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President Obama's Climate Action Plan

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Summary

On June 25, 2013, President Obama announced a Climate Action Plan (CAP) to reduce emissions of carbon dioxide (CO₂) and other greenhouse gases (GHG), and to encourage adaptation to expected climate change. The President affirmed his 2009 pledge to reduce U.S. GHG emissions by 17% below 2005 levels by 2020 if all other major economies agreed to limit their emissions as well. In 2012, U.S. gross GHG emissions were approximately 10% below 2005 levels.

The President stated willingness to work with Congress toward enacting a bipartisan, market-based scheme to reduce GHG emissions. He also said that he would take executive branch actions in the absence of congressional support. His CAP identifies measures in three categories:

- Cut carbon pollution in America.
- Prepare the United States for the impacts of climate change.
- Lead international efforts to address global climate change.

Many measures in the CAP have been under way. The plan specifies few timelines or metrics for evaluating progress of individual measures.

A Presidential Memorandum, also of June 25, 2014, directs the Environmental Protection Agency (EPA) to issue two rules to curtail CO₂ emissions from new and existing power plants. First, it instructs EPA to re-propose standards under the Clean Air Act (CAA) for GHG emissions from newly constructed electric generating units (EGU), and to issue the final rule “in a timely fashion” after comments. This proposal was published in the *Federal Register* on January 8, 2014, opening a 60-day comment period.

Second, and more significantly, the Memorandum directs EPA to issue standards, regulations, or guidelines for CO₂ emissions applicable to modified, reconstructed, and existing power plants, building on states’ efforts to reduce power plant emissions. EPA Administrator Gina McCarthy plans to announce the proposed guidelines for existing EGU on June 2, 2014. The Memorandum requests rules to be finalized by June 1, 2015. Further, it requests that guidelines require states to submit to EPA their implementation plans, required under Section 111(d) of the CAA, and their implementing regulations by June 30, 2016. Many stakeholders have encouraged EPA to write the standards and guidelines to allow innovative, potentially cost-cutting flexibilities to states and regulated entities.

The CAP additionally announces regulatory actions to

- reduce GHG emissions including fuel efficiency standards for heavy-duty vehicles post-2018;
- tighten efficiency standards for federal buildings; and
- require a transition away from chemicals that contribute to global climate change that were introduced as alternatives to stratospheric ozone-depleting chemicals.

President Obama referred to the pending Presidential Permit for the Keystone XL pipeline to carry Canadian oil sands across the U.S. border: “The net effects of the pipeline’s impact on our climate will be absolutely critical to determining whether this project is allowed to go forward.”

In early 2014, the White House announced a strategy to reduce methane, about 9% of U.S. GHG emissions. Additional administrative actions would promote energy efficiency and increased electricity generation by renewable energy in federal facilities, on federal lands, and by private, state, and local partners of federal agencies. The President's FY2015 budget proposed funding for some related actions.

To promote adaptation to climate change by the federal government and states and localities, the CAP mostly continues existing programs. Executive Order 13653, issued November 1, 2013, *Preparing the United States for the Impacts of Climate Change*, expounds on efforts federal agencies should undertake to enhance climate preparedness and resilience.

The CAP includes international initiatives to promote global reductions of GHG emissions and adaptation. One would end U.S. support for public financing of new coal-fired power plants overseas, except those employing advanced efficiency or carbon capture and sequestration technology.

Notably, the CAP does not quantify whether it would meet the President's commitment to reduce GHG emissions by 17% from 2005 levels by 2020. Nor does it say how the United States would produce its share of a 2009 international pledge of \$100 billion annually to assist developing countries to mitigate GHG emissions and adapt to climate change.

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Presidential Announcement

On June 25, 2013, President Obama announced a national plan to reduce emissions of carbon dioxide (CO₂) and other greenhouse gases (GHG), as well as to encourage adaptation to expected climate change.¹ The President stated a willingness to work with Congress on a bipartisan, market-based scheme to reduce GHG emissions. However, the President had earlier stipulated that the set of actions he announced would not require congressional approval. This announcement followed up on his vow in the 2013 State of the Union Address:

I urge this Congress to pursue a bipartisan, market-based solution to climate change, like the one John McCain and Joe Lieberman worked on together a few years ago. But if Congress won't act soon to protect future generations, I will. I will direct my Cabinet to come up with executive actions we can take, now and in the future, to reduce pollution, prepare our communities for the consequences of climate change, and speed the transition to more sustainable sources of energy.²

The President had been under increasing pressure from environmental allies to exercise greater leadership on the climate change issue, after the Congress did not enact "Waxman-Markey" (H.R. 2454 in 2009) or other comprehensive bills to reduce GHG emissions. Also, some states and non-governmental organizations gave notice that they would file suit when the Environmental Protection Agency (EPA) proposed but did not finalize greenhouse gas (GHG) emission standards for new power plants by April 2013.³ The President's plan is accompanied by a White House "infographic" covering extreme weather events, U.S. GHG emissions, and elements of the President's plan.⁴

Members of Congress continue to be divided in their views on whether climate change risks merit raising current costs to the economy in exchange for benefits that would mostly accrue to future generations, people in other countries, and stability of Earth systems. The prospect of continued congressional divisions in part has prompted the President's use of existing executive branch authorities.

