U.S. House Committee on Energy and Commerce Subcommittee on Environment "From Gridlock to Growth: Permitting Reform Under the Clean Air Act." Documents for the Record September 16, 2025

- 1. A letter from American Cement Association (ACA) addressed to Chairman Guthrie to Ranking Member Pallone, submitted by Majority.
- 2. Report from the American Lung Association on Cumulative Health Impacts and the NAAQS (Dec. 17, 2024)
- 3. Report from the Environmental Defense Fund entitled "Under Attack: Vital Clean Air Safeguards" (July 2025)
- 4. Letter from the American Lung Association to Chairman Guthrie, Ranking Member Pallone, Chairman Palmer, and Ranking Member Tonko on HR 161 (Sept. 16, 2025)
- 5. Letter from various organizations to Chairman Guthrie, Chairman Palmer, Vice Chairman Crenshaw, Ranking Member Pallone, Ranking Member Tonko (Sept. 16, 2025)



September 16, 2025

Washington, D.C. 20150

The Honorable Brett Guthrie Committee on Energy and Commerce U.S. House of Representatives American Cement Association 200 Massachusetts Ave NW, Suite 200 Washington D.C., 20001 202.408.9494 www.cement.org

The Honorable Frank Pallone Committee on Energy and Commerce U.S. House of Representatives Washington, D.C. 20150

Dear Chairman Guthrie and Ranking Member Pallone:

I am writing on behalf of the American Cement Association to share our support for Representative Morgan Griffith's legislation, the New Source Review Permitting Improvement Act (H.R. 161), which seeks to modernize the New Source Review Program (NSR). We believe that this legislation is an integral part of the effort to ensure a balance between providing necessary environmental protections and encouraging economic growth.

The American Cement Association - formerly the Portland Cement Association - is the leading voice for America's cement manufacturers. Founded in 1909, our association adopted its new name in May 2025 to reflect the industry's evolution beyond portland cement. Today, our members are pioneering the production of innovative cements and emissions-reduction technologies to expand domestic manufacturing capacity.

Understanding the cement production process is essential for understanding the extensive environmental regulations that the industry complies with and its role of our industry in the economy.

Cement, the primary ingredient in concrete, is essential to building and maintaining the nation's infrastructure – from highways and bridges to airports, mass transit systems, water facilities, and residential and commercial buildings. Our products enhance energy efficiency in buildings, improve fuel efficiency on roads, and contribute to the resilience of critical infrastructure. Cement and concrete manufacturing support over 600,000 American jobs and contribute more than \$100 billion to the U.S. economy annually.

Cement manufacturing is an energy-intensive process that depends on carefully balanced chemistry and physics. Cement is the primary ingredient of concrete. Concrete is formed when cement is mixed with water and aggregate (sand and rock), and allowed to harden. Cement is manufactured through a tightly controlled chemical combination of calcium, silica, aluminum, iron, and other minor ingredients. These chemicals are commonly derived from limestone, chalk, or marl, combined with shale, clay, slate, blast furnace slag, silica sand, and iron ore. These materials are heated to high temperatures, 2700°F or more, until they liquefy and become clinker. Once cooled, gypsum is added to the clinker, and the product is ground into the fine powder that becomes cement.

The Clean Air Act has helped bring about those early tremendous improvements to our air quality in the 1970s and 1980s; however, the law has failed to keep up with ensuring manufacturing and energy generation keeps pace with economic growth. While the law was well-intentioned and effective for improving environmental outcomes across the country, we face new economic challenges that require it to be modernized by Congress. The NSR, established under the Clean Air Act Amendments of 1977, was intended to ensure that "modifications" to facilities did not "significantly increase" emissions. The NSR

statutory provision was measured in scope and contained a common-sense exemption for "routine maintenance."

In practice, the well-intentioned law did not provide adequate specificity for keywords and phrases used to trigger or preclude review, resulting in inconsistent application of the program by the Environmental Protection Agency (EPA), delayed maintenance, investment, and process improvements by manufacturers, and an unduly lengthy and burdensome permitting process. These statutory flaws have had real and negative consequences for both the industry and the environment.

Cement plants can cost several hundred million dollars to build, with the largest plants exceeding \$1 billion, including millions of dollars of investment in emissions monitoring and control equipment and associated operational expenses. They are complex systems stretching hundreds of feet, with carefully calibrated environmental controls. A change to one system, particularly for environmental compliance, can affect the entire production process.

Representative Griffith's New Source Review legislation will improve the NSR program by clarifying the definitions for "modification" and "construction." This bill is an essential legislative step towards addressing the EPA's inconsistent approach to the program. Should this legislation become law, we encourage Congress to provide strict oversight of the EPA's implementation to ensure the agency does not use it to justify additional monitoring, recordkeeping, or emissions limits beyond what the CAA already requires.

Our members are committed to environmental stewardship and sustainable operations as responsible members of their communities and have supported appropriate and necessary regulatory measures aimed at reducing harmful air pollution. ACA's members comply with a variety of environmental regulations, including stringent air emissions requirements that are part of their permits, which can require tens of millions of dollars in emission control equipment and associated operating expenses. For example, ACA's members have been at the forefront of undertaking voluntary efforts to contribute to a cleaner environment through increased plant efficiency and the use of alternative fuels such as scrap tires, used motor oils, petroleum sludge, and other waste materials that would otherwise go to landfills or incinerators.

Such sustainability, efficiency, and operational improvements often require ACA members to undertake, or at the very least consider, modifications to their facilities. Many current EPA policies governing New Source Review (NSR) can discourage, if not prevent, our members from making improvements to their facilities and operations that would benefit the environment and the American economy.

In one instance, a member company sought a permit to combust alternative fuels, which are materials that often otherwise end up in landfills. The EPA Regional Office insisted that permitting for the utilization of alternative fuels automatically triggers NSR permitting, even though the proposed change was only a change to the method of operation and likely would have resulted in decreased emissions. Only after going through a costly, burdensome, and lengthy five-year process to develop results to prove what the company had already known, the EPA Regional Office concluded that the project was not required to go through NSR permitting.

