ARIZONA CHAMBER
OF COMMERCE & INDUSTRY

Testimony by Glenn Hamer, Arizona Chamber of Commerce and Industry, submitted to the Senate Environmental and Public Works Committee's Subcommittee on Clean Air and Nuclear Safety Hearing entitled "Examining Pathways Towards Compliance of the National Ambient Air Quality Standard for Ground Level-Ozone: Legislative Hearing on S. 2882 and S. 2072," June 22, 2016

On behalf of the Arizona Chamber of Commerce and Industry (Arizona Chamber or Chamber), I welcome this opportunity to submit for the record the following testimony regarding the economic implications for the state of Arizona of the Environmental Protection Agency's new standard for ground-level ozone. In addition to this written testimony, I am including for the record a copy of the latest paper by the Arizona Chamber Foundation and Prosper Foundation titled "A Clear and Present Danger: How the EPA's New Ozone Regulations Threaten Arizona's Economy," which provides a comprehensive examination of the issue.

In October 2015, the Environmental Protection Agency (EPA) lowered the national standard for ground-level ozone to 70 parts per billion (ppb) from the previous standard, set in 2008, of 75 ppb. This new one-size-fits-all national standard will be virtually impossible for Arizona to meet because of Arizona's unique location in the southwestern region of the United States, and because the primary sources of Arizona's ozone precursors are outside our state's control. Protecting Arizona's air quality is of utmost important to those of us here in Arizona, and our state's businesses and regulators have been working diligently to reduce our emissions so that all Arizonans enjoy healthy air. But the imposition of this new standard will punish Arizona for ozone we cannot control.

First, Arizona's number one source of nitrogen oxide emissions is cars. Our state's location as a border state and a gateway to Southern California mean that Arizona's highways are heavily traveled. Yet because vehicle emissions are regulated at the federal level, they are wholly outside Arizona's control. In other words, Arizona's most effective strategy for reducing its ozone is entirely in the hands of federal regulators responsible for vehicle emission standards.

Second, Arizona has incredibly high levels of biogenic, or naturally occurring, background ozone. With our state's vast ponderosa pine forest and high incidence of wildfires and lightning, biogenic ozone emissions account for 43 percent of Arizona's volatile organic compound emissions. Point source major emitters account for a mere 1% of Arizona's VOC emissions.

Third, Arizona receives a significant amount of ozone from neighboring California, also referred to as "interstate transport." Proving that this ozone originates in California is complicated and expensive, and the EPA does not permit exclusions for interstate

3200 N. Central Ave. | Suite 1125
Phoenix, AZ 85012
www.azchamber.com
P: 602.248.9172 | F: 602.391.2498

transport. Thus, despite the fact that ozone originates in California, Arizona is penalized for it.

Fourth, Arizona receives significant "international transport" from Mexico as well as Asia, by way of California. But because of the EPA's rules, even if Arizona's Department of Environmental Quality could prove—at great cost—that Arizona would be in attainment "but for" the internationally transported ozone from Mexico and Asia, it would still be put into nonattainment status.

Finally, almost 70% of the land in Arizona is tribal land or controlled by the federal government, yet Arizona is still responsible for controlling emissions originating there.

Simply put, Arizona cannot implement a 70 ppb standard. Nine out of the ten counties in Arizona in which ozone is measured are already out of attainment. The penalties for nonattainment have drastic economic consequences: existing Arizona businesses and companies interested in expanding in the state will be unable to secure necessary permits and face limitations or outright bans on construction, and our state's federal highway dollars could be compromised. And these consequences are already coming to fruition, with companies choosing to locate elsewhere due to uncertainties surrounding permitting.

With regard to the specific pieces of legislation before this committee:

The Arizona Chamber is appreciative of the work being done on this issue by Senators Hatch and McCaskill in S. 2072, which gives states an opportunity to submit to the EPA an "early action compact" to address state-specific issues with implementation. Offering another option as to how the states manage their air quality. However, on the issue of ozone, federal regulators must still recognize the unique characteristics of the various regions when setting a national standard.

With respect to S. 2882, The Ozone Standards Implementation Act of 2016, we agree that delaying the implementation of the 70 ppb standard is necessary, at the very least. We also appreciate the excellent work of Arizona's two senators, Messrs. McCain and Flake, on this issue.

The issue for Arizona and other Western states is not feasibility of implementation; it is impossibility.

