Comments of New York, California, Connecticut, Delaware, Hawaii, Illinois, Iowa, Maine, Maryland, Massachusetts, Minnesota (by and through its Minnesota Pollution Control Agency), New Mexico, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, and Washington, the District of Columbia, and the cities of Boulder (CO), Chicago, Los Angeles, New York, Philadelphia, and South Miami (FL), and the county of Broward (FL) on

the Environmental Protection Agency's proposed Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 82 Fed. Reg. 48,035 (Oct. 16, 2017)

April 26, 2018

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I. EXECUTIVE SUMMARY

The states of New York, California, Connecticut, Delaware, Hawaii, Illinois, Iowa, Maine, Maryland, Massachusetts, Minnesota (by and through its Minnesota Pollution Control Agency), New Mexico, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, and Washington, the District of Columbia, and the cities of Boulder (CO), Chicago, Los Angeles, New York, Philadelphia, and South Miami (FL), and the county of Broward (FL) (together, "States and Cities") submit these comments in strong opposition to the Environmental Protection Agency's (EPA) proposed Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units 82 Fed. Reg. 48,035 (Oct. 16, 2017). The rule EPA seeks to repeal, commonly known as the "Clean Power Plan" or "CPP," 80 Fed. Reg. 64,662 (Oct. 23, 2015), sets the first nationwide emission limits on one of our country's largest sources of harmful greenhouse gases—existing fossil-fueled power plants. EPA's proposed repeal of the Clean Power Plan would violate the Clean Air Act. The statute requires EPA to set limits on carbon pollution from existing power plants, yet the agency is proposing to repeal the Clean Power Plan without replacing it with *any* alternative rule, much less a substitute that requires equivalent or greater pollution reductions. As described below, EPA's about-face, contending that the Clean Power Plan conflicts with section 111(d) of the Act, is erroneous.

As explained in Section II of these comments, scientific reports issued after EPA finalized the Clean Power Plan further demonstrate the need to promptly reduce greenhouse gas emissions from power plants and other large sources to mitigate ongoing and anticipated public health and environmental harms. We highlight threats the States and Cities are facing from climate change and the need for EPA to perform its duty under the Clean Air Act to set nationwide limits on power plant carbon pollution.

In Section III of these comments, we discuss how EPA's proposed repeal of the Clean Power Plan without simultaneously replacing it with a lawful alternative would violate the Clean Air Act. After more than a decade of litigation led by the States and Cities, EPA's statutory obligation to regulate the emission of pollutants such as greenhouse gases from power plants is well-established. EPA recognizes that the emission of greenhouse gases poses a risk to human health and the environment, and EPA cannot simply ignore its obligation to regulate the stationary sources that emit the most of this pollution. Repeal without replacement is an impermissible action under the Clean Air Act.

Section IV of the comments addresses how EPA has fundamentally failed to explain the statutory interpretation that is the sole reason provided for the proposed repeal and how the Clean Power Plan, properly characterized, is inconsistent with the interpretation as presented. EPA's proposed repeal, thus, appears to be improperly and unlawfully based on a mischaracterization of the Clean Power Plan, rather than a properly explained new interpretation of the statute.

Section V details why EPA's attempts to read section 111 as precluding the Clean Power Plan are contrary to law and arbitrary and capricious. This section also provides comments on each of the five specific areas on which EPA sought comment as bases for the proposed repeal: statutory text, congressional intent, EPA's prior understanding, statutory context, and broader

policy concerns. As discussed in detail below, EPA's new embrace of legal arguments made by now-Administrator Pruitt and other petitioners in the *West Virginia v. EPA* litigation in each of these areas is unpersuasive. EPA carefully considered—and rejected—these same contentions in the Clean Power Plan rulemaking and in the subsequent litigation. These arguments are no more meritorious now than they were then. The agency's new approach to statutory interpretation is analogous to a horse with blinders (if not a blindfold): a constrained vision of the nation's most protective environmental statute, one that completely ignores the dire threat climate change poses, the interconnected nature of power plants, and the nature of the pollutant (carbon dioxide) that is the subject of regulation in the Clean Power Plan.

Section VI critiques EPA's revised analysis on the economic impacts of the Clean Power Plan. In a thinly-veiled attempt to provide factual support for its predetermined conclusion to repeal the Clean Power Plan, EPA's revised analysis underestimates the benefits of the Clean Power Plan while exaggerating its costs. The agency's revised analysis contains numerous errors, including substantially discounting the social cost of carbon and abandoning EPA's past practice in valuing co-benefits for human health associated with reducing particulate matter and ozone pollution.

Finally, Section VII explains why the agency's proposed revocation of the legal memorandum issued together with the Clean Power Plan is unjustified.

Because EPA's proposed repeal of the Clean Power Plan is unsupported by the facts or law, EPA should abandon it and encourage the D.C. Circuit Court of Appeals to complete its review of the rule forthwith.

II. CLIMATE CHANGE HARMS AND THE NEED FOR MEANINGFUL LIMITS ON POWER PLANT CARBON POLLUTION NATIONWIDE

A. Recent Scientific Reports Further Demonstrate the Need to Aggressively Reduce Greenhouse Gas Emissions.

Since EPA's publication of the Clean Power Plan in October 2015, the Earth experienced the warmest year on record—2016—breaking the records set previously in 2014 and 2015.[1] Recent observations of air and ocean temperatures and other climate-related metrics, in combination with improved understanding of the underpinnings of the Earth's climate system, confirm the already well-accepted scientific consensus: the Earth's climate system is changing rapidly primarily due to human activities, especially from emissions of greenhouse gases.

Recent major scientific assessments strengthen EPA's 2015 findings outlined in the Clean Power Plan, including that "[c]limate change impacts touch nearly every aspect of public welfare."[2] In 2017, the United States Global Change Research Program released the Fourth National Climate Assessment ("Fourth Assessment"), a 470-page report summarizing the current

[1] https://climate.nasa.gov/vital-signs/global-temperature/, last accessed 4/9/2018.

[2] 80 Fed. Reg. at 64,683.

state of climate change science, and ongoing and projected future physical impacts.[3] Coordinated by lead authors representing the National Science Foundation, National Oceanic and Atmospheric Administration (NOAA), and National Aeronautics and Space Administration (NASA), with contributions from leading scientists from other federal organizations, including the Department of Energy and its National Laboratories, Army Corps of Engineers, National Center for Atmospheric Research, Department of Defense, Department of Agriculture, Department of Health and Human Services, and EPA, the Fourth Assessment concludes:

Global annually averaged surface air temperature has increased by about 1.8°F (1.0°C) over the last 115 years (1901–2016). This period is now the warmest in the history of modern civilization. The last few years have also seen record-breaking, climate-related weather extremes, and the last three years have been the warmest years on record for the globe. These trends are expected to continue over climate timescales.

This assessment concludes, based on extensive evidence, that it is extremely likely that human activities, especially emissions of greenhouse gases, are the dominant cause of the observed warming since the mid-20th century. For the warming over the last century, there is no convincing alternative explanation supported by the extent of the observational evidence.

In addition to warming, many other aspects of global climate are changing, primarily in response to human activities. Thousands of studies conducted by researchers around the world have documented changes in surface, atmospheric, and oceanic temperatures; melting glaciers; diminishing snow cover; shrinking sea ice; rising sea levels; ocean acidification; and increasing atmospheric water vapor.

As the climate system continues to respond to anthropogenic impacts, the Fourth Assessment found that the United States and its residents are increasingly experiencing effects from climate change. Different temperature and precipitation extremes are becoming more common. For example, the increasing intensity and frequency of heavy rainfall is contributing to flooding, especially in the Northeast. Heat waves are increasing while extreme cold events have decreased since the 1960s. As the ocean warms and land ice continues to melt, global mean sea level rose faster during the last century than in any previous century in at least 2,800 years,

[3] USGCRP, 2017: Climate Science Special Report: Fourth National Climate Assessment, Volume I [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 470 pp., doi: 10.7930/J0J964J6. This document, and others cited in these Comments that are not attached, were prefiled with EPA. *See* Joint Appendix of Environmental and Public Health Organizations and States Regarding the Proposed Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Generating Units (submitted in person by John Bullock on April 20, 2018) (documents cited hereinafter as "JA, Att. __").

contributing to daily tidal flooding increases in more than 25 Atlantic and Gulf Coast cities. Reduced snowpack and earlier seasonal melting are negatively affecting water resources in the western United States, and the incidence of large forest fires has increased.[4]

In addition, since 2015, the ability of scientists to attribute the increased likelihood of observed extreme events to climate change, a discipline termed "event attribution," has significantly evolved. In a National Academies of Sciences, Engineering, and Medicine overview report, Attribution of Extreme Weather Events in the Context of Climate Change, scientists found the likelihood that individual extreme events are attributable to climate change is increasing.[5] The likelihood that climate change is increasing the odds of extreme events is "greatest for those extreme events that are related to an aspect of temperature, such as the observed long-term warming of the regional or global climate, where there is little doubt that human activities have caused an observed change."[6]

For the past seven years, the journal of the American Meteorological Society (AMS) has published an annual special supplement describing studies of the connection between specific extreme weather events and anthropogenic climate change. In previous AMS reports, scientists found a total of 89 extreme weather events for which climate change increased the likelihood of the event occurring.[7] In the 2017 AMS report, for the first time, the authors found several of the extreme weather events occurring in 2016 would not have been "possible without the influence of human caused climate change."[8] These extreme weather events are happening because of the ongoing anthropogenic alteration of the Earth's climate and are beyond the bounds of the "natural" climate system. The three such extreme events AMS identified in year 2016 were: (1) record-breaking global temperatures, (2) record-breaking regional temperatures over the Asian continent, and (3) the anomalous warm water temperatures in Alaska's Bering Sea. These events *would not have occurred* in a pre-industrial climate.

Next, two independent research teams, including one from the Department of Energy's Lawrence Berkeley National Laboratory, recently released studies identifying a clear anthropogenic climate signal in the torrential precipitation that inundated Houston during Hurricane Harvey, reporting the precipitation was up to 38 percent greater due to climate change.[9,10] It is estimated that Hurricane Harvey was the second costliest natural disaster on

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[4] USGCRP 2017 (JA, Att. B69).

[5] National Academies of Sciences, Engineering, and Medicine. 2016. Attribution of Extreme Weather Events in the Context of Climate Change. Washington, DC: The National Academies Press. https://doi.org/10.17226/21852 (JA, Att. K24).

[6] *Id.*

[7] Herring, S. C., N. Christidis, A. Hoell, J. P. Kossin, C. J. Schreck III, and P. A. Stott, Eds., 2017: Explaining Extreme Events of 2016 from a Climate Perspective. *Bull. Amer. Meteor. Soc.*, 98 (12), S1–S157 (attached hereto as ***Exhibit 1***).

[8] *Id.*

[9] Risser M., and M.F Wehner (2017), Attributable human-induced changes in the likelihood and magnitude of the observed extreme precipitation during Hurricane Harvey, Geophys. Res. Lett., 44, doi:10.1002/2017GL075888 (JA, Att. B53).

record in United States history, resulting in approximately $125 billion in total damages.[11] Consistent with scientists' long-standing expectations that climate change will increase extreme precipitation events, studies indicate the intensity and frequency of such events have increased since 1901, especially in the northeastern United States.[12] For instance, in New York State, communities and infrastructure have incurred significant damage from heavy rains in recent years.[13]

The Fourth Assessment evaluated how the climate may continue to change in the future. Historical emissions of greenhouse gases, including carbon dioxide, have locked-in additional warming. The concentration of carbon dioxide in the atmosphere now exceeds 400 ppm, a level the Earth's climate last experienced about three million years ago.[14] Since 1901, global mean surface air temperatures have increased by approximately 1.8°F.[15] Rates of greenhouse gas emissions over the last few decades are consistent with the higher emission scenarios climate modelers use to assess future climate change. Depending upon future emission rates, global mean temperatures over the next few decades are projected to increase between 0.5°F and 1.3°F, while longer-term warming will depend primarily on cumulative greenhouse gas, aerosol emissions, and climate system sensitivity. Projected long-term global temperature changes for the end of the century range from 4.7-8.6°F under the high emission scenario to 0.5-1.3°F for the low emission scenario.[16] Temperature changes are expected to be even higher for the contiguous United States. Increases of about 2.5°F are projected for the period 2021-2050 relative to the average from 1976-2005 in all Representative Concentration Pathway ("RCP") emission scenarios, implying recent record-setting years may be "common" in the next few decades. Much larger rises are projected by end of century, as high as 5.8°-11.9°F for the highest emission scenario.[17]

The Fourth Assessment finds the scope of resulting impacts for the United States to be significant, including:

- The frequency and intensity of extreme high temperature events are virtually certain to increase in the future as global temperatures increase. Extreme precipitation events will very likely continue to increase in frequency and intensity throughout most of the world.

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[10] Geert Jan van Oldenborgh *et al* 2017 *Environ. Res. Lett.* 12 124009 (attached hereto as ***Exhibit 2***).

[11] https://coast.noaa.gov/states/fast-facts/hurricane-costs.html, last accessed 4/9/2018.

[12] USGCRP 2017.

[13] Current & Future Trends in Extreme Rainfall Across New York State, A Report from the Environmental Protection Bureau of New York State Attorney General Eric T. Schneiderman (Sept. 2014) available at https://ag.ny.gov/pdfs/Extreme_Precipitation_Report%209%202%2014.pdf. (JA, Att. B9).

[14] USGCRP 2017.

[15] USGCRP 2017.

[16] USGCRP 2017.

[17] USGCRP 2017.

- The frequency and intensity of heavy precipitation events in the United States are projected to continue to increase over the 21st century.
- The incidence of large forest fires in the western United States and Alaska, which increased since the early 1980s, is projected to further increase in those regions as the climate warms, with profound changes to certain ecosystems.
- Relative to the year 2000, global mean sea level is very likely to rise by 0.3–0.6 feet by 2030, 0.5–1.2 feet by 2050, and 1.0–4.3 feet by 2100. Relative sea level rise is likely to be greater than the global average for states bordering the western Gulf of Mexico and those in Mid-Atlantic and the Northeast.
- Assuming storm characteristics do not change, sea level rise will increase the frequency and extent of extreme flooding associated with coastal storms, such as hurricanes and nor'easters.
- The current rate of ocean acidification is unparalleled in at least the past 66 million years. Under the higher emission scenario (RCP 8.5), the global average surface ocean acidity is projected to increase by 100–150 percent.

B. The States and Cities Are Experiencing Harms from Climate Change Now that Will Worsen Unless Prompt Steps Are Taken to Mitigate that Pollution.

The States and Cities are home to approximately 144 million people, or roughly 45 percent of the population of the United States. We are already suffering from the deleterious impacts of global climate change caused by manmade emissions of greenhouse gases. Our residents have lost property, been displaced from homes, and even been killed as a result of severe weather events exacerbated by climate change. Our infrastructure has been damaged, and our economies have been affected by more extreme heat, shorter winters, and rising sea levels. Appendix A to these comments contains a detailed description, with citations, of significant harms and threats each of the States and Cities is facing. Those threats are highlighted in this section.

- ***Heat waves.*** Premature deaths caused by more frequent and intense heat waves are a pressing public health problem, especially in our cities. For example, in Maryland, the Centers for Disease Control and Prevention found that there were twelve heat-related deaths in the state resulting from the heat wave in 2012; yearly premature deaths from extreme heat are expected to more than double that amount for just the city of Baltimore by 2050. In Washington, D.C., the number of heat emergency days (days when the heat index exceeds 95°F), could more than double from the current 30 days per year to 80 days per year by the 2050s under a high emission scenario. Similarly, in the near future Chicago will likely experience between 5 to 20 days a year with heat and humidity conditions similar to the 1995 heat wave that caused approximately 750 deaths in the city.

- ***Wildfires.*** Climate change creates more favorable conditions for wildfires. California experienced its worst wildfire season ever in 2017: wildfires have killed dozens of people, destroyed thousands of homes, forced hundreds of thousands to evacuate, and burned more than half a million acres of forests and land. The 2013–15 fire seasons were

some of the largest and most intense that Oregon has ever experienced. And in Washington, under a business-as-usual greenhouse gas emissions scenario without the Clean Power Plan, the state is facing up to a 300-percent increase in the land area in eastern Washington burned annually by forest fires and up to a 1,000-percent increase in land area burned annually on the west side of the state.

- ***Severe storms.*** Because of greater energy in the climate system, scientists anticipate that climate change will result in more damaging storms, a trend that the States and Cities have already begun to experience. For example, in 2014, Long Island, NY received more than 13½ inches of rain—nearly an entire summer's worth—in a matter of hours, breaking the state's rainfall record. That deluge flooded over 1,000 homes and businesses, opened massive sinkholes on area roadways, and forced hundreds of residents to evacuate to safer ground. In 2013, the City of Boulder experienced a flood that caused damages estimated as high as $150 million. In the region, four people died, 1,202 people were airlifted from their homes, and 345 homes were destroyed. And in 2011, Hurricane Irene dumped up to 11 inches of rain on Vermont, impacting 225 municipalities and causing $733 million in damage; the same storm left 800,000 Connecticut residents without power for up to nine days.

