with the report's findings and recommendations, including where necessary, updating regulations and agency policy guidance documents that apply to existing leases as well as any new leases that may be issued. The Administration is committed to the responsible and sustainable development of Federal energy resources as the Nation transitions to a low-carbon economy, and such reforms are a critical component of this effort.

Marine Minerals

FISCAL YEAR 2023 BUDGET

Bureau of Ocean Energy Management

Marine Minerals

Table 11: Marine Minerals Budget Summary

Activity: Ocean Energy Management
Subactivity: Marine Minerals

Marine Minerals	2021 Actual	2022 CR at Annual Rate	Fixed Costs (+/-)	Internal Transfers (+/-)	Program Changes (+/-)	2023 Request	Change from 2022 CR at Annual Rate (+/-)
Marine Minerals	10,781	10,781	155	0	+4,447	15,383	+4,602
<i>FTE</i>	<i>18</i>	<i>21</i>	<i>0</i>	<i>0</i>	<i>+5</i>	<i>26</i>	<i>+5</i>

The OCSLA designates BOEM as the Federal authority for overseeing the use of marine minerals across almost 2.5 billion acres of the OCS. BOEM’s Marine Minerals Program facilitates access to and manages these crucial OCS resources to support resilient coasts, natural disaster preparedness, climate change adaptation, critical infrastructure protection, and the supply chain for critical minerals. BOEM’s marine minerals mission involves environmentally responsible stewardship, mineral resource exploration and leasing activities, coordination with governmental partners, engagement of stakeholders, and scientific research to improve decision making and manage risk.

The Bureau may convey, on a noncompetitive basis, the rights to sand and other sediment to Federal, State, and local government agencies for use in shore protection, beach and wetlands restoration projects, or other construction projects funded or authorized by the Federal Government. BOEM also oversees marine mineral geological and geophysical exploration, and competitive commercial leasing for critical and other minerals located on the OCS.

BOEM continues to assess which of the currently identified 50 critical minerals, such as cobalt, manganese, and rare-earth elements, may be located on the OCS.



BOEM team monitors hopper dredge using OCS sand

The FY 2023 budget will support:

- **Climate Change Resilience and Adaptation:** Consistent with EO 14008, *Tackling the Climate Crisis at Home and Abroad*, and the 2021 DOI Climate Action Plan, BOEM continues to advance its marine minerals activities, facilitating the restoration and protection of shoreline infrastructure vital to the Nation’s security, economy, and ecosystems, as well as beach and coastal wetlands restoration projects. These activities contribute toward the Administration’s goal of increasing climate change resilience. BOEM supports and applies state-of-the-art science to make informed decisions, mainstreams nature-based solutions and other adaptation strategies, and builds strong partnerships to ensure our Nation’s coasts are well managed, protected, and preserved for current and future generations.
- **Use of Sand and Sediment Resources:** As of February 1, 2022, BOEM has conveyed the rights to nearly 178 million cubic yards of OCS sediment and executed 64 negotiated agreements for projects in eight states that have restored nearly 444 miles of coastline. BOEM expects to facilitate additional mineral exploration and leasing in FY 2022 and FY 2023 on the Gulf of Mexico and Atlantic OCS, including the potential for the first negotiated agreement in the State of Texas.

- **National Offshore Sand Inventory:** BOEM continues to develop the National Offshore Sand Inventory, focusing in priority areas along the Gulf of Mexico and south and mid-Atlantic. The National Offshore Sand Inventory helps BOEM and its partners identify the location, quantity, and character of sand reserves that may be appropriate for use in beach nourishment, coastal restoration, and infrastructure protection efforts. The National Offshore Sand Inventory enables BOEM’s partners to act quickly and responsibly in emergency or post-storm situations and supports scenario and resilience planning to forestall climate change effects. BOEM also uses the National Offshore Sand Inventory to identify and manage multiple use conflicts, such as those with renewable energy or oil and gas facilities, and to avoid or minimize environmental impacts from dredging activities.



Key Program Statistics as of February 2022

- **Marine Minerals Information System:** BOEM manages and uses the Marine Minerals Information System (MMIS) to organize marine minerals data. BOEM populates the MMIS with data from National Offshore Sand Inventory activities, as well as project-specific leasing and monitoring activities. The MMIS is publicly available (<https://mmis.doi.gov/BOEMMMIS/>) and provides stakeholders with reliable information on sand and gravel resources on the OCS. BOEM will continue to populate, maintain, and host the MMIS in its current configuration through FY 2023, including updating data and metadata for geologic data, OCS sand resource areas, OCS dredge areas, and shoreline placement reaches. In FY 2023, BOEM will make key improvements to the MMIS provided by findings and recommendations of internal reviews kickstarted in FY 2021.

- **National Offshore Critical Mineral Inventory:** BOEM is building the National Offshore Critical Mineral Inventory to house information about potential critical mineral resources and environmental conditions in shallow water and deeper water environments.

SUMMARY OF 2023 PROGRAM CHANGES

Summary of 2023 Program Changes for Marine Minerals		
Program Changes:	(\$000)	FTE
Maintain Baseline Capacity	+128	+0
FY 2023 Fixed Costs	+155	+0
Technical Internal Transfers	[-520/+520]	+0
Develop National Offshore Sand Inventory	+4,056	+4
Support Responsible Stewardship of Critical Minerals	+263	+1
TOTAL Program Changes	+4,602	+5

* Changes listed in order of budget activity, not priority.

Maintain Baseline Capacity (+\$128,000). The 2023 budget includes important investments in programs needed to help strengthen America and be more competitive as the world continues to change. These investments include funding needed to maintain a strong, talented workforce and the core capacity needed to continue to fulfill BOEM's mission. The budget includes \$128,000 in this budget activity, which reflects the incremental amount needed to cover the fixed costs associated with mission operations in FY 2022. This request in combination with the FY 2023 fixed costs amounts will allow the program sustain core capacity and avoid impacts to ongoing program activities.

FY 2023 Fixed Costs (+\$155,000). Fixed cost increases are fully funded in BOEM's FY 2023 budget. These costs include increases to support changes in Federal health and retirement benefits and workers' compensation, rent to the General Services Administration, and payments to the Department through its Working Capital Fund.

Technical Internal Transfers (-\$520,000/+520,000; 0 FTE). Technical adjustments in FY 2023 reflect a decrease in offsetting collections paired with a commensurate increase in net current appropriations. The amount cited above reflects the technical internal transfer associated with this budget activity. There are no programmatic changes associated with this shift.

Develop National Offshore Sand Inventory (+\$4,056,000; +4 FTE). The proposed increase in resources enables the further development of the National Offshore Sand Inventory. This work facilitates the restoration and protection of shoreline infrastructure vital to the Nation's security, economy, and ecosystems, as well as beach and coastal wetlands restoration projects. Requested funding allows additional geophysical and geological data acquisition, evaluation, and interpretation, with a focus on needs identified along the western coast of the Gulf of Mexico. Requested FTE would support increased leasing and environmental activities associated with the growing demand for OCS sediments. The National Offshore Sand Inventory enables the Federal Government to proactively plan for OCS needs and

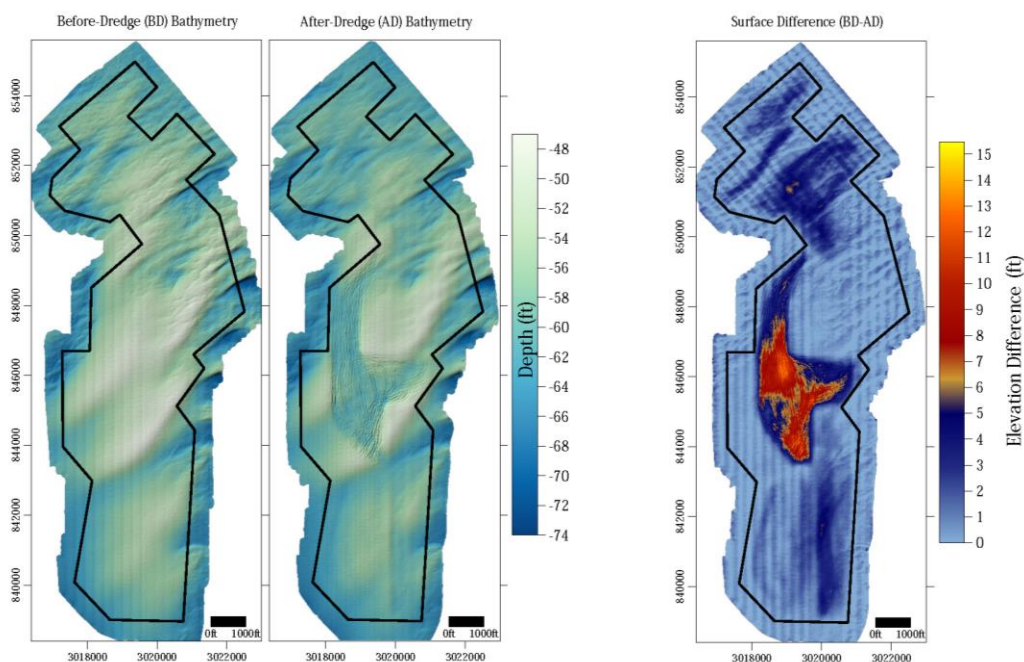
infrastructure protection efforts on a national scale, protecting taxpayers, localities, and the Federal Government from expenses resulting from hurricanes and other storm damage. Requested funds will significantly improve efforts to protect critical infrastructure and economic activity along the coasts of the U.S. by quantifying and identifying compatible and proximate sand resources that will reduce Federal disaster recovery and coastal project dredging costs, while also shortening project timelines. These funds will support coastal infrastructure and property protection, including national security infrastructure and assets.

Support Responsible Stewardship of Critical Minerals (+\$263,000; +1 FTE). Requested funding supports BOEM’s efforts to further its responsible stewardship of both OCS critical minerals resources and the surrounding environment. The additional FTE would help BOEM develop the needed in-house subject matter expertise pertinent to perform critical minerals environmental assessments. Funding will also enable BOEM to define and advance the tenets of responsible stewardship and to position itself to apply those principles during the evaluation of future requests to prospect for, lease, and potentially develop offshore critical minerals.

PROGRAM OVERVIEW

During FY 2023, BOEM will continue to:

- Manage the exploration and development of OCS sand and gravel resources;
- Identify sand and restoration-quality sediment resources for future use and advance the National Offshore Sand Inventory in high-demand areas or in proximity to resilience hubs;
- Populate, maintain, and host the MMIS;
- Engage stakeholders and coordinate with key partners on potential projects;
- Conduct environmental research, reviews, and consultations;
- Design dredge plans and associated stipulations to ensure potential environmental impacts are avoided and minimized;
- Develop leasing agreements that incorporate dredge plans;
- Oversee operational research and monitoring related to dredging activities and resource stewardship; and
- Explore the potential for critical minerals on the OCS and begin population of the National Offshore Critical Mineral Inventory.

Figure 18: Seafloor change data for borrow area in Dare County Beach Nourishment Project (NC)

(Left) Seafloor condition before dredging (Spring 2017) and after dredging (Fall 2017). Dredge tracklines are visible in the after-dredge (AD) map, most clearly in the central region of the borrow area. (Right) Elevation changes in borrow area showing OCS sand removed.

In FY 2023, BOEM anticipates processing additional requests for marine minerals exploration authorizations and leasing agreements. Related stewardship responsibilities will include monitoring of dredging operations, borrow area change, and potential environmental impacts (Figure 18). BOEM works with project partners to ensure performance of resiliency projects and prudent use of limited OCS resources in those projects. BOEM plans to sponsor new strategic research focused on the identification and responsible use of OCS sand resources. Separately, BOEM will leverage Environmental Studies Program funds to support research on priority environmental issues, such as evaluating the effectiveness of emerging technologies to improve mitigation practice, assessing the impact of dredging in borrow areas home to endangered species, or evaluating unique, slow-growing biological communities in the vicinity of critical minerals.

