FRED UPTON, MICHIGAN
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS

Congress of the United States

House of Representatives

COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115

Majority (202) 225-2927
Minority (202) 225-3641

MEMORANDUM

June 10, 2015

To: Subcommittee on Energy and Power Democratic Members and Staff

Fr: Committee on Energy and Commerce Democratic Staff

Re: Hearing on "EPA's Proposed Ozone Rule"

On Friday June 12, at 9:30 a.m. in room 2123 of the Rayburn House Office Building, the Subcommittee on Energy and Power will hold a hearing on a proposed Environmental Protection Agency (EPA) rule to revise the National Ambient Air Quality Standard (NAAQS) for ozone. Issued on November 25, 2014, the proposal would tighten the level of the ozone NAAQS from its current level of 75 parts per billion (ppb) to a level between 65 and 70 ppb.[1]

I. EPA'S PROPOSED REVISION TO THE NATIONAL AMBIENT AIR QUALITY STANDARDS FOR OZONE

A. Background on NAAQS

The Clean Air Act (CAA) requires EPA to set national ambient air quality standards (NAAQS) for certain pollutants that endanger public health and the environment. EPA sets primary NAAQS at concentration levels sufficient to protect the public health with an "adequate margin of safety."[2] In essence, for certain pollutants emitted from "numerous and diverse sources" the primary NAAQS identify the level of ambient air pollution that is "safe" to breathe. These standards are the cornerstone of the Clean Air Act.

---

[1] U.S. Environmental Protection Agency, *National Ambient Air Quality Standard for Ozone*, 79 Fed. Reg. 75234 (Dec. 17, 2014) (proposed rule) (online at www.federalregister.gov/articles/2014/12/17/2014-28674/national-ambient-air-quality-standards-for-ozone) [hereinafter Proposed Rule].

[2] Clean Air Act § 109(b)(1).

There are NAAQS for six criteria pollutants: lead, particulate matter ($PM_{2.5}$ or PM_{10}), ozone, Nitrogen Dioxide (NO_2,), sulfur dioxide (SO_2), and carbon monoxide. Ozone, also known as smog, has a number of health impacts, ranging from increased asthma attacks in children and increased cases of acute bronchitis in children to premature death.[3] Ozone also damages vegetation, including crops and ecosystems.[4]

B. NAAQS and State Enforcement Represent Cooperative Federalism

The setting of the NAAQS by the federal EPA, followed by state implementation plans (SIPs) to flexibly implement the NAAQS, is a leading example of cooperative federalism. EPA sets the NAAQS based on a thorough review of the medical and scientific evidence, as well as advice provided by the Clean Air Scientific Advisory Committee (CASAC), an independent scientific review committee.[5] These standards are to be based solely on considerations of public health, and are to '"accurately reflect the 'latest scientific knowledge.'"[6] EPA must review each NAAQS every five years and make revisions as appropriate.[7]

There are also "secondary' NAAQS for the same pollutants set at a level that is 'necessary to protect public health and welfare,'" a broad phrase that includes non-health damage to the environment, such as damage to crops, vegetation, property, building materials, etc.[8] These standards are also subject to review and, as appropriate, revision, every five years.

In setting both primary and secondary NAAQS, EPA may not consider the costs of implementing the standard. In the Supreme Court's unanimous ruling in *Whitman v. American Trucking Associations*,[9] Justice Scalia wrote, "the text of §109(b) …unambiguously bars cost considerations from the NAAQS-setting process, and thus ends the matter for us as well as the EPA."[10]

Once EPA establishes the NAAQS, the states are then primarily responsible for reducing pollution to meet the standard.[11] It is up to each state to prepare and submit SIPs to require and

---

[3] U.S. Environmental Protection Agency, *Ozone and Health* (Nov. 25, 2014) (online at www.epa.gov/airquality/ozonepollution/pdfs/20141125fs-health.pdf).

[4] U.S. Environmental Protection Agency, *Ozone and Agriculture* (Nov. 25, 2014) (online at www.epa.gov/airquality/ozonepollution/pdfs/20141125fs-agriculture.pdf).

[5] *Id.* at § 109(d)(2). CASAC is composed of seven members, including at least one member of the National Academy of Sciences, one physician and one person representing state air pollution agencies.

[6] *Id.* at § 108(a)(2).

[7] *Id.* at § 109(d)(1).

[8] *Id.* at § 109(b)(2).

