

**COMMENTS OF THE ATTORNEYS GENERAL OF NEW YORK,  
CALIFORNIA, MASSACHUSETTS, DELAWARE, NEW MEXICO, OREGON,  
WASHINGTON, CONNECTICUT, MAINE, MARYLAND, RHODE ISLAND,  
VERMONT, DISTRICT OF COLUMBIA ON THE DESIGN OF A PROGRAM  
TO REDUCE CARBON POLLUTION FROM EXISTING POWER PLANTS**

**Executive Summary**

The Environmental Protection Agency is soliciting input from stakeholders in developing a proposed rule under section 111(d) of the Clean Air Act (Act) to address greenhouse gas emissions from existing power plants: the largest source of greenhouse gas emissions in the nation. The Act requires EPA to ensure that States achieve emission reductions from existing power plants necessary to protect human health and welfare from the harms of carbon pollution. As part of its outreach effort in advance of proposing a rule in June 2014, EPA has requested the view of States on several aspects of regulation under section 111(d), including determining the best system of emission reduction and designing criteria by which to evaluate the adequacy of state programs.

The Attorneys General of New York, California, Massachusetts, Delaware, New Mexico, Oregon, Washington, Connecticut, Maine, Maryland, Rhode Island, Vermont, the District of Columbia submit these comments in response to that request and on related issues concerning EPA's vital obligation to limit greenhouse gas emissions from existing power plants. Although each of the undersigned States has already taken significant steps to reduce greenhouse gas pollution emitted by the power sector, substantial work remains.

Section I of these comments provides background on the importance of EPA's rulemaking to address carbon pollution from existing power plants. First, we discuss the serious and well-recognized harms caused by carbon pollution and associated with climate change. Against this backdrop, we summarize how EPA finally reached the point of regulating greenhouse gas emissions from power plants. We then explain the various programs that, in the absence of EPA action until now, States have implemented to reduce greenhouse gas emissions from the power industry cost-effectively. These approaches include renewable portfolio standards, market-based cap-and-trade systems, planned retirements of coal-fired power plants, demand management and energy efficiency programs.

Section II discusses EPA's legal authority to regulate greenhouse gas emissions from existing power plants under section 111(d), including the text and legislative history supporting such regulation. Because EPA is regulating greenhouse gas emissions from new power plants under section 111(b) and greenhouse gases are not regulated as criteria pollutants or as hazardous air pollutants, EPA must regulate those emissions from existing power plants under

section 111(d). The obligation to act is further supported by EPA's longstanding interpretation of the scope of its authority to regulate under section 111(d), which was not altered by Congress's amendment of the statute in 1990.

Section III concerns the substantive aspects of regulation under section 111(d), including its cooperative federalism framework and EPA's role within this structure. Although some State Attorneys General have sought to relegate EPA to a perfunctory procedural role, EPA's role is far more central. EPA is first tasked with issuing emission guidelines that include minimum substantive emission limitations. In doing so, the Act authorizes EPA to determine the degree of emission limitation achievable when the best *system* of emission reduction, as determined by EPA to have been adequately demonstrated, is applied. To make this determination, EPA must consider a range of systems, including source-based and system-based<sup>1</sup> approaches of emission reduction. Then, EPA prescribes how to measure the achievable emission limitation, for example, with a pounds per megawatt hour emission rate, or a tons per year mass emission limit. Many existing programs that States have employed to begin the urgent task of reducing greenhouse gas emissions from the power sector can inform EPA's determination of the reductions achievable.

Finally, in Section IV, we look at the States' critical responsibilities under section 111(d). EPA sets the required degree of emission reduction, but each State must actually determine how to regulate its existing sources through its own state plan. Because section 111(d) puts the States in the driver's seat to implement and enforce the required emission reductions, EPA must give the States options to demonstrate compliance with its emission guidelines and tell the States how to show that their plans are equivalent to such guidelines. Such alternative mechanisms may include trading and other existing state programs, use of multi-year compliance periods, regional cooperation, and phased reductions if, among other things, the proposed standards are enforceable and the reductions are measurable and timely achieved. In short, the statute gives EPA and the States sufficient flexibility to achieve meaningful reductions of greenhouse gas emissions quickly and in a cost-effective way.

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<sup>1</sup> In its request for input in advance of EPA's proposed section 111(d) rule, EPA referred to two options for addressing carbon pollution from existing power plants, a "source-based approach" and a "system-based approach." CONSIDERATIONS IN THE DESIGN OF A PROGRAM TO REDUCE CARBON POLLUTION FROM EXISTING POWER PLANTS (Sept. 23, 2013), *available at* <http://www2.epa.gov/sites/production/files/2013-09/documents/20130923statequestions.pdf>. EPA explained that "[a] system-based approach evaluates a broader portfolio of measures including those that could be taken beyond the affected sources but still reduce emissions at the source." *Id.* at 1-2. These comments accordingly use the terms "system-based approach" or a "system-wide approach" to mean industry-wide or power sector-wide systems of emission reduction.

## I. The Urgency of Aggressively Addressing the Largest Sources of Carbon Pollution

In *Massachusetts v. EPA*, 549 U.S. 497, 521 (2007), the Supreme Court noted that “[t]he harms associated with climate change are serious and well recognized.” As the recent draft U.S. Climate Action Report prepared by the Department of State succinctly states: “The scientific consensus . . . is that anthropogenic emissions of greenhouse gases are causing changes in the climate that include rising average national and global temperatures, warming oceans, rising average sea levels, more extreme heat waves and storms, extinctions of species, and loss of biodiversity.” Climate Action Report 2014, U.S. Biennial Report – Highlights at 2.<sup>2</sup> The release of atmospheric carbon dioxide from human activities is also the primary cause of ocean acidification, which causes changes to ecosystems and marine biodiversity, potentially impacting food security and the economy.<sup>3</sup> A recent report confirmed that “[t]he ocean continues to acidify at an unprecedented rate in Earth’s history,” with a projected increase of 170 percent in ocean acidity by 2100 compared with preindustrial levels if carbon dioxide emissions are not reduced.<sup>4</sup> Significant reductions in greenhouse gas emissions must occur to prevent increases in the frequency, magnitude and scale of the adverse impacts of climate change pollution, which include:

- more heat-related deaths and illnesses;
- higher smog levels, increasing the rate of asthma, pneumonia and bronchitis;
- extreme weather, including storms, floods and droughts;
- loss of water supplies due to increased salinity and saltwater intrusion;
- coastal land loss due to inundation, erosion, submergence and habitat loss from a rising sea level;
- increased risk of wildfire;
- loss of snowpack in California’s Sierra Nevada and the Cascade mountains in Oregon and Washington;
- ocean acidification;
- threats to ecosystems from the Adirondacks in New York to the Sierra Nevada in California;
- disappearance of plant and animal species and a rise of insect-borne illnesses, destructive fungi and pests;

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<sup>2</sup> Available at <http://www.state.gov/e/oes/climate/ccreport2014/index.htm>.

<sup>3</sup> Ocean Acidification Summary for Policymakers, Third Symposium on the Ocean in a High-CO2 World, available at <http://www.igbp.net/publications/summariesforpolicymakers/summariesforpolicymakers/oceanacidificationsummaryforpolicymakers2013.5.30566fc6142425d6c9111f4.html>.

<sup>4</sup> *Id.*

- displacement of cold water fish species such as native brook trout in New York;
- warmer stream temperatures and reduced stream flow, threatening Chinook salmon, coho salmon and steelhead trout species in California, Oregon and Washington;
- reduced hydroelectric production from snowmelt-driven shifts in stream flow;
- threats to our food production, agriculture and forest productivity;
- threats to our energy, transportation and water resource infrastructure; and
- increased environmental pressures in certain settlements, particularly in Alaskan indigenous communities.

The Supreme Court's decision not to disturb a federal court of appeals' ruling upholding EPA's determination that greenhouse gas emissions endanger public health and welfare ends the legal debate on climate science, *Coalition for Responsible Regulation v. EPA*, 684 F.3d 102 (D.C. Cir. 2012), *cert. denied*, 82 U.S.L.W. 3214 (U.S. Oct. 15, 2013) (No. 12-1272), switching the focus squarely to what the federal government and the States can do to address these emissions.

