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RE: *Standards of Performance for Greenhouse Gas Emissions From New Stationary Sources:
Electric Utility Generating Units*
Docket ID No. EPA-HQ-OAR-2013-0495

The Office of the Attorney General of the State of California, acting in its independent capacity to protect the state's public interest, public health and the environment, submits these comments on the United States Environmental Protection Agency's (EPA) proposed Standards for Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units (2014 Proposal), 40 CFR Parts 60, 70, 71 and 98, published at 79 Fed. Reg. 1430 (January 8, 2014).

The Interest of the California Attorney General

The Attorney General's Office strongly supports EPA's 2014 Proposal to establish performance standards for greenhouse gas emissions from new fossil-fueled electric utility generating units (power plants) under section 111 of the Clean Air Act. As EPA correctly notes at the outset of its 2014 Proposal, "[g]reenhouse gas (GHG) pollution threatens the American public's health and welfare by contributing to long-lasting changes in our climate that can have a range of negative effects on human health and the environment." 79 Fed. Reg. 1433 (footnote omitted).

California is an innovator and a leader in lowering emissions from fossil-fuel generation, pioneering energy efficiency measures, supporting development of clean renewable energy, and creating new green jobs in the process. EPA's proposed national standard for GHG emissions from new power plants appropriately aligns all states with minimum standards of performance

that are achievable and cost-effective, and consistent with California's approach. As a nation, we must be collectively smarter about how we generate and use electricity if we are to protect public health and natural resources, as well as the economy, for our generation and into the future, from the threat of climate change.

Background

Fossil-fueled power plants emit more greenhouse gas (GHG) pollution than any other category of sources in the United States, contributing significantly to the human induced warming of the atmosphere and the oceans.¹ In California the changes in climate are measureable and the impacts on public health, natural resources and the economy have been documented. Annual air temperatures are rising and extreme heat events are increasing, presenting immediate health risks in our agricultural fields, where heat related deaths have risen, and in our urban centers, where increased ground level ozone pollution contributes to respiratory illness. Changes in temperature and precipitation patterns are also impacting our forests, contributing to an increase in large wildfires in California. In the mountains, freezing level elevation is rising and the spring snowmelt is declining, increasing competition between the water needs of farmers and cities, and providing less water for generation of hydropower. At the coast, sea level is rising, placing a wide range of critical infrastructure, such as highways, wastewater treatment plants, airports and energy facilities, at increased risk of flooding. And, in the waters off our coast, GHG emissions are changing the chemistry of the ocean, making it more acidic.² Absent concerted action by states and the federal government, future generations of Californians will see these observed effects grow in intensity, because most of the GHGs we emit today remain in the atmosphere for decades or centuries to come. GHG emissions from fossil-fueled power plants throughout the country contribute to these effects.

As early as 2006, California enacted an Emissions Performance Standard for new power plants, and long-term power contracts, that EPA's proposal now builds upon under its Clean Air

¹ See 79 Fed. Reg. 1456; see also International Panel on Climate Change (IPCC), Alexander, et al., Working Group I Contribution to the IPCC Fifth Assessment Report Climate Change 2013 (2013) The Physical Science Basis Summary for Policymakers (hereafter Alexander) pp. SPM-7, SPM-10, SPM-12, available at <http://www.climatechange2013.org/> (attached as Ex. 3); U.S. Global Change Research Program (USGCRP), Walsh et al., Climate Change Impacts in the United States: The Third National Climate Assessment (2014) Chapter 2, Our Changing Climate (hereafter Walsh) pp. 22-24, available at <http://nca2014.globalchange.gov/report/our-changing-climate/introduction>.

² Kadir, et al., Indicators of Climate Change in California (2013) (hereafter Kadir) (attached as Ex. 1); Moser et al., Our Changing Climate 2012, Vulnerability & Adaptation to the Increasing Risks from Climate Change in California (2012) A Summary Report of the Third Assessment from the California Climate Change Center (hereafter Moser) (attached as Ex. 2).

Act authority.³ In addition to reducing emissions from new fossil-fueled sources of electricity, California has long sought to improve the state's energy efficiency and to increase its electricity supply from renewable sources. Since 2003, state policy has called for maximizing the use of energy efficiency and renewable generation before relying on new fossil-fueled generation to meet California's energy needs.⁴ More recently, California increased its renewable energy standard, calling for the generation of one-third of the state's electricity from renewable resources by 2020, and initiated a cap-and-trade program that will cap statewide emissions. As a result, California's per capita electricity use consistently ranks among the lowest in the country and its generation of electricity from renewable energy resources, such as geothermal, wind and solar, ranks highest.⁵ While many states have joined California or enacted their own innovations in reducing GHG emissions from new and existing fossil-fueled power plants, many other states are lagging behind. EPA's Proposed Rule would – at least in this one area – require that all states carry their load in lowering GHG emissions from new fossil fired power plants.