- ***Sea level rise and associated flooding.*** Coastal flooding exacerbated by sea level rise increasingly plagues the States and Cities. For example, the Hampton Roads area of Virginia has experienced the highest rates of sea level rise along the East Coast. Ordinary rain events now cause flooding in the streets of Norfolk, including large connector streets disappearing underwater. Norfolk naval base, the largest navy base in the world, is currently replacing 14 piers due to sea level rise, at a cost of $35–40 million per pier.[18] In South Florida, extreme high tides have become increasingly frequent and dramatic due to rising sea levels, over-topping seawalls, pushing up through stormwater systems and contributing to flooding in communities far from the waterfront and coastal canals. In Delaware, over 17,000 homes and almost 500 miles of roadway are at risk of permanent inundation from sea level rise by the end of the century. And the more than 12 inches of sea level rise New York City has experienced since 1900 expanded 2012 Hurricane Sandy's flood area by about 25 square miles, flooding the homes of an additional 80,000 people in the New York City area alone.

- ***Diseases.*** Warmer temperatures from climate change have facilitated the spread of infectious diseases. For example, warmer temperatures are contributing to the rise in deer populations in Massachusetts, resulting in loss of underbrush habitat for forest species and the spread of tick-borne diseases like Lyme disease. In Pennsylvania, climate change is expected to increase the prevalence of West Nile disease in the higher-elevation areas and the duration of the transmission season. Disease outbreaks threaten our natural resources as well. In California, a majority of the ponderosa pine in the foothills of the

[18] Section 335 of the National Defense Authorization Act of 2018 (H.R. 2810) requires the Secretary of Defense to submit a report on the vulnerabilities to military installations and combatant commander requirements resulting from climate change, including a listing of the ten most vulnerable military installations for each service based on rising sea tides, increased flooding, drought, wildfires, and other climate change impacts.

central and southern Sierra Nevada Mountains have already died, killed by the western pine beetle and other bark beetles. The increasing threat from these insects is driven in large part by warmer winters and a lengthening summer season attributable to climate change.

- ***Drinking water.*** Water supplies are being threatened in states that rely on snowpack for drinking water. In Washington's Cascade Mountains, snowpack has already decreased by about 25 percent since the mid-20th century and is anticipated to decrease even more substantially by the 2040s. In California, during the recent drought, the Sierra snowpack—critical to California's water supply (and other uses)—was the smallest in 500 years. Similarly, projections of further reduction of late-winter and spring snowpack and subsequent reductions in runoff and soil moisture pose increased risks to water supplies needed to maintain cities, agriculture, and ecosystems in New Mexico. In Broward County (FL), water supplies are threatened by rising seas, which drives saltwater contamination into well fields. U.S. Geologic Survey modeling in collaboration with the County reveals a predicted loss of 35 million gallons per day in water supply capacity by 2060 (40 percent of Broward's coastal well field capacity), due entirely to additional sea level rise.

- ***Air quality.*** Warmer temperatures also increase the formation of ground level ozone, which impairs lung function and can cause increased hospital admissions and emergency room visits for people suffering from asthma, particularly children. Massachusetts already has the nation's highest incidence of asthma: among children in grades K–8, more than 12 percent suffer from pediatric asthma, and 12 percent of the state's adult population suffers from asthma. Similarly, in 2010, nearly a quarter of the children in Philadelphia County had asthma, among the highest rates in the nation.

- ***Ocean fisheries***. Carbon dioxide emissions into the atmosphere are increasing the acidity of Atlantic and Pacific Ocean waters, harming aquatic species. In Oregon, ocean waters are now more acidified, hypoxic (low oxygen), and warmer, and such impacts are projected to increase, with a particularly detrimental impact on oysters and other shellfish, which will threaten marine ecosystems, fisheries, and seafood businesses. In Maine, the increasing acidity is inhibiting shell formation in soft-shell clams, oysters, and Maine's world famous lobsters. Also, the Gulf of Maine is warming faster than 99 percent of the world's ocean waters, and soft-shell clam flats throughout southern and mid-coast Maine have been destroyed by an invasion of non-native green crabs that have expanded their range northward as these waters warm.

- ***Agriculture***. Climate change is also disrupting agricultural production. In California's Central Valley, the historic five-year drought (2012–17) cost the farming industry about $2.7 billion and more than 20,000 jobs in 2015 alone. In Maryland, predicted hotter temperatures and increased inundation of soils from the rising seas threaten the state's produce and livestock industry. In Illinois, an increase in temperature and a shift in rain patterns could mean a 15-percent yield loss in field crops such as corn and soybeans in the next 5 to 25 years and up to a 73-percent average yield loss by the end of the next

century. Similarly, in Iowa, absent significant adaptation by Iowa farmers, the state could face declines in its corn crop of 18–77 percent.

- ***Biodiversity and ecosystem health.*** Warming temperatures and changing precipitation patterns are threatening native marine and terrestrial species in the States and Cities. For example, warmer water temperatures in Narragansett Bay off Rhode Island are causing many changes in ecosystem dynamics and fish, invertebrate, and plankton populations. Cold-water iconic fish species (cod, winter flounder, hake, and lobster) are moving north out of Rhode Island waters, and warm-water southern species are becoming more prevalent (scup, butterfish, and squid). A recent study found that greenhouse gas-driven warming may lead to the death of 72 percent of the Southwest's evergreen forests by 2050, and nearly 100 percent mortality of these forests by 2100. In Washington, Douglas fir accounts for almost half the timber harvested in the State. Under a moderate greenhouse gas scenario, Douglas fir habitat is expected to decline 32 percent by the 2060s relative to 1961–1990.

C. EPA Has Acknowledged the Critical Importance of Nationwide Carbon Pollution Reductions from Power Plants.

In the *West Virginia* litigation, EPA recognized that "[n]o serious effort to address the monumental problem of climate change can succeed without meaningfully limiting [power] plants' CO_2 emissions."[19] Although the States and Cities have taken significant steps, national emission standards are necessary. And the Supreme Court has described EPA as the "expert agency" that is "best suited to serve as primary regulator of greenhouse gas emissions." *Amer. Elec. Power v. Connecticut*, 564 U.S. 410, 428 (2011) (*AEP*). In the *AEP* case, several states, New York City, and land trust organizations brought federal common-law public nuisance claims directly against power plants, seeking reductions in the greenhouse gas pollution harming the health and welfare of their citizens. Citing EPA's commitment to proceed with rulemaking (which culminated in the Clean Power Plan), the Supreme Court rejected plaintiffs' federal common-law claims, holding that the Clean Air Act "directly" authorized EPA to regulate greenhouse gases from power plants under section 111(d). *Id*. at 424 (quotation marks omitted). Because of this statutory authority, "the Clean Air Act and the EPA actions it authorizes displace any federal common-law right to seek abatement of carbon-dioxide emissions from fossil-fuel fired powerplants." *Id.* Although the Supreme Court's decision left open the possibility that parties could use state law common law nuisance actions against power companies to compel reductions in carbon pollution, there is no question that it would be more efficient for EPA to use its authority under the Clean Air Act to require such emission limits nationwide.

[19] EPA Final Brief in *West Virginia v. EPA*, D.C. Cir. No. 15-1363 (Doc. #1609995, filed April 22, 2016), at 61 (JA, Att. A7).

III. EPA CANNOT REPEAL THE CLEAN POWER PLAN WITHOUT SIMULTANEOUSLY ISSUING A REPLACEMENT RULE TO REGULATE CARBON DIOXIDE FROM EXISTING POWER PLANTS

A. Repeal Without Replacement Would Put EPA in Violation of its Statutory Duty to Regulate Carbon Dioxide from Power Plants.

When it promulgated the Clean Power Plan, EPA did so pursuant to its obligation under section 111(d) of the Clean Air Act to regulate carbon dioxide from existing fossil-fueled power plants, the largest stationary sources of greenhouse gas emissions. The rule marked the fruition of more than a decade of efforts led by several of the States and Cities to compel EPA to address power plant emissions. And while EPA does not dispute its statutory obligation to regulate power plant carbon pollution under section 111(d), the agency is not proposing to replace the Clean Power Plan at the time of repeal. With respect to a possible replacement rule, EPA says only that "EPA continues to consider whether it should issue another CAA section 111(d) rule addressing GHG emissions from existing [power plants] and, if so, what would be the appropriate form and scope of that rule." 82 Fed. Reg. at 48,038. The recent "Advance Notice of Proposed Rulemaking" is equally noncommittal regarding the timing or nature of a replacement rule, if any. *See* 82 Fed. Reg. 61,507 (Dec. 28, 2017). If EPA now wishes to repeal the Clean Power Plan, it cannot simply return to a legal landscape of non-regulation; rather, EPA must replace the Clean Power Plan with an alternative rule that fulfills EPA's regulatory duty to meaningfully limit carbon pollution for existing power plants.

Under Clean Air Act section 111, EPA "shall" establish standards of performance for new and existing stationary sources that emit air pollutants. 42 U.S.C. § 7411(a)(3), (b)(1), (d). The language and structure of section 111 contemplate that a rule for existing sources be promulgated at the same time, or shortly after, a rule for new sources. *E.g.*, *id.* § 7410(b)(1)(B) (requiring EPA to promulgate standards for new sources within one year of listing a stationary source category); *id.* § 7411(d) (requiring EPA to establish procedures for submission of state plans for existing sources similar to section 110, 42 U.S.C. § 7410, which requires that state plans be submitted within three years of promulgation of a standard); 40 C.F.R. § 60.22(a) (draft guidelines to be published "concurrently or after" proposal of section 111(b) standards). As the States and Cities have long argued, and the Supreme Court has held, EPA is statutorily obligated to regulate carbon dioxide from power plants. The Clean Air Act specifically contemplates that EPA will review and revise standards of performance from stationary sources from time to time, but it does not empower EPA to repeal the existing standards and start the rulemaking process anew each time the standards are revised. *See* 42 U.S.C. § 7411(b)(1)(B), (g).

By way of additional background, in 2003, several of the States and Cities, as well as other parties, sued EPA to compel regulation of greenhouse gas emissions from new motor vehicles under section 202 of the Clean Air Act. The Supreme Court held that the Act's broad definition of "air pollutant" unambiguously covers greenhouse gases, and that EPA was accordingly obliged "to regulate emissions of the deleterious pollutant" if it found that greenhouse gas emissions endanger public health or welfare. *Massachusetts v. EPA*, 549 U.S. 497, 528-29, 533 (2007). EPA subsequently found that greenhouse gases, including carbon dioxide, endanger public health and welfare by causing more intense, frequent, and long-lasting heat waves; worse smog in cities; longer and more severe droughts; more intense storms,

hurricanes, and floods; the spread of disease; and a dramatic rise in sea levels. 74 Fed. Reg. 66,496, 66,497, 66,524-25, 66,532-33 (Dec. 15, 2009) (the Endangerment Finding). The D.C. Circuit upheld the Endangerment Finding, and the Supreme Court declined review. *Coal. for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102, 120-21 (D.C. Cir. 2012) (per curiam), *cert. granted in part on other grounds*, 134 S. Ct. 418 (2013), *aff'd in part, rev'd in part, Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427 (2014). The Endangerment Finding remains in effect and is not at issue here. 82 Fed. Reg. at 48,037. As two judges of the D.C Circuit recently recognized, the Endangerment Finding "triggered an affirmative statutory obligation to regulate greenhouse gases." Per Curiam Order, *West Virginia v. EPA*, D.C. Cir. No. 15-1363 (Aug. 8, 2017) (Tatel, Millett, concurring); *see also AEP*, 564 U.S. at 426-427 (Clean Air Act "directs the EPA to establish emissions standards for categories of stationary sources" where pollution from those sources endangers public health or welfare).

To spur EPA to regulate greenhouse-gas emissions, some of the States and Cities and nonprofit organizations sued EPA for failing to establish emission standards and guidelines for carbon dioxide from new and existing power plants under section 111 of the Act. *See New York v. EPA*, No. 06-1322 (D.C. Cir., filed Sept. 13, 2006). After the Supreme Court decided *Massachusetts*, the D.C. Circuit remanded *New York* to the agency for further proceedings in light of that case. Per Curiam Order, *id.*, ECF#1068502 (Sept. 24, 2007). In 2010, the parties settled *New York* after EPA agreed to proceed with rulemaking under section 111 by May 2012. *See* 75 Fed. Reg. 82,393 (Dec. 30, 2010). EPA's rulemaking process culminated – more than three years after the agreed-upon deadline – in the Clean Power Plan.

In short, through litigation, the States and Cities have compelled EPA to fulfill its statutory duty to regulate greenhouse gas emissions from power plants in the form of the Clean Power Plan. EPA now proposes to return to the pre-*New York* remand state of affairs by repealing the Clean Power Plan without promulgating any replacement or even providing any concrete timeframe for when a replacement might be promulgated. Although EPA may change its policy with respect to how to regulate carbon pollution from power plants (provided that new policy is lawful), it cannot simply announce a policy of non-regulation in contravention of its statutory duties. Rather, the "new policy" must be "permissible under the statute." *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009).

The Supreme Court held more than ten years ago that "[i]f EPA makes a finding of endangerment, the Clean Air Act requires the Agency to regulate emissions of the dangerous pollutant." *Massachusetts*, 549 U.S. at 533. According to the Court, "[u]nder the clear terms of the Clean Air Act, EPA can avoid taking further action only if it determines that greenhouse gases do not contribute to climate change or if it provides some reasonable explanation as to why it cannot or will not exercise its discretion to determine whether they do." *Id.* In light of this clear description of EPA's obligation to regulate greenhouse gas emissions as air pollutants, the D.C. Circuit remanded *New York v. EPA* to the agency for further proceedings. As discussed above, EPA later determined in the Endangerment Finding that greenhouse gas emissions do endanger public health and welfare. 74 Fed. Reg. 66,496.[20] In light of the Supreme Court's

[20] Although *Massachusetts* related only to greenhouse gas emissions from mobile sources, the Supreme Court in *AEP* recognized that the Clean Air Act also "directs the EPA to establish emissions standards for categories of stationary sources" where pollution from those sources endangers public

decisions and EPA's Endangerment Finding, doing nothing with respect to stationary sources that emit the most carbon pollution—as EPA's proposed repeal contemplates—is not permissible under the Clean Air Act. *FCC v. Fox Television*, 556 U.S. at 515.

B. EPA Failed to Consider Alternatives to Non-Regulation Supported by the Record.

Repeal without replacement is not only an impermissible construction of the statute, but also arbitrary and capricious because EPA did not consider whether the pollution reductions required in the Clean Power Plan could be achieved through the application of systems of emission reduction that EPA previously rejected as the "best" systems, but that EPA apparently still considers to be systems under its interpretation discussed in the proposed repeal.[21] EPA fails to demonstrate that the emission limits set forth in the Clean Power Plan could not be established based on EPA's identification of a different "best system of emission reduction" ("best system" or "BSER") supported by the existing administrative record. Instead, EPA simply states that it "is not taking comment on on-site efficiency measures with this proposal." 82 Fed. Reg. at 48,039 n.5. However, EPA does not need to take comment "on on-site efficiency measures" or other measures such as co-firing or carbon capture and storage (CCS) because the record is already full of information regarding their availability and cost-effectiveness. EPA arbitrarily and capriciously failed to engage with its own record in this regard. *See Motor Vehicle Mfrs Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 42 (1983) ("*State Farm*") (noting that Congress "established a presumption . . . *against* changes in current policy that are not justified by the rulemaking record") (emphasis added).

In the Clean Power Plan, EPA found that coal-fired power plants could reduce carbon dioxide emissions by "co-firing" with natural gas or by implementing carbon capture and storage (CCS). *See* 80 Fed. Reg. at 64,727. These measures are ones that would qualify as "systems of emission reduction" even under a constrained view of section 111.[22] EPA previously concluded that these measures could not be considered part of the <u>best</u> system because "co-fired and CCS measures are more expensive than other available measures for existing sources" – specifically, the generation shifting measures represented by building blocks two (reducing generation from

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health or welfare. *AEP*, 564 U.S. at 426-427. EPA previously concluded in a separate rulemaking that a separate endangerment finding for greenhouse gas emissions from stationary sources is not required, *see* 80 Fed. Reg. at 64,529-31, and has not proposed to depart from that interpretation. *See* 82 Fed. Reg. at 61,508-509. In any case, the Clean Power Plan confirmed that the 2009 Endangerment Finding for greenhouse gas emissions applies and extends to power plants. *See, e.g.*, 80 Fed. Reg. at 64,683-88 (concluding that "recent scientific assessments" since the 2009 endangerment finding "confirm and strengthen the conclusion that GHGs endanger public health," and "public welfare," and noting that power plants "are by far the largest emitters of GHGs among stationary sources").

[21] As noted below, EPA has failed to reasonably explain its purported new interpretation of the Clean Air Act or how building blocks two and three of the Clean Power Plan do not satisfy it. *See* Points IV.B and V, *infra*.

