



PRESIDENT OBAMA'S CLIMATE ACTION PLAN

2ND ANNIVERSARY PROGRESS REPORT

*Continuing to cut carbon pollution, protect
American communities, and lead internationally.*

JUNE 2015

It is clear that no challenge poses a greater threat to future generations than climate change. Climate change is not just harmful to the environment; it threatens our property, transportation, comfort, and overall quality of life. The [National Security Strategy](#), released by the White House in February 2015, noted that “climate change is an urgent and growing threat to our national security, contributing to increased natural disasters, refugee flows, and conflicts over basic resources like food and water.”

We know that it would be unconscionable to condemn our children to a planet that is beyond their capacity to repair. Fortunately, we have the means – the technological edge and the scientific imagination – to begin the work of fixing it right now. Rapid advancements in clean energy, energy efficiency, and low-carbon energy technologies are already creating jobs, stimulating investment, and spurring innovation – proving that a sound environment is the best foundation for strong sustained economic growth. Moving to a low-carbon economy is creating new industries and unlocking cleaner forms of affordable and reliable American-made energy. That is why more than 1,200 businesses – including Apple, Microsoft, GM, Nike, Intel, and Starbucks – have [declared](#) that “tackling climate change is one of America’s greatest economic opportunities in the 21st century.”

The pace, magnitude, and ultimate costs of climate change can be greatly reduced by taking a range of common-sense steps that are within the reach of individuals, communities, and nations. And we are acting now. An analysis by the White House Council of Economic Advisors found the cost of hitting a specific climate target increases, on average, by approximately 40 percent for each decade of delay in taking action. In other words, when we wait to act on climate change, [it comes at a huge price](#).

On the domestic front, we have made real progress in advancing the goals of the President’s Climate Action Plan. To reduce our greenhouse gases, we have put forth common-sense [carbon pollution standards](#) for power plants, announced a [solar jobs training program](#) for veterans, and [permitted](#) five utility-scale renewables projects on public lands. We have forged partnerships with industry to [phase down HFCs](#), [cut energy waste](#), and [deploy more renewable energy](#), and we have taken important steps to address [methane emissions](#) in the oil and gas sector. Today, we harness three times as much electricity from the wind and more than twenty times as much from the sun as we did since President Obama took office. By the middle of the next decade, our cars will go [twice as far on a gallon of gas](#), and we have made unprecedented investments to cut energy waste in our homes and buildings, saving consumers billions of dollars in the process.

In collaboration with our [State, Local, and Tribal partners](#), we are implementing a wide range of steps to enhance the resilience of the nation to the impacts of climate change. We are working across the Federal Government to modernize programs to support more resilient economic development. We are [using sound science](#) to help manage climate impacts. And we are rebuilding resiliently from [past natural disasters](#), while enacting changes to better protect our neighborhoods for the future.

President Obama is taking important steps to act on climate, but cannot meet this challenge alone. The only solution is a global solution. That is why we are working with other nations to advance cleaner energy technologies, enhance energy efficiency, promote best practices to reduce global greenhouse gas emissions, and aid developing countries in increasing their own resilience to climate change. In 2009, President Obama made an international commitment to reduce U.S.

greenhouse gas emissions in the range of 17 percent below 2005 levels by 2020, and today, we are about half-way to reaching our goal. Building on that progress, in a [historic joint announcement](#) with China's President Xi Jinping in November 2014, President Obama announced an ambitious but achievable target to reduce U.S. greenhouse gas emissions in the U.S. [26 to 28 percent by 2025](#) versus 2005 levels, and to make best efforts to reduce 28 percent. In parallel, China announced a first-ever intention to peak carbon emissions around 2030, with best efforts to peak earlier, and to increase its share of non-fossil energy consumption to 20 percent by 2030. These historic joint announcements have galvanized global momentum in advance of the Paris climate conference later this year. In March 2015, in what was the first formal commitment from a developing country, Mexico put forward an ambitious plan to peak net greenhouse gas emissions by 2026 and reduce its greenhouse gas emissions and short-lived climate pollutants by 25 percent below BAU by 2030. By collaborating with the U.S. through a new bilateral task force on clean energy and climate change, the two countries are illustrating the benefits of partnering on these actions.

When fully implemented, the policies put forward **under the President's Climate Action Plan** will:

- Cut nearly **6 billion** tons of carbon pollution through 2030, an amount equivalent to taking more than **1.2 billion** cars off the road for a year;
- Enable the development of **nearly 12,000** megawatts of wind, solar, and geothermal energy, enough to power more than **3 million** homes;
- Train more than **75,000** workers to enter the solar industry;
- Save households and drivers nearly **\$300 billion** on their energy bills;
- Improve the energy efficiency of more than **1.5 billion** square feet of city buildings, schools, multifamily housing complexes, and businesses across the country;
- Protect the health of vulnerable Americans, including children and the elderly, by preventing **150,000** asthma attacks and up to **6,600** premature deaths.

We will continue to work from every angle to cut our carbon emissions, prepare our communities, and lead the international effort to protect the one planet we have. Through the Climate Action Plan, the United States has become a global leader in climate-change mitigation and preparedness. As we continue to combat climate change at home, we are leading a worldwide effort to create a cleaner, healthier, and safer future for our children.

CUTTING CARBON POLLUTION IN AMERICA

The Obama Administration has taken decisive steps under the Climate Action Plan to move to cleaner sources of power and improve energy efficiency across our economy. The policies implemented by the President are expected to cut nearly 6 billion metric tons of carbon pollution by 2030. That amount is equivalent to taking more than 1.2 billion cars off the road for a year. Examples of the initiatives put in place in the past year include:

I. Deploying Clean Energy

Proposing Carbon Pollution Standards for Power Plants: In June 2014, the Environmental Protection Agency (EPA) released the [Clean Power Plan](#) – proposing carbon pollution standards

for existing power plants that will protect the health of our children and put our nation on the path toward a 30 percent reduction in carbon pollution from the power sector by 2030. The proposal will also cut pollution that leads to soot and smog by over 25 percent in 2030, delivering climate and health benefits of up to \$93 billion in 2030, including avoiding up to 6,600 premature deaths and up to 150,000 asthma attacks in children. EPA is on track to finalize the Clean Power Plan this summer.

Permitting Renewable Energy on Public Lands: The Department of the Interior (DOI) is making progress toward achieving the Climate Action Plan goal of permitting enough renewable energy projects on public lands by 2020 to power more than 6 million homes. Since President Obama took office, DOI has permitted 55 utility-scale renewable energy projects – including 29 solar projects – with a total generating capacity of over 14,000 megawatts. If built as planned, these projects would provide more than 24,000 construction and operations jobs, attract private capital investments of approximately \$37 billion, and power more than 4.9 million homes.

- *Onshore:* Since June 2014, DOI has approved 3 utility-scale solar-energy projects. When built, these projects will have a total capacity of up to 442 megawatts of electricity – enough to power over 1 million homes. Additionally, in September 2014, DOI announced a [competitive leasing policy](#) to encourage solar and wind energy development on public lands, provide greater certainty to renewable energy developers, and ensure a fair market return to American taxpayers.
- *Offshore:* As part of the Administration’s effort to stand up a sustainable offshore wind program, DOI awarded four competitive wind energy leases off the shores of Massachusetts and Maryland since June 2014. These sales totaled 434,409 acres leased for a wind energy capacity of up to 3,450 megawatts – enough to power one million homes. Other offshore accomplishments include DOI’s execution of the first right-of-way grant in Federal waters for renewable energy transmission offshore Rhode Island in late 2014, the first outer continental shelf lease for testing of marine hydrokinetic energy technology offshore Florida in 2014, and the first wind energy research lease for an area offshore Virginia in early 2015.

