

# PRESIDENT OBAMA'S CLIMATE ACTION PLAN: TWO YEARS LATER



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Two years after President Obama announced his Climate Action Plan, the administration has made marked progress toward achieving its goals. The plan, announced June 25, 2013, outlines 75 goals in three areas: cutting carbon pollution in the United States, preparing the United States for the impacts of climate change, and leading international efforts to address climate change. To date, there has been at least initial government action related to every item in the plan.

Notable areas of progress include steps to limit carbon pollution from power plants; new energy efficiency standards; actions to reduce methane and hydrofluorocarbon (HFC) emissions; the release of climate adaptation plans for 38 federal agencies and a Climate Resilience Toolkit for the public; and a joint announcement with China of new greenhouse gas targets. Areas where there has been only initial progress include increasing the climate resilience of federal buildings and infrastructure.

With Congress unlikely to enact major climate legislation in the near term, the Climate Action Plan relies almost entirely on executive powers under existing laws—steps the administration can take on its own. Some of these efforts have been subject to political pushback from opponents in Congress and some states. While efforts to undo executive actions have mostly been unsuccessful, it seems likely Congress will succeed in repealing guidelines on U.S. financing of coal plants overseas.

The nature, scope and ambition of the plan's many elements vary widely. Some are discrete, relatively simple tasks within existing policies and programs; others require the administration to undertake formal rule-

making processes; and some are continuations of existing government programs and policies. Achieving some of the plan's goals will require a transformation of the U.S. energy system over a period that will outlast President Obama's time in office.

## CUTTING CARBON POLLUTION IN THE UNITED STATES

The first pillar of the plan includes commitments and goals to reduce emissions of major greenhouse gases, including carbon dioxide, methane, and hydrofluorocarbons. It covers major economic sectors, including power, transportation, and buildings, and is geared toward achieving goals the U.S. has pledged internationally: reducing economy-wide greenhouse gas emissions 17 percent below 2005 levels by 2020 and reducing economy-wide greenhouse gas emissions 26 to 28 percent from 2005 levels by 2025. These goals require reducing annual emissions by more than 600 million metric tons of carbon dioxide below 2014 levels by 2020 and by more than 1,300 million metric tons by 2025.

The most prominent objective within this pillar is reducing carbon pollution from power plants, which account for almost one-third of U.S. greenhouse gas emissions,<sup>1</sup> making them the largest source. At the time he announced the plan, the president directed the Environmental Protection Agency (EPA) to propose regulations covering new power plants by September 2013 and existing power plants by June 2014. The agency met deadlines for releasing the proposals but missed deadlines for issuing final rules a year later, saying it will release final regulations for new, modified, and existing power plants in summer 2015. The proposed rule for new

power plants would bar new coal-fired plants unless they employ carbon capture-and-storage technology, although there are indications the capture and storage requirement may be dropped in the final rule. The proposed Clean Power Plan<sup>2</sup> for existing power plants is projected to reduce emissions 30 percent below 2005 levels by 2030 (a projected reduction of 383 million metric tons by 2020<sup>3</sup>). The proposal would establish different target emission rates (pounds of carbon dioxide per megawatt-hour of generation) for each state, and allow them flexibility in designing implementation plans. States will then have up to two years to submit their implementation plans to EPA or three, if they seek to participate in a multistate compliance program.

The administration has taken significant steps to reduce greenhouse gas emissions from the transportation sector, which accounted for 27 percent of greenhouse gas emissions in 2013.<sup>4</sup> These actions included the first-ever fuel economy standards for heavy-duty trucks, followed by a commitment in the Climate Action Plan to strengthen those standards. In June 2015, the Department of Transportation and EPA announced new fuel economy standards for heavy-duty trucks built after model year 2018 that could reduce emissions an additional 24 percent from 2010 levels by 2027. In other parts of the transportation sector, the administration initiated a regulatory process to reduce emissions from aircraft engines in June 2015 and is offering funding for alternative fuel conversions in the U.S. marine vessel flag fleet.

Several steps have been taken to address two highly potent greenhouse gases, HFCs and methane. EPA issued final rules in December 2014 and April 2015 to expand the number of acceptable alternatives to HFCs under its Significant New Alternatives Policy and to delist specific uses of HFC-134a. The administration is also directing federal agency purchasing toward more climate-friendly alternatives to HFCs. The administration estimates that the HFC measures could reduce emissions by up to 135 million metric tons of carbon dioxide equivalent in 2020.<sup>5</sup>

Following the release of a methane strategy in March 2014, the administration has proposed steps to reduce methane emissions from the oil and gas industry, agriculture, new and existing landfills, and coal mines. The administration estimates these measures could reduce greenhouse gas emissions by up to 90 million metric tons of carbon dioxide equivalent in 2020.<sup>6</sup> In the

oil and gas sector, the largest source of methane emissions, the administration announced a goal to cut emissions from oil and gas wells by 40 to 45 percent from 2012 levels by 2025. To achieve this goal, the administration plans to set emission standards for new and modified oil and gas wells, launch a voluntary industry partnership to reduce emissions from existing wells, set energy efficiency standards for certain equipment, seek funding for leak identification and reduction technology research, and set standards to reduce venting and flaring on public lands. In the agriculture sector, the administration launched a voluntary partnership with the dairy industry in August 2014 to reduce emissions through the use of biodigesters. In June 2014, EPA proposed updates to standards for new landfills and solicited feedback on whether to update guidelines for existing landfills. In April 2014, the Department of Interior gathered input on reducing emissions from coal mines on public lands.