POLICY BRIEF

A Clear and Present Danger: How the EPA's New Ozone Regulations Threaten Arizona's Economy

Introduction

In October 2015, the Environmental Protection Agency ("EPA") lowered the national standard for ground-level ozone to 70 parts per billion (ppb). Arizona's unique location in the southwest region of the United States makes achieving the lower standards unrealistic. Since 2008, when the EPA set the standard at 75 ppb, Arizona and other states across the country have been working diligently to reduce their emissions to meet that standard. Although Arizona was making great strides toward achieving attainment of 75 ppb, its climate and geographic location will make it nearly impossible for Arizona to meet the new lower standard despite best efforts by Arizona industry and regulators. The consequences of nonattainment could be dramatic for Arizona: existing Arizona businesses and companies interested in expanding in the state will be unable to secure necessary permits and face limitations or outright bans on construction, and Arizona's federal highway dollars will be compromised.

The EPA's move to lower the standard now is premature and unnecessary. States across the country, including Arizona, have only just begun to see the impacts of the control measures they implemented after the 2008 standard was promulgated. Furthermore, scientists from the National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA) have found that, while "North American emissions contribute to global ozone levels, [there is no] evidence that these local emissions are driving the increasing trend in ozone above western North America."[1] While the western United States reduced its production of ozone by 21 percent between 2005 and 2010, the region's air quality did not enjoy the expected improvement in response.[2] That is because domestic reductions are being offset by increases in ozone originating in Asia and elsewhere.[3]

Given this disturbing international trend and other local factors that make attainment costly and difficult, lowering the standard from 75 ppb to 70 ppb is not substantiated by the required scientific data to support such a move. Protecting our air is of utmost importance to all of us lucky enough to call Arizona home—dare say even more so—than it is to federal regulators in Washington. But Arizona and its businesses are already making great strides in protecting air quality and ensuring Arizonans enjoy healthy air. The EPA has acted far outside its mandate, setting a new standard that is unjustified by science and impossible to meet without severe economic consequences.

I. The Clean Air Act and the National Ambient Air Quality Standards

The Clean Air Act (CAA), originally passed by Congress in 1970, is the federal law that regulates air quality. The CAA was intended to protect public health by regulating emissions of common air pollutants from both mobile and stationary sources (i.e. vehicles and industry), which at that time were unregulated. To that end, the CAA authorizes the EPA to establish National Ambient Air Quality Standards (NAAQS) for a variety of air pollutants, including ground-level ozone.[4]

But the EPA's mandate to regulate in this area is not unlimited. Rather, pursuant to the CAA, the EPA may only regulate emissions to the extent that public health is protected "with an adequate margin of safety."[5]

Since the EPA set the first NAAQS at 80 ppb in 1971,[6] emissions across the country have been reduced significantly.[7] Ozone levels have declined by 33% since 1980,[8] as man-made sources of ozone have fallen in North America and Europe as a result of air-quality legislation.[9] Given the great strides toward attainment and the reductions we have already seen, the health impact of further reductions may be inconsequential at best while the costs associated with such reductions will be exponential.

The EPA has acknowledged the incremental nature of further reductions, stating that while there is "no bright-line rule delineating the set of conditions or scales [within the range proposed] at which known or anticipated effects become adverse to public welfare," its position is nevertheless that the lower the standard, the better.[10]

Scientists involved in setting the new regulation looked at health impacts from ozone levels ranging from 60 to 72 ppb using various studies, most notably one from 2009 examining just 31 people exercising with varying levels of ozone exposure over a 6-hour period.[11] The EPA's policy assessment of the new standard makes clear that, based on this research, respiratory symptoms were seen at concentrations as low as 72 ppb, but that numerous exposure uncertainties existed with respect to the relative weight given to different risk estimates at lower levels.[12]

The EPA Administrator ultimately determined that within the probabilistic range of impact, lowering the standard to 72 ppb was supportable, but stated that she had "decreasing confidence that adverse effects will occur following exposures to [ozone] concentrations below 72 ppb."[13] Nevertheless, the EPA set the new standard at 70 ppb anyway, despite the cost and consequences to states trying to come into attainment.[14] Indeed, the EPA has acknowledged that, according to its own modeling, there are areas in the Intermountain Western U.S.[15] in which "substantial background contributions . . . [already] approach or exceed the [75 ppb] NAAQS."[16] Furthermore, a 70 ppb standard

was explicitly rejected by the EPA Administrator in a 1997 review of the then-current NAAQS precisely because it was too close to peak background concentrations.[17] Lowering the standard to 70 ppb now only makes sense in a world in which an emissions target of zero is the goal and the cost of further reduction is of no consequence. Even the EPA, however, acknowledges that the CAA does not require a zero-risk level.[18]

II. Understanding Ozone

At the stratospheric level, ozone is a good thing—it protects us from the sun's harmful U.V. rays. In contrast, ground-level ozone—the primary component of smog—may affect air quality. Some studies (while inconclusive) suggest that ground-level ozone on its own or when mixed with other potential pollutants such as particulate matter can have adverse health consequences like asthma and bronchitis.[19] However, some studies also indicate that ozone alone—while a risk factor—may not cause significant demonstrable health issues for most populations. Rather, it is the interaction with other elements that presents possible negative health effects to the human body.[20] In addition, ozone "is a natural constituent of the atmosphere and the lung is equipped with [defense] mechanisms" to deal with it.[21] The task for scientists and regulators is to determine, with regard to ozone specifically, how it interacts with other pollutants, how it presents itself in various geographic areas, and how any specific population may or may not be impacted.