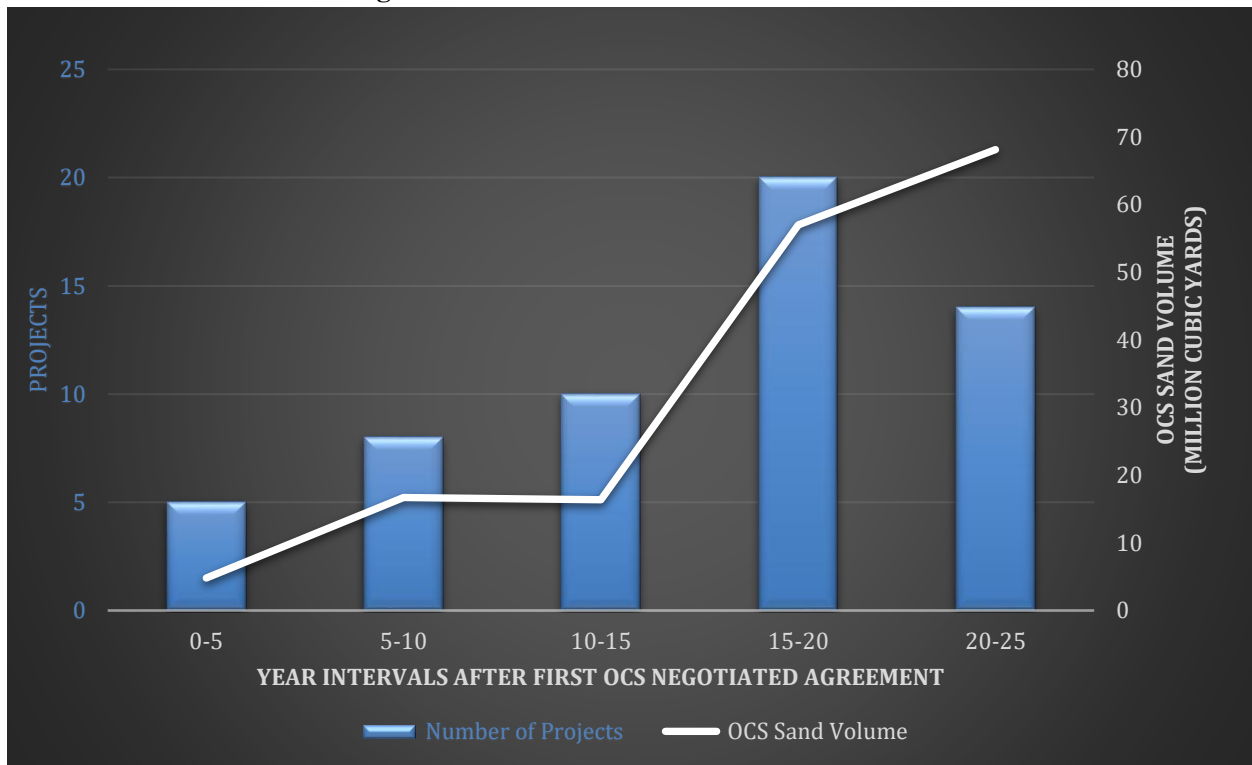
GROWING DEMAND FOR MARINE MINERALS

OCS sand and sediment resources are critical to the long-term success and cost-effectiveness of many shore protection, beach nourishment, and wetlands restoration projects along the Gulf of Mexico, Atlantic, and Pacific coasts. Over the last 25 years, BOEM has received an increasing number of requests for OCS sand and sediment, a greater geographic distribution of these requests, and a commensurate increase in the volume allocated each year (Figure 19). These trends are driven by diminishing resources in State waters and frequent tropical and winter storms along the Gulf of Mexico and Atlantic coasts. Over the next ten years, BOEM expects project partners to request the use of almost 300 million cubic

yards across 13 coastal States. BOEM anticipates potential growth into New York, Texas, and one or more New England states by the end of the decade. Timely access to OCS resources is critical to restoration and recovery efforts in the aftermath of natural disasters.

The availability of proven, technically recoverable sand is limited in comparison to future demand in some locations. As resources in State waters are depleted, there is increased focus on resources in Federal waters. Further, coastal planners recognize the benefit of adding to the near-shore coastal sediment budget by bringing in OCS resources, instead of simply moving sediment around within the active sediment transport system. Knowing where resources are and how much material is available up-front reduces project construction timelines and costs, as sources do not have to be discovered, characterized, or identified as part of a project’s schedule or budget. Advance regional-scale planning also enables project planners to consider economies of scale when designing and constructing projects. With early identification of sand resources, BOEM facilitates the restoration and protection of shoreline infrastructure vital to the Nation’s security, economy, and ecosystems, as well as beach and coastal wetlands restoration projects. BOEM continues to work proactively with partners, such as the U.S. Army Corps of Engineers (USACE), and State and local governments to identify and provide sand for projects so that communities can recover quickly from storms and be better prepared for future events.

Figure 19: Demand for OCS Sand Resources



Use of OCS sand resources has increased drastically over the last 25 years.

In FY 2021, BOEM managed the use of OCS sand for beach nourishment projects under negotiated agreements in Louisiana, Florida, North Carolina, and Virginia. BOEM anticipates receiving another 8 to 12 requests for new agreements and amendments in FY 2022 and FY 2023 for projects in Texas,

Louisiana, Florida, South Carolina, North Carolina, Virginia, Maryland, and potentially New Jersey. There are no near-term projects expected along the Pacific or Alaskan coastline. BOEM also considers and authorizes non-commercial geophysical and geological exploration for sand resources in these areas, especially Louisiana, Florida, and North Carolina.

As a responsible environmental steward, BOEM strives to ensure that any potential environmental impacts associated with OCS marine minerals activities are avoided or mitigated whenever possible. The Bureau complies with the requirements of NEPA and consults with the National Marine Fisheries Service and FWS on endangered species and essential fish habitat prior to leasing OCS resources. BOEM ensures coastal consistency and undertakes archaeological resources reviews to protect important cultural artifacts. BOEM also sponsors targeted environmental studies (primarily through the Environmental Programs budget activity) to evaluate the effects of specific proposed dredging operations, and to design mitigation measures to minimize the effects of dredging. BOEM invested more than \$15 million over the past eight years on world-class environmental research that informs resource stewardship and leasing decisions concerning the use of OCS sand resources.

➤ **National Offshore Sand Inventory**

As the steward of OCS mineral resources, one of BOEM's top priorities is to advance the National Offshore Sand Inventory — the comprehensive, data-driven catalog of the location, character, quantity, and accessibility of identified OCS sand resources and reserves. The process of inventorying sand and sediment useable in coastal restoration projects is an ongoing requirement subject to continual refinement.

As the National Offshore Sand Inventory expands, BOEM's information base and degree of confidence in resource estimations increase. The estimation of resources and reserves depends on constantly changing data and continually improving interpretations derived from the expanding data. In line with EO 14008, the National Offshore Sand Inventory reflects the Administration's goal to build resilience "against the impacts of climate change that are already manifest and will continue to intensify according to current trajectories."

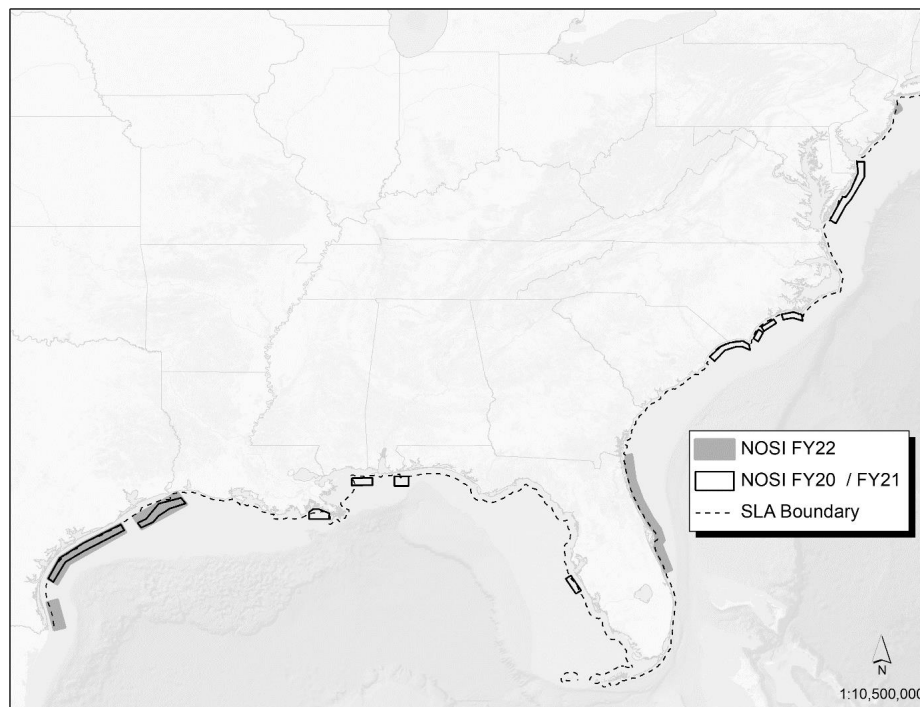
In support of the National Offshore Sand Inventory, BOEM and partner organizations continue to study and develop tools that analyze and identify areas of high vulnerability and coastal risk along the Atlantic and Gulf coasts. In general, these risk assessments consider erosion and inundation, critical infrastructure, habitat, and communities at risk, and are compiled through meaningful engagement with State and local governments.

BOEM uses these assessments, as well as modeling results and gap analyses prepared by other Federal agencies, State partners, and researchers, to identify priority areas where more or better information is needed about nearby sand resources. For example, in collaboration with the USACE and through participation in the *South Atlantic Coastal Study* and *Sand Availability and Needs Determination* initiatives, BOEM identified multiple high priority areas for future resource identification from Mississippi to North Carolina. In FY 2022 and FY 2023, BOEM also plans to utilize a contract and collaborate with the USACE and USGS, as well as State cooperative agreement partners, to acquire new geophysical and geological data in priority areas.

BOEM is proactively partnering with the State of Texas to support the Texas Coastal Resiliency Master Plan, a comprehensive program calling for up to hundreds of millions of cubic yards of sand to protect and restore the upper, central, and lower Texas shoreline. In FY 2020, BOEM entered into an agreement with the State of Texas’ General Land Office and the USACE Galveston District to synchronize efforts to identify and access sand, gravel, and shell resources. Three of the largest Texas Coastal Master Plan projects have identified the need for OCS sediment, including Bolivar Peninsula/Galveston Island, Follet’s Island, and Texas Point National Wildlife Refuge (managed by FWS). In FY 2021, BOEM made significant new investments in resource identification offshore of Texas to help meet this demand and continued this effort in FY 2022, ultimately investing millions of dollars.

Each year, BOEM advances the National Offshore Sand Inventory by collecting and processing new geophysical and geological data. Those data are used by BOEM and key partners to identify additional sediment resources in priority areas (Figure 20). New data are integrated with existing information to improve the Bureau’s understanding of how much resource is available and refine plans for how the resource can be used responsibly over the life of a project. All new investment in the National Offshore Sand Inventory is harmonized with the team leading the *National Strategy for Mapping, Exploring, and Characterizing the United States Exclusive Economic Zone*.

Figure 20: Priority Areas for FY 2022 Geological and Geophysical Data Collection

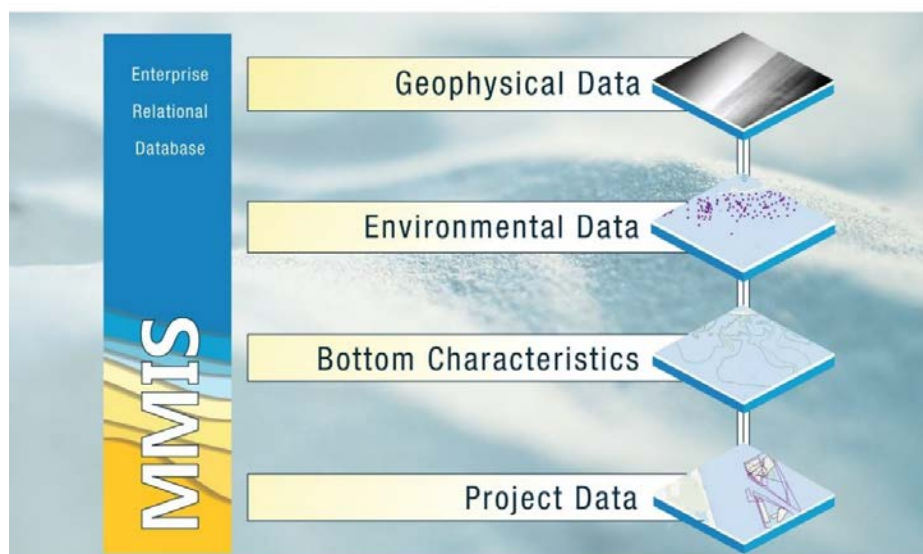


G&G data collection FY 2022 priority locations to advance the National Offshore Sand Inventory

Key BOEM Marine Mineral Partnerships	
Federal Agencies	United States Army Corps of Engineers; National Aeronautics and Space Administration; National Oceanic and Atmospheric Administration; United States Fish and Wildlife Service; United States Geological Survey; United States Navy.
State Agencies and Geological Surveys	Alabama; California; Delaware; Florida; Georgia; Louisiana; Maine; Maryland; Massachusetts; Mississippi; New Hampshire; New Jersey; New York; North Carolina; Rhode Island; South Carolina; Texas; Virginia.
Universities	Boston University; Columbia University; East Carolina University; Louisiana State University; Rutgers University; Stony Brook University; University of Alabama; University of Delaware; University of Florida; University of Georgia; University of Louisiana at Lafayette; University of Maine; University of Massachusetts; University of New Hampshire; University of New Orleans; University of Rhode Island; University of South Florida; University of Southern Mississippi; University of Texas; Virginia Institute of Marine Science; University of Washington.

BOEM uses the MMIS to organize, analyze, update, and disseminate marine minerals data, including the National Offshore Sand Inventory (Figure 21). The MMIS utilizes multiple pieces of information to create a comprehensive understanding of existing marine minerals information, such as geophysical data, environmental data, bottom characteristics, and project data. The MMIS helps BOEM address marine use conflicts, such as the potential for submarine cables, oil and gas pipelines, and transmission lines from offshore wind facilities to cross important sand resource areas. Ultimately, the MMIS supports Bureau and stakeholder decisions regarding the use and sustainability of offshore sand resources by identifying potential sources proactively and helps to shorten recovery efforts after hurricanes and other natural disasters.

Figure 21: Marine Mineral Information Management System



➤ **Responding to Natural Disasters**

BOEM continues to be a key player in restoration and recovery following natural disasters. BOEM’s immediate response efforts include communication and coordination with stakeholders in areas of need, site analysis and resource availability, resource compatibility analysis, and identification of site-specific environmental concerns. In the aftermath of a hurricane, the scale and volume of requested sand projects often increases by 25 to 30 percent. This is because post-disaster projects generally encompass larger project areas and require a larger volume of resources to mitigate significant storm-related losses and support additional protection measures (i.e., dunes) to reduce future potential damages. Consequently, the scope of information needed to process project requests increases substantially after major storms.

Project Profile: Periodic Nourishment of Brevard County, Florida Beaches

Brevard County, Florida, and the USACE maintain County beaches with periodic nourishment of the North, Mid, and South Reaches. The Patrick Space Force Base (PSFB) also lies between the North and Mid Reaches. The Air Force 45th Space Wing maintains the PSFB in tandem with the Brevard County Coastal Storm Risk Management Project.