[22] *See* 80 Fed. Reg. at 64,727 (identifying "co-firing" a coal plant with natural gas and CCS as "measures that reduce individual affected [power plants'] CO2 emission rates," which presumably would fit within a constrained interpretation of the Clean Air Act that would preclude EPA from considering building blocks two and three of the Clean Power Plan as "system[s] of emission reduction;" *see also* 82 Fed. Reg. at 61,517.

higher-emitting affected steam generating units by an amount that can be replaced by increased generation from lower-emitting existing natural gas combined cycle units) and three (reducing generation from affected fuel-fired generating units by an amount that can be replaced by increased generation from new zero-emitting renewable energy generating capacity). *See id.* at 64,667, 64,727-28. If EPA now thinks that the less-expensive building blocks two and three are legally impermissible, it must evaluate the degree of emission limitation achievable through application of a best system that includes the co-firing and CCS methods that it previously ruled out based on the availability of those less expensive measures. *See id.* at 64,728 (even if EPA set emission guidelines based on co-firing and CCS, most power plants "would rely on the lower cost option of substituting lower- or zero-emitting generation or, as a related matter, reducing generation"). The Clean Air Act specifically contemplates that EPA will review and revise standards of performance from stationary sources from time to time, without empowering EPA to repeal the existing standards, leaving sources of that harmful pollution unregulated while EPA contemplates starting the rulemaking process anew. 42 U.S.C. § 111(b)(1)(B), (g).

EPA appears to have presumed the outcome of this analysis of alternative systems by stating—without support—that the Clean Power Plan "established performance standards for coal-fired plants assuming a uniform emissions rate well below that which could be met by existing units through any retrofit technology of reasonable cost available at the time." 82 Fed. Reg. 48,037. Although EPA is unclear on this point, this statement can only mean either that EPA did not consider co-firing because it does not believe that it is a "retrofit technology" or that EPA reached a different conclusion about co-firing in the proposed repeal without describing, in any way, the basis or analytical path for that conclusion. Neither of these meanings passes muster. Failure to consider an available alternative technology as a basis for regulation is among the "most obvious reason[s]" for finding an agency's rescission of a rule arbitrary and capricious. *State Farm*, 463 U.S. at 46-48. That would be particularly true here, given that section 111 is not limited to consideration of "retrofit technolog[ies]." And, of course, agencies must support and explain the bases for their conclusions.

EPA has consistently stated that generation shifting is not the only system of emission reduction that can achieve the limits in the Clean Power Plan; it is just the least costly of the systems that can. 80 Fed. Reg. 64,727-28, 64,769; *see also* EPA's Brief in *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. March 28, 2016), ECF#16059110 at 14 (generation shifting achieves a higher degree of emission limitation that might otherwise have required more expensive investments in end-of-the-stack technologies at their particular plants) (citing 80 Fed. Reg. at 64,782 n.604, 64,795-811); *see also id.* at 59 ("While the Best System informs the stringency of emission-reduction targets, the Rule grants states almost complete flexibility to decide how to meet those targets. For example, if a state prefers a plant-by-plant command-and-control technological approach to reducing emissions, it could compel its coal plants to switch their fuel to natural gas, or require carbon sequestration where feasible.").

In addition, more recently when it denied petitions to reconsider the Clean Power Plan last year, EPA made a number of findings regarding significant emission reductions achievable at existing power plants using alternatives to best system measures, such as fuel switching, CCS, and demand side energy efficiency. *See* EPA, *Basis for Denial of Petitions to Reconsider and Petitions to Stay the CAA section 111(d) Emission Guidelines for Greenhouse Gas Emissions*

and Compliance Times for Electric Utility Generating Units (Jan. 11, 2017) ("EPA Reconsideration Denial"), Appendix 3 (JA, Att. F6). EPA concluded that "[a]t the state level, we observe that application of the non-BSER measures [] to the 2012 baseline data for each state results in an emissions estimate that is lower than the 2030 goal for nearly every state [subject to the Clean Power Plan] (except New Jersey and Rhode Island." *Id.*, Appendix 3 at 17.

By erroneously assuming that there is no other basis for establishing the Clean Power Plan's emission limits other than through the best system that EPA chose (and which the repeal proposal wrongly disavows), the repeal proposal arbitrarily and capriciously ignores and/or mischaracterizes the record, such that EPA cannot articulate a rational connection between the facts it has found and the conclusions it draws. *See State Farm*, 463 U.S. at 43.

C. The Clean Air Act and the Record Contradict EPA's Assertion that the Clean Power Plan's Magnitude Requires Repeal without Replacement.

EPA contends that it must repeal the Clean Power Plan now (without a replacement in effect) because "[i]t is not in the interests of the EPA . . . to expend its resources along the path of implementing" the Clean Power Plan, 82 Fed. Reg. at 48,038. This contention is unfounded. EPA fails to acknowledge that the Supreme Court has stayed the Clean Power Plan, making any expenditure of resources by EPA to implement it wholly conjectural at this point. Indeed, the EPA Administrator previously relied on the Supreme Court stay to assure states that they "have no obligation to spend resources to comply" with the Clean Power Plan. *E.g.* Letter from E. Scott Pruitt to Governor Andrew Cuomo (Mar. 30, 2017) (attached hereto as ***Exhibit 3***).[23] It is wholly disingenuous for EPA to now claim that it must rush through a repeal of the Clean Power Plan and fail to meaningfully engage with its own record to avoid the expenditure of resources.

EPA also claims that "it is not appropriate" for a rule of the "magnitude" and "level of impact" of the Clean Power Plan to remain in existence during "a potential, successive rulemaking process." 82 Fed. Reg. at 48,038. EPA fails to acknowledge its recent conclusion that trends in the power sector towards low- and zero-emitting electricity generation since the promulgation of the Clean Power Plan have significantly reduced any such impact, making it *easier* for states to design their plans and for sources to comply with the rule at a significantly lower cost than initially projected. EPA Reconsideration Denial at 22-26.

Moreover, EPA's concerns regarding what is in its "interests" or what is "appropriate" amount to policy preferences. "The agency's policy preferences cannot trump the words of the statute." *National Treasury Employees Union v. Chertoff*, 452 F.3d 839, 865 (D.C. Cir. 2006). Although EPA under the current Administration might prefer not to regulate greenhouse gas emissions from stationary sources at all, it cannot simply ignore its statutory obligation to do so. The open-ended Advance Notice of Proposed Rulemaking for a replacement rule to regulate greenhouse gas emissions—which seeks to reset the administrative process when EPA already

[23] As discussed in the response to this letter by many of the States and Cities, Administrator Pruitt's view of the impact of the Supreme Court's stay on future compliance obligations of states and power plants (*i.e.*, once the stay is lifted), is erroneous. See Letter from Michael J. Myers, New York State Attorney General's Office, to Kevin S. Minoli, EPA (Aug. 30, 2017), available at: https://ag.ny.gov/sites/default/files/2017_0830_letter_to_epa_re_cpp_stay.pdf.

has an ample administrative record to form the basis for regulation before it—is wholly inadequate to meet EPA's obligations under the Clean Air Act. *See* 82 Fed. Reg. at 61,510 (outlining a broad range of solicited comments, including on issues relating to possible heat-rate improvements and CCS measures at existing power plants). *See*, *generally*, Comments of States and Cities on EPA's Advance Notice of Proposed Rulemaking (Feb. 26, 2018).[24]

IV. EPA HAS FAILED TO REASONABLY EXPLAIN ITS LEGAL INTERPRETATION BEHIND THE PROPOSED REPEAL OR HOW THE CLEAN POWER PLAN IS INCONSISTENT WITH THAT INTERPRETATION

As discussed below in Point V, *infra*, EPA's position that the Clean Power Plan must be repealed because it is inconsistent with the Clean Air Act is wrong. Before discussing the numerous reasons why that is so, the States and Cities initially address how EPA has fundamentally failed to explain its statutory interpretation behind the proposed repeal or how the Clean Power Plan is inconsistent with that interpretation. First, as the sole basis of the proposed repeal, EPA purports to reinterpret the phrase "best system of emission reduction" in section 111. But the interpretation described does not actually appear to be materially different from the one discussed in the Clean Power Plan, or, at a minimum, EPA has failed to adequately identify and explain the differences. Second, even accepting EPA's characterization of its interpretation as different, the "best system" identified in the Clean Power Plan fits well within that proposed interpretation, and such interpretation cannot, therefore, support repeal. In reality, what EPA appears to be doing, without saying so, is offering a new characterization of the best system identified in the Clean Power Plan. It is that new mischaracterization that is the sole basis of EPA's purported reinterpretation and its rejection of the Clean Power Plan. Mischaracterizations of prior rules cannot support the repeal of those rules. *See State Farm*, 463 U.S. at 42-43.

A. EPA Has Not Reasonably Explained Its Reinterpretation of the Statute that Supposedly Precludes the Clean Power Plan.

EPA claims its sole basis for repealing the Clean Power Plan is a different interpretation of section 111, specifically of the phrase "best system of emission reduction." *See* 82 Fed. Reg. 48,038 (stating that EPA's "reconsidered … interpretation" is the basis for proposed repeal); *id.* ("The basis for the proposed repeal of the CPP is the EPA's proposed interpretation of CAA section 111."). But the purportedly different interpretation, as described by EPA in the proposed repeal, is not actually different and cannot support the repeal.

In finalizing the Clean Power Plan, EPA interpreted "system of emission reduction" "to carry an important limitation: Because the emission guidelines for the existing sources must reflect 'the degree of emission limitation achievable *through the application of* the best system of emission reduction … adequately demonstrated,' the system *must be limited to measures that can be implemented—'appl[ied]'—by the sources themselves*." 80 Fed. Reg. at 64,720 (first emphasis and modification in original, second emphasis added). EPA also "clarified that the components of the BSER must be *implementable by the affected [electric generating units] EGUs*" and "show[ed] that all the components of the BSER have been demonstrated to be

[24] *Available at*: https://ag.ny.gov/sites/default/files/cpp_anpr_comments.pdf.

achievable on that basis." *Id.* at 64,736 (emphasis added). And EPA indicated that "system[s] of emission reduction" would include actions "designed to reduce emissions from [the] affected source … actions [that] enable the affected source to achieve its emissions limitation." *Id.* at 64,761. Further defining these limitations, EPA stated that its "interpretation of 'system of emission reduction' does not include emission reduction measures that the states have authority to mandate without the affected EGUs being able to implement the measures themselves." *Id.* at 64,736.

Here, EPA proposes a purportedly different "source-oriented reading" under which the best system must "be something that can be *applied to* or *at* the source." 82 Fed. Reg. at 48,039 (emphasis in original); *see also id.* ("best system of emission reduction" would be limited to "measures that can be *applied to or at* an individual stationary source) (emphasis in original); *id.* at 48,039, n.5 (limiting the best system to "measures … that apply at, to, and for a particular source").

The only discernible differences between this purportedly changed interpretation and the interpretation in the Clean Power Plan, however, are the prepositions used: the latter referring to whether the system can be applied *by* the source to reduce emissions *from* the source and the former referring to whether the system can be applied *to* or *at* the source. EPA fails to acknowledge these similarities, or, in fact, to actually discuss the interpretation articulated in the Clean Power Plan. EPA also fails to explain how a system that can be applied *by* the source to reduce emissions *from* that source is different from a system that can be applied *to*, *at*, or *for* the source to reduce those same emissions. Describing the purportedly "changed" interpretation as "source-oriented" does not provide this explanation, given that EPA's interpretation in the Clean Power Plan was also source-oriented, expressly focusing on measures that would reduce emissions at or from the affected source. *See also* 80 Fed. Reg. 64,672 (describing Clean Power Plan as "establish[ing] source-level emission performance rates"); *see also id.* at 64,674-75.

Rather than discussing the Clean Power Plan's interpretation of the best system and then distinguishing it, EPA mischaracterizes the former interpretation. For example, EPA suggests that the Clean Power Plan interpreted the best system in a way that would result in emissions standards "for other sources or entities," rather than "for any existing source" covered by the Rule. 82 Fed. Reg. at 48,039. But that is simply not true. Indeed, the Clean Power Plan could not have been more clear that the emissions guidelines, and the standards states would set, would require emissions reductions from covered sources. *E.g.*, 80 Fed. Reg. at 64,745 ("Building block 2 is a 'system of emission reduction' for steam EGUs because [it] will result in reduced generation and emission from steam EGUs"). In the proposed repeal, EPA points to no standards created for sources or entities other than those covered by the Clean Power Plan, and these mischaracterizations of the Plan do not illuminate the purportedly new interpretation.

Likewise, EPA purports to distance its changed interpretation from the one underlying the Clean Power Plan by claiming that the Plan "established performance standards for coal-fired plants assuming a uniform emissions rate well below that which could be met by existing units through any retrofit technology of reasonable costs available at the time." 82 Fed. Reg. at 48,037. Neither the interpretation in the Clean Power Plan nor the one in the proposed repeal, however, limits systems of emission reduction to "retrofit technolog[ies]," so this statement does not illuminate what is "new" about the proposed interpretation. In any event, the Clean Power Plan

did not establish performance standards that are unattainable by existing coal-fired plants. It actually set only emissions guidelines, leaving the performance standards to be established by the states in their plans. Furthermore, there is no question that a coal-fired plant could meet any uniform mass standard through existing technology, given that no technology—beyond curtailed operations—would be necessary to comply.

In the end, EPA's discussion of its purportedly new interpretation raises more questions than it answers. For example, EPA acknowledges that Congress expressly indicated that "pre-combustion cleaning or treatment of fuels" is a "system of emission reduction" (a technological one). 82 Fed. Reg. at 48,040, n.13. EPA also acknowledged that such cleaning can occur off-site from the regulated source. *Id.* Thus, under this view, part of a recognized "system of emission reduction" can occur away from the source. EPA contends that this is still a "source-oriented" measure, and therefore a legitimate "system," because the fuel is ultimately used in the source. *Id.* This suggests that so long as some *part* of the "system" occurs at the source, then it can qualify under such an approach. But EPA appears to contradict itself on that point, suggesting in that same footnote that pre-combustion cleaning occurring off-site is only a "system" because Congress expressly said it was and that other "systems" that only partly occur at the source could not qualify. It is entirely unclear from this whether EPA is saying that systems occurring partly off-site are acceptable or that they are only acceptable if Congress has explicitly mentioned them. The former position is completely consistent with the Clean Power Plan and is thus not new. The latter position might be new, but it would be completely untethered from the statutory text. The relevant provision defines "technological system of continuous emission reduction" as "<u>including</u> pre-combustion cleaning or treatment of fuels." 42 U.S.C. § 7411(a)(7). The use of the word "including" makes it impossible to read this as limiting EPA's consideration to only those systems expressly listed. In any event, it is entirely unclear whether EPA proposes to interpret "system of emission reduction" as including or excluding "systems" that occur partly on-site and partly off-site.

EPA has not accurately or clearly described the interpretation it purports to reject or explained the interpretation it purports to adopt. Because this purportedly new interpretation, and its differences with the prior interpretation, is the sole basis offered in support of the repeal, a repeal would be unlawful. *See, e.g., United Food and Commercial Workers Intern. Union, AFL-CIO, Local 150-A v. NLRB*, 880 F.2d 1422, 1436 (D.C. Cir. 1989) (agencies "must accept responsibility for clarifying and identifying the standards that are guiding its decisions").

B. Even if EPA Had Reasonably Explained How Its Source-Specific Interpretation in the Repeal Proposal is Different from the One in the Clean Power Plan, the Plan, Accurately Described, Would Satisfy that Interpretation.

EPA's discussion in the repeal proposal underscores not only that its interpretation is not materially different from the one in the Clean Power Plan but also that the Clean Power Plan's best system fits within the purportedly changed interpretation. For example, EPA now proposes to interpret the best system as limited to "measures … based on a physical or operational change to a building, structure, facility, or installation at that source, rather than measures that the source's owner or operator *can implement on behalf of* the source at another location." 82 Fed. Reg. 48,039 (emphasis original). But, as discussed above, EPA at least appears to acknowledge, as it must, that the best system can include steps that occur off-site—but seems to require that a

step in the best system involves "a measure applicable to and performed at the level of, and at or within the bounds of an individual source." *Id.* at 48,040 n.13. The best system EPA described in the Clean Power Plan fits well within that frame. EPA described "the actions that may be undertaken by individual sources that are therefore also part of the BSER" as "two distinct actions," including increasing lower-emitting generation and "reducing the amount of CO_2-emitting generation." 80 Fed. Reg. at 64,723. This is no different from two distinct actions—one off-site and one on-site—involved in pre-combustion cleaning of fuel (off-site) and the use of that fuel in the facility (on-site) that Congress expressly indicated could be a system of emission reduction.[25]

There is no question that reducing operations is a measure implemented by, at, for, and on a source. In other words, EPA's choice of prepositions is irrelevant to this measure. There is also no question that it is a system of emission reduction that, for power plants, is adequately demonstrated and extremely cost-effective. Indeed, the Clean Power Plan record is replete with evidence of grid-connected power plants reducing operations and shifting generation as a strategy to reduce emissions, including emissions of carbon dioxide.