Ground-level ozone is formed when nitrogen oxides (NOx) and volatile organic compounds (VOCs)—also referred to as ozone precursors—react in the presence of sunlight and other weather conditions.[22] The ways in which these reactions occur is highly complex and remain only partially understood.[23]

The NOx and VOCs in our environment are both naturally occurring ("biogenic") as well as the result of man-made ("anthropogenic") pollution. For example, nitrogen oxides come from agricultural sources like synthetic fertilizer and livestock manure, and fossil fuel combustion from mobile sources (e.g. cars) and stationary sources (e.g. coal-fired power plants).[24] Nitrogen oxides also come from natural sources like lightning and biological decay in our soil and oceans.[25] Similarly, VOCs come from man-made sources like solvents (paint, adhesives, wood strippers, and cleansers) and various processes like dry cleaning and oil production and refining.[26] Naturally-occurring VOCs primarily come from plant life; tropical forests are estimated to produce approximately half of all global biogenic VOC emissions.[27]

III. If Ground-Level Ozone is Bad, Why isn't the EPA's Lower Standard Good?

A large percentage of ozone precursors are naturally occurring. In addition, ozone is often transported hundreds of miles from its point of origin. Thus, for many states, especially those of the Intermountain Western U.S., the ozone found within their borders is largely not within their control. So even though ground-level ozone may, in large quantities, have adverse health effects, it is unrealistic to expect that states can continue to reduce or even eliminate ground-level ozone.

That is especially true in Arizona, where the primary sources of ground-level ozone precursors are cars and plants.[28] In Maricopa County, a mere 1% of VOC emissions come from point source major emitters (i.e. industrial, manufacturing and electrical power generating facilities); in contrast, 43% of Maricopa County's VOC emissions come from biogenic sources (i.e. natural vegetation).[29] Coupled with unusually high levels of background ozone and Arizona's dry and sunny desert climate, Arizona is at a unique disadvantage when it comes to complying with the EPA's new standard for ground-level ozone.

First, as a border state and a gateway to Southern California, Arizona's federal, state and local highways are heavily traveled by those passing through and residing within the state. Arizona's primary sources of nitrogen oxide emissions are on-road and non-road mobile sources (primarily cars, but also airplanes, construction equipment, and lawn equipment).[30] As Arizona's Department of Environmental Quality ("ADEQ") has pointed out, "[l]ocally implemented pollution controls are unlikely to be effective at reducing ambient ozone levels across [Arizona] because ozone is a regional problem and caused primarily by cars."[31] And because vehicle emissions are regulated at the federal level, they are wholly outside Arizona's control; Arizona's most effective strategy for reducing its ozone is therefore entirely in the hands of federal regulators responsible for vehicle emission standards.[32] It is also important to note that Arizona has a high proportion of older—and therefore dirtier—vehicles as compared to the rest of the country,[33] because our great weather allows cars to remain in operable condition for a very long time.

Arizona's primary source of VOCs is biogenic emissions, which are emissions from natural sources such as vegetation, soil and lightning. Arizona has the largest ponderosa pine forest in the United States, but no one would seriously argue that Arizona should reduce its VOC emissions by cutting down trees. Thus, Arizona has no meaningful way of reducing its two biggest sources of ozone precursors—cars and plants.

> Arizona's unique geography contributes to its high levels of ozone and will make it essentially impossible to comply with the EPA's new standard without dire effects.

Second, Arizona has extremely high levels of background ozone. "Background ozone" refers to ozone that results from naturally-occurring emissions such as wildfires, lightning or the natural "off-gasing" of plants. It also includes emissions from man-made sources outside the borders of the United States (also referred to as international transport).[34] Background ozone is incredibly hard to measure, and requires complicated and expensive photochemical modeling. Even if proven, the EPA does not permit exclusions for background. Rather, states whose ozone levels are above the federal standard—regardless of the source—are deemed "nonattainment areas," which has significant consequences for the receipt of necessary permitting and federal highway dollars.[35]

Arizona's ozone is comprised significantly of transport from Mexico and California (California's ozone has been shown to include ozone from as far away as Asia). Thus, even if Arizona's Department of Environmental Quality can prove—at great cost—that Arizona would be in attainment "but for" the internationally transported ozone precursors originating in Mexico or Asia, it would still be put into nonattainment status. And while the EPA may include international transport in the definition of background ozone, it does not consider emissions purportedly generated by man-made sources within the U.S. as background regardless of where they were generated. In other words, it doesn't matter if emissions measured in one state are generated in another state (referred to as interstate transport), even though they are outside the control of the impacted jurisdiction.[36] That means Arizona gets no benefit from proving

to the EPA that it would be in attainment "but for" ozone originating in California.