#### **A. The history of federal regulation of power plant greenhouse gas emissions**

In 2006, after EPA revised its new source performance standards (NSPS) for power plants and failed to include standards for greenhouse gas emissions, the States of New York, Connecticut, California, Delaware, Maine, New Mexico, Oregon, Rhode Island, Vermont, Washington, the Commonwealth of Massachusetts, the District of Columbia and the City of New York filed a petition seeking judicial review of that failure. *New York v. EPA* (D.C. Cir. No. 06-1322). The matter was ultimately remanded to the agency after the Supreme Court's decision in *Massachusetts v. EPA*, and in 2010, the parties entered into a settlement agreement setting a schedule for EPA to propose and promulgate NSPS for greenhouse gas emissions from new and existing power plants.

Although EPA failed to meet that rulemaking schedule, on June 25, 2013, President Obama issued a memorandum to the Administrator of the EPA, in which he directed the Administrator to fulfill her statutory duty under sections 111(b) and 111(d) of the Act "to issue standards, regulations, or guidelines, as appropriate, that address carbon pollution from modified, reconstructed, and existing power plants and build on State efforts to move toward a cleaner power sector." The President established new dates for the Administrator to issue a new proposal for NSPS for greenhouse gas emissions, for the Administrator to propose and finalize emission guidelines for existing power plants, and for the States to submit their implementation plans pursuant to those guidelines.

**“The unique characteristics of carbon pollution and the interconnected nature of the electric power sector call for a broad and flexible approach to designing the program for existing power plants.”**

EPA Overview Presentation of Clean Air Act Section 111 (minute 27:49), available at <http://www2.epa.gov/carbon-pollution-standards/what-epa-doing#overview>.

EPA proposed NSPS for greenhouse gas emissions from new power plants on September 20, 2013.<sup>5</sup> As discussed below, the proposal triggered EPA’s obligation to proceed with rulemaking under section 111(d), which governs regulation of air pollutants for existing sources that if new, would be subject to the NSPS. EPA’s authority to act under section 111 is supported by the Supreme Court’s decision in *American Electric Power v. Connecticut*, 131 S. Ct. 2527, 2537 (2011) (*AEP*), where the Court specifically pointed to section 111 in finding that the Act “speaks directly” to carbon dioxide emissions from power plants and that therefore, the Act “and the EPA actions it authorizes” displace any federal common law right of action to abate carbon dioxide emissions from fossil fuel-fired power plants.<sup>6</sup>

## **B. State efforts to curb power plant greenhouse gas emissions**

Rather than simply wait for federal action, many States moved forward independently to implement programs to reduce greenhouse gas emissions from fossil fuel-fired power plants. Twenty States and the District of Columbia have set greenhouse gas emissions targets, emission reduction levels that each State committed to achieve by a specified time.<sup>7</sup> States have employed different strategies to curb emissions, some of which are highlighted below.

### **Renewable portfolio standards**

Most States now have renewable portfolio standards that require electricity providers to obtain a given amount of their electricity from sources such as wind or solar. These standards create demand for new renewable power generation, which can displace generation from existing fossil fuel-fired sources.

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<sup>5</sup> EPA had previously proposed an NSPS for greenhouse gas emissions from new power plants on April 13, 2012. 77 Fed. Reg. 22,392 (April 13, 2012). After receiving and reviewing more than a million public comments on the proposal, EPA decided to issue a new proposal. See <http://www2.epa.gov/sites/production/files/2013-09/documents/20130920proposal.pdf>.

<sup>6</sup> Because *AEP* concerned existing power plants, not new ones, the Court’s reference to EPA’s authority under the NSPS provisions of the Act to abate carbon dioxide emissions from fossil fuel-fired power plants must be to regulation under section 111(d).

<sup>7</sup> See <http://www.c2es.org/us-states-regions/policy-maps/emissions-targets>.

Under these programs, state renewable energy targets range from 1.5 percent (Iowa) to 40 percent (Hawaii), with compliance due over a range of time periods. Emission reductions attributable to these standards depend on the level and design of the standards and other state-specific factors, like the carbon intensity of existing sources and changes in demand. New York's effort to meet its renewable target of 30 percent by 2015 has already eliminated millions of tons of carbon dioxide, in addition to other pollutants. The World Resources Institute has projected that even States with relatively modest standards of between 8 and 12.5 percent can achieve reductions in emissions from existing power plants.<sup>8</sup>

## Market-based systems

A number of Northeastern and mid-Atlantic States have joined together to reduce greenhouse gas emissions from existing power plants in their States through a regional cap-and-trade system known as the Regional Greenhouse Gas Initiative (RGGI).<sup>9</sup> Pursuant to each RGGI State's own regulations, regulated power plants must acquire, either at auction or on a secondary market, one emission allowance for each ton of carbon dioxide emitted. RGGI has succeeded in reducing carbon dioxide emissions from the power sector by more than 40 percent below 2005 levels, with further reductions projected. At the same time, these States have used the proceeds from allowance auctions to fund investments in energy efficiency, further reducing demand and generating large net economic benefits (hence the coining of the term a "cap-and-invest" program). For example, a recent analysis of RGGI's costs and benefits in the participating States found that the program produces a net benefit of \$1.6B in the region (net present value), based on the first three-year compliance period.<sup>10</sup>

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<sup>8</sup> See Michael Obeiter et al., World Resources Institute, Power Sector Opportunities for Reducing Carbon Dioxide Emissions: Ohio 2 (2013), *available at* [http://www.wri.org/sites/default/files/power\\_sector\\_opportunities\\_for\\_reducing\\_carbon\\_dioxide\\_emissions\\_ohio\\_summary.pdf](http://www.wri.org/sites/default/files/power_sector_opportunities_for_reducing_carbon_dioxide_emissions_ohio_summary.pdf); Michael Obeiter et al., World Resources Institute, Power Sector Opportunities for Reducing Carbon Dioxide Emissions: North Carolina 2 (2013), *available at* [http://www.wri.org/sites/default/files/power\\_sector\\_opportunities\\_for\\_reducing\\_carbon\\_dioxide\\_emissions\\_north\\_carolina\\_summary.pdf](http://www.wri.org/sites/default/files/power_sector_opportunities_for_reducing_carbon_dioxide_emissions_north_carolina_summary.pdf); Michael Obeiter et al., World Resources Institute, Power Sector Opportunities for Reducing Carbon Dioxide Emissions: Michigan 2 (2013), *available at* [http://www.wri.org/sites/default/files/power\\_sector\\_opportunities\\_for\\_reducing\\_carbon\\_dioxide\\_emissions\\_michigan\\_summary.pdf](http://www.wri.org/sites/default/files/power_sector_opportunities_for_reducing_carbon_dioxide_emissions_michigan_summary.pdf); Michael Obeiter et al., World Resources Institute, Power Sector Opportunities for Reducing Carbon Dioxide Emissions: Pennsylvania 2 (2013), *available at* [http://www.wri.org/sites/default/files/power\\_sector\\_opportunities\\_for\\_reducing\\_carbon\\_dioxide\\_emissions\\_pennsylvania\\_summary.pdf](http://www.wri.org/sites/default/files/power_sector_opportunities_for_reducing_carbon_dioxide_emissions_pennsylvania_summary.pdf).

<sup>9</sup> The States that currently participate in RGGI are Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont.

<sup>10</sup> See Analysis Group, The Economic Impacts of the Regional Greenhouse Gas Initiative on Ten Northeast and Mid-Atlantic States (2011), *available at*

California's economy-wide cap-and-trade program likewise requires power plants to obtain allowances or credits sufficient to match their emissions. The program is a key element of the State's efforts to reduce emissions to 1990 levels by 2020, as required by the California Global Warming Solutions Act. See CAL. HEALTH & SAFETY CODE §§ 38550, 38562(a). California projects the combination of cap and trade, a renewable portfolio standard, energy efficiency standards for consumer and industrial products, and other programs will reduce power sector emissions by at least 25 percent from 2005 levels by 2025. The state board has set a declining cap on emissions at a level deemed necessary to achieve the statute's emissions reductions goals, and thus can use the cap as a backstop in the event other programs in California's portfolio fall short of achieving their projected reductions.

