



# Issue Brief

## Obama Administration FY 2016 Budget Proposal: Sustainable Energy, Buildings, Transportation and Climate

February 2015

On February 2, 2015, President Obama released his **\$4 trillion fiscal year (FY) 2016 budget proposal** for the federal government. The request includes \$563 billion for non-defense discretionary spending – \$5 billion over FY 2015 enacted levels. The budget reflects the administration's "all of the above" energy strategy, as well as its continued focus on addressing climate change and investing in infrastructure. The proposed 2016 budget increases the Department of Energy's (DOE) funding by 9 percent over 2014 enacted levels, raises the Environmental Protection Agency's (EPA) budget by 5.5 percent, and hikes the Department of Transportation's (DOT) funding by 31 percent.

**The proposal invests \$7.4 billion in clean energy technology programs across all agencies**, led by DOE, the Department of Defense (DOD), the National Science Foundation (NSF), and the Department of Agriculture (USDA). Other highlights include a proposed \$4 billion Clean Power Plan Incentive Fund to encourage states to go beyond their minimum carbon reduction requirements, as well as \$1.29 billion for the Global Climate Change Initiative (GCCII), which supports multilateral and bilateral international efforts to combat climate change. Transportation programs include a new \$7.5 billion Critical Immediate Investments Program and a \$7.4 billion increase for the Federal Transit Administration (a 67 percent increase).

This issue brief outlines the Obama administration's FY 2016 budget request for several clean energy and infrastructure programs within key agencies.

### DEPARTMENT OF ENERGY

The President's FY 2016 budget request for the Department of Energy (DOE) is **\$29.9 billion, an increase of 9 percent** over FY 2015 enacted levels, compared to an overall federal budget increase of 3.6 percent. The proposed budget is built to further the Administration's all-of-the-above energy strategy and its Climate Action Plan, announced June 2013. The White House aims to reduce domestic greenhouse gas emissions 17 percent by 2020, 26-28 percent by 2025 and 83 percent by 2050, all with respect to 2005 levels. To this end, the White House's budget request focuses on DOE's role in transitioning to a low carbon economy through a more resilient, economical, and clean energy system.

The 2016 request increases the **Office of Energy Efficiency and Renewable Energy (EERE) budget 42 percent over 2015 enacted levels**, to \$2.7 billion. The Office of Electricity Delivery and Energy Reliability would grow nearly 84 percent to \$270 million, with a 133 percent increase in funding for **energy infrastructure resiliency**, a 94 percent increase for **smart grid R&D**, and a 75 percent increase for **energy storage**. The Office of Fossil Energy would grow by 6.4 percent to \$842 million. The Office of Nuclear Energy's budget would increase 8.9 percent to \$907 million. The DOE Office of Science, which funds basic research in the physical sciences, will grow 5.4 percent to \$5.3 billion. The budget also provides \$325 million for the Advanced Research Projects Agency – Energy (ARPA-E), an increase of 16 percent. ARPA-E funds the development of innovative energy technologies that show promise but are not ready for market investment. In keeping with its multi-year open solicitation policy, ARPA-E does not plan to release an open solicitation in 2016. However, ARPA-E will provide seven to ten technology funding opportunities throughout the year, and continue its Small Business Innovation Research/Small Business Technology Transfer program.

The budget request funds five crosscutting initiatives which are conducted in partnership between the three Under Secretaries of DOE: Science and Energy, Nuclear Security, and Management and Performance. The initiatives are funded within DOE's programs. They include work on grid modernization, supercritical carbon dioxide (sCO<sub>2</sub>)-based power generation, subsurface engineering, the energy-water nexus, and cybersecurity.

This year DOE will start a new loan guarantee program for tribal energy, at a level of \$11 million. This money will be used to leverage private funding for energy projects on tribal lands.

