

New Energy Frontier



The Administration has implemented a true all-of-the-above approach to American energy, with renewable energy from sources like wind and solar doubling since the President took office, while at the same time domestic oil and gas production has increased each year.

*Ken Salazar, Secretary of the Interior
October 23, 2012*

On May 7, 2012, Secretary of the Interior Ken Salazar “flipped the switch” on the Enbridge Silver State North solar project, the first large-scale solar energy facility on U.S. public lands to deliver power to American consumers. Located 40 miles south of Las Vegas, Nevada, Silver State North is a 50 megawatt plant that will use photovoltaic technology to generate enough power for nearly 9,000 Nevada homes. Constructed on 618 acres of public land managed by the Bureau of Land Management, the solar project underwent full environmental analysis and public review. The BLM worked closely with Federal, State and local partners, members of the environmental and conservation community, and interested stakeholders to protect wildlife and advance this environmentally sound project. This milestone is in line with the Administration’s broad commitment to expand production of all sources of American made energy, including renewable sources such as wind and solar.

Innovation and technology are helping to create a new energy frontier in America. The Department of the Interior is an integral part of that effort as the steward of the Nation’s public lands. Interior manages one-fifth of the Nation’s landmass and 1.7 billion acres of the Outer Continental Shelf, and has the resources to help America responsibly produce more energy at home. Oil and gas development on Federal lands and waters presently account for nearly 23 percent of the Nation’s energy supply. Under Interior’s stewardship, responsible domestic energy development, both conventional and renewable, has made significant contributions to the Nation’s energy security and to the clean energy economy of the future.

Just four years ago, in 2009, there was not a single commercial solar energy project on or under development on Federal lands. Since then, Interior has authorized 37 renewable energy projects on or through the public lands, which if fully developed, will provide more than 11,500 megawatts of power, enough to power more than 3.8 million homes, according to developer estimates.

At the end of 2012, domestic crude oil production was higher than at any time since 1992 and natural gas production was at its highest level ever.



PARTNERSHIPS ARE ADVANCING THE NEW ENERGY FRONTIER

These renewable energy projects reflect the Obama Administration's commitment to expand domestic energy production on our public lands and diversify our Nation's energy portfolio.

*Ken Salazar, Secretary of the Interior
March 13, 2013*

In March 2013, Secretary Salazar joined with California Governor Edmund Brown, Jr. to announce the approval of three major renewable energy projects that, when built, are expected to deliver 1,100 megawatts to the grid, enough to power more than 340,000 homes, and help support more than 1,000 jobs through construction and operations.

Working together, the State of California and the Department of the Interior have established a unique partnership in support of the State and Federal government's clean energy goals. Since 2009, the aligned Federal and State permitting and environmental review processes have advanced five gigawatts of wind, solar, geothermal, and transmission projects on public lands in California, and more than 15 gigawatts State-wide.

Interior and California agencies are also engaged in the Desert Renewable Energy Conservation Plan, a mutual landscape-level planning effort to streamline renewable energy development in appropriate areas in the California desert, while at the same time conserving important natural resources and natural communities for species protection and recovery. A draft of the plan is expected to be complete in 2013.

The approved projects underwent extensive environmental review and public comment. The companies agreed to undertake significant mitigation efforts to minimize impacts to wildlife, water, and historical, cultural, and other resources. State and Federal agencies have set up a joint compensation fund operated by the National Fish and Wildlife Foundation to help mitigate impacts. The projects will displace an estimated 800,000 metric tons of greenhouse gases each year, equivalent to more than 150,000 cars, while generating tens of millions of dollars in construction payroll, local housing demand, increased tax revenue, and purchases of local goods and services during construction and operation.



- The McCoy Solar energy project, located nearly 13 miles northwest of Blythe, California, was proposed by McCoy Solar, LLC, a subsidiary of NextEra Energy Resources, LLC. The 750 megawatt photovoltaic solar facility would be one of the largest solar projects in the world, and as proposed would encompass about 7,700 acres of BLM-managed lands and 477 acres of private land. Because BLM worked closely with the developer to reduce the footprint, the project will occupy only 4,394 acres. McCoy Solar has agreed to purchase more than 4,500 acres of habitat to protect the desert tortoise, burrowing owl, and Mojave fringe-toed lizard species. The project is expected to employ nearly 500 workers during peak construction and provide 34 permanent jobs. When operational, the facility would generate enough clean power for an estimated 225,000 homes in southern California. A 12.5 mile generation transmission line would connect the project to Southern California Edison's Colorado River Substation.

- The Desert Harvest Solar Farm, proposed by EDF Renewable Energy, formerly enXco, on a site six miles north of Desert Center, California, will encompass nearly 1,208 acres of BLM-managed lands for the 150 megawatt photovoltaic facility. The project's infrastructure will be concentrated with that of a nearby solar project, minimizing new ground disturbance. The BLM added requirements to ensure the plant will not contribute to overdraft of the local groundwater basin. When operational, the facility will generate enough electricity to power an estimated 45,000 homes in southern California. The project also includes an on-site substation and 230 kilovolt line to the Red Bluff Substation, which will connect the project to the Southern California Edison regional transmission grid.
- The Searchlight wind energy project will be built on 18,949 acres of BLM-managed land near Searchlight, Nevada, 60 miles southeast of Las Vegas. The permanent footprint of the 200 megawatt project will be approximately 160 acres. The Western Area Power Administration is proposing to construct, operate, and maintain a new switching station to connect the project to the existing power grid. When built, the project will provide enough electricity to power nearly 70,000 homes. The facility will create an estimated 275 peak construction jobs, 15 full and part-time operational jobs, and generate an estimated \$18.6 million in property and sales tax revenue for local government.

For more information on BLM's approved and pending renewable energy projects, visit http://www.blm.gov/wo/st/en/prog/energy/renewable_energy.html.



