S. HRG. 114–85

IMPACTS OF EPA'S PROPOSED OZONE STANDARD ON MANUFACTURING AND UTILITIES

FIELD HEARING

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

SEPTEMBER 1, 2015—COLUMBUS, NE

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ONE HUNDRED FOURTEENTH CONGRESS
FIRST SESSION

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C O N T E N T S

IMPACTS OF EPA'S PROPOSED OZONE STANDARD ON MANUFACTURING AND UTILITIES

TUESDAY, SEPTEMBER 1, 2015

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Columbus, NE.

The Committee met, pursuant to notice, at 10 a.m. on September 1, 2015, at the Fine Arts Center, Central Community College, 4500 63rd Street, Columbus, Nebraska, Hon. Deb Fischer, U.S. Senator from the State of Nebraska, presiding.

OPENING STATEMENT OF HON. DEB FISCHER, U.S. SENATOR FROM THE STATE OF NEBRASKA

Senator FISCHER. The hearing will come to order.

Good morning. I am very pleased to convene the Senate Environment and Public Works Committee for a field hearing which is titled Impacts of the Environmental Protection Agency's Proposed Ozone Standard on Manufacturing and Utilities.

It's wonderful to host this hearing right here in Platte County, Nebraska, where the average unemployment rate is 3.24 percent and a thriving manufacturing industry serves as the foundation for many surrounding local communities.

I would also like to extend a special thank you to Central Community College for providing today's accommodations.

Today we welcome a group of Nebraska stakeholders to share their perspectives on the Environmental Protection Agency's proposed rule to reduce the allowable concentration of ground-level ozone from 75 parts per billion to between 65 and 70 parts per billion.

Today's hearing allows us to explore this issue in depth and determine the impacts this proposal will have on Nebraska's families, businesses and utilities.

The EPA's proposal has been called the most expensive regulation of all time. Regardless of one's view on this proposal, we can all agree the American people deserve to know the real cost of this regulation.

Additionally, it is unclear whether the new standard provides any real health benefits. There are also serious flaws with the EPA's methods and modeling for the proposal.

For example, the EPA did not consider personal exposure to ozone, which is the concentration people actually breathe in when setting the standard. Instead, the agency used outdoor monitoring data that significantly overestimates the risk.

Furthermore, the EPA's own assessment indicates that lowering ozone concentrations would actually result in more deaths in some instances. This alarming result either shows a stricter standard would not achieve its objective or that there are serious problems with the EPA's methodology.

While questions remain about the scientific evidence used to justify the EPA's proposal, there is no question that this new standard would be economically devastating. A stricter ozone standard would put 57 Nebraska counties in nonattainment. This includes rural counties that have less than one person per square mile.

This rule would also expose urban areas like Omaha, which currently complies with Federal clean air standards, to harsh regulations that will stifle new and existing industry growth, as well as impede transportation infrastructure improvements.

Moreover, the EPA's proposal would require power plants and industrial facilities across Nebraska to install expensive ozone control equipment, limit production or buy offsets, which would stifle economic growth.

This means that our citizens, Nebraska is the only 100 percent public power State in the country, and this means that our citizens own the electricity.

The additional compliance costs imposed by this proposed rule would be passed down to small businesses, it would be passed down to families and it would result in a $370 drop in average household consumption per year.

Nebraskans value clean air. Our businesses and utilities take seriously their role in protecting air quality. However, many communities are still struggling to achieve the standards that were set in 2008. Stricter standards would put an additional burden on communities across our State. In some cases, due to background ozone levels, attainment would be virtually impossible to attain.

I have serious concerns about imposing additional rules, regulations and permitting requirements on our jobs, our Nation's job creators, our electricity providers and our families. We should not be in the business of creating unnecessary regulations; instead, we need to explore policy options that promote growth.

I am entering into the record comments submitted by the Nebraska Department of Environmental Quality, the Omaha Public Power District and the Norfolk Area Chamber of Commerce. Each set of comments states that the current ozone standard of 75 parts per billion should be retained.