Accelerating Clean Energy in Affordable Housing: The Climate Action Plan set a goal to install more than 100 megawatts of renewable energy on Federally assisted housing by 2020. As of June 2015, the Department of Housing and Urban Development (HUD) announced that 45 affordable housing and service providers across the nation have [committed to installing](#) over 180 megawatts of on-site renewable energy – far surpassing the goal five years ahead of schedule and more than doubling the amount of renewable energy on HUD-assisted multifamily buildings. Additionally, President Obama announced a series of executive actions to bolster investment in energy upgrades in homes and Federal buildings, strengthen appliance standards and building codes, and develop a skilled solar workforce. In June 2015, the Administration announced technical and financial assistance from HUD and DOE to help unlock private-sector capital to finance low-income solar and a series of private-sector commitments to deploy solar on affordable housing and invest in low-income solar.

Advancing Wind Power in America: Wind energy is emerging as a powerhouse in the U.S. energy mix. Since President Obama took office, we have tripled domestic wind energy generation, and the U.S. now ranks number one in the world in wind power. Over the past five years, one third of

all new generating capacity has come from the wind industry. Wind power currently supports over 73,000 American jobs and powers 16 million homes.

- *Wind Reports:* In March 2015, DOE released the [Wind Vision Report](#), underscoring progress in the development of the wind industry and charting the positive [economic and environmental impacts](#) of future development. The report highlighted key findings, including: (1) wind power could help America combat climate change by avoiding more than 12.3 billion tons of carbon pollution cumulatively by 2050, equivalent to avoiding one-third of global annual carbon emissions; (2) the wind industry could support more than 600,000 jobs by 2050; and (3) wind energy could save approximately 260 billion gallons of water by 2050. Furthermore, in May 2015, the Administration released a report entitled [Enabling Wind Power Nationwide](#), which highlights the technical potential of advanced wind turbines in the U.S. and maps how advancements in turbine technology will unlock wind energy potential in all 50 states.

Accelerating Solar Power in America: Solar power advances our energy independence, bolsters our energy security, creates jobs, and combats climate change. In fact, today, we harness more than *twenty times* as much electricity from the sun as we did when President Obama took office. And in the process of cutting emissions and combatting climate change, today's solar industry is adding jobs ten times faster than the rest of the economy. Nearly halfway into the President's decade-long SunShot Initiative, the solar industry is nearly 70 percent of the way to achieving SunShot's affordability goal to make solar power fully cost-competitive with traditional energy sources, without incentives, by 2020. SunShot is partnering with national laboratories, universities, private companies, state and local governments, and utilities on more than 250 research and development projects that aim to make solar power affordable for American families and businesses across the nation.

- *Private-Sector Commitments and Executive Actions to Advance Solar and Energy Efficiency:* In 2014, the Administration [announced](#) more than 350 private and public sector commitments to deploy more than 885 megawatts of solar – enough to power over 130,000 homes and cut energy waste in more than 1.4 billion square feet of buildings across the U.S.
- *Creating Jobs for Veterans in Solar:* In April 2015, President Obama launched [Solar Ready Vets](#), a program at four military bases across the country, with plans to expand to 10 bases total. This accelerated training will prepare transitioning service members for careers in the solar industry as installers, sales representatives, system inspectors, and other related occupations.

Bolstering Clean Energy Deployment in Rural America: In October 2014, the Department of Agriculture (USDA) committed up to \$250 million for lending to [finance](#) the first program of its kind to enable rural cooperatives to invest in to invest energy efficiency improvements and renewable energy systems. Additionally, through the 2014 Farm Bill, USDA invested \$880 million dollars toward solar energy generation, advanced biofuel production, energy efficiency for rural small businesses and farms, and research and development for clean fuels. For example, in February 2015, USDA [announced](#) the availability of up to \$280 million in grants and loan guarantees for renewable and energy efficiency projects under the Rural Energy for America Program.

Supporting Investments in Clean Energy & Demonstrating New Technologies: DOE has supported a number of clean energy projects, including:

- *Renewable Energy and Energy Efficiency:* In July 2014, DOE issued a loan guarantee solicitation for up to [\\$4 billion in loan guarantees](#) available for innovative renewable energy and energy efficiency projects located in the U.S. that avoid, reduce, or sequester greenhouse gases, including advanced grid integration and storage, drop-in biofuels; waste-to-energy; enhancement of existing facilities including micro-hydro or hydro updates to existing non-powered dams; and efficiency improvements. In September and October 2014, DOE announced the opening of two pioneer biorefineries, bringing the total to three DOE-supported pioneer and demonstration facilities that produce cellulosic ethanol at commercial scale. Federal support for first-of-a-kind integrated biorefineries can help validate costs and performance, thus reducing the technical and financial risks associated with deploying new technology for the U.S. bioeconomy. In 2014 and 2015, DOE awarded \$78 million to U.S. States through the State Energy Program (SEP) to help them advance their clean energy economy while contributing to national energy goals.
- *Advanced Fossil Energy:* In October 2014, the Petra Nova project, a post-combustion carbon capture, use, and storage (CCUS) retrofit of an existing coal-fired generating facility that is partially funded by DOE, began construction. In April 2015, in a landmark accomplishment, DOE announced that a group of carbon capture and storage (CCS) projects supported by DOE have safely captured 10 million metric tons of carbon dioxide – the equivalent of removing more than 2 million passenger vehicles from the nation’s roads for one year. The projects are part of DOE’s Regional Carbon Sequestration Partnership (RCSP) Initiative and the Industrial Carbon Capture and Storage (ICCS) Major Demonstrations programs. The ICCS program – representing a \$1.4 billion investment under the American Recovery and Reinvestment Act – is a major step forward in the effort to reduce carbon emissions from industrial plants. In addition, the Administration proposed \$2 billion in two new tax credits in its [Fiscal Year 2016 Budget](#) that will complement each other in driving the deployment of CCUS technologies, which will enable additional technology improvements and drive down the costs of follow-on CCUS deployment.

SunZia Southwest Transmission Line: In January 2015, DOI [approved](#) the SunZia Southwest Transmission Line, including two proposed 500-kilovolt transmission lines and associated infrastructure located between central New Mexico and central Arizona. SunZia is one of the priority projects of the Obama Administration’s [Rapid Response Team for Transmission](#), which aims to improve the overall quality and timeliness of electric transmission infrastructure permitting. The project has the potential to add 3,000 to 4,500 megawatts of electric capacity to the Desert Southwest Region of the U.S., and to increase energy security by providing access to currently stranded renewable energy resources in eastern New Mexico.

Stimulating Private-Sector Investment in Clean Energy: Solutions to climate change must include innovative technologies with breakthrough potential to reduce carbon pollution. In February 2015, the Administration launched its [Clean Energy Investment Initiative](#) to catalyze \$2 billion of expanded private-sector investment. In June 2015, the White House hosted a Clean Energy Investment Summit, where it announced a total of over \$4 billion to fund innovative solutions to help fight climate change, including technologies with breakthrough potential to reduce carbon pollution. DOE announced a new Clean Energy Impact Investment Center to make information

about government agencies and clean technology investments more easily accessible for the public. The Clean Energy Investment Initiative catalyzes expanded private sector investment in solutions to climate change, including innovative technologies with breakthrough potential to reduce carbon pollution.

Developing a Quadrennial Energy Review: In April 2015, Vice President Biden and Energy Secretary Moniz announced the release of the first installment of the [Quadrennial Energy Review \(QER\)](#), a series of reports to develop a comprehensive and integrated energy strategy through interagency dialogue and active engagement of external stakeholders. Conducted as an interagency effort, the QER's first installment focused on energy transmission, storage, and distribution – the networks of pipelines, wires, storage, waterways, railroads, and other facilities that form the critical backbone of our energy system. The report proposed major policy recommendations to replace, expand, and modernize U.S. infrastructure. Future installments of the QER will place a spotlight on other key aspects of national energy policy.