Foreign oil imports now account for less than half of the oil consumed in America, the lowest level since 1995. Most of the domestic boom is coming from onshore production from shale rocks underlying private lands. At the same time, however, oil production on Federal lands rose seven percent in 2012 over the previous year, the largest single-year production gain in the past eight years. Offshore there were 37 deepwater floating rigs drilling in the Gulf at the end of 2012, up from 26 at the beginning of the year. The Department's Bureau of Safety and Environmental Enforcement approved 112 new deepwater well permits in 2012, the most since 2005, when these data began to be tracked electronically.

These resources are a significant driver of U.S. economic development and employment. The Department estimates that in 2011, oil, gas, coal, hydropower, wind power, geothermal power, solar power, and other mineral activities on Interior-managed lands and offshore areas supported nearly 1.5 million jobs and \$275 billion in economic activity. Excluding hydropower, the Energy Information Administration projects increased generation from renewable energy in the electric power sector. This will account for 33 percent of the overall growth in electricity generation from 2010 to 2035. According to the Bureau of Labor Statistics, employment in electric power generation, transmission, and dis-

tribution is expected to decline by 0.9 percent each year for the next ten years. The Bureau predicts, however, green energy, especially wind and solar, will account for a larger share of the U.S. energy supply. As these sectors expand, the need for both high- and low-skilled workers to construct, maintain, and operate plants will grow.

Interior's focus on America's energy future supports an all-inclusive approach, one that responsibly develops not only conventional but also renewable resources on the Nation's public lands. Interior's resource programs are working to achieve a responsible balance between reducing reliance on imported oil and broadening the Nation's energy portfolio, while also ensuring that it chooses the right places to develop and enforcing strong safety standards in development.

Responsible and Accountable Energy Development – In 2014, the Department will continue to advance a suite of reforms to get the best return for the taxpayer, encourage diligent development, and strengthen revenue collection processes. These efforts will capitalize on the reorganization of the former Minerals Management Service, completed in 2012, into the Bureau of Ocean Energy Management, Bureau of Safety and Environmental Enforcement, and Office of Natural Resources Revenue within the Office of the Secretary. Together these reforms will promote maximum transparency in agency decisions and processes, a priority for this Administration and the Secretary.

As the steward for the development of the Nation's oil and gas resources, Interior is keenly aware of its responsibilities to the American taxpayer. In 2012, Interior disbursed \$12.2 billion in revenue generated from energy production on public lands and offshore areas, a \$1 billion increase over the previous year, and in line with increased production taking place across the Country. The revenues were distributed to Federal, State, and tribal accounts, providing important funding to local economies and supporting critical restoration, conservation, and preservation projects. Interior transferred \$6.6 billion directly to the U.S. Treasury, making the Department's mineral revenue disbursements one of the Nation's largest sources of non-tax revenue.

To promote transparency and equity within energy markets, Interior is leading the Administration's effort to implement the Extractive Industries Transparency Initiative. The EITI requires governments to publicly disclose their revenues from oil, gas, and

mining assets, and for companies to make parallel disclosures regarding payments. Working with industry and the public, the Department established a multi-stakeholder group to oversee the design and implementation of EITI within the U.S. Signing onto the global standard that EITI sets will help ensure

STRENGTHENING ACCOUNTABILITY AND TRANSPARENCY

The U.S. Extractive Industries Transparency Initiative Multi-Stakeholder Group is piloting a new approach to participatory government, bringing representatives from industry, government, and the public together to develop new ways to bring greater transparency to the revenue that is generated and collected from extractive processes of the Nation's natural resources.

The EITI is a voluntary, global effort designed to increase transparency, strengthen the accountability of natural resource revenue reporting, and build public trust for the governance of these vital activities. Each Nation's EITI reporting requirements is country-specific and developed jointly by a multi-stakeholder group comprised of members of the public, government, and companies through a multi-year, consensus-based process.

Participating countries publicly disclose revenues received by the government for oil, gas, and mining development, while companies make corresponding disclosures regarding these same payments to the government. Both sets of data are reviewed and reconciled by a mutually agreed upon independent third party, and results are then released in a public report. The goals under EITI complement the top to bottom reforms of Interior's natural resource management undertaken over the last three years.

At the inaugural meeting of the U.S. EITI Multi-Stakeholder Group in February 2013, Samantha Power, Senior Advisor to the President and Senior Director for Multilateral Affairs and Human Rights, described the U.S. EITI as a critical tool in the fight against corruption, an effective weapon to ensure greater transparency and empower citizens.

American taxpayers are receiving every dollar due for the extraction of these valuable public resources.

In 2012, Interior established a new Priority Goal targeting onshore oil and gas operations to ensure taxpayers are receiving revenues owed for production and that operations are safe and environmentally responsible. Although the Priority Goal focuses on the onshore inspection and monitoring program, milestones and deliverables will be used to gauge the reduction of risks in other areas of production and revenue collection. Interior established this goal to produce tangible results in an area identified for improvement by the Government Accountability Office.

2014 BUDGET SUMMARY

The 2014 request for the New Energy Frontier initiative totals \$607.5 million in current funding. This is an increase of \$46.3 million over the 2012 level. In addition, the Department will manage \$164.2 million in funding for conventional energy activities from fees and permanent sources, including fees charged for inspections, applications for permits to drill, and funding from the Permit Processing Improvement Fund established by Section 365 of the Energy Policy Act. Spending from fees and permanent funding increases \$51.2 million from the 2012 level, reflecting a proposal to expand onshore oil and gas inspection activities and offset the BLM’s inspection program costs to the taxpayer with fees from industry. Total funding for the New Energy Frontier initiative in 2014 is \$771.6 million, an increase of \$97.5 million over the 2012 level.

The 2014 request for New Energy Frontier programs includes \$99.9 million for renewable energy activities, a \$26.4 million increase over the 2012 level. Combined current and permanent funding for conventional energy and compliance activities totals \$671.7 million, an increase of \$71.0 million over the 2012 level. New Energy Frontier funding in 2014 maintains the Department’s emphasis on strategic investments to advance renewable energy development, encourage domestic energy production, enhance environmental enforcement functions, expand training and electronic inspection capabilities, and fund operational safety improvements.

