March 18, 2019

The Honorable Andrew Wheeler, Administrator
U.S. Environmental Protection Agency
EPA Docket Center,
Docket ID No. EPA–HQ–OAR–2013–0495
Mail Code 28221T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Sent Via: Regulations.gov

RE: Comments on the Review of Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units EPA-HQ-OAR-2013-0495.

Dear Administrator Wheeler:

On behalf of the patients and public we serve, our organizations urge EPA to retain the current limits, adopted in 2015, on carbon pollution for New, Modified and Reconstructed Stationary Sources. EPA's proposal significantly weakens the limits on carbon emissions from new and reconstructed sources, opening the door for more greenhouse gas emissions.

The nation experiences the damage from climate change today, and forecasts predict more devastation to come. EPA should be taking aggressive steps to address those challenges and greatly reduce the

emissions of greenhouse gases and other harmful pollutants. Instead, this proposed rule would roll back and weaken existing policy, with no benefits to public health and with the potential to add millions of tons of the longest-lasting greenhouse gas to the problem. Our organizations oppose these changes.

Climate change today demands more protections for public health, not fewer

The changing climate threatens the health of Americans alive now and in future generations. Carbon dioxide lasts in the atmosphere for hundreds of years, altering the climate in damaging ways. Time is of the essence in curbing releases of this pollution if we are to avoid catastrophic damage. Consequently, the nation has a critically short window to act to reduce those threats.

Since EPA finalized these new source performance standards in 2015, hundreds of additional studies and major reports have made even clearer the essential need to adopt and maintain the strongest possible measures to reduce carbon and other greenhouse gases that endanger the long-term health of all people.[1] For example, just last fall, three newly released reports drew graver conclusions on the impact of climate and health. The latest report from the International Panel on Climate Change warned that the world needed to reduce greenhouse gases even further because the harm from climate change would be higher with an increase of 1.5° C than forecasts had previously described.[2] *The Lancet* reported on the growing evidence of harm to human health.[3] Federal agencies including EPA compiled the second volume of the Fourth National Climate Assessment, which detailed the impact region by region across the nation.[4]

The evidence before our eyes supports the scientific studies. **We have seen some of the worst catastrophic weather events in the past three years that give an unvarnished look at the impact on the lives and health of millions of Americans.** From the California and Montana wildfires to the hurricanes and massive flooding that damaged homes in Florida, Georgia, North and South Carolina, Virginia, and Puerto Rico, the nation witnessed the impact on the lives and health of our neighbors, families, and friends.

Climate change will increase the number and severity of such emergency events. These events have profound direct consequences on thousands of lives, and their wide mark lasts for years and years.

Wildfires have not only cost families their homes and in tragic cases individuals have perished. The particle pollution and ozone pollution they produced spread smoke across the nation. Even short-term increases in particle pollution like those from wildfires can cause serious health threats, including premature death. Studies have found high particle days increase the risk of premature death from respiratory and cardiovascular causes; increase hospitalization for asthma among children; [5, 6, 7] and worsen asthma attacks in children.[8]

Increased risk of dangerous hurricanes threatens not only damage and death from the wind, but disruption in communities that suffer the hurricanes. Just this fall, Hurricanes Florence and Michael have left thousands of families homeless in the aftermath of their massive flooding and wind damage.[9] Hurricane Harvey left the greater Houston area with more than 50 inches of floodwater, a record rainfall that two studies concluded resulted from the aftermath of climate change.[10] One of the many potential

impacts of these events to affected communities is disruption in medical care and in access to essential medicines.

Flooding causes premature deaths, often through drowning, but the aftermath of flooding expands the burden. Water damage leaves behind lingering health risks including dampness and mold, chemicals and sewage spread through flood waters, and contaminated debris in flooded homes, schools, hospitals and other community facilities.[11]

Ground-level ozone is likely to be worse as the climate warms further and will be harder to clean up in some locations. Higher temperatures increase the likelihood that the precursor gases will react to form ground-level ozone, making to harder to protect people from this most widespread air pollutant. In 2018, Los Angeles recorded 87 straight days when ozone levels reached into unhealthy levels, the worst streak of dangerous air pollution levels in 20 years.[12] Researchers repeatedly found that the risk of premature death increased with higher levels of ozone.[13] Ozone causes asthma attacks and respiratory distress, and may increase cardiovascular harm, risk of harm to the central nervous system and risk of low birth weight in newborns.[14]