Investing in Coal Communities, Workers, and Technology: To help communities dependent on the coal industry to adapt to the changing energy landscape and build a better future, the President's Fiscal Year 2016 Budget proposed the [POWER+ Plan](#), which invests in workers and jobs, addresses important legacy costs in coal country, and drives development of coal technology.

- *The POWER Initiative:* In March 2015, the Obama Administration, in coordination with Kentucky Governor Steve Beshear, announced the [POWER Initiative](#), a component of the POWER+ Plan, with the goal of effectively aligning and leveraging a range of Federal economic and workforce development programs and resources to assist communities negatively impacted by changes in the coal industry and power sector.
- *POWER Grants:* In May 2015, the POWER Initiative announced that it is [awarding grants](#), on two parallel tracks, to partnerships anchored in impacted communities. The first track will provide up to \$3 million in planning grants to assist coal communities in creating comprehensive economic development strategic plans for their regions. The second track, POWER Implementation Grants, will provide up to \$35.5 million in funding to help coal communities.

II. Building a 21st Century Transportation Sector

Developing Standards for Medium- and Heavy-Duty Engines and Vehicles: On June 19, DOT and EPA announced that they are jointly proposing standards for medium- and heavy-duty vehicles that would improve fuel efficiency and cut carbon pollution to reduce the impacts of climate change, while bolstering energy security and spurring manufacturing innovation. The proposed standards are expected to lower carbon emissions by approximately 1 billion metric tons, cut fuel costs by about \$170 billion, and reduce oil consumption by up to 1.8 billion barrels over the lifetime of the vehicles sold under the program. These reductions are nearly equal to the greenhouse gas emissions associated with energy use by all U.S. residences in one year. The total oil savings under the program would be greater than a year's worth of U.S. imports from the Organization of the Petroleum Exporting Countries (OPEC) each year. The proposal builds on the fuel efficiency and greenhouse gas emissions standards already in place for medium- and heavy-duty vehicles for [model years 2014-2018](#), which alone will result in emissions reductions of 270 million metric tons and save vehicle owners more than \$50 billion in fuel costs, as well as

on standards that the Administration has put in place for [light-duty vehicles](#), which are projected to reduce carbon pollution by 6 billion tons over the lifetime of vehicles sold, double fuel economy by 2025, and save consumers \$1.7 trillion at the pump. These standards are already delivering savings for American drivers; new vehicles in 2013 achieved their highest fuel economy of all time.

Addressing Aircraft Emissions: In June 2015, EPA issued a [proposed finding](#) under the *Clean Air Act* that greenhouse gas emissions from commercial aircraft contribute to the pollution that causes climate change, endangering the health and welfare of Americans. At the same time, EPA released an Advanced Notice of Proposed Rulemaking that provided information about the international process already underway by the International Civil Aviation Organization (ICAO) for developing carbon pollution standards for aircraft, and is taking comment on the types of engine standards for aircraft that could be used as part of the ICAO process. Furthermore, as part of the [Next Generation Air Transportation System](#) (NextGen), FAA is leading a number of efforts and collaborating with the aviation industry to develop and improve technology that results in better fuel efficiency and reduced emissions and noise. NextGen is expected to save 5.8 billion gallons of fuel through 2030.

Reducing Emissions through Transportation Investment: In March 2015, the Department of Transportation (DOT) transmitted the Administration's proposed Generating Renewal, Opportunity, and Work with Accelerated Mobility, Efficiency, and Rebuilding of Infrastructure and Communities throughout America (GROW AMERICA) Act to Congress. The [GROW AMERICA Act](#) would increase transit funding by 76 percent, invest \$29 billion to improve rail infrastructure, and establish a \$1 billion Fixing and Accelerating Surface Transportation (FAST) grants program to incentivize strategies and best practices that include those that reduce energy use and emissions. Finally, the Act takes initial steps to understand local planning approaches and progress to determine national performance measures surrounding connectivity to public transportation and non-motorized modes.

Transitioning to Low-Emissions Transportation Fuels: In September 2014, the Maritime Administration finalized a \$325 million loan guarantee to TOTES Shipholdings, Inc., for the construction of the first two purpose-built LNG-powered container ships. TOTES Shipholdings will use the ships on the Jacksonville – Puerto Rico route. Furthermore, transit agencies, supported by Federal transit funding, have been aggressively acquiring hybrid, electric, and natural gas transit buses. As of early 2014, some 41 percent of the national transit bus fleet was comprised of hybrid and alternative fuel vehicles, a figure that is expected to climb above 50 percent by the end of 2016.

Developing Cutting-Edge Electric Vehicle (EV) Technology and Charging Infrastructure: Since January 2014, DOE has invested \$167 million of funding for over 33 industry, 26 national laboratory, and 20 university projects that explore how to make EV batteries more efficient and cost-effective. In November 2014, DOE acted to support new, competitively awarded projects to facilitate [aggregated purchases](#) of EVs and [announced commitments](#) by more than 120 utility companies, businesses, non-profits, and schools to purchase EVs and technologies to install workplace charging stations, which will lead to \$50 million in purchases by electric utility companies.

III. Cutting Energy Waste in Homes and Businesses

Setting New Energy Conservation Standards for Appliances and Equipment: In 2014, DOE issued 9 proposed and 10 final [energy conservation standards](#) for appliances and equipment. In total, those final rules are expected to reduce emissions by more than 350 million metric tons by 2030. Building on this momentum, so far in 2015, DOE has proposed 6 additional energy conservation standards. All together, the final standards completed during this Administration to date will avoid more than 2.2 billion metric tons of carbon emissions by 2030, saving consumers over \$480 billion on their utility bills through 2030. The Administration remains on track to meet the Climate Action Plan's goal of cutting 3 billion metric tons of carbon pollution from these energy savings measures by 2030.

Expanding the Better Buildings Challenge: The President's [Better Buildings Challenge](#) continues to drive progress by helping American commercial, industrial, and multifamily buildings become at least 20 percent more energy efficient by 2020. Since May 2014, over 60 new cities, school districts, universities, manufacturers, and businesses across the country made have commitments to join the Better Buildings Challenge. Additionally, 12 organizations have joined Better Buildings as new Financial Allies, committing \$2 billion to help owners and managers of multifamily housing and other organizations with energy efficiency upgrades. Across the country, Better Buildings Challenge partners have completed upgrades to more than 32,000 facilities with 4,500 buildings improving efficiency by at least 20 percent, and another 12,000 by at least 10 percent, compared to their baseline years. In total, there are now 250 partners committed to cutting energy waste across 3.5 billion square feet. The Better Buildings partners are making [tremendous progress](#) and saving on average 2 percent each year, with total savings to date of 94 trillion BTUs or \$840 million. Financial allies have placed over \$3.5 billion dollars in energy efficiency projects.

- *Multifamily Housing:* In December 2013, the President's Better Buildings Challenge expanded to include multifamily housing. 89 multifamily partners have agreed to participate to date – representing roughly 400 million square feet of property and affecting nearly 400,000 households.
- *Data Centers:* In September 2014 Better Buildings [expanded](#) to take on [data centers](#), with 19 new public and private partners, including DOE National Laboratories, Federal agencies, and private companies, including CoreSite Realty Corporation, eBay Inc., and Staples. These partners pledged to improve the efficiency of data centers, which together currently consume more than 90 megawatts of power.
- *Advanced Lighting Challenge:* In January 2015, the Administration [launched](#) the [Advanced Outdoor Lighting Challenge](#), challenging mayors across the country to upgrade 1.5 million outdoor lighting poles, thus tripling the existing outdoor lighting goal. As part of this effort, the [Better Buildings Outdoor Lighting Accelerator](#) is already working with 10 cities, three regional networks of dozens of cities, and two states to upgrade their outdoor lighting.
- *Setting Water Savings Goals:* Building on the water savings achieved by Better Buildings Challenge partners through a water pilot launched in 2014, the program is officially expanding to encourage partners to set water goals and share their solutions. To date 23 partners from the commercial, industrial, and public sectors have set water savings targets.