[9] *Whitman v. American Trucking Assns., Inc.*, 531 U.S. 457 (2001).

[10] *Id.* at 471.

[11] Clean Air Act at § 107(a).

enforce pollution reductions sufficient to meet the NAAQS in each air quality control region.[12] In determining how to meet the NAAQS, a state may consider costs in crafting the appropriate mix of pollution controls for sources in a given state or area. Areas not meeting the standard are referred to as "non- attainment" areas.

C. History of Revisions to the Ozone NAAQS

1. The 2008 Revision to 75 ppb

In setting a NAAQS, EPA is to consider the recommendations of CASAC.[13] However in 2008, the Bush Administration lowered the ozone NAAQS to 75 ppb, despite the unanimous recommendations of the CASAC that a 60 to 70 ppb standard would be more protective of public health. The CASAC Chair, Rogene Henderson, wrote to then EPA Administrator Stephen Johnson that:

> It is the Committee's consensus scientific opinion that your decision to set the primary ozone standard above this range [60 to 70 ppb] fails to satisfy the explicit stipulations of the Clean Air Act that you ensure an adequate margin of safety for all individuals including sensitive populations."[14]

2. The 2010 Withdrawn Reconsideration of Ozone Standard

EPA began reconsidering the ozone standard in 2009, and proposed to lower the NAAQS to 60 to 70 ppb in 2010, as recommended by CASAC. However before the standard was finalized, President Obama directed EPA to withdraw its proposal.[15]

Because EPA failed to meet the five year deadline to review and update the ozone NAAQS, environmental and public health groups filed suit against the agency in June of 2013. On April 30, 2014, the court ordered EPA to "issue a proposed rule based on its review of the NAAQS for ozone," by December 1, 2014, and a final rule by October 1, 2015.[16]

---

[12] *Id.* at § 110(a).

[13] Clean Air Act § 109(d)(2).

[14] Letter from Dr. Rogene Henderson, Chair of the Clean Air Scientific Advisory Committee to U.S. Environmental Protection Agency Administrator Stephen Johnson (Apr. 7, 2008) (online at yosemite.epa.gov/sab/sabproduct.nsf/4AF876432433128885257425006 9E494/$File/EPA-CASAC-08-009-unsigned.pdf).

[15] The White House, Office of the Press Secretary, *Statement by the President on the Ozone National Ambient Air Quality Standards* (Sept. 2, 2011) (online at www.whitehouse.gov/the-press-office/2011/09/02/statement-president-ozone-national-ambient-air-quality-standards).

[16] *Sierra Club, et al. v. EPA*, No. 13-cv-2809-YRGR (N.D. Cal. Apr. 30, 2014) (order granting summary judgment) (online at

D. EPA's New Proposed Ozone NAAQS

On November 20, 2014, EPA proposed to tighten the ozone NAAQS from 75 ppb to a level between 65 and 70 ppb.[17] This level is consistent with the recommendations of CASAC, indicating a level between 60 and 70 ppb would be protective of public health, based on the latest scientific knowledge.

CASAC indicated that it "further concludes that there is adequate scientific evidence to recommend a range of levels for a revised primary ozone standard from 70 ppb to 60 ppb."[18] With regard to the upper bound of 70 ppb, CASAC noted that:

> based on the scientific evidence, a level of 70 ppb provides little margin of safety for the protection of public health, particularly for sensitive subpopulations… Although a level of 70 ppb is more protective of public health than the current standard, it may not meet the statutory requirement to protect public health with an adequate margin of safety.[19]

EPA is currently considering comments it received on the ozone NAAQS proposal and will finalize the standard by October 1, 2015.

1. Health Benefits

EPA's proposal will improve air quality and result in significant public health benefits, particularly for children, the elderly, and people with respiratory diseases such as asthma. EPA estimates that 25.9 million people in the U.S. have asthma, including 7.1 million children.[20] According to EPA, in 2012, there were approximately 133 million Americans living in counties that experience ozone levels higher than the current ozone standard of 75 ppb.[21]

In addition to lowering ozone pollution, EPA's proposal is expected to result in additional co-benefit reductions of particulate matter ($PM_{2.5}$). In 2025, EPA projects that the health benefits of lowering the ozone standard will help avoid up to 4,300 premature deaths, 2,300

---

www.epa.gov/ttn/naaqs/standards/ozone/data/201404ozonenaaqsorder.pdf).