Pledged Actions and Timing

The President affirmed his commitment to his 2009 policy pledge to reduce U.S. GHG emissions by 17% below 2005 levels by 2020 if all other major economies agreed to limit their emissions as well.⁵ In 2012, the United States' gross GHG emissions⁶ were approximately 10% below their

¹ Executive Office of the President (EOP). *The President's Climate Action Plan*. June 2013. Available at <http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>.

² White House, *Remarks by the President in the State of the Union Address*. Washington DC. February 12, 2013.

³ The House passed the American Clean Energy and Security Act (the "Waxman-Markey" bill), the 111th Congress's H.R. 2454, but no corresponding bill cleared the Senate. For further information, see CRS Report R40643, *Greenhouse Gas Legislation: Summary and Analysis of H.R. 2454 as Passed by the House of Representatives*, coordinated by Mark Holt and Gene Whitney.

⁴ White House. *President Obama's Plan to Fight Climate Change*. <http://www.whitehouse.gov/share/climate-action-plan>.

⁵ President Obama separately set a goal to double U.S. energy productivity (i.e., energy consumption per unit of economic activity, such as Gross Domestic Product) by 2030 compared with 2010 levels.

2005 levels, or about 5% above 1990 levels.⁷ U.S. GHG emissions peaked in 2007. During the period 1990 to 2012, U.S. economic activity, measured as Gross Domestic Product (GDP), rose 73%, while population increased 26%.

The U.S. Energy Information Administration projected U.S. energy-related CO₂ emissions, about 78% of all U.S. GHG emissions, to grow 3.5% from 2012 to 2020, under existing regulations and policies—not taking into account the new guidelines for CO₂ reductions from existing power plants.⁸ Under this reference scenario, transportation sector emissions fall by 2%, industry CO₂ emissions grow by 14%, and electricity sector emissions rise almost 4%.

An independent study estimated in late 2012 that the United States is on a path to reduce all GHG emissions to 16% below 2005 levels in 2020, including effects of the New Source Performance Standards for CO₂ emissions from power plants that EPA proposed in 2012 (more below).⁹ The researchers cite assumptions about promulgated and proposed standards, trends in the relative prices of coal and natural gas, and state and local GHG mitigation programs as main drivers of the projected reductions.

To fill the gap between the President's pledge and the current emissions trajectory, President Obama identified a series of actions to abate GHG emissions and to facilitate resilience to the effects of climate change. These are outlined below in three broad categories from the President's plan, which describes his three "pillars" as

1. cut carbon pollution in America;
2. prepare the United States for the impacts of climate change;
3. lead international efforts to combat global climate change and prepare for its impacts.

This summary emphasizes the incremental additions in the plan announced June 25, 2013, beyond programs and other executive branch actions already under way. Few of the listed measures specify the timing of executive branch actions, or the quantitative GHG reductions that should be achieved.

(...continued)

⁶ Of the six gases covered by the Kyoto Protocol, excluding hydrofluorocarbons, nitrogen hexafluoride and other newer GHG, and excluding removals of CO₂ from the atmosphere by "sinks", such as uptake by expanding forests.

⁷ CRS calculations from data in Environmental Protection Agency. *Inventory of U.S. Greenhouse Gas Emission and Sinks: 1990-2012*. Washington DC, April 2014. <http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html>.

⁸ U.S. Energy Information Administration. "Annual Energy Outlook 2014, Table 18. Carbon Dioxide Emissions by Sector and Source," May 7, 2014. http://www.eia.gov/forecasts/aeo/tables_ref.cfm.

⁹ Burtraw, Dallas, and Matt Woerman. *US Status on Climate Change Mitigation*. Washington DC: Resources for the Future, October 2012. <http://www.rff.org/RFF/Documents/RFF-DP-12-48.pdf>.

Cut Carbon Pollution

GHG Standards for Electricity Generation

The centerpiece of the President's Climate Action Plan arguably is the Presidential Memorandum¹⁰ setting deadlines for EPA to issue rules to curtail carbon dioxide emissions from new and existing power plants.¹¹ Specifically, the Presidential Memorandum first instructs EPA to issue, as planned, a new proposal under the Clean Air Act (CAA), by September 20, 2013, for GHG emissions from newly constructed electric generating units (EGU), and to issue the final rule "in a timely fashion" after comments. This rule was proposed in the *Federal Register* on January 8, 2014, opening a 60-day comment period.¹² The proposal would set an emissions limit of 1,100 pounds of carbon dioxide (CO₂) per megawatt-hour (MWh) of electricity generated by new coal-fired EGUs, and a standard of either 1,000 or 1,100 lbs/MWh (depending on size) for new natural gas-fired EGUs.¹³ To meet the standard, coal-fired plants are assumed to require carbon capture and sequestration (CCS) of about 40% of the CO₂ from their fuel.¹⁴ EPA assumed CCS technology in its Regulatory Impact Analysis of the proposal.¹⁵