Project proponents completed initial construction of the Mid Reach in Spring 2020 and completed the periodic nourishment of the North and South Reaches in Spring 2021. BOEM authorized the use of a total of 2,020,000 cubic yards of sediment from the Canaveral Shoals II Borrow Area for the Brevard County reaches. BOEM separately authorized an additional 600,000 cubic yards for the PSFB segment. This material was placed through a combination of direct placement via hopper dredge and stockpile with subsequent truck-haul to fill more delicate placement areas adjacent to environmentally sensitive reef habitat in the Mid Reach and portions of the PSFB segment.

In 2000, BOEM authorized the first use of the borrow area on Canaveral Shoals for the Brevard County beaches. Since then, USACE Jacksonville District and Brevard County have used these borrow areas four times to maintain a resilient shoreline for tourism and storm damage reduction and to restore habitat along one of the most significant sea turtle nesting areas in the country.

➤ **Protecting Federal Infrastructure and National Defense**

Building on more than 35 years of research experience, BOEM continues to partner with coastal communities, States, and other Federal agencies to facilitate critical coastal infrastructure projects, including some that are key to our Nation’s defense and economy. BOEM’s support demonstrates its

commitment to help coastal communities and States, and acknowledges the importance of climate considerations with regard to national security.



*national
security
facilities*



*critical coastal
infrastructure
and economies*



*NASA and Air
Force operated
launch facilities*



*key energy
and port
facilities*



*roads and
transportation
infrastructure*



*DOI and
State parks
and lands*

Examples include –

- Caminada Headlands (Grand Isle, Louisiana): This project protects the petroleum storage, transport, and support facilities associated with Port Fourchon, which services over 90 percent of Gulf of Mexico deepwater oil production. The project performed to design conditions during Hurricane Ida in 2021.
- National Aeronautics and Space Administration (NASA) Wallops Island Flight Facility (Wallops Island, Virginia): This project protects approximately \$1 billion in launch pads and associated infrastructure, as well as test and training facilities.



NASA Wallops Island, VA (before)



NASA Wallops Island, VA (after)

- Navy Dam Neck Facility (Virginia Beach, Virginia): This project protects approximately \$135 million of assets, including training facilities, housing, and support facilities.
- Patrick Space Force Base (Canaveral, Florida): This project protects fighter, tactical, and transport aircraft and SPACE Coast launch facilities.
- Long Beach Island (Long Beach Island, New Jersey): This 12-mile project protects public streets, utilities, and commercial properties, and maintains the public beach.
- Mississippi Coastal Improvements Program (Gulf Islands National Seashore, MS): BOEM, the National Park Service, the USACE Mobile District, and the State of Mississippi completed a multi-phase project restoring Ship Island, which was severely eroded during Hurricane Camille in the late 1960s.

Project Profile: Restoration of Terrebonne Basin Barrier Islands, Louisiana

BOEM partnered with the Louisiana Coastal Protection and Restoration Authority to support construction of beach, dune, and marsh habitat within the Terrebonne Basin barrier complex.

The \$170 million project restored one prominent headland and two barrier islands: West Belle Headland, Timbalier Island, and Trinity-East Island. The project, completed in 2021, restored approximately 1,100 acres of marsh, dune, and beach using approximately 9.2 million cubic yards of sediment from an OCS shoal known as Ship Shoal.

The project, which performed well during Hurricane Ida, features a marsh platform to facilitate naturally occurring overwash processes during storm events, and serves as a roll-over platform as the islands migrate landward. Restoration of the Terrebonne Basin barrier shoreline protects critical infrastructure, including Port Fourchon and Highway 1, and supports foraging and nesting areas for various migratory sea turtles and birds.



➤ Interagency Coordination

With the *South Atlantic Coastal Study*, the USACE identified priority locations where beach nourishment projects should be implemented to address erosion risk and other vulnerabilities from Mississippi through North Carolina. This initiative involved examining Federal and non-Federal beach nourishment projects and determined the sand volume needs and current availability of offshore sediment to support long-term coastal resilience and protection. In FY 2021 and FY 2022, BOEM sponsored collection of new geophysical and geotechnical data offshore the southwest coast of Florida, central Atlantic coast of Florida, and priority areas in South and North Carolina.

BOEM has forged key partnerships with the Gulf of Mexico Alliance, the Louisiana Coastal Protection and Restoration Authority, and the Texas General Land Office to coordinate Gulf of Mexico sediment resource identification data. For example, BOEM and the Texas General Land Office invested in the identification of new sand resources along major offshore bank features along the Upper Coast in Texas in FY 2021 and FY 2022.

BOEM also works closely with other DOI Bureaus to assist in beach nourishment, coastal and wetlands restoration, and infrastructure protection efforts. The USGS is an important partner and collaborator on

offshore sand resource evaluation and coastal vulnerability assessment. For example, BOEM and USGS completed geologic mapping and sand identification offshore Ocean Beach, California, an erosional hotspot south of San Francisco Bay. The USGS, in collaboration with BOEM, is digitizing legacy data in the Gulf of Mexico, and the latest recovery effort included the preservation of historical geophysical investigations offshore of Texas and Louisiana, covering an area where digital, near-surface geophysical data was sparse to non-existent. In FY 2021, USGS and BOEM continued a multi-year study of loggerhead sea turtle behavior in the shallow Gulf of Mexico, tagging and tracking sea turtles safely relocated during BOEM-authorized restoration projects.

CRITICAL MINERALS

BOEM is focused on ensuring there is a robust scientific and regulatory framework to consider any potential future critical mineral mining proposals on the OCS. While most critical minerals appear outside of Federal waters, OCS mineral deposits such as polymetallic nodules, ferromanganese crusts, and seafloor massive sulfides contain at least half of the 50 critical minerals designated by the USGS (86 FR 71083, February 24, 2022). Minerals found in the marine environment are used in a wide range of applications from electronics to renewable energy to military materials. BOEM, USGS, and NOAA continue to work together to determine which areas of the OCS have potentially significant critical mineral resources, with a focus on cobalt, manganese, and rare earth elements.

BOEM leads the development of the National Offshore Critical Mineral Inventory to identify potential areas of offshore critical minerals under U.S. jurisdiction. BOEM also plays a leading role in the National Science and Technology Council's Critical Minerals Subcommittee. Critical minerals are an important component of EO 14017, *America's Supply Chains*, and the Bureau participated in development of the 100-Day Supply Chain report in response to the EO. BOEM also contributes to implementation of the 2019 *Memorandum on Ocean Mapping of the United States Exclusive Economic Zone and the Shoreline and Nearshore of Alaska*.

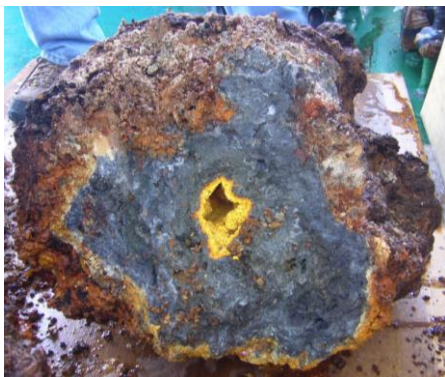
It is important to note that promising critical mineral deposits may exist in the Pacific insular areas (e.g., Guam and American Samoa), although, under OCSLA as currently written, BOEM has no authority to authorize exploration or issue leases offshore U.S. insular areas.

Figure 22: Critical Minerals Occurring on the OCS



In FY 2021, multiple Federal agencies worked together to launch BOEM’s National Offshore Critical Mineral Inventory. This included a collaborative effort with USGS and NOAA to fund the first U.S.-based critical mineral expedition since the early 1980’s; this multiyear effort is exploring the massive sulfide mineralization and associated ecosystems of the Escanaba Trough offshore northern California. The Escanaba Trough is a deepwater, sediment-covered seafloor spreading center with large massive sulfide deposits. In FY 2021, BOEM also initiated a multi-year collaboration with NOAA and USGS to investigate the Aleutian Island Arc in the Pacific for potential hydrothermal systems and mineral potential. This multi-phase project, incorporating both resource exploration and environmental assessment activities, leverages recent laboratory testing and includes field deployment of a state-of-the-art uncrewed survey vessel to map the seafloor, and another innovative remote-sensing technology developed and tested in collaboration with NASA that will investigate specific locations with potential offshore critical mineral deposits. BOEM expects similar research projects in FY 2023 within the OCS adjacent to Hawaii and in the Exclusive Economic Zone near American Samoa, an area which is geologically analogous to OCS areas.

Despite increased interest from industry, the military, and the international community, the quantity and characteristics of the critical resources on the OCS, as well as the potential environmental impact of attempting to develop those resources, remain uncertain. There is a need to identify areas that have high economic potential but low ecological value, making them suitable for further study of the environmental impacts of seabed mining on the OCS.

Project Profile: Remote Sensing for Critical Minerals offshore the Aleutian Islands

In FY 2021, BOEM, USGS, and NOAA began planning for a multi-phase research program exploring ecosystems and critical mineral resources offshore the western Aleutian Island chain, which contains dozens of volcanoes. Submarine volcanoes and associated vents are largely unexplored. The complex environments of submarine vent systems contain manganese, titanium, and cobalt critical mineral ore deposits. This research program explores how underwater volcanic vents relate to critical minerals and the surrounding deep-sea environment. The project combines cutting-edge technology, scientific expertise, and traditional knowledge to find seamounts with volcanic hydrothermal environments.

In Phase 1, BOEM funding supports an autonomous Sairdrone mapping and exploring up to 75,000 km² of the Aleutians over three months. Phase 2 will apply Phase 1 information to identify and investigate specific locations likely to have hydrothermal vents. Biologists and geologists will visit these sites on a state-of-the-art research vessel and explore the seabed using a deep-sea submersible. Phase 3 will focus on a single location, evaluating the baseline ecology, describing the relationships between critical minerals and the ecosystem, and determining the potential values of the biologic and geologic resources.

OUTLOOK FOR MARINE MINERALS

The role of BOEM as the Nation's steward of OCS mineral resources and champion of resilient coasts is expected to grow dramatically over the next decade. Ongoing development along the coast, storm activity, sea level rise, and diminishing sand sources in State waters contribute to the expected increasing demand. In the next five years, BOEM expects new requests from at least three additional States that have not used OCS sand previously, plus continuing requests from historic users. Continued development of the National Offshore Sand Inventory, National Offshore Critical Mineral Inventory, and MMIS are critical to support BOEM's role as environmental steward and resource manager.

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Environmental Programs

FISCAL YEAR 2023 BUDGET

Bureau of Ocean Energy Management

Environmental Programs

Table 12: Environmental Programs Budget Summary

Activity: Ocean Energy Management
Subactivity: Environmental Programs

Environmental Programs	2021 Actual	2022 CR at Annual Rate	Fixed Costs (+/-)	Internal Transfers (+/-)	Program Changes (+/-)	2023 Request	Change from 2022 CR at Annual Rate (+/-)
Environmental Programs	75,875	75,875	922	0	+9,576	86,373	+10,498
<i>FTE</i>	<i>142</i>	<i>146</i>	<i>0</i>	<i>0</i>	<i>+3</i>	<i>149</i>	<i>+3</i>

BOEM's Environmental Programs budget activity is cross cutting and foundational to the bureau's work. This activity advances Administration priorities by ensuring that science and environmental protection are foremost and indispensable considerations in BOEM decision-making, fostering conservation of natural and cultural resources, combating climate change, restoring trust in government, and advancing environmental justice. Further, this budget activity supports BOEM's role in advancing engagement with communities for which environmental considerations are often central: federally recognized Tribes, Native Alaskan communities, Native Hawaiian organizations, and Island communities.

BOEM's Environmental Programs budget activity plays a critical role in advancing clean energy. The Administration has established a goal to deploy 30 gigawatts of offshore wind production capacity by 2030, which could support nearly 80,000 jobs. BOEM will be central to achieving that target. To advance the Administration's goal, BOEM must better understand how offshore wind construction and operations affect the environment. The Office of Environmental Programs is essential to advance project reviews, consistent with NEPA.

The budget activity also funds efforts that inform decision-makers and the public about the potential impacts of OCS energy and mineral activities on the marine, coastal, and human environments and that provide measures to avoid or reduce impacts. Funding supports scientific research needed to inform policy decisions regarding energy and mineral development on the OCS.

The FY 2023 budget will support:

- **Advancing Offshore Wind Development Through Research and Environmental Review:** As expansion of offshore wind development gathers pace, BOEM will continue to assess the cumulative or reasonably foreseeable impacts of offshore wind facilities. Science and research are fundamental to a durable and informed decision-making process. In FY 2023, BOEM will advance studies that are needed to continue to look holistically at offshore wind, including cumulative potential long-term effects on both living marine resources and on communities that depend on those resources, particularly through recreational and commercial fishing. These assessments will engage stakeholder groups to obtain a better sense of the impact to the communities as a whole. These studies will also consider environmental, socioeconomic, and cultural impacts as they relate to a changing climate.
- **Advancing Environmental Justice:** Consistent with the goals of EO 14008, *Tackling the Climate Crisis at Home and Abroad*, BOEM strives to be leader in environmental justice by advancing policies, programs, activities, and decision-making processes to address disproportionate adverse impacts and achieve sustainable and equitable environmental outcomes for all people. Investing in job creation, education, risk analysis and mitigation, and workforce development, particularly in underserved communities, will be important as the offshore wind industry moves forward. BOEM has contracted with a small Native American woman-owned business to support the development of environmental justice best practices in fiscal years 2022 and 2023.
- **Addressing Ocean Noise Impacts Through the Center for Marine Acoustics (CMA):** Protecting marine life from industrial noise is crucial for all offshore energy and minerals development activities. In FY 2021, BOEM created the CMA to drive scientific understanding, develop more effective modeling tools, improve mitigation approaches, and conduct outreach with the many interested stakeholders. In FY 2023 and into FY 2024, the CMA will complete its acoustic model buildout, expand its partnerships internationally for more global solutions, and develop a fee-for-service business model so it can assist other Federal agencies with marine noise impact assessment needs.
- **Expanding Information Availability and Tools to Assess Trade-Offs:** BOEM expects to expand the available tools by developing the “Status of the OCS”—a one-stop shop for environmental information on the OCS—and implementing an ecosystem-based management approach to visualize and evaluate the trade-offs of management decisions on the OCS.