Finally, Arizona's unique geography contributes to its high levels of ozone and will make it essentially impossible to comply with the EPA's new standard without dire effects. Arizona's mountainous terrain, with its alternating valleys and high altitudes, lends itself to an accumulation of ozone.[37] Coupled with Arizona's hot, dry, sunny climate and propensity for wildfires and lightning, Arizona is a textbook environment for ground-level ozone.

IV. What About the EPA's "Tools" for Dealing with Background Ozone?

Federal regulators maintain that states have "tools" at their disposal for addressing background ozone. But because of the make-up of Arizona's ozone, the so-called "tools" made available by the EPA are inadequate to enable Arizona to meet the new standard.

Rural Transport.

The Clean Air Act allows the EPA to determine that a rural area that is not in compliance with the federal standard can be treated as a "rural transport area" (RTA), thereby providing certain relief mechanisms for that designated area. However, to qualify as an RTA, the state must show that the rural area does not contain major emission sources and is not included within nor is adjacent to a highly populated urban area.[38] This is not helpful for a large western state like Arizona, where huge rural areas—some of which are tens of thousands of acres and larger than entire states on the eastern seaboard—are all adjacent to areas that contain urban population centers. Furthermore, because RTAs are technically designated as nonattainment areas, they must meet the EPA's requirements for nonattainment areas, including developing a baseline emissions inventory, implementing a new source review program, submitting major source emission statements, and preparing transportation and general conformity demonstrations—all costly and technical requirements. The only relief an RTA receives is that it is not subject to the more stringent requirements of a higher-classified nonattainment area. Regardless, of all the rural areas in Arizona that will be unable to comply with the 2015 ozone standard, there are likely none that would be able to seek an RTA designation.

International Transport

The Clean Air Act allows the EPA to approve a state's ozone attainment plan—a required part of meeting the federal ozone standard—if the state can demonstrate that ozone originating in another country is a significant impediment to its ability to meet the federal standard and that it has taken "appropriate local measures" toward attainment.[39] But this provision does not exclude international transport from the state's ozone levels, nor does it prevent areas from within the state from being placed in nonattainment status; to the contrary, an international transport designation puts the area into marginal nonattainment status and requires the area to implement marginal nonattainment programs.[40] Furthermore, because of the nature of ozone, proving international transport is time-consuming and expensive. For example, El Paso, Texas spent 10 years and undoubtedly an obscene amount of money to prove that a portion of its ozone came from Juarez, Mexico.[41] To date, it is the only city that has been successful in doing so. The CAA's international transport provision is therefore not helpful to Arizona, which borders on and gets significant ozone from Mexico and, increasingly, from Asia.

Exceptional Events

An "exceptional event" is an event—natural or caused by human activity—that affects air quality, is unlikely to recur at a particular location, and cannot be reasonably controlled or prevented.[42]

The Clean Air Act allows the EPA to exclude ozone caused by exceptional events if a state can prove—through an expensive, technical, and time-consuming process—that it meets the exceptional events criteria.[43] Given the cost of the demonstration and the frequency of exceptional events like wildfires and lightning in Arizona, this provision is too onerous to be a tool of any significance. According to ADEQ, the cost of a typical exceptional events demonstration for particulate matter (i.e. dust) is around $50,000 per event; a demonstration for ozone would be significantly higher due to the complicated modeling such a demonstration would require.[44]

As of October 2015, Wyoming is the only state that had been granted an "exceptional event clearance by EPA due to high background ozone levels"[45] for stratospheric intrusion—a demonstration that can take anywhere from four to eight months to produce.[46] Wyoming's Department of Environment Quality estimates that an exceptional events demonstration for an ozone exceedance caused by wildfire would require 15 months and $150,000 to produce.[47] Even if a state succeeds in proving an exceptional event, the remedy is merely the exclusion of data affected by the event, which does not assure that the state will avoid nonattainment.

V. Punishing Arizona for Ozone It Can't Control

The EPA's new ozone rule could penalize nine out of the 10 counties in Arizona in which ADEQ or other government entities measure ozone levels.[48] That is because although the Clean Air Act technically does not require states to reduce emissions from background sources that are not in their control, the EPA does not consider ozone from man-made pollution generated within the U.S. the type of "background" for which states are not held accountable.[49] In other words, the EPA does not allow states to "discount" for ozone transported into their borders from a neighboring state.[50] This is particularly problematic for Arizona, where neighboring California contributes non-negligible amounts of ozone for which Arizona is ultimately held responsible. As a result, parts of Arizona will be out of compliance due to uncontrollable ozone, yet Arizona must still act to reduce its own ozone emissions to bring its total amount to a level within the federal standard.