Second, and more significantly, the Presidential Memorandum directs EPA also to issue standards, regulations, or guidelines for CO₂ emissions applicable to modified, reconstructed and existing power plants, building on states' efforts to reduce power plant emissions. EPA Administrator Gina McCarthy plans to announce the proposed guidelines for existing EGU emissions on June 2, 2014. The Memorandum directs EPA to finalize the guidelines by June 1, 2015, and notes that states should submit to EPA their implementation plans, required under Section 111(d) of the CAA, and their implementing regulations by June 30, 2016. The Memorandum states that

- states and nongovernmental leaders should be directly engaged in the process;
- regulations and guidelines should be tailored to reduce costs;
- approaches should allow use of market-based instruments, performance standards, and other flexibilities;
- standards should be consistent with maintaining reliable and affordable power; and
- EPA should work with states and other agencies to promote electricity from cleaner and more efficient technologies, including appliance efficiencies.

¹⁰ White House. "Memorandum for the Administrator of the Environmental Protection Agency: Power Sector Carbon Pollution Standards." June 25, 2013.

¹¹ For more information on these rules, see CRS Report R43127, *EPA Standards for Greenhouse Gas Emissions from Power Plants: Many Questions, Some Answers*, by James E. McCarthy.

¹² *Federal Register*. 79 FR 1429. January 8, 2014. <https://www.federalregister.gov/articles/2014/01/08/2013-28668/standards-of-performance-for-greenhouse-gas-emissions-from-new-stationary-sources-electric-utility>.

¹³ For more on the proposed standards, see CRS Report R43127, *EPA Standards for Greenhouse Gas Emissions from Power Plants: Many Questions, Some Answers*, by James E. McCarthy.

¹⁴ For more on CCS, see CRS Report R42532, *Carbon Capture and Sequestration (CCS): A Primer*, by Peter Folger.

¹⁵ EPA. EPA-452/R-13-003. September 2013. See also CRS Report R43127, *EPA Standards for Greenhouse Gas Emissions from Power Plants: Many Questions, Some Answers*, by James E. McCarthy.

The President directed EPA to work with state and local governments, industry, non-governmental organizations, tribal officials, and others in designing the programs, and to use market-based elements where possible. These instructions might be consistent with new standards and guidelines that take innovative forms, such as proposals put forward by policy analysts.¹⁶ Some call for state-specific guidelines for existing power plants with flexibilities in state implementation plans to allow compliance in flexible ways, including use of generator and consumer efficiency, renewable mechanisms, rate averaging, and additional options. The President's announcement specifically indicated that the EPA standards should "provide flexibility to different states with different needs, and build on the leadership that many states, and cities, and companies have already shown." Stakeholders are offering many comments regarding the stringency of the guidelines, the flexibilities to states and regulated entities, and the base year against which reductions will be measured, with many views on costs, benefits, and impacts on various entities and populations in the United States.

Electricity Generation from Renewable Energy. The President set a goal to double electricity generation from wind, solar, and geothermal energy from current levels by 2020. Electricity generation produced from wind, solar, and geothermal increased 80% from 2009 to 2011, from 90 million megawatt-hours to 161 million megawatt-hours.¹⁷ Including biomass fuels, the increase of non-hydro renewable electricity was 52% from 2009 to 2011, from 144 million megawatt-hours to 219 million megawatt-hours. The President proposes to accomplish the doubling goal by

- instructing the Department of Interior to issue permits for 10 gigawatts (GW) of renewable electric capacity on public lands by 2020;
- encouraging expansion of hydropower generation at existing dams, including the Red Rock Hydroelectric Plant on the Des Moines River in Iowa as a high priority permitting project;
- deploying 3 GW of renewable capacity on military installations by 2025;
- aiming to install 100 MW of renewable capacity for federally subsidized housing stock by 2020; and
- directing federal agencies, through a June 2013 Presidential Memorandum, to streamline siting, permitting, and review of electricity transmission projects across federal, state, and tribal government processes.

Consider Climate Impacts in the National Interests of Keystone XL. The State Department faces a pending decision of whether to grant a Presidential Permit for the proposed Keystone XL pipeline. Keystone XL would transport oil sands crude from Canada to a market hub in Nebraska for further delivery to Gulf Coast refineries.¹⁸ Some environmental groups called this decision the "line in the sand" for U.S. climate change policy¹⁹ and urged the President to deny the permit. On

¹⁶ See, for example, Tarr, Jeremy et al., *Regulating CO2 under Section 111(d): Options, Limits, and Impacts*. Nicholas Institute for Environmental Policy Solutions, Duke University. January 2013; and Lashof, Daniel A., et al. *Closing the Power Plant Carbon Pollution Loophole: Smart Ways the Clean Air Act Can Clean Up America's Biggest Climate Polluters*. Natural Resources Defense Council. 2012.

¹⁷ Energy Information Administration. *Net Generation by Other Renewable Sources: Total (All Sectors), 2003-April 2013*. Extracted June 25, 2013. Data available at http://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_1_01_a.