NEW ENERGY FRONTIER			
(dollars in millions)			
	2012	2014	
	Enacted	Request	Change
RENEWABLE ENERGY			
BLM.....	19.7	29.1	+9.4
BOEM.....	33.0	34.4	+1.4
RECLAMATION	0.8	1.1	+0.3
USGS	5.9	9.9	+4.0
FWS	7.0	14.1	+7.2
BIA	6.0	8.3	+2.3
OIA	1.1	3.0	+1.9
Subtotal.....	73.5	99.9	+26.4
CONVENTIONAL ENERGY AND COMPLIANCE			
BLM.....	125.5	147.9	+22.4
BOEM.....	127.8	135.0	+7.3
BSEE	197.4	222.1	+24.8
USGS	25.1	39.8	+14.7
FWS	3.1	3.4	+0.3
BIA	2.5	2.5	0.0
ONRR.....	119.4	121.1	+1.6
Subtotal.....	600.7	671.7	+71.0
TOTAL	674.2	771.6	+97.5

The 2014 request also assumes several legislative and administrative proposals related to energy programs; these are described more fully in the Departmental Overview. In particular, the request includes a package of oil and gas program reforms that combines administrative reforms with legislative changes, including several new proposals as well as proposals submitted with the 2013 request. These proposals include royalty reforms, changes to encourage diligent development of oil and gas leases, and improvements to revenue collection processes. In total, this package of reforms is estimated to save \$2.5 billion over the period 2014-2023, of which the legislative components are estimated to save \$1.7 billion.

DEVELOPING RENEWABLE ENERGY

In just over four years, we have advanced 37 wind, solar, and geothermal projects on our public lands—or enough to power more than 3.8 million American homes. These projects are bolstering rural economies by generating good jobs and reliable power and strengthening our national energy security.

Ken Salazar, Secretary of the Interior
March 13, 2013

In delivering new energy to America, Interior, working with Federal partners, States, and local communities, is guided by the fundamental belief that renewable energy development, where promoted and sited in a thoughtful way, can fully contribute to conservation and protection of the environment. Interior has continued to responsibly and aggressively develop renewable energy resources, to date authorizing 37 renewable energy projects on public lands since 2009, and laying the groundwork to hold the first-ever auctions for commercial wind development in the Atlantic. This year, the Department will complete groundbreaking milestones to offer additional commercial lease sales for Wind Energy Areas offshore New Jersey, Maryland, and Massachusetts, and analyze a lease request to develop cutting-edge floating wind turbines in Federal waters off Maine. Other demonstration projects are proposed off Virginia and Oregon. In addition, in 2013 BOEM is reviewing a mid-Atlantic wind energy transmission line that has the potential to eventually bring up to 7,000 megawatts of offshore wind energy capacity to the grid.

The Secretary's efforts to expand domestic energy have produced groundbreaking projects. In 2009, Interior established the first regulatory framework for offshore renewable energy development and in 2010, launched a "Smart from the Start" development strategy to identify wind energy areas using a coordinated, focused approach with extensive environmental analysis, public review, and large-scale planning. In 2012, Interior identified six wind energy areas on the Atlantic coast with the greatest wind potential and fewest development conflicts. In 2012, the Department issued the second commercial wind lease off Delaware and will move forward with the first ever competitive lease sales for wind energy areas off Virginia and Rhode Island/Massachusetts. These sales have the potential to support

ONSHORE OIL AND GAS DEVELOPMENT PRIORITY GOAL

GOAL:

Improve production accountability, safety, and environmental protection of oil and gas operations through increased inspection of high-risk oil and gas production cases.

METRIC:

By September 30, 2013, the Bureau of Land Management will increase the completion of inspections of Federal and Indian high-risk oil and gas cases by nine percent over 2011 levels, the equivalent of covering as much as 95 percent of the potential high-risk cases. In fiscal year 2014, BLM is targeting to maintain inspections of the potential high-risk cases.



RENEWABLE ENERGY PRIORITY GOAL

In the Energy Policy Act of 2005, Congress set a goal of approving 10,000 megawatts of non-hydro renewable energy by 2015. The BLM achieved that milestone in 2012, beating the Energy Policy Act target by three years. The Department and BLM have not allowed early achievement of the Energy Policy Act goal to lead to complacency. Interior recommitted itself to aggressively advancing the Administration's alternative energy goals by establishing a Renewable Energy Priority Performance Goal for 2010 through 2014. It will increase approved capacity authorized for renewable solar, wind, and geothermal energy resources affecting Interior-managed lands, while ensuring full environmental review, to reach 15,429 megawatts. The Department will successfully meet this goal if a majority of the energy projects designated as priority projects for 2012 and 2013 are approved.

an estimated 4,000 megawatts of wind generation, enough electricity to power 1.4 million homes.

In 2012, the Department made significant achievements to advance responsible development of renewable energy on public lands. Using a structured, scientific process, Interior released guidelines designed to help wind energy project developers avoid and minimize impacts of land-based wind projects on wildlife and their habitats. The voluntary guidelines are the result of a five-year process that included multiple opportunities for public review and comment. The guidelines were also informed by the Wind Turbine Guidelines Advisory Committee, established in 2007, which is comprised of diverse stakeholders, including Federal and State agencies, Tribes, the wind energy industry, and conservation organizations. These voluntary guidelines also will help developers identify additional steps and review processes and permits that may be needed to ensure compliance with Federal laws such as the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, and the Endangered Species Act.

The Department also:

- Formed two more Federal/State Renewable Energy Task Forces with the States of Hawaii and South Carolina. These task forces facilitate communication and cooperation, among Interior, other State, local and Federal agencies, and Tribes, concerning renewable energy development in Federal waters offshore the two States.
- Created a roadmap for smart solar development onshore by finalizing the Western Solar Energy Plan, which provides a blueprint for utility-scale solar energy permitting. The Plan covers six western States and establishes 17 solar energy zones, totaling an estimated 285,000 acres of public lands, with access to existing or planned transmissions that will serve as priority areas for commercial-scale solar development.
- Expanded a partnership with the Defense Department by signing a historic Memorandum of Understanding to strengthen the Nation's energy security and reduce military utility costs. The MOU encourages appropriate development of renewable energy projects on public lands withdrawn (set aside) for defense-related purposes, and other onshore and offshore areas near military installations. Nearly 13 million of the 16 million acres that

have been withdrawn over the years for military use are located in the West and are high in wind, solar, and geothermal resources.