For example, La Paz County, Arizona already has a projected three-year concentration of 70 ppb for 2013-2015; 52.68 ppb of that is represented by background.[51] La Paz County is home to just 20,000 people and the size of the state of Connecticut; with no local industry, La Paz County has no local mechanisms for reduction or control.[52]

Likewise, Yuma County's ozone level is hovering around 76 ppb;[53] industrial sources account for only about five percent of that.[54] With a relatively small population and small manufacturing base, the majority of Yuma County's ozone is transport originating in California and Mexico.[55] As Misael Cabrera, Director of Arizona's Department of Environmental Quality, recently testified before Congress, "No matter how many local emissions reductions are achieved, Yuma County simply will not be able to achieve compliance with the new [70 ppb] standard."[56]

Other states of the Intermountain Western U.S. are in similar situations. For example, Colorado's Department of Public Health and Environment noted the effect of transport on Colorado's ozone levels, pointing out that rural monitoring in Colorado demonstrates that "ozone can [] regularly exceed existing standards due to emissions transported into Colorado from upwind sources." EPA's own figures show a contribution to Colorado's background levels of anywhere between three and seven ppb from interstate transport.[57]

VI. What Offsets?

Once an area is designated nonattainment, the CAA mandates that there can be no net increase in emissions from new or modified existing sources. That means emissions offsets must be obtained prior to the construction or expansion of any major source in a nonattainment area.

For an area that is already in nonattainment status, any offset must provide a net air quality benefit. It must also be:

Real: the offset must be based on actual emissions reductions;
Permanent: the offset must be assured for the life of the corresponding emission increase;
Surplus: the emission reduction must not have been mandated by any other local, state or federal requirement; and
Quantifiable: the offset must be capable of reliable and replicable measurement.[58]

In other words, in order to get credit for an offset, it must be in the same location and represent the same type of emission (NOx or VOC) and source (mobile or stationary) for which it is being credited, and the company using the offset must show, to the EPA's satisfaction, that the offset is no longer emitting. In addition, the offset must already be in the existing emissions inventory and must equal or exceed the amount of emission increases at the new or modified source.

In a state like Arizona, where available offsets are incredibly limited or nonexistent,[59] this is an extremely limiting control mechanism. And in counties facing nonattainment under the new standard in which there are essentially no local offsets—like La Paz and Yuma Counties—it's not even a control mechanism.

Arizona is not alone. Like Arizona, Nevada's large rural areas are in nonattainment due to transport and have few available local offsets. As such, the lower standard "will result in the effective foreclosure of new industrial growth in [Nevada's] rural ozone non-attainment areas . . . which is likely to have devastating consequences on these rural communities since they may already be struggling economically."[60]

Given the grim economic development consequences, ADEQ, the Governor's Office, and key stakeholders are working together on a task force to come up with creative and innovative ways to generate offsets that will foster, not inhibit, economic growth. The reality, though, is that the dearth of available offsets in Arizona renders even the most creative offset incentive of limited utility.

VII. Federal Overreach Costs Arizona

Unilaterally lowering the standard for ground-level ozone from 75 ppb to 70 ppb, despite evidence that 70 ppb is not an attainable standard in the Intermountain Western U.S., represents a problematic example of federal overreach. Rather than taking a critical view toward the actual sources of air quality issues in particular areas and what can be done to alleviate pollution from primary emissions sources, the federal government has used its rulemaking power to take a broad swipe to the entire country, disparately impacting the Intermountain Western U.S. and creating an environment of winners and losers from a national economic impact viewpoint. Arizona and other states of the Intermountain Western U.S. will experience a significant negative economic impact

should this rule be implemented as planned without the support and consequences of good technical, scientific, location- and population-specific models developed with data. It is the federal government's responsibility to establish what is necessary to support and implement the rule, not the states' responsibility to lessen the impact.

The costs to Arizona of this overreach are significant and will reach across the state, impacting our economic development outlook for years to come. The cost and feasibility of compliance will simply prove too great for many businesses, forcing them to shut down, relocate operations, or forgo growth and expansion. This says nothing of the businesses that will simply choose not to come to Arizona due to the uncertainty of obtaining necessary permits to operate, an unfortunate consequence that has already come to fruition.

VIII. Challenging the EPA's Overreach: Arizona Takes the Lead

Precisely for the reasons outlined here, in November 2015 Arizona—now joined by nine other states[61]—filed a lawsuit asking a federal court to review the EPA's new standard. Led by Arizona Attorney General Mark Brnovich, Arizona's lawsuit charges that, in setting the new standard for ground-level ozone at 70 ppb, the EPA abused its rulemaking authority and acted outside its CAA mandate.

