

ONE HUNDRED THIRTEENTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
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MEMORANDUM

September 17, 2013

To: Subcommittee on Energy and Power Democratic Members and Staff

Fr: Committee on Energy and Commerce Democratic Staff

Re: Hearing on “The Obama Administration’s Climate Change Policies and Activities”

On Wednesday, September 18, 2013, at 10:15 a.m. in room 2123 of the Rayburn House Office Building, the Subcommittee on Energy and Power will hold a hearing on “The Obama Administration’s Climate Change Policies and Activities.” Secretary of Energy Ernest Moniz and the Administrator of the Environmental Protection Agency (EPA) Gina McCarthy are expected to testify about the President’s Climate Action Plan.

I. THE PRESIDENT’S CLIMATE ACTION PLAN

In 2009, President Obama pledged that the United States would reduce its greenhouse gas pollution by 17% by 2020 and 80% by 2050, from a 2005 baseline.¹ Over the past four years, the United States has made progress toward this goal. Investments in energy efficiency and renewable energy have doubled U.S. capacity to generate renewable electricity from wind and solar resources and reinvigorated domestic clean energy manufacturing. The Administration’s carbon pollution standards for automobiles will double fuel economy and produce major reductions in greenhouse gas pollution from passenger vehicles. These steps are likely to bring the United States halfway toward the 2020 greenhouse gas reduction goal.

In his State of the Union address in February, the President told the nation, “if Congress won’t act soon to protect future generations, 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

¹ The White House, *Remarks by the President at the Morning Plenary Session of the United Nations Climate Change Conference* (Dec. 18, 2009) (online at www.whitehouse.gov/the-press-office/remarks-president-morning-plenary-session-united-nations-climate-change-conference).

energy.”² When Congress failed to respond, the President announced his Climate Action Plan on June 25, 2013.³ The plan consists of a wide range of executive actions involving at least 20 federal agencies.

The EPA and Department of Energy (DOE) will play crucial roles in implementing the Climate Action Plan. Under the Plan, EPA’s responsibilities include issuing carbon pollution standards for both new and existing power plants, developing post-2018 fuel economy standards for heavy-duty vehicles with the Department of Transportation, prohibiting specific uses of the most harmful hydrofluorocarbons (HFCs), and working with other federal agencies to develop a comprehensive interagency strategy to reduce methane emissions. An accompanying Presidential Memorandum directed EPA to issue proposed carbon pollution standards for existing power plants by June 1, 2014, and final standards by June 1, 2015.⁴

Under the plan, DOE has several responsibilities, including establishing new minimum energy efficiency standards for appliances and equipment, improving the efficiency of commercial and industrial buildings, providing loan guarantees to advanced fossil energy projects, and supporting a government-wide quadrennial energy review.

New and updated energy efficiency standards are a key part of the President’s Climate Action Plan, which includes a goal of reducing carbon pollution by at least 3 billion metric tons cumulatively by 2030 through efficiency standards. Since the announcement of the President’s Climate Action Plan in June, DOE has proposed updated energy efficiency standards for commercial refrigeration equipment, metal halide lamp fixtures, and walk-in coolers and freezers.

II. EPA POWER PLANT CARBON POLLUTION STANDARDS

EPA is authorized under section 111 of the Clean Air Act to establish performance standards for new facilities (and modified facilities that increase emissions) reflecting best demonstrated technology and taking costs into account. States submit plans to EPA to reduce emissions at existing facilities. The state plans allow for flexibility in applying less stringent standards or longer compliance schedules for various reasons including costs, remaining useful life of the facility, and physical impossibility.

² The White House, *Remarks by the President in the State of the Union Address* (Feb. 12, 2013) (online at www.whitehouse.gov/the-press-office/2013/02/12/remarks-president-state-union-address).

³ The White House, Executive Office of the President, *The President’s Climate Action Plan* (Jun. 25, 2013) (online at www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf).

⁴ The White House, *Presidential Memorandum – Power Sector Carbon Pollution Standards* (Jun. 25, 2013) (online at www.whitehouse.gov/the-press-office/2013/06/25/presidential-memorandum-power-sector-carbon-pollution-standards).

On March 27, 2012, EPA proposed the Carbon Pollution Standards for new power plants. This New Source Performance Standard (NSPS) establishes an emissions limit of 1,000 pounds of carbon dioxide per megawatt per hour for new facilities that generate over 25 megawatts of energy.⁵ Currently, 95% of natural gas combined cycle facilities already meet this standard.⁶ Many electric generating units are not subject to this standard, including existing units, existing units that undergo major modifications, units outside of the continental U.S., and transitional units. Transitional units are plants that start construction within 12 months of the proposed rulemaking and already hold the required permits.