<b>DOE Overall Energy Budget</b> <b>(Dollars in thousands)</b>			
<b>Program</b>	<b>FY 2014 Current</b>	<b>FY 2015 Enacted</b>	<b>FY 2016 Budget Request</b>
Energy Efficiency and Renewable Energy	1,824,876	1,914,195	2,722,987
Electricity Delivery and Energy Reliability	144,205	146,975	270,100
Fossil Energy	770,447	791,117	842,100
Nuclear Energy	877,620	833,379	907,574
Office of Indian Energy Policy and Programs	2,506	16,000	20,000
Science	5,131,038	5,067,738	5,339,794
Advanced Research Projects Agency- Energy (ARPA-E)	280,000	279,982	325,000
Energy Information Administration	116,999	117,000	131,000
Loan Guarantee Program	7,857	17,000	0
Advanced Technology Vehicles Manufacturing Loan	6,000	4,000	6,000
Tribal Indian Energy Loan Guarantee Program	0	0	11,000
Excess Fees and Recoveries, FERC	-19,686	-28,485	-23,587
<b>Sub Total</b>	<b>9,141,862</b>	<b>9,158,901</b>	<b>10,551,968</b>

The President's FY 2015 Energy Efficiency and Renewable Energy budget request for DOE includes:

- **A 44 percent increase in funding for the Solar Energy program to nearly \$336 million**, to help the SunShot Initiative achieve its goal of a solar energy price of \$0.06/kWh, without subsidies.
- **A 36 percent increase in funding for the Wind Energy program to \$145 million**, which will support three advanced offshore wind demonstration projects, planned to begin power generation in 2017. DOE is also supporting an Atmosphere to Electrons initiative to lower costs and enhance wind farm performance.
- **A nearly 10 percent increase in funding for the Water Power program to \$67 million**, to fund a new initiative called HydroNEXT, which will research and develop ways to increase hydropower on pre-existing dams, water conveyance systems, and streams. HydroNEXT will also research cheap modular systems with small environmental and construction footprints, as well as marine and hydrokinetic technologies.
- **A 75 percent increase in funding for the Geothermal Technologies program to \$96 million**, to fully implement the Subsurface Technology and Engineering RD&D crosscut, an effort to decrease the risks and costs of geothermal development by using lessons learned in other subsurface sectors. The funding also supports the Frontier Observatory for Research in Geothermal Energy (FORGE), a site to test innovative geothermal technologies.
- **A 6 percent increase in funding for the Hydrogen and Fuel Cell Technologies program to \$103 million**, which will focus on technologies and materials that will reduce hydrogen production, compression, transport, and storage costs. Funding will also provide resources to rapidly advance the development of quality control tools for the manufacturing of fuel cell components and systems.

- **A 59 percent increase in funding for the Vehicle Technologies program to \$444 million**, to support greater investment in vehicle electrification and grid infrastructure, improved freight hauling efficiency, and partnerships to demonstrate community-scale alternative fuel vehicles. The program will continue to work toward aspirational vehicle technology goals, such as improving battery energy storage.
- **An over 9 percent increase for the Bioenergy Technologies program to \$246 million**, to develop advanced cellulosic and algal-based gasoline, jet and diesel fuel at a price of \$3 per gallon gasoline equivalent (gge). The budget will also fund commercial-scale demonstration biorefineries to make fuel for the military, in partnership with the Departments of Navy and Agriculture.
- **A 31 percent increase for the Weatherization and Intergovernmental Assistance Program to \$318 million**, to fund low-income weatherization services for about 33,000 homes in FY 2016 and the State Energy Program, which will also help government facilities and operations share best practices to decrease their annual energy use 2 percent by 2020.
- **A 59 percent increase in funding for the Federal Energy Management program to \$43 million**, with a new \$15 million investment to help federal agencies meet energy efficiency and renewable energy requirements.
- **A 102 percent increase for the Advanced Manufacturing program to \$404 million**, which will fully fund two new Clean Energy Manufacturing Innovation Institutes, while continuing funding for the four existing institutes. These institutes will be part of an interagency National Network of Manufacturing Institutes, focused on convening universities, companies, and the government to solve industry problems and improve U.S. competitiveness.
- **A 53 percent increase in funding for the Building Technologies program to \$264 million**, to support advanced materials and technologies R&D, appliance standards development, and other initiatives to reduce building energy use.