ACA appreciates the opportunity to share our member's perspectives on legislation reforming the New Source Review Program. We look forward to working with the Committee on moving this legislation as it considers its next steps. If you have any further questions, please contact me at soneill@cement.org or 202.719.1974.

Sincerely,

Sean O'Neill

Senior Vice President, Government Affairs

Portland Cement Association

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Cumulative Health Impacts Assessment and the National Ambient Air Quality Standards

American Lung Association December 17, 2024

Summary

The numerous adverse health effects of ambient air pollutant exposures are now well documented in scientific literature. The air pollutants in outdoor air do not exist in isolation nor are they inhaled individually. Ambient air is a mixture of multiple pollutants including the commonly present criteria pollutants, which have the potential to interact with one another and influence their individual impacts on human health.

The criteria air pollutant exposome, i.e. the totality of environmental exposures and their health impacts, includes multiple risk factors that potentially add to the health effects resulting from exposure to a specific pollutant. Non-chemical stressors, such as socioeconomic status and sociodemographic factors and preexisting health issues, add to the health impacts of criteria air pollutant exposures. Climate change is another major risk factor that impacts public health on its own and also imposes a penalty on conventional air pollutant exposure.

Assessing the cumulative health impacts of all these stressors requires establishing the risk posed by each, quantifying that risk, and weighting the risk in regulating specific air pollutants. The problem with the current paradigm of criteria air pollutant control, i.e. setting health-based primary National Ambient Air Quality Standards (NAAQS) for the six individual pollutants without considering the health effects of co-pollutants, is that there can be adverse health impacts from co-exposures to these pollutants even if no individual pollutant exceeds its current standard. Cumulative impacts assessment also plays a role in the framing and use of the Air Quality Index (AQI) which is based on short-term primary NAAQS.

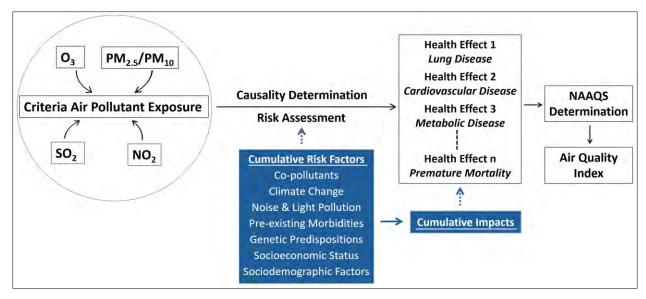
In this paper we briefly discuss the state of scientific research in the assessment of cumulative health impacts of co-pollutant exposures as one of the multiple risk factors and the application of such assessments in regulatory policy and risk communication related to criteria air pollutants and their NAAQS determinations to better protect public health.

Ambient air is a complex mixture of multiple chemical pollutants which are not produced in isolation, nor are they inhaled in isolation. Among this mixture are criteria air pollutants (CAPs) such as nitrogen oxides (NO_y), sulfur oxides (SO_x), particulate matter (PM), and ozone and related photochemical oxidants (PX) which are closely associated with each other due to the similarity of their emission sources (or those of their precursors) and of their adverse health impacts from both short-term and long-term exposures. It is now clear that non-chemical stressors such as preexisting morbidities, life stages, noise pollution, light pollution, economic status, education level, race and climate change are some additional risk factors that may amplify the health impacts of chemical air pollutant exposures.

The criteria air pollutant exposome, i.e. the totality of environmental co-exposures and multiple risk factors that potentially add to the adverse health impacts of criteria air pollutant exposures, includes a large array of stressors. Cumulative impacts assessment is the consideration of the "totality of exposures to combinations of chemical and non-chemical stressors and their effects on health, well-being, and quality of life outcomes." Such an assessment requires an "analysis, characterization, and possible quantification of the combined risks to health and/or the environment from multiple agents and/or stressors", i.e. cumulative risk assessment (CRA). VI

The Clean Air Act requires EPA to review and revise (as warranted by current science), at least once every five years, the National Ambient Air Quality Standards (NAAQS) for criteria air pollutants based on their health and welfare effects. Even though the "consideration of cumulative health impacts is consistent with the Act's requirement to set standards at a level requisite to protect public health, could translate into a more accurate way to estimate risks, and could provide a tool for prioritization of emission reductions in the most heavily impacted communities,"vii EPA has historically focused on assessing the scientific evidence of the health effects of only one criteria pollutant at a time in determining its NAAQS without assessing the impacts of any other co-occurring risk factor. Cumulative impact assessment is also needed to ensure that the NAAQS meet the Act's "margin of safety" requirement to protect vulnerable atrisk subpopulations which the courts have repeatedly affirmed and "have remanded NAAQS decisions to EPA for failure to adequately consider these groups or for failure to explain how the standards are adequate to protect their members."

Lack of consideration of cumulative impacts of multiple risk factors could likely result in weaker standards of criteria pollutants and run counter to the public health protection metric of primary NAAQS as laid out in the Clean Air Act. (Figure 1)



Partial exposome of a criteria air pollutant. In the current framework of criteria air pollutants (e.g. O_3 – ozone, $PM_{2.5}$ – fine particulate matter, PM_{10} – coarse particulate matter, SO_2 – sulfur dioxide, NO_2 – nitrogen dioxide) regulation, EPA determines their primary National Ambient Air Quality Standards (NAAQS) based on the health impacts attributable solely to the single pollutant under consideration. However, multiple risk factors including the simultaneous co-exposure to multiple air pollutants could add to the health burden of criteria air pollutant exposures. Consideration of the cumulative health impacts of various chemical and non-chemical stressors is needed to accurately determine NAAQS that are truly protective of public health. The Air Quality Index (AQI), a public health risk communication tool based on short-term NAAQS of the CAPs could be made more effective if cumulative impact assessment were included in its framework as well.

Qualitative and quantitative assessment of cumulative impacts is complex because of the many categories of different stressors and the paucity of policy-relevant data on most of them.* In 2012, EPA staff noted that there is no agency-wide policy for considering the various "chemical, biologic, radiologic, physical, and psychologic stressors" that affect human health in decision-making.* This continues to be true today.