Weaker limits fail to address the problems

EPA's proposal would allow new or reconstructed power plants to emit far too much CO_2 under this proposal. EPA would raise the limits on CO_2 for new plants from 1,400 lbs. per MWh-g per year to 1,900 lbs. per MWh-g per year. EPA proposes to raise the limits on CO_2on reconstructed plants to 1,900 lbs. per MWh-g from 1,800 lbs. per MWh-g.

EPA's own evidence rebukes EPA's arguments for weakening the standards. EPA acknowledges that the fossil fuel electricity generation is the largest stationary source of carbon dioxide and greenhouse gas emissions in the U.S. EPA has recognized the threats to the nation from these changes, most recently in the Fourth National Climate Assessment discussed above. Given the overwhelming evidence of harm from climate change, EPA should lead the efforts to further reduce emissions from greenhouse gases from all sources, but particularly from electric utilities. Instead, this proposal further undermines those efforts.

EPA proposes to weaken the current standards, which are based on its previous determination that the Best System of Emission Reductions (BSER) for coal-fired power plants is partial carbon capture and sequestration. EPA claims that the costs of meeting the current standard are too high despite EPA's own recognition that such plants are not the source of future growth in electricity generation. EPA itself acknowledges that the electric utilities have not built, reconstructed or modified any coal plants since 2015 (83 FR. 244: 65431). The U.S. Energy Information Administration (EIA) projections from January indicate that the proposed rule would have little to no impact on the development of future coal-fired power plants, because natural gas has already captured markets formerly dominated by coal. Natural gas has already supplanted coal as the dominant source of energy for electricity generation. The short-term energy outlook predicts that, by 2020, renewables will become the nation's third leading electricity source, surpassing nuclear power.[15] The long-term analysis forecasts that renewables will overtake coal well before 2030. EIA's basis for the long-term forecasts explicitly only includes state standards for

renewables and carbon dioxide emissions, so no existing or proposed federal actions on carbon emissions influence these projections. [16]

However, the forecasts do not rule out new coal-powered plants. EIA reports that one, small (17 MW) new coal-fired plant will come online in 2019.[17] If utilities build coal-fired power plants in the future, current law says that these power plants can and must meet the 1,400 lbs. CO2/MWh standard by installing partial carbon capture and sequestration, building an IGCC or co-firing with natural gas. EPA's proposal would roll back the protection these standards provide in the case that, despite market predictions, a new coal-fired power plant is built.

This rollback would have severe impacts even if only one utility adds a single coal-fired plants to the fleet. Under this proposal, EPA estimates that a single 600 MW plant could emit an additional 1.1 million tons of CO_2 each year, compared to the limits under the current rules.[18] Given that the average life of these plants is 39 years,[19] that one additional new plant would add another 42.9 million additional tons of CO_2 during its lifespan. Those additional emissions from one new plant would likely offset all expected reductions in CO_2 under the proposed ACE rule, which weakened the Clean Power Plan. Just to give one example, under this proposal, a single additional new 600 MW plant opened in 2025 would add 11 million tons of CO_2 by 2035, offsetting all the estimated 7 to 11 million tons in CO_2 that the Regulatory Impact Statement projected ACE would reduce by that year in two of the three scenarios. [20]

EPA argues that the CCS technology is not widely usable, despite its determination in 2015 that CCS could be widely implemented. That change might also surprise Secretary of Energy Rick Perry, who called CCS "one of the most effective ways we can continue to leverage the sustainability of our Nation's fossil fuel resources while advancing environmental stewardship" when he awarded $36 million in funds in 2017 to continue the development of the technologies. [21]

EPA even claims that it stands by the mission to drive innovation in emission control technology, while at the same time proposing to determine that the best system of emission reduction is outdated, efficiency controls developed in the 1950s. EPA states, "[T]he proposed BSER will promote the development and implementation of visible control technologies" in other countries such as India and in Southeast Asia, that would result in "a reduction in global CO_2 emissions." (83 FR 244: 65448). That would be true if EPA were setting limits that would push technology to provide greater benefits, but instead it is other plants around the world which are operating more efficiently. Although CCS is one of a variety of technologies researchers are exploring for reducing carbon emissions, all have serious questions on their impacts that need to be recognized and addressed.[22] The best way is to expand energy sources like renewables that do not emit carbon pollution into the atmosphere.