¹⁸ See CRS Report R41668, *Keystone XL Pipeline Project: Key Issues*, by Paul W. Parfomak et al.

¹⁹ For analysis of the emissions implications of the Keystone pipelines, see CRS Report R42611, *Oil Sands and the* (continued...)

June 25, 2013, the President stated in his speech that “[our] national interest will be served only if this project does not significantly exacerbate the impacts of carbon pollution. The net effects of the pipeline’s impact on our climate will be absolutely critical to determining whether this project can go forward.”²⁰ In April 2013 comments on the draft Environmental Impact Statement (EIS) for the permit application, EPA recommended that the State Department include in the final EIS monetized estimates of the social cost of the GHG emissions from a barrel of oil sands crude compared to average U.S. crude. It is not clear whether the State Department will include in the final EIS the additional emissions data recommended by EPA. If those data are included, it is not yet known how it may inform the State Department’s assessment of the “net effects” of the pipeline project on the climate.

Eliminate Tax Incentives Benefiting U.S. Fossil Fuels. The President proposed phasing out tax provisions that benefit fossil fuels in his FY2014 budget proposal.²¹ (He links this proposal to seeking a global phase-out of similar incentives for fossil fuels.) The President proposed similar phase-outs in previous budget requests.

Technology Development. The President’s FY2014 budget proposes approximately \$7.9 billion, a 30% increase of funding across agencies, for research, development, and deployment of “clean energy” technologies.

- The Department of Energy (DOE) plans to issue a Notice in the *Federal Register* announcing a draft solicitation to use up to \$8 billion in “Section 1703” loan guarantee authority²² for advanced fossil fuel energy projects that can “cost-effectively meet financial and policy goals, including the avoidance, reduction, or sequestration of anthropogenic emissions of greenhouse gases.”²³ The draft solicitation will be open for public comment, with an aim to issue the final solicitation in the fall of 2013.
- Conduct a Federal Quadrennial Energy Review, led by the White House Domestic Policy Council and the Office of Science and Technology Policy, to assess energy infrastructure challenges, identify threats, risks, and opportunities for U.S. energy and climate security in order to translate policy goals into sequenced actions and proposed investments over four-year planning horizons.

Increasing Fuel Economy Standards for Heavy-Duty Vehicles for the post-2018 Model Years. No levels of performance or GHG reductions are specified in the plan. Model Year 2014-2018 standards have been promulgated. Medium- and heavy-duty vehicles are the second-largest component of transportation-sector CO₂ emissions, after light-duty vehicles (passenger cars and light trucks), while transportation emissions are 33% of U.S. CO₂ emissions and 28% of all U.S. GHG emissions.²⁴

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Keystone XL Pipeline: Background and Selected Environmental Issues, coordinated by Jonathan L. Ramseur.

²⁰ White House. Remarks by the President on Climate Change. (transcript) Georgetown University, Washington DC. June 25, 2013. <http://www.whitehouse.gov/the-press-office/2013/06/25/remarks-president-climate-change>.

²¹ For more on this topic in the FY2013 budget proposal, see CRS Report R42374, *Oil and Natural Gas Industry Tax Issues in the FY2014 Budget Proposal*, by Robert Pirog.

²² Energy Policy Act (EPA) of 2005, Title XVII, §1703.

²³ EOP, op. cit., p. 7.

²⁴ EPA, op. cit. Also see CRS Report R40506, *Cars, Trucks, and Climate: EPA Regulation of Greenhouse Gases from* (continued...)

Developing and Deploying Next-Generation Energy Sources for Transportation. Continuing to support the Renewable Fuels Standard,²⁵ the Administration will invest in research and development on advanced biofuels, advanced batteries, and fuel cells in every mode of transportation. The Department of Transportation (DOT) will work with other agencies to explore how to integrate alternative fuel vessels into the U.S. flag fleet. DOT, the Department of Housing and Urban Development (HUD), and the EPA will work with states, cities, and towns to improve transportation options and lower transportation costs while protecting the environment.

New Goal for Energy Efficiency Standards. The President set a goal for efficiency standards for appliances and federal buildings, promulgated during his tenure, to reduce carbon emissions by at least 3 billion metric tons cumulatively by 2030 while also reducing household energy bills.

Department of Agriculture (USDA) Financing of Rural Energy Efficiency. USDA's Rural Utilities Service Energy Efficiency and Conservation Loan Program would provide up to \$250 million for rural electric utilities to finance energy efficiency investments by businesses and households. The existing Rural Energy for America program would streamline grants and loan guarantees for efficiency and renewable energy investments by agricultural producers and rural small businesses.

Explore New Incentives for Residential Energy Efficiency. HUD's Multifamily Energy Innovation Fund would continue to provide \$23 million to test new approaches to achieve cost-effective residential energy. The Federal Housing Administration with stakeholders will explore incentives in mortgage underwriting and appraisal that would factor energy efficiency into sales and refinancing of homes.

Expand DOE's Voluntary Better Buildings Challenge to Include Multifamily Housing. This program, which supports commercial and industrial building owners to improve energy efficiency by providing technical assistance and matching partners with allied suppliers, will expand to building owners and public housing agencies to cover multifamily housing efficiency as well.