SUMMARY OF 2023 PROGRAM CHANGES

Summary of 2023 Program Changes for Environmental Programs

Program Changes:	(\$000)	FTE
Maintain Baseline Capacity	+888	+0
FY 2023 Fixed Costs	+922	+0
Technical Internal Transfers	[-3,097/+3,097]	+0
Execute National OCS Program	-1,812	+0
Conduct Environmental Studies Program	+10,000	+3
Further NEPA Coordination with CEQ	+500	+0
TOTAL Program Changes	+10,498	+3

* Changes listed in order of budget activity, not priority.

Maintain Baseline Capacity (+\$888,000). The 2023 budget includes important investments in programs needed to help strengthen America and be more competitive as the world continues to change. These investments include funding needed to maintain a strong, talented workforce and the core capacity needed to continue to fulfill BOEM’s mission. The budget includes \$888,000 in this budget activity, which reflects the incremental amount needed to cover the fixed costs associated with mission operations in FY 2022. This request in combination with the FY 2023 fixed costs amounts will allow the program to sustain core capacity and avoid impacts to ongoing program activities.

FY 2023 Fixed Costs (+\$922,000). Fixed cost increases are fully funded in BOEM’s FY 2023 budget. These costs include increases to support changes in Federal health and retirement benefits and workers’ compensation, rent to the General Services Administration, and payments to the Department through its Working Capital Fund.

Technical Internal Transfers (-\$3,097,000/+3,097,000; 0 FTE). Technical adjustments in FY 2023 reflect a decrease in offsetting collections paired with a commensurate increase in net current appropriations. The amount cited above reflects the technical internal transfer associated with this budget activity. There are no programmatic changes associated with this shift.

Execute National OCS Program (-\$1,812,000; 0 FTE). In FY 2023, BOEM proposes a reduction to the National OCS Oil and Gas Leasing Program (National OCS Program) funding, taken from the Environmental Programs (-\$1,812,000) and Conventional Energy (-\$1,587,000) budget activities. Development of and decisions regarding the next National OCS Program are ongoing, as the Department evaluates all options and determines the best pathway to accomplish its mission. The FY 2023 budget does not presume the Secretary’s decision on the scope of the next National OCS Program. Planning for future leasing activities does not impact ongoing energy operations. BOEM continues to work with BSEE to support all permitting decisions necessary to ensure the orderly development of OCS oil and gas resources that contribute to U.S. energy security.

Conduct Environmental Studies Program (+\$10,000,000; +3 FTE). This funding will better equip BOEM to conduct the environmental studies that support clean energy development as well as climate science and conservation, and that inform BOEM understanding and policy decisions. Section 20 of OCSLA requires BOEM to consider the impacts from OCS development on the marine, coastal, and human environments. The FY 2023 budget supports environmental studies to enable research and leveraging of funds through partnerships and collaborative efforts to advance scientific progress on renewable energy, conventional energy, and marine minerals, and provide information for mission critical decision-making. BOEM also utilizes the information collected to inform environmental reviews and consultations with Tribes, States, and natural resource agencies. Information from studies will also aid the Administration as it works to achieve its goal of conserving at least 30 percent of our lands and waters by 2030. This program is a priority area for BOEM and supports the Administration’s desire for advancing our Nation’s clean energy future, as well as responsible development of our Nation’s energy and mineral resources.

Further NEPA Coordination with CEQ (+\$500,000; 0 FTE). In FY 2023, BOEM proposes funding for use in working with the Council on Environmental Quality (CEQ). Funding advances more effective NEPA environmental reviews and overall implementation by supporting technical assistance and coordination with the CEQ.

PROGRAM OVERVIEW

BOEM’s Environmental Programs budget activity includes the environmental assessment function and the environmental studies function, organized administratively into headquarters functions placed in the Office of Environmental Programs in the Washington, DC, area (comprising the Environmental Assessment Division, Environmental Sciences Division, and Center for Marine Acoustics), and regional and program functions within the Office of Renewable Energy Programs, Office of Strategic Resources (including marine minerals), and BOEM regional offices (New Orleans Office, Louisiana; Anchorage Office, Alaska; and Camarillo Office, California). Because of its responsibility for impacts to the human environment, the Office of Environmental Programs provides central leadership for the Tribal Program. BOEM’s multi-disciplinary Environmental Studies Program is managed as a single account through the Program’s budget activity.

The environmental staff works in teams, with leadership provided by those whose backgrounds and capabilities best address the issues at hand. BOEM is committed to continuous staff improvement, and recruitment and retention of the best available talent. BOEM employs staff in diverse fields: marine and coastal biology; chemical, biological, and physical oceanography; avian and marine mammal biology; acoustic science; geology; meteorology; risk modeling; sociology; marine archaeology; anthropology; economics; and environmental policy.

➤ **Tribal Engagement**

The Environmental Program takes a leadership role in numerous Tribal consultations on specific projects as well as extensive informal communications to build relationships with Tribes. BOEM continues government-to-government consultations in FY 2023 as the Bureau develops Tribal Consultation Guidance. BOEM may broaden these consultations to address BOEM’s overall approach for Tribal engagement.

BOEM expects to establish a Native American Council of Advisors in FY 2022 to advise senior leadership on issues and policy development concerning Tribal nations. The initiative includes funding for facilitation and a stipend for participating Tribal leaders. BOEM also expects to conduct Native Nations Training for BOEM staff in FY 2022. Training exercises will be tailored to BOEM’s process and organization, including cultural competency elements and regional elements, and Tribal trainers will lead content development and delivery.

In February 2021, BOEM held the first Tribal Ocean Summit, which enabled a mutual exchange of information and learning to improve working relationships and build meaningful consultation practices. It was attended by 53 Tribal nations and the Secretary of the Interior. During the summit, participants engaged in open dialogue and shared ideas to improve future consultation.

➤ **Environmental Justice**

BOEM prioritizes equity in its policies, programs, and decision-making processes by consistently applying sound science to understand environmental justice communities. Beginning in FY 2021, BOEM began developing methodologies and best practices that will provide a consistent and scientifically robust approach to environmental justice analyses. By developing the appropriate models and practices, BOEM further supports underserved communities and works toward a just transition with the development of offshore renewable energy.

In FY 2022, BOEM established trusting relationships with community members and leaders, in partnership with NOAA and DOE, through targeted engagement on offshore wind projects or activities that directly relate to specific community concerns.

➤ **Climate Change**

BOEM supports assessments of greenhouse gas emissions data, including a greenhouse gas emissions inventory conducted every three years. In FY 2021, BOEM collected data from oil and gas operators and analyzed the data in FY 2022. This information and the analyses of any new offshore activity are included in BOEM’s assessments, which range from environmental analyses of proposed activities to new approaches to BOEM’s contribution to achieving the goals outlined in EO 14008. This information and these analyses help BOEM plan mitigation strategies to reduce greenhouse gas emissions.

BOEM also developed a leading model in the Federal government for estimating lifecycle emissions related to energy development and consumption and enhanced this model significantly in FY 2022.

BOEM has invested in ecosystem-based approaches to researching and understanding whole-system effects of energy development and will work through fiscal years 2022 and 2023 to establish a framework for dynamic modeling of multiple wind project build-outs in the context of climate change.

➤ **Center for Marine Acoustics**

Protecting marine life from industrial noise is an important component of all offshore energy and minerals development activities. In FY 2021, BOEM established the Center for Marine Acoustics (CMA) — its first center of expertise — to become a trusted voice on this highly controversial and technical issue (<https://www.boem.gov/center-marine-acoustics>). Through expertise, collaboration, innovation, and leadership, the CMA works with key partners, such as NOAA and the U.S. Navy, to improve risk assessment tools and models, answer key science questions, develop better policy solutions, and educate stakeholders.

During FY 2023, the CMA continues to build its state-of-the-art acoustic impact model to better predict impacts; to work with USGS, the National Science Foundation, and NOAA to overhaul management of high resolution geophysical sources; to develop methodologies to better assess acoustic impacts from multiple wind facilities on marine species, including the highly endangered North Atlantic right whale; and to implement modeling and sound source field verification guidelines that assist wind operators in understanding better how to meet mitigation requirements. In FY 2023 and into FY 2024, the CMA will complete its acoustic model buildout, expand its partnerships internationally for more global solutions, and develop a fee-for-service business model so it can assist other Federal agencies with marine noise impact assessment needs.

ENVIRONMENTAL ASSESSMENTS



BOEM’s environmental reviews provide essential information and recommended mitigation measures for decisions related to energy and mineral activities. These include authorization of geological and geophysical (G&G) exploration; planning for the National OCS Oil and Gas Leasing Program (National OCS Program); conducting lease sales and site assessments; evaluating oil and gas exploration and development plans and offshore wind construction and operations plans; as well as supporting more specific authorizations and permits, including decommissioning. BOEM’s environmental analyses not only evaluate potential

environmental impacts and alternatives to proposed actions but also identify impact mitigating measures that may be incorporated into requirements through regulatory vehicles such as permit conditions, lease stipulations, terms and conditions of plan approval, and notices to lessees. The environmental assessment

and mitigations developed address the requirements of many statutes, including NEPA, ESA, Marine Mammal Protection Act (MMPA), National Historic Preservation Act, Magnuson-Stevens Fisheries Conservation and Management Act, Coastal Zone Management Act, Clean Air Act, and Clean Water Act.

➤ **Programmatic Solutions**

During FY 2022, BOEM continues to develop clear guidance and reusable content for the development of offshore wind construction and operation plan environmental impact statements (EISs). This initiative will facilitate the efficient development and review of these documents and support consistent analyses in current and future renewable energy projects. This work will dovetail into FY 2023 with the ongoing development of a programmatic EIS for future development of renewable energy leases in the New York Bight. The programmatic EIS will evaluate the environmental effects of possible wind energy construction facilities and operations in that area. Further NEPA analysis for each construction and operation plan would tier from the programmatic EIS. BOEM will work with NMFS throughout fiscal years 2022 and 2023 to develop and implement a framework for ESA and Essential Fish Habitat compliance for offshore wind.

BOEM initiated and leads a multi-stakeholder “living” strategy aimed at better understanding and avoiding potential impacts to North Atlantic right whales from offshore wind. BOEM engages with key partners (such as NOAA, state agencies, the offshore wind industry, environmental non-governmental organizations, and academia) to collaboratively implement and adapt the strategy through research, improved risk assessment methods, mitigation (with a focus on avoidance), and monitoring for effects during construction and operation.

BOEM’s programmatic environmental analyses and comprehensive planning are a centerpiece for development of a National OCS Program. BOEM prepares analytic documents to address the potential impacts of activities it oversees. These include NEPA documents such as EISs that address “significant” impacts and environmental assessments that address “non-significant” impacts of a project, plan, policy, or program associated with a proposed project. These documents provide a focused analysis of potential environmental issues and impacts, highlighting areas that may be sensitive to impacts and may warrant consideration of mitigation or protection. BOEM uses a phased approach to environmental review, wherein national or programmatic-level analyses are prepared first, followed by increasingly site-specific analyses at subsequent stages of approval for decisions on activities, such as geophysical survey and geological sampling permit applications, operators’ plans for exploration and development, and other related industry activities.

In fiscal years 2022 and 2023, BOEM will continue to develop the Status of the OCS and associated analytic tools, such as an ecosystem-based management trade-off model. The Status of the OCS, initiated in 2021, is an information portal to serve as a “one-stop shop” for environmental information on the OCS. It is intended to facilitate consistency and efficiency in preparation of environmental documents and to provide tools to facilitate comprehensive and meaningful environmental analysis under all BOEM programs. These uses include information for the planning and execution of proposed lease sales outlined in the National OCS Program and information for the rapidly growing offshore wind portfolio. Through

FY 2023, BOEM will finalize content related to emissions and climate change, environmental justice, and renewable energy.

BOEM will prepare a programmatic EIS for the next National OCS Program. BOEM will reexamine the way the Bureau considers the impacts of offshore oil and gas leasing, and its ability to regulate, mitigate, and otherwise meet the Administration's goals outlined in EO 14008 of a carbon pollution-free electric sector by 2035 and net-zero emissions, economy-wide, by 2050. Other analyses will be needed to understand BOEM's contribution and possible paths towards achieving these goals and to better understand the options for addressing not just the offshore contribution of OCS production to greenhouse gas emissions, but also the contributions from onshore processing and consumption of OCS oil and gas resources. BOEM expects to continue assessments like the lifecycle greenhouse gas analysis of the 2017–2022 National OCS Program in support of future programs.

During FY 2021, BOEM prepared environmental reviews for lease sales under the 2017–2022 National OCS Program in the Gulf of Mexico and, in early FY 2022, a draft EIS for a proposed lease sale in Cook Inlet, Alaska. BOEM will prepare new environmental review documents for lease sales in the next National OCS Program as needed.