EPA introduced additional flexibility into the standards by permitting utilities to use a 30-year average emissions value to meet the standard if they implement carbon capture and sequestration technology. This would allow new sources to construct and begin operation prior to installing carbon capture and sequestration technology.

EPA is expected to issue a new proposed rule by September 20, 2013. EPA believes that proposed standards will reduce regulatory uncertainty for the power generation industry regarding the regulation of carbon pollution from new sources.⁷ A rule would provide additional support for clean coal and natural gas energy production. New facilities that meet the standards would have assurance that they are compliant with requirements to address carbon pollution under the Clean Air Act.

III. GREENHOUSE GAS EMISSIONS IN THE UNITED STATES

According to the Energy Information Administration (EIA), U.S. energy-related carbon dioxide emissions declined in 2012 to the lowest level since 1994, largely as a result from fuel switching from coal to natural gas in the power sector.⁸ But those trends have reversed in 2013 as the price of natural gas has increased. EIA reports that coal-fired power generation has increased by 10% in the first half of 2013, compared with the same period in 2012.⁹ As a result, energy-related carbon dioxide emissions were more than 3% higher at the end of May than they

⁵ U.S. Environmental Protection Agency, *Fact Sheet: Proposed Carbon Pollution Standard for New Power Plants* (Mar. 2012) (online at epa.gov/carbonpollutionstandard/pdfs/20120327factsheet.pdf).

⁶ *Id.*

⁷ U.S. Environmental Protection Agency, *Regulatory Impact Analysis for the Proposed Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units* (Mar. 2012) (online at www.epa.gov/ttnecas1/regdata/RIAs/egughgnspproposalria0326.pdf).

⁸ Energy Information Administration, *Energy-Related Carbon Dioxide Emissions Declined in 2012* (Apr. 5, 2013) (online at www.eia.gov/todayinenergy/detail.cfm?id=10691).

⁹ Energy Information Administration, *Electric Power Monthly, Table 1.7.B. Net Generation from Coal* (Aug. 22, 2013) (online at www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_1_07_b).

were at the same point last year.¹⁰ EIA projects that, under current policy, carbon dioxide emissions will continue to increase in 2013 and 2014 and climb over the coming decades.¹¹

Energy-related carbon dioxide emissions represent three-fourths of the U.S. inventory of greenhouse gases.¹² President Obama pledged in Copenhagen in 2009 that the United States would reduce its greenhouse gas emissions by 17% below 2005 levels by 2020, the equivalent of 3% below 1990 levels. U.S. greenhouse gas emissions fell sharply in 2008 and 2009 due to the economic recession but then increased again in 2010 before falling modestly in 2011.¹³ In 2011, U.S. greenhouse gas emissions were 7% below 2005 levels but remain 8% above 1990 levels.¹⁴

In contrast, the world's top climate scientists agree that greenhouse gas emissions from developed nations such as the United States need to decline by 25% to 40% by 2020 and 80% to 95% by 2050 compared with 1990 levels to avoid a dangerous level of warming, even if developing countries make substantial reductions.¹⁵

IV. THE GROWING THREAT OF CLIMATE CHANGE

Climate change is already having an impact in the United States and could have a much more severe impact in the future if the country does not take urgent action to cut carbon pollution.

According to the Draft National Climate Assessment, average U.S. temperatures already have increased about 1.5°F since 1895, with more than 80% of this increase occurring since

¹⁰ Energy Information Administration, *Monthly Energy Review, Section 12: Environment* (Aug. 27, 2013) (online at www.eia.gov/totalenergy/data/monthly/#environment).

¹¹ Energy Information Administration, *Annual Energy Outlook 2013, Energy-Related Carbon Dioxide Emissions by Sector and Source, United States, Reference Case* (Apr. 2013) at table A18 (online at [www.eia.gov/forecasts/aeo/pdf/0383\(2013\).pdf](http://www.eia.gov/forecasts/aeo/pdf/0383(2013).pdf)).

¹² U.S. Environmental Protection Agency, *U.S. Inventory of Greenhouse Gas Emissions* (2013) at ES-6 and ES-7 (online at www.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2013-ES.pdf).

¹³ *Id.* at ES-7.