Members of multiple scientific bodies have recommended additional research into and consideration of cumulative health impacts of multiple risk factors in EPA's decision-making. Xii In its 2022 consultation with EPA on cumulative impact assessments, the Science Advisory Board (SAB) recommended that the agency: a. "as a first step, determine geographic "hot spots" and narrow the initial scope to stressors present in those regions. Hot spots representing different parts of the country and different scales could be considered", b. "identify the "lowest hanging fruit" (combinations of stressors for which we have the most information), the "greatest potential impact" (combinations of stressors for which we may not have enough information, but the evidence points to serious health impacts), and "of greatest concern" [combinations of stressors of greatest concern to community groups, experts (including environmental, health, and social scientists), and other stakeholders]. Peer-reviewed methods that have been previously used to assess multiple stressors are a good starting point." As the SAB recommended, EPA could turn to existing literature on mixed methods strategies that integrate quantitative and qualitative data in the holistic consideration of multiple risk factors and the assessment of cumulative impacts in environmental decision-making. XIV EPA could also

review the different components of cumulative impacts assessments, including the various risk factors, that are already considered individually in major environmental laws as well as in regulatory decisions at most levels of government.**

Among the chemical stressors, multipollutant co-exposures are important universal health risk factors whose cumulative health impacts need serious consideration in regulating ambient air pollution, such as in determining the NAAQS of criteria pollutants. "The parameters of the Clean Air Act, which govern the review of each NAAQS separately, have contributed to researchers often examining the health effects of exposure to individual criteria pollutants, rather than simultaneous exposure to multiple pollutants." Thus, the assessment of cumulative health impacts of multipollutant exposures in determining health-based primary NAAQS has been constrained by a limited availability of policy-applicable scientific data. Wii More than a decade ago, EPA staff scientists proposed transitioning to a multipollutant paradigm in the regulation of criteria air pollutants through the "adoption of a framework for multipollutant science and risk assessment that encompasses well-studied and ubiquitous air pollutants." This proposal was made to enable "an air quality management program that protects public health through a better understanding of the features of a complex air pollution mixture that are most deleterious to health." XiX

In early 2023, EPA drafted a set of principles for evaluating cumulative risks in the regulation of toxic pollutants under the Toxic Substances Control Act (TSCA) "to examine risk to people from exposure to multiple chemicals with similar effects." However, an equivalent is still wanting in the determination of health-based primary NAAQS for criteria pollutants. There is now increasing data on the impacts of co-pollutant mixtures on specific health endpoints associated with the exposure to a single criteria pollutant. XXIII,XXIII,XXIV,XXIV

In 2023, EPA released draft guidelines for cumulative risks analysis (CRA) planning and a problem formulation approach to support risk management in the agency's decision-making: "CRAs have been performed to inform decisions on some of the...NAAQS, (which) as standards for ambient air, reflect consideration of the cumulative concentrations of various pollutants in ambient air, which result from emissions from many sources."xxvi However, this is true only for the *human welfare-based* secondary NAAQS, for which EPA considers the impacts of some of the criteria air pollutants cumulatively: "Cumulative ecological risk assessment has also been performed to inform NAAQS decisions, e.g., in assessing ecological risk associated with the co-occurrence in ambient air of multiple oxides of sulfur and nitrogen."xxvii

By contrast, in the "Health Risk and Exposure" assessments for *human health-based* primary NAAQS, EPA considers the exposure risk and cumulative health impacts of *only* those groups of pollutants that are chemically- or physically-related to the individual criteria pollutants whose NAAQS are being reviewed, but not those of other groups. **xviii* For example, the ozone NAAQS is set for ozone and related photochemical oxidants (collectively referred to as Ox) that co-occur with ozone in ambient air. **xix* Ozone serves as the indicator species for the group, members of which share similar chemical profiles and are also likely to have similar health effects. Similarly, NO_2 and SO_2 serve as indicators of multiple oxides of nitrogen (NOy = NOx (reactive nitrogen oxides: $NO + NO_2$) + NOz (other nitrogen oxides))**xx* and sulfur (SOx) respectively for which these NAAQS are set. The NAAQS for particulate matter are set for groups of particulate

aerosols that are of similar physical size (fine particles - PM_{2.5} and coarse particles - PM₁₀). "In the case of risk assessments for fine particulate matter, the assessment is of the whole mixture of fine particulate matter and reflects cumulative health risk associated with all particulate substances in ambient air that fall into the particle size class of interest." The primary NAAQS reviews do not consider the cumulative impacts of any of these groups in the context of exposure to other chemical stressors, such as the other groups of pollutants regulated by the NAAQS.

The importance of assessing cumulative impacts of co-pollutants was also underscored in the recommendations of recent CASAC panels: "A recurring shortfall of virtually all NAAQS reviews has been the lack of acceptance and strategy to address multi-pollutant co-exposures... Based on both clinical and epidemiological research, other co-pollutants can serve to increase the impact or intensity of response... In the regulatory context of reviewing individual criteria pollutants under the Clean Air Act, one approach to address multi-pollutant exposures might be to consider other contaminants as potential risk factors that could elevate or decrease exposure risk"; "Consider the estimation of cumulative risk and impacts on health morbidity and mortality. There is increasing evidence that risk is cumulative and methods to estimate this risk are improving. In addition, the relationships between multiple exposures or co-pollutants, modifiers and outcomes (e.g., demographic, socioeconomic, built environment factors) should also be incorporated or acknowledged as sources of uncertainty"; xxxiii "ozone never exists in isolation; co-pollutant effects must be considered with different exposure models."xxxiv An additional important recommendation was for EPA's consideration of health endpoints cumulatively by focusing on "the combined strength of identified negative health outcomes across several organ system indices (respiratory, cardiovascular, neurologic, reproductive, metabolic)" instead of on "individual organ system uncertainties." xxxv