BOEM's review of lease sales, site-specific projects, and other proposals requires advanced coordination with other expert stakeholders, such as NMFS, FWS, and the National Park Service. Consultation with resource agencies helps BOEM identify effective mitigation practices designed to avoid or minimize harm to protected or managed species and habitat. BOEM must consider, and in some cases incorporate, the results of these consultations within its decisions and authorizations. Additionally, G&G permits issued by BOEM require operators to obtain incidental take authorizations for marine mammals from NMFS. BOEM and NMFS held a joint kick-off meeting in July 2019 to develop a detailed ESA and MMPA streamlining plan. In FY 2021, BOEM and NMFS continued to develop details and mechanisms to fully build out a streamlining plan. In FY 2022 and FY 2023, BOEM will implement the final plan to expedite MMPA incidental take authorization requests and ESA consultations for G&G permits across all three of its programs.

➤ **Assessments: Atlantic OCS**

BOEM conducts environmental analyses in the Atlantic OCS for core program-related activities, including renewable energy and marine minerals.

Most of BOEM’s renewable energy effort has centered on potential wind energy in the Atlantic OCS. As of February 2022, BOEM oversees 18 active commercial wind energy leases in the Atlantic OCS and has approved 14 site assessment plans. If fully developed, these 18 leases could support approximately 27 gigawatts of power, enough to supply nearly 9.5 million homes.

BOEM prepares environmental assessments to support its renewable energy leasing decisions. In FY 2022, BOEM completed environmental assessments for lease sales in the New York Bight and offshore the Carolinas. In addition to considering the impacts of site characterization surveys, these environmental analyses also consider site assessment activities (i.e., installation and operation of meteorological towers and/or installation of meteorological buoys) that would result from lease issuance. BOEM prepares EISs under NEPA for construction and operations plans. As of March 2022, BOEM received 15 Construction and Operation Plans for commercial-scale wind energy facilities along the Atlantic coast and anticipates receiving additional plans over the next year. Two plans have been approved and BOEM is in the process of preparing EISs for nine of the plans; the remaining plans are under initial review by BOEM or are being revised by the lessee. The EISs for the proposed Vineyard Wind Project and the South Fork Wind Farm were initiated in FY 2018 and FY 2019, respectively. BOEM announced completion of the Vineyard Wind 1 offshore wind energy project and South Fork Wind Farm EISs on March 8, 2021, and August 20, 2021, respectively.



**Block Island Wind Farm offshore
Rhode Island**

➤ **Assessments: New Orleans Office**

BOEM’s New Orleans Office conducts NEPA analyses and reviews for renewable energy, conventional energy, and marine minerals in the Gulf of Mexico OCS, as well as conventional energy in the Atlantic OCS. Due to the high volume of oil and gas activity in the Gulf of Mexico, BOEM prepares hundreds of NEPA documents and completes thousands of resource-specific reviews every year. The New Orleans Office has been working towards renewable development in the Gulf of Mexico OCS while supporting both development and on-lease renewable activities in the Atlantic. The need for OCS sand and gravel for coastal restoration and beach nourishment projects in the Gulf of Mexico has also increased in recent years, leading to an increase in the development of NEPA documents in support of these activities.

In FY 2021, BOEM began planning for the environmental review to support the proposed FY 2023 wind energy auctions in the Gulf of Mexico and Central Atlantic. BOEM will prepare an environmental assessment and Consistency Determinations and conduct consultations for these two offshore wind auctions in FY 2022.



Killer whale observed in the Gulf Stream

In FY 2021, BOEM conducted site-specific NEPA environmental reviews for each of 822 submittals of plans and ancillary activity notifications, G&G permit applications, pipeline permit applications, and structure removal permit applications. The site-specific environmental review process includes reviews and consideration for extraordinary circumstances. The determination is then made whether to conduct further environmental review by completing a site-specific environmental assessment or to apply a categorical exclusion. Site-specific environmental assessments were completed for 49 plans, 43 G&G permit applications, 13 ancillary activity notifications, and 119 structure removal applications. Categorical exclusions were applied to 124 plans, 472 pipeline applications, and 2 G&G applications.

In FY 2022 and FY 2023, the New Orleans Office anticipates the number of environmental reviews to increase each year.

➤ **Assessments: Anchorage Office**



Beluga whales in the open ocean

BOEM's Anchorage Office conducts environmental analyses for conventional energy activities. Also, the Anchorage Office actively supported both Headquarters and the Pacific Region in FY 2021 with high-priority renewable energy analyses and will continue supporting them in FY 2023. BOEM issued a permit for geohazard and cultural surveys on some of the 14 existing leases in Cook Inlet in advance of an exploration plan submittal. Additionally, BOEM initiated development of an EIS during the fall of 2020 for a proposed lease sale scheduled for the Cook Inlet Planning Area; BOEM released the draft EIS in October 2021. BOEM continues to identify information needs to support NEPA analyses associated with potential future activities in the Arctic,

Cook Inlet, and other planning areas that have potential for conventional and renewable energy development. In FY 2023, BOEM will continue to provide NEPA and consultation support to BSEE for oil spill drill exercises.

➤ **Assessments: Camarillo Office**

BOEM's Camarillo Office conducts environmental analyses for conventional and renewable energy activities on the Pacific OCS. There are currently 30 active oil and gas leases offshore California. BOEM's conventional energy assessments continue to focus on development and production from the 30 active leases, as well as anticipated upcoming decommissioning proposals for 8 of the 23 existing platforms, a seismic survey, and development of the next National OCS Program. These activities will support both BOEM and BSEE and include the development of NEPA documents; assisting in the development of, and compliance with, mitigation measures; and review of the measures' effectiveness. BOEM completed two environmental assessments for BSEE in FY 2021 and kicked off a programmatic EIS for decommissioning of oil and gas platforms.

BOEM will continue working with agencies and other stakeholders to advance research to support decisions regarding commercial renewable energy projects on the California, Oregon, and Hawaii OCS. Recent activity includes coordination offshore Newport, Oregon, with FERC to issue the nation's first research lease request for a grid-connected wave energy test facility on the OCS. BOEM was a cooperating agency with FERC on the environmental assessment before making a leasing decision. FERC published the final environmental assessment on April 23, 2020; BOEM issued the lease in February 2021. In Oregon, BOEM resumed offshore wind planning in September 2019 and expects to identify Call Area(s) in the spring of 2022.

Additionally, since 2015, BOEM has received three unsolicited lease requests from two different companies for commercial-scale floating wind developments offshore Oahu, Hawaii, and has identified the Humboldt and Morro Bay Wind Energy Areas offshore northern and central California. The Humboldt Wind Energy Area was announced on July 28, 2021. BOEM issued the draft environmental assessment in January of 2022. The Morro Bay Wind Energy Area in central California was announced on November 12, 2021, initiating an environmental assessment with a scoping period extending through January 11, 2022. Both assessments will be completed by Summer 2022 for a lease auction by Fall 2022.

ENVIRONMENTAL STUDIES PROGRAM

The OCSLA 1978 amendments mandated that the Department have a comprehensive environmental studies program to provide sound scientific analysis of the potential impacts of offshore development and an Oil and Gas Information Program to provide offshore operators and Federal and State governments with data and information from OCS activities. BOEM collects data and monitors human, marine, and coastal environments to identify potential ecological, economic, and social impacts resulting from potential OCS activity.

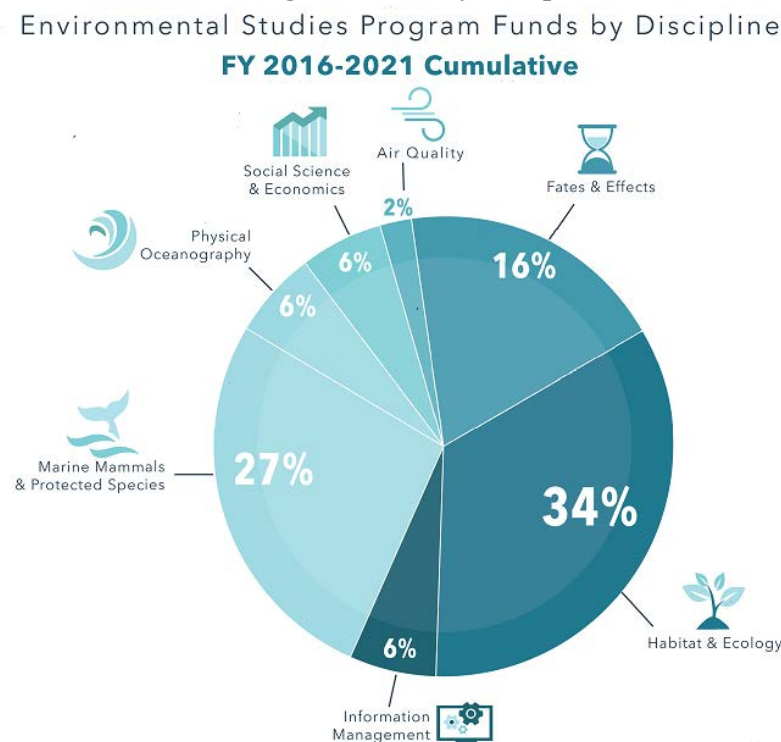
BOEM follows a strategic framework that asks three key questions: what does BOEM need to know, what strategic questions should be posed, and what criteria should be used to prioritize studies for addressing these questions? To ensure that studies address these questions, BOEM carefully evaluates potential studies and works with the National Academy of Science's Committee on Offshore Science and Assessment to create annual studies development plans. To generate the best possible information, the

scope of BOEM's environmental studies extend across multiple disciplines (see figure below). In addition, BOEM considers studies that are underway independently to design and implement effective research for decision-making. Major continuing emphases are on the impacts of renewable and conventional energy and mineral development, as well as on monitoring efforts, analyses to improve baseline characterizations, and trend analyses. Research to understand the release, transport, fate, and effects of oil and other materials that may be discharged or spilled in the marine environments is also a priority. The BOEM Environmental Studies Program *Strategic Framework*, which provides the details of the studies development process, can be found at <https://www.boem.gov/Strategic-Framework-2017/>.

BOEM is at the forefront of collaborating with Tribal communities and traditional practitioners on traditional ecological knowledge. Over the last few years, the Bureau sponsored approximately a dozen projects that have included Tribal communities to collect data on marine mammal observations, social networks, and harvest patterns through a Tribal lens. The Bureau's plans for even more robust engagement with Tribal nations through collaborative and co-productive research efforts, and improved science communications about BOEM's Environmental Programs, which likely will require a greater investment of resources. Understanding how Bureau activities may affect traditional ways, subsistence, and Indigenous cultural resources is a key element to the Bureau's decision-making processes.

BOEM disseminates environmental data sets, reports, and other study products to the public on its website, the Environmental Studies Program Information System (<https://marinestadastre.gov/espis/>). BOEM has a long-standing commitment to ensure that publications and samples are archived to meet future information needs.

In FY 2021, BOEM provided \$16.7 million to ongoing studies and \$12.4 million to new studies. In FY 2022, BOEM anticipates providing \$15.2 million to ongoing studies and \$16.7 million to new studies. In addition, as OCS renewable energy and minerals activities continue to increase, more studies related to their impacts will be needed, and the FY 2022 National Studies List includes an additional \$10 million for renewable energy studies.

Figure 23: Environmental Studies Program Funds by Discipline, FY 2016–2021 Cumulative

Note: This chart includes obligations for all studies supporting environmental information needs for all energy types and marine minerals.

➤ Research Partnerships

The valuable data collected through BOEM are also used by stakeholders, other Federal agencies, and State and local governments. Leveraging partnerships to satisfy common scientific needs is a central component of BOEM's approach to gathering robust scientific information for its decisions and consultation processes. BOEM does not possess certain assets (such as ships, autonomous underwater vehicles, etc.), and partnerships are necessary to achieve BOEM's applied science mission. By contributing personnel, equipment, facilities, and funds, BOEM and its partners can expand the scope of research to obtain maximum results. Partnerships with Federal agencies (such as the National Science Foundation, NOAA, USGS, DOE, and FWS) are typically established through interagency agreements and through the National Oceanographic Partnership Program, a collaborative community of Federal agencies working to improve knowledge of the ocean environment. From FY 2016 to FY 2021, BOEM provided over \$74 million to Federal partners to conduct BOEM-designed scientific environmental work. In FY 2021, BOEM finalized 32 studies, 14 of which were conducted with or by BOEM's Federal and State partners.

Examples of effective BOEM Environmental Studies Program partnerships include the following:

- **Deep Sea Exploration to Advance Research on Coral/Canyon/Cold Seep Habitats (DEEP SEARCH).** From FY 2019 through FY 2022, BOEM supports this multi-year, multi-agency study conducted to characterize the deep-sea ecosystems of the U.S. Mid- and South Atlantic. In 2019,

while exploring methane cold seeps 36 miles offshore South Carolina, scientists discovered 85 linear miles of *Lophelia* coral offshore and chemosynthetic vestimentiferan tubeworms, marking the first time ever that tubeworms have been observed in this part of the Atlantic. The DEEP SEARCH team has spent 65 days at sea on 5 different research vessels, completing 3 autonomous underwater vehicle dives, 11 human operated vehicle dives, and 11 remotely operated vehicle dives for a total of over 259 hours of bottom time. They have collected over 2,800 biological and geological samples and mapped over 14,966 square kilometers of seafloor. The team is currently analyzing the data and preparing a final report and scientific manuscripts to describe the findings.