Arizona's lawsuit, which is currently before a federal appeals court in Washington, D.C., raises the question of whether the EPA violated the Clean Air Act and federal requirements for rulemaking when it set the NAAQS at a level at or below background "such that attainment may not be achieved through practicable controls [and] can be justified by illusory promises of future waivers under the exceptional event, international transport, or rural transport programs."[62] Rather, the lawsuit argues that the CAA requires the EPA to set NAAQS at levels that are actually attainable. The lawsuit also questions whether the EPA had sufficient new evidence to warrant lowering the standard at all.[63]

Explaining Arizona's motivation for filing the lawsuit, Attorney General Brnovich explained: "We all want clean air, however, reducing the ozone standards to 70 ppb will be nearly impossible for Arizona to attain. . . . The financial stakes for [Arizona] are enormous if we are unable to comply."[64]

Conclusion

States across the country are just now starting to approach attainment of the 2008 standard of 75 ppb, but the EPA continues to move the goal post by mandating further reductions for ground-level ozone even though the benefit of such reductions is unsupported by the science. There comes a point of diminishing returns by continuing to mandate ever-lower levels, even as current standards are barely achievable and the proven costs of attainment are so high.

The EPA's new ozone standard of 70 ppb will be virtually impossible for Arizona to meet due to Arizona's high levels of background, limited local

sources, and unique geography. What's worse, the EPA has acted well outside its mandate in lowering the standard, which goes beyond an "adequate margin of safety."

The Clean Air Act needs to be updated to take our modern reality into consideration. As such, the CAA should be amended to allow states to discount for interstate and international transport, and it should require the EPA to consider cost and feasibility when setting NAAQS. In addition, Congress should reduce or even eliminate funding for this program until such time as the 2015 standard is rolled back or reexamined.

Implementation of the current rule in Arizona is not reasonable, based in sound science or achievable. As such, at the very least, implementation of the rule should be set aside in Arizona and other states similarly situated, and those states should be given the opportunity to work meaningfully with the federal government to obtain a realistic plan other than what the current rule requires.

End Notes

1. "Study Links Springtime Ozone Increases Above Western North America to Emissions From Abroad," University of Colorado Boulder, Jan. 20, 2010.

2. "Nature, Chinese Pollution Offset U.S. West Ozone Gains," Jet Propulsion Laboratory, Aug. 10, 2015.

3. "Study Links Springtime Ozone Increases Above Western North America to Emissions From Abroad," *supra* note 1.

4. Ozone is found in Earth's stratosphere, where it protects us from ultraviolet radiation; in Earth's troposphere, where it acts as a greenhouse gas; and at ground level, where it is a component of smog. Ground-level ozone is produced when nitrogen oxides react with sunlight and volatile organic compounds. Sources of nitrogen oxides and volatile organic compounds are both man-made and naturally occurring. *See* "NASA: Background Ozone a Major Issue in U.S. West," Jet Propulsion Laboratory, California Institute of Technology, Sept. 29, 2015.

5. 42 U.S.C. Sec. 7409. When setting NAAQS, the EPA's mandate "is to identify the maximum airborne concentration of a pollutant that the public health can tolerate, decrease the concentration to provide an 'adequate' margin of safety, and set the standard at that level." *Whitman v. Am. Trucking Ass'n,* 531 U.S. 457, 465 (2001).

6. Table of Historical National Ambient Air Quality Standards, Environmental Protection Agency, https://www.epa.gov/ozone-pollution/table-historical-ozone-national-ambient-air-quality-standards-naaqs.

7. According to the EPA, aggregate national emissions of the six common air pollutants regulated by the CAA, including ozone, dropped an average of 69 percent from 1970 to 2014. "Progress Cleaning the Air and Improving People's Health," Environmental Protection Agency, https://www.epa.gov/clean-air-act-overview/progress-cleaning-air-and-improving-peoples-health#pollution.

8. Daren Bakst, "What the EPA Isn't Telling You About Its New Ozone Standards," *The Daily Signal,* Oct. 1, 2015.

9. Ruth M. Doherty, "Ozone Pollution From Near and Far," *Nature Geoscience,* Aug. 10, 2015.

10. ADEQ Comments on Proposed Rule, March 17, 2015; National Ambient Air Quality Standards for Ozone, Proposed Rules, 79 Fed. Reg. 75234, 75330 (Dec. 17, 2014).

11. See National Ambient Air Quality Standards for Ozone; Final Rule, 80 Fed. Reg. 65292, 65303 (Oct. 26, 2015); E.S. Schelegle, et al., "6.6-hour inhalation of ozone concentrations from 60 to 87 parts per billion in healthy humans," Am. J. Respir. Crit. Care Med. 2009 Aug 1;180(3):265-72. (May 15, 2009).