<b>DOE Energy Efficiency and Renewable Energy Budget</b>			
<b>(Dollars in thousands)</b>			
<b>Program</b>	<b>FY 2014 Current</b>	<b>FY 2015 Enacted</b>	<b>FY 2016 Budget Request</b>
Vehicle Technologies	282,201	280,000	444,000
Bioenergy Technologies	182,327	225,000	246,000
Hydrogen and Fuel Cell Technologies	89,518	97,000	103,000
<b>Total, Sustainable Transportation</b>	<b>554,046</b>	<b>602,000</b>	<b>793,000</b>
Solar Energy	254,305	233,000	336,700
Wind Energy	87,035	107,000	145,500
Water Power	57,834	61,000	67,000
Geothermal Technology	44,802	55,000	96,000
<b>Total, Renewable Energy</b>	<b>443,976</b>	<b>456,000</b>	<b>645,200</b>
Advanced Manufacturing	175,400	200,000	404,000
Federal Energy Management Program	28,248	27,000	43,088
Building Technologies	173,631	172,000	264,000
Weatherization and Intergovernmental Programs	230,862	243,000	318,499
<b>Total, Energy Efficiency</b>	<b>608,141</b>	<b>642,000</b>	<b>1,029,587</b>
Facilities and Infrastructure (NREL)	45,973	56,000	62,000
Program Direction	162,000	160,000	165,330
Strategic Programs	23,540	21,000	27,870
<b>Total, Corporate Support</b>	<b>231,513</b>	<b>237,000</b>	<b>255,200</b>
<b>Subtotal EERE</b>	<b>1,837,676</b>	<b>1,937,000</b>	<b>2,722,987</b>
Adjustments (Inc. Use & Rescission of Prior Year Balances )	-12,800	-22,805	0
<b>Total EERE</b>	<b>1,824,876</b>	<b>1,914,195</b>	<b>2,722,987</b>

DOE crosscutting initiatives showcase an overlay of priorities which elaborates on the funding levels above. The following table shows which DOE programs are supporting the crosscutting initiatives, and at what level.

FY 2016 Crosscutting Initiatives (Dollars in thousands)						
	Grid Modernization	sCO <sub>2</sub>	Subsurface Engineering	Energy-Water Nexus	Cyber Security	Total
Vehicle Technologies	18,000	0	0	0	0	18,000
Hydrogen and Fuel Cell Technologies	8,500	0	0	0	0	8,500
Solar Energy	60,000	0	0	0	0	60,000
Wind Energy	12,027	0	0	0	0	12,027
Water Power	0	0	0	1,000	0	1,000
Geothermal Technologies	0	500	71,000	3,750	0	75,250
Advanced Manufacturing	0	0	0	4,300	0	4,300
Building Technologies	18,000	0	0	0	0	18,000
Facilities and Infrastructure	36,000	0	0	0	2,190	38,190
<b>Total, Crosscuts</b>	<b>152,527</b>	<b>500</b>	<b>71,000</b>	<b>9,050</b>	<b>2,190</b>	<b>235,267</b>

## USDA / DOE BIOENERGY PROGRAMS

### Department of Energy Bioenergy Programs

The **Bioenergy Technologies Program** is part of DOE's Sustainable Transportation initiative within the Office of Energy Efficiency and Renewable Energy. The FY 2016 budget proposes funding of \$246 million, an increase of 9.3 percent above the FY 2015 appropriated level. Similar to FY2015, the budget emphasizes "development of innovative processes to convert cellulosic and algal-based feedstocks to bio-based gasoline, jet and diesel fuels at a cost of \$3.00 per gallon gasoline equivalent." The Department of Energy is continuing its collaboration with the U.S. Department of Agriculture and the U.S. Navy to demonstrate commercial-scale biorefineries to produce military-specification fuels, as well as supporting development of new technologies that are still in the research stage.

Within the Bioenergy Technologies program, **\$38.8 million is requested for feedstocks development** and pre-pilot scale logistics, an increase of \$6.8 million over FY15 enacted levels. Of this, **\$21 million is for advancing algae feedstocks**, and **\$17.8 million is allocated to cellulosic feedstocks**.

### U.S. Department of Agriculture (USDA) Bioenergy & Sustainable Farms and Forests Programs

FY 2014 and early 2015 have seen the roll-out of many energy efficiency, renewable energy and conservation programs established under the *Agricultural Act of 2014* (Farm Bill). President Obama's budget request for energy title programs for FY 2016 is \$32 million higher than FY 2015 funding levels. **The Farm Bill contains robust mandatory funding for its Energy Title Programs** over its five-year authorization.