Phase-Down Hydrofluorocarbon (HFC) Emissions. EPA will use its authority under the Significant New Alternatives Policy Program to identify and approve "climate-friendly" chemicals as alternatives to HFC and to chemicals that deplete the stratospheric ozone layer, and to prohibit certain uses of the most harmful chemicals. The Administration will purchase safer alternatives to HFC where feasible and transition to alternatives over time.

Develop an Interagency Methane Strategy. EPA, USDA, DOE, Department of Interior (DOI), Department of Labor (DOL), and DOT will assess best technologies and practices, and will identify existing authorities and incentives to reduce methane emissions.

Collaborate to Reduce Methane Emissions. The Administration announced in March 2014 efforts by several agencies to reduce potentially significant methane and other emissions:²⁶

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Mobile Sources, by James E. McCarthy and Brent D. Yacobucci.

²⁵ See CRS Report R40155, *Renewable Fuel Standard (RFS): Overview and Issues*, by Randy Schnepf and Brent D. Yacobucci.

²⁶ Dan Utech, "A Strategy to Cut Methane Emissions." March 28, 2014. <http://www.whitehouse.gov/blog/2014/03/28/strategy-cut-methane-emissions>.

- EPA will assess emissions from the oil and gas sector and, by late 2014, “determine how best to pursue further methane reductions from these sources.” If EPA decides to pursue regulations, it would finalize them by the end of 2016.²⁷
- The Department of the Interior will propose updated standards on venting and flaring of methane from oil and gas production on public lands, as well as develop a program for capture and sale of methane from coal mines on lands leased by the federal government.
- EPA will propose updated standards on methane emissions from new landfills and take public comment on whether to update standards for existing landfills.
- EPA and the Departments of Agriculture and Energy will develop a joint biogas road map to accelerate adoption of methane digesters to reduce emissions from cattle waste by 25% by 2020.

Protecting Carbon Removals by U.S. Resources and Landscapes. Related to measures to adapt to climate change, conservation and land management will seek to protect and restore forests, grasslands, wetlands, and other resources. In the context of a changing climate, these measures aim to help ensure that vegetation continues to remove carbon from the atmosphere, along with providing other services.

Continue to Carry Out Executive Order 13514. Agencies will continue to enter into performance-based contracts that promote energy savings²⁸ and take additional actions to promote energy efficiency. The plan indicates that agencies will synchronize building codes for federally owned and supported buildings, and take additional measures to meet the GHG emission reduction directives under E.O. 13514 (with adaptation plans discussed below).²⁹

Prepare the United States for the Impacts of Climate Change

On October 5, 2009, President Obama signed Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*. The E.O. called for

- federal agencies to participate actively to develop “approaches through which the policies and practices of the agencies can be made compatible with and reinforce” a national climate change adaptation strategy; and
- the Council on Environmental Quality to report to the President on progress on agency actions and recommendations for further measures.

Agencies were instructed by CEQ to include initial adaptation plans in their 2012 Strategic Sustainability Performance Plans (SSPPs), required of every agency under E.O. 13514. Agencies’ SSPPs are available using sustainability.performance.gov. In many cases, the climate change adaptation plans are stand-alone reports appended to the SSPPs. The first adaptation plans were

²⁷ See CRS Report R40813, *Methane Capture: Options for Greenhouse Gas Emission Reduction*, by Kelsi Bracmort et al.

²⁸ Directed by Presidential Memorandum, “Implementation of Energy Savings Projects and Performance-Based Contracting for Energy Savings.” December 2, 2011.

²⁹ <http://www.whitehouse.gov/administration/eop/ceq/sustainability>.

officially released on February 7, 2013, for a 60-day public comment period. Some agencies have updated their plans since then.

The June 2013 Climate Action Plan calls for a series of actions that may be—but are not clearly—incremental to what agencies were already undertaking pursuant to E.O. 13514. The plan includes

- Directing agencies to identify and remove barriers to making climate-resilient investments; identify and remove counterproductive policies that increase vulnerabilities; and support more resilient investments through agency grants, technical assistance, and other mechanisms. Climate risk management is to be fully integrated into federal infrastructure and natural resource management planning,³⁰ the Clean Water and Drinking Water State Revolving Funds,³¹ grants for brownfields cleanup, and HUD grants to assist in recovery following Superstorm Sandy.
- Establishing a State, Local, and Tribal Leaders Task Force on Climate Preparedness,³² to provide recommendations to remove barriers to appropriate investments, modify grant and loan programs, and develop better information and tools to support communities that seek to become more resilient to a changing climate. The Task Force has met several times, and expects to deliver final recommendations to the President in November 2014.
- Requiring that existing federal programs continue to provide targeted assistance to communities to prepare for the impacts of climate change, including through the Federal Highway Administration, the Bureau of Indian Affairs, and annual federal “Environmental Justice Progress Reports.”
- Boosting resilience of buildings and infrastructure by developing a framework and guidelines for safe buildings and infrastructure through a panel to be convened by the National Institute of Standards and Technology (NIST). The President’s FY2014 budget proposal included \$200 million for Climate Ready Infrastructure through the Transportation Leadership Awards program of DOT.
- Enhancing resilience in rebuilding following Hurricane Sandy through federal relief programs. Programs that provide financial assistance include the Federal Transit Administration (\$1.3 billion to locally prioritized projects to make transit systems more resilient to future disasters); DOI (\$100 million in competitive grants to promote resilient natural systems and \$250 million in support projects for coastal restoration and resilience); and the U.S. Army Corps of Engineers (\$20 million to study reducing the vulnerability of Sandy-affected coastal communities to future large-scale flood and storm events).³³