Pollution emitted from coal-fired power plants, even with CCS technology in place to reduce carbon emissions, endangers the lives and health of communities across the nation, with a disproportionate impact on communities located near coal mines and coal-fired power plants. For this reason, many of our organizations oppose the construction of any new coal-fired power plants, including plants with CCS technology. Nonetheless, we note that EPA and other experts have previously found CCS to be feasible, and EPA's current proposal attempts to overturn this finding without sufficient evidence to the contrary.

EPA must leave these standards in place.

EPA's proposal to reverse these more protective limits brings the devastating consequences of climate change ever closer to home. Like much of the world, the U.S. is falling behind in reducing the emissions that worsen climate change. As the 2018 IPCC report this fall noted, the damaging consequences from climate change are happening now and will only increase if the world fails to act.[23] The IPCC provided strong recommendations of more aggressive actions needed to reduce greenhouse gas emissions, including greatly reduced coal use and increased use of clean, renewable energy sources. The IPCC recognized that a limited approach would fail to provide anywhere close to the protections needed under the current levels. As one co-chair of one of the working groups describes the risk: "Every extra bit of warming matters, especially since warming of 1.5° C or higher increases the risk associated with long-lasting or irreversible changes."[24]

EPA's proposal would significantly weaken the current limits, adopted in 2015, on carbon pollution for new and reconstructed sources, opening the door for more greenhouse gas emissions from coal-fired power plants. **Our organizations strongly oppose the proposal and urge EPA to maintain the current limits.**

Sincerely,

Allergy & Asthma Network

Alliance of Nurses for Healthy Environments

American College of Physicians

American Lung Association

American Public Health Association

American Thoracic Society

Asthma and Allergy Foundation of America

Children's Environmental Health Network

Climate for Health

Health Care Without Harm

National Medical Association

Trust for America's Health

[1] Hundreds of studies on the health effects of climate change have been published since EPA adopted the Clean Power Plan. This list includes just a sample: Watts N, Amann M, Ayeb-Karlsson S, Belesova K et al. 2018 The *Lancet* Countdown on health and climate change: from 25 years of inaction to a global transformation for public health. *Lancet* 391: 581-630; Ahdoot S, Pacjeco SE, and The Council on Environmental Health. 2015. Global Climate Change and Children's Health. *Pediatrics* 138: e1-e17; Petlova EP, Vink JK, Horton RM, Gasparrini A, et al. 2017. Towards more comprehensive projections of urban heat-related mortality: estimates for New York City under multiple population, adaptation, and climate scenarios. *Environ Health Perspect*. 125: 47-55; National Research Council. 2015. *Modeling the Health Risks of Climate Change: Workshop Summary.* Washington, DC: The National Academies Press.; Short EE, Caminade C, and Thomas BN. Climate Change Contribution to the Emergence or Re-Emergence of Parasitic Diseases. 2017. *Infectious Diseases: Research and Treatment*. 10:1-7.

[2] IPCC. Special Report on Global Warming of 1.5º C., October 2018.

[3] Watts N et al. The Lancet Countdown on health and climate change: from 25 years of inaction to global transformation for public health. *Lancet,* 2018. 391: 581-630.

[4] U.S. Global Change Research Program. Fourth National Climate Assessment Volume II: Impacts, Risks, and Adaptation in the United States. 2018.

[5] Lin M, Chen Y, Burnett RT, Villeneuve PJ, Kerwski D. The Influence of Ambient Coarse Particulate Matter on Asthma Hospitalization in Children: case-crossover and time-series analyses. *Environ Health Perspect.* 2002; 110:575-581.

[6] Norris G, YoungPong SN, Koenig JQ, Larson TV, Sheppard L, Stout JW. An Association Between Fine Particles and Asthma Emergency Department Visits for Children in Seattle. *Environ Health Perspect*. 1999;107:489-493.