- Approved five new renewable energy projects in 2012, including a 350 megawatt solar energy project on tribal trust land of the Moapa Band of Paiute Indians in Clark County, Nevada. The project marks a milestone as the first-ever, utility-scale solar project approved for development on tribal lands, and is one of the many steps the Administration has taken to help strengthen tribal communities. This project is expected to generate enough power for an estimated 100,000 homes.
- In Wyoming, Interior approved the Chokecherry-Sierra Madre wind energy project, the largest proposed wind energy project in the U.S. to date, and one of the largest in the world. This project will use 1,000 turbines to produce 3,000 megawatts of power, enough to power nearly one million homes.
- Approved construction of the transmission line for First Solar's Campo Verde solar energy project, which will cross public lands southwest of El Centro, California. The 139 megawatt solar energy project is expected to support more than 250 jobs through construction and operations, generate \$17.5 million in local tax revenue over the life of the facility, and provide an estimated \$239 million of financial benefits to local, county, and State economies. At full capacity, when built, the Campo Verde solar facility will produce enough electricity to power nearly 40,000 homes.



- Identified 373 existing Bureau of Reclamation canals and conduits with the combined potential to generate an additional 365,000 megawatt hours of hydropower annually,

enough to power more than 30,000 homes. This finding builds upon the 191 existing Reclamation dam and reservoir sites identified in 2011 with a potential of 1.2 million megawatt hours annually, enough to power more than 104,000 households each year.

The Department of the Interior's New Energy Frontier initiative includes \$99.9 million for renewable energy activities, an increase of \$26.4 million above the 2012 enacted level. The funding requested is critical to advance development of vast wind resources along the Atlantic coast and to conduct the necessary environmental work to allow responsible construction of renewable energy power generation and transmission facilities on and through the public lands, particularly those that tie to established transmission corridors.

Bureau of Land Management – In 2013 and 2014, BLM will continue to facilitate and promote the development of renewable energy resources on the vast public lands it manages in the West, lands that are rich in renewable energy resources and potential, including wind, solar, geothermal, and biomass. The BLM lands also serve as corridors for energy transmission infrastructure, a function that is vital to the Nation's overall ability to efficiently and effectively utilize energy and power. The BLM is focused on developing renewable energy in an accelerated but responsible manner, ensuring the protection of signature landscapes, wildlife habitats, and the cultural resources of the public lands. In its pursuit of renewable energy development, BLM works closely and collaboratively with local communities, States, Tribes, industry, conservationists, and other interested stakeholders to develop utility-scale renewable energy projects in the right way and in the right places, to avoid or minimize conflicts with other public land uses.

The 2014 request continues to provide strong support for BLM's contributions to the New Energy Frontier initiative in the responsible development of renewable and conventional energy. The budget request provides a \$7.1 million program increase for Renewable Energy to support planning efforts and studies aimed at identifying additional renewable energy development zones or leasing areas and implementation of renewable energy plans scheduled to be completed in 2013 for Arizona, California, and Nevada. The increase will enable BLM to prepare and offer the first competitive solar energy lease sales and allow BLM to continue ongoing program management responsibilities associated with geo-

thermal energy development by replacing permanent funding previously provided for this purpose through the Geothermal Steam Act Implementation Fund, which has expired. The request also reflects the realignment of \$2.0 million in geothermal funds from the Oil and Gas Management program to the Renewable Energy Management program, which BLM executed in its 2013 Operating Plan.

Bureau of Ocean Energy Management – The Secretary has delegated to BOEM the Energy Policy Act of 2005 authority to grant leases, easements, or rights-of-way for activities on the OCS related to production, transportation or transmission of energy from renewable sources. In 2012, BOEM completed the first lease under Interior's Smart from the Start initiative, which facilitates environmentally responsible offshore wind development along the OCS by identifying wind energy areas in a coordinated, focused approach with extensive environmental analysis, public review, and large-scale planning. Continuing this momentum, BOEM issued proposed sale notices for the sale of commercial wind energy leases in the Virginia and Rhode Island/Massachusetts offshore wind energy areas, and passed another milestone for renewable energy development by issuing a Determination of No Competitive Interest for the proposed Mid-Atlantic offshore wind energy transmission line. If constructed, it would be the first such major offshore transmission line in the United States.

The BOEM request includes \$34.4 million, an increase of \$1.4 million from the 2012 enacted level, for renewable energy development activities such as the siting and construction of offshore wind farms on the OCS, as well as other forms of renewable energy such as wave and current. The funds will be used to continue the Department's commitment to the thoughtful development of renewable energy resources for the Nation.

Bureau of Reclamation – The 2014 request allocates \$1.1 million for a pilot initiative to increase renewable generation by exploring how renewable energy technologies, including solar, small hydropower, and hydrokinetics, can be integrated into Reclamation projects. Reclamation will continue efforts to: optimize its hydropower projects to produce more energy with the same amount of water; investigate hydro pump-storage projects that can help integrate large amounts of different renewable resources such as wind and solar into the electric grid; and work with Tribes to assist them in developing renewable energy sources. These important projects will assist

in the production of cleaner, more efficient renewable energy.

Fish and Wildlife Service—The 2014 FWS renewable energy request includes \$14.1 million, an increase of \$7.2 million over the 2012 level, to expand capability to fulfill endangered species consultation requirements for renewable energy projects. The request includes a program increase of \$1.4 million for scientific research into the impacts of energy transmission and development infrastructure on wildlife and habitat. The research will identify potential impacts associated with the development of energy infrastructure and develop strategies to minimize the impacts on habitat and species likely to be impacted, including the desert tortoise and sage grouse.