The administration has made varying progress on other elements of this first pillar as well. Renewable energy production and use is increasing on public lands, federal and military facilities, and in the economy overall. The United States is on target to double its renewable energy use from President Obama's first term through 2020, as committed to in the plan. It has completed or made significant progress on many steps to strengthen energy efficiency standards, including finalizing a number of appliance standards that had been delayed during the president's first term. Also, the Department of Energy (DOE) released its first Quadrennial Energy Review on energy infrastructure in April 2015.

## PREPARING THE UNITED STATES FOR THE IMPACTS OF CLIMATE CHANGE

The second pillar of the plan focuses on strengthening resilience to climate change impacts. The plan commits federal resources and assistance to help make communities, infrastructure, and ecosystems more climate-resilient while improving the scientific basis for future actions.

The administration has made some progress on most goals related to making communities and infrastructure more resilient. A November 2013 executive order<sup>7</sup> directed federal agencies to begin integrating climate

resilience in a number of policy areas that, if carried through to completion, would fulfill many of the president's commitments. In October 2014, 38 federal agencies released final Climate Change Adaptation Plans,<sup>8</sup> which identify how climate change is expected to affect their missions and operations, outline steps to address these issues, and incorporate climate change considerations into decision-making.

The executive order also set up the State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience to bring together decision makers across the country to share experiences, challenges, and opportunities. In November 2014, the Task Force released its recommendations on how the federal government should modernize programs and policies to incorporate climate change, incentivize and remove barriers to community resilience, and provide useful, actionable information and tools.<sup>9</sup>

Some other discrete actions, especially those providing resources for climate resilience and those dealing with Hurricane Sandy, have been completed.

Other elements are designed to protect economic sectors and natural resources against the threats of climate change. The administration has begun examining needs in these areas: DOE released a major study on the vulnerability of critical energy and electricity infrastructure to climate change, and the Department of Commerce released a vulnerability assessment on oceans. Additional assessments, including on water resources, are forthcoming from other agencies. Though steps have been taken to address many resource-specific vulnerabilities, including threats of drought, wildfires and reduced agricultural sustainability, the administration has not begun work on commitments to reduce vulnerabilities in the insurance sector.

The administration also committed to advance the science of climate measurement and adaptation and increase the availability, accessibility, and utility of climate-relevant scientific tools and information. In March 2014, the administration took steps to increase data availability through the release of the comprehensive National Climate Assessment and the Climate Data Initiative. In November 2014, the administration released the [Climate Resilience Toolkit](#), which provides scientific tools, information, and links to experts that can help users manage their climate-related risks and opportunities, and improve their resilience to extreme

events.

A January 2015 executive order<sup>10</sup> established a new federal flood risk management standard, requiring all future federal investments in and affecting floodplains to meet a defined level of resilience and consider current and future risks.

## LEADING INTERNATIONAL EFFORTS TO ADDRESS GLOBAL CLIMATE CHANGE

The third pillar of the plan focuses on strengthening international leadership to reduce greenhouse gas emissions and build resilience to climate impacts. The plan commits the administration to work with other countries bilaterally, through international fora and international organizations, and multilaterally, through multilateral negotiations, including the United Nations Framework Convention on Climate Change (UNFCCC).

The administration has made climate change a top priority in its high-level diplomacy. In November 2014, the United States and China jointly previewed their "intended nationally determined contributions" to the new global climate agreement due later this year in Paris, and announced joint research projects on clean energy, carbon capture, and other collaborative efforts. This was followed in January 2015 by a joint announcement with India on climate change and clean energy cooperation.

The administration took steps in 2014 to limit U.S. public financing for new coal-fired power plants overseas through the Department of Treasury<sup>11</sup> and Export-Import Bank,<sup>12</sup> a decision Congress may soon reverse. The president has encouraged other countries and international finance institutions, including the World Bank<sup>13</sup> to limit such financing, and some have.

Similarly, budgetary proposals related to international climate action have faced resistance from Congress. A call to eliminate U.S. fossil fuel subsidies as part of a global effort was met with little support from legislators. The administration has also not yet secured congressional support for further increases in support for climate mitigation and adaptation efforts in developing countries.

On the multilateral front, the administration is actively engaged in negotiations to achieve a new global climate agreement under the UNFCCC in late 2015. In April 2015, the United States became one of the first countries to formally submit its intended contribution to the

agreement – an economy-wide target to reduce emissions 26 to 28 percent below 2005 levels by 2025.

The administration has actively pursued climate objectives in other multilateral arenas. The United States, China, and India all pledged this year to advance efforts under the Montreal Protocol to phase out HFCs. The administration worked with other countries to launch negotiations in July 2014 to reduce tariffs on environmental goods through the World Trade Organization. The United States and other parties to the International Civil Aviation Organization agreed in September 2013 to develop a market-based mechanism to reduce greenhouse gas emissions from aviation, and the United States has moved to adopt vessel efficiency standards agreed to through the International Maritime Organization. Finally, the administration continues its efforts to reduce short-lived climate pollutants through the Climate and Clean Air Coalition, which began

including private sector partners in July 2014.