[7] Tolbert PE, Mulholland JA, MacIntosh DD, Xu F, Daniels D, Devine OJ, Carlin BP, Klein M, Dorley J, Butler AJ, Nordenberg DF, Frumkin H, Ryan PB, White MC. Air Quality and Pediatric Emergency Room Visits for Asthma in Atlanta, Georgia. *Am J Epidemiol.* 2000; 151:798-810.

[8] Slaughter JC, Lumley T, Sheppard L, Koenig JQ, Shapiro, GG. Effects of Ambient Air Pollution on Symptom Severity and Medication Use in Children with Asthma. *Ann Allergy Asthma Immunol.* 2003; 91:346-353.

[9] Clasen-Kelly F. "Florence damaged thousands of homes in the Carolinas: 'This has been so stressful.'" The Charlotte Observer, September 28, 2018. Ocner Matis J "'No sense in leaving now': Hurricane Michael recovery begins in Mexico Beach." Miami Herald. October 21, 2018; Koh, Elizabeth. "They survived Michael but now lack healthcare basics: colostomy bags, oxygen, more.: Miami Herald. October 25, 2018.

[10] Risser MD and Wehner MF. 2017. Attributable human-induced changes in the likelihood and magnitude of the observed extreme precipitation during Hurricane Harvey. *Geophysical Research Letters*. Pre-Publication. DOI: 10.1002/2017GL075888; van Oldenborgh GJ, van der Wiel K, Sebastian A, Singh R, et al. 2017. Attribution of extreme rainfall from Hurricane Harvey, August 2017. *Environmental Research Letters* 12:124009.

[11] Luber et al., 2014; APHA 2011.

[12] Barboza T. "87 days of smog: Southern California just saw its longest streak of bad air in decades." Los Angeles Times, September 21, 2018.

[13] Bell ML, McDermott A, Zeger SL, Samet JM, Dominici F. Ozone and short-term mortality in 95 US urban communities, 1987-2000. *JAMA.* 2004; 292:2372-2378. Gryparis A, Forsberg B, Katsouyanni K, et al. Acute Effects of Ozone on Mortality from the "Air Pollution and Health: a European approach" project. *Am J Respir Crit Care Med.* 2004; 170: 1080-1087. Bell ML, Dominici F, and Samet JM. A Meta-Analysis of Time-Series Studies of Ozone and Mortality with Comparison to the National Morbidity, Mortality, and Air Pollution Study. *Epidemiology.* 2005; 16:436-445. Levy JI, Chermerynski SM, Sarnat JA. Ozone Exposure and Mortality: an empiric Bayes metaregression analysis. *Epidemiology.* 2005; 16:458-468. Ito K, De Leon SF, Lippmann M. Associations Between Ozone and Daily Mortality: analysis and meta-analysis. *Epidemiology.* 2005; 16:446-429.

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

[15] U.S. Energy Information Administration. Short-Term Energy Outlook. February 12, 2019.

[16] U.S. Energy Information Administration. Annual Energy Outlook 2019 with projections to 2050. January 2019. DOE/EIA

[17] U.S. Energy Information Administration. U.S. Coal Consumption in 2018 expected to be the lowest in 39 years. December 4, 2018.

[18] U.S. Environmental Protection Agency. Economic Impact Analysis for the Review of Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units. EPA 452/R-18-005. December 2018. P. 2-3.

[19] U.S. Energy Information Administration. Most coal plants in the United States were built before 1990. April 17, 2017.

[20] U.S. Environmental Protection Agency. Regulatory Impact Analysis for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program. EPA-452/R-18-006. August 2018.

[21] U.S. Department of Energy. "Secretary of Energy Rick Perry Announces $36 Million for Projects to Advance Carbon Capture Technologies." September 22, 2017.

[22] Smith P, Davis SJ, Creutizig F, Fuss S, et al. Review Article: Biophysical and economic limits to negative CO_2 emissions. Nature Climate Change. Published online December 7, 2015. Doi: 10,1038/nclimate2870. P

[23] IPCC, Special Report on Global Warming of 1.5° C. 2018.

[24] Quote from Hans-Otto Pörtner, Co-Chair of IPCC Working Group II from IPPC, IPCC Press release.