Additionally, I am also submitting to the record testimony from Dr. Bryan Shaw, he is the commissioner of the Texas Commission on Environmental Quality who provided testimony for the committee hearing on this topic last December. He states that EPA's process of setting ozone standards has not scientifically proven that further lowering of the ozone standard will fail to provide any measurable increase in human health protection.

Today's panel represents diverse perspectives on the effect of the proposed rule to lower the ground-level ozone standard. I am eager to hear further details from our panelists on the challenges that each industry and business will face if and when the EPA finalizes this proposed rule.

Today's hearing will begin with a witness who can speak to the importance of providing affordable and reliable electricity to our Nebraska ratepayers. Russ Baker is the manager for the Omaha Public Power District's Environmental and Regulatory Affairs Division. Mr. Baker plans, organizes and directs OPPD's environmental compliance programs and related regulatory matters across the district's nuclear, coal, natural gas and ever increasing renewable generation fleet.

Mr. Baker has been with OPPD since 2000 and has worked in environmental affairs for nearly a decade. In addition to his tenure at OPPD, Mr. Baker has also served on the Board of WasteCap Nebraska, a non-profit organization dedicated to helping businesses and communities in Nebraska reduce and eliminate waste in Nebraska.

Russ, I am very eager to hear how this proposed rule will impact our public power utilities, please begin your testimony.

[The referenced comments follow:]

Pete Ricketts
Governor

STATE OF NEBRASKA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Jim Macy ~~Patrick W. Rice~~
Director ~~xxxxxxxxxx~~
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March 13, 2015

Docket ID No. EPA-HQ-OAR-2008-0699
EPA Docket Center
Environmental Protection Agency
2822T 1200 Pennsylvania Ave NW
Washington, D.C. 20460

Dear Administrator McCarthy,

On behalf of the Nebraska Department of Environmental Quality (NDEQ), thank you for this opportunity to comment on the Environmental Protection Agency's (EPA) proposed revisions to the National Ambient Air Quality Standards (NAAQS) for ground-level ozone (O_3) published by EPA on December 17, 2014 (79 Federal Register 75234). The NDEQ oversees and administers the State of Nebraska's air quality program, including the NAAQS, State Implementation Plan (SIP), New Source Review (NSR), Prevention of Significant Deterioration (PSD), and air quality monitoring programs that are affected by this rulemaking under the Clean Air Act (CAA).

Background

The CAA requires the EPA to issue NAAQS that are requisite to protect public health and welfare within an adequate margin of safety,[1] wherein the term "requisite" is defined by the EPA as "neither more nor less stringent than necessary."[2] In the course of setting, reviewing, and revising the O_3 NAAQS to meet these obligations, the EPA Administrator considers the following information:

- The Integrated Science Assessment (ISA), a critical review and analysis of the latest available scientific evidence on the human health and environmental effects associated with the presence of ozone in the ambient air;
- The Risk and Exposure Assessments (REAs), which analyze the impact of ozone on air quality, human exposures to ozone, ozone-associated health risks, ecological risks, and risks to associated ecosystem services;

[1] 42 U.S. Code § 7409 – National primary and secondary ambient air quality standards
[2] 79 FR 75243 | II. A. Approach

- The Policy Assessment (PA), an official EPA senior staff recommendation on the most policy-relevant scientific evidence and exposure/risk information contained in the ISA and REAs;
- Advice and recommendations by the Clean Air Scientific Advisory Committee (CASAC), an independent panel of scientists, environmental engineers, public health experts, and air agency and industry representatives; and,
- Public comments received during the development of the above documents and throughout the rulemaking process.

Evaluation of the Current O_3 NAAQS

NDEQ supports the current 75 ppb O_3 NAAQS level and believes it should be retained as it has worked well for Nebraska. It provides a balance between environmental protection and economic sustainability.

To the extent that EPA decides to lower the standard, NDEQ opposes lowering the O_3 NAAQS level to below 70 ppb. A level of 70 ppb fulfills the EPA's statutory obligation to protect public health and welfare within an adequate margin of safety without imposing excessive costs and burdens on states tasked with implementing the NAAQS.