### **Demand management**

States have achieved significant cost-effective emission reductions and saved ratepayers money through efforts to reduce demand for electricity generation. More than half of the States require utilities to adopt Energy Efficiency Resource Standards, reducing demand by a specified amount each year.<sup>11</sup>

### **Retirement planning and plant refurbishment**

Colorado's Clean Air Clean Jobs Act, HB-1365, required utilities to develop plans to reduce carbon dioxide and other emissions from their coal-fired power plants. The law encouraged utilities drafting those plans to consider retiring those plants and investing in energy efficiency programs, and allowed utilities to recover the costs of such changes. The State's largest utility, Xcel Energy, developed a plan to replace coal-fired power plants with natural gas-fired plants. Xcel projects its plan will reduce its carbon dioxide emission by 28 percent by 2020 and its emissions of other pollutants like sulfur and nitrogen oxides and mercury by more than 80 percent each. A similar law in Minnesota led Xcel to replace two existing coal-fired power plants and refurbish another, leading to a 21 percent reduction in greenhouse gas emissions.

### **Energy efficiency programs**

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[http://www.analysisgroup.com/uploadedFiles/Publishing/Articles/Economic\\_Impact\\_RGGI\\_Report.pdf](http://www.analysisgroup.com/uploadedFiles/Publishing/Articles/Economic_Impact_RGGI_Report.pdf).

<sup>11</sup> See American Council for an Energy-Efficient Economy, *The 2013 State Energy Efficiency Scorecard 19-20* (2013), available at <http://aceee.org/research-report/e13k>.

Other state efforts include energy efficiency standards for consumer products and commercial and industrial equipment, residential and commercial building codes, and incentives for consumers to adopt more efficient technologies, and investment in energy efficiency projects. Massachusetts' energy efficiency programs have been so successful that the Independent System Operator New England (ISO-NE), New England's regional transmission organization which operates the bulk electric power generation and transmission system for New England and administers wholesale electricity markets, has begun to take the programs into account for purposes of its long term load forecasting. For the period 2016 through 2022, ISO-NE is projecting that, with state energy efficiency investments fully included, load growth will remain flat at about 132,000 GWh.<sup>12</sup> Such a flat load growth means that customers reduce energy costs by 1) avoiding the cost of energy that would have been used absent energy efficiency; 2) reducing overall energy prices since lower demand results in lower prices for everyone; and 3) avoiding generation, transmission and distribution infrastructure costs system-wide. By contrast, without including state energy efficiency programs in the projection, load growth is forecast to increase from 144,000 to 152,000 GWh during that same period.<sup>13</sup> These data show that consumers can dramatically reduce the demand curve if state programs offer the right incentives.

The Massachusetts energy efficiency programs reduced retail sales of electricity in the Commonwealth by 2 percent in 2012; that number is expected to reach 2.5 percent in 2015, resulting in a cumulative annual carbon dioxide emission reduction of three million metric tons in 2015 from electric energy efficiency programs implemented from 2005 through 2015.<sup>14</sup> Because energy efficiency is less expensive than fossil fuel-fired power, the flattening of demand attributable to the Massachusetts efficiency programs represents both substantial savings to consumers and highly cost-effective reductions in carbon dioxide emissions.

Oregon's public purpose charge – three percent of the total revenues collected by the state's utilities – provides roughly \$60 million per year to support energy efficiency, renewable energy, and low-income programs in Oregon. This funding supports the Energy Trust of Oregon's electric programs, including a goal of saving over 2,000 GWh of electricity between 2010 and 2014, equivalent to 1 percent of electricity sales in 2013 and 2014.

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<sup>12</sup> ISO-NE Final 2013 Energy Efficiency Forecast 2016-2022 (Feb. 22, 2013), Slide 37, *available at* [http://www.iso-ne.com/committees/comm\\_wkgrps/othr/engry\\_effncy\\_frcst/2013frcst/iso\\_ne\\_final\\_ee\\_forecast\\_2016\\_2022.pdf](http://www.iso-ne.com/committees/comm_wkgrps/othr/engry_effncy_frcst/2013frcst/iso_ne_final_ee_forecast_2016_2022.pdf).

<sup>13</sup> *Id.*

<sup>14</sup> Massachusetts Department of Environmental Protection (November 21, 2013).

California has likewise focused on energy efficiency as a means to protect its consumers and reduce air pollution. For decades, California has enforced an expanding network of efficiency standards which help minimize the energy needed to power appliances and buildings.<sup>15</sup> Energy savings are projected at nearly 70,000 GWh in 2013 alone.<sup>16</sup> The California Energy Commission estimates that these efficiency standards have generated \$74 billion in savings for California consumers over the last several decades.<sup>17</sup> Energy efficiency is the first resource California looks to as it considers its energy needs, and is the first resource considered in procurement proceedings under California's loading order.<sup>18</sup> Because California has decoupled utility profits from energy sales, its investor-owned utilities have strong incentives to pursue these savings.<sup>19</sup> Academic analysts have concluded that hundreds of thousands of jobs can be created by California's expanding energy efficiency programs.<sup>20</sup>

States' innovative programs provide valuable data and experience for EPA to consider and upon which it should draw in determining the best system of emission reduction from existing power plants.

## **II. EPA's Legal Authority to Regulate Greenhouse Gas Emissions from Existing Power Plants**

EPA historically has interpreted section 111(d) to mandate regulation of existing sources' emissions of pollutants that are not regulated as criteria pollutants (under sections 108 and 110, 42 U.S.C. §§ 7408, 7410) or as hazardous air pollutants (under section 112, *id.* § 7412) once EPA regulates emissions of those pollutants from new sources under section 111(b). This construction is consistent with the idea that section 111(d) provides a "backstop" to regulation of pollutants under the

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<sup>15</sup> See generally California Energy Commission, *Tracking Progress: Energy Efficiency* (2013), available at [http://www.energy.ca.gov/renewables/tracking\\_progress/documents/energy\\_efficiency.pdf](http://www.energy.ca.gov/renewables/tracking_progress/documents/energy_efficiency.pdf).

<sup>16</sup> *Id.*

<sup>17</sup> See *id.*

<sup>18</sup> See generally California Energy Commission, *Implementing California's Loading Order for Electricity Resources* (2004), available at <http://www.energy.ca.gov/2005publications/CEC-400-2005-043/CEC-400-2005-043.PDF>.

<sup>19</sup> See American Council for an Energy-Efficient Economy, *State Energy Efficiency Database: California* (2013), available at <http://aceee.org/sector/state-policy/california>.

<sup>20</sup> David Roland-Holst, *Energy Efficiency, Innovation, and Job Creation in California* 35 (2008), available at [http://are.berkeley.edu/~dwrh/CERES\\_Web/Docs/UCB%20Energy%20Innovation%20and%20Job%20Creation%2010-20-08.pdf](http://are.berkeley.edu/~dwrh/CERES_Web/Docs/UCB%20Energy%20Innovation%20and%20Job%20Creation%2010-20-08.pdf).

national ambient air quality standards (NAAQS) or hazardous air pollutant programs. Thus, here power plants emitting greenhouse gases are subject to mandatory regulation under section 111(d) because greenhouse gases are not regulated as criteria pollutants or as hazardous air pollutants and because EPA has moved forward with regulating greenhouse gas emissions from power plants under section 111(b).

Two recent commentators have sought to use a legislative oddity – the enactment in 1990 of two differently worded amendments to section 111(d) – to argue that EPA is powerless to regulate greenhouse gas emissions from existing power plants.<sup>21</sup> As explained below, however, Congress’s enactment of these two amendments did not change the backstop nature of EPA’s authority to regulate under section 111(d). Instead, Congress revised section 111(d) to correct a cross-reference to section 112 as a result of substantive changes to section 112, not to effectuate sweeping change in the coverage of pollutants regulated under section 111(d).

**A. The language, structure and history of section 111(d) show that greenhouse gas emissions from existing power plants are subject to regulation under this section.**

Under the familiar two-pronged test of *Chevron, U.S.A., Inc. v. NRDC*, courts and agencies “must give effect to the unambiguously expressed intent of Congress.” 467 U.S. 837, 842 (1984) (*Chevron*). If the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency’s answer is based on a permissible construction of the statute. *Id.* at 842.

At step one of *Chevron*, “traditional tools of statutory construction,” including legislative history and statutory text and structure, are employed to discern legislative intent. *Id.* at 843 n.9. See, e.g., *Zuni Public School Dist. No. 89 v. Dep’t of Educ.*, 550 U.S. 81, 89-100 (2007) (considering legislative history and purpose of statute first at step one, then again at step two). The text and structure of section 111(d) and the circumstances surrounding the amendment of section 111(d) make clear that power plant greenhouse gas emissions are subject to section 111(d) regulation.