³⁰ See GAO. *Climate Change: Various Adaptation Efforts Are Under Way at Key Natural Resource Management Agencies*, May 31, 2013. <http://www.gao.gov/products/GAO-13-253>.

³¹ For more about these funds, see CRS Report RL31116, *Water Infrastructure Needs and Investment: Review and Analysis of Key Issues*, by Claudia Copeland and Mary Tiemann.

³² See GAO. *Climate Change: Future Federal Adaptation Efforts Could Better Support Local Infrastructure Decision Makers*, April 12, 2013. <http://www.gao.gov/products/GAO-13-242>.

³³ EOP, op. cit., p. 14.

- Identifying and taking actions in specific sectors, including energy production, healthcare, insurance, land and water resource conservation and management, agriculture, forestry, and others. Among these efforts would be launch of a new National Drought Resilience Partnership, and expansion of forest- and rangeland-restoration to reduce those areas' vulnerability to catastrophic fire.
- Focusing on “usable knowledge” in continuing global change research and completing the third National Climate Assessment (NCA). The expected release date for the NCA is now spring of 2014.
- Launching a Climate Data Initiative consistent with the President's May 9, 2013, executive order, *Making Open and Machine Readable the New Default for Government Information*.³⁴ It is intended to make government data more freely available.
- Providing a Toolkit for Climate Resilience that centralizes access to various federal agencies' related tools, services, and best practices.

Following up, Executive Order 13653, *Preparing the United States for the Impacts of Climate Change*, was issued November 1, 2013. It expounds upon efforts federal agencies should undertake to enhance climate preparedness and resilience.³⁵ It calls for intergovernmental partnerships, risk-informed decision making, adaptive learning, and preparedness planning. The executive order establishes a Council on Climate Preparedness and Resilience (Council) to replace the Inter-Agency Climate Change Task Force. It also establishes a State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience (Task Force) to support intergovernmental partnerships (including tribes). The Task Force shall provide recommendations to the Council by November 1, 2014, and shall terminate no later than six months after submitting its recommendations.

E.O. 13653 builds on previous executive orders and policies requiring agencies to develop climate change action plans and timelines. It charges numerous interagency task forces with ensuring that climate change-related risks are taken into account in federal permitting and other decisions.³⁶ The executive order increases reporting from agencies on how they are meeting their requirements, including their assessments of changes to policies, programs, and regulations to make natural resource managements more resilient to climate change. It also calls for a web-based portal on “data.gov” to improve access to data and tools relevant to climate issues and decision making.

International Leadership

When the United States ratified the 1992 United Nations Framework Convention on Climate Change (UNFCCC), it agreed to the objective of

³⁴ White House. *Making Open and Machine Readable the New Default for Government Information*. May 9, 2013

³⁵ Executive Office of the President. *Executive Order 13653: Preparing the United States for the Impacts of Climate Change*. *Federal Register*, November 1, 2013. <https://www.federalregister.gov/articles/2013/11/06/2013-26785/preparing-the-united-states-for-the-impacts-of-climate-change>.

³⁶ Task forces changed explicitly by E.O. 13653 include the Steering Committee on Federal Infrastructure Permitting and Review Process Improvement; the Task Force on Ports; the Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska; and the Federal Interagency Working Group on Environmental Justice.

stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved with a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.³⁷

Although the United States signed the 1997 Kyoto Protocol to the UNFCCC, the agreement was never submitted to the Senate for consent to its ratification.³⁸ Congressional opposition was strong to a treaty, in part because it did not include all major emitting countries, such as China, and that it would impose costs on the U.S. economy.³⁹ The United States has no quantitative, legally binding obligations to reduce its GHG emissions under the UNFCCC, although it is currently negotiating towards an agreement to abate GHG emissions globally, due in 2015 and to take effect by 2020.

After President Obama took office, in conjunction with the 2009 Copenhagen Accord, he pledged a policy to reduce U.S. GHG emissions by 17% compared with 2005 levels. Without rules to reduce power plant emissions, the United States would not be on track to meet this pledge, a fact that increases pressure and arguably undermines U.S. leadership (though not necessarily leverage) in the international negotiations.

New in the President's announcement is a call to end U.S. support for public financing of new coal-fired power plants overseas. This would exempt the most efficient coal technology available in the world's poorest countries and power plants that employ emerging carbon capture and sequestration technology.