The FWS Endangered Species Consultation program will utilize the findings, and a requested program increase of \$1.5 million, to conduct environmental reviews associated with proposed renewable energy projects. The request includes a program increase of \$2.8 million for conservation planning assistance and \$750,000 for migratory bird conservation and monitoring that will enable FWS to cooperate with Federal, State, tribal, and local governments and the renewable energy industry to ensure priority landscape level planning considers the impacts on wildlife and habitat. Application of biological expertise and pro-active consultation and cooperation will limit lengthy delays as project planning nears completion and should minimize legal challenges that might hinder project development.



The FWS will help ensure the Nation's energy development occurs in an environmentally responsible manner, consistent with wind power industry guidelines issued in 2012, and reflective of the Department's long standing commitment to wildlife conservation. The request includes a program increase of \$750,000 for law enforcement activities that address the impact of energy development on wildlife and habitat.

Indian Affairs – The 2014 request provides \$8.3 million, an increase of \$2.3 million above the 2012 enacted level, for renewable energy projects on tribal lands. More than 50 renewable energy projects are ongoing on an estimated 35 reservations. This, however, is barely tapping the potential that exists in Indian Country for renewable energy development. The BIA has identified 267 reservations with renewable energy potential, but the resources on these reservations have not yet been fully determined.

The potential for hydroelectric power on these reservations is significant. A tremendous need exists to quantify the potential on individual reservations to gain a better understanding of how to best develop these resources where Tribes have expressed an interest in doing so. The budget includes an increase of \$1.9 million to complement existing program activities to complete technical and engineering studies associated with renewable energy projects. These studies will be used to complete feasibility and financial packages and to start the environmental permitting. Concurrent with assessment of these resources, BIA will also determine the needs and interests of the Indian communities and, in accordance with community interest, work with Tribes to bring these resources to the production stage. Developing these resources has the potential to create green jobs in Indian Country while also helping to alleviate chronic unemployment on Indian reservations.

The BIA is working with several Tribes on hydro-generation projects, providing assistance with the planning of facilities using existing dams. Many reservations have feasibility and environmental studies under review. Detailed planning is required for resource potential, fish disturbance, and potential environmental impact if these projects are to be successful. Currently, most activity is in northern California, and there is potential for future projects within the BIA Rocky Mountain Region. Tribes with the best potential are in the northwest, Rocky Mountains, and Great Plains, and they include Rocky Boy's, Flathead, Crow, Cherokee, Pyramid Lake, Wind River, as well as several northern California Tribes.

U.S. Geological Survey – The 2014 USGS budget includes \$9.9 million for renewable energy activities, an increase of \$4.0 million over the 2012 enacted level. The increase would fund research to support permitting decisions for alternative energy strategies on Federal lands. The increase would also fund research to provide information on species, populations, habitats, and energy technology

FIRST EVER COMMERCIAL SOLAR ENERGY PROJECT ON AMERICAN INDIAN TRUST LANDS

In June of 2012, Interior approved a 350 megawatt solar energy project on tribal trust land of the Moapa Band of Paiute Indians in Clark County, Nevada, the first ever, utility-scale solar project approved for development on tribal lands. This low impact photovoltaic facility will sit on nearly 2,000 acres of the Tribe's 71,954 acre reservation, located 30 miles north of Las Vegas. The project is expected to generate 400 jobs at peak construction and 15-20 permanent jobs.

In early 2011, the Moapa Band of Paiutes came to the Interior Department with its development partner, K Road Power, to propose plans and after initial discussions, the Bureau of Indian Affairs recommended the project be included on the Department's Priority Project list of renewable energy projects.

Since that initial meeting, the project has exemplified what can be achieved when the Federal government, Indian Tribes, and private partners work together in pursuit of a common goal. The BIA, through its Western Regional Office, served as the lead agency on the project. Heightened coordination between the BIA and its Federal partners allowed the Department to complete its review within 14 months.



In evaluating the proposed project's compliance with the National Environmental Policy Act, BIA, as the lead Federal agency, worked closely with cooperating agencies, including the Bureau of Land Management, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers and the Tribe. To minimize and mitigate potential environmental impacts, a Desert Tortoise Translocation Plan, Bird and Bat Conservation Strategy, and Weed Management Plan will be implemented, and natural resources monitoring by qualified biologists will be conducted during all surface disturbing activities. No water will be used in the production of electricity, but will be used periodically for cleaning the photovoltaic panels.

The project will generate lease income for the Tribe, create new jobs and employment opportunities for tribal members, and connect the existing tribally-owned Travel Plaza to the electrical grid, decreasing its dependence on a diesel powered generator. The procurement of construction materials and equipment is expected to generate additional sales and use tax revenues for the county and the State.

Collaborating with the Department of Energy's Office of Indian Energy on this project and other projects, interagency efforts are underway to complement and coordinate tribal energy development. The Department of Energy has been providing technical assistance to the Tribe related to distributed hybrid and renewable energy options for its community and facilities.

so the impacts of energy development on natural populations can be assessed and modeled as part of providing decision support tools.

Office of Insular Affairs – In 2012, OIA awarded funding for a wind turbine pilot project in Guam as well as energy efficiency improvements to a number of Government of Guam buildings. These activities are consistent with the 2011 U.S. Department of Energy, National Renewable Energy Laboratory recommendations for initial energy efficiency, renewable energy assessments, and a strategic plan for implementation and deployment. Funding also is being used by the Guam Energy Office to develop an energy code curriculum to train building industry professionals on the importance of following Guam’s recently developed Tropical Energy Code.

The budget provides \$3.0 million, \$1.9 million above the 2012 level, for sustainable energy projects. The Empowering Insular Communities program supports the development and implementation of sustainable energy strategies in all four U.S. territories: American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands. Strengthening the energy foundations in the islands will reduce their dependence on costly oil imports, help stabilize critical energy services, and attract investment in the local economies.

CONVENTIONAL ENERGY DEVELOPMENT

Today, drilling activities in the Gulf are back to pre-spill levels. And the U.S. is now positioned as a global leader in offshore oil and gas safety. That’s good for domestic production and good for the industry as a whole.