[17] Letter from Dr. H. Christopher Frey, Chair of the Clean Air Scientific Advisory Committee to U.S. Environmental Protection Agency Administrator Gina McCarthy (Jun. 26, 2014) (online at yosemite.epa.gov/sab/sabproduct.nsf/5EFA320CCAD326E885257D030071531C/$File/EPA-CASAC-14-004+unsigned.pdf).

[18] *Id.*

[19] *Id.* (emphasis added).

[20] U.S. Environmental Protection Agency, *Ozone and Health* (Nov. 25, 2014) (online at www.epa.gov\groundlevelozone\pdfs\20141125fs-health.pdf).

[21] Proposed Rule, 79 Fed. Reg. at 75242.

cases of acute bronchitis in children, 4,300 asthma-related emergency room visits, 960,000 asthma attacks in children, 180,000 missed work days, and 1 million missed school days across the country each year.[22]

EPA considered the California health benefits separately because it projects that some counties would need additional time to comply with the revised standard. After 2025, EPA projects that the health benefits of lowering the ozone standard in California will help avoid up to 430 premature deaths, 130 cases of acute bronchitis in children, 740 asthma-related emergency room visits, 210,000 asthma attacks in children, 11,000 missed work days, and 230,000 missed school days annually.[23]

2. Climate Change

Climate change will also exacerbate the impacts of ground level ozone. The National Climate Assessment highlights that ozone formation increases with warmer temperatures and larger and more intense wildfires that occur because of climate change will also increase emissions of ozone precursors, such as carbon monoxide (CO), nitrogen oxides (NO_x) and various volatile organic compounds (VOCs). As a result, "[c]limate change is projected to harm human health by increasing ground-level ozone."[24] EPA further notes that "climate change has the potential to cause increases in summertime O_3 [ozone] concentrations over substantial regions of the country, with increases tending to occur during higher peak pollution episodes in the summer."[25]

3. NAAQS Benefits Significantly Outweigh the Costs

Although the Clean Air Act requires EPA to set NAAQS at levels that will protect human health and welfare without considering costs, EPA's analysis shows that the health benefits of a 65 to 70 ppb ozone standard would significantly outweigh compliance costs by billions of dollars per year:

- Excluding California, EPA projects that the annual public health benefits of complying with a **65 ppb** ozone standard would be $4 to $23 billion higher than the costs in 2025 ($19 to $38 billion in benefits vs. $15 billion in costs).

---

[22] U.S. Environmental Protection Agency, *Ozone by The Numbers* (Nov. 25, 2014) (online at www.epa.gov/airquality/ozonepollution/pdfs/20141125fs-numbers.pdf). These estimates exclude California.

[23] *Id.*

[24] U.S Global Change Research Program, *Climate Change Impacts in the United States, Chapter 9 Human Health* (May 2014) (online at nca2014.globalchange.gov/report/sectors/human-health).

[25] Proposed Rule, 79 Fed. Reg. at 75242.

- EPA projects that the annual public health benefits of complying with a **70 ppb** ozone standard, excluding California, would be $2.5 to $9.1 billion higher than the costs in 2025 ($6.4 to $13 billion in benefits vs. $3.9 billion in costs).

- EPA also projects that after 2025 annual public health benefits in California would exceed compliance costs under either a 65 or 70 ppb ozone standard.[26]

4. Concerns About Expanded Number of Non-Attainment Areas

Critics of the proposed ozone NAAQS have raised concerns regarding the number of new ozone non-attainment areas that will result from lowering the standards. However a number of existing federal rules will help to reduce ozone emissions. For instance, the new Tier 3 standards for vehicles and fuels,[27] the Cross State Air Pollution Rule (CSAPR),[28] and the New Source Performance Standards for the Oil and Gas Industry[29] will help lower ozone emissions, and thus the number of non-attainment areas will be much smaller than many have previously projected.

According to EPA, by 2025 only nine counties are expected to exceed the 70 ppb standard, and only 68 are expected to exceed the 65 ppb standard. These projections are far lower than the 358 counties and 558 counties with current ozone levels above 70 ppb and 65 ppb respectively.[30] In fact, these figures are based on 2011-2013 air quality data. Final designations will likely be made based on 2014-2016 data which will reflect some of the federal measures discussed above and will likely lead to even fewer non-attainment areas.