Before its amendment in 1990, section 111(d) authorized regulation of “any air pollutant which is not included on a list published under section 7408(a) or 7412(b)(1)(A) of this title.” See 42 U.S.C. § 7411(d) (West 1977). At that time, section 112(b)(1)(A) required EPA to list hazardous air pollutants meriting

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<sup>21</sup> William J. Haun, *The Clean Air Act as an Obstacle to the Environmental Protection Agency’s Anticipated Attempt to Regulate Greenhouse Gas Emissions from Existing Power Plants*, THE FEDERALIST SOCIETY (March 2013); Brian H. Potts, *The President’s Climate Plan for Power Plants Won’t Significantly Lower Emissions*, 31 YALE J. REG. ONLINE 1, 9 (Aug. 22, 2013).

regulation under section 112. *See id.* § 7412(b)(1)(A). Congress amended the Act extensively in 1990 after its approach to regulating hazardous air pollutants “proved to be disappointing” due to EPA’s delay in listing those pollutants under section 112.<sup>22</sup> The 1990 amendments overhauled section 112 to identify 188 specific hazardous air pollutants and to regulate their emissions. 42 U.S.C. § 7412 (2012). To conform the language of section 111(d) to the changes made to section 112, Congress also revised section 111(d).

However, in an unusual turn of events, different language in the House and Senate bills amending section 111(d) was enacted into law without being reconciled in conference. In such circumstances, the Statutes at Large, rather than the U.S. Code, are controlling.<sup>23</sup> The Statutes at Large contain both the House and Senate amendments to section 111(d). The Senate amendment, set forth at Pub. L. No. 101-549, § 302(a), 104 Stat. 2399, 2574 (1990), simply substituted the reference to the amended section of the Act<sup>24</sup> and provides:

Section 111(d)(1) of the Clean Air Act is amended by striking ‘112(b)(1)(A)’ and inserting in lieu thereof ‘112(b).’

The House amendment, set forth at Pub. L. No. 101-549, § 108(g), 104 Stat. 2399, 2467 (1990), took a different approach and replaced the simple reference with an explanation:

Section 111(d)(1)(A)(i) of the Clean Air Act [42 U.S.C. 7411(d)(1)(A)(i)] is amended by striking ‘or 112(b)(1)(A)’ and inserting ‘or emitted from a source category which is regulated under section 112.’

Both amendments appear in the House Conference Report, which was enacted by both the House and the Senate, H.R. Conf. Rep. 101-952, at 50, 123 (1990), and the bill signed by President Bush contained both amendments surrounded by brackets with a footnote describing the amendments as “duplicative.” According to the codifier, the provisions did nothing more than merely “in different language, change the reference to section 112.” *The Clean Air Act, as Amended, reprinted in 1*

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<sup>22</sup> *See Sierra Club v. EPA*, 353 F.3d 976, 979-80 (D.C. Cir. 2004) (describing history of hazardous air pollutant provisions between 1970 and 1990).

<sup>23</sup> 1 U.S.C. § 112 (2012). *See United States Nat’l Bank of Oregon v. Indep. Ins. Agents of Am.*, 508 U.S. 439, 448 (1993) (“Though the appearance of a provision in the current edition of the United States Code is ‘prima facie’ evidence that the provision has the force of law, 1 U.S.C. § 204(a), it is the Statutes at Large that provides the ‘legal evidence of laws,’ [1 U.S.C.] § 112, and despite its omission from the Code [a provision] remains on the books if the Statutes at Large so dictates”).

<sup>24</sup> *See* 42 U.S.C.A. § 7411(d) (West 1977).

**The bill signed by President George H.W. Bush contained both amendments surrounded by brackets with a footnote stating: “The amendments . . . appear to be duplicative; both, in different language, change the reference to section 112.”**

The Clean Air Act, as Amended, *reprinted in* 1 ENVIRONMENT AND NATURAL RES. POLICY DIV., LIBRARY OF CONGRESS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS OF 1990, at 46 (1998).

ENVIRONMENT AND NATURAL RES. POLICY DIV., LIBRARY OF CONGRESS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS OF 1990, at 46 (1998).

Consistent with congressional intent and the codifier’s understanding, the revisions to section 111(d) must be read, as a *Chevron* step one matter, as differently worded provisions that simply conformed the reference in section 111(d) to preclude the simultaneous regulation of air pollutants under sections 111(d) and 112. Indeed, the House and Senate amendments are found under the headings “Miscellaneous Provisions” and “Conforming Amendments,” respectively. Pub. L. No. 101-549, §§ 108, 302(a), 104 Stat. 2399, 2467, 2574 (1990).

Despite the statutory language and structure and the legislative history, two recent commentators have argued that the House amendment precludes EPA regulation of greenhouse gas emissions from power plants under section 111(d), because

greenhouse gas emissions would fall under the category of *any* pollutant that happens to be emitted from a source category that is being regulated under section 112. Nothing in the legislative history or structure of section 111(d) suggests that Congress intended the amendment to effect a sweeping, substantive change in the scope of regulation under section 111(d).

First, “[s]uch a reading would be inconsistent with the general thrust of the 1990 amendments, which, on balance, reflects Congress’ desire to require EPA to regulate more substances, not eliminate EPA’s ability to regulate large categories of pollutants like non-[hazardous air pollutants].” 70 Fed. Reg. 15,994, 16,032 (March 29, 2005). And where the 1990 amendments provided regulatory relief for specific categories of sources, they did so explicitly, *see, e.g.*, 42 U.S.C. §§ 7412(e)(1), 7412(n)(1), and after much discussion.<sup>25</sup> As the Supreme Court said in another

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<sup>25</sup> *See, e.g.*, S. Rep. No. 101-228, at 147 (1989), *reprinted in* 5 ENVIRONMENT AND NATURAL RES. POLICY DIV., LIBRARY OF CONGRESS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS OF 1990, at 8514-15 (1998) (describing section 112(e) exceptions to general rules for scheduling standard-setting for sources under section 112(d)); Senate Debate on S. 1630 (April 3, 1990), *reprinted in* 4 ENVIRONMENT AND NATURAL RES. POLICY DIV., LIBRARY OF CONGRESS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS OF 1990, at 7139-40 (1998) (discussing Senate

Clean Air Act case, Congress “does not, one might say, hide elephants in mouseholes.” *Whitman v. Am. Trucking Ass’ns.*, 531 U.S. 457, 468 (2001).

Second, as the former head of EPA’s enforcement office recently wrote, such an interpretation would make section 111(d) a “dead letter” because it is “difficult—perhaps impossible—to think of an air pollutant that is (a) emitted by stationary sources within the ambit of section 111 but (b) not also emitted by some sources (stationary or otherwise) that *also* emit[] hazardous air pollutants.” Adam Kushner and Judith Coleman, “*Lessons from Mercury: Ensuring Legal Certainty for New GHG Performance Standards from Existing Fossil Fuel Plants*,” EE News 6 (Oct. 24, 2013) (emphasis original).<sup>26</sup> This huge gap in regulation would render section 111(d) ineffective in fulfilling its structural and historical role as a backstop provision and “impute to Congress a purpose to paralyze with one hand what it sought to promote with the other.” *Clark v. Uebersee Finanz-Korporation, A.G.*, 332 U.S. 480, 488-89 (1947). A “cardinal principal of statutory construction” requires courts to reject interpretations like this that would render statutory provisions superfluous. *New York v. EPA*, 443 F.3d 880, 887 (D.C. Cir. 2006) (quoting *TRW, Inc. v. Andrews*, 534 U.S. 19, 31 (2001)).

**B. EPA has reasonably interpreted section 111(d) to resolve any ambiguity.**

At a minimum, EPA’s interpretation that gives effect to both the Senate and House amendments by limiting (not eliminating) its section 111(d) authority when it is regulating a source category under section 112 should be upheld because it is a permissible construction of the statute. *Chevron*, 467 U.S. at 843; *City of Arlington v. FCC*, 133 S. Ct. 1863 (2013) (reiterating that *Chevron* framework applies when agency interprets jurisdictional provision of statute it administers). Under EPA’s interpretation, if EPA is regulating source category X under section 112, section 111(d) could not be used to regulate any hazardous air pollutant emissions from that particular source category. 70 Fed. Reg. at 16,031; *see also* 73 Fed. Reg. 44,354, 44,417-18, 44,487, 44,493 (July 30, 2008); 69 Fed. Reg. 4,652, 4,685 (Jan. 30, 2004).