*Ken Salazar, Secretary of the Interior
April 24, 2012*

Over the past several years, Interior has reformed the Nation’s onshore and offshore oil and gas programs to expand domestic energy production in a safe and environmentally responsible way. Deepwater Horizon shook Americans’ confidence in offshore energy development. Interior moved quickly and aggressively to strengthen safety standards and environmental protections and put in place assurances that companies drilling in deepwater areas are prepared to deal with a blowout.

As part of a comprehensive set of reforms, the Department divided the three conflicting missions of the Minerals Management Service into strong and separate organizations.

At the end of 2012, more rigs were operating in the Gulf than in the previous two and a half years, equaling the number of rigs in the Gulf before the Deepwater Horizon oil spill. Since 2010, the Department issued over 1,800 drilling permits, including 146 new deepwater and 161 new shallow water permits.

In 2012, the Department released a new five-year program for offshore leasing, making areas containing an estimated 75 percent of the technically recoverable offshore oil and gas resources available for exploration and development. Interior oversaw the first new exploratory activity in the Alaskan arctic in a decade under strict safety and environmental oversight. Also in 2012, the Administration reached agreement with the government of Mexico to open up previously off limits transboundary oil and natural gas reservoirs in the Gulf of Mexico. When approved by Congress, this agreement would make accessible nearly 1.5 million acres of the United States OCS, believed to contain as much as 172 million barrels of oil and 304 billion cubic feet of natural gas. In March 2013, Interior held the second sale under the new OCS Plan, the first of five Central Gulf of Mexico lease sales that will be held under the program. The sale generated more than \$1.2 billion in high bids.

At the same time, Interior advanced reforms to ensure offshore oil and gas production can continue to expand safely and responsibly. In 2012, the Bureau of Safety and Environmental Enforcement implemented regulations for safety and environmental management systems, issued a new drilling safety rule to refine safety reforms and strengthen requirements, took administrative action to hold contractors accountable for their actions offshore, collaborated with the U.S. Coast Guard to provide consistency in OCS regulation to promote compliance, and participated in the first full-scale industry



capping stack deployment exercise to help prepare for the possibility of a future deepwater blowout.

Onshore, the Department implemented leasing reforms bringing the public into the leasing process earlier, so fewer leases end up in court. Interior has worked to resolve controversies on some of the

largest oil and gas projects in the West, including more than 3,500 new wells on Anadarko's Greater Natural Buttes project in Utah, while at the same time safeguarding air quality and assuring the protection of critical wildlife habitat. In December 2012, Secretary Salazar issued a Secretarial Order to promote the co-development of oil and gas and

SCIENCE, RESEARCH, AND INNOVATION IN ENERGY

Science, research, and innovation continue to play a vital role in Interior's efforts to further expand oil and gas production in the U.S. and make sure it's done safely and responsibly. Improvements in technologies like hydraulic fracturing are responsible for greatly increasing the Nation's capacity to develop America's abundant unconventional resources in recent years. Hydraulic fracturing is an oil and gas well development process that involves injecting water under high pressure into a bedrock formation to increase oil and gas flow to a well from petroleum-bearing rock formations.

Through a close collaboration across the government to streamline research efforts, Interior, through the USGS, with the U.S. Department of Energy and the Environmental Protection Agency, is working to meet the critical need of increasing public understanding and public confidence of these technologies in order to continue safe and responsible exploration and production for many decades to come.

The USGS is conducting studies to assess the amount of water required for hydraulic fracturing as well as the impacts of withdrawing water from the local environment. On-the-ground projects are currently proposed or ongoing in more than 15 States to establish baseline water quantity and quality measurements and assessments.

Hydraulic fracturing, directional drilling, and other advanced technologies have enabled the production of oil and gas from rock formations that previously could not be developed. As a result, unconventional resources like shale gas and shale oil are among the fastest growing energy sources in the United States. Unconventional gas now accounts for well over 60 percent of the U.S. gas supply. The USGS has long assessed the amount of oil and gas yet to be discovered using standard industry practices and geologic knowledge at the time of the assessment. High volume hydraulic fracturing coupled with directional drilling is now commonplace; and the USGS has completed many unconventional energy resource assessments of actively producing formations, such as the Marcellus Shale and Bakken Shale, as well as frontier areas such as Alaska, that are only just now being explored for shale oil or shale gas. Assessments are important not only to help predict the amount of oil and gas that might be available in the future but also to allow land and resource managers to plan and prepare for potential future oil and gas development prudently.



The USGS conducted research that associates deepwell fluid injection, a process sometimes used to dispose of produced waters or flowback waters from hydraulic fracturing and gas production, with the triggering of earthquakes. Earthquakes may occur when the injected fluid reaches a critically stressed fault. Deepwell fluid injection is a technique in which wastewater, typically produced waters from the petroleum formation and flowback from the fracking operation, is injected back into the Earth for storage. The USGS is researching the factors that control the generation of injection-induced earthquakes and maintains information regarding the potential earthquake hazards associated with deepwell fluid injection.

potash resources in New Mexico, addressing a long standing source of serious conflict regarding the sequencing of production of these resources.

In November 2012, BLM held its second annual oil and gas lease sale in the National Petroleum Reserve - Alaska, offering nearly 4.5 million acres for development. In February 2013, the Department finalized the Integrated Activity Plan Record of Decision for the National Petroleum Reserve, providing a roadmap to facilitate appropriate energy development and conservation in the right places.

Interior finalized a new plan in March 2013 to promote research, demonstration, and development of oil shale and tar sand resources on public lands in Colorado, Utah, and Wyoming. BLM signed two leases for RD&D oil shale proposals in Colorado, to encourage industry to develop and test technologies aimed at developing oil shale resources on a commercial scale.

The Department is also part of a multi-agency research and development effort with the Department of Energy and the Environmental Protection Agency to better understand and minimize potential environmental, health, and safety impacts of energy development involving hydraulic fracturing. New work will build on existing efforts and address issues such as water quality and quantity; ecosystem, community, and human health impacts; and induced seismicity. Continued support for this collaboration is included in the 2014 budget.