- **Expanding Pacific Research and Exploration of Submerged Systems (EXPRESS).** Limited Federal coordination of deepwater mapping and exploration off the West coast prior to 2018 has hindered resource and hazard management. This limitation has, in part, been addressed by a mapping project, led by NOAA and with support of shared BOEM, USGS, and Monterey Bay Aquarium Research Institute resources, known as EXPRESS. In the subsequent two years, the EXPRESS campaign grew to over 24 research expeditions exploring and characterizing over 22,000 square kilometers of seafloor, supporting multiple Federal and private agency and stakeholder information needs. EXPRESS has evolved and expanded far beyond anything BOEM anticipated. BOEM has substantially more information off both central and northern California than it did a few years ago. To date, the venture has amassed 386 days at sea on 9 vessels and logged more than 130 remotely operated vehicle and 75 autonomous underwater vehicle dives. Moreover, BOEM’s financial contribution has been a small fraction of total project costs (approximately \$4 million out of the \$20 million spent to date). Although the various Federal partners have different interests, there was common interest in working together and sharing the cost burden.
- **Arctic Integrated Ecosystem Survey.** In FY 2021, BOEM continued to lead this key Arctic interdisciplinary effort. This partnership of Federal, State, Tribal, industry, academic, and non-governmental organizations, which will be completed in 2022, is advancing the understanding of ecosystem structure and function on the Chukchi and Beaufort shelves. The data will also support climate change studies conducted through a collaboration with the Alaska Ocean Acidification Center.
- **Next Generation of Animal Telemetry.** As a basic element of OCS management, BOEM needs to know where marine animals travel. One tool BOEM depends on is animal telemetry—using satellites to track animals to learn about their movement and behavior. However, while technology in space has advanced tremendously over the past two decades, that has not trickled down to animal movement studies. As a result, just six satellites are used to obtain animal telemetry data globally. In partnership with the National Aeronautics and Space Administration’s (NASA’s) Advanced Exploration Division, BOEM is working to develop the next generation of animal telemetry by leveraging inexpensive, coffee-cup size, open-source satellites that are being launched regularly. By developing a common standard, BOEM and NASA are ushering in a new generation of science. The team is developing a software defined radio for testing on the International Space Station in 2023, followed by a free flying experiment in 2024.
- **Impacts of Offshore Wind Development on the Environment.** Offshore wind energy is poised for rapid growth in the U.S., which will help the country reduce its carbon emissions while supporting

job growth. BOEM and DOE are jointly funding three research projects, for a total of \$13.5 million, to support the growth of offshore wind. The three awards are slated to begin in 2022 and have a duration of five years: one will lead a team to assess the risk that offshore wind development poses to birds, bats, and marine mammals along the East coast; another will survey changes in commercial fish and marine invertebrate populations and seafloor habitats at an offshore wind development site on the East coast; and the third will conduct visual surveys and acoustic monitoring of marine mammals and seabirds to develop predictive density maps of species present in potential wind energy development areas off of northern California and Oregon. The awardees will work cooperatively with DOE scientists and BOEM scientists at the Office of Renewable Energy Programs, the Camarillo Office, and headquarters.

- **DNA Sequencing.** BOEM continues its long-term partnership with the Smithsonian’s National Museum of Natural History (NMNH) to preserve biological specimens, including invertebrates and sequenceable DNA acquired from federally funded research, and to maintain and provide quality assurance for the databases associated with the specimens. Many of these invertebrates have not had DNA sequencing and thus must be identified and archived appropriately for scientific posterity. Expanded acquisitions of OCS specimens from these and other sources will augment BOEM’s baseline of biological materials and enable innovation in OCS research and monitoring approaches. NMNH will champion a NMNH-BOEM OCS Genomic Sample Strategy to specifically target key OCS invertebrate taxa that are either invasive species or species critical to seafloor impact assessment.
- **Academic Partnerships.** BOEM supports collaborations with the academic community through the Coastal Marine Institutes located at the University of Alaska Fairbanks and Louisiana State University. BOEM plans to spend approximately \$1,750,000 in fiscal years 2022 and 2023 for new and continuing cooperative agreements with Coastal Marine Institute partners. Through the Cooperative Ecosystem Studies Unit Network, BOEM gains access to a collaborative network of Federal and academic researchers and technical experts. Many projects include opportunities to train students and contribute to the next generation of environmental science leaders. BOEM funded \$1.6 million in FY 2020, \$1.96 million in FY 2021, and planned funding more than \$3 million in FY 2022 for cooperative agreements with Network institutions.
- **Utilizing Traditional Knowledge Panels.** BOEM supports collaborations with Indigenous knowledge holders on the North Slope of Alaska. Traditional Knowledge panels are designed to collaborate with the Iñupiaq community to determine research needs and will help to integrate Traditional Knowledge in scientific research. Knowledge panels will generate meaningful engagement with Traditional Knowledge holders and include multiple opportunities for feedback. BOEM plans to spend \$650,000 in FY 2022 for new and continuing cooperative agreements to improve Tribal engagement and to improve understanding of concerns from communities around food security and reductions in conflicts around subsistence hunting.

➤ **National Studies**

BOEM conducts research relevant to decision-making at all levels of government organizations, and many studies are of global interest. National studies are managed centrally by BOEM’s Office of

Environmental Programs, though BOEM staff from regional and program offices participate and may lead projects. The fundamental distinction of national studies is their intention to address issues of broad interest rather than specific interest to a region or program.



Squat lobster in coral

In FY 2022, BOEM funded several studies in a cost-effective and timely manner. New starts at the national level include a collaborative effort with Atlantic Tribes to better understand marine environments on the Atlantic Coast; a study into offshore air quality using data obtained from NASA satellites; an effort to better understand how habitat modifications impact protected species in the Northeast and Mid-Atlantic; improvements to the Tethys Passive Acoustic Data Metadata System; and an update to the oil spill rate data for OCS platforms and pipelines, U.S. and worldwide tankers, and U.S. barges.

Potential priority areas for study in FY 2023 include Tribal consultation; social impacts and environmental justice considerations related to offshore energy development and marine mineral extraction; impacts of renewable energy development; fishery surveys in the Northeast; and climate change. BOEM remains committed to championing the use of new technology and innovation in marine science.

Pursuant to EO 14008, BOEM will continue to collect data on greenhouse gas emissions from offshore oil and gas activities. In addition, BOEM will strengthen oversight of OCS energy facilities to reduce emissions in support of the Administration’s goals for a carbon pollution-free electric sector by 2035 and net-zero emissions, economy-wide, by 2050. BOEM will continue to investigate and incorporate in its studies and assessments the effects of climate change on fisheries, marine mammals, and other resources.

➤ **Atlantic OCS Studies**

During FY 2023, BOEM will continue to collect baseline information about the marine environment, which is critical for assessing offshore wind energy development. Studies also will address key questions to identify mitigations for post-construction offshore wind infrastructure. Notably, studies will use the latest techniques to model impacts to the endangered North Atlantic right whale. Interactions between commercial fishing and existing offshore wind leases will be evaluated. BOEM also will continue to work jointly with DOE on regional research with respect to fisheries and marine life impacts.

BOEM studies will include research on the impacts of sound on fish and sea turtles, monitoring construction activities at wind facilities, and improving our knowledge base about seabirds. The final report for the *Atlantic Deepwater Ecosystems Observatory Network* will be published in FY 2022, providing much-needed baseline data and delivering the capability for monitoring long-term environmental changes and testing BOEM mitigations. This project serves the advancement of the

Renewable Energy Program by generating needed environmental and socioeconomic information to inform future decision-making.

BOEM continues to plan and conduct studies in the Mid- and South Atlantic Planning Areas. Baseline studies are of special importance in this region and need to span the relevant geographic area of interest (out to ultra-deep waters) and include the variety of scientific disciplines relevant to BOEM's environmental analyses. Partnerships play an important role in baseline studies, including the *Atlantic Marine Assessment Program for Protected Species*, now in its third phase, and the *Mid-Atlantic Deepwater Canyons and Shipwrecks* study, involving NOAA, FWS, the U.S. Navy, and USGS. 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 human-induced variability. An interdisciplinary monitoring approach will be adopted to understand biological species densities and distributions, the physiochemical mechanisms driving change, and human uses 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.

Driven by climate change, the frequency and intensity of storms has increased demand on sand resources from the OCS to address serious beach erosion. As a result, BOEM's Marine Minerals Program continues to carry out studies to investigate the impacts associated with sand extraction for shore restoration. For example, the *Productivity and Ecology of Sand Shoals* study identifies strategies to mitigate risks in various climate scenarios by developing a dynamic ecosystem model to visualize potential ecological changes associated with those strategies. The final report for this study will be published in FY 2022. In FY 2022, BOEM will continue the *Sandbridge Shoal* study, which aims to understand shoal use by highly migratory species to help identify habitat preferences in Sandbridge Shoal, a borrow area off Virginia that has been used by multiple stakeholders to rebuild beaches. Results from this study will improve analyses of dredge impacts and in turn help to evaluate the use of other potential sand borrow areas in Federal waters.

Other studies continuing in FY 2022 cover a range of topics, including assessing the behavioral and spatial ecology of ESA-listed species to inform risk associated with BOEM activities, testing the viability of deploying commercially available autonomous underwater vehicles for shallow-water geophysical mapping, and assessing the environmental impacts of mining critical minerals in the deep sea. Marine Minerals studies proposed for FY 2022 focus on understanding the relationships between fish habitat use and OCS sand resource management decisions in a large sand shoal to inform potential benthic and habitat impact analyses and assessing temporal and spatial dimensions of sturgeon occurrence and behavior to determine impacts to the species from dredging and associated activities. BOEM is also collaborating with NOAA and USGS on a study on the Blake Plateau off the southeast Atlantic coast examining the potential long-term environmental recovery after test mining of polymetallic nodules conducted several decades ago.

➤ **Gulf of Mexico OCS Studies**



Ten-ray Star Coral colony

In the Gulf of Mexico, long-term environmental monitoring is combined with experimental research to give OCS decisions a firm scientific base. Studies analyze and explore the ocean ecology 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’s Gulf of Mexico OCS studies support all three programs—conventional energy, renewable energy, and marine minerals—and cover the entire Gulf of Mexico. BOEM is especially challenged to provide the information and oversight needed to support all three programs and develop

these new frontiers, as biological and other environmental information is sparse and often outdated.

In FY 2022, BOEM will continue the long-term coral reef monitoring efforts at the Flower Gardens Banks National Marine Sanctuary by funding a new four-year agreement with NOAA. This long-standing monitoring work demonstrates that energy production can co-exist with a healthy, productive marine coral ecosystem, ensuring the long-term health of the sanctuary.

Studies implemented in FY 2021 and continuing into FY 2022 assess seafloor adaptive management strategies and develop an information tool that synthesizes relevant research to streamline socioeconomic impact assessments of offshore energy. The information from these studies supports multiple aspects of all three BOEM programs and informs future studies. Studies proposed for FY 2023 cover a range of diverse topics, including: (1) the impact of abandoned oil and gas wells on air and water quality; (2) forecasting migratory bird movements for potential avian interactions with wind development; (3) reevaluating BOEM’s survey guidelines to identify submerged pre-contact archaeological sites on the OCS; (4) documenting drill splays in deep and shallow waters for improving mitigations and impact analyses; and (5) evaluating the efficacy of thermal detection technologies for nighttime Protected Species Observers monitoring procedures during marine mineral-related activities.

To be awarded in FY 2022, the *Offshore Analysis of Seafloor Instability and Sediments* is an interdisciplinary, multi-year study that will provide a better understanding of seafloor instability and mudflow events along the Mississippi River Delta Front and their risks to offshore conventional energy infrastructure. This interdisciplinary study leverages partnerships between BOEM and seven other Federal agencies from the Departments of the Interior, Defense, Energy, and Commerce. Additional collaboration is anticipated with academic institutions, the private sector, and the energy industry, further demonstrating the value of developing partnerships to address similar information needs.

Studies proposed for FY 2023 seek to prioritize which offshore oil and gas air emissions factors need additional study and address the potential for plastics pollution from abandoned conventional energy-related umbilicals. A better understanding of the impacts of conventional energy development on various resources will continue to be an information need in the region.

➤ Alaska OCS Studies

BOEM's Anchorage Office conducts studies currently focused on foundational research in the Beaufort Sea, Chukchi Sea, and Cook Inlet Planning Areas.

Strengthening collaborative research opportunities is a priority, including the incorporation of Indigenous knowledge in decision-making. Other priorities include data synthesis, updating and improving oil spill risk analysis models, synthesizing the impacts to marine mammals from oil and gas activities, improving ice forecast modeling, and generating a revised baseline for

subsistence activities in North Slope communities. In FY 2022, the Anchorage Office received approximately 70 study ideas from stakeholders, including public and private academic institutions, the general public, consultants, Tribal governments, and Federal agencies such as NOAA and USGS.



Humpback whales in the Beaufort Sea, Alaska

To identify the effects of development in Cook Inlet and the Arctic, BOEM continues to assemble a wide range of studies, taking an integrated approach and using new technologies that facilitate cost-effective research in the challenging Alaska environment to understand the effects on critical resources and the people dependent upon them. Studies in FY 2022 will obtain improved estimates of community composition, distribution, and habitat use of marine mammals, fish, and other organisms in Cook Inlet and improve understanding of the impacts of vessel presence and sound on the marine environment and subsistence activities in the Pacific Arctic.

To address BOEM's evolving priorities in the Alaska OCS, studies for FY 2023 will be developed through a rigorous analysis of data and information needs and include robust stakeholder and partner input. BOEM will seek innovative ways to extend the monitoring conducted in several recently completed projects. Specific areas of focus include the application of emerging technologies and approaches to collect information about cetaceans and other marine mammals, updating baseline information to facilitate analyses of potential adverse impacts from energy development activities in Cook Inlet, and evaluating and mitigating bird strikes.

In FY 2022, BOEM will examine the potential locations and distribution of seamounts and associated hydrothermal activity in priority regions of the Aleutian Arc. These seafloor features have the potential to contain critical minerals. The baseline studies initiated in FY 2022 explored benthic communities, including deep sea corals and sponges, and whether any are endemic to critical mineral habitats.