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Amendment adding section 112(n) requirement of study of mercury emissions from power plants prior to setting standards under section 112).

<sup>26</sup> Available at [http://www.eenews.net/assets/2013/10/24/document\\_gw\\_01.pdf](http://www.eenews.net/assets/2013/10/24/document_gw_01.pdf). Indeed, the commentators do not admit this potential breadth insofar as they suggest that the House Amendment precludes regulation of air pollutants emitted by a source category only where the source category to be regulated under section 111(d) is also regulated under section 112. Moreover, the fortuity that pollutant X shares a source with other more stringently regulated pollutants logically should have no bearing on the stringency, or existence of, regulation of pollutant X. *See Desert Citizens Against Pollution v. EPA*, 699 F.3d 524, 527-28 (D.C. Cir. 2012) (rejecting argument that certain consequences flowed simply because sources listed under one section for their emissions of seven particular hazardous air pollutants also emitted other pollutants).

In *Citizens to Save Spencer County v. EPA*, 600 F.2d 844, 872 (D.C. Cir. 1979), the court upheld EPA's approach of seeking to reconcile seemingly inconsistent amendments by giving some effect to both, explaining that:

[where Congress] drew upon two bills originating in different Houses and containing provisions that, when combined, were inconsistent in respects never reconciled in conference . . . it was the greater wisdom for the agency to devise a middle course between inconsistent statutes so as to give maximum possible effect to both.

Similarly here, EPA's interpretation gives effect to each amendment, maintaining the focus of the previous version of the Act on specific pollutants, as preserved by the Senate amendment, and incorporating the House amendment's reference to specific sources to ensure that section 112 regulated source categories will not be subject to duplicative regulation of hazardous air pollutants under both section 112 and section 111(d). As a *Chevron* step two matter, EPA's interpretation giving effect to both amendments is a reasonable one. *Chevron*, 467 U.S. at 843; *Smiley v. Citibank, N.A.*, 517 U.S. 735, 744-745 (1996).<sup>27</sup>

Thus, because greenhouse gases are not regulated as hazardous air pollutants or criteria pollutants, and because EPA has moved forward with regulation of power plant greenhouse gas emissions under section 111(b), power plant greenhouse gas emissions must be regulated under section 111(d).

### III. The Cooperative Federalism Framework of Section 111(d)

Section 111(d) establishes a framework that gives EPA and the States distinct but complementary roles to regulate air pollutants from existing sources that, if new, would be subject to NSPS. Section 111(d) requires EPA to prescribe regulations that establish a section 110-like procedure under which each State shall submit to EPA a plan establishing, implementing and enforcing standards of performance for such sources. "Standard of performance" is defined as a standard for emissions of air pollutants that reflects the degree of emission limitation achievable through the application of the best system of emission reduction that, considering the cost of achieving the reduction and any nonair quality health and environmental impact and energy requirements, EPA determines has been adequately demonstrated. 42 U.S.C. § 7411(a)(1).

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<sup>27</sup> See also *Am. Water Works Ass'n v. EPA*, 40 F.3d 1266, 1271 (D.C. Cir. 1994) (quoting *Chem. Mfrs. Ass'n v. NRDC*, 470 U.S. 116, 126 (1985); *Desert Citizens Against Pollution*, 699 F.3d at 527-28 (agreeing with EPA's interpretation that section 112(c)(6)'s cross-reference to sections 112(d)(2) and (d)(4) only meant that seven pollutants specified in section 112(c)(6) were subject to standards required in latter sections, not that all hazardous air pollutants emitted by sources that also emitted seven pollutants were subject to these standards).

As discussed below, the definition of “standard of performance” calls for EPA to determine the adequately demonstrated best system of emission reduction and the corresponding achievable degree of emission limitation.<sup>28</sup> Once EPA sets the floor in its emission guidelines, each State must submit a plan establishing standards of performance for existing sources and implementing and enforcing such standards. 42 U.S.C. § 7411(d)(1).

Thus, like the section 110 state implementation plan (SIP) framework and procedure, section 111(d) directs EPA to work hand-in-hand with the States to ensure that each State – through its plan – achieves the reductions that EPA has determined are achievable through the application of the best system of emission reduction that has been adequately demonstrated. This cooperative federalism allows EPA to establish the minimum reductions required, while giving the States flexibility to determine how to achieve those reductions (or more).

**A. Section 111(d) requires EPA to establish emission guidelines, including substantive limitations, for existing sources.**

Under section 111(d), EPA issues emission guidelines and, “in compliance with those guidelines and subject to federal oversight, the States then issue performance standards for stationary sources within their jurisdiction.” *AEP*, 131 S. Ct. at 2537 (citing 42 U.S.C. § 7411(d)). The statutory framework thus requires EPA to “establish guidelines as to what the best system for each such category of existing sources is” and the States to apply those guidelines. H.R. Rep. No. 95-294, at 195, *as reprinted in* 1977 U.S.C.C.A.N. 1077, 1274.

To fulfill its statutory responsibilities, EPA must establish substantive emission limitations for existing sources. Pursuant to section 111(a), EPA must determine the emission reduction achievable through application of the best system of emission reduction it determines is adequately demonstrated, considering costs and other factors. 42 U.S.C. § 7411(a). Based on this determination, EPA uses its expertise to establish standards for new and modified sources under section 111(b) and emission guidelines for the States to follow under section 111(d). For EPA to evaluate the adequacy of state plans under section 111(d)(2), as the statute requires it to do, EPA must first establish a benchmark. That way it can, if necessary, step in where a State either submits an unsatisfactory plan or fails to enforce provisions of an approved plan. 42 U.S.C. § 7411(d)(2).

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<sup>28</sup> “Emission limitation” is defined in section 302 to mean requirements which limit the quantity, rate or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under this chapter. 42 U.S.C. § 7602.

Another group of State Attorneys General has pointed to the language in section 111(d) that requires EPA to establish a procedure similar to that under section 110 for submission of state plans as limiting the agency's role to a perfunctory one.<sup>29</sup> EPA correctly dismissed that interpretation at the beginning of the section 111(d) program. That interpretation cannot be squared with the statute's directive that EPA evaluate the content of state plans under section 111(d) and "prescribe a plan for a State in cases where the State fails to submit a satisfactory plan." 42 U.S.C. § 7411(d)(2). And if the States alone could determine the standards to be applied, it would not have been necessary for Congress to expressly require EPA to allow the States to consider the "remaining useful life of a source" when applying those standards. Indeed, the very language upon which these commentators rely, requiring EPA to establish a "procedure similar to that provided by section 7410," does not support their interpretation because EPA uses its scientific expertise to establish substantive standards under section 110 (national ambient air quality standards), which the States then develop plans to

implement. Thus, section 111(d) plainly requires EPA to establish minimum emission limitations to guide the States in devising their plans and to provide an objective measure against which EPA may judge the equivalency of the performance standard(s) included in each state plan.

EPA's regulations call for guideline documents to include

- a description of adequately demonstrated systems of emission reduction,
- the degree of emission reduction achievable with each system,
- the costs and environmental effects of each system,
- an emission guideline reflecting the application of the best system of emission reduction adequately demonstrated for existing sources, and
- the time within which compliance with equivalent emission standards can be achieved.

40 C.F.R. § 60.22(b).

EPA's longstanding interpretation of its authority further affirms that it is, at a minimum, *allowed* to establish substantive guidelines. *See Chevron*, 467 U.S. at 842 (agency's interpretation will be upheld if based on permissible statutory construction). In its rulemaking proposal to establish general procedures under section 111(d), EPA explained that it would publish guideline documents setting minimum emission limitations that reflect the best available demonstrated systems of emission control. 39 Fed. Reg. 36,102 (Oct. 7, 1974).

EPA reiterated in the preamble to its final rule that the agency has the statutory authority to set minimum emission guidelines for state emission standards

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<sup>29</sup> *Perspective of 18 States on Greenhouse Gas Emission Performance Standards for Existing Sources under § 111(d) of the Clean Air Act*, submitted to EPA under cover letter dated September 11, 2013 by the State of Nebraska Office of the Attorney General ("*Nebraska*").

included in state plans. 40 Fed. Reg. 53,340, 53,342 (Nov. 17, 1975). Responding to industry comments questioning EPA's authority to prescribe more than procedural requirements for state plan adoption and submittal, EPA correctly reasoned that its interpretation was necessary to implement section 111(d) effectively. If EPA had no authority to set minimum substantive guidelines, the States would be able to set "extremely lenient standards" for air pollutants subject to regulation only under Section 111(d) – which would leave "a gaping loophole in a statutory scheme otherwise designed to force meaningful action." *Id.* at 53,343.