In recent NAAQS reviews, the issue of multipollutant exposure was also raised in the context of weighting different types of health research data in making causal determinations. In arguing to weight epidemiological data more than data from experimental dose-response/controlled human exposure (CHE) chamber studies because the latter are "not conservative enough to protect at-risk populations," CASAC panels and also public health advocates noted one inherent limitation of CHE studies: that they involve exposure to a single pure pollutant, which may underestimate or miss the effects of other pollutants realistically present in ambient air. "This is relevant for considering whether a potential alternative standard has an adequate margin of safety to protect these potentially at-risk populations."xxxvi Application of an "adequate margin of safety" in protecting the multiple and diverse vulnerable groups requires a comprehensive assessment of the cumulative impacts of multiple risk factors that such groups experience that could increase the adverse health impacts of their CAP exposures. It also involves applying the precautionary principlexxxvii to protect these subpopulations, especially in cases of scientific uncertainties, by integrating the heterogeneity of their responses (relative to general population) to CAP exposures so they are protected to the same extent as the average population.

The first systematic analysis of existing epidemiologic and experimental literature on multipollutant effects (as joint effects, effect measure modification, or interactions) on an array of cardiovascular outcomes was published in 2018 by EPA scientists.xxxviii Comparing the effects

of pairwise combinations of criteria pollutants ($PM_{2.5} \& O_3$, $PM_{10} \& NO_2$, $NO_2 \& O_3$, PM & CO, $CO \& O_3$) relative to single pollutant exposures, they found evidence of O_3 concentration modifying the effect of PM, with the PM and O_3 combination providing "evidence for additivity, synergism, and/or antagonism depending on the specific health endpoint." For other pollutant pairs, they found heterogeneous results and noted that "the limited number of studies inhibited making a conclusion about the nature of the relationship between pollutant combinations and cardiovascular disease."

In March 2024, EPA published a case study that seems to incorporate some of the SAB recommendations, a comparative analyses of quantified cumulative impacts of multiple criteria air pollutants on a specific health effect associated with changes in pollutant levels over time.xxxix Using a developmental multipollutant version of the Environmental Benefits Mapping and Analysis Program - Community Edition (BenMAP-CE), x1 the study estimated the change in the number of pediatric asthma emergency department (ED) visits as a function of modeled changes in air pollution between 2011 and 2025 in Atlanta, Georgia, applying risk estimates from the 2014 study. The authors analyzed short-term exposures to both individual and combinations of criteria pollutants (O₃, PM_{2.5}, NO₂, SO₂, CO) that represent "shared properties or predefined sources" such as oxidant gases, power plant emissions, secondary pollutants, traffic emissions. The study found the estimated number of avoided asthma ED visits to be higher among multipollutant groups in which pollutant interaction terms were included, compared to that from single-pollutant models. This robust study underscores the importance of a multipollutant paradigm and the consideration of co-pollutant interactions for a more comprehensive assessment of health impacts in regulating individual criteria pollutants, compared to single-pollutant models. It also demonstrates that performing multipollutant health impact assessments in air quality regulation is appropriate, needed, and technically feasible.

Comparative analyses of the impacts of single pollutant exposures and cumulative effects of copolluting criteria pollutants are needed to inform regulatory actions such as primary NAAQS determinations of the six individual criteria pollutants, in the implementation of these standards, and also in air quality risk communication, which is based on the primary NAAQS of the individual criteria pollutants.

EPA's Air Quality Index (AQI) is a public health risk communication tool used by state and local air agencies to inform their residents on daily air quality, generally accompanied with action alerts and air quality forecast information. In its current framework, the AQI covers the group of six criteria air pollutants, using the same scale for each of the individual pollutants to set levels of outdoor air quality and associated exposure risks. This scale is based on the pollutants' respective short-term NAAQS, i.e. AQI value of 100 of any pollutant - which indicates moderate air quality - corresponds to the level of the short-term NAAQS of that pollutant.

The AQI communicates health risks of exposure to only that single pollutant which is present at the highest level in ambient air on any given day, relative to the other pollutants in the group. Elevated levels of the other pollutants in the group do not prompt additional warnings. This maximum value single-pollutant AQI paradigm does not capture the cumulative health impacts of co-pollutants or other non-chemical stressors and may not convey the true public health risk

of exposures to "more complex air mixtures," which are realistic representations of ambient air. Modifying the current AQI framework or adopting an aggregate air quality index that integrates cumulative risk factors and their cumulative health impacts could help gain efficiencies in protecting public health. EPA's recent multipollutant study on co-polluting criteria pollutants that show "joint effects with interactions" to be similar to "sum of (the effects of) single pollutants" warrant a review of the AQI structure so that the current AQI values are better aligned with multipollutant exposures.

EPA recently announced that it is prioritizing cumulative impacts assessment in decision-making by funding research studies focusing on the Exposome or the Total Environment Framework: "build from the traditional risk assessment approach to include combinations of chemical and non-chemical stressors, changing climate, multiple health endpoints, community engagement, and mixed methods analytical approaches that incorporate both quantitative and qualitative data to inform decisions in the best interest of the community." Some nonprofit research organizations are also funding similar studies on cumulative impacts of multiple stressors and its translation into implementable strategies. These research projects/programs focus on a broad and diverse group of stressors with the goal of addressing disproportionate environmental burden on specific communities in various agency actions related to air, water, and land.

Focusing on one specific set of stressors in one specific regulatory domain could yield results that could be used in multiple policies. Air pollution, such as criteria air pollutant exposure, is a universal health hazard that affects everyone. Cumulative impacts of contemporaneous exposure to multiple criteria air pollutants can be assessed more easily than some of the nonchemical stressors because of the relative ease of quantification of the health impacts of multipollutant exposures in the regulation of individual criteria air pollutants. Integrating impacts of contemporaneous exposure to multiple pollutants would be helpful in designing more effective air pollution policy interventions than the current single pollutant approach. To better understand the interactions between copollutants and accurately capture their cumulative health impacts, a more robust scientific evidence base is needed. Conducting policyapplicable ("fit-for-purpose") multipollutant research studies across different study types (epidemiological studies, animal toxicological studies, human exposure chamber studies, exposure modeling, etc.), refining existing multipollutant models, exploring new methodologies, conducting more case studies in different geographic and demographic contexts, etc. will fill the current data gaps and best inform the NAAQS process in ensuring public health protection from multipollutant exposures.