In 2014 alone, partners reported saving 377 million gallons of water – the equivalent of 570 Olympic-size swimming pools.

- *Residential Accelerators:* In May 2015, two new Better Buildings Accelerators launched with 30 national and regional organizations, State and local governments, and utility partners teaming up with DOE to help American families improve the efficiency of their homes. The [Home Energy Information](#) and [Home Upgrade Program](#) Accelerators are aimed at making home energy information more accessible to potential homebuyers and improving and expanding home upgrade programs that help Americans save money on their energy bills.
- *Better Buildings Solution Center:* The Solutions Center profiles hundreds of tested and proven partner innovations and strategies in a new web tool designed to help users [explore energy efficiency solutions](#) on topics such as building type, sector, technology, market barriers, and more.

IV. Reducing Potent Greenhouse Gas Emissions & Protecting Public Health

Issuing and Implementing a Strategy to Reduce Methane Emissions: To further cut methane emissions in landfills, coal mining, agriculture, and oil and gas systems, the Administration released a [Strategy to Reduce Methane Emissions](#) in March 2014. Progress from the past year includes:

- *Implementation of Strategy:* EPA released five [white papers](#) on potentially significant sources of methane, hosted [stakeholder roundtables](#) to explore options to reduce methane emissions from the oil and gas sector, and released the [Biogas Opportunities Roadmap](#), which outlined a series of voluntary actions for reducing methane through biogas systems. In April 2014, DOE allocated \$30 million to [finance the development](#) of breakthrough technologies to detect and measure methane.
- *Oil and Gas Sector:* In January 2015, EPA announced a [goal to cut methane emissions](#) from the oil and gas sector by 40 to 45 percent from 2012 levels by 2025, as well as a set of actions to put the U.S. on a path to achieve that goal. These actions include plans to propose common-sense standards for methane emissions from new and modified sources.

Assessing the Health Impacts of Climate Change: The relationship between climate change and public health is a priority consideration for the Obama Administration. In June 2014, the White House released a [report](#) detailing the harmful effects of carbon pollution on human health. The report found that EPA’s proposed Clean Power Plan guidelines for carbon pollution from power plants will help reduce the impacts of climate change, including by avoiding up to 6,600 premature deaths. In April 2015, President Obama and the Surgeon General [convened a roundtable](#) as part of [National Public Health Week](#) to discuss the health impacts of climate change and [the actions the Administration is taking](#), including:

- In April 2015, the White House launched the [Health Theme](#) of the Climate Data Initiative, making more than 150 health/climate datasets from Federal, State, and local governments publicly available on [climate.data.gov](#). Additionally, the Climate Resilience Toolkit was expanded with the addition of 20 Federal tools related to the climate/health nexus, including the first iteration of the [Sustainable and Climate Resilient Health Care Facilities toolkit](#).

- In April 2015, the U.S. Global Change Research Program released for public comment a [draft report](#) that assesses the observed and projected impacts of climate change on human health in the United States. The report is part of the National Climate Assessment, as called for under the President's Climate Action Plan. Expected in early 2016, the report will provide needed context for understanding Americans' changing health risks due to climate change.
- In April 2015, the President convened a [roundtable](#) with a number of Deans and other representatives from medical, public health, and nursing schools, colleges, and universities. The discussion focused on mechanisms to ensure that the next generation of health professionals is trained to address the health impacts of climate change.
- In June 2015, President Obama and the U.S. Surgeon General hosted a 2015 [White House Climate Change and Health Summit](#), bringing together medical and health professionals, academics, and other stakeholders to discuss the public-health impacts of climate change and identify policy and community solutions.

Reducing Hydrofluorocarbons (HFCs): In September 2014, the White House [announced](#) new private-sector commitments that would reduce cumulative global consumption of HFCs by the equivalent of 700 million metric tons of carbon dioxide through 2025 – equivalent to 1.5 percent of global greenhouse gas emissions in 2010 – as well as a set of executive actions to continue progress in reducing emissions of HFCs. These commitments and actions build on regulatory steps that the Administration has taken through EPA's [Significant New Alternatives Policy](#) (SNAP) program. In August 2014, EPA [proposed](#) a rule to prohibit some of the most harmful HFCs in various end-uses and expects to finalize this rule in summer 2015. Additionally, in February 2015, EPA [finalized a rule](#) to expand the list of acceptable alternatives. The Administration is also leading on this issue internationally, including in agreements with China and India. These actions build momentum for an amendment to the Montreal Protocol to phase down the global production and consumption of HFCs, which could reduce emissions by as much as 240 million metric tons of carbon dioxide equivalent in 2025 in the United States alone.

Reducing Emissions and Increasing Carbon Sequestration from Agriculture and Forests: In April 2015, USDA [announced](#) a comprehensive and detailed approach to support farmers, ranchers, and forest land owners in their response to climate change. The framework consists of [10 building blocks](#) that span a range of technologies and practices to reduce greenhouse gas emissions, increase carbon storage, and generate clean renewable energy. USDA's strategy focuses on climate-smart practices designed for working production systems that provide multiple economic and environmental benefits, in addition to supporting resilience to extreme weather, reduced emissions, and increased carbon storage. Through a comprehensive set of voluntary programs and initiatives, USDA expects to reduce net emissions and enhance carbon sequestration by over 120 million metric tons of carbon dioxide equivalent per year – about 2 percent of economy-wide net greenhouse emissions – by 2025.

V. Leading at the Federal Level

Reducing Greenhouse Gas Emissions in the Federal Government: The Federal Government is the single-largest consumer of energy in the United States. In March 2015, President Obama signed Executive Order 13693 on [Planning for Federal Sustainability in the Next Decade](#) to reduce

greenhouse gas emissions in the Federal Government by 40 percent over the next decade, and to increase the share of electricity the Federal Government consumes from renewable and alternative sources to 30 percent. As a result, taxpayers will save up to [\\$18 billion](#) in avoided energy costs. Additionally, the Administration released a [new scorecard](#) to publicly track the self-reported emissions disclosure and progress for all major Federal suppliers. The combined results of these actions will reduce greenhouse gas emissions by 26 million metric tons by 2025 – the equivalent of taking nearly 5.5 million cars off the road for a year.

Deploying Renewable Energy on Military Installations: The Department of Defense (DOD) is making significant progress toward the Climate Action Plan goal of deploying 3 gigawatts of renewable energy by 2025. In the past year, the Air Force developed a [16-megawatt solar array](#) at Davis-Monthan Air Force Base and plans to expand its use of renewable energy, with more than 160 megawatts under development. The Army announced three 30-megawatt solar arrays at installations in Georgia, the first of which broke ground in April 2015 at Fort Benning. The Army also unveiled an 18-megawatt [solar array](#) at Fort Huachuca in Arizona, and the Navy launched its [Renewable Energy Program Office](#) and [announced plans](#) to install up to 200 megawatts of renewable energy across 14 installations in California.

Helping to Bring Next-Generation Biofuels: In September 2014, the Departments of the Navy, USDA, and DOE [announced new contracts](#) to construct and commission biorefineries capable of producing drop-in, military-compatible fuels. Together, the contracts will result in more than 100 million gallons of clean, cost-competitive fuel that can be used in warfighting platforms and by commercial industry.

PREPARING THE UNITED STATES FOR THE IMPACTS OF CLIMATE CHANGE

Even as we take new steps to cut carbon pollution, we must also prepare for the impacts of a changing climate that are already being felt across the country. Since the release of the President’s Climate Action Plan and Executive Order 13653 on [Preparing the United States for the Impacts of Climate Change](#), the Administration has launched a number of initiatives to protect families, businesses, and communities from the risks posed by climate change.