## CONCLUSION

Two years after its launch, the administration has made increasingly significant progress toward achieving many of the goals of President Obama's Climate Action Plan, although the details of some of the more significant items have not yet been announced. The plan demonstrates a commitment toward reducing greenhouse gas emissions, one that is important to meet the U.S. goals of reducing emissions 17 percent by 2020 and 26 to 28 percent by 2025, especially in the absence of congressional action. Achieving the 2020 goal will be possible if the United States continues on the course of action established in the first two years of the plan. However, additional actions, whether through the plan or additional steps, must be taken to achieve the ambitious 2025 goal.

## STATUS UPDATE: PRESIDENT OBAMA’S CLIMATE ACTION PLAN

*President Obama’s Climate Action Plan relies almost entirely on executive powers under existing laws—steps the administration can take on its own. The nature, scope and ambition of the plan’s many elements vary widely. Some are discrete, relatively simple tasks within existing policies and programs; others require the administration to undertake formal rule-making processes; and some are continuations of existing government programs and policies. Achieving some of the plan’s goal will require a transformation of the U.S. energy system over a period that will outlast President Obama’s time in office.*

*This chart describes each of the plan’s 75 key goals and the status and description of progress toward reaching that goal. The summaries are based on publicly available information, including from the federal government.*

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### PILLAR 1: CUT CARBON POLLUTION IN AMERICA

#### ***I. Deploying Clean Energy***

##### **A. Cutting carbon pollution from power plants**

The president issued a memorandum for the Environmental Protection Agency (EPA) to issue carbon pollution standards for new and existing power plants.

EPA issued a proposed carbon pollution standard for new power plants in September 2013, and a proposed carbon pollution standard for existing power plants (called the Clean Power Plan) in June 2014. The proposed standard for existing plants would set different target emission rates (pounds of carbon dioxide per megawatt-hour) for each state and is projected to achieve a 30 percent cut from 2005 emissions by 2030. Final regulations for new, modified, and existing power plants are to be issued by summer 2015.

##### **B. Promoting American leadership in renewable energy**

To double renewable generation between the end of Obama's first term and 2020.

Between January 2013 and December 2014, renewable generation (from wind and solar) increased by 38 percent. According to the latest Energy Information Administration Annual Energy Outlook 2015 reference case, wind and solar generation are expected to be 97 percent higher than at the end of the president’s first term by 2020, effectively meeting the target.

##### ***Accelerating clean energy permitting***

The Department of the Interior (DOI) is to permit an additional 10 gigawatts of renewables on public between October 2012 and 2020.

DOI permitted 4.181 gigawatts of capacity on federal lands between October 2012 and August 2014; permits for another 1.780 gigawatts are pending.

Designate Red Rock Hydroelectric Plant in Iowa to participate in the Infrastructure Permitting Dashboard for

The plant was added to Federal Infrastructure Projects Permitting Dashboard in June 2013.

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high-priority projects.	
The Department of Defense (DOD) is to install 3 gigawatts of renewable energy in military installations by 2025.	DOD has created a contract vehicle allowing branches to procure renewable energy through power purchase agreements, not requiring onsite power generation. The Defense Logistics Agency announced 46.6 megawatts worth of power purchase agreements. In May 2015, the Department of Defense Annual Energy Management report gives each service, Army, Navy, and Air Force a 1 gigawatt goal.
Federal agencies will survey existing projects of renewable installations on federally subsidized housing stock and achieve 100 megawatts of capacity by 2020.	The Department of Housing and Urban Development (HUD) announced in May 2014 commitments by housing partners and developers to install more than 150 megawatts of on-site renewable energy on HUD-assisted multifamily buildings.
<b>Expanding and modernizing the electric grid</b>	
The president issued a memorandum directing agencies to streamline the siting, permitting, and review process for transmission projects across federal, state, and tribal governments.	Federal agencies are working through specific steps outlined in the memorandum that must be completed by November 2014. Several significant steps have been completed on time.
<b>C. Unlocking long-term investment in clean energy innovation</b>	
<b>Spurring innovation in advanced fossil energy projects</b>	
The Department of Energy (DOE) will issue a final solicitation by fall of 2013 that would make up to \$8 billion in loan guarantee authority available for advanced fossil projects under the Section 1703 program.	The solicitation was issued with applications due in February 2014. However, no loan guarantees have been issued for advanced fossil fuel projects.
<b>Instituting a Quadrennial Federal Energy Review</b>	
The administration will conduct a Quadrennial Energy Review (QER), and the first review will focus on infrastructure challenges.	The first QER, focused on infrastructure development, was released in April 2015.
<b>II. Building a 21st-Century Transportation Sector</b>	
<b>A. Increasing fuel economy</b>	
The president will partner with stakeholders to develop post-2018 fuel economy standards for heavy-duty vehicles.	In June 2015, EPA and the Department of Transportation (DOT) proposed heavy-duty fuel economy standards for model years after 2018 that could reduce emissions an additional 24 percent from 2010 levels by 2027.

**B. Developing and deploying advanced transportation technologies**

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The administration will leverage public and private partnerships to deploy clean batteries and fuel cells in all transportation modes.	Several pre-existing public-private partnerships to advance battery, fuel cell, and hydrogen transportation have continued.
DOT will lead an exploration of strategies for integrating alternative fuel vessels into the U.S. flag fleet.	In November 2013, the Maritime Administration funded a study on and conversion project for the use of liquefied natural gas in ships. An additional funding opportunity for fuel conversion was issued in April 2015.
The administration will continue work to improve transportation in communities nationwide.	Various ongoing and new programs and grants through DOT serve this goal.