The NDEQ is aware that the EPA cannot consider implementation costs when setting the NAAQS, nor is it required to consider the attainability or technological feasibility of the standards.[3,4,5] However, the EPA has included a cost-benefit analysis as part of its Regulatory Impact Analysis (RIA) for this rulemaking.[6] The RIA estimates total costs for nationwide attainment – excluding California – for an O_3 NAAQS level of 70 ppb at $3.9 billion, compared to $15 billion for a level of 65 ppb and $39 billion for a level of 60 ppb. Total health benefits resulting from nationwide attainment excluding California are estimated at $6.4 to $13 billion for 70 ppb, compared to $19 to $38 billion for 65 ppb and $34 to $70 billion for 60 ppb. This puts the net benefits of 70 ppb at $2.5 to $9.1 billion, compared to $4 to $23 billion for 65 ppb and $5 to $31 billion for 60 ppb.[7]

An O_3 NAAQS with a level of 70 ppb offers the greatest degree of confidence regarding the costs and benefits associated with implementing a more stringent standard. The estimated net benefits for an O_3 NAAQS level of 70 ppb have a range of just $6.6 billion, compared to $19 billion for a level of 65 ppb and $26 billion for a level of 60 ppb. The greater ranges for levels below 70 ppb indicate greater uncertainty regarding the potential costs and benefits of implementing these standards, and the degree to which any net benefits may be realized.

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[3] 79 FR 75238 | I. B. Legislative Requirements
[4] Whitman v. American Trucking Assns., Inc. 531 U.S. 457 (2001)
[5] American Petroleum Institute v. Costle, 665 F.2d 1176 (1981)
[6] Regulatory Impact Analysis of the Proposed Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone (http://www.epa.gov/ttn/ecas/regdata/RIAs/20141125ria.pdf)
[7] Table ES-6. Total Annual Costs and Benefits for U.S., except California in 2025 (billions of 2011$) | RIA of the Proposed Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone (http://www.epa.gov/ttn/ecas/regdata/RIAs/20141125ria.pdf)

Importance of Timely Guidance

Should the EPA choose to lower the O3 NAAQS, the NDEQ stresses the importance of having adequate guidance and implementation tools made available to the states in a timely manner. This is especially important given that many states may be facing nonattainment issues, some for the first time, depending on the stringency of the standard. Additional ambient air quality monitoring may also be necessary, requiring additional collaboration, training, and resource-sharing between the EPA and state and local regulators.

Timely access to adequate training, guidance, and implementation resources has been a significant problem in prior NAAQS revisions.[8, 9, 10] Having clear and timely guidance and implementation tools is crucial for enabling the states to effectively implement and comply with the NAAQS. The NDEQ therefore requests that the EPA issue implementation rules and guidance documents at the same time as the final NAAQS.

Updating the Air Quality Index

The Air Quality Index (AQI) is an important outreach and public awareness tool. State and local agencies rely on the AQI to inform the public about the local air quality conditions. The NDEQ therefore recommends that the AQI be reflective of the latest National Ambient Air Quality Standards.

We respectfully submit these comments and urge EPA to carefully consider them before you move forward in the rulemaking process.

Sincerely,

Jim Macy

Director

[8] NACAA Comments to EPA on Proposed 2008 Ozone SIP Requirements Rule (Sep 4, 2013) (http://4cleanair.org/Documents/NACAA_Comments-O3_SIP_Reqs_Rule-090413.pdf)
[9] NACAA Comments on EPA's Draft Guidance for 1-Hour SO2 Nonattainment Area SIP Submissions (Dec 4, 2013) (http://www.4cleanair.org/Documents/12062013NACAAFinalComments-DraftSO2NAAGuidance.pdf)
[10] NACAA Comments on EPA's Proposed Particulate Matter NAAQS (Aug 31, 2012) (http://4cleanair.org/sites/default/files/NACAACommentsonProposedPMNAAQS08312012_3.pdf)

Omaha Public Power District

444 South 16th Street Mall
Omaha, NE 68102-2247

March 17, 2015
15-EA-076

Attn: Docket ID No. EPA-HQ-OAR-2008-0699
EPA Docket Center (Air Docket)
U.S. Environmental Protection Agency
Mailcode: 28221T
1200 Pennsylvania Ave. NW.
Washington DC 20460