I. Building Stronger and Safer Communities

State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience: Executive Order 13653 on [Preparing the United States for the Impacts of Climate Change](#) established a [State, Local, and Tribal Leaders Task Force](#) on Climate Preparedness and Resilience. This group of 26 elected officials from across the country advised the Administration on how the Federal Government can remove barriers to climate-resilient investments; modernize Federal programs, grants, and loans to better support local efforts; and develop the tools necessary to help communities prepare for climate change. In November 2014, the Task Force issued their [final recommendations](#), which address cross-cutting themes that range from improving resilience in our nation’s infrastructure to protecting human health. Many of the actions included in this progress report were informed by Task Force recommendations. Some additional examples include:

- In July 2014, the Administration launched a \$10 million [Federal-Tribal Climate Resilience Partnership](#) and a \$13 million collaboration to develop [advanced 3-D mapping](#).
- In November 2014, EPA announced up to \$600,000 in training and technical assistance to help drinking water, wastewater, and stormwater utilities in more than 20 communities bolster their climate change resilience and readiness using EPA's Climate Resilience Evaluation and Awareness Tool.
- In December 2014, the Council on Environmental Quality released updated [draft guidance](#) for Federal agencies on how to consider greenhouse gas emissions and the impacts of climate change in their environmental analyses under the National Environmental Protection Act.
- In May 2015, EPA released a new web-based climate adaptation training module to help local government officials prepare for the impacts climate change may have on the services they provide to their communities.

Support Climate-Resilient Investment: In order to ensure that our communities and economy are secure, Federal agencies are working to modernize their programs to encourage and support resilient economic development. For example:

- In April 2015, DOT [announced](#) \$500 million in competitive grants to fund transportation projects, including those that help communities prepare for flooding, storm damage, and disruption of the transportation network.
- DOT is also working to incorporate resilience into transportation system planning. In a proposed rule published in June 2014, states and the Metropolitan Planning Organization were encouraged to reference plans that address climate change and resilience to current and future conditions as part of their overall planning document.
- The Administration's GROW AMERICA Act proposal would clarify the ability of State and local governments to use Federal transportation funding for transportation resilience through a requirement that long-range transportation plans consider potential vulnerabilities and risks of critical highway, transit assets to the impacts of current and future extreme weather, and climate change effects; and an explanation of potential strategies for the adaptation of those critical assets.
- In April 2014, EPA announced [an addition](#) to the resilience requirement in its brownfields cooperative agreements.

Federal Flood Risk Management Standard: In January 2015, the President signed Executive Order 13690 on [Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input](#), establishing a flood standard that will reduce the risk and cost of future flood disasters by requiring all Federal investments in and affecting floodplains to meet higher flood risk standards. By requiring that Federally funded buildings, roads, and other infrastructure be constructed to better withstand the impacts of flooding, the President's action will support the thousands of communities that have strengthened their local floodplain management codes and standards, and will help ensure Federal projects last as long as intended. The new standard gives agencies the flexibility to select one of three approaches for establishing the flood elevation and hazard area they use in siting, design, and construction.

Rebuilding and Learning from Hurricane Sandy: The [Hurricane Sandy Rebuilding Task Force's Rebuilding Strategy](#) not only continues to help the Sandy-affected region rebuild resiliently, but also serves as a model for communities across the nation facing greater risks from extreme weather.

- *Refined Petroleum Product Reserve:* In May 2014, DOE announced the creation of a [Northeast Regional Refined Petroleum Product Reserve](#) holding one million barrels of gasoline to help mitigate the impacts of sudden and unexpected future supply interruptions in the Sandy-affected region.
- *Rebuild by Design:* In June 2014, HUD and the Hurricane Sandy Rebuilding Task Force [announced](#) the winners of the [Rebuild by Design](#) competition, which connected the world's most talented researchers and designers with stakeholders in the Sandy-affected region to develop new ideas for increasing the resilience of their communities.
- *Restoration Projects:* In June 2014, DOI announced more than [\\$100 million](#) in competitive grants to support 54 projects on the Atlantic coast to: (1) restore wetlands and other natural areas; (2) better manage stormwater using green infrastructure; and (3) assist states, tribes, and local communities in protecting themselves from major storms.
- *Transit Resilience Projects:* In September 2014, DOT [announced](#) that 40 projects were selected to receive a share of nearly \$3.6 billion in competitive transit resilience project grants. These investments include almost \$410 million to create a natural gas/solar power generation and distribution system as a backup to the regional power network and allow transit systems to function in the event of a blackout caused by a disaster. These investments ensure that infrastructure and transportation systems damaged by Hurricane Sandy are rebuilt stronger and more resiliently in the face of increasingly frequent and extreme weather events.
- *Emergency Relief Program and Guidance:* DOT established their Emergency Relief (ER) program – a direction under the Moving Ahead for Progress in the 21st Century (MAP-21.) This new ER program enables DOT to provide assistance to public transit operators in the aftermath of an emergency or major disaster. This program was designed in a way that encourages more resilient rebuilding after the impact of an emergency and disaster. Additionally, in February 2015, DOT published an updated [Emergency Relief Manual](#) to guide users toward appropriate disaster relief funding.
- *Aviation Navigation Infrastructure:* In 2014, FAA began a Superstorm Sandy Case Study project to evaluate the impacts of the storm on aviation navigation infrastructure. This case study will include information on the amount of time select navigation assets were affected and the cost of repair, as well as lessons learned to form best practices for future extreme weather events.

Announcing a National Disaster Resilience Competition: In June 2014, President Obama announced the [National Disaster Resilience Competition](#) to allow states and communities that experienced major natural disasters in the past several years to vie for nearly \$1 billion in funds to help them rebuild stronger and more resilient to the impacts of climate change. The Competition supports innovative resilience projects at the local level and encourages communities to adopt policy changes and activities that plan for the impacts of extreme weather and climate change.

Recognizing Communities for Leadership on Climate Change: In 2014, the Administration [launched](#) the first round of the Climate Action Champions competition to recognize and support the steps that local and Tribal governments are already taking to reduce carbon pollution and

prepare for the impacts of climate change. In December 2014, the Administration announced [the first Climate Action Champions](#) – 16 local and Tribal communities that had identified their climate vulnerabilities and taken decisive steps to cut carbon pollution and build resilience. The selected communities are benefiting from facilitated peer-to-peer learning opportunities, technical assistance, and targeted support from a range of Federal programs. In December 2014, DOE announced it was making up to \$3.5 million in funding available for communities, including the Climate Action Champions, to deploy smart-grid tools and technologies to advance climate preparedness and resiliency of the electricity delivery infrastructure. In August 2014, DOE partnered with the State of Vermont and industry for the groundbreaking on a resilience microgrid that will combine 2.5 megawatts of solar generation with 4 megawatts of energy storage, pairing photovoltaic and storage in such a way that, for example, a high school serving as a public emergency center can be islanded to maintain critical facilities when the grid is down.

Partnering with Local Communities to Identify and Address Region-Specific Vulnerabilities: In July 2014, the Administration launched two [Preparedness Pilots](#) that bring together Federal agencies and local communities in assessing and planning for region-specific vulnerabilities and interdependencies associated with the impacts of climate change. The City of Houston partnered with NASA’s Johnson Space Center, and the State of Colorado partnered with DOE’s National Renewable Energy Laboratory to advance preparedness planning on the ground and help create models for other communities and agencies to follow. In addition to the pilots, the White House and the Federal Emergency Management Agency (FEMA)’s [National Exercise Division](#) conducted a series of workshops to discuss region-specific climate vulnerabilities and adaptation planning strategies to address those impacts. These workshops were held in the pilot locations, as well as in Alaska, Virginia, and Washington, D.C.

