Short-Circuiting Progress: How the Clean Air Act

Impacts Building Necessary Infrastructure

and Onshoring American Innovation

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Chairman Griffith, Ranking Member Tonko, and distinguished members of the subcommittee, I am Chad Whiteman, Vice President, Environment and Regulatory Affairs for the Global Energy Institute at the U.S. Chamber of Commerce. I appreciate the opportunity to testify today on behalf of the business community regarding recent air quality regulations.

The U.S. Chamber of Commerce appreciates the opportunity to offer its views to the Subcommittee concerning the setting and implementation of Clean Air Act ("Act") National Ambient Air Quality Standards (NAAQS), and the impact of the NAAQS program on our ability to build critical infrastructure

to meet growing energy needs, reshore manufacturing to create good paying jobs, and secure our supply chains to bolster the economy and national security.

Right-Sizing Regulations to Support Economic Growth and Innovation

Regulations, when properly constructed, help implement the laws passed by Congress to improve our quality of life. Some level of government regulation is necessary to ensure public safety, protect the environment, and promote competitive and free markets.

Well-designed regulations provide greater clarity and certainty about how the law operates in practice and do so in a manner that maximizes innovation and choice while avoiding unduly prescriptive requirements and excessive costs. When not properly constructed, regulations become a form of government micromanagement that eliminates the ability of regulated entities and the marketplace to do what people in free markets do best: innovate. This lack of innovation and the often excessive costs of government micromanagement hold back economic growth. The cost to the economy is compounded when the rules are constantly being changed. What is permissible or required in one moment may become prohibited or not required in the next. This uncertainty makes it difficult to plan and invest for the future.

The wave of regulations issued over the prior four years has raised serious concerns in the business community, including concerns about economic impacts due to those regulations' cumulative $1.8 trillion dollar price tag, an historic record.[1] More than 70 percent of those costs on the public were imposed by the Environmental Protection Agency, and the vast majority of that 70 percent came from air regulations. Overly ambitious standards can skyrocket compliance costs and deter investment, threaten job losses, and add to the cost of producing goods and services (what we call "regflation"), particularly in

[1] The Biden Regulatory Record, American Action Forum, https://www.americanactionforum.org/insight/the-biden-regulatory-record/.

sectors such as manufacturing, infrastructure, and energy. It is essential to ensure complex regulatory requirements such as those tied to the NAAQS continue air quality progress without undue harm to investment and economic growth.

The $1.8 trillion in regulatory costs reported by federal agencies themselves may be underestimated due to several factors. Agencies often fail to account for all direct and indirect costs, such as the time and resources businesses must spend to comply with new rules. Additionally, the availability and cost of necessary technology can be uncertain, making compliance more challenging and expensive than initially anticipated. Unintended consequences of regulations, such as increased litigation or disruptions to existing business practices, can also add to the overall cost. Furthermore, agencies sometimes artificially cap estimates of regulations' costs and do not take into account the full scope of a regulation's impact, leading to significant underestimations of the true economic burden.

Air Quality Successes Over the Last Few Decades

Over the past several decades, the United States has made remarkable progress in improving air quality. Since 1970, emissions of key pollutants have significantly decreased, thanks to the collaborative efforts of businesses, states, and the federal government. This progress has been achieved while our economy has continued to grow, demonstrating that environmental protection and economic prosperity can go hand in hand.

The Clean Air Act has been instrumental in driving these improvements. The Act established a comprehensive framework for regulating air pollutants, setting national standards, and requiring states to develop implementation plans for how to meet those standards. As a result, since 2000, emissions of pollutants such as sulfur dioxide, nitrogen oxides, and particulate matter have decreased by 87 percent,

54 percent, and 37 percent respectively.[2] These emissions reductions have all occurred while gross domestic product, vehicle miles traveled, and population have all increased as shown in Figure 1 below. These improvements are a testament to the effectiveness of collaborative efforts between industry, states, and the federal government.