Thus, if the Administrator determines that a designated pollutant may cause or contribute to endangerment of public health or welfare, emission standards shall be no less stringent than EPA's emission guidelines.<sup>30</sup> 40 CFR § 60.24(a)(d). EPA has followed this approach in each of the emission guidelines it has promulgated pursuant to section 111(d), repeatedly establishing minimum emission limitations in its final emission guidelines for each State to include in its respective plan.<sup>31</sup> A contrary interpretation would undermine the intent of section 111(d) to provide a backstop for emissions of harmful unregulated air pollutants from existing sources and also effectively would nullify section 111(d)'s provisions concerning EPA's role in determining the best system of emission reduction and in approving state plans.<sup>32</sup>

**B. EPA must evaluate the full range of available systems in determining the achievable emission reductions from existing power plants.**

EPA must require emission reductions at a level that is achievable when applying the best system of emission reduction that EPA determines is adequately

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<sup>30</sup> EPA's guidelines to the States are not enforceable against a source, but may be used to judge the adequacy of state plans. 40 Fed. Reg. at 53,343.

<sup>31</sup> *See, e.g.*, 40 C.F.R. § 60.31d (establishing emission guideline for sulfuric acid production units at 0.25 grams sulfuric acid mist per kilogram of sulfuric acid produced); 40 C.F.R. § 60.33b (establishing emission guidelines for pollutants emitted by municipal waste combustors); 40 C.F.R. § 60.33e (establishing specified emission limits for pollutants emitted by hospital, medical, infectious waste incinerators); 40 C.F.R. § 1515 (establishing specified emission limits for pollutants emitted by small municipal waste combustion units); 40 C.F.R. § 60.2515 (establishing specified emission limits for pollutants emitted by commercial and industrial solid waste incineration units); 40 C.F.R. § 60.2983 (establishing specified emission limits for pollutants emitted by other solid waste incineration units); 40 C.F.R. § 60.5015 (establishing specified emission limits for pollutants emitted by sewage sludge incineration units).

<sup>32</sup> *Cf. Big Rivers Elec. Corp. v. EPA*, 523 F.2d 16, 22 (6th Cir. 1975) (EPA acted within its authority in rejecting alternate control strategies in lieu of emission limitations that Kentucky sought to include in its state implementation plan and explaining that under section 110's "dual scheme, the freedom of the States to choose the manner of achieving this goal [of reducing air pollution] was made subject to the absolute requirement that every state plan include emission limitations as an ingredient").

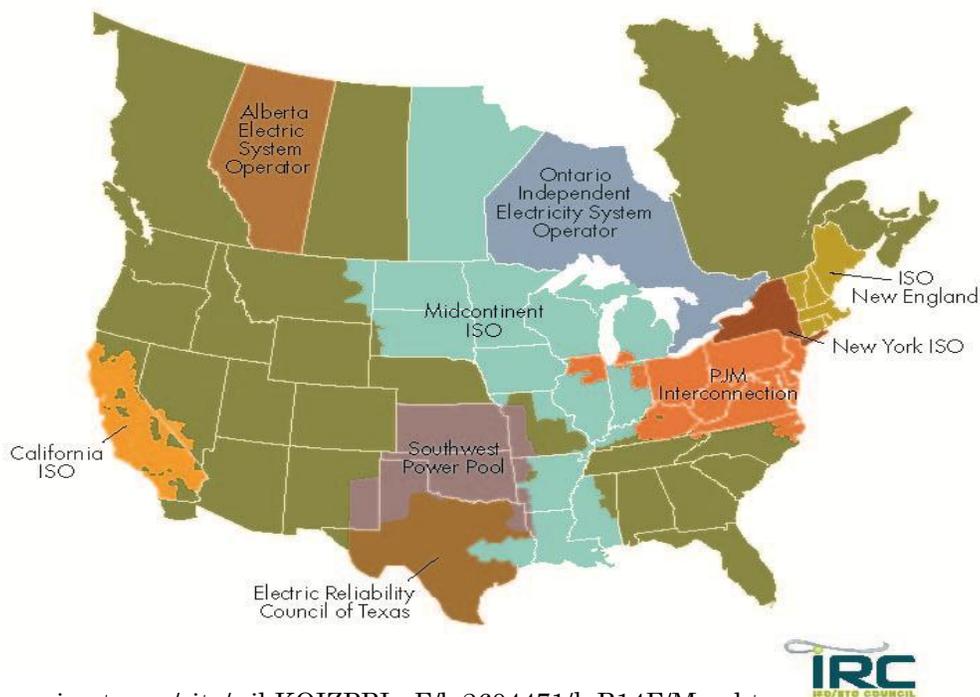
demonstrated, considering the cost of achieving the reduction and any nonair quality health and environmental impact and energy requirements. 42 U.S.C. § 7411(a); *AEP*, 121 S. Ct. at 2549. Because section 111(d) applies only to existing sources, Congress recognized from the outset a need for flexibility in determining appropriate control measures. See “Clean Air Act Amendments of 1977,” *Committee on Interstate and Foreign Commerce*, H.R. Rep. No. 95–294 at 195, reprinted in 4 “A Legislative History of the Clean Air Act Amendments of 1977,” *Congressional Research Service*, 2662. Therefore, to achieve the greatest level of reductions from existing power plants cost effectively, EPA must evaluate diverse types of systems when considering the best demonstrated system of emission reduction, in keeping with the highly interconnected nature of the existing sources at issue here.

- 1. EPA must consider system-based approaches as well as source-based approaches to determine the best system of emission reduction adequately demonstrated and the corresponding emission limitation.**

EPA must consider existing systems of emissions reductions in determining the “best system of emission reduction” for greenhouse gases emitted by power plants. Because the statute does not separately define “system,” the assumption is that “the ordinary meaning of that language accurately expresses the legislative purpose.” *Engine Mfrs. Ass’n v. S. Coast Air Quality Mgmt. Dist.*, 541 U.S. 246, 252–53 (2004) (quotations and citations omitted). At the time that Congress created the NSPS program in 1970, system was defined as “a complex unity formed of many often diverse parts subject to a common plan or serving a common purpose.” Webster’s Third New International Dictionary of the English Language Unabridged 2322 (1968). This broad definition includes not just source-specific systems or approaches to reducing emissions, but also system-wide approaches that have been adequately demonstrated. Source-specific changes that reduce carbon emissions include plant efficiency improvements, heat rate improvements, switching to or co-firing with lower carbon fuels, combined heat and power programs, and carbon capture and sequestration. System-wide approaches would include those programs that shift generation from less efficient to more efficient plants and to renewable energy and programs that reduce the need for generation and could drive or otherwise implicate the source-specific approaches noted above. Such systems would include emissions from all power plants or from multiple power plants within a regional, state or regulatory system to which each power plant must adhere.

Because existing power plants are components of a complex and interconnected electricity grid, or network, EPA must consider system-wide programs that reduce carbon emissions from this sector. Approaches for reducing emissions from existing power plants will be most effective if they reflect the fact that power plants operate not in isolation, but as parts of large, dynamic grid-connected systems. For example, ISO-NE, New England’s regional transmission organization, includes 300 generating plants and 8,000 miles of transmission lines.

ISO-NE serves 6.5 million households and businesses, and its 400 market participants complete wholesale electricity transactions valued annually at ten billion dollars.<sup>33</sup> The interconnected nature of the electricity system is taken into account for purposes of system management; for example, decisions concerning plant retirements and dispatch are made on the basis of system-wide considerations. *See, e.g.*, ISO-NE Non-Price Retirement Determination Letters and Resource Responses.<sup>34</sup>



<http://www.isorto.org/site/c.jhKQIZPBImE/b.2604471/k.B14E/Map.htm>

EPA has previously recognized the interconnected relationship between regional multi-state power pool dispatch decisions and resulting emissions impacts in the participating States. In EPA’s SIP call for nitrogen oxides (NOx SIP call), EPA approved a redistribution of the NOx SIP call budgets for Connecticut, Massachusetts and Rhode Island based on a Memorandum of Understanding (MOU) entered into by the three States and EPA. 64 Fed. Reg. 49,987, 49,989 (Sept. 15, 1999). EPA noted that the States belonged to the same power pool and that, because “dispatch is determined on the power pool level rather than the State level, dispatch itself may result in redistribution of generation and resulting emissions among the States in the power pool.” *Id.* Therefore, EPA concluded “a

<sup>33</sup> See ISO-NE history, available at [http://www.iso-ne.com/aboutiso/co\\_profile/history/index.html](http://www.iso-ne.com/aboutiso/co_profile/history/index.html).