### ***III. Cutting Energy Waste in Homes, Businesses, and Factories***

#### **A. Reducing energy bills for American families and businesses**

##### **Establishing a new goal for energy efficiency standards**

Efficiency standards for appliances and federal buildings set in the first and second terms combined will reduce carbon pollution by at least 3 billion metric tons cumulatively by 2030.

Appliance standards issued by the administration through January 2015 are projected to reduce CO2 emissions by more than 2.165 billion metric tons through 2030. Standards for additional appliances may be forthcoming.

##### **Reducing barriers to investment in energy efficiency**

The Rural Utilities Service will finalize an update to its Energy Efficiency and Conservation Loan Program to provide \$250 million for rural utilities to finance private efficiency investments.

The update was finalized in December 2013.

The Rural Energy for America program will be streamlined to provide grants and loan guarantees directly to agricultural producers and small businesses.

In November 2013, the Department of Agriculture (USDA) announced funding for rural energy efficiency projects, and awarded \$263 million to eight states for projects.

The Federal Housing Administration (FHA) will convene stakeholders for a roundtable to discuss options for factoring energy efficiency in mortgage and appraisal processes.

A Green Mortgage Roundtable was held in July 2013, and FHA is piloting the use of Energy Efficient Mortgages.

##### **Expanding the president's Better Buildings Challenge**

The Better Buildings Challenge will be expanded to multifamily housing.

Multifamily buildings were included in the Better Buildings Challenge in December 2013, and 87 multifamily partners joined through April 2014.

The administration is launching the Better Buildings Accelerator to support and encourage adoption of state and local policies to increase energy efficiency.

DOE launched three accelerator tracks in December 2013 and launched two additional tracks by April 2015.

### ***IV. Reducing other greenhouse gas emissions***

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**A. Curbing emissions of hydrofluorocarbons**

EPA will use authority through the Significant New Alternatives Policy Program to encourage private sector investment in low-emissions technology by identifying and approving climate-friendly chemicals while prohibiting certain uses of the most harmful alternatives.

EPA issued final rules in December 2014 and April 2015 to offer five acceptable alternatives to hydrofluorocarbons (HFCs) for refrigeration, air-conditioning equipment, and other uses and to prohibit specific uses of HFC-134a in applications where more climate-friendly alternatives have become available.

The administration is to purchase cleaner alternatives to HFCs whenever feasible and transition to equipment that uses safer alternatives.

The Office of the Federal Environmental Executive has taken the lead on efforts to direct federal agency purchasing toward more climate-friendly alternatives.

**B. Reducing methane emissions**

**Developing an interagency methane strategy**

EPA will work with other agencies to develop a comprehensive, interagency methane strategy.

A methane strategy announced in March 2014 outlined specific measures and timelines to reduce emissions from the oil and gas industry, agriculture, new and existing landfills, and coal mines. The oil and gas sector is the largest source of methane emissions, and the administration announced a goal to cut methane emissions from wells by 40 to 45 percent from 2012 levels by 2025. To achieve this goal, the administration will propose emission standards for new and modified oil and gas wells in summer 2015 with a final rule in 2016, and launch a voluntary partnership with industry to reduce emissions from existing wells. It committed to energy efficiency standards for certain equipment, proposed funding for leak identification and reduction technology research, and committed to standards to reduce venting and flaring on public lands. For the agriculture sector, the administration launched a voluntary partnership with the dairy industry in August 2014 to reduce emissions through biodigesters. In June 2014, EPA proposed updates to standards for new landfills and solicited feedback on whether to update guidelines for existing landfills. In April 2014, the Department of the Interior gathered input on reducing emissions from coal mines on public lands.

**Pursing a collaborative approach to reducing emissions**

The administration will work with states and private sector to reduce emissions across sectors, as part of the methane strategy.

DOE held four stakeholder roundtables on methane emissions, and EPA solicited input on five technical papers on significant sources of methane emissions in the oil and gas sector. EPA announced its intention to create voluntary industry partnerships to reduce methane emissions from existing oil and gas wells and dairy farms.



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**C. Preserving the role of forests in mitigating climate change**

The administration is working to find new approaches to protect and restore forests and other critical landscapes.

The Forest Service announced 13 pilot projects to make lands on the border of public and private ownership more resilient. The president's FY2016 budget request includes \$108 million for government research on the role of natural lands in sequestering carbon dioxide.

***V. Leading at the federal level***

**A. Leading in clean energy**

The federal government will consume 20 percent of its energy from renewable sources by 2020.

In December 2013, the president issued a memorandum describing interim goals, priority actions, and methods for calculating federal renewable energy use.

***B. Federal government leadership in energy efficiency***

The administration will initiate a partnership with the private sector to work towards a standard contract for financing federal investments in energy efficiency.

DOE's Federal Energy Management Program (FEMP) has a standard energy performance savings contract (ESPC) for use by agencies for any federally owned facility worldwide. They are indefinite-delivery, indefinite-quantity contracts designed to make ESPCs as practical and cost-effective as possible. These contracts are awarded to energy service companies based on their ability to meet established terms and conditions. Agencies can also go through Corps of Engineers as an alternative.