As California has demonstrated, policies to reduce GHG emissions can further economic development. A 2010 survey estimated that 432,840 Californians worked in green jobs, representing 3.4 percent of the state's total employment.⁶ The highest number of California's green jobs are in the manufacturing and construction industries, and the greatest concentration of green jobs are in the utility sector.⁷ These job sectors should continue to grow at an even faster pace as low-GHG technologies come down in cost. At the same time, California has also demonstrated that it is possible to achieve aggressive reductions in GHG emissions while still leading the country in multiple energy-intensive industries such as chemicals, forest products, glass and petroleum.⁸ Simply put, as a result of its environmentally friendly policies, California's economy benefits from producing more economic activity with less energy, and fewer GHG emissions, than the vast majority of all other states.⁹

As the Supreme Court recognized, the harm from climate change is “widely shared” and “the severity of that injury will only increase over the course of the next century.”¹⁰ California

³ See Senate Bill No. 1368 (2005-2006 Reg. Sess.), available at <http://leginfo.legislature.ca.gov/> (setting a single standard of 1,100 lbs. of carbon dioxide equivalent per megawatt hour of electricity generated).

⁴ Senate Bill No. 1389 (2001-2002 Reg. Sess.), available at <http://leginfo.legislature.ca.gov/>; see also Cal. Pub. Res. Code § 25301[a].

⁵ U.S. Energy Information Agency, California State Energy Profile (2013), available at <http://www.eia.gov/state/print.cfm?sid=CA>.

⁶ State of California Employment Development Dept., Labor Market Information Division, California's Green Economy, Summary of Survey Results (2010) p. 15, available at http://www.labormarketinfo.edd.ca.gov/Publications_Library.html.

⁷ *Id.* at pp. 19, 21.

⁸ See U.S. Energy Information Agency, California State Energy Profile.

⁹ See U.S. Energy Information Agency, California State Energy Profile.

¹⁰ *Massachusetts v. EPA*, 549 U.S. 497, 522-523 (2007).

has taken important steps to address this problem in the utility sector, as well as elsewhere. EPA's Proposed Rule takes the important first step of setting achievable and cost-effective national standards of performance for new coal and natural gas-fired power plants. For these reasons, we submit the comments below supporting EPA's Proposed Rule, for consideration.

Comments

We present our comments in five parts. Part I explains why, under section 111 of the Clean Air Act, EPA has the authority and the obligation to establish standards of performance for GHG emissions from new power plants. In Part II, we discuss two reports by California's universities, other research groups and state environmental agencies that support EPA's 2009 finding that GHG pollution endangers the public health and welfare. Part III discusses the technology-forcing role of section 111 of the Clean Air Act, confirms that EPA can rely in part on projects that have received federal assistance to determine that carbon capture and storage (CCS) for coal-fired power is an adequately demonstrated technology, and supplements EPA's ample record showing that CCS is adequately demonstrated. Part IV addresses enforcement and implementation issues, including how violations should be calculated in order to foster compliance. Finally, Part V offers observations as to how EPA might strengthen its 2014 Proposal.

I. Under Section 111, EPA Must Establish Standards of Performance for GHG Pollution from Power Plants

Section 111 of the Clear Air Act requires that the Administrator publish a list of categories of sources that "in [her] judgment ... cause[], or contribute[] significantly to, air pollution which may reasonably be anticipated to endanger the public health or welfare" and to "publish proposed regulations establishing federal standards of performance for new sources within such categor[ies]." 42 U.S.C. § 111, subs. (b)(1)(A) and (b)(1)(B).