In conclusion, consideration of cumulative health impacts of copollutant exposures is needed – in NAAQS determinations and in their implementation such as the Air Quality Index to communicate public health risk – to better protect human health from criteria air pollutants. Multipollutant exposures in which individual criteria pollutants are present at levels lower than their respective NAAQS could still be harmful to health because of their combined impacts. Data from policy-applicable scientific studies on cumulative impacts criteria air pollutant coexposures would help align primary NAAQS determination more accurately with exposure risks and afford better public health protection under the Clean Air Act.

¹ Behles, D. N. (2010). <u>Examining the Air We Breathe: EPA Should Evaluate Cumulative Impacts When It Promulgates National Ambient Air Quality Standards</u>. *Pace Environmental Law Review, 28(1), 200*.

^{II} EPA. <u>Integrated Science Assessments</u> (ISAs); Tables ES-1 (Summary of causality determinations) in: ISA for Ozone and Related Photochemical Oxidants, April 2020, EPA/600/R-20/012; ISA for Particulate Matter, December 2019, EPA/600/R-19/188; ISA for Oxides of Nitrogen – Health Criteria, January 2016, EPA/600/R-15/068.

iii Humphrey, J. L. et al. (2024). Disentangling impacts of multiple pollutants on acute cardiovascular events in New York city: A case-crossover analysis. Environmental Research, 242, 117758; Study found significant same-day associations of both with risk of overall cardiovascular disease and sub-diagnosis of heart failure events and "chronic life stress among African-Americans may lead to hastened aging and cardiovascular susceptibility"; Fann, N. L., et al. (2021). Associations Between Simulated Future Changes in Climate, Air Quality, and Human Health. JAMA Netw Open, 4(1):e2032064; "reducing air pollutant emissions could attenuate but not eliminate the climate change-induced increase in mortality associated with air pollution"; Sun, Y., et al. (2022). Exposure to air pollutant mixture and gestational diabetes mellitus in Southern California: Results from electronic health record data of a large pregnancy cohort. Environment international, 158, 106888. "This study found that exposure to a mixture of ambient PM_{2.5}, PM₁₀, NO₂, and PM_{2.5} chemical constituents was associated with an increased risk of GDM" & "NO₂ and black carbon PM2.5 contributed most to GDM risk."; Canterbury, A. et al. (2020). Association between cumulative social risk, particulate matter environmental pollutant exposure, and cardiovascular disease risk. BMC cardiovascular disorders, 20(1),76; This community-based cohort study found that the association of increasing cumulative social risk with higher cardiovascular disease and mortality risks is partially accounted for by exposure to PM_{2.5} environmental pollutants; Li, Y., et al. (2019). Association between air pollution and type 2 diabetes: an updated review of the literature. Therapeutic advances in endocrinology and metabolism, 10, 2042018819897046.; "Current cumulative evidence appears to suggest that T2DM-related biomarkers increase with increasing exposure duration and concentration of air pollutants. The chemical constituents of the air pollutant mixture may affect T2DM to varying degrees. The suggested mechanisms whereby air pollutants induce T2DM include increased inflammation, oxidative stress, and endoplasmic reticulum stress"; Shaw, G. M., et al. (2024). Ambient Environment and the Epidemiology of Preterm Birth. Clinics in perinatology, 51(2), 361-377; Khraishah, H. et al. (25 Apr, 2024). Understanding the Cardiovascular and Metabolic Health Effects of Air Pollution in the Context of Cumulative Exposomic Impacts. Circulation Research, 134, 1083–1097; This review summarizes "the current state of epidemiologic and mechanistic evidence underpinning the association of air pollution with cardiometabolic disease and how complex interactions with other exposures and individual characteristics may modify these associations" and identifies "gaps in the current literature and suggest emerging approaches for policy makers to holistically approach cardiometabolic health risk and impact assessment."

iv EPA. (9/16/2023). <u>Guidelines for Cumulative Risk Assessment: Planning and Problem Formulation</u> (Public Comment Draft). GLOSSARY OF KEY TERMS; page v

^v EPA. (9/16/2023). Guidelines for Cumulative Risk Assessment. GLOSSARY OF KEY TERMS; page v

vi Chiger & Nachman (2024). <u>Invited Perspective: Advancing Cumulative Approaches in Regulatory Decision Making</u>. *Environmental Health Perspectives*, 132(3).

vii Behles, D. N. (2010). 28 Pace Envtl. L. Rev. 200, page 2 (1)

viii Clean Air Act. 42 U.S. Code § 7409 - <u>National primary and secondary ambient air quality standards;</u> Section 109:

[&]quot;National primary ambient air quality standards...shall be ambient air quality standards the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health."

ix National Academies' Report on Causality Framework (Oct, 2022), page 23

^{*} EPA's Science Advisory Board (4/25/2022). <u>Consultation on Cumulative Impact Assessments</u>, EPA-SAB-22-003; Dr. Susan Anenberg, page 12 (B-4)

xi Alves, S. et al. (2012). EPA authority to use cumulative risk assessments in environmental decision-making. Int. J. Environ. Res. Public Health, 9(6), 1997-2019

xii NRC, 2012; NASEM, ongoing; SAB, 2022; Clean Air Scientific Advisory Committee (CASAC) 2022-2023

xiii Science Advisory Board (4/25/2022). Consultation on Cumulative Impact Assessments

xiv Ellickson, K. M., Pauli B. J. &Whitehead, S. (July 8, 2024). Mixed Methods Approaches: Structures and