Federal agencies will work together to synchronize building codes.

The Federal government's Interagency Sustainability Working Group and Interagency Energy Manager Task Force have been working over several years to align guidance, practices, and standards for new buildings, which are also reflected in sustainability plans. As a result of executive orders, all new buildings have to meet threshold standards for energy efficiency.

The administration will leverage the Green Button standard, which aggregates building energy data, within federal facilities.

In December 2013, the president issued a memorandum outlining steps for federal agencies to use the Green Button standard in their energy management practices. In May 2014, the General Services Administration announced that it will use Green Button technology across the government to save energy, starting with a pilot project in the Washington, DC region and the issuance of guidance to agencies.

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**PILLAR 2: PREPARE THE UNITED STATES FOR THE IMPACTS OF CLIMATE CHANGE**

***1. Building stronger and safer communities and infrastructure***

**A. Directing agencies to support climate resilient investment**

The president will direct federal agencies to identify and remove barriers to making climate-resilient investments; identify and remove counterproductive policies that increase vulnerabilities; and encourage and support smarter, more resilient investments, including through agency grants, technical assistance, and other programs, in sectors from transportation and water management to conservation and disaster relief.

The president issued an executive order in November 2013 establishing an interagency Council on Climate Preparedness and Resilience. Federal agencies have made progress in incorporating considerations of climate risk into their funding programs, including the EPA grants for brownfields cleanup, the DOT Transportation Investment Generating Economic Recovery (TIGER) funding opportunity, and the Department of Commerce Coastal Zone Management program. Various agencies are working to incentivize and remove barriers to community resilience through programs such as the HUD National Disaster Resilience Competition and the DOI Federal-Tribal Climate Resilience Partnership and Technical Assistance Program.

Agencies will also be directed to ensure that climate risk-management considerations are fully integrated into federal infrastructure and natural resource management planning.

Executive Order 13514 in 2009 directed agencies to identify vulnerabilities and develop climate adaptation plans, which many agencies released prior to the Climate Action Plan in 2013. In response to Executive Order 13653 in November 2013, agencies are also integrating climate change considerations into operations, missions, and programs. In October 2014, 38 different federal agencies released their final Climate Change Adaptation Plans, which identify how climate change is expected to affect their missions and operations, outline steps to address these issues, and incorporate climate change considerations into decision-making.

EPA will integrate consideration climate change impacts and adaptation into major programs including Clean Water and Drinking Water State Revolving Funds and brownfields cleanups.

In November 2013, EPA released 17 program and regional draft adaptation plans, including for Clean Water and Drinking Water State Revolving Funds and brownfields cleanups. The final plans were released in June 2014.

HUD is already requiring grant recipients in the Hurricane Sandy-affected region to take sea-level rise into account.

HUD issued these requirements in April 2013, prior to the president's announcement.

**B. Establishing a State, Local, and Tribal Leaders Task Force on Climate Preparedness**

The president will establish a short-term task force of state, local, and tribal officials to advise on key actions the federal government can take to better support local preparedness and resilience-building efforts.

The task force was created by executive order in November 2013, and held meetings in December 2014 and February 2014. The task force issued a final report and recommendations in November 2014, and the president

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announced a series of executive actions in response at that time.

**C. Supporting communities as they prepare for climate impacts**

Agencies will provide targeted support and assistance to communities and tribes.

EPA has issued grants to communities and tribes for resilience and offered other support for communities and tribes. In May 2015, EPA released an online training module to help local government officials take actions to increase their communities’ resilience.

“Environmental Justice Progress Reports” will be used to identify innovative ways to prepare for and recover from climate impacts.

Annual Environmental Justice Progress Reports covered climate change impacts before the president's announcement.

**D. Boosting the resilience of buildings and infrastructure**

The National Institutes of Science and Technology (NIST) will convene a panel on disaster-resilience standards for communities.

NIST has held five resilience workshops since April 2014 and has plans for a sixth workshop in July 2015.

Increase the resilience of federal facilities and infrastructure.

In November 2013, the president issued an executive order directing federal agencies to develop, implement, and update comprehensive plans that integrate consideration of climate change into agency operations and overall mission objectives, and to submit those plans to the White House Council on Environmental Quality and OMB for review.

FY2014 budget proposes \$200 million for Climate Ready Infrastructure through the Transportation Leadership Awards program.

This item was included in the president's budget proposal.

**E. Rebuilding and learning from Hurricane Sandy**

The Hurricane Sandy Rebuilding Task Force will deliver a rebuilding strategy with lessons learned in August 2013.

The Task Force released its Rebuilding Strategy in August 2013.

**II. Protecting our economy and natural resources**

**A. Identifying vulnerabilities of key sectors to climate change**

DOE will release an assessment of climate change impacts on the energy sector.

In July 2013, DOE released an assessment of the vulnerability of critical energy and electricity infrastructure to climate change.

Agency reports on climate impacts to health, transportation, food supplies, oceans, and coastal communities.