U.S. Department of Agriculture Farm Bill Energy Title Programs						
(Dollars in thousands)						
Program	FY 2014 Actual		FY 2015 Estimated		FY 2016 Budget Request	
	Mandatory	Discretionary	Mandatory	Discretionary	Mandatory	Discretionary
Sec. 9002 Biobased Markets Program	3,000	-	3,000	-	3,000	-
Sec. 9003 Biorefinery Assistance Guaranteed Loans	100,000	-	30,000 <sup>a</sup>	-	50,000	-
Sec. 9004 Repowering Assistance Payments	12,000	-	0	-	0	-
Sec. 9005 Bioenergy for Advanced Biofuels	15,000	-	14,000 <sup>b</sup>	-	15,000	-
Sec. 9006 Biodiesel Fuel Education Program	1,000	-	1,000	-	1,000	-
Sec. 9007 Rural Energy for America Loans	25,000	4,000	23,000 <sup>c</sup>	1,000	25,000	5,000
Sec. 9007 Rural Energy for America Grants	25,000	-	23,000 <sup>c</sup>	-	25,000	5,000
Sec. 9008 Biomass Research and Development	3,000	-	3,000	-	3,000	-
Sec. 9010 Biomass Crop Assistance Program	7,000	-	27,000 <sup>c</sup>	-	25,000	-
<b>Total USDA Farm Bill Energy Title Programs (mandatory + discretionary)</b>	<b>195,000</b>		<b>125,000</b>		<b>157,000</b>	
<sup>a</sup> Estimated program levels, depending on funded projects. The Farm Bill allocates up to \$50 million of mandatory funding for FY2015. <sup>b</sup> The Farm Bill provides \$15 million of mandatory funding in FY2015 and FY2016. <sup>c</sup> The Farm Bill provides \$25 million of mandatory funding for Sec. 9007 loans and grants and for Sec. 9010 Biomass Crop Assistance Program in FY2015 and FY2016.						

Additionally, the President’s FY 2016 USDA budget request includes several new programs, as well as stable or increased funding levels for existing programs that will continue to put farms, forests and rural economies on a more sustainable path. Climate change and its impact on water availability, extreme weather events as well as the growing climate-water-agricultural nexus received increased attention and funding throughout the budget request. Conservation and related programs include:

- First floated in the President’s 2015 Budget proposal, the President continues to advocate for “treating catastrophic fire as a natural disaster” through **the creation of a separate \$855 million emergency disaster fund**. According to USDA, fire suppression has grown from “13 percent of the agency’s budget in the 1990s to over 50 percent in 2014.” As fire-related costs have soared, the practice of ‘fire transfer’ has increased, which redirects essential funds from other programs to fighting wildfires.
- **2015 support levels are maintained for local sustainable forest initiatives** under Integrated Resource Restoration (IRR) at \$822 million, and the Collaborative Forest Landscape Restoration Program (CFLRP) at \$60 million. These programs will decrease the number of catastrophic wildfires by funding restoration practices that reduce hazardous fuels as well as help restore water quality, and increase carbon sequestration.
- **Total funding of 2016 Farm Bill conservation programs is \$6.3 billion**. This includes conservation programs at both the Forest Service (FS) and the Natural Resources Conservation Service (NRCS). USDA estimates an additional 7 million acres will be enrolled per year under the Conservation Stewardship Program and will continue to support 24 million acres enrolled under the Conservation Reserve Program.
- **Research programs that address climate change and its role in forest and agricultural sustainability were continued and expanded:**
  - **A \$125 million increase of the Agriculture and Food Research Initiative (AFRI)** relative to FY15 funding levels, to \$450 million for FY16. Research areas include the role of water supply and availability to agricultural and food production.
  - Additionally, under the Agricultural Research Service (ARS), **environmental stewardship programs will receive \$206 million**. This includes funding to continue the Regional Hubs for Risk Adaptation and Mitigation to Climate Change.
  - The Economic Research Service will receive \$1 million to study the impacts of climate change on the water-agriculture-food nexus.

- Provision of **\$200 million for Watershed and Flood Prevention Operations**, which assists communities and land owners in becoming more resilient to climate change.
- **The proposed budget includes \$10 million in funding over two years for USDA and other agencies to study the effects of incentives and outreach on farmer adoption of conservation practices**, in order to foster conservation programs that are the least-cost option.

