

Opportunity for All: Building a Clean Energy Economy, Improving Energy Security, and Taking Action on Climate Change

A Roadmap for Growth, Opportunity, and Fiscal Responsibility: The President's Budget provides a roadmap for accelerating economic growth, expanding opportunity for all Americans, and ensuring fiscal responsibility. It invests in infrastructure, job training, preschool, and pro-work tax cuts, while reducing deficits through health, tax, and immigration reform.

Builds on Bipartisan Progress: The Budget adheres to the 2015 spending levels agreed to in the Bipartisan Budget Act and shows the choices the President would make at those levels. But it also shows how to build on this progress to realize the nation's full potential with a fully paid for \$56 billion Opportunity, Growth, and Security Initiative, split evenly between defense and non-defense priorities.

WHAT THE PRESIDENT'S BUDGET DELIVERS:

- **Stronger Growth and Job Creation:**
 - Advanced manufacturing – Invests in American innovation and strengthens our manufacturing base, including a national network of 45 manufacturing institutes.
 - Research and innovation – Supports ground-breaking research to fight disease, protect the environment, and develop new technologies, and makes permanent the R&D Tax Credit.
 - Pro-growth infrastructure – Lays out an ambitious, four-year \$302 billion surface transportation reauthorization proposal paid for with transition revenue from pro-growth business tax reform.
 - Government reform – Promotes government management that delivers improved services that are more effective, efficient, and supportive of economic growth.
- **Opportunity for All:**
 - Tax cuts for working Americans – Doubles the maximum value of the childless worker EITC to build on the EITC's success in encouraging people to enter the workforce and reducing poverty; improves tax benefits that help middle-class and working families pay for child care and college and save for retirement.
 - Preschool for all – Invests in the President's vision of making access to high-quality preschool available to every four-year-old child.
 - Job-driven training – Invests in new efforts to drive greater performance and innovation in workforce training to equip workers with skills that match the needs of employers.
- **Fiscal Responsibility:**
 - Continues historic progress in slowing health care cost growth – Builds on the savings and reforms in the Affordable Care Act with additional measures to strengthen Medicare and Medicaid, slow health care cost growth, and improve the quality of care.
 - Pro-growth tax reform – Curbs inefficient and unfair tax breaks that benefit the wealthiest, and ensures that everyone is paying their fair share.
 - Immigration reform – Supports comprehensive reform of our broken immigration system, which independent economists say will grow our economy and shrink our deficits.
 - Further reduces the deficit and debt – By paying for new investments and tackling our true fiscal challenges, reduces deficits to 1.6 percent of GDP by 2024, and stabilizes debt as a share of the economy by 2015 and puts it on a declining path after that.

In order to secure America's energy future, cut carbon pollution, and prepare the nation for the unavoidable impacts of climate change we are already beginning to experience, the Budget supports a wide array of programs that promote advances in clean energy, improve energy security, and enhance preparedness and resilience to climate change. The Budget continues the significant progress already made toward achieving the President's commitment to cut carbon pollution in the U.S. in the range of 17 percent below 2005 levels by 2020. As critical components of the President's Climate Action Plan, these programs are fundamental to bringing about a clean energy economy with new businesses, jobs, and opportunities for American workers.

INVESTING IN HOMEGROWN CLEAN ENERGY

The Budget continues to further American leadership by investing approximately \$6.9 billion in base funding for clean energy technology programs across several agencies.

Cutting Carbon Pollution by Investing in Clean Energy Technologies. The Budget provides approximately \$5.2 billion in base funding for clean energy technology activities at the Department of Energy (DOE), including:

- Over \$900 million in basic clean energy research in the Office of Science;
- Over \$860 million for programs and infrastructure that support the advancement of nuclear energy technologies, including \$97 million to help accelerate the timelines for the commercialization of small modular reactors (SMR) through the SMR Licensing Technical Support program.
- Over \$700 million in cutting-edge sustainable transportation technologies to increase the affordability and convenience of advanced vehicles and domestic renewable fuels;
- Over \$500 million to increase the use and reduce the costs of clean renewable power from solar, wind, water, and geothermal energy;
- Nearly \$400 million in cleaner energy from fossil fuels, including \$25 million to support the demonstration of carbon capture and storage integrated with a natural gas power system.
- \$325 million for DOE's Advanced Research Projects Agency– Energy (APRA-E) to support potentially transformative applied energy research;
- Technical assistance to help State and local decision-makers develop policies and regulations that encourage greater deployment of renewable energy, energy efficiency technologies, and alternative fuel vehicles;
- A new demonstration project to accelerate pre-commercial development and validation of a turbine system technology that shows promise in improving electricity generation efficiency; and
- Modernizing the electricity grid through an investment of \$157 million in Smart Grid R&D and other activities.