In short, where a listed source category emits significant quantities of an identified air pollutant, EPA must set a standard of performance. See 79 Fed. Reg. 1453; see also *Am. Electric Power Co., Inc. v. Connecticut*, 131 S.Ct. 2527, 2537 (2011) ("Once EPA lists a category, the agency must establish standards of performance for emission of pollutants from new or modified sources within that category. § 7411(b)(1)(B); see also § 7411(a)(2)."). Here, fossil fuel-fired power plants have been "listed" by the Administrator since the 1970s. 79 Fed. Reg. 1454. And GHG emissions have been held to be an air pollutant within the meaning of section 111. In *American Electric Power Company, Inc. v. Connecticut*, 131 S.Ct. at 2537, the Supreme Court held that:

Massachusetts [v. EPA] made plain that emissions of carbon dioxide qualify as air pollution subject to regulation under the Act. 549 U.S. [497], 528–529, 127 S.Ct. 1438 [2007]. And we think it equally plain that the [Clean Air] Act "speaks directly" to

emissions of carbon dioxide from the defendants' [coal-fired power] plants.

Further, in 2009 EPA found that GHG pollution endangers the public health and welfare. 74 Fed. Reg. 66496 (Dec. 15, 1009). As EPA notes, fossil-fuel power plants emit almost one-third of all U.S. GHG emissions. 79 Fed. Reg. 1456. EPA, thus, unquestionably has an obligation to set federal performance standards for GHG pollution from new fossil-fuel power plants. To conclude otherwise would be to disregard Congress's plain intent that EPA set performance standards for new sources that are known to produce significant amounts of dangerous pollution.

Arguments to the contrary are unavailing. Previous commenters objecting to regulation have asserted that the Clean Air Act requires that the Administrator make new findings specific to carbon dioxide (CO₂) emitted by power plants. *Id.* First, EPA correctly concludes that a "pollutant-specific" endangerment finding is not required. 79 Fed. Reg. 1452-53. Even if EPA were required to specifically find that CO₂ pollution "may be reasonably anticipated to endanger the public health and welfare," the Administrator's 2009 Endangerment Finding with respect to GHG pollution, which subsequent national and international research reinforces, more than suffices. As discussed below, EPA's findings concerning the harm caused by GHG emissions and climate change are confirmed and complemented by two recent California reports. See, *infra*, Part II. Second, EPA correctly determines that it is not required to make a specific finding that CO₂ emissions from fossil-fueled power plants "cause-or-contribute significantly to air pollution," and that, even if it were, that fact that power plants emit one-third of the nation's GHG pollution exceeds any reasonable threshold or definition of a significant contribution. 79 Fed. Reg. 1453, 1456.

II. Greenhouse Gas Pollution Threatens California's Public Health and Welfare, Particularly in Minority and Lower-Income Communities

Two significant California scientific reports, one by a collaboration of expert state agencies with twenty-six research teams from the University of California system and other research groups (the Third Assessment by the California Climate Change Center)¹¹ and another by California's Environmental Protection Agency and Office of Health Hazard Assessment (Indicators of Climate Change),¹² summarized below, confirm and complement EPA's 2009

¹¹ California prepared the Third Assessment pursuant to Executive Order #S-3-05, which called for periodic reports to the Governor and the Legislature on the impacts to California of global warming. The full set of over thirty peer reviewed papers is available at http://climatechange.ca.gov/climate_action_team/reports/third_assessment/index.html. These comments cite and attach the Summary Report and an exemplar of the papers (Exs. 2 and 4).

¹² Kadir, *supra* (Ex. 1).

Endangerment Finding and further document the threats GHG pollution presents to public health and public welfare, particularly in California.¹³

A. GHG Pollution Harms the Public's Health

EPA's Regulatory Impact Analysis observes that as atmospheric levels of GHGs increase, unusually hot days and heat waves are becoming more frequent and that "[h]eat is already the leading cause of weather-related deaths in the United States." RIA 3-1. California's recent reports confirm both the observed increase in extreme heat events and the impacts on the public's health generally, and particularly, on vulnerable populations.¹⁴

Summertime temperatures are increasing across California.¹⁵ "Many of the gravest threats to public health in California stem from the increase in extreme conditions, principally more frequent, more intense, and longer heat waves."¹⁶ One study "shows that mortality from various cardiovascular conditions on extremely hot days is up to 28 percent higher than normal background mortality."¹⁷

The effects of increases in extreme heat events fall disproportionately on those Californians with the fewest resources. As California's Indicators of Climate Change Report concluded:

The elderly, infants and young children, persons with advanced cardiovascular disease (myocardial infarction, congestive heart failure, and ischemic heart disease), and African-Americans have been found to be at increased risk from heat, specifically for mortality.... Outdoor workers (e.g., firefighters and farmworkers), socially isolated populations, the poor and the medically underserved are also more vulnerable to the effects of heat than the general population....¹⁸

¹³ In addition, the IPCC's Fifth Assessment Report and the USGCRP's Third National Climate Assessment bolster EPA's conclusions. See Alexander, *supra*; see also Walsh, *supra*.