In the preamble to the Clean Power Plan and accompanying Legal Memorandum, EPA detailed how individual sources can and do achieve emission limits under pollution regulations by reducing their generation. 80 Fed. Reg. at 64,779-82; Legal Mem. at 62-82. For example, legally and practicably-enforceable limitations on a source's operating hours can reduce that source's "potential to emit" beyond levels that would otherwise trigger Clean Air Act obligations. *Id.; see also* 40 CFR 52.21(b)(4) ("Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation ... shall be treated as part of its design if [certain conditions are met]."). Illustrating the point, EPA highlighted a Title V permit obtained by Manitowoc Public Utilities in Wisconsin that "limited the operating hours" of the facility to "not more than 194 hours per month, averaged over any consecutive 12-month period." 80 Fed. Reg. at 64,781; *see also* Legal Memo at 74. These are "emissions limitations" involving a "source-oriented reading" of section 111 that is precisely how EPA now describes its purported reinterpretation. *See* 82 Fed. Reg. at 48,039; *see also id.* at 48,042 ("[T]he BSER should be interpreted as a source-specific measure. . . "). As the discussion of the "potential to emit" provisions related to New Source Review and hazardous air pollutants indicate, the Clean Power Plan is also "in line with other CAA standard-setting provisions." *See id*. at 48,039. And the reduced operation of higher-emitting sources is certainly no less "integral to the operation of a regulated source" than the pre-combustion cleaning or treatment of fuels that Congress indicated, and EPA acknowledges, could lawfully be considered part of a "system." *See id*. at 48,040 n.13. At a minimum, EPA has not identified or explained any differences. Thus, EPA's assertion in the proposed repeal that individual coal-fired plants could not meet the Clean Power Plan's uniform emission rate for

[25] Furthermore, the best system set forth in the Clean Power Plan did not actually require any particular source to engage in the off-site activity. Sources could comply simply by reducing their operations and, therefore, their emissions. *See* 80 Fed. Reg. at 64,709 ("Building blocks 2 and 3 may be implemented through a set of measures, including reduced generation from the fossil fuel-fired EGUs.").

fossil fuel-fired steam generating units through measures taken "at" or "to" the unit, *id.* at 48,037/3, is mistaken.

EPA previously rejected the premise of its purported changed interpretation—that generation-shifting measures are not measures that can be applied at or to a source itself—as false. *See* EPA Br. at 45-46. Because of the unique interconnected nature of the nation's electricity system, generation shifting does in fact incorporate changes to an individual plant's physical operations. As EPA previously explained in rejecting arguments that largely mirror its interpretation in the proposed repeal: "a particular plant may change its production process to increase or reduce its level of generation, and that action—in and of itself—accomplishes generation-shifting, because other sources must decrease or increase commensurately their operations to balance supply and demand." *Id.*

In sum, EPA is not proposing to reinterpret the statute. It is proposing, rather, to re-characterize the Clean Power Plan (inaccurately). An agency's mischaracterization of its own rule cannot form the basis for repeal of that rule. Otherwise, agencies could repeal rules at will, without providing the reasoned basis the law requires. *See State Farm*, 463 U.S. at 43.

V. EPA'S PROPOSED REPEAL OF THE CLEAN POWER PLAN IS CONTRARY TO LAW AND ARBITRARY AND CAPRICIOUS

If, as EPA claims, it is proposing a different interpretation of the best system of emission reduction with which the Clean Power Plan is incompatible, that interpretation would be unlawful as a matter of statutory construction, congressional intent, and facts on the ground. Such interpretation would exceed the agency's statutory authority and be inconsistent with the language and intent of section 111 of the Clean Air Act. It would irrationally cabin EPA's authority to address the largest sources of carbon pollution, which pose a "monumental threat to Americans' health and welfare," *see* EPA Br. at 1, and read the statute as mandating that EPA ignore how regulated sources already operate and reduce their emissions.

Section 111 plainly instructs EPA to consider any "system" of emission reduction that has been adequately demonstrated when establishing emission guidelines. Congress intentionally used language in the Clean Air Act that compels EPA to consider a broad array of emission-reduction measures to best meet the statutory purpose of protecting public health and welfare. After thoroughly considering the way in which power plants operate due to their connection on the grid and how their output of electricity—and pollution—are closely related, EPA concluded that measures through which power plants already reduce emissions through replacing higher-emitting generation with lower-emitting generation, or "generation shifting," was a "system" of emission reduction that was adequately demonstrated. EPA cited the widespread use by power generators of this method to control emissions and EPA's reliance on such measures in prior Clean Air Act programs and rules for the power sector. EPA further determined that, based on the unique characteristics of carbon pollution and the interconnected nature of the power sector, these were the "best" measures to reduce emissions considering the degree of reductions achieved, costs, energy requirements, and non-air quality health and environmental impacts.

In the preamble to the Clean Power Plan and accompanying Legal Memorandum, EPA explained in detail its determination that a "system of emission reduction"—as defined under

section 111(a)(1) of the Act and applied under section 111(d)(1)—encompasses a broad range of pollution reduction measures including generation shifting. 80 Fed. Reg. at 64,760-76; Legal Mem. 5-9, 14-18, 84-117. EPA explained that such interpretation: (1) is supported by the plain meaning of "system of emission reduction" and statutory context; (2) accommodates the very design of section 111(d)(1), which acts as a "gap-filler" to address a range of source categories and air pollutants; (3) is supported by the legislative history of section 111(a)(1) and 111(d)(1), which indicates Congress's intent to have EPA consider a wide array of measures, including ones that might be carried out by parties other than the affected sources; and (4) is reasonable in light of other Clean Air Act provisions that give EPA similar authority to consider such measures and by a comparison with other provisions that arguably require controls on the design or operation of an affected source. 80 Fed. Reg. at 64,761-66. EPA further cited several other considerations that supported the reasonableness of its interpretation, including the fact that fossil fuel-fired power plants already can and do apply generation shifting measures to reduce carbon emissions, the fact that prior EPA action under section 111(d) was based in part on generation shifting measures, and the combination of the unique characteristics of carbon dioxide pollution and the utility power sector. *Id.* at 64,724-26, 64,768-76; Legal Mem. at 5-6. EPA vigorously defended these interpretations in the *West Virginia* litigation.

EPA explicitly rejected the arguments of certain commenters that ultimately challenged the rule, such as Utility Air Regulatory Group (UARG) and Oklahoma, that the statutory text precludes EPA from considering generation shifting as a "system" of emission reduction. 80 Fed. Reg. at 64,760-61, 64,766-68. EPA stated that the phrase "system of emission reduction," by its terms and when read in context, contains no such limits and that consideration of generation shifting was consistent with the plain meaning of the deliberately-broad statutory language and context, and EPA's historical interpretation of section 111. In the proposed repeal of the Clean Power Plan, EPA now summarily adopts, in the span of a mere four pages, the very arguments that it had explicitly and in great detail previously concluded were mistaken.

EPA's proposed repeal of the Clean Power Plan fails basic tenets of rational decision-making. To justify its proposal, EPA is required to "examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made." *State Farm*, 463 U.S. at 43. An agency action is "arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, [or] offered an explanation for its decision that runs counter to the evidence before the agency." *Id.* Although agencies are free to change existing policies (within statutory boundaries), they must provide a reasoned explanation for the change. *FCC v. Fox Television*, 556 U.S. at 515. The agency must at least "display awareness that it is changing position" and "show that there are good reasons for the new policy." *Id.* Further, where, as here, a new policy rests on factual or legal determinations that contradict those underlying the agency's prior policy, the agency must provide a more detailed explanation for its policy. *Id.* "Unexplained inconsistency" in agency policy is "a reason for holding an interpretation to be an arbitrary and capricious change from agency practice." *National Cable & Telecommunications Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 981 (2005). An arbitrary and capricious regulation of this sort is itself unlawful and receives no deference. *Encino Motorcars, LLC v. Navarro*, -- U.S. -, 136 S. Ct. 2117, 2126 (2016).

EPA fails to provide a reasoned explanation for its proposed repeal of the Clean Power Plan. Its contention that the Clean Power Plan is unlawful based on a consideration of the statutory text, Congressional intent, EPA's prior understanding, statutory context, and broader policy concerns is completely erroneous. Rather, an interpretation of section 111 that requires EPA to disregard measures that sources actually use to reduce emissions, such as generation shifting, in determining the best system of emission reduction, is inconsistent with the language and purposes of the Clean Air Act, as well as with EPA's previous interpretation and applications of the statutory language. Further, EPA fails to provide any explanation, let alone the required detailed or reasoned one, for "disregarding facts and circumstances that underlay or were engendered by [its] prior policy," *see FCC v. Fox Television*, 556 U.S. at 515. Specifically, EPA has not explained its decision to now disregard the fact that the sources at issue here deploy generation shifting as a way to reduce emissions. Rather, in proposing to repeal the Clean Power Plan, EPA fails to acknowledge or explain crucial inconsistencies between its prior position and its new position, which is based on both a misreading of the Clean Air Act and a fundamental misconstruction of the Plan itself. The agency's interpretation in the proposed repeal is also completely devoid of any recognition of the dire threat posed by climate change, the interconnected nature of power plant generation of electricity and pollution, and the nature of carbon dioxide as a widely-dispersed pollutant.

A. Statutory Text

1. EPA's proposed repeal of the Clean Power Plan is contrary to the plain meaning and context of the relevant statutory language.

EPA proposes to interpret the phrase "through application of the best system of emission reduction" contained in section 111(a)(1) "as requiring that the BSER be something that can be *applied to* or *at* the source and not something that the source's owner or operator can implement *on behalf* of the source at another location." 82 Fed. Reg. at 48,039 (emphasis in original). As discussed above in Point IV.B, the "system of emission reduction" identified in the Clean Power Plan comports with this proposed interpretation. Any narrow and contrary interpretation, including the one on which EPA purports to base its repeal, would read textual limitations into the statutory language that would conflict with the plain meaning and context of the phrase "system of emission reduction" as it appears in section 111(a)(1) and as it is applied under section 111(d)(1).

The phrase "system of emission reduction," which itself is not defined in the Clean Air Act, appears in the definition of "standard of performance" under section 111(a)(1). EPA's determination of the "best system of emission reduction" under section 111(a)(1) serves as the basis for standards of performance that EPA establishes for new sources under section 111(b), and that states establish for any existing source under section 111(d)(1). In neither section 111(a)(1) nor section 111(d)(1) does the statute say the best system must be applicable "to" or "at" a source. Those words simply do not appear in the statutory text. Thus, even if generation shifting was not applicable "to" or "at" covered sources, that would still not provide a lawful basis for repeal of the Clean Power Plan. Reading those words into the statute is contrary to the plain meaning and context of the operative language that actually appears in the statute: "system of emission reduction."

Because the phrase "system of emission reduction" is not defined, EPA must look to its ordinary meaning. *See, e.g.*, 80 Fed. Reg. at 64,762; *see also Engine Mfrs. Ass'n v. S. Coast Air Quality Mgmt. Dist.*, 541 U.S. 246, 252-53 (2004) (where words used in a statute are not defined, the assumption is that "the ordinary meaning of that language accurately expresses the legislative purpose."). At the time Congress created the new source performance standards (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 Int'l Dictionary of the English Language Unabridged 2322 (1968). Generation shifting is unquestionably a "system" of emission reduction under this definition. It involves actions that power plants—diverse parts that are integrated on a common power grid—can take to reduce emissions.

As EPA determined in the Clean Power Plan, the phrase "system of emission reduction" cannot rationally be read to preclude generation shifting; it is a deliberately broad term that must necessarily encompass actions that may occur off-site but that result in emission reductions from the covered sources. *See, e.g.*, 80 Fed. Reg. at 64,761-62; *see also* EPA Br. at 27. In other words, consistent with congressional intent in the Act, whether or not a measure can be a "system of emission reduction" turns on whether it reduces emissions from the covered sources. This reading is supported by the context in which the phrase appears in section 111. Although that context does contain important limitations, *see, e.g., id.* (stating that "because the 'degree of emission limitation' must be '*achievable* through the *application* of the best system of emission reduction,' . . ., the 'system of emission reduction' must be limited to a set of measures that work together to reduce emissions and that are implementable by the sources themselves"), EPA found that generation shifting measures fall within such limitations. *See, e.g.*, 80 Fed. Reg. at 64,709 ("All of these measures are components of a 'system of emission reduction' for the affected EGUs because they entail actions that the affected EGUs may themselves undertake that have the effect of reducing their emissions."). Further, because the statute requires the "system of emission reduction" EPA selects to be "adequately demonstrated" and the "best" available system, statutory context clearly requires EPA to look at methods sources themselves use to reduce emissions and to select the best such method. Generation shifting must be a "system of emission reduction" within the plain meaning and context of the statutory text because it is the method that power plants themselves have chosen to reduce their own emissions. *See* 80 Fed. Reg. at 64,725, 64,769-72. To conclude otherwise, as EPA proposes to do here, is to conclude that Congress intended EPA to ignore reality—to ignore the means by which the very sources EPA intends to regulate are reducing the very pollution EPA intends to control. Interpreting the Act in this way—to preclude consideration of demonstrated and effective means of pollution control, currently being deployed by the sources at issue, when determining the "best system of emission reduction"—is arbitrary and capricious in light of the plain meaning and context of the statutory language in section 111.

EPA specifically rejected in the Clean Power Plan the additional limitation it now proposes as inconsistent with both the deliberately broad plain meaning of "system of emission reduction" and the context in which that phrase appears. *See, e.g., id.* at 64,766-77 ("We see nothing in CAA section 111(d)(1) or (a)(1) which by its terms limits CAA section 111 to measures that must be integrated into the sources' own design or operations."). EPA's cursory explanation in the proposed repeal for its complete reversal of position fails to satisfy *FCC v. Fox Television's* more detailed justification standard.

EPA further attempts to justify a repeal of the Clean Power Plan by asserting that the best system interpretation "is also guided by CAA section 111(d)'s direction that standards be established '*for* any existing source,' . . . and not for other sources or entities." 82 Fed. Reg. at 48,039. EPA properly rejected this reasoning in rulemaking and in litigation as conflating the future emission standards that states set for particular sources with the "best system of emission reduction" that EPA uses to establish the degree of emission limitation that those standards must collectively achieve. EPA Br. at 60-61. Under section 111(d), it is generally states, not EPA, that establish emission standards "for" individual sources. EPA's first job, and what it did in the Clean Power Plan, is to determine the degree of emission limitation that such standards must reflect based on what can be achieved by sources through application of the best system of emission reduction. Although EPA's determination of the best system of emission reduction informs the stringency of the emission standards, it is state plans that establish standards of performance "for" each affected source. The Clean Power Plan is consistent with that direction. It contemplates that states will set the emission standards for and applicable to individual sources and it does not, as EPA implies in the proposed repeal, establish standards "for other sources or entities."

2. EPA's reliance on other Clean Air Act provisions that include the word "application" is misplaced.

EPA points to other Clean Air Act "standard-setting provisions" that, like section 111, use the phrase "through application of" as support for its claim that "the term 'application' signals a physical or operational change to a source" of a kind inconsistent with generation shifting. 82 Fed Reg. at 48,040. For instance, EPA cites to the maximum achievable control technology (MACT) provision under section 112(d)(2) and the definition of best available control technology (BACT) under section 169(3), which provide for MACT or BACT to be achieved "through application of" various measures. EPA's contention that these provisions support its position that the Clean Power Plan is unlawful is without merit.

First, the fact that these provisions specifically refer to the implementation of "technology" arguably suggests a narrower construction compared to section 111's purposefully more inclusive "system of emission reduction" language. Also, these provisions include specific lists of measures to be used to achieve the required emission limitation, arguably suggesting a narrower class of measures than intended by section 111. In any event, the measures listed under the MACT provision are non-exclusive and on their face are not limited to on-site measures. *See* 42 U.S.C. § 7412(d)(2) (calling for "application of measures, processes, methods, systems or techniques *including, but not limited to* …") (emphasis added). Even if the measures allowed under these provisions were more limited, the Supreme Court has recognized that in light of the differences between the NSPS and Prevention of Significant Deterioration programs, it is reasonable for EPA to adopt different meanings of the same statutory term to further the aims of those provisions. *See Environmental Defense Fund v. Duke Energy*, 549 U.S. 561 (2007).[26]

[26] The position that these three statutory provisions must be identically construed is also undercut by Congress's deliberate decisions throughout the history of the NSPS program to make clear that section 111(d) guidelines, in contrast, need not require the implementation of technology to limit emissions. *See* 80 Fed. Reg. at 64,701-02 (discussing changes made in the 1977 and 1990 amendments to section 111); *see also* Section V.B, *infra* (detailing additional indicia of congressional intent refuting EPA's position).

Second, EPA is simply incorrect in its apparent assumption that generation shifting measures do not qualify as operational changes to a source. For example, the agency has previously noted that decreasing operations at more carbon-intensive plants (coal or natural gas) constitutes an operational change applied at each affected source. *See* EPA Br. at 45-46.

B. Congressional Intent

1. Congress intended EPA to consider a broad range of measures to protect public health and welfare from a range of air pollutants and sources.

EPA's proposed repeal of the Clean Power Plan is also contrary to Congressional intent. Congress passed the Clean Air Act to protect public health and welfare from dangerous air pollutants by comprehensively addressing air pollution, encouraging pollution prevention, and, particularly, protecting against urgent and severe threats. 80 Fed. Reg. at 64,761, 64,773-75. In the 1970 amendments to the Clean Air Act, Congress established a regulatory regime for existing stationary sources of air pollutants designed to comprehensively address three categories of pollutants emitted from stationary sources: (1) criteria pollutants (regulated under section 110); (2) hazardous air pollutants (regulated under section 112); and (3) other pollutants "that are (or may be) harmful to public health or welfare but are not" criteria or hazardous air pollutants. 40 Fed. Reg. 53,340 (Nov. 17, 1975) (EPA regulations implementing section 111(d)). Congress specifically designed section 111(d) to cover this third category, intending it to apply to a wide range of source categories and air pollutants. 80 Fed. Reg. at 64,763 & n.474 (citing S. Rep. No. 91-1196, at 20 (Sept. 17, 1970), 1970 CAA Legis. Hist. at 420 ("[T]here should be no gaps in control activities pertaining to stationary source emissions that pose any significant danger to public health or welfare").