To further support U.S. leadership in clean energy, the Opportunity, Growth, and Security Initiative invests additional funding in applied research at the Department of Energy to accelerate the development and deployment of new energy efficiency and renewable energy technologies. Examples include increased R&D on higher-performing electric drive motors, batteries, and ultra-light materials and composites to enable electric vehicles to be as affordable and convenient as the gasoline powered vehicles we drive today; and on technological advances to make renewable electricity as inexpensive and accessible as fossil-fuel based electricity. The Opportunity, Growth, and Security Initiative also

makes other investments across several agencies to maintain U.S. global leadership in basic research and help transition our economy to a clean energy future.

Promoting Clean Energy in Rural America. The Budget provides \$345 million for the Department of Agriculture (USDA) for a range of programs including research related to biomass feedstock, biofuels and biobased product development, as well as demonstration and deployment of renewable energy systems, biomass feedstock production, and energy efficiency improvements.

To cut carbon pollution and promote renewable and clean energy as well as energy efficiency improvements in electric generation, transmission, and distribution sites in rural communities, the Budget also supports \$5 billion in USDA lending to rural electric cooperatives and utilities to support the transition to clean-energy and increased energy efficiency.

Making Public Lands Available for Clean Energy Infrastructure Projects. To enhance energy security and create jobs in new industries, the Budget invests in core Department of the Interior (DOI) renewable energy development programs, providing roughly \$95 million to review and permit new renewable energy projects on Federal lands and waters. These funds will allow DOI to continue progress toward its goal of permitting 20 gigawatts of renewable energy capacity and related transmission infrastructure by 2020 as part of the President's Climate Action Plan.

Making Permanent and Expanding the Renewable Energy Production Tax Credit. In order to provide a strong, consistent incentive to encourage investments in renewable energy like wind and solar, create American jobs, and support American companies and manufacturers, the Budget would make permanent the tax credit for the production of renewable electricity and reform it by making it refundable.

Challenging the Federal Government to Lead By Example. To challenge Federal agencies to continue to lead by example the President more than doubled their renewable energy use goals to 20% by 2020. The Administration also called on them to expand and extend the \$2 billion energy performance contracting challenge that uses performance contracts to deploy energy-saving and renewable energy projects at government facilities through 2016.

ENSURING AMERICA'S ENERGY SECURITY

Making Energy Go Further for the Economy and Consumers. Cutting the amount of energy we waste in our cars and trucks, in our homes and buildings, and in our factories, will make a stronger, more resilient, and more competitive economy. That is why the President set a goal of cutting in half the energy wasted by America's homes and businesses with action aimed at doubling the economic output per unit of energy consumed in the United States by 2030, relative to 2010 levels. The Budget takes a number of steps to help reach this goal, including: supporting the development of additional efficiency standards for appliances and buildings; expanding the Better Buildings Challenge to encourage greater energy efficiency in industrial and commercial buildings; improving energy efficiency in Federal buildings; improving energy data access for consumers and for Federal facilities through the "Green Button" initiative, under which utilities are establishing a standardized system allowing electricity customers to securely download their energy usage information; and supporting and encouraging the adoption of State and local policies to cut energy waste.

The Opportunity, Growth, and Security Initiative supports further progress on cutting energy waste by launching a Race to the Top for Energy Efficiency and Grid Modernization. This one-time investment would incentivize States to make progress toward the goal of doubling American energy productivity in 20 years and toward modernizing their electricity grids, resulting in more cost-effective demand response, distributed generation, and improved grid reliability and resilience.

The Budget supports a new tax credit to catalyze investment in the necessary infrastructure to support deployment of advanced vehicles. This proposal would be fuel neutral, allowing the private sector to determine if biofuels, electrification, natural gas, hydrogen, or other alternative fuels would be the best fit in different communities. In addition, the Budget proposes to extend the cellulosic biofuel producer credit that expired on December 31, 2013. Cellulosic biofuels have the potential to reduce petroleum consumption and carbon pollution while boosting rural economic development. Extending the existing tax credit would accelerate development of this transformative transportation fuel.