Other Department actions taken in 2012 to advance the safe development of conventional energy sources on public lands and waters include:

- Groundbreaking steps to assess the conventional energy resource potential in the Mid- and South Atlantic with the release of a draft Programmatic Environmental Impact Statement. This milestone advances BOEM's regionally-tailored approach to OCS exploration and development, consistent with the OCS Oil and Gas Leasing Program for 2012-2017.
- New initiatives to expedite safe and responsible development of domestic energy resources on U.S. public lands and Indian trust lands in the Dakotas, Montana, and States across the Country as part of BLM's ongoing efforts to ensure efficient processing of oil and gas permit applications. The Bureau is implementing new automated tracking sys-

tems that are expected to reduce the review period for drilling permits by two-thirds and expedite the sale and processing of Federal oil and gas leases. The new system will track permit applications through the entire review process and quickly flag any missing or incomplete information, greatly reducing the back-and-forth between BLM and industry applicants currently needed to amend paper applications.

- Released a new estimate for potential additions to domestic oil and gas reserves from reserve growth in discovered, conventional accumulations in the United States. The USGS estimates the mean potential of undiscovered, conventional reserve additions for the United States total 32 billion barrels of oil, 291 trillion cubic feet of natural gas, and 10 billion barrels of natural gas liquids, an estimated ten percent of the overall U.S. oil and gas endowment.
- Approved a land-into-trust application from the Three Affiliated Tribes of the Fort Berthold Reservation, the first in a series of necessary approvals that will enable the Tribes to build the first U.S. refinery in decades, supporting American made energy, including domestic resources from the Bakken Formation, while also creating jobs.

The 2014 budget request for current and permanent conventional energy and minerals programs is \$671.7 million, an increase of \$71.0 million above the 2012 level, to support environmentally sound and safe development of conventional energy resources on public lands and the OCS. This includes an increase of \$32.0 million to continue aggressive implementation of reforms within BOEM and BSEE.

Bureau of Land Management – Federal onshore oil and gas resources are vital components of the Nation's energy portfolio. In May, 2010, BLM implemented leasing reforms to establish a more orderly, open, and environmentally sound process for developing oil and gas resources on public lands that has resulted in a significant decline in the number of protests. In fiscal year 2012, only 18 percent of BLM's oil and gas leases were protested, down from 47 percent in 2009.

The 2014 request enhances BLM's ability to support oil and gas development on Federal lands. The request for Oil and Gas Management includes a \$10.0 million increase to continue implementation of the important leasing reforms first instituted in

May 2010 and restores base funding for oil and gas oversight to 2011 levels.

The budget also proposes to expand and strengthen BLM's oil and gas inspection capability with revenues from new fees on industry. The BLM is taking steps to improve its oil and gas inspection capabilities. The Bureau has transitioned to a risk-based inspection strategy and will continue to expand its implementation. This strategy will help ensure the highest risk cases are inspected each year. The budget proposes \$48.0 million in new inspection fee collections, which will offset a proposed reduction of \$38.0 million in appropriated funds, providing for a net increase of \$10.0 million for inspection and enforcement activities. The additional funds will enable BLM to conduct defensible and timely lease parcel environmental analyses and correct deficiencies identified by GAO in its February 2011 report, which designated Federal management of oil and gas resources, including production and revenue collection, as high-risk.

Bureau of Ocean Energy Management – The 2014 BOEM budget includes \$135.0 million for conventional energy activities, an increase of \$7.3 million over the 2012 level. Within this total, \$63.8 million is provided for environmental assessments, including \$700,000 to support necessary baseline environmental characterization and monitoring activities, and \$1.1 million to establish an air quality regulatory program in Alaska. The 2012 Consolidated Appropriations Act transferred jurisdiction for air quality monitoring from the Environmental Protection Agency to the Department for OCS sources located offshore the North Slope Borough of the State of Alaska. The new jurisdiction includes both the Beaufort Sea and Chukchi Sea OCS planning areas, or Arctic OCS. With this statutory change in place, Interior, through BOEM, now has responsibility for thoroughly reviewing the potential air quality effects of new offshore operations in these arctic areas, in addition to areas of the Western and Central Gulf of Mexico where BOEM already has jurisdiction. The bureau is undertaking an integrated effort across regions and in close coordination with the EPA to implement this new authority and enhance the program overall.

In 2014, BOEM requests \$1.5 million to implement ePlans, a web-based plan submittal and workflow information technology application. The submittal, review, and approval of an OCS Plan are critical steps for offshore lease holders before any operations can commence. This effort to modernize an important

component of BOEM's IT infrastructure will achieve significant gains for both the rigor of analysis and the efficiency of plan review, including projected reductions of 30 to 40 percent in review processing time. The automation of this system also will yield significant savings for industry, and increase coordination and opportunities for data-sharing across Federal and State agencies.

Bureau of Safety and Environmental Enforcement

The 2014 request for BSEE includes \$222.1 million for conventional energy activities, an increase of \$24.8 million over the 2012 level. The request continues strong support for responsible development of offshore oil and gas resources, and the reforms put in place to strengthen regulatory and oversight capability, and foster environmental compliance, inspection, investigation, and enforcement programs.

The Environmental Enforcement program fosters environmental compliance, inspection, investigation, and enforcement programs to assure the highest level of environmental standards for all offshore energy activities. The 2014 request proposes a \$4.2 million increase to hire, train, equip, and support a cross section of critical staffing to conduct environmental inspections, Safety and Environmental Management System audits, and investigations. It also will take enforcement actions and evaluate the effectiveness of environmental mitigation measures.

The 2014 request will focus significant increases of \$15.2 million for Operations, Safety and Regulation, including program increases of \$2.5 million to support the anticipated growth in exploration, development, and production activities on the Alaska OCS, and \$1.0 million to streamline the permitting process to support development of a modern electronic system to manage the permitting process. Additional increases are proposed of \$1.4 million to research requirements for well structure integrity and \$2.0 million for offshore safety systems and operations. As the industry pushes into deeper water and drills more high-pressure/high-temperature wells, BSEE's safety and enforcement protocols must be kept up-to-date. The BSEE will use this increase to keep pace with industry's advancement and ensure the integrity of state-of-the-art equipment and operations. These increases are partially offset by \$3.0 million in additional estimated inspection fee collections. Inspection activities also will benefit from a program increase of \$3.7 million to support the new National Offshore Training program. The program will provide contemporary learning and development opportunities to BSEE's inspectors and

engineers. Courses are designed to enhance safety and environmental stewardship by using the best science and technology to evaluate, protect, and preserve the human, marine, and coastal environments.