EPA identified the "catch-all" or "gap-filling" nature of section 111(d)(1) as support for its plain meaning interpretation that a "system of emission reduction" encompasses a broad range of measures, including generation shifting. 80 Fed. Reg. at 64,763 ("Because Congress designed CAA section 111(d) to cover a wide range of air pollutants—including ones that Congress may not have been aware of at the time it enacted the provision—and a wide range of industries, it is logical that Congress intended that the BSER provision, as applied to CAA section 111(d), have a broad scope so as to accommodate the wide range of air pollutants and source categories"). EPA also detailed in the Clean Power Plan how including generation shifting measures as a "system of emission reduction" is compelled by the protective purposes of the Clean Air Act. 80 Fed. Reg. at 64,773-75. EPA summarized:

> Climate change has become the nation's most important environmental problem. We are now at a critical juncture to take meaningful action to curb the growth in CO_2 emissions and forestall the impending consequences of prior inaction. CO_2 emissions from existing fossil fuel-fired power plants are by far the largest source of stationary source emissions. They emit almost three times as much CO_2 as do the next nine categories combined, and approximately the same amount of CO_2 emissions as all of the nation's mobile sources. The only controls available that can reduce CO_2 emissions from existing power plants in amounts commensurate with the problems they pose are the measures in building blocks 2 and 3, or far more expensive measures such as CCS.

Id. at 64,774-75.

By contrast, EPA fails to explain how its interpretation in the proposed repeal of the Clean Power Plan is consistent with the protective purposes of the Clean Air Act and the catch-all nature of section 111. As discussed above, EPA is obligated to regulate the largest stationary source of greenhouse gases that endanger human health and the environment. The Clean Power Plan is designed to address what EPA has acknowledged is a serious and global problem. *See* 74 Fed. Reg. 66,496. Yet, the proposed repeal notice barely even acknowledges the massive risks posed by global climate change, much less makes the case for its narrow reading of "system" that would allow EPA to ignore how these very sources currently reduce this very pollution. *See* 82 Fed. Reg. at 48,044 (only reference to "climate change" in proposed repeal, in regulatory impact analysis section).

2. EPA's proposed repeal of the Clean Power Plan is contrary to Congress's intent, manifest in the plain language of the statute, that EPA choose the "best" system of emission reduction that has been "adequately demonstrated."

In the Clean Power Plan, EPA identified measures including the generation shifting measures of building blocks two and three, that EPA determined collectively constitute the "best" system of emission reduction, applying the statutory considerations of degree of reductions achieved, costs, energy requirements, and non-air quality health and environmental impacts. 80 Fed. Reg. at 64,744-51. EPA determined that these measures were not only adequately demonstrated but the most cost-effective available system for sources to meaningfully limit their carbon dioxide emissions. *Id.* EPA considered other methods for reducing emissions from affected sources, such as co-firing with natural gas, implementation of CCS, conversion to natural gas, and efficiency improvements. However, EPA determined that such methods for reducing carbon dioxide emissions from power plants are either more expensive than generation shifting (such as natural gas co-firing and CCS), or are capable of achieving far less reduction in carbon dioxide emissions (such as heat rate improvement measures). 80 Fed. Reg. at 64,727-28, 64,769.

A restrictive interpretation that prohibits consideration of generation shifting measures would be inconsistent with Congress's specific instruction to EPA in section 111 to choose the "best" system of emission reduction that has been "adequately demonstrated." Because EPA's restrictive interpretation unreasonably forecloses EPA from considering the very measures that are most effective at reducing emissions, already widely used, and that power plants themselves choose to reduce emissions, it is an impermissible construction of section 111(a)(1). *See Chevron, U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 842-43 (1984); *Utility Air Regulatory Group v. EPA*, 134 S. Ct. 2427 (2014) (holding that an agency must "operate within the bounds of reasonable interpretation," that a "reasonable statutory interpretation must account for both 'the specific context in which . . . language is used' and 'the broader context of the statute as a whole,'" and "an agency interpretation that is 'inconsisten[t] with the design and structure of the statute as a whole,' . . ., does not merit deference") (citations omitted).

Similarly, such an interpretation would be arbitrary and capricious because by ignoring evidence of how power plants have successfully reduced carbon pollution, the agency would have "entirely failed to consider an important aspect of the problem[.]" *State Farm*, 463 U.S. at

43. Specifically, EPA ignores the fact that "generation shifting" is a well-established "system" of emissions control, that industry has long used, and that industry commenters asked EPA to consider. *See* Legal Mem. at 14-18 (detailing industry comments that endorse the view that the best system of emission reduction under section 111(d) can encompass generation shifting measures, such as UARG's comments on EPA's Endangerment Finding that: "[f]acility-wide, plant-wide, and company-wide standards would provide valuable flexibility but also complexity in trying to integrate such standards into potential economy-wide programs like trading"). EPA noted in the Clean Power Plan that power plants "have long implemented, and are continuing to implement, the measures in building blocks 2 and 3 for various purposes, including for the purpose of reducing CO_2 emissions." 80 Fed. 64,769 & n.520 (citing various "climate mitigation plans" implemented by utilities). The Clean Power Plan record is replete with information supporting the viability of generation shifting "at" or "by" sources to reduce emissions at and of those sources, which EPA made no attempt to rebut in the repeal proposal. *See, e.g.*, Response to Comments § 3.2, at 4-5 (JA, Att. F26). Indeed, the States submitted comments demonstrating the effectiveness of shifting generation from coal- and oil-fired power plants to cleaner renewable or natural gas-fired power plants. Joint State Comments (EPA-HQ-OAR-2013-0602-23597) at 15-19, 22-24 (JA, Att. D3); RGGI States' Comments (EPA-HQ-OAR-2013-0602-22395) at 3 (JA, Att. D4); California Air Resources Board's Comments (EPA-HQ-OAR-2013-0602-23433), Attachment, at 43 (JA, Att. D1).

As set forth in detail in Appendix B to these comments, the States and Cities have enacted programs that have resulted in shifts to cleaner forms of electricity generation and energy efficiency, successfully cutting carbon pollution from existing power plants without harming grid reliability or impeding economic growth. A few highlights from Appendix B regarding the successes of these state and local programs include:

- ***Substantial reductions in greenhouse gas emissions from the power sector.*** Under the Regional Greenhouse Gas Initiative (RGGI), ten northeastern states (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey,[27] New York, Rhode Island, and Vermont) have cut carbon pollution from the power sector by more than 40 percent since the program began in 2008.

- ***Significant cuts in other harmful pollutants, including mercury, nitrogen oxides, and sulfur dioxide.*** In shifting to cleaner generation, Minnesota has reduced nitrogen oxides and sulfur dioxide from coal-fired boilers by 76 percent and 80 percent, respectively, and mercury emissions by 90 percent.

- ***Continued reliability in the electricity grid.*** Iowa has added large amounts of wind energy to the grid (approximately 7,000 megawatts (MW) of installed capacity) without experiencing reliability problems. More than one-third of the state's electricity generation in 2016 was provided by wind energy.

[27] New Jersey was a member of RGGI during the first three-year compliance period (2009-11), before withdrawing in 2012. New Jersey Governor Philip Murphy has announced that the state will be rejoining RGGI this year. *See* Letter from Gov. Murphy to Governors of Nine RGGI States (Feb. 16, 2018), available at: http://www.nj.gov/dep/docs/letter-to-rggi-governors20180222.pdf.

- ***Lower consumer electricity prices.*** The RGGI states have used the proceeds from allowance auctions to fund investments in energy efficiency, further reducing demand for electricity. Average electricity prices across the region have decreased by 6.4 percent since RGGI took effect, while electricity prices in non-RGGI states have increased by an average of 6.2 percent. In California, due in large part to the state's energy efficiency policies, per-capita electricity use is lower than every other state in the continental U.S. California residents pay some of the lowest monthly power bills out of any state in the country, according to the U.S. Energy Information Administration.

- ***Better economic growth, including green energy jobs.*** According to a September 2017 report by the Clean Energy Trust, Illinois has over 119,000 clean energy jobs (the highest out of twelve Midwestern states) and posted a 4.8 percent clean energy job growth from 2015-16. Similarly, in Minnesota, clean energy jobs grew more than 75 percent between 2000 and 2014, while the total Minnesota economy grew 11 percent during the same time period. Pennsylvania's renewable energy portfolio standard, which requires that 18 percent of electric power come from clean energy sources such as wind and solar by 2021, has helped to grow the clean energy industry: more than 1,300 MW of wind power and nearly 240 MW of solar – which combined is enough energy to power the equivalent of 330,000 homes – has been installed to date and has brought over $2.8 billion in capital investment into the state. According to a recent report by the Analysis Group (attached hereto as ***Exhibit 4***), in 2015-17, the RGGI program led to $1.4 billion of net positive economic activity in the nine-state region.[28]

EPA previously concluded that even if it selected other emission control measures such as co-firing or CCS as the best system of emission reduction, power plants would use generation-shifting—due to its cost-effectiveness—to reduce emissions. 80 Fed. Reg. at 64,728. EPA's proposed repeal ignores these well-demonstrated systems of emission reduction, and does not address EPA's prior conclusions or otherwise distinguish the existing record.

EPA also ignores the integrated nature of the power grid, which by design causes generation to be distributed and shifted among sources, and which allow shifts in generation in order to reduce greenhouse gas emissions. Much of EPA's reasoning for adopting the Clean Power Plan's building blocks was based on the integrated nature of the power grid. 80 Fed. Reg. at 64,728. EPA described at length the unique nature of the power industry, which allows for changes in which generators are operating and for how long as a simple means to reduce power sector pollution. *Id.* at 64,769–72. These shifts already occur in response to policy measures, economic forces, and other factors. 80 Fed. Reg. at 64,677, 64,795. EPA properly rejected arguments that it should ignore the integrated nature of the electricity generating industry, characterizing such an approach as treating each power plant as if it were "hermetically sealed off from the rest of the world." EPA Br. at 61. In the Clean Power Plan, EPA correctly recognized the relationship between the way electricity—and emissions—are generated in the power sector, and the proposed repeal now fails to account for that recognition whatsoever.

[28] The Analysis Group, *The Economic Impacts of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Atlantic States* (April 17, 2018)

3. The selected snippets of legislative history cited by EPA in the proposed repeal fail to support EPA's reading.

With respect to the issue of Congressional intent, EPA confines its discussion in the proposed repeal to select pieces of the legislative history in isolation, in contrast to when EPA adopted the Clean Power Plan, where it comprehensively assessed such history in the context of the larger protective purposes of the Clean Air Act. *Compare* 82 Fed. Reg. at 48,040 *with* 80 Fed. Reg. at 64,763-66. As with the plain language of the statutory text, there is nothing in the legislative history of the Clean Air Act to suggest that Congress intended to limit the measures that EPA could consider or that a source could use in a way that would exclude generation shifting.

As EPA recognized in the Clean Power Plan, the Congress that enacted section 111 in 1970 did not limit the term "standards of performance" to add-on "control technology," but also contemplated "processes, operating methods, *or other alternatives*." 80 Fed. Reg. at 64,764 (citing "Summary of the Provisions of Conference Agreement on the Clean Air Act Amendments of 1970," Sen. Muskie, S. Consideration of H.R. Conf. Rep. No. 91-1763 (Dec. 17, 1970), 1970 CAA Legis. Hist. at 130) (emphasis original)); *see also id.* ("The Senate Committee Report explains that 'performance standards should be met through application of the latest available emission control technology or through *other means of preventing or controlling air pollution*.'" (citing S. Rep. No. 91-1196, at 15-16 (Sept. 17, 1970), 1970 CAA Legis. Hist. at 415-16 (emphasis added by EPA)).) In 1977, Congress emphasized that "best systems" for existing sources under section 111(d) would "not necessarily [be] technological." 80 Fed. Reg. at 64,765 (citing H.R. Rep. No. 95-294 (May 12, 1977), 1977 CAA Legis. Hist. at 2662).

Regardless, as EPA admits in the proposed repeal, "[t]he question of whether a control technique or emission reduction system is or is not 'technological' is a distinct question from whether it applies at and is limited to the level of the individual source." 82 Fed. Reg. at 48,040. There is simply nothing in the legislative history to suggest that, whether technological or not, Congress intended to prohibit EPA from considering methods, such as generation shifting, that are already in use at affected sources. On the contrary, Congress recognized that such measures could include techniques that occurred off-site at facilities owned and operated by third parties, if those actions allow the affected source to meet its emission limitation. For instance, Congress specifically contemplated that a standard of performance could be based on fuel-cleaning techniques implemented by other entities. 80 Fed. Reg. at 64,765 ("Congress intended that standards of performance for electric power plants could be based on measures implemented by other entities, for example, entities that 'wash,' or desulfurize, coal (or, for oil-fired EGUs, that desulfurize oil)"); *see also* Legal Mem. at 85-88 (detailing the history of EPA's and Congress's reliance on coal-cleaning, which has been used in establishing emission limits under section 111).

EPA's attempt in the proposed repeal to distinguish pre-combustion cleaning or treatment of fuels from generation shifting measures by arguing that the former does not necessarily occur off-site and that the use of the cleaned/treated fuels occurs within the bounds of the individual source, 82 Fed. Reg. at 48,040, n.13, is unavailing. It is the off-site, third-party coal cleaning that enables reductions in the amount of pollutants in the fuel and allows the coal to be combusted on-site with fewer emissions. Similarly, under the Clean Power Plan, when clean energy

generation increases—whether on-site or off-site—it supports on-site emission reductions from the regulated source. EPA has failed to account for its inconsistent treatment of the issue of coal-cleaning as a beyond-the-unit measure previously utilized by EPA and endorsed by Congress. *See FCC v. Fox Television*, 556 U.S. at 515-16.

C. EPA's Prior Understanding

In the proposed repeal, EPA erroneously claims that its interpretation of its authority in the Clean Power Plan was novel and that it is proposing to return to its historical understanding of section 111(d) as reflected in prior regulatory actions under this provision. 82 Fed. Reg. at 48,041. However, EPA has never previously adopted such a cramped interpretation of the "best system," and this flawed rationale is not a legitimate basis for the proposed repeal.

1. EPA mischaracterizes prior relevant regulatory actions under section 111.

As EPA explained in the Clean Power Plan, it relied on generation shifting as part of the best system of emission reduction in the only other section 111(d) rule for power plants that EPA has previously promulgated. 80 Fed. Reg. at 64,772. In a rulemaking to control mercury emissions from fossil fuel-fired power plants under section 111(d), 70 Fed. Reg. 28,606 (May 18, 2005) ("Mercury Rule"), EPA established a cap-and-trade program and based the level of the cap partly on the ability of sources to cost-effectively shift generation to lower-emitting plants. As EPA explained in the Clean Power Plan litigation: "By identifying the cap-and-trade program as part of the Best System, EPA recognized that sources need not reduce emissions at their own plants using add-on controls, but could instead use other approaches to reduce emissions, including using 'dispatch changes' (*i.e.*, generation shifting) or buying allowances from sources that had reduced emissions at their plants." EPA Br. at 34 (citing 70 Fed. Reg. at 28,619). Although the Mercury Rule was vacated on grounds unrelated to the nature of the emissions control program, *New Jersey v. EPA*, 517 F.3d 574, 583-84 (D.C. Cir. 2008), it shows that EPA's approach in the Clean Power Plan is not novel. Further, industry representatives strongly supported a cap-and-trade system in the Mercury Rule. *See* UARG Mercury Rule Comments; Joint Respondent Intervenors' Brief in *New Jersey v. EPA*.

EPA now claims in the proposed repeal of the Clean Power Plan that the cap-and-trade program in the Mercury Rule was "ultimately predicated on measures taken at the level of individual sources," 82 Fed. Reg. at 48,041, n.14, and based solely on "control technology available" for installation on individual sources. *Id.* at 48,042, n.21 (citing 70 Fed. Reg. at 28,617). These statements are specious. In the preamble to the Mercury Rule, EPA expressly stated that: "Under the cap-and-trade approach [*i.e.*, the approach it adopted in the rule] we are projecting that Hg reductions result from units that are most cost-effective to install control, which enables those units that are not cost effective to use other approaches for compliance including buying allowances, switching fuels, or making dispatch changes." 70 Fed. Reg. at 28,619 (emphasis added); *see also* Legal. Mem. at 113-16. EPA now ignores this contradictory language and fails to acknowledge—let alone adequately explain—its reversal of its former treatment of the Mercury Rule as set forth in the Clean Power Plan preamble, Legal Memorandum, and litigation briefing. This unexplained inconsistency is a sufficient basis on which to find EPA's proposed repeal to be arbitrary and capricious. *See FCC v. Fox Television*,

556 U.S. at 515-16; *National Cable & Telecommunications Ass'n v. Brand X Internet Servs.*, 545 U.S. at 981.

As support for its purported "return" to its historical understanding related to the best system, EPA also cites to prior rules it has issued under section 111 for industries other than the power sector that it claims have "limited their BSER to physical or operational measures taken at and applicable to the individual sources." 82 Fed. Reg. at 48,041. Setting aside that generation shifting is such a measure, the fact that EPA has not relied on generation shifting for rules applicable to other source categories besides power plants, and for pollutants other than carbon dioxide, is entirely irrelevant. EPA specifically explained in detail in the Clean Power Plan that the uniquely-integrated nature of the utility power sector and the unique characteristics of carbon pollution make generation shifting measures appropriate for consideration as the best system for a rule regulating carbon dioxide emissions from power plants. 80 Fed. Reg. at 64,726, 64,728, 64,768.