12. 80 Fed. Reg. at 65318-21.

13. *Id.* at 65323-6, 65353.

14. *See* Responses to Significant Comments on the 2014 Proposed Rule on the National Ambient Air Quality Standards for Ozone, 79 Fed. Reg. 75234 (Dec. 17, 2014).

15. "Intermountain Western U.S." refers to the states of Arizona, Colorado, New Mexico, Nevada, Utah, and Wyoming, as well as the high-elevation portions of eastern California. *See* U.S. Environmental Protection Agency, "Implementation of the 2015 Primary Ozone NAAQS: Issues Associated with Background Ozone – White Paper for Discussion," at pg. 3 n. 10 (2015).

16. 80 Fed. Reg. at 65300.

17. *Id.* at 65297.

18. *Id.* at 65295.

19. Ozone Basics, Environmental Protection Agency, https://www.epa.gov/ozone-pollution/ozone-basics#effects.

20. World Health Organization, Health Aspects of Air Pollution – Answers to Follow-up Questions from CAFE, p. 16. (2004), http://apps.who.int/iris/bitstream/10665/107556/1/E82790.pdf,

21. World Health Organization, Air Quality Guidelines: Global Update 2005, p. 322 (2005), http://www.euro.who.int/__data/assets/pdf_file/0005/78638/E90038.pdf?ua=1.

22. "NASA: Background Ozone a Major Issue in U.S. West," *supra* note 4; *see also* 80 Fed. Reg. at 65299.

23. *See* 80 Fed. Reg. at 65300.

24. Overview of Greenhouse Gases, Environmental Protection Agency, https://www3.epa.gov/climatechange/ghgemissions/gases/n2o.html; "NASA: Background Ozone a Major Issue in U.S. West," *supra* note 4.

25. Overview of Greenhouse Gases, *supra* note 24.

26. Volatile Organic Compounds' Impact on Indoor Air Quality, Environmental Protection Agency, https://www.epa.gov/indoor-air-quality-iaq/volatile-organic-compounds-impact-indoor-air-quality.

27. Laura Naranjo, "Volatile Trees: Forests fill the air with more than just a fresh scent," *EarthData,* Nov. 20, 2011, https://earthdata.nasa.gov/user-resources/sensing-our-planet/volatile-trees.

28. Arizona Department of Environmental Quality PowerPoint Presentation, AMC Environmental Issues Breakfast, April 12, 2016.

29. *Id.*

30. *Id.*

31. Arizona Department of Environmental Quality, Briefing Paper – EPA's New, Lower Ozone Standard, Oct. 2, 2015.

32. *Id.*

33. Brandon Loomis, "Arizona officials: Sun, old cars will make new EPA ozone limit difficult to meet," *Arizona Republic,* Oct. 2, 2015, *available at* http://www.azcentral.com/story/news/arizona/politics/2015/10/02/arizona-sun-old-cars-make-new-epa-ozone-limit-difficult/73221680/; *see also* Janet Pelley, "Consumers Hold Onto Cars Longer; Making Exhaust Dirtier," *Scientific American,* Dec. 12, 2014, *available at* http://www.scientificamerican.com/article/consumers-hold-onto-cars-longer-making-exhaust-dirtier/.

34. James E. McCarthy & Richard K. Lattanzio, Ozone Air Quality Standards: EPA's 2015 Revision at 18, *Congressional Research Service,* Jan. 25, 2016.

35. *Id.* at 5.

36. U.S. Environmental Protection Agency, "Implementation of the 2015 Primary Ozone NAAQS: Issues Associated with Background Ozone – White Paper for Discussion," at pg. 2 (2015).

37, A Natural Disadvantage: Punishing Arizona for Ozone Levels Beyond Its Control at 4.0, The Center for Regulatory Solutions, Small Business Entrepreneurship Council, 2016, http://centerforregulatorysolutions.org/wp-content/uploads/2016/02/A-Natural-Disadvantage.pdf.

38. The National Ambient Air Quality Standards, Tools for Addressing Background Ozone at 3, Environmental Protection Agency, https://www.epa.gov/sites/production/files/2015-10/documents/20151001_background_ozone.pdf; *see also* Arizona Department of Environmental Quality PowerPoint Presentation, *supra* note 28.

39. The National Ambient Air Quality Standards, Tools for Addressing Background Ozone, *supra* note 38, at 3.

40. Arizona Department of Environmental Quality PowerPoint Presentation, *supra* note 28.

41. 69 Fed. Reg. 32450 (June 10, 2004).

42. The National Ambient Air Quality Standards, *supra* note 38, at 2.

43. *Id.* at 3. The EPA has indicated that it is undertaking a review of the exceptional events designation process and expects to take final action to issue guidance and simplify the rule some time in 2016. It is unclear at this point what that guidance might look like and whether it will in fact be forthcoming this year.