The President's Climate Action Plan includes several efforts in motion prior to the June 2013 announcements. Among the bilateral and multilateral programs are the following:

- A "major initiative" in 2013 in conjunction with the Major Economies Forum on Energy and Climate⁴⁰ to promote energy efficiency gains in buildings.
- Bilateral cooperation with key major emerging economies. Existing initiatives include the U.S.-China Clean Energy Research Center, the U.S.-India Partnership to Advance Clean Energy, and the Strategic Energy Dialogue with Brazil. The President cites as an example an agreement between the United States and China in June 2013 to phase down production and consumption of hydrofluorocarbons (HFC) globally under the Montreal Protocol on Substances that Deplete the Ozone Layer.⁴¹

³⁷ UNFCCC Article 2, Objective. 1992.

³⁸ For more information on the international negotiations on climate change, see CRS Report R40001, *A U.S.-Centric Chronology of the United Nations Framework Convention on Climate Change*, by Jane A. Leggett.

³⁹ The Senate had stated this clearly, in July 2007 prior to the Kyoto negotiations, in S.Res. 98, passed on a vote of 95-0.

⁴⁰ <http://www.state.gov/e/oes/climate/mem/index.htm>.

⁴¹ White House, *United States and China Agree to Work Together on Phase Down of HFCs*, press release, June 8, 2013. For more information on the Montreal Protocol, see United Nations Environment Programme, Ozone Secretariat. *The Montreal Protocol on Substances that Deplete the Ozone Layer*.

- A call to phase out subsidies for fossil fuels globally. G-20 leaders committed to this goal in 2009. President Obama proposes in his FY2014 budget, as in previous budgets, to eliminate U.S. tax provisions that benefit fossil fuel supply.
- Negotiating a global free trade agreement on environmental goods and services under the World Trade Organization (WTO). The President said such a global agreement would build on the 2011 agreement under the Asia-Pacific Economic Cooperation (APEC) economies to reduce tariffs to 5% or less by 2015 on a negotiated list of 54 environmental goods. The plan calls for negotiation at the WTO of a plurilateral agreement to eliminate tariffs on environmental goods with countries that account for 90% of global trade in environmental goods. It also calls for inclusion of environmental services in the ongoing plurilateral Trade in International Services agreement. These talks seek to supplant the thus far unsuccessful multilateral negotiations on environmental goods and services at the WTO Doha Round.
- Supporting reduction of emissions from deforestation and forest degradation (REDD) globally. The Agency for International Development (AID) works bilaterally and multilaterally through the Forest Investment Program, the Forest Carbon Partnership Facility, the Millennium Challenge Corporation, and the Tropical Forest Alliance 2020.
- Supporting international cooperation to reduce so-called “super-pollutants,” gases and aerosol pollutants that are highly potent but short-lived once emitted to, or formed from emissions in, the atmosphere. The Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollution was formed among a group of like-minded countries in February 2012 to promote reduction of methane, black carbon, HFC, and other pollutants with potent influence on the climate.

In cooperation under the UNFCCC, the Obama Administration pledged to help mobilize \$30 billion of financing during 2010-2012 to assist developing countries mitigate GHG emissions and adapt to climate change. The \$30 billion was intended as a publicly funded “fast start” toward stimulating financing—both public and private—of \$100 billion annually by 2020. The President stated the United States met its pledge for the 2010-2012 “fast-start” financing with approximately \$7.5 billion in that three-year period.⁴² The June 2013 Plan speaks to the pledge for 2020 financing in general terms only.⁴³

Possible Issues for Congress

The President’s plan mostly envisions actions that do not require further authority from Congress to accomplish, although some would rely on appropriations of funds to specific programs. An initial review of the Climate Action Plan raises a few initial questions some in Congress may wish to explore.

1. The cumulative impacts of existing measures and the President’s announced plan have not been assessed, in terms of accomplishments in reducing GHG emissions

⁴² The State Department’s calculation is available at <http://www.state.gov/e/oes/climate/faststart/index.htm>.

⁴³ EOP, op. cit., p. 20.

or in terms of costs and savings that may result. In addition to net costs or benefits, distributional impacts across regions, sectors, and segments of the population may be of interest.

Some in Congress and, more generally, in the American public oppose regulation of GHG emissions under the Clean Air Act. Some legislators have proposed resolutions or bills to curtail executive authority in advance of EPA finalization of rules. Once a rule is finalized, Congress may use the Congressional Review Act (CRA, 5 U.S.C. §§801 et seq.)⁴⁴ to overturn the rule by enacting a joint resolution of disapproval. The CRA allows for the use of expedited procedures when considering such a joint resolution, and, if the joint resolution were to be enacted, the rule would no longer have force or effect. However, the resolution of disapproval would require the signature of the President, who would be unlikely to sign a bill overturning his own agency's rule. A two-thirds vote in both House and Senate could overcome a presidential veto.