2. EPA relies on other prior regulatory snippets that do not support a narrow reading of the statute.

In the proposed repeal, EPA cites to a 1975 rulemaking promulgating procedures and requirements for the submittal of state plans in which EPA describes section 111 as requiring a "technology-based approach." 82 Fed. Reg. at 48,041. EPA claims that this language shows that "EPA clearly interpreted the phrase 'system of emission reduction' to be technology-based and source-based for both CAA section 111(b) standards of performance and CAA section 111(d) emission standards." *Id.* Again, setting aside the fact that the Clean Power Plan is "source-based," EPA's reliance on this language is misplaced. As with the legislative history on which EPA relies, this language does not say that the system must be applied "at" or "to" an individual source, and elsewhere in the proposed repeal EPA admits that is a separate issue from whether a system is technological. *See* 80 Fed. Reg. at 48,040. And EPA also admits that section 111 systems are not limited to technology-based measures anyway. *Id.* at 48,040.

On the other hand, EPA ignores other agency actions that are contrary to its interpretation, including implementing regulations put in place before the Clean Power Plan that clarified that section 111(d) standards may include trading programs (i.e., programs that allow a source to avoid applying controls "at" or "to" its own facilities by paying others to control pollution from their facilities). *See* 40 C.F.R. § 60.21(f) (defining an emission standard under section 111(d) as encompassing "an allowance system").

D. Statutory Context

1. EPA unreasonably dismisses other Clean Air Act programs or rules that were precedents for its selection in the Clean Power Plan of generation shifting as a "system of emission reduction" for the power sector.

EPA now dismisses the relevance of several other previous Clean Air Act programs and rules for the power sector that it determined in the Clean Power Plan provided support for its consideration of generation shifting as an adequately demonstrated system of emission reduction. *Compare* 80 Fed. Reg. 64,770-73; Legal Mem. 98-99, 102; EPA Br. at 32-33, *with* 82 Fed. Reg. at 48,042. For example, EPA previously cited to the 2011 Cross State Air Pollution Rule

(CSAPR), in which it set statewide emissions budgets for power-plant nitrogen oxides and sulfur dioxide emissions, and based those budgets in part on the ability of plants to cost-efficiently shift generation to lower-emitting plants. 80 Fed. Reg. at 64,772 (citing 76 Fed. Reg. 48,452). Generation shifting was also an important component of the two transport rules that preceded CSAPR: the NO_X SIP Call and the Clean Air Interstate Rule. 80 Fed. Reg. at 64,772 n.545, Legal Mem. at 96-98, 100-02.

EPA had also previously pointed to the acid rain cap-and-trade program in Title IV, in which Congress recognized power plants' ability to use generation shifting as one available pollution control strategy for sulfur dioxide emissions. 80 Fed. Reg. at 64,770-71 (citing S. Rep. No. 101-228, at 316 (1989) (identifying strategies for power plants to reduce emissions to include "least-emissions dispatching," *i.e.*, generation shifting)); Legal Mem. at 88-93 (detailing legislative history of Title IV demonstrating Congress's support for dispatch shifts and encouraging renewable energy technologies as cost-effective methods to "reduce emissions of acid rain precursors and *global warming gases*" (citing Sen. Fowler, Sen. Debate on S. 1630 (Apr. 3, 1990), 1990 CAA Legis. Hist. at 7106) (emphasis added)).

EPA now attempts to distinguish these programs on the grounds that Congress expressly established the cap-and-trade program under Title IV and expressly authorized use of marketable permits to implement standards under section 110, such as CSAPR. To the contrary, it is particularly appropriate for EPA to consider generation shifting as a system of emission reduction approach "already endorsed by Congress in a related context," especially given Congress's choice of a capacious word like "system." *See Van Hollen v. FEC*, 811 F.3d 486, 493 (D.C. Cir. 2016); 80 Fed. Reg. at 64,770-71; *see also* Legal Mem. at 92-93 (explicitly rejecting argument that Title IV precludes EPA from considering generation shifting as BSER and instead citing to "strong legislative history indicating that 'conservation and renewables' were intended to become 'a central part of the nation's clean air policies immediately'" (citing Additional Views of Rep. Markey & Rep. Moorhead, H.R. Rep. No. 101-490, at 674 (May 17, 1990)).

2. A narrow interpretation that precludes consideration of generation shifting measures when determining the best system of emission reduction fails to consider states' corresponding flexibility under section 111(d) to adopt standards of performance that allow generation shifting for compliance.

Sections 111(d)(1) and (d)(2) expressly reference section 110, which provides states with flexibility under the National Ambient Air Quality Standards (NAAQS) program to adopt state implementation plans to meet federal emission goals through "other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emission rights)." 42 U.S.C. § 7410(a)(2)(d). It is well-established that states may adopt section 111(d) standards of performance in the form of tradable emission rates or mass limits under appropriate circumstances. *See* 40 C.F.R. § 60.21(f); 80 Fed. Reg. at 64,840-41. And numerous states and industry stakeholders urged in comments to EPA on the Clean Power Plan that states have discretion under section 111(d) to adopt standards in the form of trading programs to facilitate the ability of industry to rely on generation shifting for compliance. 80 Fed. Reg. at 64,733 n.380; Legal Mem. 14-18.

EPA previously pointed out the incongruity of interpreting section 111(d) to allow states to have discretion to authorize and incentivize sources to use generation shifting as a pollution

control strategy, but at the same time limiting EPA's authority to interpret the phrase "best system of emission reduction" to encompass the same strategy. EPA Br. at 47-49. In its proposed repeal of the Clean Power Plan, EPA fails to acknowledge or account for this inconsistency.

3. EPA fails to consider the breadth of section 111's "best system of emission reduction" language in comparison with other, narrower language elsewhere in the statute.

As EPA found in the Clean Power Plan, the broadly inclusive nature of section 111(d)(1) and (a)(1) is also confirmed by comparing it to other Clean Air Act provisions that contain narrower language than "best system of emission reduction," and that explicitly require controls on the design or operations of an affected source. *See, e.g.*, 80 Fed. Reg. 64,767 (citing section 111(a)(7), section 407(b)(2), and section 169A). EPA also fails to address these distinctions in the proposed repeal. Rather, when describing the Clean Power Plan in the proposed repeal, EPA now appears to have improperly conflated the narrower "best available retrofit technology" (BART) language of section 169 with section 111's "best system of emission reduction" language. *See* 82 Fed. Reg. at 48,037 ("The rule established performance standards for coal-fired plants assuming a uniform emissions rate well below that which could be met by existing units though any *retrofit* technology of reasonable cost available at the time") (emphasis added). Moreover, as pointed out in the comments many of the States and Cities submitted on the proposed Clean Power Plan, EPA has in fact not required source-specific measures to demonstrate compliance with BART. Instead, EPA's regulations allow sources to comply by showing that their participation in multistate trading programs will result in "better than BART" emission reductions. *See* Joint State Comments at 49. As discussed in those comments, that approach was upheld by the D.C. Circuit, which subsequently reaffirmed the approach in a decision issued last month in *Utility Air Regulatory Group v. EPA*, Case No. 12-1342 (D.C. Cir., Mar. 20, 2018).

EPA also incorrectly argues that a constrained interpretation of section 111(d) is necessary to harmonize it with the "best available control technology" provision in the PSD program. 82 Fed. Reg. at 48,041-42. The "floor" language to which EPA refers, contained within the BACT definition in section 169(3), states that the application of BACT shall not "result in the emissions of any pollutants which will exceed the emissions allowed by any applicable standard established pursuant to section 7411 or 7412 of this title." 42 U.S.C. § 7479(3). But the "applicable standards" to facilities that triggered PSD permitting as newly-constructed or major modifications would be those established by EPA under section 111(b) for new facilities and for modifications, respectively. Any standards established by states for existing facilities pursuant to the section 111(d) guidelines would not be "applicable" to new or modified facilities.

E. Broader Policy Concerns

Under the category of "broader policy concerns," EPA contends that interpreting section 111(d) to reject consideration of generation shifting in determining the best system of emission reduction "has the advantage of not implicating" the "clear statement" doctrine, "in that it would avoid potentially transformative economic, policy and political significance in the absence of a clear Congressional statement of intent to confer such authority on the Agency." 82 Fed. Reg. at 48,042. EPA also seeks comment on "whether the CPP exceeded the EPA's

proper role and authority" by purportedly regulating the electricity sector and whether its new interpretation "would ensure that CAA section 111 has not been construed in a way that supersedes or limits the authorities and responsibilities of the Federal Energy Regulatory Commission (FERC) or that infringes on the roles of the states." *Id.* These concerns are misplaced. As the agency correctly concluded in rejecting these same claims in the Clean Power Plan rulemaking and litigation, EPA's interpretation of section 111(d) is fully authorized and also does not impermissibly infringe on FERC's or states' jurisdiction.

Finally, EPA's failure to seek comments on the "broader policy concerns" related to our country's ability to address climate change pollution and its resulting harms in the wake of repealing the Clean Power Plan is further evidence that the proposed repeal is an unreasonable interpretation of the Clean Air Act and is arbitrary and capricious.

1. A "clear statement" is not required here.

The proposal's implicit assumption that the Clean Power Plan is a "transformative" rule—thereby implicating (in EPA's new view) the need for a "clear statement" from Congress authorizing the Plan—is erroneous. EPA previously considered, and properly rejected, arguments advanced by then Attorney General Pruitt and others in the Clean Power Plan rulemaking and subsequent litigation that a "clear statement" was necessary before EPA could consider pollution reductions achieved by generation-shifting measures in promulgating the Clean Power Plan's emission guidelines. 80 Fed. Reg. at 64,782-85; EPA Br. 40-44.

The Clean Power Plan regulates air pollution from power plants, an area plainly within EPA's authority. *See* 42 U.S.C. § 7411. The fact that the Clean Power Plan would encourage cleaner generation by requiring that the cost of carbon pollution reduction be factored into the cost of generating electricity is hardly unique. Rather, this is a common feature of power plant regulations under the Clean Air Act, such as those requiring power plants to reduce emissions of nitrogen oxides, sulfur dioxide, and mercury. Those regulations—such as CSAPR and the Mercury Air Toxics Standards—have been adjudged under the traditional *Chevron* standard, despite their incidental effects on the cost of generating electricity. *See EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584 (2014); *Michigan v. EPA*, 135 S. Ct. 702 (2014). Furthermore, the Supreme Court has recognized that Congress gave EPA authority under section 111(d) to balance environmental protection with energy needs in regulating carbon pollution from these sources. *See AEP*, 564 U.S. at 427 (EPA's mandate under section 111(d) is to make an "informed assessment of competing interests[,] including not only 'the environmental benefit potentially achievable,' but also our Nation's energy needs").

The generation shifting aspect of the Clean Power Plan does not make it a "transformative" regulation requiring further delegation of authority from Congress. As explained in Sections III, IV, and V above, EPA's consideration of generation-shifting as a "system of emission reduction" is well supported by the statute and the administrative record. In the Clean Power Plan rulemaking and the litigation that followed, EPA properly rejected the contention that "textual snippets" relied on by then Attorney General Pruitt and other petitioners prohibit the agency from considering these proven measures in reducing carbon pollution. EPA Br. 60-68 (citing 80 Fed. Reg. 64,762, 64,765, 64,767, 64,773, 64,826, 64,841). EPA cited

previous regulations that either considered generation shifting in setting emission standards or as a means of compliance, or otherwise accounted for emission reductions that may have physically occurred off the plant site (*e.g.*, coal washing). EPA Br. 32-34. Furthermore, as the States and Cities explained in the Clean Power Plan rulemaking, the subsequent litigation, and above in these comments, power plants in our jurisdictions have successfully cut carbon dioxide emissions by shifting from coal to natural gas and renewables in the generation of electricity. *See* Joint State Comments at 15-19, 22-24; Brief of State Intervenor-Respondents in *West Virginia v. EPA* (D.C. Cir. 15-1363) (Apr. 29, 2016) at 25-29 (JA, Att. A6); *see also* Comments of Fourteen State Agencies on EPA's Proposed Repeal of the Clean Power Plan (Apr. 17, 2018) at 6 ("Compliance with the CPP would involved actions of the same nature as changes already occurring in the electricity sector and actions that our states already use to successfully reduce emissions of both carbon dioxide and other pollutants from the power sector"). Similarly, power companies explained that it was "business as usual" to shift generation among sources as a means of achieving numerous objectives, including the reduction of carbon dioxide and other emissions. *See* Brief of Industry Intervenor-Respondents in *West Virginia v. EPA* (D.C. Cir. 15-1363) (Apr. 29, 2016) at 2-3.

Nor does the scope of the emission reductions required under the Rule trigger any "clear statement" requirement. When it promulgated the Clean Power Plan, EPA determined that the use of coal to generate electricity would be 5.4 percent less with the rule than without it. *See* EPA Br. 39 (citing Regulatory Impact Analysis at 3-27 (tbl. 3-11)). As Judge Griffith remarked during the *en banc* oral argument, such a change "hardly seems transformative." *See* Trans. of Oral Arg. in *West Virginia v. EPA* (D.C. Cir. No. 15-1363, Sept. 27, 2016) at 5 (JA, Att. A9). In addition, when EPA denied reconsideration of the Clean Power Plan in January 2017, it found that even with the Clean Power Plan stayed, "trends away from coal-fired generation and towards cleaner generation have accelerated." EPA Reconsideration Denial at 2. For 24 states, emissions from fossil-fueled power plants in 2015 were lower than their 2022 emission goals under the Clean Power Plan, and downward trends continued through the first nine months of 2016. *Id.* at 3. The agency further noted that "[s]everal different modeling studies show that approximately one-third to more than one-half of the states are expected to achieve the 2030 goals as a result of business-as-usual trends, including at least some that at present are coal heavy." *Id.*; *see also id.* at 22 ("[T]his information demonstrates that the state emission targets required by the CPP can be achieved with significantly less impact on the generation mix in the industry, and at much lower cost, than the EPA projected at the time of promulgation"). This further demonstrates EPA's conclusion that the Clean Power Plan is a "trends following" rule, not a transformative one.

In a recent case, the Third Circuit rejected a similar "clear statement" argument. There, the court held that the Clean Water Act contained sufficiently clear direction for EPA to issue a regulation on the Total Maximum Daily Load of non-point source pollution causing water quality degradation in Chesapeake Bay. In *Am. Farm Bureau Fed'n v. EPA*, 792 F.3d 281, 303 (3d Cir. 2015), the court rejected petitioners' argument that a "clear statement" from Congress was required because of the regulation's alleged intrusion on state authority in regulating land use. The court reasoned that "once an agency is operating in the weeds of a statute that obviously requires federal oversight of some state functions, we will not require subordinate clear statements of congressional intent every time an interpretation arguably varies the usual balance

of responsibilities between federal and state sovereigns." *Id.* at 304. Likewise, EPA's interpretation of another technical term, the "best system of emission reduction," does not require "subordinate statements of congressional intent" to enable the agency to consider common-sense, practical emission reduction measures that are used routinely in the industry.

2. Because the Clean Power Plan regulates air pollution, not electricity generation, EPA was correct in previously rejecting claims that the Plan infringes on the jurisdictions of the states or FERC.

Under the Clean Air Act, EPA has a mandate to serve "as primary regulator of greenhouse gas emissions" from power plants. *AEP*, 564 U.S. at 427-28; *see also Texas v. EPA*, 726 F.3d 180, 197 (D.C. Cir. 2013). The Clean Power Plan is similar to other air pollution rules for power plants and effects on types of electricity generation are ancillary and commonplace. Therefore, it does not intrude on the authority of the states or FERC to regulate the generation and sale of electricity.

First, the Clean Power Plan does not infringe on the right of states to regulate electricity generation. As explained in the States and Cities' rulemaking comments and merits brief in the *West Virginia v. EPA* litigation, state decisions regarding electricity generation have long been constrained by the concurrent regulatory authority of Congress, which has delegated authority to federal agencies over many aspects of operating power plants. *See* State Br. 9-12. Concurrent federal jurisdiction over aspects of running a power plant properly reflects the fact that many of those aspects likely affect multiple states due to safety and environmental risks that cross state lines, as well as the interconnected nature of the electricity market. *See, e.g.*, *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 205 (1983).