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Methodologies for Cumulative Impact Assessment Development. Environmental Justice - Ahead of Print <sup>xv</sup> K. Ellickson, Union of Concerned Scientists. (Sept 30, 2024). <u>Protecting Public Health Is Complicated. But Science</u> Can Help, and the Time Is Now.
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- xvi Coffman, E. et al. (3/6/2024). Quantifying Multipollutant Health Impacts Using the Environmental Benefits Mapping and Analysis Program—Community Edition (BenMAP-CE): A Case Study in Atlanta, Georgia. Environmental Health Perspectives, 132(3). Invited Perspective: Advancing Cumulative Approaches In Regulatory Decision Making xvii Science Advisory Board (4/25/2022). Consultation on Cumulative Impact Assessments, page 41 (B-33), Dr. A. Childress: "Given that the EPA expected to start moving beyond single chemical risk assessments to multi-chemical and cumulative risk assessments in 2003, it is surprising that studies have not been done."
- Approaches for Ambient Air Pollution. Environmental Health Perspectives, 120(9), 1238-1242.
- xix Vedal, S. & Kaufman, J. D. (2011). What Does Multi-Pollutant Air Pollution Research Mean? American Journal of Respiratory and Critical Care Medicine, 183(1), 4-6.
- xx February 24, 2023. EPA Releases Proposed Approach for Considering Cumulative Risks under TSCA | US EPA xxi EPA. (2/24/2023). EPA Releases Proposed Approach for Considering Cumulative Risks under TSCA.
- ^{xxii} Gogna, P. et al. (5/6/2024). A cohort study of the multipollutant effects of PM_{2.5}, NO₂, and O₃ on C-reactive protein levels during pregnancy. Environ. Epidemiol., 8(3):e308; Pollutant mixtures showed stronger relationships with maternal systemic C-reactive protein (CRP) levels compared with individual pollutants and illustrate the importance of conducting multipollutant analyses.
- ^{xxiii} Mainka, A. & Żak, M. (10/2022). <u>Synergistic or Antagonistic Health Effects of Long- and Short-Term Exposure to Ambient NO₂ and PM_{2.5}: A Review. Int J Environ Res Public Health, 19(21):14079. "Both short- and long-term exposure to PM_{2.5} or NO₂ adjusted for NO₂ and PM_{2.5}, respectively, revealed a synergistic effect appearing as higher mortality from respiratory diseases."</u>
- xxiv Sun, Y., et al. (2022). Exposure to air pollutant mixture and gestational diabetes mellitus in Southern California: Results from electronic health record data of a large pregnancy cohort. Environment international, 158, 106888. "This study found that exposure to a mixture of ambient PM_{2.5}, PM₁₀, NO₂, and PM_{2.5} chemical constituents was associated with an increased risk of gestational diabetes mellitus."
- ^{xxv} Adebayo-Ojo, T. C. et al. (1/2022). <u>Short-Term Joint Effects of PM₁₀, NO₂ and SO₂ on Cardio-Respiratory Disease Hospital Admissions in Cape Town, South Africa</u>. Int J Environ Res Public Health, 19(1), 495; This study found "robust associations of daily respiratory disease hospital admissions with daily PM₁₀ and NO₂ concentrations" and "overall cumulative risks for RD per IQR increase in PM₁₀ and NO₂ for children at 2% and 3.1% respectively."
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xii Air Quality Index (AQI) - AirNow; AirNow website & app report daily air quality using the AQI. AirNow is a federal, state, tribal, local government partnership platform that provides local air quality for numerous urban and rural areas across the country as well as an overview of air quality at the state, national, and international levels.

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Under Attack: Vital Clean Air Safeguards

EPA Administrator Zeldin's plans will put lives at risk and cost trillions of dollars.

Updated July 2025

Major Environmental Protections at Risk: Administrator Zeldin's EPA is reversing course on nine major clean air protections. Losing these standards would, cumulatively by 2055:

- Produce more than 18 billion metric tons of climate pollution – nearly 3 times the annual emissions from the entire U.S. today
- Result in 184,000 premature deaths
- Lead to over 40 million missed work and school days
- Deliver net costs between \$3.7 and \$4.3 trillion

BACKGROUND

In March 2025, EPA Administrator Zeldin unveiled plans to dismantle dozens of the nation's most successful and vital air pollution protections. In addition to plans to strip away bedrock protections like the 2009 finding that greenhouse gases endanger human health and welfare, Administrator Zeldin is targeting major regulations finalized between 2021-2024 that would drive down pollution, save hundreds of thousands of lives, and provide trillions of dollars of benefits to Americans.

EPA has already proposed rules that would repeal standards for carbon pollution and toxic emissions from power plants. Proposals to rescind EPA's foundational Endangerment Finding, motor vehicle rules, and certain aspects of oil and gas methane standards are currently under or have recently cleared review by the White House, the last step before public release.

The stakes for climate, public health, and American jobs are significant. This report analyzes the emissions increases, health harms, and lost monetized benefits of 9 major clean air related standards that Administrator

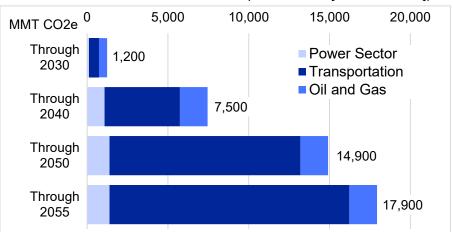
Zeldin is poised to weaken or eliminate.

POLLUTION IMPACTS

The 9 actions¹ this report addresses span three major pollution sources: Transportation, Power, and Oil & Gas.

As shown in Figure 1, undoing these rules would significantly increase climate pollution – **7.5 billion metric tons** by 2040 and more than **18 billion metric tons** by 2055. This is equivalent to nearly 3 times the annual emissions from the entire U.S. today.

Figure 1: Cumulative Carbon Pollution Increases if Major Clean Air Standards Reversed (Source: EPA [100-GWP AR5])



¹ EPA Mercury and Air Toxics Standards for Power Plants; EPA New Gas and Existing Coal GHG Standards; EPA Good Neighbor Plan for 2015 Ozone; EPA Heavy-Duty NOx standards for MY27 and later vehicles; EPA Light-Duty GHG Standards, MY23-26; EPA Heavy-Duty GHG Standards, MY27-32; EPA Light/Medium-Duty Multipollutant Standards, MY27-32; EPA Methane Standards for New and Existing Oil and Gas Sources; EPA Methane Waste Emission Charge; and Particulate Matter NAAQS.