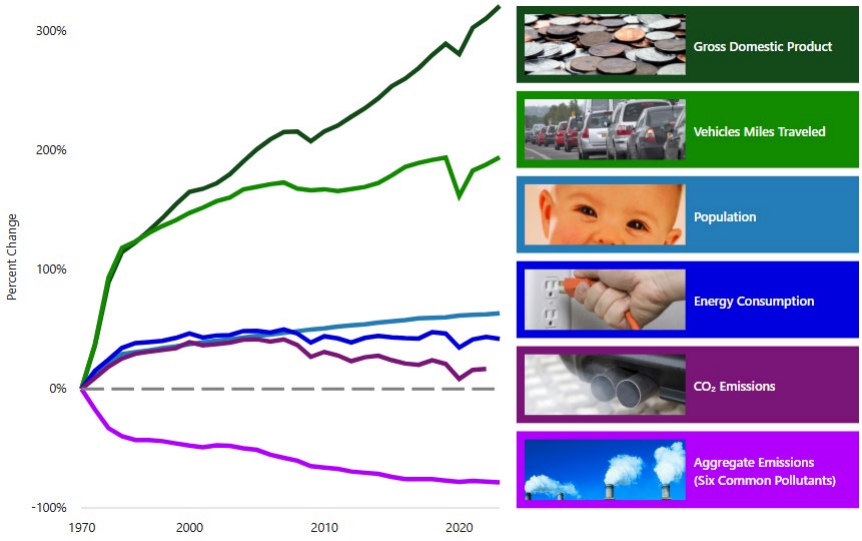

Figure 1. Comparison of Growth Areas and Declining Emissions (1970-2023)[3]

The development and adoption of cleaner technologies have played a crucial role in reducing emissions. Private investment and innovation have driven advancements in emissions control technologies and solutions, enabling businesses to meet stringent environmental standards while maintaining competitiveness.

The combination of steady economic growth and continued reductions in emissions is a testament to what has historically been an effective regulatory framework. But to have successful initiatives and programs, including measures under the Clean Air Act, businesses need a reliable framework to innovate

[2] U.S. Environmental Protection Agency, Our Nation's Air: Status and Trends Through 2023, https://www.epa.gov/air-trends.
[3] Ibid.

and invest in new and better technologies that can result in cleaner air and a stronger economy. It is why regulatory executive orders from both parties have called for well-designed regulations to be written such that they minimize overall costs while seeking to achieve the goal of the underlying law.

The United States has some of the best air quality in the world, thanks to steady reductions in pollutants over the last several decades—by a combined 78 percent across all of the pollutants covered under the NAAQS program.[4] For example, according to the World Health Organization, the average annual PM2.5 concentration in the U.S. is the 11th cleanest of 198th countries, bested only by sparsely populated Canada, Norway, Sweden, Finland, and some small island states.[5] By contrast, PM2.5 concentrations in other major economies are significantly higher than the U.S., including in France (45 percent higher), Germany (49 percent), Japan (51 percent), Italy (98 percent), and China (431 percent). This air quality advantage has been achieved through private investment, technological advances, and cooperative efforts between states, businesses, and the federal government.

Most Fine Particulate Matter Now Comes from Non-Industrial Sources

The 2024 rule further tightened the national ambient PM2.5 standards by 25 percent, dropping them from 12 ug/m3 to 9 ug/m3. This aggressive tightening has raised major concerns within the business community and across the country. For a number of reasons, the new standards are overly stringent and invalid: the standards did not comply with legal and regulatory process requirements,[6] were based on