Investing in Energy Security. Over the President’s first term, the United States cut oil imports by more than 3.6 million barrels per day, more than under any other President. Last year, domestic oil production exceeded crude oil imports for the first time since 1995, while petroleum net imports were the lowest since February 1991. To ensure that we continue on a path towards greater energy security, the Budget establishes an Energy Security Trust to help fund efforts to shift our cars and trucks off oil. This \$2 billion investment over 10 years will support R&D into a range of cost-effective technologies – like advanced vehicles that run on electricity, homegrown biofuels, renewable hydrogen, and domestically produced natural gas – and will be drawn from existing royalty revenues generated from Federal oil and gas development. The Budget proposes an extension of tax credits to support cellulosic biofuels and new tax incentives for medium- and heavy-duty trucks that run on alternative fuels like natural gas and for the fuel infrastructure needed to deploy them.

Supporting Responsible Development of the Nation’s Oil and Gas Resources. The Budget continues to support the President’s “all of the above” strategy for developing domestic energy resources and reducing our reliance on oil imports. This includes \$170 million and \$205 million, respectively, to fund the Department of the Interior’s (DOI) Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement, which share responsibility for overseeing development of oil and gas resources on the Outer Continental Shelf (OCS). The current OCS five-year leasing program will make more than 75 percent of estimated undiscovered technically recoverable oil and gas resources on the OCS available for development. Funding supports continued reforms to strengthen oversight of industry operations following the 2010 Deepwater Horizon oil spill, with an additional emphasis on ensuring the safe and responsible development of Arctic OCS resources.

The Budget also provides support for onshore energy permitting and oversight on Federal lands, with an 18 percent increase in discretionary and fee-based funding for the oil and gas program of DOI’s Bureau of Land Management (BLM), relative to the 2014 enacted level. Combined with an extended and reformed permitting pilot office authority and ongoing administrative efforts, these resources will facilitate improved responsiveness to permit requests while strengthening oversight and enforcement of industry operations. BLM’s costs would be partially offset through new inspection fees totaling \$48 million in 2015, requiring the onshore industry to bear a greater share of the cost of managing the program from which it benefits, just as the offshore industry currently does.

Promoting Safe and Responsible Production and Use of Natural Gas and Cleaner Energy from Fossil Fuels. Our domestic natural gas resources are reducing energy costs across the economy—from manufacturers investing in new facilities to lower heating costs for families throughout the country. The Budget invests in research to ensure safe and responsible natural gas production. Specifically, it includes \$48 million to support an interagency R&D initiative aimed at understanding and minimizing potential environmental, health, and safety impacts of unconventional gas resource development and production through hydraulic fracturing. This research will be coordinated between DOE, DOI's U.S. Geological Survey, and the Environmental Protection Agency (EPA) and will focus on timely, policy-relevant science to ensure prudent development while protecting human health and the environment.

The Budget also invests in innovative approaches to cleaner fossil fuels, including advanced high-efficiency combustion engines and combined heat and power, as well as carbon capture and storage technologies from both natural gas and coal. The Budget also supports grants through DOE's Office of Energy Efficiency and Renewable Energy to States and local communities to create economic development roadmaps that leverage the current shale gas boom to support sustained economic development and growth as well as assist local governments in their efforts to diversify their economies by attracting advanced manufacturing and clean energy industries. Additionally, the Budget helps States and localities improve the integration and utilization of natural gas in manufacturing and transportation.

REDUCING CARBON POLLUTION AND PREPARING FOR THE IMPACTS OF CLIMATE CHANGE

Promoting Voluntary and State Action to Cut Carbon Pollution. The Budget provides nearly \$200 million for the Environmental Protection Agency (EPA), which will be focused on cutting carbon pollution to protect our children's health and spark business innovation to modernize our power plants as called for in the Climate Action Plan; implementing programs such as Energy Star; and supporting State efforts to monitor and cut carbon pollution.

Ensuring Resilience to the Effects of Climate Change. The Nation is already experiencing impact from climate change, and there is more to come. The Budget strengthens America's preparedness for and resilience to the effects of climate change by including base funding for investments specifically for identifying and analyzing critical infrastructure vulnerabilities, as well as funds for grants to support research and State and local level resilience planning. These investments include:

- The Department of Transportation (DOT), in partnership with States and communities, is advancing integration of climate information to minimize the effects of extreme weather and climate change on critical transportation infrastructure. The Budget continues DOT's commitment to work with the States to pilot approaches for conducting climate change vulnerability and risk assessments, initiated in 2010 and 2011. These on-the-ground projects advance understanding of current and future vulnerabilities – and inform actions to improve transportation safety and minimize the disruptions that affect communities on a daily basis.
- The Budget also includes \$5 million for the Army Corps of Engineers' (Corps) Responses to Climate Change effort to continue development of planning and engineering guidance and supporting tools that will aid in the design of future climate resilient water resources infrastructure.