The Anchorage Office initiated a partnership with DOE's National Renewable Energy Laboratory in FY 2022 for a *Feasibility Study for Renewable Energy Technologies in Alaska Offshore Waters*. The goal was to provide an understanding of the potential for ocean based renewable energy sources on the Alaska OCS and in State waters relating to offshore wind, wave, and tidal sources. In addition, it will also consider practical methods for delivering energy from these sources to end users, including the potential for green hydrogen fuel production, distribution, and end use adoption opportunities.

➤ **Pacific OCS Studies**

Within the Pacific OCS planning areas, which include the OCS offshore California, Oregon, Washington, and Hawaii, BOEM studies continue to evolve in response to the changes in: (1) the geographic areas of activity; (2) the emphasis on the disciplines highlighted for research; (3) the information needs for the mature oil- and gas-producing area offshore California; (4) the focus to include areas for renewable energy offshore California, Oregon, and Hawaii; and (5) the prospective interest in marine minerals. The Camarillo Office's responsibility encompasses ongoing oil and gas operations, potential renewable energy development from wind and marine hydrokinetic energy, and marine minerals (i.e., sand, gravel, and critical minerals).

Partners play a key role in Pacific OCS studies. For FY 2021, the Camarillo Office received 107 study ideas from Federal and State agencies, Tribal organizations, universities, private companies, and nonprofit organizations. In FY 2022, the Camarillo Office received a total of 96 study ideas.

BOEM's priorities for Pacific studies include acquiring and refining information about environmental conditions and biological communities in areas of potential renewable energy development offshore California and Oregon, and obtaining baseline information in areas of renewable energy potential offshore Hawaii. Other priorities include continued monitoring of environmental conditions adjacent to oil and gas activities offshore California and collecting environmental and socioeconomic information to prepare for decommissioning existing platforms. In response to increased interest, the Camarillo Office works closely with the Marine Minerals Program to evaluate Pacific sand, gravel, and critical minerals.



Preparing for a FY 2020 tri-agency expedition (BOEM, NOAA, USGS) aboard NOAA Ship Reuben Lasker to explore and characterize deep sea habitats, including areas of prospective offshore wind energy development.

In FY 2022, BOEM anticipates starting several studies to inform expected decisions regarding new offshore wind energy and decommissioning of oil and gas facilities. Examples include: (1) cultural landscape assessments of areas of Tribal significance to inform offshore wind planning, (2) a competitive award in partnership with DOE to inform West coast offshore wind energy development, and (3) the *Motus Wildlife Tracking System*, which is an international collaborative network that uses coordinated automated radio-telemetry arrays to study movements of small flying organisms.

Planned FY 2023 new starts will be identified following stakeholder input. However, BOEM’s Pacific scientists and managers are already discussing data and information needs, as well as opportunities associated with better understanding cumulative impacts of offshore wind, a renewal of the long-standing Multi-Agency Rocky Intertidal Network monitoring program, and a combination environmental study and resource assessment effort in partnership with the USGS to investigate areas of potential interest for critical minerals.

OUTLOOK FOR ENVIRONMENTAL PROGRAMS

Looking forward, BOEM will continue to manage OCS energy and mineral resource development using the best available environmental analyses and studies conducted through BOEM’s Environmental Programs. In support of BOEM’s activities, Environmental Programs will continue to use cross-cutting and regional environmental analyses for all OCS regions and activities and will expand its Center for Marine Acoustics. BOEM will continue to integrate science needs across programs and resources to inform decision-makers in a timely and effective manner. To these ends, BOEM will continue to leverage partnerships to create an informed community with an interest in OCS resources and a desire to protect the environment. BOEM is developing a more robust and consistent environmental justice outreach program to access, inform, and educate vulnerable communities that could be impacted by development of OCS resources and will strive to better incorporate environmental justice considerations into Bureau decisions.

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Executive Direction

FISCAL YEAR 2023 BUDGET

Bureau of Ocean Energy Management

Executive Direction

Table 13: Executive Direction Budget Summary

Activity: Ocean Energy Management
Subactivity: Executive Direction

Executive Direction	2021 Actual	2022 CR at Annual Rate	Fixed Costs (+/-)	Internal Transfers (+/-)	Program Changes (+/-)	2023 Request	Change from 2022 CR at Annual Rate (+/-)
Executive Direction	17,207	17,207	506	0	+2,634	20,347	+3,140
<i>FTE</i>	<i>67</i>	<i>81</i>	<i>0</i>	<i>0</i>	<i>+11</i>	<i>92</i>	<i>+11</i>

This activity funds BOEM leadership, management, coordination, communications strategies, outreach, and regulatory development. It includes functions such as: managing the budget planning and execution processes, Freedom of Information Act activities, overseeing official documents, policy analysis, international affairs, managing administrative services, bureau-wide information technology management and governance, congressional and public affairs, and regulations.

The FY 2023 budget will support:

- **Strategic Leadership:** Provide BOEM policy guidance and leadership, including the implementation of Administration priorities and policies.
- **Diversity, Equity, Inclusion and Accessibility:** The BOEM budget includes funding to support the Department-wide Diversity, Equity, Inclusion, and Accessibility Program, which addresses identified high-priority needs in support of EO 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*, and EO 13988, *Preventing and Combating Discrimination on the Basis of Gender Identity and Sexual Orientation*. As part of this initiative, the Department, bureaus, and offices jointly conduct reviews of the Diversity, Equity, Inclusion, and Accessibility Program across the Department to identify gaps and challenges and implement best practices.
- **Justice, Equality, Diversity, and Inclusion (JEDI) Committee:** BOEM is committed to implementing justice, equality, diversity, and inclusion in its workplace and in the effects of its programs. On July 31, 2020, BOEM's Acting Director signed the Charter which established the JEDI Committee. This Committee was instituted as an internal working group within BOEM. The

Committee advises the BOEM Senior Leadership Team, develops and periodically updates a work plan with specific objectives and timelines, and otherwise advances justice, equality, diversity, and inclusion in BOEM and in the impacts of BOEM's programs on all people.

- **Budget:** Manage the budget formulation and execution processes, from the development of the annual budget justification through the expenditure of appropriated funds, in conformance with all necessary policies, regulations, and statutes.
- **Freedom of Information Act:** Ensure timely resolution of Freedom of Information Act requests, as well as implement any legislative actions that pertain to Freedom of Information Act policy.
- **Communications:** Coordinate internal and external communications, including outreach to the public, the media, Congress, State and local governments, and other stakeholders.
- **Policy:** Support BOEM mission areas and help achieve Departmental and Administration priorities on national-level policy issues, external coordination, information sharing, and project management to support the resolution of complex energy, mineral, and environmental issues.
- **International Affairs:** Support U.S. government international initiatives related to energy, minerals, and the environment, and collaborate with other countries' regulators on issues of mutual interest.
- **Administration and Compliance:** Oversee and coordinate Bureau-level programs and management initiatives with BOEM offices and regions, including strategic human capital programs and plans, continuity of operations and emergency management program, directives and delegations, external audit liaison activities, and internal control programs.
- **Information Technology:** Provide Bureau-wide information technology management and governance, ensuring that technology aligns with mission delivery requirements. In addition to technology, data management, privacy, and records management are also addressed.
- **Regulations and Guidelines:** Manage BOEM's rulemaking activities and coordinate the review and publication of Federal Register Notices, guidelines documents, and Notices to Lessees.

SUMMARY OF 2023 PROGRAM CHANGES

Summary of 2023 Program Changes for Executive Direction

Program Changes:	(\$000)	FTE
Maintain Baseline Capacity	+492	+0
FY 2023 Fixed Costs	+506	+0
Technical Internal Transfers	[-1,705/+1,705]	+0
Enhance Program Support Capacity	+1,240	+6
Create Office of Equity and Inclusion	+789	+4
Execute Justice40 Initiative	+113	+1
TOTAL Program Changes	+3,140	+11

* Changes listed in order of budget activity, not priority.

Maintain Baseline Capacity (+\$492,000). The 2023 budget includes important investments in programs needed to help strengthen America and be more competitive as the world continues to change. These investments include funding needed to maintain a strong, talented workforce and the core capacity needed to continue to fulfill BOEM’s mission. The budget includes \$492,000 in this budget activity, which reflects the incremental amount needed to cover the fixed costs associated with mission operations in FY 2022. This request in combination with the FY 2023 fixed costs amounts will allow the program to meet sustain core capacity and avoid impacts to ongoing program activities.

Fixed Costs (+\$506,000). Fixed cost increases are fully funded in BOEM’s FY 2023 budget. These costs include increases to support changes in Federal health and retirement benefits and workers’ compensation, rent to the General Services Administration, and payments to the Department through its Working Capital Fund.

Technical Internal Transfers (-\$1,705,000/+1,705,000; 0 FTE). Technical adjustments in FY 2023 reflect a decrease in offsetting collections paired with a commensurate increase in net current appropriations. The amount cited above reflects the technical internal transfer associated with this budget activity. There are no programmatic changes associated with this shift.

Enhance Program Support Capacity (+\$1,240,000; +6 FTE). In FY 2023, BOEM proposes a funding and FTE increase within the Office of the Director to support the administrative and information technology needs associated with its expanding role and contributions toward the Administration’s clean energy, climate change resilience and restoration, and conservation efforts. BOEM’s budget reflects BOEM’s role in addressing activities identified in EO 14008, including advancing the Nation’s clean energy future, fostering climate change resilience and restoration, championing environmental justice, and utilizing environmental studies and analysis in support of conservation efforts. The request includes funding and FTE increases for the programmatic offices that work directly on the Administration’s priorities; however, it does not reflect the associated increase in administrative and technical work associated with those programmatic activities. The Director’s office is pivotal to supporting the program and regional offices in the execution of Bureau and Administration responsibilities. In addition to providing Bureau-wide leadership and direction, the Director’s office is responsible for coordination and communication strategies internal and external to BOEM, as well as outreach activities. The Director’s

office also manages and executes the budget planning and execution processes, Bureau-wide information technology, congressional and public affairs, as well as policy and regulations. As the scope of BOEM's responsibilities and organization expands, associated administrative and technical work also increases and requires personnel to carry-out the necessary behind-the-scenes work. To meet these needs during FY 2023, BOEM requests additional funding and FTE to execute its increased functions responsibly and efficiently.

Create Office of Equity and Inclusion (+\$789,000; +4 FTE). In FY 2023, in support of the Administration's priorities outlined by EOs 13985 and 13988, BOEM proposes four FTE to establish an Office of Equity and Inclusion. Requested funding would enable BOEM to combine its JEDI Committee efforts with a new, more traditional equal employment opportunity (EEO) program to create a holistic office to advance all aspects of equal opportunity, diversity, and inclusion. BOEM estimates it would need an additional four staff in FY 2023 to carry out the activities associated with both a traditional EEO function and increased target areas to include justice, equality, diversity, and inclusion. Increased staffing would enable the Office of Equity and Inclusion to carry out the duties necessary to ensure that BOEM is in compliance with title VII of the Civil Rights Act of 1964, as amended; the Equal Pay Act of 1963; the Age Discrimination in Employment Act of 1967, as amended; sections 501 and 505 of the Rehabilitation Act of 1973, as amended; title II of the Genetic Information Nondiscrimination Act of 2008; Departmental directives; and other related statutes and orders. BOEM's goal is to ensure workforce activities are inclusive and that they promote the full utilization and exchange of skills and talents.

Execute Justice40 Initiative (+\$113,000; +1 FTE). The 2023 budget includes \$4.0 million Department-wide, including \$113,000 for BOEM, for dedicated staff resources to provide programmatic expertise, coordination, and outreach support to implement the Justice40 Initiative to increase environmental justice in Federal programs. Interior bureaus and offices are an important component of the Administration's objective for 40 percent of overall benefits of Federal investments that impact climate change and generate clean energy to be directed to disadvantaged communities. Interior has identified more than 50 programs with a budget totaling over \$3.0 billion that contribute to this forward-thinking initiative. Funding in 2023 will be used to develop methodologies to identify and quantify the benefits of Justice40 programs, demonstrate how and where covered programs distribute benefits, and pursue strategies for maximizing the benefits to vulnerable communities in the future. Agencies will also pursue and document stakeholder engagement in the initiative.

PROGRAM OVERVIEW

➤ **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.

➤ **Chief of Staff**

The BOEM Office of the Chief of Staff manages the day-to-day operations of the Bureau, provides general administrative direction, and conducts a variety of other management functions for the bureau to ensure effective and efficient completion of mission-related activities. The office includes administrative support staff for the Director and Deputy Director, the Office of Document Management, and is responsible for coordinating communication between the bureau and the Assistant Secretary for Land and Minerals Management.

➤ **Freedom of Information Act Office**

The Freedom of Information Act (FOIA) office is responsible for planning, developing, analyzing, evaluating, and administering the BOEM FOIA program, including policy and training development in accordance with Departmental FOIA Office parameters and instruction, oversight of FOIA program functions, providing guidance on FOIA-related matters, and implementing and assessing FOIA activities.

➤ **Office of Communications**

The Office of Communications is responsible for BOEM's internal and external communications including traditional and social media relations, internal and external websites, communication strategy development, and associated outreach. Communications staff coordinates the implementation of an effective and inclusive outreach program to the public in general as well as numerous target audiences, including State and local governments, the energy industry, related trade associations, the environmental community, Tribes, and energy consumer groups. BOEM's Congressional affairs staff, within the Office of Communications, is the primary point of contact with Congress and is responsible for the coordination of all communication and outreach with Congressional offices. The Congressional affairs staff also serves as the liaison 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 Regulations**

The Office of Regulations leads and oversees BOEM's national regulatory policy and evaluation programs and provides the Director with independent review and analysis of regulatory issues. The Office of Regulations leads cross-program Bureau initiatives to ensure consistent BOEM-wide implementation of regulations, and the publication of associated guidance documents, that directly support Congressional, Presidential, Departmental, and Bureau directives, laws, orders, proposals, and mandates. The Office of Regulations provides BOEM oversight in several critical areas including regulatory planning, development, promulgation, and related policy initiatives.