## ENERGY-EFFICIENT / SUSTAINABLE BUILDINGS PROGRAMS

### Department of Energy

The DOE’s Building Technologies Office seeks to develop and promote technologies and practices that will reduce U.S. building energy consumption by 50 percent from the 2010 Annual Energy Outlook baseline. According to the Energy Information Agency (EIA), residential and commercial buildings across the country consumed more than 40 percent of total U.S. energy (and more than 73 percent of U.S. electricity) in 2013. America’s energy bill of more than \$430 billion could be cost effectively reduced 20-50 percent if available solutions were applied and new products and practices were successfully developed and commercialized. **In recognition of the building sector’s importance, the DOE buildings program benefits from a substantial 53 percent increase in proposed funding over 2015 enacted levels.**

**The FY 2016 request of \$264 million for Building Technologies** emphasizes R&D for lighting, building envelopes, and heating and cooling; facilitates the development of minimum energy efficiency requirements; and supports activities to improve the efficiency and resiliency of the electric grid and its connections to buildings and related infrastructure. The budget request also supports a new R&D effort for advanced building envelope and refrigerant materials manufacturing; assists home owners and builders in adopting energy efficiency solutions; and provides new resources and tools to the commercial sector with a goal of achieving a 20 percent reduction in energy use by 2020. Energy conservation standards and test procedures directly support national energy policy objectives, such as increasing energy savings and energy productivity, and reducing carbon emissions.

Building Technologies programs and public-private partnerships focus on individual building components *as well as system-design strategies and tools that integrate and optimize components into high-performing, low-energy systems*. The Building Technologies Office also provides technical assistance and training; education and outreach; technical review of model building energy codes; support to the states and local jurisdictions that adopt and enforce such codes; and development of appliance and equipment standards. These initiatives help the building industry apply new technologies and practices cost-competitively; provide consumers with the knowledge to demand better houses and buildings; and ensure that buildings are safe, durable and affordable.

<b>Department of Energy Building Technologies Programs</b>			
<b>Dollars in Thousands</b>			
	FY 2014 Enacted	FY 2015 Enacted	FY 2016 Budget Request
Commercial Buildings Integration	30,782	27,643	32,000
Emerging Technologies	55,862	55,740	112,500
Equipment and Buildings Standards	55,840	53,359	69,000
NREL Site-Wide Facility Support	1,000	2,500	2,500
Penn State Consortium for Building Energy Innovation	9,994	10,000	0
Residential Buildings Integration	24,390	22,758	48,000
<b>Total, Building Technologies</b>	<b>177,868</b>	<b>172,000</b>	<b>264,000</b>

## Department of Housing and Urban Development (HUD)

HUD's FY 2016 budget proposes **\$49.3 billion in budget authority, an increase of more than 8 percent over FY 2015 levels.** The budget emphasizes the Department's core commitment to provide Americans with access to affordable housing, but also seeks to continue helping communities "prepare for the risks posed by extreme weather and other natural disasters, while strengthening communities' ability to be economically resilient in the face of a changing climate and natural disasters."

Energy efficiency also factors into the HUD budget. HUD spends between \$4 and \$6 billion per year on energy for its public housing stock. Reducing those expenditures would be a win for HUD and the Public Housing Authorities that own and operate public housing and a win for the environment by reducing greenhouse gas emissions associated with fossil-fuel generated energy. The FY 2016 budget therefore continues funding for the Energy Performance Contracting (EPC) program and proposes a **Utilities Conservation Pilot** that would encourage Public Housing Authorities (PHAs) of all sizes to undertake needed energy conservation measures.

The administration is also proposing **\$4.6 billion for the Public Housing Operating Fund**, a \$160 million increase over the 2015 enacted level. HUD is proposing a change in policy for public housing construction and operation that has the potential to dramatically reduce energy use and operational costs in the HUD portfolio. The change would allow PHAs with more than 250 public housing units to use their operating reserves for capital expenditures. This would provide a powerful incentive to conserve operating expenses, such as energy use.

With regards to **climate change adaptation**, HUD has allocated \$14.2 billion of the \$15.2 billion it received to respond to Hurricane Sandy. The remaining \$1 billion is earmarked for the Office of Economic Resiliency's **National Disaster Resilience Competition**, which will be awarded in FY2016. Also included is a Pay for Success demonstration that allows HUD to enter multiyear agreements to repay private investors who provide upfront funding for **energy efficiency retrofits of HUD-assisted housing**.

HUD maintains and updates a federal building code for **manufactured housing** (24 CFR Part 3282), a type of U.S. factory-built housing that is an important source of affordable housing. Since the HUD Code came out in 1976, the fire safety, durability and quality of manufactured homes have greatly improved. Further code changes that will greatly increase the energy efficiency of manufactured housing are anticipated.