5. Timeline

It is important to recognize that setting a new ozone NAAQS is only the beginning of the implementation process. Existing sources in non-attainment areas are provided with ample time to comply with any revised standard. Although new sources located in non-attainment areas would be subject to controls, for existing sources the controls become effective only after the SIP is in place, which would be 2020 at the earliest. Actual attainment deadlines extend as far out as 2037.

For ozone, the timeline would begin with a final rule that is published on October 1,

---

[26] *Id.*

[27] U.S. Environmental Protection Agency, *Tier 3 Vehicle Emission and Fuel Standards Program* (May 11, 2015) (online at www.epa.gov/oms/tier3.htm).

[28] U.S. Environmental Protection Agency, *Cross-State Air Pollution Rule* (Jun. 3, 2015) (online at www.epa.gov/airtransport/CSAPR).

[29] U.S. Environmental Protection Agency, *Oil and Natural Gas Air Pollution Standards* (Apr. 7, 2015) (online at www.epa.gov/airquality/oilandgas).

[30] U.S. Environmental Protection Agency, *Ozone by The Numbers* (Nov. 25, 2014) (online at www.epa.gov/airquality/ozonepollution/pdfs/20141125fs-numbers.pdf).

2015. The following timeline then occurs:

- October 1, 2016: States make recommendations for designations of areas within each state as attainment, non-attainment or maintenance areas. EPA has announced it will update its existing designations guidance shortly after the publication of the final rule.

- October 1, 2017: EPA issues final area designations, these would likely be based on 2014 to 2015 air quality data, which will likely reduce the number of non-attainment areas below the figures cited above.

- 2020-2021: States and tribes complete development of SIPs.

- 2020- 2037: States are required to meet the health based standard, with staggered deadlines depending on the severity of the area's air pollution problem. Extreme areas like Los Angeles have until 2037 to comply.

6. Industry Claims Regarding Cost of the Ozone Rule

As noted above, EPA has estimated the cost of a 65 ppb ozone standard would be $15 billion with $19-38 billion in benefits (excluding California), and the cost of a 70 ppb ozone standard would be $3.9 billion with $6.4-$13 billion in benefits (excluding California). Although these estimates may not legally be used in setting the standard, they were reviewed and approved by the Office of Management and Budget as part of EPA's Regulatory Impact Analysis.[31]

Industry has produced some estimates that are greatly inflated in comparison to these figures. In July 2014, well before the ozone proposal was issued, the National Association of Manufacturers (NAM) issued a report claiming that the ozone standards would be the most expensive rule ever issued and would reduce Gross Domestic Product by up to $270 billion per year.[32]

There are numerous problems with this study. Perhaps most importantly it fails to include any estimate of benefits. That is analogous to including only the costs of a purchase without including any of the purchased item's ensuing benefits. As EPA's analysis shows, the benefits to be obtained under the standard uniformly exceed the costs.

Also, the 2014 study examines a standard of 60 ppb, which, although it is within the range identified by CASAC, it falls outside the range of 65-70 ppb that EPA proposes. Even

[31] U.S. Environmental Protection Agency, *Regulatory Impact Analysis of the Proposed Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone* (Nov. 26, 2014) (online at www.epa.gov/ttnecas1/regdata/RIAs/20141125ria.pdf).

[32] National Association of Manufacturers, *Assessing Impacts of a Stricter National Ambient Air Quality Standard for Ozone*, (Jul. 2014).

considering 60 ppb, EPA has estimated the costs of that standard at $39 billion per year.

NAM updated its analysis in February of 2015, to examine a 65 ppb standard and reached a revised estimate of $140 billion per year.[33] However, EPA's estimate is $15 billion in costs with $19-38 billion in benefits (excluding California).

The Congressional Research Service has identified numerous other problems with both studies that cause the costs to be inflated---such as use of outdated data from 2008 and 2010 regulatory analyses, use of an incorrect baseline that does not include the effects of the CSAPR rule, and artificially restricting compliance options in the analysis.[34]

II. WITNESSES

The following witness is expected to testify:

The Honorable Janet McCabe
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

[33] National Association of Manufacturers, *Economic Impacts of a 65 ppb National Ambient Air Quality Standard for Ozone*, (Feb. 2015).

[34] Congressional Research Service, *Ozone Air Quality Standards: EPA's 2015 Revision* (Jun. 8, 2015) (R43092) (online at www.crs.gov/pdfloader/R43092).