In May 2013, the Administration released an updated range for the “social costs of carbon” (SCC)—dollar values representing the benefits of avoiding damages of climate change, expressed as dollars per ton of CO₂ released in particular years.⁴⁵ These SCC estimates have been, and will be used, to compare the benefits with the costs of prospective regulations,⁴⁶ though cost-benefit analysis has not typically been a determinative factor in regulatory choices. While the interagency group that developed the SCC acknowledged the difficulties of providing such values, the 9th Circuit Court ruled in 2007 that estimating the benefits of rules without including such values for climate damages is “arbitrary and capricious.”⁴⁷ Some observers have expressed concern that the new SCC values could be used to justify tighter standards, while others have criticized the methods for understating the SCC. Congress may wish to consider the process by which the SCC have been developed, the role of public and congressional input, and how the SCC may affect future actions.

2. Some in Congress may seek to enact a more cohesive alternative to EPA regulation of GHG emissions and the assortment of Administration measures in the Obama plan. Some policy makers have proposed that fees on GHG emissions (e.g., “carbon taxes”) would be a preferable alternative, while others oppose this option. The Keystone XL pipeline, to transport Canadian oil sands crude across the U.S. border, requires a Presidential Permit from the President. While many support approval of the pipeline, some environmental proponents have called the project the “line in the sand” on climate change and urge the President to deny the permit. Pursuant to the President's statement that “[our] national interest will be served only if this project does not significantly exacerbate the impacts of carbon pollution,” Congress may wish to examine systematically the trade-offs to national interest of the project.

⁴⁴ CRS Report RL32240, *The Federal Rulemaking Process: An Overview*, coordinated by Maeve P. Carey.

⁴⁵ Interagency Working Group on Social Cost of Carbon. *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866*. Washington DC: U.S. Government, May 2013. http://www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbon_for_ria_2013_update.pdf.

⁴⁶ CRS Report R41974, *Cost-Benefit and Other Analysis Requirements in the Rulemaking Process*, by Maeve P. Carey

⁴⁷ *Center for Biological Diversity v. National Highway Traffic Safety Admin.*, 508 F.3d 508, 519 (9th Cir. 2007).

Selected CRS Reports Relating to the Obama Proposal

A number of CRS reports are available with background relating to some of President Obama's announced policies on climate change. Additional reports are available at <http://www.crs.gov>, and at the CRS Climate Change Science, Technology, and Policy web page.

CRS Report R43127, *EPA Standards for Greenhouse Gas Emissions from Power Plants: Many Questions, Some Answers*, by James E. McCarthy.

CRS Report R42613, *Climate Change and Existing Law: A Survey of Legal Issues Past, Present, and Future*, by Robert Meltz.

CRS Report R41561, *EPA Regulations: Too Much, Too Little, or On Track?*, by James E. McCarthy and Claudia Copeland.

CRS Report R42532, *Carbon Capture and Sequestration (CCS): A Primer*, by Peter Folger.

CRS Report R41103, *Federal Agency Actions Following the Supreme Court's Climate Change Decision in Massachusetts v. EPA: A Chronology*, by Robert Meltz.

CRS Report RL32240, *The Federal Rulemaking Process: An Overview*, coordinated by Maeve P. Carey.

CRS Report R40913, *Renewable Energy and Energy Efficiency Incentives: A Summary of Federal Programs*, by Lynn J. Cunningham and Beth Cook.

CRS Report R40806, *Energy Projects on Federal Lands: Leasing and Authorization*, by Adam Vann.

CRS Report R43011, *U.S. and World Coal Production, Federal Taxes, and Incentives*, coordinated by Marc Humphries.

CRS Report R42986, *An Overview of Air Quality Issues in Natural Gas Systems*, by Richard K. Lattanzio.

CRS Report R40506, *Cars, Trucks, and Climate: EPA Regulation of Greenhouse Gases from Mobile Sources*, by James E. McCarthy and Brent D. Yacobucci.

CRS Report R42721, *Automobile and Truck Fuel Economy (CAFE) and Greenhouse Gas Standards*, by Brent D. Yacobucci, Bill Canis, and Richard K. Lattanzio.

CRS Report R40155, *Renewable Fuel Standard (RFS): Overview and Issues*, by Randy Schnepf and Brent D. Yacobucci.

CRS Report R41985, *Renewable Energy Programs and the Farm Bill: Status and Issues*, by Randy Schnepf.

CRS Report R40813, *Methane Capture: Options for Greenhouse Gas Emission Reduction*, by Kelsi Bracmort et al.

CRS Report R42611, *Oil Sands and the Keystone XL Pipeline: Background and Selected Environmental Issues*, coordinated by Jonathan L. Ramseur.

CRS Report R42537, *Canadian Oil Sands: Life-Cycle Assessments of Greenhouse Gas Emissions*, by Richard K. Lattanzio.

CRS Report R40001, *A U.S.-Centric Chronology of the United Nations Framework Convention on Climate Change*, by Jane A. Leggett.

CRS Report R41845, *The Global Climate Change Initiative (GCCII): Budget Authority and Request, FY2010-FY2015*, by Richard K. Lattanzio.

CRS Report R41302, *International Climate Change Financing: The Climate Investment Funds (CIFs)*, by Richard K. Lattanzio.

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