HUD is requesting **\$50 million for the Policy Development and Research (PD&R) Research and Technology (R&T)** account for fiscal year 2016, \$22 million less than the 2015 appropriation. PD&R is responsible for providing research on building technology, disaster housing (which FEMA provides to communities), resilient housing and resilient communities. This request will fully fund PD&R's housing surveys, including the American Housing Survey, and continue research dissemination functions.

## DEPARTMENT OF TRANSPORTATION

The proposed Department of Transportation (DOT) FY 2016 budget requests a total of **\$94.7 billion in mandatory and discretionary funds, a 31 percent increase** from an estimated \$72.1 billion in 2015. The recent extension of the MAP-21 surface transportation authorization expires on May 31, 2015, so the budget includes a six-year surface transportation reauthorization proposal which would fund a Transportation Trust Fund (TTF) with \$240 billion from federal fuels taxes and other existing revenue sources, supplemented with \$238 billion from a 14 percent mandatory tax on \$2 trillion of existing corporate earnings held overseas. The new TTF would include the current Highway Trust Fund's highway and mass transit accounts, and add rail and multimodal accounts. The proposal would increase funding for the Federal Highway Administration (FHWA) by \$10.4 billion, the Federal Transit Administration (FTA) by \$7.4 billion, the Federal Railroad Administration (FRA) by \$3.4 billion, and National Infrastructure Investment (TIGER) grants by \$750 million.

<b>Department of Transportation Programs</b> <b>(Dollars in Thousands)</b>			
<b>Program / Organization</b>	<b>FY 2014 Actual</b>	<b>FY 2015 Enacted</b>	<b>FY 2016 Budget Request</b>
<b>Office of the Secretary - National Infrastructure Investments (TIGER)</b>	600,000	500,000	1,250,000
<b>Federal Highway Administration (FHWA)</b>	40,941,800	40,941,100	51,307,000
<b>Federal Transit Administration (FTA)</b>	10,841,800	11,008,400	18,399,400
Transit Formula Program	8,595,000	8,595,000	13,914,000
Capital Investment Grants/New Starts (listed)	1,942,900	2,120,000	3,250,000
Rapid Growth Area Bus Rapid Transit Corridor	0	0	500,000
Fixing and Accelerating Surface Transportation	0	0	500,000
Washington Metropolitan Area Transit Authority	150,000	150,000	150,000
Transit Research, Technical Assistance and Training	48,000	37,500	60,000
Public Transportation Emergency Relief	0	0	25,000
<b>Federal Rail Administration (FRA)</b>	1,609,800	1,626,000	4,995,400
Current Passenger Rail Service (Trust Fund)	--	--	2,450,000
(Operating Grants to Amtrak #	340,000	250,000	0)
(Capital and Debt Service Grants to Amtrak #	1,050,000	1,140,000	0)
Rail Service Improvement Program (Trust Fund)	--	--	2,325,000
Safety and Operations	184,500	186,900	203,800
<b>Pipeline and Hazardous Materials Safety Administration</b>	210,000	244,500	288,700
<b>Federal Aviation Administration (FAA)</b>	15,760,200	15,847,500	15,836,000
<b>Federal Maritime Administration (MARAD)</b>	377,300	341,200	406,800
<b>National Highway Traffic Safety Administration (NHTSA)</b>	801,400	830,000	908,000
# Currently included in budget separate from FRA, proposed to move into FRA in FY16 as Current Passenger Rail Service program			

**The proposed FTA budget (\$18.4 billion) would reduce transit’s \$86 billion maintenance backlog and avoid increased congestion costs as urban populations continue to grow.** Formula grants (\$13.9 billion) would increase 160 percent for rail and 350 percent for bus. Capital Investment Grants (\$3.25 billion) would increase by \$1.13 billion, with 28 New/Small Starts and Core Capacity projects in 15 states. There would be a new grant program for Rapid Growth Area Transit focused on Bus Rapid Transit (\$500 million). Another new competitive grant program, Fixing and Accelerating Surface Transportation (FAST), would provide \$500 million to the FTA, and another \$500 million to the FHWA, for innovative State and local solutions to pressing transportation performance challenges.