Implementing the Arctic Executive Order: In January 2015, the President signed Executive Order 13689 on [Enhancing National Efforts in the Arctic](#), establishing the Arctic Executive Steering Committee (AESC) with the responsibility for helping to shape and reconcile Federal priorities in the Arctic, promote coordinated implementation and evaluation, improve Federal engagement with the State of Alaska and Alaska Native Communities, and support U.S. Chairmanship of the 8-nation Arctic Council.

Climate Adaptation Exercise Resources for Communities: In 2014, the White House and FEMA launched the Climate Adaptation, Preparedness, and Resilience Exercise Series. This inaugural campaign was comprised of five exercises: a Federal interagency workshop in May 2014; regional workshops in Houston, Texas, Fort Collins, Colorado, and Anchorage in October 2014; and a regional exercise in Hampton Roads, Virginia in December 2014. Building upon the many successes of these initial exercises, a suite of mitigation and recovery-focused exercise resources will be developed by June 2015 to foster and support community-driven climate adaptation and vulnerability reduction across State, local, and tribal communities. Through “train-the-trainer” seminars conducted in Fiscal Years 2015 and 2016, community leaders will better understand the diversity of climate data and tools available to inform locally relevant exercises, and learn to develop exercises that validate resilience planning. These exercise materials will complement existing climate tools, including the Climate Resilience Toolkit, by making it easier for communities to incorporate existing climate data and build on established exercise design and conduct concepts.

II. Protecting our Economy and Natural Resources

Promoting Resilience in the Health Sector: As part of the Climate Action Plan, the Department of Health and Human Services (HHS) created the Sustainable and Climate-Resilient Health Care Facilities Initiative to develop tools and information to help health care facilities prepare for the impacts of climate change and increase their resilience. In December 2014, the Administration released a [best practices guide](#) for health care providers, design professionals, policymakers, and others to promote continuity of care before, during, and after extreme weather events. The document identifies the current status of the health care infrastructure's resilience to extreme weather risks, as well as best practices that health care organizations can adopt to improve their climate readiness. Leaders from across the health care industry, including from some of the Nation's largest health care providers, also announced their commitment to enhance the climate resilience of their facilities and operations, using the Administration's guide as the foundation for their efforts.

Enhancing the Resilience of America's Natural Resources: In October 2014, the Administration announced a [Climate and Natural Resources Priority Agenda](#), a first-of-its-kind comprehensive commitment to support resilience of our natural resources and enhance carbon storage. The actions outlined in the Priority Agenda focus on protecting important landscapes and developing new science; planning and tools to foster climate-resilient lands and waters; enhancing U.S. carbon sinks, such as forests, grasslands, wetlands, and coastal areas; promoting innovative 21st century infrastructure that integrates natural systems into community development; and modernizing Federal programs and services to build resilience and enhance carbon storage. The Administration also announced a collection of commitments from the private and public sectors that support resilient natural resources and the communities that depend on them.

Partnering with the Energy Sector to Enhance Climate Resilience: In April 2015, Vice President Biden and Energy Secretary Moniz announced the new [Partnership for Energy Sector Climate Resilience](#) to improve U.S. energy infrastructure against extreme weather and climate change impacts with the leading providers of electricity services. The participating 17 companies represent a broad array of investor-owned, Federal, municipal, and cooperative utilities. Collectively, these partners represent approximately 20 percent of U.S. generating capacity, and serve approximately 25 percent of U.S. customers. The goal of the Partnership is to accelerate investment in technologies, practices, and policies that will enable a resilient 21st century energy system. Under this Partnership, owners and operators of energy assets will develop and pursue strategies to reduce climate- and weather-related vulnerabilities. In April 2015, DOE convened a roundtable discussion with CEOs from the initial Partners to discuss challenges and opportunities to enhance energy sector resilience.

Advancing Green Infrastructure to Improve Community Resilience: In July 2014, EPA launched the [Green Infrastructure Collaborative](#), bringing together Federal agencies, NGOs, and private-sector entities to [advance green stormwater infrastructure](#). Through the Collaborative, Federal agencies will provide funding assistance in at least 25 communities for green-infrastructure projects and host an in person workshop to share information on green infrastructure implementation. In October 2014, new public- and private-sector organizations [joined the](#)

[Collaborative](#) to improve stormwater management and expand the use of green infrastructure techniques in communities across the country. Additionally, in 2015, HUD released a [report](#) on the Green Infrastructure and Sustainable Communities Initiative, which highlights Green Infrastructure efforts from many HUD grantees.

Assessing Vulnerability of Transportation Infrastructure: In August 2014, DOT published a [synthesis report](#) of its Climate Change Adaptation Initiative, which presents the collective findings for seven pilot projects aimed at identifying climate impacts on transit systems. In 2014, DOT completed 17 of 19 [Climate Change Resilience Pilots](#), which aim to develop approaches to conduct climate change and extreme weather vulnerability assessments of transportation infrastructure and analyze options for improving resiliency.

Implementing a Wildfire Strategy: USDA and DOI continue to implement the [Western Watershed Enhancement Partnership](#) by engaging with local municipalities and towns to reduce hazardous fuels in critical water supply watersheds. In December 2014, DOI announced the [availability of Community Assistance grants](#), which align with the Cohesive Strategy as they emphasize collaboration among State, local, and Tribal leaders and communities in wildland fire management.

Launching a National Drought Resilience Partnership: In November 2013, the White House [launched](#) a cross-agency [National Drought Resilience Partnership](#). The Partnership leverages Federal collaborations already underway with communities, businesses, farmers, and ranchers to build drought resilience and help prepare for future drought events. In July 2014, the Partnership [launched a demonstration project](#) in Montana focused on how drought preparedness at the State, local, and Tribal levels can be achieved through enhanced coordination of Federal agency resources in a specific watershed basin. In June 2015, the President convened the Western Governors and senior Administration officials for an update on the Federal Government's activities in support of drought-afflicted states.

Sizing the Economic Costs of Climate Change: In July 2014, the White House Council of Economic Advisers released a report entitled, [The Cost of Delaying Action to Stem Climate Change](#), which found that the cost of hitting a specific climate target increases, on average, by approximately 40 percent for each decade of delay, and substantially decreases the chances that even concerted efforts in the future will be able to achieve more aggressive climate targets.

Prioritizing Community Resilience in the President's Budget: In the Fiscal Year 2016 budget, the President prioritized resilience efforts by including base funding for investments to identify and analyze critical infrastructure vulnerabilities, as well as funds for grants to support research and State- and local-level resilience planning. Additionally, the President's budget supports programs that build resilience to climate impacts such as flooding, drought, and wildfires, including a \$400 million request for National Flood Insurance Program Risk Mapping and a new budget framework classifying severe wildfire activity in the same category as other natural disasters.

III. Using Sound Science to Manage Climate Impacts

Releasing a Health Report on Climate Change: In June 2015, EPA released a report on the health and economic benefits of global action on climate change. [Climate Change in the United States:](#)

[Benefits of Global Action](#), compares two future scenarios: a future with significant global action on climate change, and a future with no action on climate change. The report quantifies the differences in health, infrastructure, and ecosystem impacts under the two scenarios, producing estimates of the costs of inaction and the benefits of reducing global greenhouse gas emissions, with the finding that we can save tens of thousands of American lives, and hundreds of billions of dollars, annually in the U.S. by the end of this century, and the sooner we act, the better off America and future generations of Americans will be.

Launching a Climate Data Initiative: In March 2014, the Administration launched the [Climate Data Initiative](#), an ambitious new effort that brings together extensive open-government data with commitments from the private and philanthropic sectors to develop planning and resilience resources for local communities. Data and resources on coastal flooding; food resilience; and water, health, and ecosystem vulnerability have been made available online through the Initiative, with more themes to be released in the future. This effort will help give communities across the U.S. access to the information and tools they need to plan for current and future climate impacts.