The Department of Commerce released a report on the impacts of climate change on oceans in August 2013, and the White House released a report on the impacts of climate change on health in June 2013. DOI has a report on impacts on natural resources under way. EPA released a draft report on the impacts of climate change on human

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	health in February 2014.
<b>B. Promoting resilience in the health sector</b>	
The Department of Health and Human Services (HHS) will create a public-private partnership to identify best practices for the sector to be climate resilient.	Members of the health care industry, professional associations, and organizations joined the administration to pledge actions to strengthen the resilience of the health care sector in December 2014.
HHS will share best practices among federal health facilities.	HHS released a best practices guide in December 2014.
HHS will build on pilots in 16 states to train public health professions to prepare for climate change, health risks, and resilience measures.	The Centers for Disease Control (CDC) has built on the Climate-Ready States & Cities Initiative pilot by adding two pilot locations. CDC now provides technical assistance to 16 states and two cities to help public health practitioners undertake activities such as vulnerability assessments, mapping, and planning for extreme heat. CDC also hosts climate and health webinars for professionals, and released a guide for health departments to assess health vulnerability to climate change in July 2014.
<b>C. Promoting insurance leadership for climate safety</b>	
The administration will convene insurance industry representatives and other stakeholders to explore best practices for insurers.	The administration convened insurance industry representatives in June 2014, however there has been no public output on best practices for insurers.
<b>D. Conserving land and water resources</b>	
The president will direct federal agencies to identify and evaluate additional approaches to improve our natural defenses against extreme weather, protect biodiversity and conserve natural resources in the face of a changing climate, and manage our public lands and natural systems to store more carbon.	In November 2013, the president issued an executive order directing federal agencies to ensure that their land- and water-related policies, programs, and regulations help make U.S. watersheds, natural resources, and ecosystems, and the communities and economies that depend on them, more resilient in the face of a changing climate.
<b>E. Maintaining agricultural sustainability</b>	
USDA will create seven new Regional Climate Hubs to deliver tailored, science-based knowledge to farmers, ranchers, and forest landowners.	The creation of seven regional hubs was announced in February 2014.
DOI's Natural Resources Conservation Service (NRCS) and Bureau of Reclamation will provide grants and technical support to agricultural water users for more water-efficient practices in the face of drought and long-term climate change.	NRCS's Environmental Quality Incentives Program (EQIP) provides financial and technical support to agricultural producers. Several projects supported by EQIP employ water-use efficiency strategies to help farmers increase yields with less water. The Bureau of Reclamation's WaterSMART program provides technical and financial support for water projects that conserve and use water

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	more efficiently, facilitate water markets, or carry out other activities to address climate-related impacts on water. The program also identifies adaptive measures to address climate change and its impact on future water demands. The president requested \$89 million for WaterSMART in his FY2016 budget.
<b>F. Managing drought</b>	
The administration will launch a cross-agency National Drought Resilience Partnership.	The National Drought Resilience Partnership and its first year goals were announced in November 2013.
<b>G. Reducing wildfire risk</b>	
Federal agencies will expand and prioritize forest and rangeland restoration efforts in order to make natural areas and communities less vulnerable to catastrophic fire, including the Western Watershed Enhancement Partnership.	The Western Watershed Enhancement Partnership was announced in July 2013, and the National Cohesive Wildland Fire Management Strategy was released by USDA and DOI in April 2014.
<b>H. Preparing for future floods</b>	
Federal agencies will update their flood-risk reduction standards for federally funded projects to reflect a consistent approach that accounts for sea-level rise and other factors affecting flood risks.	A January 2015 executive order established a new federal flood risk management standard, and requires all future federal investments in and affecting floodplains to meet the level of resilience defined by the standard and consider current and future risks.
<b>III. Using sound science to manage climate impacts</b>	
<b>A. Developing actionable climate science</b>	
FY2014 Budget provides more than \$2.7 billion, largely through the 13-agency U.S. Global Change Research Program (USGCRP), to increase understanding of climate-change impacts, establish a public-private partnership to explore risk and catastrophe modeling, and develop the information and tools needed by decision-makers to respond to both long-term climate change impacts and near-term effects of extreme weather.	The president's FY2015 budget proposes \$2.5 billion for the USGCRP to undertake these efforts.
<b>B. Assessing climate-change impacts in the United States</b>	
The administration will release the National Climate Assessment in 2014.	The National Climate Assessment was released in May 2014.
<b>C. Launching a climate data initiative</b>	
The administration will launch a Climate Data Initiative for the private sector to use public climate data.	The administration announced the Climate Data Initiative in March 2014, including the launch of climate.data.gov offering the general public and communities climate data

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	<p>from the National Oceanic and Atmospheric Administration, the National Aeronautics and Space Administration, the U.S. Geological Survey, and the Department of Defense. Data is now available on coastal flooding, food resilience, water, ecosystem vulnerability and human health.</p>

**D. Providing a toolkit for climate resilience**

Federal agencies will create a virtual climate-resilience toolkit that centralizes access to data-driven resilience tools, services, and best practices, including those developed through the Climate Data Initiative.

The White House released the online toolkit in November 2014, which addresses how climate change affects coastal flooding, food access, health, transportation, water, and ecosystems.

**PILLAR 3: LEAD INTERNATIONAL EFFORTS TO ADDRESS GLOBAL CLIMATE CHANGE**

***I. Working with other countries to take action to address climate change***

**A. Enhancing multilateral engagement with major economies**

The administration will use the Major Economies Forum on Energy and Climate (MEF) to launch a major initiative on efficiency gains in the buildings sector.

In September 2013, MEF participants agreed to develop an initiative on building sector energy efficiency. The initiative has commissioned reports on potential efficiency gains in the building sector in 2014 and 2015.