- The Budget provides \$2 million to support the National Oceanic and Atmospheric Administration's development of a climate toolkit, as called for in the President's Climate Action Plan. This toolkit will provide easy access to tools, models, and other data that will help inform decision-making to support resiliency efforts.
- The Budget proposes \$150 million for National Flood Insurance Program mitigation grants, which lower the risk of flood damage to policy holders' properties.

In addition to these base funding investments, the Budget includes over \$1 billion in a Climate Resilience Fund within the President's Opportunity, Growth and Security Initiative to more fully prepare the Nation for existing and future threats from climate change. The investments supported by the Fund will arm us with a greater understanding of the impacts of climate change, provide tools and information to support community planning that accounts for the effects of climate change, and help reduce the risk to our communities, infrastructure, and natural resources in the face of climate change and extreme weather events. For example, the Budget will include \$400 million for the Pre-Disaster Mitigation program in the Opportunity, Growth, and Security Initiative. This, combined with the \$150 million, combined with the \$150 million in base funding for National Flood Insurance Program mitigation grants, represent an increase of \$450 million over the 2014 spending level. These programs provide grants for eligible mitigation planning and projects that reduce disaster losses and protect life and property from future disaster damages. This includes support for adaptation planning and pilot projects for cities and communities through hazard mitigation assistance, building on Administration efforts to implement the National Mitigation Framework. For mitigation funding provided through the Flood Insurance Program, this can include planning grants to prepare flood mitigation plans; cost-effective project grants to reduce flood losses, structure elevation, retro-fitting of existing buildings, soil stabilization; and management costs for the State to help administer mitigation programs.

Protecting Resources on Tribal and Federal Lands. In 2015, Federal agencies will continue to fulfill the President's commitment to modernize policies and programs to help State and local governments build resilience to the impacts of climate change. For the Department of Interior, a \$27 million increase is proposed for climate-related work, including robust funding for: adaptive management across public lands and resources managed by the Fish and Wildlife Service, the Bureau of Land Management, and the National Park Service; drought mitigation and sustainable water management by the Bureau of Reclamation; climate resilience on tribal lands through the Bureau of Indian Affairs; and the development of science and tools by the United States Geological Survey and other bureaus to support adaptive resource management.

Understanding the Impact of Climate Change on Oceans. The Budget includes \$15 million for an expanded ocean acidification research program at the National Oceanic and Atmospheric Administration. This will allow for better understanding of the impacts of increasing levels of atmospheric carbon dioxide on ocean chemistry and marine resources.

Understanding Global Climate Change and its Impacts. The U.S. Global Change Research Program (USGCRP) coordinates Federal research to improve our ability to understand, assess, predict, and respond to the human-induced and natural processes of global change and their related impacts and effects. USGCRP outcomes support the Administration's Climate Action Plan. The Budget includes approximately \$2.5 billion for USGCRP, advancing scientific knowledge of the integrated natural and human components of the Earth system; providing the scientific basis to inform and enable timely decisions; supporting sustained assessment capacity that improves the ability to document changes on the regional, landscape, and local level to understand, anticipate, and respond to global change impacts

and vulnerabilities; and advancing communications and education to broaden public understanding of global change. The Budget also supports an integrated suite of climate change observations, process-based research, modeling and assessment and adaptation science activities that serve as a foundation for providing timely and responsive information including but not limited to technical reports, impact and vulnerability assessments, and adaptation response strategies to a broad array of stakeholders.

Leading International Efforts on Climate Change. The Budget provides \$839 million to advance the goals of the Global Climate Change Initiative (GCCCI) and the President's Climate Action Plan by supporting bilateral and multilateral engagement with major and emerging economies; reducing emissions from deforestation and forest degradation; and expanding clean energy use as well as energy efficiency. Established in 2010, the Global Climate Change Initiative (GCCCI) enables the United States to provide international leadership through the Department of State, USAID, and the Department of Treasury to promote cleaner and more efficient energy, to conserve the world's remaining tropical rainforests, to phase down chemicals with high global warming potential, and to support the most vulnerable communities in their efforts to cope with the adverse impacts of severe weather events and climate change.

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