Collectively, by 2055, the U.S. would also see a substantial increase of health-harming pollution:

- 660,000 890,000 tons of fine particulate matter (PM_{2.5})
- 9.3 million tons of nitrogen oxides (NOx)
- **300,000 tons** of sulfur dioxide (SO₂)
- 21 million tons of volatile organic compounds (VOCs)

HEALTH HARMS

To quantify the health harms that would result from Administrator Zeldin's attacks on these vital safeguards, we applied <u>national incidence-per-ton factors</u> to the different source categories. This resulted in changes in health outcomes for each emission source for each rule. For more discussion, see the <u>methodology</u> document.

We estimate that Administrator Zeldin repealing the 9 clean air protections at risk would result in an additional:

- 184,000 premature deaths
- 280,000 hospital and ER visits
- 112 million asthma attacks
- 40 million lost workdays and school absences

Table 1: Cumulative Health Harms from Undoing Major Clean Air Standards Under Threat

Sector	Premature deaths	Hospital and ER visits	Cases of asthma symptoms (million)	Lost work / school days (million)
Power	40,000	60,000	25	8.7
Transportation	88,000	160,000	72	26
Oil and Gas	3,200	8,000	4.3	1.6
PM _{2.5} NAAQS	23,000 - 90,000	19,000 - 71,000	3.3 - 16	1.2 - 5.8
TOTAL	150,000- 220,000	250,000- 300,000	104 - 117	38 - 42

Table 1 shows these health impacts by sector.

Table 2: Monetized Harms From Undoing Major Clean Air Standards (BILLION 2022\$)

Sector	Years	Health Costs	Climate Costs	Net Costs
Power	2023-2047	\$377	\$324	\$662
Transportation	2023-2055	\$575	\$1,970	\$2,894
Oil and Gas	2024-2038	\$8	\$125	\$111
PM _{2.5} NAAQS	2032-2051	\$637	\$0	\$629
TOTAL		\$960 to \$1,597	\$2,419	\$3,667 to \$4,296

MONETIZED HARMS FROM ZELDIN PLAN

In their extensive assessment of regulatory actions, agencies quantify the costs and benefits, including compliance costs, health impacts, climate impacts, and fuel and maintenance costs or savings for consumers. Table 2 shows the costs Americans will bear if the major clean air standards assessed here are repealed. By 2055, the U.S. would incur between \$3.7 and \$4.3 trillion in net costs, including at least \$1 trillion in health costs and \$2.4 trillion in climate costs. The estimate is in present value

and uses either a 2% or 3% discount rate depending on what value was used by the agency in its analysis.

HAZARDOUS AIR POLLUTION

Between 2021-2024, EPA finalized new cost-effective standards to reduce hazardous air pollutant (HAP) emissions from nine industries. HAPs include dozens of toxic pollutants that are dangerous to human health at any level including mercury, arsenic, benzene, and more. Many are carcinogenic and cause significant harm to developing fetuses and children. Combined, EPA estimates these standards would reduce hazardous air pollution from impacted facilities by **17 million pounds per year.**

The nine industries covered by the recent standards include:

- Coal power plants
- Chemical manufacturing
- Commercial sterilizers
- Coke ovens
- Steel production
- Rubber processing
- Taconite iron ore processing
- · Lime manufacturing
- Copper smelting

Zeldin's EPA and the Trump Administration have already begun their assault on these critical health protections. On March 24th, Administrator Zeldin <u>launched a website</u> inviting the 500-plus industrial sources covered by nine different rules to seek two-year extensions to their deadlines to comply with critical air toxics standards. The website encouraged the "regulated community" to apply for special Presidential exemptions from standards that protect people from toxic and hazardous air pollution and included step-by-step instructions on how to request one.

President Trump has now issued two sets of proclamations exempting polluters from complying with standards for two years with little public explanation: 68 coal-fired power plants on April 8th and on July 17th, 52 chemical manufacturing facilities, 39 medical sterilizers, eight taconite iron ore processing facilities, and three coal-fired

power plants.

EDF and partner groups have released a map that plots all of the 500-plus facilities and allows communities to see which facilities are near them, whether they have asked for or received an exemption, and learn about their emissions and compliance history.



For several of the industries including <u>steel</u> and <u>coke ovens</u>, EPA delayed the compliance dates on vital clean air protections without any public input.

For additional information, see Methodology and Detailed Results.



September 16, 2025

The Honorable Brett Guthrie Chairman, Energy & Commerce 2125 Rayburn House Office Building Washington, DC 20515

The Honorable Gary Palmer Chairman, Environment Subcommittee 2125 Rayburn House Office Building Washington, DC 20515 The Honorable Frank Pallone Ranking Member, Energy & Commerce 2323 Rayburn House Office Building Washington, DC 20515

The Honorable Paul Tonko
Ranking Member, Environment Subcommittee
2323 Rayburn House Office Building
Washington, DC 20515

Dear Congressman Guthrie, Congressman Palmer, Congressman Pallone and Congressman Tonko:

The American Lung Association is strongly opposed to policies that are scheduled to be debated in a legislative hearing titled *"From Gridlock to Growth: Permitting Reform Under the Clean Air Act."*The Clean Air Act is approaching its 55th anniversary this year. This bipartisan, landmark law has been responsible for decades of improvements in air quality and has saved lives. Despite this progress, air pollution still kills and leaves many people suffering from otherwise preventable disease, showing that more progress under the Clean Air Act is needed. Bills under consideration at this hearing will weaken critical Clean Air Act protections that safeguard the public's health.