EPA's pollution regulations are an example of one of these federal constraints. Air pollutants—including carbon dioxide emissions—have substantial interstate effects that the Clean Air Act was designed to address. *See EME Homer City Generation*, 134 S. Ct. at 1593-94; *Massachusetts*, 549 U.S. at 521-22. State policy choices in this area thus appropriately account for and yield to federal pollution regulations. *Cf. Hodel v. Va. Surface Mining & Reclamation Ass'n*, 452 U.S. 264, 290 (1981) (rejecting state Tenth Amendment claim against surface mining regulations, citing "congressional authority to displace or pre-empt state laws regulating private activity affecting interstate commerce when these laws conflict with federal law"). Although states make policy-based decisions about their electricity generation markets (and would continue to do so under the Clean Power Plan), states do not have unfettered discretion to determine their energy-generation mix without regard for the requirements of federal environmental laws. And as explained in our previous filings in the *West Virginia* litigation, state energy commissions are well-accustomed to dealing with power-plant implementation of federal air pollution requirements. *See* State Br. 11, 20-23; *see also* Comments of Fourteen State Agencies on EPA's Proposed Repeal at 5 ("Under the CPP, state energy regulators would maintain their independent authority to oversee retail electricity prices and to license new electric generating capacity").

Moreover, the Clean Power Plan is a lawful exercise of EPA's statutory authority because any changes to a State's energy mix would merely be an incidental effect of the Rule's permissible focus on reducing carbon dioxide emissions. As the Supreme Court explained in

FERC v. EPSA, 136 S. Ct. 760, 776 (2016), whether a federal regulation improperly intrudes on an area of state control should be judged by assessing what it directly regulates, not by looking at any downstream effects it may have. In that case, the Court addressed a federal rule that directly "regulate[d] what takes place on the *wholesale* [electricity] market"—an area of federal regulation under the Federal Power Act (FPA)—but that also "of necessity" "affect[ed]" retail electricity rates—an area expressly reserved to the states under the Act. *Id.* (emphasis added). The Court held that the rule's effect on retail rates was "of no legal consequence" and did not "run afoul" of the FPA's grant of authority to states over retail electricity. *Id.* The same is true here. The Clean Power Plan directly regulates pollution, a subject squarely within EPA's regulatory jurisdiction; it is thus permissible regardless of its potential downstream effects on a State's energy mix. *Cf. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277, 1280 (D.C. Cir. 2007) (recognizing that FERC's "indisputable authority" over entities directly subject to its jurisdiction "may, of course, impinge as a practical matter on the behavior of non-jurisdictional" entities).

The Clean Power Plan permissibly focuses on pollution reduction rather than direct energy regulation, as evidenced by the fact that the rule is indifferent about the specific means by which states and power plants achieve the rule's emission limits. The Clean Power Plan gives states substantial flexibility to determine how emission limits will be met, so long as the rule's pollution-reduction goals are satisfied. So, although EPA determined that cost-effective and readily available reductions could be achieved in part by increasing electricity generation from cleaner fuels or renewable energy—methods that power plants have used to comply with air quality regulations for years, *see* 80 Fed. Reg. at 64,666-67, 64,710—nothing in the Clean Power Plan requires states or sources to adopt such measures in the manner or at the level that EPA has determined is achievable. *See id.*

The Clean Power Plan thus operates in a manner similar to many previous Clean Air Act regulations by controlling air pollution from power plants without dictating the precise manner by which states and sources comply with these pollution limits. *See, e.g.*, *Michigan v. EPA*, 213 F.3d 663, 687-688 (D.C. Cir. 2000) (EPA's rule provided states with "real choice" in implementing the "assigned reduction levels"). This balance between federal and state authority appropriately helps to ensure that the Clean Power Plan will achieve meaningful reductions in carbon-dioxide emissions without improperly intruding on state regulation of electricity generation.

Finally, to the extent EPA believes that repealing the Clean Power Plan would avoid the need for state public utility commissions to be involved in reviewing decisions made by power plant operators to comply with carbon pollution limits, such a belief would be mistaken, and contradicted by the Clean Power Plan rulemaking record. State regulators routinely choose to play a role in this area by reviewing changes in power generation—whether caused by state or federal regulations, economic forces, industry practice, or power-plant owners' private business decisions. It is common for state regulators to evaluate and decide applications from power plants seeking to comply with federal air-quality regulations or seeking to recover the costs of such compliance, including regulations such as the Mercury Air Toxics Standards. *See* State Br. 20-21.

The Clean Power Plan likewise does not intrude on FERC's authority. As EPA explained in its brief in the *West Virginia* litigation, the rule does not infringe on FERC's authority under the Federal Power Act to regulate interstate sales of electricity because it does not regulate *any* kind of electricity sales or rates: interstate or intrastate. *See* EPA Br. at 59. In addition, EPA coordinated extensively with FERC during the development of the Clean Power Plan on the design and subsequent implementation of the rule. *See* 80 Fed. Reg. at 64,875-76. FERC did not object that the rule was encroaching on its regulatory authority. This point was recently reaffirmed in the letter submitted by several former FERC commissioners last month objecting to the proposed repeal of the Clean Power Plan. *See* Comments of Former FERC Commissioners Norman C. Bay, John Norris, and Jon Wellinghoff (March 27, 2018). And as discussed above, state public utility commissions (as well as independent and regional transmission operators) have extensive experience in ensuring that power plant operators' compliance with new federal pollution requirements does not undermine the reliability of the electrical grid. *See* State Br. 11, 20-23.

3. EPA's proposed repeal completely ignores important "broader policy concerns" regarding the pressing need to address climate change harms.

An erroneous (and inexplicable) omission from the agency's "broader policy concerns" section in the proposed repeal is what repealing the Clean Power Plan—without a suitable replacement—would mean to efforts to combat climate change harms. As explained above, *see* Point II, *supra*, harms attributable to climate change will only worsen in the future unless we act now to substantially cut emissions of carbon dioxide and other greenhouse gases. Yet EPA's preamble discussion in the proposed repeal reads like a dry, esoteric lecture on statutory interpretation, improperly omitting any discussion of the implications for deferring action on the largest stationary source emitters of greenhouse gases in the country. *See PDK Labs v. U.S. DEA*, 362 F.3d 786, 797-98 (D.C. Cir. 2004) ("[I]t is incumbent upon the agency not to rest simply on its parsing of the statutory language. It must bring its experience and expertise to bear in light of the competing interests at stake."). As EPA noted last year during the *West Virginia* litigation, "[n]o serious effort to address the monumental problem of climate change can succeed without meaningfully limiting [power] plants' CO_2 emissions."[29] Yet that is exactly the course EPA now proposes to take, without even pausing to evaluate what such a course would mean to the public health and welfare. An agency commits reversible error when it incorrectly concludes that particular regulatory action is mandated by statute. *See Prill v. N.L.R.B.*, 755 F.2d 941, 947-48 (D.C. Cir. 1985).

EPA also fails to address the broader policy concern of what a Clean Power Plan repeal would mean with respect to anticipated reductions in conventional pollutants ("co-benefits") as a result of compliance measures power plants would have undertaken to comply with the Plan's carbon reduction requirements. EPA expected that the Plan's implementation would reduce pollutants that contribute to particulate matter and ozone pollution by more than 20 percent in 2030, including about 318,000 tons of sulfur dioxide and 282,000 tons of nitrogen oxides. *See* EPA Fact Sheet, *The Clean Power Plan by the Numbers* (Aug. 2015), at 2 (JA, Att. F14). EPA anticipated that these pollution reductions would save lives and prevent illnesses, including

[29] EPA Final Brief in *West Virginia v. EPA*, Doc. #1609995, at 61

1,500-3,600 premature deaths, 1,700 nonfatal heart attacks, 90,000 asthma attacks, 1,700 hospital admissions, and 300,000 missed school and work days. *See id.*[30]

The agency also has ignored possible international effects from a repeal. First, a repeal, especially when considered together with President Trump's announcement that he will seek to withdraw the United States from the Paris climate accord, may send a signal to other countries that the U.S. no longer views fighting climate change as a priority, which could in turn lead other countries to cut back on their commitments to address greenhouse gas emissions, further exacerbating the problem of climate change harms, such as premature deaths and illnesses caused by elevated ozone concentrations. EPA recognized the international implications of its actions when it promulgated the Clean Power Plan. *See* 80 Fed. Reg. at 64,699-700 (Clean Power Plan and related policies "encourage[] other major economies to take on similar contributions, which is critical given the global impact of [greenhouse gas] emissions"). Although the States and Cities, along with other cities and businesses, have stepped forward to renew our commitments to address greenhouse gas emissions (and many other nations have thus far confirmed their continued commitment to the Paris accord), that other countries could change their minds in response to a repeal of the Clean Power Plan is a foreseeable risk that EPA has failed to consider. *See id.* at 64,699 ("American commitment is indispensable to effective international action.").

Second, EPA has also failed to consider that the statute provides a mechanism for other countries harmed by pollution emanating from the U.S. to petition the EPA for relief. 42 U.S.C. § 7415. Repealing the Clean Power Plan would, by EPA's own analysis, increase the amount of carbon pollution from power plants. And as the agency has recognized, greenhouse gas emissions from U.S. sources contribute to elevated greenhouse gas concentrations worldwide, in turn causing climate change harms. *See* 80 Fed. Reg. at 64,699-700.

EPA's failure to take into account the national and international implications of repealing the Clean Power Plan is arbitrary and capricious. *See State Farm*, 463 U.S. at 43 (failure to consider an important aspect of the problem renders decision arbitrary).

VI. EPA'S REVISED REGULATORY IMPACT ANALYSIS SIGNIFICANTLY UNDERSTATES THE ECONOMIC IMPACTS OF REPEALING THE CLEAN POWER PLAN

The proposed repeal of the Clean Power Plan would have significant economic impacts on the States and Cities. This section provides comments on EPA's revised analysis as embodied in the October 2017 Regulatory Impact Analysis for the Review of the Clean Power Plan: Proposal (the "Revised Analysis").[31]

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[30] Despite the flaws in EPA's revised Regulatory Impact Analysis, *see* Section VI, *infra*, even the revised analysis demonstrates the substantial co-benefits that would be lost if the agency were to repeal the Clean Power Plan.

[31] The original impact analysis is contained in the "Regulatory Impact Analysis for the Clean Power Plan Final Rule", EPA-452/R-15-003, August 2015 (the "Original Analysis") (JA, Att. F23).

The Revised Analysis is undermined by several fatal flaws, including: utilizing inappropriate discount rates, underestimating the co-benefits of the Clean Power Plan and the social cost of carbon, overestimating avoided compliance costs, and improperly changing the accounting method for energy efficiency and demand response measures. As a result, the Revised Analysis significantly understates the net benefits afforded by the Clean Power Plan. Therefore, any policy decision based on the Revised Analysis would be misinformed and not properly account for public health and welfare, contrary to the basic aim of the Clean Air Act.

Despite these flaws and their implications, it is worth noting that the Revised Analysis does provide further evidence that the Clean Power Plan would substantially benefit public health by preventing avoidable deaths and illnesses. *See e.g.*, Revised Analysis at 52, Table 3-10 (estimating between 1,100 and 3,600 premature deaths attributed to exposure to fine particulate matter would be avoided annually beginning in 2030 based on no-threshold and lowest measured level scenarios). This additional evidence emphasizes the significance of what is at stake and acknowledges the acute "life and death" impact of the Plan on individuals—a perspective that can be lost when distilling a complicated issue down to an aggregate cost-benefit analysis.

A. The Revised Analysis Uses Inappropriate Discount Rates

EPA's Revised Analysis incorporates net present value ("NPV") calculations that utilize various discount rates. The Revised Analysis utilizes a 7-percent discount rate in many of its cost, benefits, and net benefits calculations that differs from the Original Analysis's use of discount rates of 2.5 percent, 3 percent, and 5 percent.[32,33] This 7-percent discount rate overstates the opportunity cost of avoided compliance costs, overstates the uncertainty of future benefits, and erroneously biases the cost-benefit analysis toward current generations at the expense of the social welfare of future generations. Therefore, the use of a 7-percent discount leads to a significant underestimate of the NPV of the Clean Power Plan.

A 7-percent discount rate overstates the opportunity cost of compliance with the Clean Power Plan. The costs of the Clean Power Plan occur relatively sooner than many of the expected benefits. Therefore, all else being equal, using a higher discount rate will increase the NPV of compliance costs relative to benefits. To the extent that the 7-percent discount rate is used as a proxy for the opportunity cost of capital,[34] it overstates the actual return the entities making compliance investments would expect to realize from alternative investments.

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[32] *See e.g.*, Revised Analysis, pp. 43; Original Analysis, Tables ES-7 and ES-9.

[33] In 2009, an interagency workgroup composed of members from six federal agencies and various White House offices was convened to improve the accuracy and consistency in how agencies value reductions in CO_2 emissions in regulatory impact analyses. The resulting range of values was based on estimates from three integrated assessment models applied to five socioeconomic and emissions scenarios, all given equal weight. To reflect differing expert opinions about discounting, the present value of the time path of global damages in each model-scenario combination was calculated using discount rates of 5 percent, 3 percent, and 2.5 percent. National Center for Environmental Economics, Office of Policy, U.S. Environmental Protection Agency, "Guidelines for Preparing Economic Analysis," (Dec. 17, 2010) Section 7-2.

[34] Revised Analysis, pp. 43, 166.

A 7-percent discount rate also overstates the uncertainty of future benefits associated with the Clean Power Plan and therefore understates the current value of future benefits. In NPV calculations, a discount rate often reflects the uncertainty of a future stream of value. The Revised Analysis overstates the actual uncertainty by using a high discount that lacks a scientific foundation. EPA argues that 7 percent is intended to "represent the average before-tax rate of return to private capital in the U.S," but does not provide any justification for why this discount rate should be used to discount future Clean Power Plan benefits including "uncertainness associated with demand-side energy investments," "uncertainty in health benefits estimation," and "characterization of uncertainty in monetizing climate-related benefits."[35]

A 7-percent discount rate also biases the consideration of benefits toward the current population at the expense of the welfare of future generations. Economists generally accept the notion that individuals value benefits now more than the same benefits in the future, hence why it makes sense for an individual's NPV calculation to incorporate some form of discounting. In the context of climate change, however, a high discount rate significantly underestimates the real costs our states and residents will suffer, in particular future generations. *See* Comments of Fourteen State Agencies on EPA's Proposed Repeal at 12. Notwithstanding the fact that economic experts have questioned applying such a high discount rate to intergenerational effects and the Office of Management and Budget has concluded that a discount rate of 7 percent is not appropriate for effects experienced on a long time horizon, such as climate change, *see id.*,[36] EPA failed to explain its departure from the discount rates used in the Original Analysis and its choice of a 7-percent rate in the proposed repeal.

B. The Revised Analysis Significantly Underestimates the Public Health Benefits of the Clean Power Plan.

In addition to the issues regarding discount rates mentioned above, EPA's Revised Analysis changes the methodology used in the Original Analysis resulting in an underestimation of the public health benefits of the Clean Power Plan. In particular, the Revised Analysis's incorporation of compliance thresholds from the NAAQS eliminates all foregone benefits associated with exposure to air pollution below those standards, and thus significantly underestimates the actual benefits associated with the Clean Power Plan. There is no scientific or legal basis for the agency to ignore these benefits.

The NAAQS were set as reasonable benchmarks for limiting "unacceptable risks to public health."[37] EPA's use of the NAAQS as thresholds in its Revised Analysis fundamentally ignores the public health costs resulting from exposures below those limits. Furthermore, this use contradicts the EPA's own findings that some risk is expected at and below the levels of the

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[35] Revised Analysis, pp. 2-3.

[36] *See also* Guidelines for Preparing Economic Analysis, Section 6-15; Original Analysis, p. ES-19.

[37] The Clean Air Act "does not require that NAAQS be set at zero-risk levels, but rather at levels that avoid unacceptable risks to public health." October 2010, Policy Assessment for the Review of the Carbon Monoxide National Ambient Air Quality Standards (EPA 452/R-10-007), 2-76.

NAAQS and considers these to be legitimate components of the total benefits estimate.[38] Put differently, EPA's use of the NAAQS assumes that these standards represent limits below which there are no discernible benefits. This assumption is wrong, contrary to findings in current policy research,[39] and contrary to EPA's own findings establishing the NAAQS for non-threshold pollutants, such as particulate matter and ozone.[40,41,42]

The exclusion of these valuable public health benefits renders the Revised Analysis fatally incomplete.

C. The Revised Analysis Significantly Underestimates the Social Cost of Carbon.

EPA's Revised Analysis also underestimates the social cost of carbon by only considering impacts "within U.S. borders."[43] This approach is directly at odds with the National Academy of Sciences' recent conclusion that "[c]limate damages to the United States cannot be accurately characterized without accounting for consequences outside U.S. borders."[44] By narrowing consideration of the social cost of carbon to impacts "within U.S. borders," the Revised Analysis erroneously assumes (1) any benefits that occur outside of U.S. borders from the Clean Power Plan have no impact on the welfare of U.S. citizens or residents; and (2) climate change policy in other countries is made completely independent of U.S. climate change policy.[45]

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[38] Regulatory Impact Analysis for the Final Revisions to the National Ambient Air Quality Standards for Particulate Matter. U.S. Environmental Protection Agency, Washington, DC, EPA-452/R-12-005, 2013. Chapter 5.7.5, page 5-89 (JA, Att. F24).