¹⁴ See Kadir, *supra* (Ex. 1); Moser, *supra* (Ex. 2); see also USGCRP, Garfin, et al., Climate Change Impacts in the United States: The Third National Climate Assessment (2014) Ch. 20, Southwest, pp. 463-471, available at <http://nca2014.globalchange.gov/report/regions/southwest%0D>.

¹⁵ Kadir, *supra*, p. 50 (June through August maximum and minimum temperatures have increased between 1950 and 2010 for each of California's six climate regions) (Ex. 1).

¹⁶ Moser, *supra*, p. 4 (Ex. 2).

¹⁷ *Id.*

¹⁸ Kadir, *supra*, p. 124 (citations omitted) (Ex. 1); see also *id.* at p. 51; USGCRP, Luber, et al., Climate Change Impacts in the United States: The Third National Climate Assessment

(continued...)

Other studies of the San Francisco Bay Area and Fresno “find that minority populations have significantly lower access to common adaptation options for dealing with health threats from climate change....”¹⁹ Global warming’s disproportionate impacts on those with the fewest resources make it all the more important that we move quickly to reduce the largest sources of GHG pollution at the state and national levels.

B. GHG Pollution Impacts the Public’s Welfare

EPA’s Regulatory Impact Analysis also finds that GHG pollution and the resulting change in climate affect nearly every aspect of our environment and economy, including food production and agriculture, forestry, water resources, sea level rise and coastal areas, energy, infrastructure and settlements, and ecosystems and wildlife. RIA at 3-4. California’s recent scientific reports confirm that the impacts EPA has observed at a national level are occurring in California. The comments below focus on just three aspects of the public welfare that are being and will continue to be impacted by climate change in California.

Water Resources. EPA’s Regulatory Impact Analysis notes several adverse affects of climate change on water resources, including altering patterns of precipitation, shrinking snowpack and earlier snow melt due to warming. RIA at 3-5. Each of these affects on water quality and availability will be increasingly felt in California. As California’s Third Assessment Summary Report noted, “[i]n California’s semi-arid, Mediterranean climate, safe and reliable supplies of clean water are critical.”²⁰ The Summary Report cites one study which finds that “by the latter half of the 21st century, critically dry water years [such as the one California is experiencing in 2013-2014] could occur substantially more often (8 percent more frequently in the Sacramento Valley and 32 percent more often in the San Joaquin Valley), compared to the historical period (1951-2000).”²¹ In years that are not critically dry, California faces other potential problems caused by climate change. As California’s Indicators of Climate Change review notes, California’s main flood control strategy – keeping reservoirs below capacity in winter to absorb heavy rains at lower altitudes – depends on the mountains (not reservoirs)

(...continued)

(2014) Chapter 9, Human Health, pp. 228-230, available at <http://nca2014.globalchange.gov/report/sectors/human-health>.

¹⁹ Moser, *supra*, p. 4 (Ex. 2); see also Cooley et al., Social Vulnerability to Climate Change in California (2012) (attached as Ex. 4); USGCRP, *Global Climate Change Impacts in the United States* (2009) p. 91, available at <http://nca2009.globalchange.gov/> (citing Hayhoe, et al., Emissions pathways, climate change and impacts in California, Proceedings of the National Academy of Sciences (2004), 101 (34) at 12425) (discussing projections for heat-related mortality in Los Angeles at the end of this century)).

²⁰ Moser, *supra*, p. 5 (Ex. 2).

²¹ *Id.*

storing water in the form of snow, with significant melting starting only in April.²² Early snow melt disrupts this process, overwhelming California's existing infrastructure.

Rising Seas. As discussed in EPA's Regulatory Impact Analysis, "according to the assessment literature, sea level is rising along much of the U.S. coast and the rate of change will very likely increase in the future" RIA at 3-6. California's Third Assessment Summary Report finds that "[a]s early as 2050, given current projections of sea-level rise, today's 100-year storm could occur once every year."²³ It finds that a "wide range of critical infrastructure – such as schools, roads, hospitals, emergency facilities, wastewater treatment plants, airports, ports and energy facilities – will also be at increased risk of flooding." And, it notes that "the risk from flooding in coastal counties is unevenly distributed with low-income and minority communities particularly vulnerable in some areas."²⁴