The **New Source Review Permitting Improvement Act (HR 161)** would allow facilities to emit more pollution into communities. The bill would significantly narrow the scope of NSR requirements, with critical protections such as pollution controls, offsets and air quality analyses kicking in only if a facility exceeded its maximum capacity to emit. This extreme approach would overturn decades of Clean Air Act safeguards and lead to significant increases in actual pollution levels, harming local communities This would mean more asthma attacks in kids, more heart attacks and strokes and increased risk of premature death.

The Fire Improvement and Reforming Exceptional Events Act and the Foreign Emissions and Nonattainment Clarification for Economic Stability Act are both iterations of previous legislation that has been staunchly opposed by the health and medical community. The National Ambient Air Quality Standards (NAAQS) are a critical tool for continuing to reduce unhealthy levels of air pollution and save lives. If an area is determined to have pollution levels in excess of those standards, pollution cleanup measures are then required and enforced. If special circumstances led

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to the pollution exceedances, such as wildfires, the Clean Air Act already provides pathways for exceptions. Additionally, EPA actions since the adoption of the Exceptional Events Rule in 2016 have stated that prescribed fire can be eligible for treatment as an exceptional event. The Clean Air Act also contains pathways during implementation of a NAAQS for states to address interstate and international transport of pollution. This legislation is unnecessary and would lead to overly broad exemptions being granted, resulting in pollution levels that should have been cleaned up.

The Reducing and Eliminating Duplicative Environmental Regulations Act and the Air Permitting Improvements to Protect National Security Act would limit regulatory oversight, undermining transparency and community input in decisions that would negatively affect health outcomes. Loosening permitting requirements and allowing for Presidential exemptions of pollution in areas that are already facing higher health burdens from poor air quality will drive up healthcare costs for communities.

The Clean Air Act is one of the most effective public health laws in American history. Its protections must be preserved—not rolled back under the guise of efficiency. Clean, breathable air is essential to a healthy, thriving population. We strongly urge the Committee to reject these bills as currently drafted and prioritize the health of all Americans—especially those most vulnerable to the effects of air pollution, including children, the elderly and people with lung disease.

September 16, 2025

The Honorable Brett Guthrie Chairman, House Committee on Energy and Commerce 2125 Rayburn House Office Building Washington, DC 20515

The Honorable Gary Palmer
Chairman Subcommittee on Oversight & Investigations House Committee on Energy and
Commerce
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Dan Crenshaw Vice Chairman, Subcommittee on Environment, Manufacturing, & Critical Materials 248 Cannon House Office Building Washington, D.C. 20515

The Honorable Frank Pallone
Ranking Member
Committee on Energy and Commerce
2107 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Guthrie, Chairman Palmer, Vice Chair Crenshaw, and Ranking Member Tonko,

We, the undersigned organizations, write to express our deep concern over the Energy and Commerce Subcommittee on Environment's **misguided focus on air pollution permitting reform that will increase harmful air pollution.** Once again, Congress is attempting to dismantle critical clean air protections that Americans rely on under the guise of permitting reform.

The bills that the subcommittee is considering represent a sweeping effort to weaken central programs under the Clean Air Act. These bills would gut the New Source Review program, weaken the National Ambient Air Quality Standards (NAAQS) program, and provide new authorities to the president to exempt highly polluting industries from complying with clean air protections. Collectively, they amount to yet another massive giveaway to corporate polluters at the expense of Americans' health and well-being.

Air pollution is not an abstract issue. It directly harms people in communities across the country. Elevated levels of soot and smog are linked to asthma attacks, heart and lung disease, developmental harms in children, and premature deaths¹². Vulnerable groups, including

U.S. Centers for Disease Control and Prevention, "Living with Asthma," available at https://www.cdc.gov/asthma/living-with/index.html (last accessed May 2025)
 American Lung Association, "Asthma Trend Brief," available at https://www.lung.org/research/trends-in-lung-disease/asthma-trends-brief (last accessed May 2025)

children, seniors, and people living in fenceline communities, bear the greatest burden³. Weakening the Clean Air Act would worsen these public health risks, increasing hospital visits and health care costs while cutting short thousands of American lives each year.

Nonattainment areas—regions where air quality fails to meet national standards—are especially vulnerable. The suite of bills under consideration in this hearing would strip away protections in precisely those areas where clean-up efforts are most essential to safeguard public health and safety. Weakening these core protections would endanger lives and deepen inequities. Already this year, Congress has clawed back funding for air monitoring programs, the Environmental Protection Agency has begun the process of rolling back life-saving clean air regulations, and President Trump has issued dozens of exemptions to industrial polluters. **This Administration and members sponsoring this misguided attack on the CAA claim to care about clean air and a healthy environment, but it seems that at every turn, they continue to trade in their constituents' health for corporate dollars. Clean Air Act programs such as the NAAQS have been the driving force behind the massive reductions in air pollution and improvements in public health outcomes over the past few decades. Congress and the Administration should continue moving our country towards progress, not take us back to the days of smoggy skies and smoke-filled lungs.**

We urge Congress to oppose this suite of pro-polluter, anti-health bills.

Sincerely,

Alternatives for Community & Environment (ACE)
Center for Earth Energy & Democracy (CEED)

Earthjustice Action

Earthworks

Endangered Species Coalition

Environmental Justice Health Alliance for Chemical Policy Reform (EJHA)

Green Door Initiative (GDI)

Greenbank Associates

GreenLatinos

Hip Hop Caucus

JPAP

League of Conservation Voters

Los Jardines Institute

Natural Resources Defense Council

NC Climate Justice Collective

New Jersey Environmental Justice Alliance

North American Climate, Conservation and Environment (NACCE)

Partnership for Policy Integrity

³American Lung Association. American Lung Association State of the Air, 2023, pg. 37. https://www.lung.org/getmedia/338b0c3c-6bf8-480f-9e6e-b93868c6c476/SOTA-2023.pdf?ext=.pdf, (Accessed May 8, 2023). When comparing people at risk from ozone in Grade A counties v. Grade F counties, we find a disproportionate number of people in poverty and people of color in the most highly exposed counties.

Plug In America RiSE4EJ Sierra Club WE ACT for Environmental Justice Young, Gifted & Green