**B. Expanding bilateral cooperation with major emerging economies.**

The administration will find new areas for cooperation, including using the Montreal Protocol to phase down HFCs by 2050.

In July 2013, the United States and China agreed to five new action initiatives through the U.S.-China Climate Change Working Group, and in February 2014, Secretary of State John Kerry announced that implementation plans for the initiatives were complete. In June, the United States and India announced the creation of a climate change working group, which was formalized in September 2013. In September 2013, the United States and China agreed to support establishment of a contact group to negotiate a phase-out of HFCs under the Montreal Protocol on HFCs. Joint announcements with China in November 2014 and India in January 2015 recommitted to making progress in this area.

**C. Combatting short-lived climate pollutants**

The administration will continue existing engagements with the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollution; and the Global Methane Initiative.

In July 2014, the Climate and Clean Air Coalition began to accept applications for private sector partners for the first time.

**D. Reducing emissions from deforestation and forest degradation.**

ITEM	PROGRESS
<p>The administration is working with partner countries to put in place the systems and institutions necessary to significantly reduce global land-use-related emissions and will continue existing engagement through the Forest Carbon Partnership Facility, Tropical Forest Alliance 2020, and Forest Investment Program.</p>	<p>The United States joined partners to launch the Initiative for Sustainable Forest Landscapes to reduce emissions related to land use. The initiative now has programs in two countries and is evaluating potential programs in two more. Other partnerships are ongoing.</p>
<p><b>E. Expanding clean energy use and cut energy waste</b></p>	
<p>The administration will promote global fuel-switching from coal to gas and adoption of heavy-duty natural gas vehicles.</p>	<p>No significant new actions taken.</p>
<p>The administration will expand efforts to promote nuclear energy generation.</p>	<p>No significant new actions taken.</p>
<p>The administration will promote clean coal technologies through bilateral and multilateral efforts.</p>	<p>The United States and China announced their intention to undertake a major carbon capture and storage project in China funded by both parties and private sector partners.</p>
<p>The administration will use Clean Energy Ministerial to expand efforts on improving building efficiency, reducing energy consumption at water and wastewater treatment facilities, and expanding global appliance standards.</p>	<p>The May 2014 Clean Energy Ministerial in Seoul, Korea, discussed key barriers and solutions in energy-efficient cooling and demand response in buildings. A roundtable discussion focused on reducing cooling demand through energy efficiency improvements in cooling technologies and demand response measures that deliver financial benefits through energy savings to households, business, and institutions.</p>
<p><b>F. Negotiating global free trade in environmental goods and services.</b></p>	
<p>The United States will work with trading partners to launch negotiations at the World Trade Organization (WTO) towards global free trade in environmental goods, including clean energy technologies such as solar, wind, hydro and geothermal based on tariff reduction reached in Asia-Pacific Economic Cooperation.</p>	<p>The United States Trade Representative announced the launch of negotiations on environmental goods in July 2014 between the United States and 13 countries that represent 86 percent of trade in such goods.</p>
<p><b>G. Phasing out subsidies that encourage wasteful consumption of fossil fuels</b></p>	
<p>President Obama is calling for the elimination of U.S. fossil fuel tax subsidies in his Fiscal Year 2014 budget and will continue to collaborate with partners around the world toward this goal.</p>	<p>The president's proposal was not approved by Congress, and the president made the proposal in FY2015 as well.</p>
<p><b>H. Leading global sector public financing towards cleaner energy</b></p>	
<p>The president calls for an end to U.S. government support for public financing of new coal plants overseas, except for (a) the most efficient coal technology available in the world's poorest countries in cases where no other</p>	<p>In October 2013, the Department of the Treasury issued guidelines limiting public financing of coal plants. However, these guidelines became the subject of Congressional push back and part of a larger debate</p>



ITEM	PROGRESS
<p>economically feasible alternative exists, or (b) facilities deploying carbon capture and sequestration technologies.</p> <p>As part of this new commitment, the United States will work actively to secure the agreement of other countries and the multilateral development banks to adopt similar policies as soon as possible.</p>	<p>whether to reauthorize the Export-Import Bank. It remains to be seen whether the bank will be reauthorized or reauthorized with a repeal of the guidelines.</p> <p>In June 2013, the World Bank announced it would end coal financing "except in rare circumstances." In addition, Scandinavian countries, the Netherlands, and the United Kingdom have put in place similar restrictions by 2014, and Germany and France added restrictions in the past year.</p>

**I. Strengthening global resilience to climate change**

The administration will strengthen government and local community planning and response capacities, such as by increasing water storage and water use efficiency to cope with the increased variability in water supply.

The first ever U.S. Agency for International Development (USAID) Water and Development Strategy was launched in May 2013 and integrates water planning and resilience into agency planning.

The administration will develop innovative financial risk management tools such as index insurance to help smallholder farmers and pastoralists manage risk associated with changing rainfall patterns and drought.

USAID launched pilot projects in December 2013 in the Dominican Republic, Ethiopia and Senegal to help local insurance companies develop weather-based insurance for rural households.

The administration will distribute drought-resistant seeds and promote management practices that increase farmers' ability to cope with climate impacts.

USAID administers or partners in projects including Feed the Future, Water Efficient Maize for Africa, and the West African Seed Program to increase distribution of drought-resistant seeds and build farmers' capacity.