RE: Comments of the Omaha Public Power District on the Proposed National Ambient Air Quality Standard for Ozone; Docket ID Number EPA–HQ–OAR–2008-0699

Headquartered in Omaha, Nebraska, the Omaha Public Power District (OPPD) is a public corporation and political subdivision of the State of Nebraska. OPPD owns and operates generation, transmission and distribution facilities, and serves approximately 800,000 persons in 13 eastern Nebraska counties. OPPD's revenue for operating expenses and routine improvements and additions is obtained from the sale of electricity and related services. Funds for major construction expenditures come from the public sale of bonds and other debt instruments. The purpose of this letter is to provide comments on the proposed revision to the National Ambient Air Quality Standards for ozone, Docket ID Number EPA-HQ-OAR-2008-0699

While OPPD is supportive of NAAQS that are protective of public health, we are also concerned with the rationale and ramifications of the proposed more stringent ozone NAAQS. The impacts of a lowered ozone NAAQS and the potential designation of a good portion of the country's larger population centers as nonattainment for ozone will likely have significant economic impacts on these areas and the country as a whole. A nonattainment designation for an area may result in the need to look at reductions in emissions from existing emission sources and will include significantly more stringent requirements for new emission sources and modifications to existing emission sources. While one option for developers is to locate new facilities or relocate existing facilities to parts of the country that are in attainment with the NAAQS, the proposed stringency of the standard may make it difficult to find sites with an adequate labor pool that are not in or near an ozone nonattainment area. This could result in manufacturing facilities and the associated jobs being located or relocated to areas outside of the United States, where less stringent environmental regulations will allow them to operate competitively.

A study by NERA Economic Consulting and commissioned by the National Association of Manufacturers (NAM) estimated that an ozone standard of 65 parts per billion (ppb) could cost the economy $140 billion per year, eliminate 1.4 million job equivalents annually and cost the average U.S. household $830 per year in the form of lost consumption. The EPA analysis should consider the adverse effect a lower ozone standard may have on low-income households and whether the possible benefits of lower ambient ozone levels offset the possible harmful effects of unemployment or having less disposable income to purchase necessary goods and services, such as groceries, medicine, or obtaining proper medical care.

With significant economic and job loss impacts of a tightened ozone standard, EPA should reconsider the ultimate benefit of finalizing an ozone standard lower than the current 75 ppb standard. EPA's own analysis indicates that significant reductions in ozone levels will be achieved absent a new ozone NAAQS by implementation of a number of other EPA regulations. As such, the substantial costs associated with large sections of the country being designated nonattainment for ozone will needlessly be levied on those communities and states while EPA already has regulations in place that will act to reduce ozone concentrations to the levels contemplated in the proposed rule. It seems a rational approach would be to maintain the ozone NAAQS at the current level and allow other EPA regulations to act to lower ambient ozone levels. EPA could then revisit the issue during the next five year NAAQS review to assess the progress made in lowering ambient ozone levels and determine if setting a lower NAAQS is required as further incentive to reduce ozone levels.

Alternatively, if EPA determines that a new lower ozone standard is required, OPPD suggests that EPA set the standard at 70 ppb and write the final rule such that implementation of the standard has the least economic impact on the country as possible. EPA has already conducted modeling and an assessment of future ozone levels under current and proposed regulations and determined that ozone levels will drop significantly. Because EPA's analysis shows that a majority of the country will achieve compliance with a lower ozone standard without any area-specific actions, at the discretion of the state involved, the final rule should allow for the EPA analysis to substitute for the traditional requirements associated with a nonattainment designation. There should be no need for a detailed analysis to form a plan to achieve compliance, no need for area-specific actions by existing sources of emissions, and no need for the area to be subject to the stringent nonattainment new source review permitting requirements that may act to stunt economic development. This approach would allow for achievement of the ambient ozone goals while minimizing the costs.