Launching a Climate Resilience Toolkit: In November 2014, the Administration released the [Climate Resilience Toolkit](#), a website that provides centralized, authoritative, and easy-to-use information, tools, and best practices to help communities, businesses, resource managers, planners, and policy leaders at all levels of government to bolster their resilience to the impacts of climate change.

Launching the Climate Education and Literacy Initiative: In December 2014, the Administration launched the [Climate Education and Literacy Initiative](#) to enhance climate literacy of students and citizens. The launch was accompanied by a robust set of commitments from Federal agencies and non-Federal entities. In February 2015, the White House honored [eight Champions of Change](#) for Climate Education and Literacy, leaders who are working in schools and communities across the country to advance climate education.

Developing Adaptation Tools for Transportation System Planners: In January 2015, DOT released Phase 2 of the [Gulf Coast Study](#). Phase 2 focused on the region of Mobile, Alabama, with the goal of enhancing regional decision-making ability to understand potential impacts on specific critical components of infrastructure and to evaluate adaptation options. DOT developed risk management tools to assist transportation stakeholders, including the [CMIP Data Processing Tool](#), which increases access to climate data; and the [Vulnerability Assessment Scoring Tool](#), which provides a framework for conducting a vulnerability assessment. In 2014, FAA began developing guidance on airport climate adaptation and infrastructure resilience.

Incorporating Climate Risks into Design and Asset Management: In February 2015, DOT proposed a process for the development of State risk-based asset management plans. Risk-based asset management serves as a climate adaptation strategy by providing a platform for inventorying assets, evaluating risks to those assets, and prioritizing capital improvements. The rule also calls for evaluations to determine if reasonable alternatives exist for roads, highways, or bridges that repeatedly require repair and reconstruction activities due to emergency events.

LEADING INTERNATIONAL EFFORTS TO ADDRESS GLOBAL CLIMATE CHANGE

No country is immune from the impacts of climate change, and no country can meet the challenge of climate change alone. Since the beginning of 2014, the Administration has made significant progress in leading multilateral and bilateral efforts to reduce global greenhouse gas emissions, advance international climate negotiations, and help prepare the world's most vulnerable populations for the impacts of climate change.

I. Working with Other Countries to Take Action to Address Global Climate Change

Negotiating a Global Climate Agreement and Leading on Post-2020 Climate Mitigation: In March 2015, the Obama Administration submitted our [Intended Nationally Determined Contribution](#) (INDC) to the U.N. Framework Convention on Climate Change (UNFCCC), announcing our intention to reduce U.S. emissions 26 to 28 percent below 2005 levels in 2025. To date, along with the U.S. submission, countries representing over 60 percent of global energy-related carbon emissions have announced their post-2020 climate targets. Under the UNFCCC, countries are working to formalize a climate agreement that will take effect from 2020 by the conclusion of the Conference of the Parties (COP) in Paris in December 2015.

Engaging with Major Economies: President Obama has made climate change a key issue in our most important bilateral relationships, including:

- In November 2014, in a [historic joint announcement](#) with China's President Xi Jinping, President Obama announced an ambitious [target](#) that is ambitious and achievable. The United States intends to achieve an economy-wide target of reducing its emissions by 26 to 28 percent below its 2005 level in 2025 and to make best efforts to reduce its emissions by 28 percent. At the same time, China announced its first-ever intention to peak carbon emissions around 2030, while making best efforts to peak sooner, as well as to increase its share of non-fossil energy to 20 percent by 2030. The U.S. estimates that this target will require China to deploy an additional 800 to 1,000 gigawatts of nuclear, wind, solar, and other zero-emission generation capacity by 2030 – more than all the coal-fired power plants that exist in China today and close to the total current electricity generation capacity in the United States. The announcement also launched a number of new bilateral initiatives, including a new climate smart/low carbon cities initiative and major new carbon capture and storage projects, to deepen our ongoing collaboration.
- President Obama has worked with Prime Minister Modi of India on advancing our ambitious climate and clean energy goals. The President welcomed the Prime Minister for a [September 2014](#) visit in Washington, D.C., and in turn visited the Prime Minister in India in [January 2015](#). The U.S. and India issued strong statements pledging cooperation toward the Paris Conference of the Parties in December 2015 – building on our already robust climate and energy cooperation including the highly successful U.S.-India Partnership to Advance Clean Energy (PACE) program – and expanded policy dialogues and technical work on clean energy and low greenhouse gas emissions technologies. In addition, the U.S. welcomed India's intention to increase its share of renewable energy in electricity generation, consistent with India's intended goal to increase solar capacity to 100 gigawatts by 2022, and both leaders agreed to cooperate on making concrete progress on phasing

down HFCs in the Montreal Protocol this year. The U.S. intends to support India's goal by enhancing cooperation in clean energy and climate change.

- The U.S. [welcomed](#) the Intended Nationally Determined Contribution (INDC) of Mexico, announced by President Peña Nieto in March 2015. The White House applauded Mexico for being the first major emerging economy to formally submit its INDC. By setting a strong target to peak net emissions by 2026 and drive emissions down thereafter, Mexico served as a clear example to the rest of the world by submitting an INDC that is timely, clear, ambitious, and supported by robust, unconditional policy commitments. Furthermore, in March 2015, the United States and Mexico announced a bilateral clean energy and climate policy task force to further deepen policy and regulatory coordination in specific areas, including clean electricity, grid modernization, appliance standards, and energy efficiency. The interagency task force held its first meeting in spring 2015, chaired by U.S. Energy Secretary Ernest Moniz and Secretary Juan José Guerra Abud of Mexico. The U.S. continues to engage with other nations in the lead-up to the Climate Summit in Paris in December 2015, and is actively working with many nations on climate mitigation and adaptation efforts.

Leadership in International Forums: The United States is leading on climate change in several international forums, including:

- *Major Economies Forum:* The U.S. continues its chairmanship of the [Major Economies Forum on Energy and Climate](#) (MEF), a group bringing together climate ministers from 17 of the world's largest economies. In April 2015, the MEF convened in Washington D.C. to build on progress at the Lima COP and continue to work through difficult negotiating issues, thus renewing participants' resolve to work together toward a successful outcome at the Paris COP in December 2015 that is ambitious, durable, and applicable to all countries. The U.S. will convene the MEF again in the summer and fall of 2015 to drive progress toward the Paris Conference.
- *G-7 Summit:* On June 7-8, the [G-7 Leaders affirmed](#) their strong determination to reach a successful climate agreement in December 2015 at the COP in Paris. In the lead-up to the Conference, all G-7 countries have announced or proposed post-2020 climate targets and G-7 Leaders have encouraged other countries who have not yet announced post-2020 INDCs to do so well in advance of the Paris conference. Recognizing that these targets are only a next step, G-7 Leaders have also articulated a long-term vision for decarbonizing their economies by the end of the century, as well as the need to be ambitious in setting goals for cutting carbon by 2050. The Leaders also announced concrete steps to address climate change, protect the environment, and boost energy security through incorporating climate resilience considerations into development assistance; expanding climate risk insurance in developing countries; mobilizing clean energy finance in Africa; addressing short-lived climate pollutants; reducing incentives for carbon-intensive investments; and promoting resource efficiency.
- *Clean Energy Ministerial:* Over the past year, DOE has helped to lead an effort to improve the effectiveness and increase the ambition of the [Clean Energy Ministerial](#) (CEM), a global forum comprised of the world's largest and most forward-leaning countries to promote best practices, policies, and programs that facilitate the transition to a global clean energy economy. At the sixth meeting of the CEM (CEM6), hosted by Mexico in May 2015, U.S. Secretary of Energy Ernest Moniz, Mexico Secretary of Energy Pedro Joaquín

Coldwell, China's Minister of Science and Technology Wan Gang and other energy leaders from CEM member countries came together.