**The FHWA budget (\$51.3 billion) contains a new Freight Program (\$1 billion) to incentivize regional, multi-modal projects, and a new \$7.5 billion Critical Immediate Investments Program (“Fix-it-First”) to reduce the number of structurally deficient Interstate Highway bridges.** Otherwise, the program structure established under MAP-21 continues. The \$10.3 billion Surface Transportation Program provides flexible (mode) funding for states to work with Metropolitan Planning Organizations (MPO) or local transportation officials in rural areas. The Congestion Mitigation and Air Quality (CMAQ) Improvement program (\$2.3 billion) provides flexible funds for state and local governments to reduce regional congestion and meet air quality standards (NAAQS). The Transportation Alternatives Program (\$847 million) helps create livable communities, and the Metropolitan Transportation Planning Program (\$320 million) supports MPOs’ multi-modal planning. The \$1 billion Transportation Infrastructure Finance and Innovation Act (TIFIA) program subsidizes loans for projects of national or regional significance, facilitates private participation and leverages up to \$30 billion in investment. New bond programs also encourage private investment (i.e. America Fast Forward, Qualified Public Infrastructure Bonds).

**The FRA budget (\$5 billion) contains a new Current Passenger Rail Service program which subsumes Amtrak programs and increases funding by \$1 billion, to return public rail assets to a state of good repair and make critical investments to maintain current services.** Program areas include: Northeast Corridor (\$550 million), State Corridors (\$225 million), Long Distance (\$850 million), National Assets, Debt and PTC (\$475 million) and Stations (\$350 million). A new Rail Service Improvement Program (\$2.3 billion) expands and improves rail networks. It includes Passenger Corridors (\$1.3 billion) to



develop new or improve existing corridors, Commuter Railroad PTC (\$825 million) for safety (due to sunset FY18), Local Rail Facilities and Safety (\$125 million) and Planning and Workforce (\$75 million). The Safety and Operations program would expand to address safety issues related to energy product movement, passenger rail and highway-rail crossings.

The \$166 million Research, Engineering and Development program in the FAA budget request maintains \$6 million to support continuing efforts to partner with industry to **transition general aviation off leaded fuel**, and \$24 million for **aircraft technologies to increase efficiency and reduce harmful emissions** by advancing alternative jet fuels.

In the budget for the Office of the Secretary, **the TIGER multimodal grant program (National Infrastructure Investment) would increase by 150 percent**. The Interagency Permitting Improvement Center proposal is carried over from last year’s request, to continue implementation of coordinating concurrent (rather than serial) interagency project reviews.

The Army Corps of Engineers budget requests **\$915 million from the Harbor Maintenance Trust Fund**, to help the nation’s ports prepare for larger cargo vessels. This amount is 16 percent less than 2015 funding, and below the \$1.32 billion target set by the recently passed authorization law (WRRDA).

Please see the Department of Energy budget analysis regarding Vehicle and Bioenergy/alternate fuels programs.

## ENVIRONMENTAL PROTECTION AGENCY

The President’s FY 2016 budget request for the Environmental Protection Agency (EPA) is **\$8.6 billion, an increase of \$452 million** (5.5 percent) from FY 2015 enacted funding. Funds for addressing climate change and improving air quality amount to \$1.11 billion, an increase of \$120 million (12 percent) from FY 2015. The \$1.1 billion request includes \$214 million to support the Clean Power Plan and other regulatory and partnership programs to reduce climate change pollution domestically and abroad. Separately from the \$8.6 billion requested for FY 2016, the Administration is proposing to create the Clean Power Plan Incentive Fund, which would provide states with as much as \$4 billion for going beyond the minimum requirements of the Clean Power Plan.

The EPA breaks down its budget request into five overall goals. Two of those goals address climate change and sustainable communities, and are highlighted below.