Threatened Forests. EPA's Regulatory Impact Analysis notes that "climate change has very likely increased the size and number of wildfires, insect outbreaks, and increased tree mortality in the Interior West, the Southwest, and Alaska, and will continue to do so." RIA at 3-5. California's reviews confirm these findings. California's Indicators of Climate Change review found that rising temperatures and increase in drought stress were the likely cause of "rapidly increasing tree mortality rates in unmanaged old forests across the western United States."²⁵ The review cautioned that "[t]rends in tree mortality may serve as an early warning of acute changes, such as sudden forest die-back."²⁶ Evidence also shows an increase in the size and number of forest fires. The three largest fire years since 1950 have occurred since 2000 (2003, 2007 and 2008) and the annual average acres burned since 2000 is 598,000 acres, almost twice the annual average for the 1950-2000 period (264,000 acres).²⁷

Thus, the best and most recent scientific data confirms that – as EPA found in 2009 – GHG pollution may reasonably be anticipated to endanger the public health and welfare.

III. EPA's Determination that Partial Carbon Capture and Storage of Greenhouse Gas Emissions from Coal-Fired Power Plants has been Adequately Demonstrated is Well Supported

Section 111 of the Clean Air Act directs EPA to establish "standards of performance" for the emissions of air pollutants from new sources. 42 U.S.C. § 7411(b)(1)(B). As defined by the Clean Air Act, a "standard of performance" means the "degree of emission limitation achievable

²² Kadir, *supra*, p. 78 (Ex. 1).

²³ Moser, *supra*, p. 9 (Ex. 2).

²⁴ *Id.*

²⁵ Kadir, *supra*, p. 132 (Ex. 1).

²⁶ *Id.* at p. 133.

²⁷ *Id.* at p. 137.

through the best system of emission reduction which ... the Administrator determines has been adequately demonstrated.” 42 U.S.C. § 7411(a)(1).

Here, we address three aspects of the legal standard for establishing a “standard of performance.” First, we discuss how the technology-forcing goals of the Clean Air Act give EPA the discretion to set a standard of performance that pushes the boundaries of the present “state of the art.” Second, we address why the Energy Policy Act of 2005 allows EPA to rely – though not exclusively – on projects that have received federal assistance in reaching a determination that CCS for coal-fired power plants has been adequately demonstrated. Third, we review laws from a broad cross-section of states that anticipate the widespread adoption of CCS, further supporting EPA’s conclusion that CCS has been “adequately demonstrated.”

A. Congress Intended that New Plants be Controlled to the Maximum Possible Degree

The Clean Air Act is a technology-forcing statute.²⁸ Indeed, with the Clean Air Act, Congress intended “that new plants be controlled to the ‘maximum possible degree.’”²⁹ It is in this context that the courts have interpreted EPA’s discretion under section 111 to set a standard of performance. Section 111(a) defines a “standard of performance” as:

a standard for emissions of air pollutants that reflects the degree of emissions limitation achievable through the application of the best system of emissions reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.

42 U.S.C. § 7411.

Courts have held that “the mandated balancing of cost, energy, and nonair quality health and environmental factors embraces consideration of technological innovation as part of that

²⁸ *Sierra Club v. Costle*, 657 F.2d 298, 364 (D.C. Cir. 1981) (citing *Portland Cement Ass’n v. Ruckelshaus*, 486 F.2d 375, 391 (D.C. Cir. 1973), cert. denied, 423 U.S. 1025 (1975); *Union Electric Co. v. EPA*, 427 U.S. 246, 256-57 (1976); *Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60, 75 (1975); *Forcing Technology: The Clean Air Act Experience*, 88 Yale L.J. 1713 (1979)).

²⁹ *Essex Chemical Corp. v. Ruckelshaus*, 486 F.2d 427, 437 (D.C. Cir. 1973) (citing Summary of the Provisions of Conference Agreement on the Clean Air Act Amendments of 1970, 116 Cong. Rec. 42384, 42385 (1970)).

balance.”³⁰ Indeed, the courts have found that “[s]ection 111 looks toward what may fairly be projected for the regulated future, rather than the state of art at present”³¹ In addition, because section 111(b) standards deal with new technology or new applications of technology, “EPA may compensate for a shortage of data through the use of other qualitative methods, including the reasonable extrapolation of a technology’s performance in other industries.”³²

In its 2014 Proposal, EPA concludes that CCS for coal-fired power plants is an adequately demonstrated technology. 79 Fed. Reg. 1471. As discussed in Part C below, many states have already embraced a role for CCS in their jurisdictions. In this way, CCS systems are part of the regulated present and can fairly be projected for the regulated future. Indeed, for EPA to set a standard that does not require some portion of the carbon pollution from coal-fired power plants be captured and stored would run contrary to the direction in which a comprehensive cross-section of states are moving.