[4] Ibid.
[5] World Health Organization Air Quality Database: Update 2022. https://www.who.int/data/gho/data/themes/air-pollution/who-air-quality-database/2022#.
[6] Indeed, the Chamber led a coalition of business associations that challenged the 2024 PM2.5 NAAQS rule in the U.S. Court of Appeals for the D.C. Circuit, joining litigation brought by the attorneys general of Kentucky, West Virginia, and 23 other states. As we explained in our briefs, the 2024 rule is subject to serious legal defects. For example, EPA violated the Clean Air Act when it decided to skip the thorough review process required by section 109(d) of the Act to more quickly arrive at a final rule lowering the PM2.5 standards. In so doing, EPA impermissibly circumvented the Act's constraints on EPA's standard-setting authority. The litigation is currently in abeyance to allow agency leadership to review the rule and determine appropriate next steps. The Chamber coalition's briefs in the litigation are available at https://www.uschamber.com/cases/energy-and-environment/epa-rule-revising-pm-naaqs.

questionable scientific conclusions,[7] and are expected to cause permitting gridlock, leading to substantial economic and compliance challenges. As the standards get closer and closer to zero, the lack of cost-effective and achievable compliance options further exacerbates these problems.

Furthermore, the growing contribution of non-industrial sources of emissions, which now make up the majority of the fine particulate matter in the air today, will make compliance even more challenging. As seen in Figure 2 below, EPA's data shows that 84 percent of PM 2.5 emissions now come from sources like wildfires and road dust that are costly and hard to control.[8] While EPA technically offers exemptions for wildfires under the Clean Air Act's exceptional events program, which means these events should not count towards an area's emissions budget, the reality is more complicated. For one state, 70 percent of their past exemption requests[9] were denied. The process for seeking an exemption is time-consuming and difficult for states to navigate, involving extensive documentation and analyses. This makes it difficult for states to manage and often results in these emissions still being counted, despite the statutory mandate, and underlying intent, to provide relief for such uncontrollable events.

On top of the challenges that states and EPA have had managing the exemption process for certain high emissions events like wildfires, there is also concern that the regulatory program in its current form may be construed to unduly restrict exceptional-events emissions exemptions.[10] It is uncertain whether, under the existing program, EPA would conclude that these exemptions could be applied to prescribed

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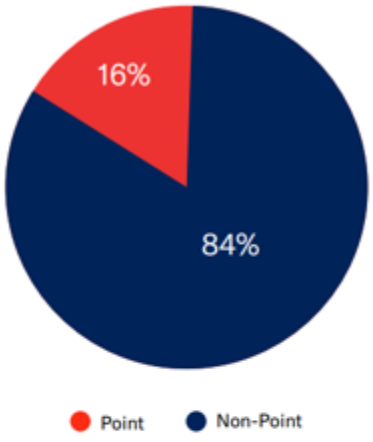
[7] For example, please see the comments of EPA Clean Air Scientific Advisory Committee member Dr. James Boylan, detailing problems with the adequacy and interpretation of scientific evidence used to justify stricter PM2.5 standards. Available at https://www.4cleanair.org/wp-content/uploads/PM-NAAQS-CASAC-Responses-to-EPA-PM-Draft-PA-031822.pdf.

[8] U.S. Environmental Protection Agency, Policy Assessment for the Reconsideration of the National Ambient Air Quality Standards for Particulate Matter, https://www.epa.gov/system/files/documents/2022-05/Final%20Policy%20Assessment%20for%20the%20Reconsideration%20of%20the%20PM%20NAAQS_May2022_0.pdf.

[9] Arizona Department of Environmental Quality, Particulate Matter NAAQS: Perspectives and Challenges – Arizona, https://cleanairact.org/wp-content/uploads/2023/09/19_Brad-Busby-ADEQ-AAPCA-2023-Fall-Meeting-PM-Challenges_Final.pdf.

[10] Clean Air Act Section 319(b)(1)(A).

fires, an important tool to control more severe emissions from wildfires, as indicated by a California delegation of U.S. Senators and Representatives who explained that EPA's exemption "process is unworkable for the scale of prescribed fire that will be necessary to protect our communities from increasingly catastrophic wildfires."[11] Amendments like those included in the CLEAR Act would help avoid counting emissions from activities like prescribed fires, which are intended to reduce larger more catastrophic wildfires.