<sup>34</sup> Available at [http://www.iso-ne.com/genrtion\\_resrcs/reports/non\\_prc\\_retremnt\\_lttrs/2011/salem\\_retirement\\_election.pdf](http://www.iso-ne.com/genrtion_resrcs/reports/non_prc_retremnt_lttrs/2011/salem_retirement_election.pdf).

redistribution, based on the MOU, of budgets within that power pool is appropriate if the same overall budget results.” *Id.*

“[S]tandards adopted for existing sources under section 111(d) of the Act are to be based on available means of emission control (not necessarily technological).” H.R. Rep. No. 95-294, at 11, *as reprinted in* 1977 U.S.C.C.A.N. 1077, 1088. Thus, in analyzing the best system to reduce greenhouse gas emissions from power plants that is adequately demonstrated, EPA must consider electric power system-based approaches and existing state and regional programs, including those described above, that have successfully reduced carbon dioxide emissions from the power sector as a whole. *See Essex Chem. Corp. v. Ruckelshaus*, 486 F.2d 427, 433-34 (D.C. Cir. 1973) (explaining that “[it] is the system which must be adequately demonstrated and the standard which must be achievable). Such reductions, which have resulted in part from system-based approaches that provide incentives for sources to increase efficiency and find reductions elsewhere in the power sector, must be considered by EPA in determining the best system of emission reduction. In addition to recognizing the true nature of electricity generation and supply, such an approach offers the greatest potential for achieving significant greenhouse gas reductions from existing power plants.

**2. EPA may determine that the emission limitation is best measured by mass and best achieved in phases.**

EPA’s emission guideline must reflect the application of the best system of emission reduction as determined by EPA. *See* 40 C.F.R. § 60.22(b). In establishing the emission guideline, EPA may determine that the best metric is a mass-based limit and that existing power plants may achieve increasingly stringent limitations in phases.

Although EPA has typically defined an emission limitation by an emission rate, for example, pounds per megawatt hour (lbs/MWh), EPA is not constrained to do so. The Act defines “emission limitation” as a limit on “the quantity, rate or concentration of emissions of air pollutants on a continuous basis.” 42 U.S.C. § 7602(k). Thus, EPA may find that the best metric for the achievable emission limitation is a mass-based limit or cap on the quantity of emissions, for example, tons/year, as long as the source is continuously subject to the emission limitation or standard. *See* 42 U.S.C. § 7602(k) (defining “emission limitation”). In *Sierra Club v. EPA*, 551 F.3d 1019, 1027 (D.C. Cir. 2008), the court rejected EPA’s attempt to exempt major sources from normal emission standards under section 112 during startups, shutdowns and malfunctions and explained that “[w]hen *sections 112 and 302(k)* are read together, . . . Congress has required that there must be continuous *section 112-compliant* standards.” Thus, when sections 111(d) and 302(k) are read

together, the source must be continuously subject to section 111(d)-compliant standards.<sup>35</sup>

To ensure that sources are subject to continuous emission limitations, section 111(d) standards, whether in emission rate or mass-based form, must be reliable and enforceable. *See Kennecott Copper Corp. v. Train*, 526 F.2d 1149, 1155 (9th Cir. 1975) (finding that intermittent control systems are not reliable or enforceable and therefore violate statute's requirement that NAAQS be met by continuous emission limitations to maximum extent possible). Thus, although EPA may broadly define a "system" for purposes of determining what level of emission reductions are achievable, state plans must ensure that emission limits can be enforced against covered facilities, as is done through the RGGI program for example.

EPA also may determine that the best demonstrated system of emission reduction can achieve specified limitations in phases. For example, certain renewable energy programs may require investment and time to realize lower emissions, or certain retirement planning and clean energy incentives may mean that greater emission reductions will be achieved later in time. In such circumstances, a phased approach may best reflect the achievable emission limitations. *See* 42 U.S.C. § 7411(d)(1). EPA has discretion under section 111(d) to so determine and to allow States to give affected sources more time to meet more stringent reduction requirements, based on when the reductions may be achieved, provided that the critical goal of achieving significant emission reductions from this industry sector is maintained. *Id.*; *see* 70 Fed. Reg. at 28,620.

#### **IV. Evaluating Equivalency of State Programs Under Section 111(d)**

Once EPA sets the floor in its emission guidelines, each State must submit a plan establishing standards of performance for existing sources and implementing and enforcing such standards. 42 U.S.C. § 7411(d)(1). As under section 110, it is up to the States to make the choices.<sup>36</sup> So long as the States demonstrate that the steps and strategies proposed in their plans meet EPA's guidelines, the States retain the authority to determine *how* to achieve the overall emission limitations.

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<sup>35</sup> In this way, the definition of "standard of performance" in section 302, which means "a requirement of continuous emission reduction," is also satisfied. 42 U.S.C. § 7602(l).

<sup>36</sup> In the section 110 context, which provides insight because of section 111(d)'s reference thereto, courts have rejected attempts by EPA to dictate to the States the choices they employ in their SIPs. *See Train v. NRDC*, 421 U.S. 60, 79 (1975) (explaining that although EPA is "plainly charged" with setting NAAQS, EPA has "no authority to question the wisdom of a State's choices of emission limitations if they are part of a plan which satisfies the standards of § 110(a)(2)"); *Union Electric Co. v. EPA*, 427 U.S. 246, 268-69 (1976) (rejecting claims of technological or economic infeasibility as basis for EPA to deny SIP, because "Congress plainly left with the States ... the power to determine which sources would be burdened by regulation and to what extent" and that Congress considered risks associated with technology forcing and "decided that the dangers posed by uncontrolled air pollution made them worth taking").

*See, e.g., Virginia v. EPA*, 108 F.3d 1397, 1410 (D.C. Cir. 1997) (finding that EPA has no authority under section 110, as amended in 1990, to force a State to adopt particular control measures). At the same time, EPA must ensure that state plans achieve real, quantifiable and enforceable reductions.

Because the States must demonstrate that their plans comport with EPA's guidelines, EPA should provide sufficient guidance regarding the minimum requirements and how the States can show that their strategies will achieve the necessary reductions. Equivalency determinations should be guided by the general principles discussed above: that Congress gave EPA the authority to require the States to achieve specified reductions, that Congress gave the States the authority to set performance standards for existing sources, and that Congress recognized the need for flexibility, including the appropriateness of considering remaining useful life and other factors for particular sources.

**A. The States must be given flexibility in their plans provided that their proposed programs are enforceable.**

Given the daunting challenge of addressing climate change, EPA should fully embrace the flexibility built into the statutory design by accepting a variety of state programs under section 111(d) so long as those programs achieve the emission limitation EPA sets and are enforceable.<sup>37</sup> As discussed above, many States have already implemented a variety of programs that have achieved significant reductions of carbon dioxide emissions from the power sector. These programs include 1) both interstate and intrastate market-based programs that cap carbon dioxide emissions at reduced levels, 2) retirement and refurbishment planning as well as renewable portfolio standards that encourage a shift away from more carbon intensive electricity production, and 3) demand side management and energy efficiency programs that reduce the amount of electricity needed and thereby cause a decrease in carbon dioxide pollution. Because these types of programs have succeeded in reducing carbon pollution from the power sector, the States should be permitted to rely on these programs in their plans, subject to EPA review, to demonstrate equivalency consistent with section 111(d)'s requirements.