B. The Energy Policy Act of 2005 Allows EPA to Rely on Evidence from Projects that Received Assistance from the Federal Government to Determine that CCS has been Adequately Demonstrated

The Energy Policy Act of 2005 (the 2005 Act) authorized billions of dollars in grant funding and tax credits to encourage coal-fired power plants to add technologies such as CCS.³³ As discussed below, Congress simultaneously placed conditions on EPA’s ability to rely on the use of technology at plants receiving support under 2005 Act when the Agency is determining the best system of emission reduction that has been “adequately demonstrated.” In its February 5, 2014, Notice of Data Availability and accompanying Technical Support Document, EPA interprets those provisions of the 2005 Act to allow the Agency to consider CCS projects that received grant funding or tax credits, as long as EPA’s determination that CCS has been “adequately demonstrated” is not based “solely” on the use of CCS at those projects. We agree with EPA’s interpretation for the reasons discussed below.

The 2005 Act includes two sections whose use of the word “solely” plainly allows EPA to make the determination that a technology has been “adequately demonstrated” based *in part* on projects receiving grant funding, as long as that determination is not based “solely” on those

³⁰ *Sierra Club v. Costle*, 657 F.2d at 346 (“The statutory factors which EPA must weight are broadly defined and include within their ambit subfactors such as technological innovation.”).

³¹ *Portland Cement Ass’n v. Ruckelshaus*, 486 F.2d at 391.

³² *Lignite Energy Council v. U.S. EPA*, 198 F.3d 930, 934 (D.C. Cir. 1999) (citing *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1054 n. 70 (D.C. Cir. 1978).)

³³ Pub. L. 109–58, §§ 401-02, *codified at* 42 U.S.C. §§ 15961-62; Pub. L. 109-58, §1307(b), *codified at* 26 U.S.C. § 48A.

projects.³⁴ *See, e.g., Maryland Casualty Co. v. Cardillo*, 107 F.2d 959 (D.C. Cir. 1939) (holding that a provision covering injuries covering injuries caused “solely” by one factor did not apply unless the court ruled out all other factors).

A third section similarly addressed technology at plants receiving tax credits:

No use of technology (or level of emission reduction solely by reason of the use of the technology), and no achievement of any emission reduction by the demonstration of any technology or performance level, by or at one or more facilities with respect to which a credit is allowed under this section, shall be *considered to indicate that* the technology or performance level is adequately demonstrated for purposes of section 111 of the Clean Air Act....

Pub. L. 109-58, § 1307(b), amending 26 U.S.C. § 48A (emphasis added)

Per EPA’s request for comment on this provision, we agree that the phrase “considered to indicate” means that EPA cannot *deem* a technology adequately demonstrated simply because it is in use by projects receiving tax credits. Nothing in this provision restricts EPA from *referring* to the use of technology at projects receiving tax credits. This provision thus achieves the same effect as the earlier two, preventing technology used at a federally-supported facility from being the sole basis, but not a partial basis, for EPA’s determination under section 111.

EPA’s interpretation of “considered” to mean “deemed” rather than “referred to” (i.e. the intransitive rather than transitive form of the verb) in this provision is confirmed by the other relevant provisions of the 2005 Act. Section 402(i), for example, uses “considered to be adequately demonstrated”³⁵ to mean “deemed adequately demonstrated.” Replacing “considered” instead with “referred to” in that phrase would make no grammatical sense. When Congress uses the same word in multiple provisions of the same statute, that word is given the same meaning absent some contrary indication of legislative intent. *Dep’t of Revenue of Ore. v.*

³⁴ Pub. L. 109–58, § 402(i) codified at 42 U.S.C. § 15962 (“No technology, or level of emission reduction, *solely* by reason of the use of the technology, or the achievement of the emission reduction, by 1 or more facilities receiving assistance under this Act, shall be considered to be adequately demonstrated for purposes of section 111 of the Clean Air Act.”); Pub. L. 109–58, § 421(a), *amending* 42 U.S.C. § 13573 (“No technology, or level of emission reduction, shall be treated as adequately demonstrated for purpose of section 111 of the Clean Air Act, ... solely by reason of the use of such technology, or the achievement of such emission reduction, by one or more facilities receiving assistance under [this section].”).