Point Sources	
Power	11%
Industrial	5%
Total	16%

Non-Point Sources	
Fires	43%
Road Dust	16%
Ag Dust	14%
Other	6%
Cars/Trucks	5%
Total	84%

Figure 2. $PM_{2.5}$ Predominantly from Non-Point Sources

Fires alone are responsible for 43 percent of fine particulate matter emissions, but are difficult for states and localities to abate. This is posing implementation challenges for the NAAQS program today that are expected to increase over time. The Chamber completed an analysis[12] that demonstrates wildfires can be an even larger contributor to fine particulate matter and push more areas into nonattainment.

EPA evaluates three consecutive years of emissions monitoring data to determine which parts of the country meet the national standards and

[11] Letter from U.S. Senators and Representatives from California to EPA on Prescribed Fires, June 13, 2023, https://insideepa.com/sites/insideepa.com/files/documents/2023/jun/epa2023_1088.pdf.
[12] EPA's Proposed Air Quality Standards Will Cause Permitting Gridlock Across Our Economy, U.S. Chamber of Commerce, November 2023, https://www.uschamber.com/energy/new-chamber-report-epas-proposed-air-quality-standards-will-cause-permitting-gridlock-across-our-economy.

which do not. Any one of those three years with high values can significantly skew the results and effectively increase the stringency of the standards.

Due to their small size, these tiny particles can drift long distances so the impacts of fires can be felt across the country. For instance, counties in Arizona may violate EPA's standards because of fires in California. In 2023, the massive Canadian wildfires increased pollution levels across much of the eastern two-thirds of the country. As a result of the Canadian and other fires in that 2023 wildfire season, the number of U.S. counties out of compliance with EPA's tightened PM2.5 standards could increase by as much as 50%, which would result in strict new penalties on American businesses—large and small—and their communities.

Addressing emissions from non-industrial sources, such as wildfires, road dust, and other non-point sources, is crucial. Collaborative efforts between businesses, states, and the federal government can help address these emissions and improve air quality. We recommend that EPA focus on strategies to address non-industrial emissions instead of punishing counties and the private sector for situations largely out of their control.

The 2024 Air Quality Standards Will Cause Permitting Gridlock Across our Economy

Concerns about the availability and cost of newly-mandated control technologies are prevalent among businesses. And when EPA acts based on faulty scientific analyses, and departs from proper regulatory procedures, the reactions range from frustration to bewilderment. The implementation of aggressive new standards without a clear pathway of compliance can stifle innovation and investment. It is crucial to ensure that regulations are based on proven technologies and realistic timelines.

Conveying the full extent of the impact of the tighter 2024 PM2.5 national standards can be challenging, but the county map in Figure 3 below vividly illustrates how much of the country could be thrown into

permitting gridlock. With the prior standard, there were just 15 counties[13] in violation of the national PM2.5 NAAQS, all in California, but the 2024 tightening of the standards could place more than 20 percent of the country in permitting gridlock.[14]

The red shaded counties in Figure 3 show the expected breadth of the country that is likely to fail to meet the lower 9.0 µg/m3 standard. In addition to those counties that are expected to be in violation of the 2024 standards, a large swath of the country, identified by the counties shaded in light red, is so close to violating the tighter standards that these counties too are expected to experience permitting gridlock. Those areas in light red are only 1-3 µg/m3 lower than the new 9.0 µg/m3 standard, leaving little emissions headroom or buffer for additional development to meet growing demands for energy, housing, and manufacturing. Unless the 2024 rule is rescinded, it will block the permitting of new manufacturing facilities and associated good-paying jobs, pushing investment overseas just at a time when we are trying to bring back manufacturing and stronger supply chains. The rule will also prevent and delay the construction of roads, bridges, and other infrastructure funded by recently passed legislation such as the Infrastructure Investment and Jobs Act.

[13] U.S. Environmental Protection Agency, Green Book PM2.5 (2012) Area Information, May 31, 2025, https://www.epa.gov/green-book/green-book-pm-25-2012-area-information.
[14] Ibid.