- The Leaders created a Steering Committee comprised of China, Denmark, the European Commission, France, India, Mexico, the United Arab Emirates, and the United States to provide ongoing strategic leadership to transform to a “CEM 2.0.”
 - President Barack Obama announced in a [video message](#) that the United States will host the seventh meeting of the CEM (CEM7) in 2016 and China's Minister Wan Gang announced that China intends to host the eighth meeting of the CEM (CEM8) in 2017, demonstrating commitment to the CEM and to clean energy by the world's two largest economies and carbon emitters.
 - The CEM Global Lighting Challenge was launched to establish a global race to reach cumulative sales of 10 billion high-efficiency, high-quality, and affordable advanced lighting products as quickly as possible. Replacing the world's existing lighting with these products could save hundreds of billions of dollars in electricity costs and reduce annual carbon emissions by over 500 million metric tons.
 - The CEM Power System Challenge was launched with countries endorsing a set of principles to help guide their countries' efforts toward the clean, reliable, resilient and affordable power systems of the future and agreeing to efforts such as developing national roadmaps and strategies to increase energy efficiency and promote smart-grid technologies and renewable energy resources.
 - The Clean Energy Solutions Center, that has already fielded requests from nearly 80 countries for low-carbon policy support, will scale up to respond to growing requests for assistance and establish a new section on Clean Energy Finance. Australia and the United States announced additional funding while Canada, France, India, Italy, and Indonesia announced in-kind support with additional experts and tools.
- *International Civil Aviation Organization (ICAO)*: The U.S. is committed to the development of a meaningful carbon emissions standard for commercial aircraft in the International Civil Aviation Organization (ICAO) to incentivize faster development of technology and serve as a basis for ensuring that less efficient aircraft and engine technologies are eliminated over time. ICAO is currently developing the coordinated standard, which is expected to be approved by ICAO's Committee on Aviation Environmental Protection (CAEP) in 2016. EPA's proposed greenhouse gas endangerment and contribution findings for aircraft engines is a necessary prerequisite for EPA and FAA to take subsequent actions to implement ICAO standards within the United States.

Bolstering Global Public-Sector Financing Towards Cleaner Energy: The Administration has made substantial progress in implementing the President's announcement to end public U.S. financing for new conventional coal plants overseas, except in the poorest countries. Since the U.S. announced this policy, a number of countries – including the United Kingdom, the five Nordic countries, and the Netherlands – have either joined the U.S. policy or otherwise taken steps to limit coal finance. The World Bank, European Bank for Reconstruction and Development, and European Investment Bank announced similar policies in the second half of 2013. Additionally, the United States, the United Kingdom, and the Netherlands have proposed that the OECD Export

Credit Group work towards the adoption of a carbon emissions performance standard that limits export credit agency support of high-carbon power plants.

Combating Short-Lived Climate Pollutants: In June 2014, the G-7 countries reaffirmed their determination to [phase-down hydrofluorocarbons](#) (HFCs) under the Montreal Protocol and committed to promote the rapid deployment of climate-friendly and safe alternatives. Additionally, in June 2015, the G-7 countries added a commitment to financially support implementation of an HFC phase-down. The [Climate and Clean Air Coalition](#) (CCAC) designed to reduce short-lived climate pollutants, has expanded to 91 partners, including 40 countries and non-state partners such as the World Bank, the U.N. Environment Program, and the World Health Organization. CCAC partners are hard at work implementing 10 initiatives to reduce emissions of short-lived climate pollutants in a range of key areas, including landfills, agriculture, the oil and gas sector, cookstoves, and diesel engines. In April 2015, the United States, along with Canada and Mexico, submitted, for the sixth year in a row, a [proposed amendment](#) to the Montreal Protocol to phase down the production and consumption of HFCs. In January 2015, President Obama and Indian Prime Minister Modi [agreed to cooperate](#) on making concrete progress in the Montreal Protocol in 2015, and India subsequently submitted an HFC amendment proposal. The United States continues to lead bilateral and multilateral action in the Montreal Protocol to secure an amendment to phase down HFCs.

Mobilizing Climate Finance: In November 2014, President Obama [pledged \\$3 billion to the Green Climate Fund](#) to reduce carbon pollution and strengthen resilience in developing countries. This pledge reflects the U.S. commitment to reduce carbon pollution and strengthen resilience in developing countries, especially the poorest and most vulnerable, and builds on a bipartisan history of U.S. leadership to support climate action. In addition, the United States has created and driven a donor-country initiative to expand the scale and variety of tools to mobilize private investment in clean technologies in developing countries.

Negotiating Global Free Trade in Environmental Goods: Global trade in environmental goods – such as technologies that keep our air and water clean – is estimated at nearly \$1 trillion annually, but some World Trade Organization (WTO) members charge tariffs on environmental goods as high as 35 percent. To make these types of goods cheaper and more accessible, the United States and 16 other WTO Members, including the European Union and China, have begun negotiations to eliminate tariffs on a range of environmental goods. Negotiators have been meeting regularly in Geneva since the launch of these negotiations in July 2014.

Reducing Emissions from Deforestation and Forest Degradation: The [BioCarbon Fund Initiative for Sustainable Forest Landscapes](#) is a \$380 million public-private partnership to support forest and land-use initiatives in developing countries that will encourage a reduction in greenhouse gas emissions from the land sector, more sustainable agriculture, and smarter land-use planning and policies. In 2014, the Initiative formally opened its first two programs in Ethiopia and Zambia. The [Forest Carbon Partnership Facility Carbon Fund](#) closed its initial pipeline of national or subnational programs to reduce emissions from deforestation and forest degradation with eleven countries and has reopened to a second tranche of proposals. Project development work is underway in the first eleven countries. Through support from the interagency SilvaCarbon

program, significant advances in forest and forest-carbon inventories, mapping, and monitoring have been made in the Andean Amazon region, Gabon, and Vietnam, among other countries.

Strengthening Global Resilience to Climate Change: In September 2014, President Obama announced Executive Order 13677 on [Climate-Resilient International Development](#), which requires agencies to factor climate-resilience considerations systematically into the U.S. Government's international development work and to promote a similar approach with multilateral entities. The Executive Order will: (1) improve the resilience of the Federal Government's international development programs, projects, and investments through consideration of current and future climate-change impacts; (2) enhance sharing of knowledge, data, and tools in incorporating climate-resilience considerations; and (3) complement efforts by the Federal Government to reduce greenhouse gas emissions at home and globally. In June 2015, the G-7 countries agreed to incorporate climate resilience into their international development aid as well.

Enhancing Climate Resilience in Developing Nations: In June 2015, the Administration launched an international public-private Partnership, to which President Obama had committed at the U.N. Climate Summit in September 2014, to empower developing nations to boost their own climate resilience. The Partnership, [Climate Services for Resilient Development](#), will provide needed climate services – including actionable science, data, information, tools, and training – to developing countries that are working to strengthen their national resilience to the impacts of climate change. The Partnership launched with more than \$34 million in financial and in-kind contributions from the U.S. Government, led by the U.S. Agency for International Development, and seven other founding-partner institutions from around the world: the American Red Cross, Asian Development Bank, Esri, Google, Inter-American Development Bank, the Skoll Global Threats Fund, and the U.K. Government. In recognition of the global diversity of climate service needs, the Partnership will deliver tailored and targeted services to countries in sub-regions of Latin America, Africa, and Asia. The Partnership's initial efforts will be organized around development and application of scalable, replicable, comprehensive, and integrative climate services in focus countries representing Latin America, Africa, and Asia.