³⁵ See Pub. L. 109–58, § 402(i) (“No technology, or level of emission reduction, solely by reason of the use of the technology, or the achievement of the emission reduction, by 1 or more facilities receiving assistance under this Act, shall be considered to be adequately demonstrated for purposes of section 111 of the Clean Air Act.”).

ACF Industries, Inc., 510 U.S. 332, 342 (1994) (“[I]dential words used in different parts of the same act are intended to have the same meaning.”).

Even if the words of section 48A are found to be ambiguous, basic principles of statutory construction support EPA’s interpretation. First, any ambiguity regarding whether and to what extent section 48A places a limitation – versus a prohibition – on EPA’s consideration of projects that received federal assistance should be interpreted narrowly. *A.H. Phillips, Inc. v. Walling*, 324 U.S. 490, 493 (“To extend an exemption to other than those plainly and unmistakably within its terms and spirit is to abuse the interpretative process and to frustrate the announced will of the people.”). Second, EPA is entitled to deference in interpreting the statute, as it is the agency charged with giving effect to this provision. See *FCC v. Arlington*, 133 S.Ct. 1863, 1872 (2013) (“Our cases hold that *Chevron* applies equally to statutes designed to curtail the scope of agency discretion.”) citing *Chem. Mfrs. Ass’n v. Nat. Res. Def. Council*, 470 U.S. 116, 142 (1985). Finally, EPA’s interpretation preserves limits on its discretion without undermining the technology-driving goals of both the 2005 Act³⁶ and section 111 of the Clean Air Act.

In sum, Congress did not require EPA to ignore the existence of projects which received assistance under the 2005 Act.

C. The Actions of Twenty-Five States Testify to the Adequate Demonstration of Carbon Capture and Storage Technology

Numerous states’ laws recognize either that CCS is a demonstrated system of emissions reductions or that CCS adds value to businesses or both.³⁷ Since as early as 2001, at least twenty-five states have enacted statutes or adopted regulations related to CCS.³⁸

- Twelve states’ laws establish permitting and/or monitoring rules and procedures for relevant components of CCS.³⁹ In other words, twelve states have made substantial efforts to put regulatory frameworks in place to govern the use of CCS

³⁶ Like the Clean Air Act, the 2005 Act sought to promote other innovative technologies to reduce harmful emissions from sources such as coal-fired power plants. See, e.g., Pub. L. 109–58, § 421, amending 42 U.S.C. § 13571 (stating legislative purpose to “reduce the cost of clean coal generation, and increase the marketplace acceptance of clean coal generation and pollution control equipment and processes; and facilitate the environmental performance of clean coal generation.”).

³⁷ Southern States Energy Board, Carbon Capture and Sequestration Legislation in the United States of America (2010) (hereafter SSEB) p. 2 (attached as **Ex. 7**).

³⁸ See Attachment, Carbon Sequestration in State Statutes and Regulations (attached as **Ex. 6**); see SSEB, *supra* (**Ex. 7**).

³⁹ See Attachment, Carbon Sequestration in State Statutes and Regulations, pp. 10-13 (**Ex. 6**).

in their jurisdictions. These actions underscore that CCS is either in use or fully anticipated in these states.

- Eight states recognize power plants using CCS as renewable energy resources and/or make CCS eligible for credit under a state renewable portfolio standard.⁴⁰ In doing so, these states have prioritized CCS over other fossil-fueled generation, indicating that power plants with CCS are safe, reliable and affordable sources of power.
- Similarly, three states' laws expressly allow utilities that deploy CCS to recover their costs from ratepayers.⁴¹ Since state regulators are tasked with ensuring that state ratepayers pay reasonable rates for electricity, in effect, these states have concluded that CCS is adequately demonstrated and reasonably cost-effective.
- In addition, nine states provide grants or tax incentives for CCS projects.⁴² These states are dedicating public money to competing to attract CCS projects in their state, again underscoring that these states view CCS as viable and worthy of public investment.

That so many states have acted to put in place laws supporting CCS speaks to their anticipation of widespread adoption of CCS. More than one state legislature has declared that geologic storage of CO₂ will benefit the environment and the citizens of their state.⁴³

In California, in February 2010, the Public Utilities Commission, Energy Commission and Air Resources Board convened the California Carbon Capture and Storage Review Panel. The Panel produced its final report in January 2011, over three years ago. Among its key findings at the time were:

- there is a public benefit from long-term geologic storage of CO₂ as a strategy for reducing greenhouse gas emissions from the atmosphere; and

⁴⁰ *Id.* at pp. 13-15.