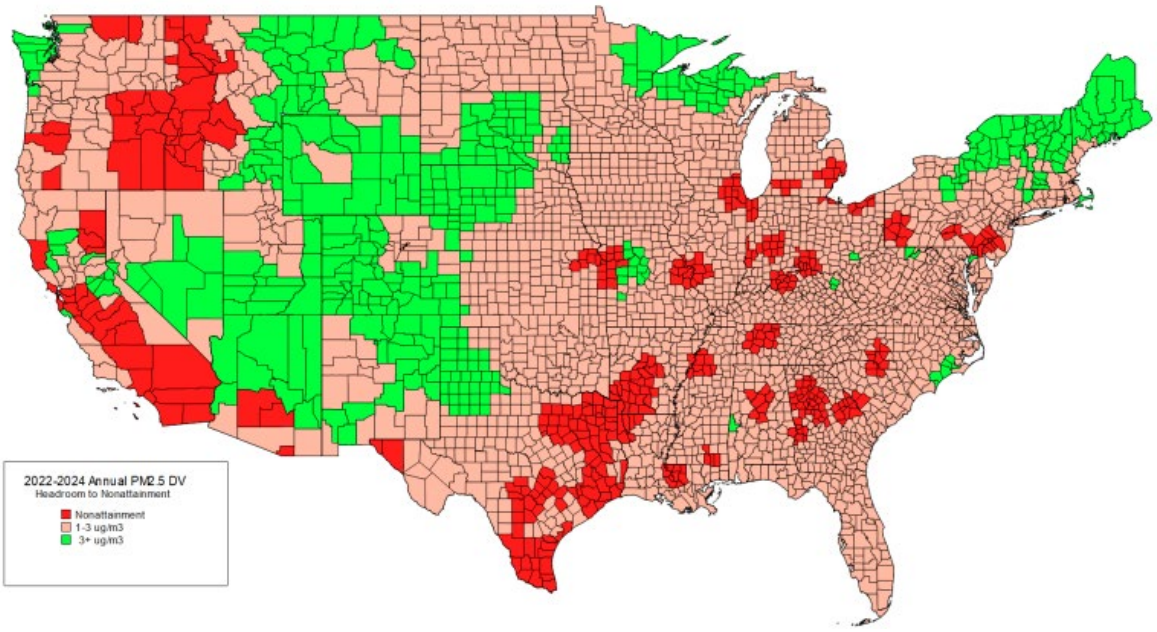


Figure 3. County-Based Map of Areas in EPA Nonattainment or Close to Nonattainment

Communities will soon encounter significant permitting restrictions on development, leaving them with little headroom to build and stimulate economic growth. This is in part because states will be required to perform complicated air dispersion modeling before building any significant new manufacturing and infrastructure projects. These air modeling exercises are designed to over-estimate actual concentrations; for many PM2.5 sources, such models tend to predict the highest potential impacts at the fence line. The result is that these counties too will face tighter permitting requirements.

Recent Congressional testimony highlights how new facilities from the steel, power, cement, brick, paper, and other industries need sufficient emissions headroom to accommodate EPA's conservative modeling approach even with the best available emissions controls installed.[15] Not only would conventional manufacturers bump into the lower air quality ceiling, but other manufacturers spurred by renewable energy investments may face the same challenges. For example, the CS Wind facility, which would

[15] Testimony of Timothy Hunt, American Forest & Paper Association, September 19, 2023, https://d1dth6e84htgma.cloudfront.net/09_19_23_ENV_Testimony_Hunt_4b415cf010.pdf, page 26.

create 800 jobs, would contribute as much as a 1.9 µg/m3 increase in fine particulate emissions based on EPA's modeling. The CS Wind and other manufacturing facilities would be able to build only in increasingly limited geographical areas if EPA tightens the standards. The potential for added costs for these permits and the opportunity costs of a manufacturing facility not being built were not considered in the EPA proposed rule. It is why we support legislative amendments like what is found in the Clean Air and Economic Advancement Reform Act (CLEAR Act) that would allow for the secondary consideration of the attainability of the standard.