**J. Mobilizing climate finance**

The administration will contribute funds to promote low-emissions, climate-resilient development.

In accordance with the fast start commitment made in Copenhagen, the United States has provided \$7.5 billion during the three-year fast start finance period. Of this amount, \$2.3 billion was provided in FY2012. The three-year fast start finance total consists of more than \$4.7 billion of Congressionally appropriated assistance and more than \$2.7 billion from U.S. development finance and export credit agencies. In June 2015, USAID announced Climate Services for Resilient Development partnership to apply technologies, scientific expertise, and capacities to developing country resilience.

**II. Leading efforts to address climate change through international negotiations**

The administration will seek a United Nations Framework Convention on Climate Change (UNFCCC) climate agreement that is ambitious, inclusive, and flexible.

The United States is actively engaged in negotiations toward a new UNFCCC agreement to start in 2020. The United States put forward is “intended nationally determined contribution” in April 2015.

The administration will lead efforts through the Montreal Protocol in support of an amendment that would phase

A United States-backed proposal to negotiate an amendment to the Montreal Protocol failed at the 2013



ITEM	PROGRESS
<p>down HFCs.</p>	<p>Meeting of the Parties. A growing number of countries support such action, and the United States and its partners re-submitted the proposal for the 2014 meeting.</p>
<p>The administration will implement the first-ever, sector-wide energy efficiency standards through the International Maritime Organization.</p>	<p>In December 2010, the Coast Guard (USCG) issued a final rule allowing international classification societies to issue International Energy Efficiency Certificates on behalf of USCG in compliance with the IMO standards. In May 2013, USCG issued a notice that the new standards were in force and compliance was required through classification societies. USCG pledged to issue further regulations on the topic, but it has not.</p>
<p>The administration has ambitious aspirational emissions and energy efficiency targets through the International Civil Aviation Organization (ICAO) and is working towards agreement to develop a comprehensive global approach.</p>	<p>The 38th ICAO Assembly in September 2013 agreed to develop a global market-based measure to reduce emissions, for agreement at the next ICAO Assembly in 2016 and to enter into force by 2020. In June 2015, the administration announced it will take the first step towards regulating emissions from aircraft domestically, by undertaking an endangerment finding.</p>

## ENDNOTES

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<sup>1</sup> U.S. Environmental Protection Agency, “U.S. Greenhouse Gas Inventory Report: 1990-2013,” last accessed April 27, 2015, <http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html>, “Energy Uses,” last accessed April 27, 2015, <http://www.c2es.org/energy/uses>.

<sup>2</sup> Center for Climate and Energy Solutions, “Carbon Pollution Standards,” last accessed June 19, 2014, <http://www.c2es.org/federal/executive/epa/carbon-pollution-standards-power-plants>.

<sup>3</sup> U.S. Environmental Protection Agency, “Clean Power Plan Proposed Rule,” last modified June 19, 2014, <http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule>.

<sup>4</sup> U.S. Environmental Protection Agency, “U.S. Greenhouse Gas Inventory Report: 1990-2013,” last accessed April 27, 2015, <http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html>.

<sup>5</sup> U.S. Department of State, *United States Climate Action Report 2014*, last accessed June 19, 2014, <http://www.state.gov/e/oes/rls/rpts/car6/index.htm>.

<sup>6</sup> Ibid.

<sup>7</sup> The White House, “Executive Order – Preparing the United States for the Impacts of Climate Change,” last modified November 1, 2013, <http://www.whitehouse.gov/the-press-office/2013/11/01/executive-order-preparing-united-states-impacts-climate-change>.

<sup>8</sup> Climate Change (Federal Actions) Supporting Information, <http://www.performance.gov/node/3406/view?view=public#supporting-info>.

<sup>9</sup> The White House, “State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience, Recommendations to the President,” [https://www.whitehouse.gov/sites/default/files/docs/task\\_force\\_report\\_0.pdf](https://www.whitehouse.gov/sites/default/files/docs/task_force_report_0.pdf).

<sup>10</sup> The White House, “Executive Order – Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input,” last modified January 30, 2015, <https://www.whitehouse.gov/the-press-office/2015/01/30/executive-order-establishing-federal-flood-risk-management-standard-and->

<sup>11</sup> U.S. Department of the Treasury, “U.S. Takes A Significant Step Toward A Clean Energy Future,” last modified October 29, 2013, <http://www.treasury.gov/press-center/press-releases/Pages/jl2195.aspx>.

<sup>12</sup> Export-Import Bank of the United States, “Export-Import Bank Board Adopts Environmental Guidelines to Reduce Greenhouse Gas Emissions,” last modified December 12, 2013, <http://www.exim.gov/newsandevents/releases/2013/EXPORT-IMPORT-BANK-BOARD-ADOPTS-REVISED-ENVIRONMENTAL-GUIDELINES-TO-REDUCE-GREENHOUSE-GAS-EMISSIONS.cfm>.

<sup>13</sup> “World Bank Group Sets Direction for Energy Sector Investments,” The World Bank, last modified July 16, 2013, <http://www.worldbank.org/en/news/feature/2013/07/16/world-bank-group-direction-for-energy-sector>.



The Center for Climate and Energy Solutions (C2ES) is an independent nonprofit organization working to promote practical, effective policies and actions to address the twin challenges of energy and climate change.