<b>Environmental Protection Agency</b>			
<b>(Dollars in Thousands)</b>			
<b>Goal 1: Addressing Climate Change &amp; Improving Air Quality</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>
	<b>Actuals</b>	<b>Enacted</b>	<b>Budget Request</b>
Address Climate Change	182,744	190,665	279,470
Improve Air Quality	737,634	751,499	777,206
Restore and Protect the Ozone Layer	16,814	16,694	17,180
Minimize Exposure to Radiation	36,224	33,841	39,015
<b>Total, Addressing Climate Change &amp; Improving Air Quality Goal</b>	<b>973,415</b>	<b>992,698</b>	<b>1,112,870</b>
<b>Goal 3: Cleaning up Communities &amp; Advancing Sustainable Development</b>			
Promote Sustainable & Livable Communities	464,428	441,440	504,572
Preserve Land	219,508	221,654	238,863
Restore Land	1,088,939	1,025,551	1,089,006
Strengthen Human Health & Environmental Protection in Indian Country	89,513	86,908	121,038
<b>Total, Cleaning Up Communities &amp; Advancing Sustainable Development</b>	<b>1,862,388</b>	<b>1,775,553</b>	<b>1,953,479</b>

The FY 2016 EPA budget request also includes:

- \$25 million for grants to states to develop their strategies for the Clean Power Plan
- \$5 million for climate resilience grants through the Wetlands Program Development Grants program
- \$4 million increase over current levels for the ENERGY STAR program
- \$14 million for the Environmental Justice program, a 107 percent increase over FY 2015. It incorporates the concerns of disproportionately impacted minority, low-income and tribal communities into rulemaking.

## DEPARTMENT OF STATE

The Department of State's FY 2016 budget request includes **\$1.29 billion for the Global Climate Change Initiative (GCCII)**, which supports international organizations that facilitate climate change resilience and affordable renewable energy in developing nations. This **includes \$549 million in multilateral assistance for international climate and clean energy efforts**, with \$150 million for the Green Climate Fund, \$168 million for the Global Environment Facility (GEF), \$171 million for the Clean Technology Fund (CTF), and \$60 million for the Strategic Climate Fund (SCF). The Strategic Climate Fund includes funding for three programs: the Pilot Program for Climate Resilience (PPCR), the Forest Investment Program (FIP), and the Program for Scaling up Renewable Energy in Low-Income Countries (SREP).

The Global Climate Change Initiative budget request also **includes \$306 million in bilateral development assistance for climate adaptation, clean energy, and the sustainable landscapes program**. The remaining portion of the GCCII request is **\$448 million** for the Oceans and International Environmental and Scientific Affairs (OES) program, which supports, among other programs, the Clean Energy Ministerial, the U.S.-Africa Clean Energy Finance initiative, and the international Climate and Clean Air Coalition. Of the \$448 million in OES funds, \$350 million would go to the **Green Climate Fund, which is to receive \$500 million in all in 2016**. The Obama administration has promised \$3 billion in total for the Fund, to be paid out over four years.

## OTHER AGENCY HIGHLIGHTS

**The Department of Commerce's \$9.8 billion budget request** includes \$6.18 billion in budget authority for the National Oceanic and Atmospheric Administration (NOAA), up \$511 million from FY 2015. The request includes \$2.38 billion for the National Environmental Satellite, Data, and Information Service (NESDIS), which will be used to improve weather predictions and modeling. The agency has requested \$507 million for NOAA's Office of Oceanic and Atmospheric Research (OAR), which includes \$160 million for climate research (a 22 percent increase over FY 2015). The NOAA budget request includes \$50 million for its Regional Coastal Resilience Grant program.

**The Department of Defense (DOD) budget provides support for energy efficiency initiatives, including improving fuel efficiency, developing new energy technologies, and expanding renewable energy resources.** The Energy Conservation Investment Program (ECIP), which supports renewable energy and energy efficiency projects at military installations, remains at the FY 2015 appropriations level of \$150 million. The budget request for the Operational Energy Capability Improvement fund is \$37 million, down \$9 million from FY 2015 funding levels. The budget request includes \$48 million for the Navy Energy Program, \$16 million lower than FY 2015.

**The Department of Interior (DOI) budget request for renewable energy initiatives is \$100 million, an increase of \$8 million above FY 2015 enacted levels.** The renewable funding request includes \$34 million for the Bureau of Ocean Management, \$29 million for the Bureau of Land Management, \$14 million for the Fish and Wildlife Service, and \$9 million for the Bureau of Indian Affairs. DOI also requests \$195 million for climate adaptation activities, including \$50 million for planning and technical assistance to communities and tribes.

**The Department of Homeland Security (DHS) budget request for the Federal Emergency Management Agency (FEMA) includes \$200 million for its Pre-disaster Mitigation Grant Program**, an eight-fold increase over current funding. The FEMA request also includes \$279 million for the Flood Hazard Mapping and Risk Analysis program, a \$194 million increase over FY 2015.