➤ **Office of Strategic Policy and International Affairs**

The Office of Strategic Policy and International Affairs provides high quality policy and strategic analysis, internal and external coordination, and project management services to support the resolution of complex national and international energy, mineral, and environmental issues. In this role, the Office of

Strategic Policy and International Affairs ensures adequate support to Bureau decision-making in advancing Departmental and U.S. Government priorities through effective collaboration across the Bureau's offices and subject matter experts, other Federal agencies, international governments and organizations, and external parties. In addition to these responsibilities, the Office of Strategic Policy and International Affairs functions as the lead for strategic planning, analysis, and coordination on emerging issues that may impact multiple program or regional offices.

➤ **Office of Budget and Administration**

The Office of Budget and Administration 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 executives, manages the personnel allocation system, and formulates and assists in the defense of BOEM's budget submissions to the Department, Office of Management and Budget, and Congress. Additionally, the Office of Budget and Administration is tasked with developing, refining, and verifying activity-based costing data and conducting planning and performance management activities to identify, establish, monitor, and report on BOEM's strategic objectives and associated performance measures. 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 conducts emergency management, strategic human capital planning, administrative policies and procedures, and talent management. The Office of Budget and Administration organizes Bureau-wide information technology management and governance ensuring that technology aligns with mission delivery requirements. Responsibilities in this area include the oversight of new and ongoing information technology initiatives, improved service delivery through application development, technology refresh, data governance, privacy, and records management.

Appendices

FISCAL YEAR 2023 BUDGET

Bureau of Ocean Energy Management

Appropriations Language

Below is the Appropriations language for the Ocean Energy Management account within BOEM.

OCEAN ENERGY MANAGEMENT

For expenses necessary for granting and administering 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, \$237,407,000, of which \$192,765,000 is to remain available until September 30, 2024, and of which \$44,642,000 is to remain available until expended: Provided, That this total appropriation shall be reduced by amounts collected by the Secretary of the Interior 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 2023 appropriation estimated at not more than \$192,765,000: Provided further, That not to exceed \$3,000 shall be available for reasonable expenses related to promoting volunteer beach and marine cleanup activities.

Note.—A full-year 2022 appropriation for this account was not enacted at the time the Budget was prepared; therefore, the Budget assumes this account is operating under the Continuing Appropriations Act, 2022 (Division A of Public Law 117-43, as amended). The amounts included for 2022 reflect the annualized level provided by the continuing resolution.

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 and administering 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 BOEM 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. ...\$237,407,000, of which \$192,765,000 is to remain available until September 30, 2024 and of which \$44,642,000 is to remain available until expended:

This provision identifies the amount of BOEM's total budget authority for FY 2023 (\$237,407,000). Of this total budget authority, \$192,765,000 is designated as two-year money, to be available from FY 2023 through the end of FY 2024. Meanwhile, \$44,642,000 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 of the Interior and credited to this appropriation from additions to receipts resulting from increases 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 its predecessor agencies) 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 for specific activities authorized by the OCS Lands Act, as authorized by the Independent Offices Appropriations 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 2023 appropriation estimated at not more than \$192,765,000:

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 BOEM, so the language was amended to include this "safety clause" in FY 2014. 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 to expend up to a certain amount for the promotion of volunteer beach and marine clean-up activities.

GENERAL PROVISIONS

The language provided below reflects the General Provision directly applicable to BOEM. For a complete, detailed discussion of the Department’s proposed General Provisions, please refer to the General Provision section of the Office of the Secretary FY 2023 budget justification.

➤ DECOMMISSIONING ACCOUNT

BOEM requires OCS oil and gas and renewable energy lessees to provide financial assurance to cover lease obligations, primarily for decommissioning of facilities when they are no longer supporting production. Through regulations implementing the OCS Lands Act (43 U.S.C. 1331 *et seq.*), BOEM is authorized to call for the forfeiture of that financial assurance and collect bond proceeds or other security forfeitures from an OCS permittee, lessee, or right-of-way holder that does not fulfill the requirements of its permit, lease, or right-of-way or does not comply with the regulations or orders of the Secretary. *See* 30 CFR § 556.907. Such forfeitures cover the cost to the United States of any improvement, protection, or rehabilitation work rendered necessary by the action or inaction that led to the forfeiture. The determination to call for the forfeiture of a bond or security is made by the Regional Director for the BOEM regional office where the lease, permit, or right-of-way is managed. Because the statute identifies the Royalty and Offshore Minerals Management account (which is now BOEM’s operating account, hereinafter referred to as the “OEM” account) as the one in which funds will be collected, forfeited moneys are credited to the OEM account to remain available until expended, and any funds in excess of the amount expended in performing the necessary work are returned to the permittee, lessee, or right-of-way holder. *See* 43 U.S.C. 1338a.

Under the OCS Lands Act and Secretarial delegations, BOEM has the authority to collect bankruptcy settlements or disbursements on behalf of BSEE. BSEE may receive distributions in bankruptcy proceedings to reimburse it for actual, necessary costs and expenses incurred in performing decommissioning during the pendency of the bankruptcy that had been the responsibility of a debtor or in correcting other regulatory violations. Additionally, BSEE may receive a pro rata distribution from the bankruptcy estate based on the proof of claim for the expected future costs of decommissioning. In both instances, the funds are received to remedy a specific problem and not for general governmental purposes. Similar to forfeited bonds or other securities, the bankruptcy settlements and distributions may be credited to BOEM’s OEM account until expended.

During the reorganization of the Minerals Management Service into three separate entities, the specific authorities regarding bond forfeitures were not clearly assigned or updated. As a result, BOEM has the authority to call bonds and collect the associated funds, but BSEE receives bankruptcy settlements and distributions. However, although BSEE is responsible for ensuring the necessary decommissioning work is done, it has no clear authority to retain funds received in bankruptcy and therefore, such funds are placed into BOEM’s OEM account, to which BSEE has no access. While BOEM can utilize a reimbursable service agreement to effectively transfer funds – resulting from a bond forfeiture or a bankruptcy distribution - from the OEM account to BSEE, this is neither a practical nor efficient long-term solution.

Proposal: BOEM proposes to separate collections of forfeitures (of bonds or other securities) and bankruptcy distributions or settlements (associated with failure to perform or noncompliance) from the appropriations in its OEM account and administer them through a new Treasury account. To accomplish this, BOEM requests authority to transfer such funds to this new account and to direct all future such funds to the new account as well. BOEM will work with the Department, OMB, and Treasury to establish the Treasury account in which decommissioning funds can be managed, but in order to utilize this new account for the collection and Administration of funds specific to decommissioning activities, the underlying statute will need to be amended. Therefore, BOEM requests the following language be included either as an administrative or general provision:

SEC. 114. The fifth and sixth provisos under the amended heading "Royalty and Offshore Minerals Management" for the Minerals Management Service in Public Law 101-512 (104 Stat. 1926, as amended) (43 U.S.C. 1338a) are further amended by striking and replacing them with— "Provided further, That notwithstanding section 3302 of title 31, any moneys hereafter received as a result of the forfeiture of a bond or other security by an Outer Continental Shelf permittee, lessee, or right-of-way holder that does not fulfill the requirements of its permit, lease, or right-of-way or does not comply with the regulations of the Secretary, or as a bankruptcy distribution or settlement associated with such failure or noncompliance, shall be credited to a separate account established in the Treasury for decommissioning activities and shall be available to the Bureau of Ocean Energy Management without further appropriation or fiscal year limitation to cover the cost to the United States of any improvement, protection, rehabilitation, or decommissioning work rendered necessary by the action or inaction that led to the forfeiture or bankruptcy distribution or settlement, to remain available until expended: Provided further, That amounts deposited into the decommissioning account may be allocated to the Bureau of Safety and Environmental Enforcement for such costs: Provided further, That any moneys received for such costs currently held in the Ocean Energy Management account shall be transferred to the decommissioning account: Provided further, That any portion of the moneys so credited shall be returned to the bankruptcy estate, permittee, lessee, or right-of-way holder to the extent that the money is in excess of the amount expended in performing the work necessitated by the action or inaction which led to their receipt or, if the bond or security was forfeited for failure to pay the civil penalty, in excess of the civil penalty imposed."

Explanation of Proposed Change: The requested language would do the following:

- 1) Establish a new parent-child account to hold funds from forfeitures of bonds and other securities and from bankruptcy settlements and distributions.
- 2) Clarify the treatment of funds from bankruptcy settlements and distributions in addition to bond forfeitures.
- 3) Amend this provision in the OCS Lands Act (43 USC 1338a) to add the word “decommissioning” to the list of purposes for which the funds in this account can be collected and used. This is because

“decommissioning” is the term used in the BSEE and BOEM regulations and by the offshore energy industry, and adding it to the statute clarifies the purposes for which the funds in this new account shall be used.

- 4) Allow BOEM to transfer existing funds from the OEM (current account) to a new parent-child account and allow BSEE access to the funds contained in the child account arising from the forfeitures (of bonds or other securities) and bankruptcy distributions or settlements.

This proposal seeks to simplify how these funds are accounted for in the U.S. Treasury, and it would have no impact to Federal revenues or budgetary scoring.

FISCAL YEAR 2023 BUDGET

Bureau of Ocean Energy Management

Disclosure of Program Assessments

This appendix is provided in compliance with section 403 of Public Law 116-260, the Further Consolidated Appropriations Act, 2021, 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 allows it to meet its administrative and information technology needs. BOEM implements this approach through reimbursable services agreements with the Bureau of Safety and Environmental Enforcement (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 to strategically expand high-quality, high-value shared services to improve performance and efficiency throughout the Department.

Through this effort, BOEM and BSEE support the Department's and the Administration'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 optimize 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. Because these costs are regularly reevaluated, estimated out-year costs are based on prior year actuals and the stated billing methodology. Amounts shown in the table below are estimates and may not reflect final agreements or end of year obligations. Additionally, because BOEM has no dedicated budget line to pay for its administrative overhead, all external assessments are paid through internal assessments to the Ocean Energy Management account.

Table 14: Disclosure of Program Assessments

Bureau of Ocean Energy Management	
Disclosure of Program Assessments	
<i>(dollars in thousands)</i>	
Cost Description	2023
External Administrative Costs	
Administrative RSA with BSEE	16,799
IT Labor RSA with BSEE	3,659
IT Technology RSA with BSEE	14,500
Solicitor Support	2,137
Working Capital Fund Centralized Billing	2,254
Working Capital Fund Direct Billing	945
NARA	84
Total, External Administrative Costs	\$ 40,378
Internal Bureau Assessments	
Ocean Energy Management	40,378
Total, Internal Bureau Assessments	\$ 40,378
* External administrative costs are charged to the Ocean Energy Management account for a total cost to the Bureau of \$40,378 thousand.	

Multiple IT support contracts provide operations, maintenance, management, and enhancement services to the enterprise and the TIMS investment. In addition to the administrative contracts with BSEE, BOEM also contracts with the Office of the Solicitor for legal support. Other external assessments include the Department's Working Capital Fund, which supports Department-wide systems, such as the Financial Business Management System, which bureaus use for accounting and finance. BOEM is also externally assessed for information archiving through the National Archives and Records Administration.

FISCAL YEAR 2023 BUDGET
Bureau of Ocean Energy Management
Employee Count by Grade
 (Total Employment)

Table 15: Employee Count by Grade

Employee Count by Grade	2021 Actuals	2022 Estimate	2023 Estimate
Executive Level V	0	0	0
SES	7	7	7
Subtotal	7	7	7
SL - 00	1	1	1
ST - 00	0	0	0
Subtotal	1	1	1
GS/GM -15	43	47	48
GS/GM -14	168	180	182
GS/GM -13	213	231	235
GS -12	69	74	79
GS -11	43	46	50
GS -10	1	1	2
GS - 9	25	27	30
GS - 8	6	6	8
GS - 7	4	4	6
GS - 6	9	10	11
GS - 5	0	1	1
GS - 4	0	0	0
GS - 3	0	1	1
GS - 2	0	0	0
GS - 1	0	0	0
Subtotal	581	628	653
Other Pay Schedule Systems	0	0	0
Total employment (actuals & estimates)	589	636	661

Notes on this table:

- 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 termination provisions of Public Law 103-89 (former Performance Management and Recognition System employees).

FISCAL YEAR 2023 BUDGET

Bureau of Ocean Energy Management

List of Acronyms

AIS	Automated Identification System
BOEM	Bureau of Ocean Energy Management
BSEE	Bureau of Safety and Environmental Enforcement
CEQ	Council on Environmental Quality
CMA	Center for Marine Acoustics
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
ESP	Environmental Studies Program
FERC	Federal Energy Regulatory Commission
FOIA	Freedom of Information Act
FTE	Full Time Equivalent
FWS	U.S. Fish and Wildlife Service
FY	Fiscal Year
GIS	Geographic Information System
G&G	Geological and Geophysical
GW	Gigawatts
IT	Information Technology
MOA	Memoranda of Agreement
MOU	Memoranda of Understanding
MMIS	Marine Minerals Information System
MMPA	Marine Mammals Protection Act
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NMNH	National Museum of Natural History
NOAA	National Oceanic and Atmospheric Administration
NOPP	National Oceanographic Partnership Program
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
P.L.	Public Law
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USCG	U.S. Coast Guard
USGS	U.S. Geological Survey

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