¹⁴ *Id.*

¹⁵ Intergovernmental Panel on Climate Change, *Climate Change 2007: Mitigation of Climate Change, Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, at 775-227 (2007). These emissions reductions are based on stabilizing global carbon emissions concentrations at 450 parts per million of carbon dioxide equivalent, the level experts agree is necessary to have a 50% chance of limiting the global increase in average temperature to 2°C.

1980.¹⁶ More heavy downpours, wildfires, and heat waves are occurring in parts of the United States.¹⁷ Snow and ice cover has diminished in some regions of the United States.¹⁸ Sea levels have risen about eight inches over the past century, and the ocean itself is becoming more acidic, threatening marine life.¹⁹ The number of strong hurricanes and the overall strength of hurricanes have increased since the early 1980s in the North Atlantic.²⁰

The Intergovernmental Panel on Climate Change has recommended that the world limit warming to 2°C by the end of the century in order to avoid the most catastrophic impacts of climate change. Scientists have sounded new alarms about the rapidly closing window for action to achieve this goal.

In December 2012, the International Energy Agency examined the global emissions reductions that would be necessary to limit global warming by 2°C and found that 80% of the carbon emissions allowable by 2035 are already “locked-in” by existing infrastructure. If the world does not take significant action to reduce emissions by 2017, then the world will be locked in to carbon emissions levels that guarantee warming of more than 2°C.²¹

Similarly, the United Nations Environment Programme concluded that without urgent action, limiting warming to 2°C by 2100 “may be insurmountable or at best, very costly.”²² Any delays in action will only lock in more carbon-intensive technologies and can result in “significantly higher mitigation costs over the medium and long term” and “greater and more costly impacts” from unmitigated climate change.²³ PriceWaterhouseCoopers (PwC) found that to have a 50% chance of avoiding warming over 2°C, the world needs to decarbonize by 5.1% each year. This rate, which would be unprecedented, is a significant increase from when PwC first estimated the necessary decarbonization rate, illustrating the growing price of delaying action.²⁴

¹⁶ U.S. Global Change Research Program, *Draft National Climate Assessment* (Jan. 11, 2013) at 3 (online at <http://ncadac.globalchange.gov/download/NCAJan11-2013-publicreviewdraft-chap1-execsum.pdf>).

¹⁷ *Id.* at 3-5.

¹⁸ *Id.* at 66.

¹⁹ *Id.* at 4.

²⁰ *Id.* at 26.

²¹ International Energy Agency, *World Energy Outlook 2012* (Nov. 2012) (online at www.iea.org/publications/freepublications/publication/English.pdf).

²² United Nations Environment Programme, *The Emissions Gap Report 2012* at viii (2012) (online at www.unep.org/publications/ebooks/emissionsgap2012/).

²³ *Id.* at 4.

²⁴ PriceWaterhouseCoopers, *Too late for two degrees? Low carbon economy index 2012* (Nov. 2012) (online at www.pwc.com/en_GX/gx/sustainability/publications/low-carbon-economy-index/assets/pwc-low-carbon-economy-index-2012.pdf).

V. THE COST OF CARBON POLLUTION TO SOCIETY

Since President Reagan, every Administration has required federal agencies to calculate the costs and benefits of federal regulations pursuant to executive orders. In order to ensure that these assessments reflect the potentially enormous economic costs of climate change, an interagency working group developed a methodology to estimate the cost of carbon pollution to society. This is an estimate of the societal benefits of reducing emissions of carbon pollution. It is sometimes referred to as the “social cost of carbon.”

The Administration’s cost of carbon pollution calculations have been subject to extensive public comment. In 2009, the Administration took public comment on its draft estimates. In March 2010, the initial cost of carbon estimates were released, after taking into account the comments received.

Because the models used to make the calculations have been revised in the peer-reviewed academic literature since 2010, the Administration updated its calculations earlier this year to ensure that they incorporate the latest scientific and technical information. The interagency working group generated estimates of the cost of carbon pollution for a range of years at different discount rates. For example, the estimate for 2015 was \$40 per ton (in 2011 dollars) at a 3% discount rate.²⁵

The public will have an opportunity to review and comment on the new cost estimates as part of the regular notice and comment process that accompanies every proposed rule. If these comments show that the cost estimate should be raised or lowered, federal agencies will be able to make adjustments when they issue final rules.

VI. WITNESSES

The following witnesses have been invited to testify:

The Honorable Ernest Moniz

Secretary

Department of Energy

The Honorable Gina McCarthy

Administrator

Environmental Protection Agency

²⁵ 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* (May 2013).