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<sup>37</sup> The National Association of Regulatory Utility Commissioners (NARUC), whose members' fundamental role is to assure that utilities provide reliable electricity at a fair cost, recently recognized the need to address greenhouse gas emissions with flexibility and from a regional perspective, resolving that, among other things, "the guidelines should provide sufficiently flexible compliance pathways or mechanisms that recognize State and regional variations to achieve the most cost-effective emissions reductions in each State;..." *Resolution on Increased Flexibility with Regard to the EPA's Regulation of Greenhouse Gas Emissions from Existing Power Plants*, available at <http://www.naruc.org/Resolutions/Resolution%20on%20Increased%20Flexibility%20with%20Regard%20to%20the%20EPAs%20Regulation%20of%20Greenhouse%20Gas%20Emissions%20from%20Existing%20Power%20Plants.pdf>.

Similarly, if EPA elects to issue a rate-based emission guideline, EPA should provide guidance to the States, for the purpose of demonstrating equivalency of state programs. For example, if EPA issues a pounds-per-megawatt hour carbon dioxide limit on power plant emissions, it should provide guidance on how to translate that rate-based emission guideline into a mass-based standard, for example, tons of carbon dioxide emitted annually from power plants, individually and/or combined in a state or regional system (see below).

EPA should also provide adequate guidelines on appropriate implementation and enforcement mechanisms, such as monitoring and reporting requirements. These guidelines are necessary to ensure that each State meets its obligations and that no “double counting” occurs. One option EPA could consider that would allow for flexibility yet ensure enforceability would be to allow the States to utilize a multi-year compliance period. Under this approach, each source is required to demonstrate full compliance on a multi-year, instead of an annual, basis.

**B. States should be allowed to use trading programs to meet their section 111(d) obligations.**

Cap-and-trade programs are well-suited to address greenhouse gas emissions from existing power plants in light of the ability of such programs to ensure source compliance with emission limitations and the difference in “hot spot” effects caused by greenhouse gas emissions and criteria pollutants. If a cap-and-trade program sets the cap appropriately below current emissions and mandates that all emissions from sources in the category are covered by sufficient allowances, such a program should qualify as a system that requires continuous emission reduction. *See* 42 U.S.C. §§ 7411(a); 7602(l).<sup>38</sup> As discussed below and in the next section, EPA should therefore allow the States to use intrastate and interstate cap-and-trade programs in meeting their section 111(d) obligations.

EPA has previously allowed the States to implement trading programs to satisfy their section 111(d) obligations. For example, in its municipal waste combustor rule, EPA allowed the States to establish a program to enable municipal waste combustor plants to engage in trading of nitrogen oxides emission credits, so

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<sup>38</sup> EPA may consider scenarios in which emissions reductions attributable to renewables generation and increased end use energy efficiency would be credited on the basis of carbon dioxide emissions avoided, and such credits used by covered facilities to achieve compliance with the emission guidelines. *See, e.g.*, Natural Resources Defense Council, *Closing the Power Plant Carbon Pollution Loophole: Smart Ways the Clean Air Act Can Clean Up America’s Biggest Climate Polluters* (March 2013). In considering these scenarios, EPA should evaluate and articulate any methodology to be used to determine credit eligibility sufficient to satisfy section 111(d)’s existing source emission limitation requirement.

long as EPA approved the trading program before implementation. 60 Fed. Reg. 65,387, 65,402 (Dec. 19, 1995); 40 CFR § 60.33b.

Similarly, in the Clean Air Mercury Rule (CAMR), EPA authorized the States to participate in a cap-and-trade program to meet section 111(d). 70 Fed. Reg. at 28,616-17. Although that rule was vacated by the D.C. Circuit on other grounds,<sup>39</sup> there are several aspects of that rulemaking that could inform EPA's thinking here, especially given that greenhouse gas emissions do not pose the same level of "hot spot" concerns as pollutants such as mercury.

First, in determining that a cap-and-trade program could be considered the best system of emission reduction, EPA concluded that it was the best system "in the relevant timeframe." 70 Fed. Reg. at 28,617. That is instructive here where in light of the potential options for existing power plants, supply side energy efficiency, fuel switching, and co-firing with cleaner fuels, shifting dispatch to lower emitting facilities, and demand side energy efficiency are some of the emission reduction strategies available "in the relevant timeframe."

Second, EPA allowed each State to choose whether to fulfill its section 111(d) obligations by participating in a cap-and-trade program or selecting some other means to stay within its statewide emissions budget. A similar approach could work here for greenhouse gas emissions. Third, EPA required new units to be subject to the cap-and-trade program and to hold sufficient allowances to cover their emissions. *See* 70 Fed. Reg. at 28,632. EPA let each State choose an allocation method and choose whether to set aside allowances to account for new units. *See id.* at 28,632; 69 Fed. Reg. at 12,406-409. Similarly, the States should have the option of including all power plants, including those that may come on-line after a state plan is approved, within a trading plan for greenhouse gas emissions. A state plan could specify its allocation method and specify how new units will be accommodated.

A source category cap-and-trade program, whether standing alone or as an element of a larger state cap-and-trade program, will drive reductions both at and outside the source category because cap-and-trade is designed to provide an economic incentive for sources to increase efficiency and deploy other means of reducing emissions and for end users to innovate, as well. All reductions attributable to such a market-based approach should be considered for purposes of EPA's best system of emissions reduction determination. Nevertheless, while cap-

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<sup>39</sup> The D.C. Circuit vacated the section 112 delisting rule that EPA relied upon to promulgate CAMR under section 111(d). *New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008). References to the CAMR in this paper do not reflect any support or endorsement of EPA's attempt through CAMR to regulate hazardous air pollutants under section 111 rather than section 112. As discussed above, a cap-and-trade program involving greenhouse gas emissions does not raise the type of local air pollution concerns that were present with respect to CAMR.

and-trade drives reductions outside the source, it is not necessary to quantify and account for those reductions for compliance purposes. For all the reasons discussed above, EPA should allow the States to use a cap-and-trade system under section 111(d).

**C. The States should be allowed to work together to meet their obligations.**

The States should be allowed to cooperate with each other to achieve the overall reductions and to demonstrate regional compliance, consistent with the Act's general encouragement of cooperative activities by the States and local government for the prevention and control of air pollution. 42 U.S.C. § 7402. Moreover, as a matter of state sovereignty, the States should be given the choice of working in coordination with their sister States to meet their section 111(d) obligations, so long as each individual state plan is enforceable against covered facilities and ensures against both States claiming "credit" for the same emission reductions.

Regional efforts can reduce emissions at least as effectively as individual state efforts, and more cost-efficiently. Regional efforts may be especially appropriate because, as discussed above, existing power plants are components of a complex and interconnected electricity grid, or network, that supplies the nation's energy. Allowing regional cooperation among States that share an electricity grid would also decrease the likelihood of emissions leakage by maintaining an even playing field among those sources within the same regional transmission organization.

EPA in the section 110 context has already recognized that redistribution of NO<sub>x</sub> emissions among three States within a power pool is appropriate if the overall budget remains the same. 64 Fed. Reg. at 49,989.<sup>40</sup> The same rationale applies here to allow the States to cooperate together to achieve overall regional reductions under section 111(d), provided that those reductions are enforceable.

**D. EPA should evaluate allowing the States to implement their state plan reduction requirements in phases.**

EPA should evaluate allowing the States to implement their state plan reduction requirements in phases and require sources to meet specified emission reductions by certain target dates, according to when the reductions are achievable. A phased approach would allow the States to account for planned retirements, or the remaining useful life of sources, and call for more modest reductions sooner and greater reductions later when an old, less efficient source will be replaced, or at least have its electricity production replaced, by a cleaner more efficient source or demand reduction measures. *See* 42 U.S.C. § 7411(d)(1); H.R. Rep. No. 95-294, at

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<sup>40</sup> *See* discussion *infra* pp. 19-20.

195, *as reprinted in* 1977 U.S.C.C.A.N. 1077, 1274 (explaining that EPA’s “guidelines must take into account the remaining useful life of existing sources”). However, any phasing must be scrutinized to account for the critical need to reduce greenhouse gas emissions from power plants as expeditiously as possible.

## **V. Conclusion**

Section 111(d) gives EPA and the States the necessary authority to make meaningful reductions of harmful greenhouse gas emissions from existing power plants. Existing state programs adequately demonstrate that significant emission reductions from the power sector are achievable. EPA accordingly should apply the best system of emission reduction as reflected by these state programs and require the States to achieve the corresponding emission limitation as expeditiously as possible. By working together, as mandated by section 111(d), EPA and the States can reduce carbon pollution as necessary to protect human and welfare.

Respectfully submitted,

[insert AG electronic signatures]