[39] Kimberly Castle & Richard Revesz, Environmental Standards, Thresholds, and the Next Battleground of Climate Change Regulations, *Minnesota Law Review* (forthcoming), vol. 103, 2018, *available at*: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3154669.

[40] Policy Assessment for the Review of the Particulate Matter National Ambient Air Quality Standards. U.S. Environmental Protection Agency, Washington, DC, EPA 452/R-11-003. April 2011. Chapter 1.2.1, pp. 1-3 (JA, Att. F22).

[41] U.S. EPA. Integrated Science Assessment (ISA) for Particulate Matter (Final Report, Dec 2009). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-08/139F, 2009 (JA, Att. F15).

[42] U.S. EPA. Integrated Science Assessment (ISA) of Ozone and Related Photochemical Oxidants (Final Report, Feb 2013). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-10/076F, 2013 (JA, Att. F16).

[43] Revised Analysis. p. 4.

[44] Nat'l Academy of Sciences, Engineering, & Medicine, *Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide* (2017) ("*Valuing Climate Damages*"), at 53 (JA, Att. I8).

[45] EPA's policy in this regard is also inconsistent with section 415 of the Clean Air Act, which requires that EPA consider impacts of domestic pollution when it affects foreign countries when those foreign countries have given the United States "essentially the same rights with respect to prevention or control." *See* 42 U.S.C § 7415.

EPA's assumption that any Clean Power Plan benefits that occur outside of U.S. borders have no impact on the welfare of U.S. citizens or residents within U.S. borders has many logical flaws, including:

- It ignores the fact that many intended beneficiaries of U.S. policy (in general) live outside of U.S. borders (*e.g.*, U.S. citizens living abroad) and that their welfare is directly impacted by effects of climate change outside of U.S. borders.
- It implicitly assumes that U.S, citizens and residents derive no utility from the welfare of citizens of other countries.
- It fails to account for climate change effects on foreign trading partners and the resulting impacts to domestic welfare. For example, the United States and Canada have interconnected electricity grids. As such, climate change and its effect on Canadian water resources and reliant hydroelectricity generators are matters of import to U.S. electricity consumers.[46]
- It ignores the fact that lower economic growth in other regions could reduce demand for U.S. exports, and lower productivity could increase the prices of U.S. imports.[47]
- It implicitly assumes that U.S. residents do not travel and derive no utility from physical impacts outside of the U.S. (*e.g.*, it assumes that if rising sea levels inundate Venice, then U.S. residents would be no worse off).

These logical flaws do not withstand elementary scrutiny. Therefore, many benefits that deserve consideration in the determination of a domestic social cost of carbon are ignored by the Revised Analysis, which consequently underestimates the true social cost of carbon "within U.S. borders."

EPA's implicit assumption that other countries' climate change policies are made completely independent of U.S. policy is also fundamentally flawed. This assumption ignores economic theory showing that when domestic policy creates externalities that are enjoyed by a foreign entity (and vice versa), the optimal policy will be one in which both parties (domestic and foreign) expend more than they otherwise would if they were to ignore these externalities.[48] Put differently, by taking the welfare of foreign entities into consideration in estimates of the social cost of carbon, a domestic entity will encourage the foreign entity to do the same, hence allowing entities to enjoy the benefits created from coordinated action. Therefore, ignoring non-domestic benefits in the social cost of carbon underestimates the true cost because the additional costs of carbon pollution imposed by the resulting policy changes that could be made in retaliation by foreign entities, many of which currently rely on estimates that consider global costs. For example, the United Nations Framework Convention on Climate Change ("UNFCCC") featured elements that demonstrate how the members considered the interdependence of policy decisions across countries including the importance of repeated

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[46] *See* Vliet, Wiberg et al. "Power-generation system vulnerability and adaptation to changes in climate and water resources." Nature Climate Change. Vol 6, April 2016 (JA, Att. B75).

[47] *Valuing Climate Damages* at 53.

[48] *See, e.g.*, Kotchen, Matthew J., "*Which Social Cost of Carbon? A Theoretical Perspective*," Journal of the Association of Environmental and Resource Economists (forthcoming), *available at*: http://www.nber.org/papers/w22246.pdf.

interaction between nations, complete information, the potential use of transfer payments between nations, and commitments for climate finance to developing countries.[49]

D. The Revised Analysis Significantly Overestimates Compliance Costs.

EPA's Revised Analysis overstates compliance costs both in relative and absolute terms. As mentioned above, EPA's choice of a 7-percent discount rate overstates the magnitude of compliance costs relative to benefits. In addition, EPA's Revised Analysis ignores the structural changes that have taken place in the energy markets since 2015 that would decrease expected compliance costs in absolute terms, all else being equal.

The relevant energy markets have changed since the Original Analysis in 2015. This fact is evidenced by EPA's observation in January 2017 in its reconsideration denial that "information, data, and analyses published since the release of the CPP in August 2015 demonstrate that the trends toward low- and zero-emitting energy, upon which the CPP builds, continue unabated, and, in fact, have accelerated since the EPA promulgated the CPP."[50] These trends represent Clean Power Plan compliance costs that have already been realized (*i.e.*, these costs are sunk). Therefore, EPA's failure to deduct the portion of compliance costs that have already been realized results in an overestimate of the remaining compliance costs in the Revised Analysis.

E. The Revised Analysis Improperly Changes the Way in Which EPA Accounts for Avoided Costs from Energy Efficiency and Demand Response.

In addition to other assumptions that affect net benefit estimates of the Clean Power Plan in the Revised Analysis, EPA has also improperly changed the accounting methods for energy efficiency and demand response programs. In the Revised Analysis, efficiency and demand response programs are treated as increases in benefits as opposed to decreases in costs. This change in accounting overstates the actual costs of the Clean Power Plan. Furthermore, this change in accounting potentially ascribes any uncertainty of potential benefits from the other aspects of Clean Power Plan to potential uncertainty for costs savings from demand response and efficiency programs, which are substantial and readily quantifiable. Ascribing general uncertainty to these programs that are more readily quantifiable underestimates the net benefits of the Clean Power Plan.

* * *

In sum, the myriad flaws in the Revised Analysis only add to the arbitrary and capricious nature of EPA's proposed repeal of the Clean Power Plan. Thus, even if EPA had sought to rely on the Revised Analysis to justify the proposed repeal—which the agency has not sought to do—it could not provide a lawful basis for such action.

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[49] *Id*. at 13

[50] *See "Basis for Denial of Petitions to Reconsider and Petitions to Stay the CAA section 111(d) Emission Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units,"* U.S. Environmental Protection Agency, January 11, 2017, p. 22.

VII. EPA'S PROPOSED REPEAL OF THE LEGAL MEMORANDUM SUPPORTING THE CLEAN POWER PLAN IS UNSUPPORTED, ARBITRARY AND CAPRICIOUS, AND CONTRARY TO LAW

EPA, almost as an after-thought, proposes to repeal the entire Legal Memorandum supporting the Clean Power Plan. 82 Fed. Reg. at 48,042-43. The 150-page Legal Memorandum was an integral basis of support for the CPP, referenced numerous times in the final rule. *E.g.* 80 Fed. Reg. at 64,710, 64,718, 64,735, 64,764, 64,773, 64,777-79, 64,781, 64, 872-74. The Legal Memorandum was subject to notice and comment along with the draft Clean Power Plan. In four short paragraphs, EPA acknowledges that the issues addressed in the Legal Memorandum may be relevant to a future rulemaking, but nonetheless proposes to repeal the entire Legal Memorandum as "inconsistent with this proposal or rendered moot by it." 82 Fed. Reg. at 48,043. However, an agency must provide a "reasoned explanation" for departing from a prior policy – it may not "depart from prior policy *sub silento*[.]" *FCC v. Fox Television*, 556 U.S. at 515.

EPA has failed to provide a reasoned basis for departing from the Clean Power Plan's interpretation of section 111, as discussed above. EPA has also failed to provide a reasoned basis for departing from many of the policies announced in the Legal Memorandum. For example, the Legal Memorandum discussed EPA's role in regulating greenhouse gas emissions from power plants following the Supreme Court's decision in *AEP*. Legal Memorandum, at 11-14. The proposed repeal does not propose to alter EPA's understanding of these obligations, and yet proposes to repeal the entire Legal Memorandum. In fact, the vast majority of the Legal Memorandum presents EPA's policy positions on matters unrelated to the determination of the best system that EPA now proposes to change. EPA cannot depart from those policies without providing a reasoned explanation. *See* State Farm, 463 U.S. at 42-43.

CONCLUSION

In conclusion, EPA's proposed repeal of the Clean Power Plan is contrary to the Clean Air Act and arbitrary and capricious. To propose to repeal the Plan—without having first put in place a replacement rule that requires equivalent or greater pollution reductions—is nothing less than an abdication of EPA's duty to protect public health and welfare from what it has recognized to be the nation's most urgent environmental threat. The agency's new position that the Clean Power Plan must be repealed is neither compelled by the language of the Clean Air Act nor reasonable in light of the statute's text, structure, and protective purpose. EPA carefully considered and rejected these same arguments when raised in the Clean Power Plan rulemaking, and they are not suddenly meritorious now. One thing that has changed is that the science supporting prompt and aggressive measures to reduce carbon pollution from power plants has gotten even stronger since EPA promulgated the Clean Power Plan. That evidence demands that EPA abandon its misguided repeal of the Clean Power Plan and instead consider how to strengthen it.

Respectfully Submitted,

FOR THE STATE OF NEW YORK

ERIC T. SCHNEIDERMAN
Attorney General

/s/ Michael J. Myers
_____
MICHAEL J. MYERS
Senior Counsel
MORGAN A. COSTELLO
Section Chief, Affirmative Litigation
BRIAN M. LUSIGNAN
Assistant Attorney General
ALAN BELENSZ
Chief Scientist
PETER MALASPINA
Chief Economist
Environmental Protection Bureau
The Capitol
Albany, NY 12224
(518) 776-2400

FOR THE STATE OF CALIFORNIA

XAVIER BECERRA
Attorney General
Robert W. Byrne
Sally Magnani
Senior Assistant Attorneys General
David A. Zonana
Supervising Deputy Attorney General
Jonathan Wiener
M. Elaine Meckenstock
Deputy Attorneys General
1515 Clay Street
Oakland, CA 94612
(510) 879-1300

FOR THE STATE OF CONNECTICUT

GEORGE JEPSEN
ATTORNEY GENERAL
Matthew I. Levine
Scott N. Koschwitz
Assistant Attorneys General
Office of the Attorney General
P.O. Box 120, 55 Elm Street
Hartford, CT 06141-0120
(860) 808-5250

FOR THE STATE OF DELAWARE

MATTHEW P. DENN
ATTORNEY GENERAL
Valerie S. Edge
Deputy Attorney General
Delaware Department of Justice
102 West Water Street, 3d Floor
Dover, DE 19904
(302) 739-4636

FOR THE STATE OF HAWAII

RUSSELL A. SUZUKI
ATTORNEY GENERAL
William F. Cooper
Deputy Attorney General
465 S. King Street, Room 200
Honolulu, HI 96813
(808) 586-4070

FOR THE STATE OF ILLINOIS

LISA MADIGAN
ATTORNEY GENERAL
Matthew J. Dunn
Gerald T. Karr
Daniel I. Rottenberg
Assistant Attorneys General
69 W. Washington St., 18th Floor
Chicago, IL 60602
(312) 814-3816

FOR THE STATE OF IOWA

THOMAS J. MILLER
ATTORNEY GENERAL
Jacob Larson
Assistant Attorney General
Office of Iowa Attorney General
Hoover State Office Building
1305 E. Walnut Street, 2nd Floor
Des Moines, IA 50319
(515) 281-5341

FOR THE STATE OF MAINE

JANET T. MILLS
ATTORNEY GENERAL
Gerald D. Reid
Natural Resources Division Chief
6 State House Station
Augusta, ME 04333
(207) 626-8800

FOR THE COMMONWEALTH OF MASSACHUSETTS

MAURA HEALEY
ATTORNEY GENERAL
Melissa A. Hoffer
Christophe Courchesne
Assistant Attorneys General
Environmental Protection Division
One Ashburton Place, 18th Floor
Boston, MA 02108
(617) 963-2423

FOR THE STATE OF NEW MEXICO

HECTOR BALDERAS
ATTORNEY GENERAL
Brian E. McMath
Joseph Yar
Assistant Attorneys General
Office of the Attorney General
408 Galisteo Street
Villagra Building
Santa Fe, NM 87501
(505) 490-4060

FOR THE STATE OF MARYLAND

BRIAN E. FROSH
ATTORNEY GENERAL
Leah J. Tulin
Assistant Attorney General
200 St. Paul Place, 20th Floor
Baltimore, MD 21202
(410) 576-6962

FOR THE STATE OF MINNESOTA, BY AND THROUGH ITS MINNESOTA POLLUTION CONTROL AGENCY

OFFICE OF THE ATTORNEY GENERAL
STATE OF MINNESOTA
Karen D. Olson
Deputy Attorney General
Max Kieley
Assistant Attorney General
445 Minnesota Street, Suite 900
St. Paul, MN 55101-2127
(651) 757-1244

FOR THE STATE OF NORTH CAROLINA

JOSHUA H. STEIN
Attorney General
Asher Spiller
Assistant Attorney General
Environmental Division
North Carolina Department of Justice
P.O. Box 629
Raleigh, NC 27602-0629
(919) 716-6000

FOR THE STATE OF OREGON

ELLEN F. ROSENBLUM
ATTORNEY GENERAL
Paul Garrahan
Attorney-in-Charge
Natural Resources Section
Oregon Department of Justice
1162 Court Street NE
Salem, OR 97301-4096
(503) 947-4593

FOR THE COMMONWEALTH OF PENNSYLVANIA

JOSH SHAPIRO
Attorney General
Michael J. Fischer
Chief Deputy Attorney General
Robert A. Reilly, Assistant Director
Pennsylvania Dept. of Env. Protection
Office of Attorney General
Strawberry Square
Harrisburg, PA 17120
(215) 560-2171

FOR THE STATE OF RHODE ISLAND

PETER F. KILMARTIN
ATTORNEY GENERAL
Gregory S. Schultz
Special Assistant Attorney General
Rhode Island Department of Attorney General
150 South Main Street
Providence, RI 02903
(401) 274-4400

FOR THE STATE OF VERMONT

THOMAS J. DONOVAN, JR.
ATTORNEY GENERAL
Nicholas F. Persampieri
Assistant Attorney General
Office of the Attorney General
109 State Street
Montpelier, VT 05609-1001
(802) 828-3186

FOR THE COMMONWEALTH OF VIRGINIA

MARK HERRING
ATTORNEY GENERAL
Stephen A. Cobb
Deputy Attorney General
Donald D. Anderson
Sr. Asst. Attorney General and Chief
Matthew L. Gooch
Assistant Attorney General
Environmental Section
900 East Main Street
Richmond, VA 23219
(804) 225-3193

FOR THE STATE OF WASHINGTON

ROBERT W. FERGUSON
ATTORNEY GENERAL
Katharine G. Shirey
Assistant Attorney General
Office of the Attorney General
P.O. Box 40117
Olympia, WA 98504-0117
(360) 586-6769

FOR THE DISTRICT OF COLUMBIA

KARL A. RACINE
ATTORNEY GENERAL
Robyn R. Bender
Deputy Attorney General
David S. Hoffman
Assistant Attorney General
Office of the Attorney General
441 Fourth Street, NW
Suite 650 North
Washington, DC 20001
(202) 442-9889

FOR BROWARD COUNTY, FLORIDA

JONI ARMSTRONG COFFEY
COUNTY ATTORNEY
Mark A. Journey
Assistant County Attorney
Broward County Attorney's Office
155 S. Andrews Avenue, Room 423
Fort Lauderdale, FL 33301
(954) 357-7600

FOR THE CITY OF CHICAGO

EDWARD N. SISKEL
Corporation Counsel
BENNA RUTH SOLOMON
Deputy Corporation Counsel
30 N. LaSalle Street, Suite 800
Chicago, IL 60602
(312) 744-7764

FOR THE CITY OF NEW YORK

ZACHARY W. CARTER
CORPORATION COUNSEL
Susan E. Amron
Senior Counsel
Kathleen C. Schmid
Counsel
New York City Law Department
100 Church Street
New York, NY 10007
(212) 356-2319

FOR THE CITY OF BOULDER

TOM CARR
CITY ATTORNEY
Debra S. Kalish
City Attorney's Office
1777 Broadway, Second Floor
Boulder, CO 80302
(303) 441-3020

FOR THE CITY OF PHILADELPHIA

MARCEL S. PRATT
CITY SOLICITOR
Scott J. Schwarz
Patrick K. O'Neill
Divisional Deputy City Solicitors
The City of Philadelphia
Law Department
One Parkway Building
1515 Arch Street, 16th Floor
Philadelphia, PA 19102-1595
(215) 685-6135

FOR THE CITY OF SOUTH MIAMI

THOMAS F. PEPE
CITY ATTORNEY
City of South Miami
1450 Madruga Avenue, Suite 202
Coral Gables, Florida 33146
(305) 667-2564

CITY OF LOS ANGELES

MICHAEL J. BOSTROM
Managing Assistant City Attorney
Affirmative Litigation Division
(213) 978-1882