The reorganization of the former Minerals Management Service separated the conflicting missions and strengthened oversight of offshore energy development. The request includes a program increase of \$4.0 million for BSEE to sustain the necessary level of support services, recruit and retain new inspectors, engineers, and scientists, and conduct additional environmental and technological studies.

Office of Natural Resources Revenue – Through ONRR, the Interior Department seeks to ensure the full and fair return of royalties and other monies owed to the American people from the production of energy and mineral resources, both onshore and on the OCS. This includes ensuring that revenue due to the public is received, accounted for, and appropriately distributed. The means of collecting royalties, rents, and other revenues must be transparent and robust. Revenue distributions, which totaling \$12.2 billion in 2012, benefit States, Tribes, individual Indian mineral royalty owners, and U.S. Treasury accounts.

The creation of ONRR on October 1, 2010 as part of the reorganization of the former Minerals Management Service provided an opportunity for a top to bottom review to improve management and oversight of revenue collection and disbursement activities for the Department. The ONRR is focused on implementing priority initiatives aligned to ensure the Department is collecting the government's share of revenue from oil and gas produced on Federal lands, consistent with recommendations made by the Government Accountability Office, Interior's Office of Inspector General, and other external organizations. The Office consistently receives clean audit opinions from annual audits performed by independent auditors.

The 2014 request includes \$121.1 million for ONRR's receipts management programs, a \$1.6 million increase above the 2012 enacted level, including \$1.5 million for fully funded fixed costs. All of the funds requested support conventional energy activities within the New Energy Frontier initiative.

U.S. Geological Survey – The 2014 request for USGS is \$39.8 million for conventional energy programs. The request includes an increase of \$13.0 million to support an interagency research and development

effort with the Department of Energy and the Environmental Protection Agency to understand and minimize potential environmental, health, and safety impacts of energy development through hydraulic fracturing. Hydraulic fracturing is a process that uses high pressure fluid to create fractures in rock layers to produce petroleum, natural gas, coal seam gas, or other substances. The energy from the injection of a highly-pressurized fluid creates new channels in the rock, which can increase the extraction rates and ultimate recovery of unconventional fossil fuels. The 2014 budget supports the research to understand and address potential impacts on water quality and availability, induced seismicity, earthquakes, ecological effects, and human and community effects, as well as assessment and characterization research in various USGS base programs.

Fish and Wildlife Service – The 2014 request of \$3.4 million for FWS conventional energy activities includes a program increase of \$250,000 to complement renewable energy funding for law enforcement activities that will help ensure the development of oil, gas, and electricity transmission is consistent with wildlife and habitat conservation. Specific efforts will include educational outreach to energy developers and land management agencies, compliance assistance and monitoring, and investigative work to document violations of law in circumstances where known mitigation measures have not been adopted.

As part of President Obama's all-of-the-above energy strategy, Interior is committed to expanding safe and responsible oil and gas development on public lands and Indian trust lands. With the help of new technology, the Bakken in North Dakota is generating impressive energy production for our Country and creating thousands of American jobs, as well as substantial royalty revenues for the State, Tribes, and taxpayers. By upgrading and improving our oil and gas drilling permit processing systems and technologies, we believe we can improve efficiencies while ensuring thorough reviews for safety and compliance.

*Ken Salazar, Secretary of the Interior
April 3, 2012*

Indian Affairs – The Office of Indian Energy and Economic Development is working closely with tribal nations to explore and develop conventional energy resources on Indian Trust lands where Tribes are interested in developing these resources. Together, the Office and Tribes are further defining, quantifying, and developing tribal energy resources for industrial scale energy production. The Department estimates energy and mineral development on Indian lands in 2012 supported over \$16.0 billion of economic activity and nearly 120,000 jobs related to trust resources. In the last three years, this Office assisted Indian mineral owners in the negotiation of 55 leases for oil, gas, renewable energy, and aggregate materials development on approximately 3.1 million acres. The 2014 request includes \$2.5 million for conventional energy and audit compliance, the same as the 2012 enacted level, to support tribal leasing activities on reservations.

Prior to 2006, the Three Affiliated Tribes of the Fort Berthold Reservation had not leased any of their lands for oil and gas exploration for over 25 years. At the request of the Tribes, Indian Affairs staff has been evaluating the oil and gas potential for the Tribes. From 2005 to 2013, IEED assisted the Tribes in the negotiation of lease agreements with oil and gas companies. These lease agreements have allowed the Tribes to share in the success of the oil and gas leasing boom in the Bakken Formation in the Williston Basin. Increased focus from Indian Affairs to approve leases in a timely fashion with a hands-on approach to technical as-

sistance helped stimulate oil and gas development in the area. In 2011, over 200 drilling permits and associated rights-of-ways were approved in the area. In 2012, the number of drilling permits and associated rights-of-way permits has risen to over 300. Drilling activity is expected to increase through 2013, with the development rate leveling off to 200 wells per year over the next five years. Nearly 1,000 wells are expected to be drilled to initially develop the Bakken Formation with an additional 1,000 wells drilled to complete full development of the Bakken and Three Forks Formations over the next ten to 20 years.

To provide better coordination and collaboration among interagency staff to respond to increased demand for oil and gas permits in certain regions, Indian Affairs is developing teams to provide technical staff to assist as demand increases. The teams include expert specialists in realty services and environmental compliance, as well as petroleum engineers. The first team is already working on the Fort Berthold Reservation and has provided a solution to the increased workload. A new team is in the initial stages of becoming operational at the Uintah and Ouray



Reservation in Utah. Plans are being developed to place a team at the Navajo Regional Office for future lease sale activities of Navajo lands in New Mexico. This concept will be used at other reservations where IEED is seeing an increase in energy development activity.