Costly Standards for Small Businesses, States, and Even Homeowners

Small businesses often bear a disproportionate burden from new regulations. Increased compliance costs and administrative complexity can be particularly challenging for small businesses, limiting their ability to grow and compete. Examples of small businesses affected by recent regulations highlight the need for a balanced approach that considers the unique challenges faced by these enterprises.

For instance, in the cost analysis that EPA prepared for the final rulemaking,[16] the agency identified various compliance pathways for tighter PM2.5 standards, including the possibility of states requiring small businesses, such as restaurants, to install costly equipment and requiring homeowners to replace wood fireplaces with natural gas logs. Intrusive requirements of this kind would place significant financial burdens on small businesses and homeowners, limiting their ability to invest in growth and innovation.

[16] Final Regulatory Impact Analysis for the Reconsideration of the National Ambient Air Quality Standards for Particulate Matter, U.S. Environmental Protection Agency, January 2024, https://www.epa.gov/system/files/documents/2024-02/naaqs_pm_reconsideration_ria_final.pdf.

Absent a correction in course, the new rule will also require investments in new control technologies for sectors not normally affected by federal air programs. As various industries have implemented increasingly stringent air standards over time, there are fewer cost-effective emissions-control solutions available, causing compliance costs to be imposed on increasingly smaller facilities. Imposing burdens on smaller sources would likely raise the cost of compliance even further and raises questions about the feasibility of installing these technologies.

In addition, the compliance obligations imposed by the 2024 rule will require states to pave unpaved roads, which would be a costly and time-consuming process. This requirement will place a significant financial burden on states and local governments, limiting their ability to invest in other critical infrastructure projects.

In promulgating and justifying the 2024 rule, EPA failed to identify cost effective and technologically achievable pathways for complying with tighter standards, as the agency only analyzed the costs of partial compliance. EPA arbitrarily capped its estimates of costs at $160,000/ton of emissions reductions.[17] But this cap doesn't reflect reality, it simply ignores the even more costly emissions control strategies that are needed to attain tighter standards. The agency stated that "[t]he estimated PM2.5 emissions reductions from these control applications do not fully account for all the emissions reductions needed to reach the proposed and more stringent alternative standard levels in some counties in the northeast, southeast, west, and California."[18] Importantly, lack of identification of all control pathways means that the proposal underestimates regulatory costs and also raises the serious possibility that the only path to compliance in some areas will be closure of existing manufacturing and industrial facilities.

[17] Ibid, page 178.
[18] Ibid, page ES-4.

Finally, it is important to remember that the Clean Air Act requires that NAAQS standard-setting ultimately rest with the judgment of the EPA Administrator. The Administrator's decision must weigh scientific evidence, policy options, and comments from the Clean Air Scientific Advisory Committee (CASAC). In continuing to refine and improve the NAAQS standards-setting process, further consideration should be given to costs and compliance feasibility. The CLEAR Act represents an important step in this direction by providing EPA the opportunity to consider "likely attainability" in setting primary NAAQS standards, which we believe could include consideration of economic as well as technological constraints. This is particularly important as the standards are approaching zero and compliance pathways may be considerably limited.

Summary

In summary, while the business community supports effective efforts to improve air quality, it is essential for such regulations to properly consider the practical implications of different environmental and economic tradeoffs. The recent wave of regulations poses significant economic and compliance challenges, and overly burdensome regulations remove the stability and predictability that businesses need to invest. The recent NAAQS regulations in particular do more – they will impose a barrier to permitting new growth. This is contrary to important Administration and Congressional goals.

The Chamber looks forward to working with policymakers to achieve our shared goals of improving air quality and supporting national prosperity. We believe that a balanced and practical regulatory approach is essential for continued progress in air quality improvement and economic growth.