44. ADEQ Comments on Proposed Rule, *supra* note 10, at 7.

45. "NASA: Background Ozone a Major Issue in U.S. West," *supra* note 4.

46. State Environmental Agency Perspectives on Background Ozone & Regulatory Relief at 11, Results of a Survey by the Association of Air Pollution Control Agencies, June 2015.

47. *Id.*

48. Arizona Department of Environmental Quality, Briefing Paper, *supra* note 31.

49. "NASA: Background Ozone a Major Issue in U.S. West," *supra* note 4.

50. The Clean Air Act has a "good neighbor" provision that purports to require states to prohibit emissions that will significantly contribute to a downwind state's nonattainment. *See* "Interstate Air Pollution Transport," Clean Air Markets, Environmental Protection Agency, https://www.epa.gov/airmarkets/interstate-air-pollution-transport. But the provision does not enable a downwind state to discount or exclude interstate transport from its levels. Because of this, and because there is no mechanism for enforcing the provision, it is of limited utility. For example Arizona receives significant interstate transport from California, and the CAA's "good neighbor" provision technically requires California to control it. But California is currently so behind in meeting the NAAQS that it is not even counted in EPA's latest studies.

51. Arizona Department of Environmental Quality PowerPoint Presentation, *supra* note 28; Letter from Eric C. Massey, Director of Air Quality, Arizona Department of Environmental Quality, to Environmental Protection Agency, March 17, 2015.

52. Arizona Department of Environmental Quality, Briefing Paper, *supra* note 31.

53. Arizona Department of Environmental Quality PowerPoint Presentation, *supra* note 28

54. William V. Theobald, "AZ to Congress: We Can't Comply with the Ozone Rule," *Arizona Republic,* April 15, 2016, *available* at http://www.azcentral.com/story/news/politics/arizona/2016/04/14/az-congress-we-cant-comply-epa-ozone-rule/83041208/; Arizona Department of Environmental Quality PowerPoint Presentation, *supra* note 28.

55. Testimony of Misael Cabrera, Director, Arizona Department of Environmental Quality, Before the Subcommittee on Energy and Power, House Committee on Energy and Commerce, April 14, 2016; A Natural Disadvantage, *supra* note 37.

56. Testimony of Misael Cabrera, *supra* note 55.

57. Letter from William C. Allison V, Director, Air Pollution Control Division, Colorado Department of Public Health and Environment, to U.S. Environmental Protection Agency, March 17, 2015, *available at* https://www.colorado.gov/pacific/sites/default/files/AP-PO-ColoradoCommentsOzoneNAAQS.pdf.

58. 42 U.S.C. Sec. 7503; 40 C.F.R. 51.165(a)(3).

59. *See* Arizona Department of Environmental Quality PowerPoint Presentation, *supra* note 28.

60. State Environmental Agency Perspectives on Background Ozone & Regulatory Relief, *supra* note 46, at 12.

61. At the time of filing, Arizona was joined by Arkansas, New Mexico, North Dakota and Oklahoma. Since then, Kentucky, Utah, Louisiana, Texas and Wisconsin have all been granted permission to join.

62. *State of Arizona v. EPA,* No. 15-1392, Petitioners' Non-Binding Statement of Issues (Nov. 30, 2015, D.C. Cir.).

63. *Id.*

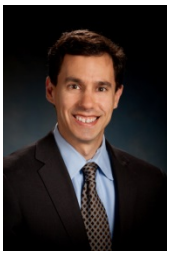
64. Press Release: Arizona Files Lawsuit Along with Four Other States Challenging EPA's New Ozone Standards Rule, Arizona Attorney General, Oct. 29, 2015.

ARIZONA CHAMBER FOUNDATION

Arizona Chamber Foundation
3200 North Central Avenue, Suite 1125
Phoenix, Arizona 85012
602-248-9172
www.azchamber.com/foundation

PROSPER FOUNDATION

Prosper Foundation
3200 North Central Avenue, Suite 1125
Phoenix, Arizona 85012
602-529-1204
www.prosperfoundationhq.org



Glenn Hamer is the President and CEO of the Arizona Chamber of Commerce and Industry. His tenure has coincided with the organization's development into one of the most respected pro-business public policy entities in the state. Glenn has led numerous successful efforts to enhance Arizona's economic competitiveness and its legal, labor, education and regulatory environments.

Glenn currently represents the Arizona Chamber on the U.S. Chamber of Commerce Public Affairs Committee and Committee of 100, and is a member of the board for Black Chamber of Arizona, the Tucson Hispanic Chamber of Commerce, the Arizona Council on Economic Education, Gov. Doug Ducey's Water Augmentation Council and the Governor's Workforce Advisory Council. He is also Vice Chair of the Arizona Charter Schools Association.