⁴¹ *Id.* at p. 15.

⁴² *Id.* at pp. 15-17.

⁴³ See *id.* at pp. 2, 3, 5 (citing Ky. Rev. Stat. Ann., § 353.800 et seq. (West 2011) and La. Rev. Stat. Ann., § 30:1101, et seq. (West 2009); see also N.D. Cent. Code, § 38-22-01, et seq. (West 2009)). In addition, the Midwest Governors Association has expressed support for the implementation of CCS technology. See Midwest Governors Association, Key Components of a State-Level Statutory & Regulatory Framework to Support Deployment of Carbon Capture and Storage (CCS) in the Midwest (2011), p. 1, available at <http://www.midwesterngovernors.org/ccs.htm>.

- technology currently exists for the safe and effective capture, transport and geologic storage of CO₂ from power plants and other large industrial facilities.⁴⁴

The findings of California's expert review panel and the broad acceptance and encouragement of CCS across a wide spectrum of diverse states provide additional evidence that CCS has been adequately demonstrated, as required by the Clean Air Act.⁴⁵

IV. An Effective Rule Requires Adequate Penalties for Noncompliance and Safeguards Against Unreasonable Delays in Implementing Emission Controls

EPA's 2014 Proposal measures compliance with the standard of performance (measured in tons CO₂ / MWh) over a rolling 12- or 84-operating month period. This 12- or 84-month averaging period provides the regulated power plants with considerable operational flexibility when compared to the alternatives (e.g., a single operating month period). EPA requests comment on two aspects of this extended averaging period.

First, EPA requests comment on the determination of the number of daily violations during an averaging period. 79 Fed. Reg. 1498. EPA proposes that if a power plant's emissions exceed the standard of performance over the 12- or 84-month averaging period, that the number of daily violations would be equal to the number of operating days in that period. *Id.* EPA's approach is reasonable. In order to adequately assure compliance, the penalty must scale with the extended averaging period. Given that the failure to comply over such an extended period could involve hundreds of thousands of tons of excess GHG emissions, the Agency must have the ability to set an appropriate penalty. A single violation for each averaging period would not be nearly sufficient.

Second, EPA's 2014 Proposal requests comment on whether power plants electing to comply with the 84-operating month standard should also be required to comply with a maximum 12-operating month standard. 79 Fed. Reg. 1448. We agree with EPA's observation that a maximum 12-operating month standard "would facilitate enforceability and assure adequate emission reductions." *Id.* An extended compliance period presents the risk a plant might have high emissions in the first several years of operation on the promise of reductions in later years that do not materialize. EPA is right to guard against a power plant falling too far behind in the timing of its implementation of CCS and/or operating at too high an emissions rate with or without CCS in place. However, a fixed maximum 12-operating month standard set at a level that could be achieved without CCS may not provide adequate assurance of compliance,

⁴⁴ Bauer et al., Findings and Recommendations by the California Carbon Capture and Storage Review Panel (2010) p. 3 (attached as **Ex. 5**).

⁴⁵ EPA has previously supported a determination under Section 111 of the Clean Air Act by looking to state-level determinations about the availability and cost of control technologies. See, e.g., 73 Fed. Reg. 34072, 34075 (June 16, 2008)

particularly in later years of an 84-operating month averaging period. In the alternative, we suggest a maximum 12-operating month standard that becomes more stringent over time.

V. The Attorney General's Office Concurs with the Recommendations of the California Air Resources Board

The Attorney General's Office concurs in the recommendations made by the California Air Resources Board (ARB) in its comment letter on the 2014 Proposal. ARB's recommendation to tightening any exemption for natural gas plants that operate less frequently is well taken.⁴⁶

As the Supreme Court stated in 2007, "[t]he harms associated with climate change are serious and well recognized." *Massachusetts v. EPA*, *supra*, 549 U.S. at 521. EPA's 2014 Proposal is important step towards addressing the sources of greenhouse gas pollution that threatens the nation's public health, environment and economy.

Respectfully Submitted,



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Attorney General

DAZ:

Encl.

⁴⁶ The Attorney General also generally concurs with the comments filed by a group of state Attorneys General that includes New York, Delaware, Maine, Oregon, Rhode Island, Vermont and Washington.