In summary, OPPD believes that the most prudent approach to attaining lower ambient ozone levels without imposing a high cost on the country's economy is to leave the current ozone standard in place and allow the impacts of other regulations EPA is implementing to act to lower ambient ozone concentrations, as EPA has determined they will. Alternatively, if it is determined that a lower standard is required, OPPD believes that a standard set at 70 ppb is appropriate and implementation of the standard should allow states to use EPA's analysis and modeling as a remedy or part of the remedy for any area that is showing nonattainment with the new standard.

Respectfully submitted,

Bob Holmes

Bob Holmes
Environmental Affairs Administrator
Omaha Public Power District

NORFOLK AREA
Chamber of Commerce

609 W. Norfolk Ave.
Norfolk, Nebraska
402.371.4862
norfolkareachamber.com

03/12/2015

The Honorable Gina McCarthy
Administrator
U.S. Environment Protection Agency
Attn: Docket ID No. EPA-HQ- OAR-2008-0699

Dear Administrator McCarthy:

As the Norfolk Area Chamber of Commerce representing our 650 + businesses, both large and small, that employ millions of Americans, we are deeply concerned about the harmful impact that the Environmental Protection Agency's (EPA) recently proposed rule to make ozone standards more stringent could have on the still struggling economy. Ozone standards at the levels considered in EPA's proposal could push virtually the entire country into "nonattainment" – where local communities face burdens to commercial and industrial activity not only vital to creating jobs, but also to providing tax revenue that support important local services like public safety and education. This proposal's hardship to the American worker is real and immediate, while the benefits are unverified and uncertain. Therefore, the Norfolk Area Chamber of Commerce strongly urges you to retain the current ozone standard when finalizing this proposal.

We all value clean air. The managers and employees of the companies we represent as well as their families all breathe the same air. We are proud that emissions of ozone-forming emissions have been cut in half since 1980, leading to a 33% drop in ozone concentrations. Moreover, EPA just updated ozone standards six years ago. These current standards are behind schedule due to EPA effectively suspending their implementation from 2010-2012 while the Agency unsuccessfully pursued reconsideration. This country can expect to see even greater reductions in ground-level ozone as states make up lost ground in putting the current standards into effect.

Indeed, states are currently committing substantial resources – both in time and money – towards achieving emissions reductions under those current ozone standards. Yet despite over three decades of cleaner air and before states can catch up with EPA's delays in implementing existing ozone standards, EPA is now proposing a new stringent range of standards from 70 to 65 parts per billion that would bring vast swaths of the country into nonattainment. In some areas, this proposed range is at or near the level of background ozone that is naturally occurring or internationally transported, pushing even remote counties far from industrial activity into nonattainment. According to EPA's own data, even the pristine Grand Canyon and Yellowstone National Parks would fail the proposed ozone standards.

If finalized, EPA's proposed stringent ozone standards could limit business expansion in nearly every populated region of the United States and impair the ability of U.S. companies to create new jobs. EPA's proposed range would immediately add red tape to companies seeking to grow even in areas that can attain those standards. The Clean Air Act carries even stiffer consequences for nonattainment areas, directly impacting economic vitality of local communities and making it difficult to attract and develop business. Increased costs associated with restrictive and expensive permit requirements would likely deter companies from siting new facilities in a nonattainment area. Making America a less attractive place to do business in this way risks shipping jobs overseas.

Companies building a new facility or performing major modifications to certain existing facilities resulting in increased ozone concentrations in, or near, a nonattainment area will be required to meet the most stringent Clean Air Act standard by installing the most effective emission reduction technology regardless of cost. As well, states are mandated to offset any ozone-forming emissions from new projects or projects undergoing major modifications by reducing emissions from other existing sources in a nonattainment area. If no party is willing to

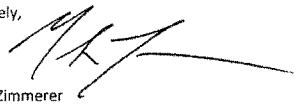
provide offsets, then the project cannot go forward. This offset can be a 2-to-1 ratio in certain situations. Nonattainment designation also has profound impact on infrastructure development vital to the business community. Beginning one year from the date of the nonattainment designation, federally-supported highway and transit projects cannot proceed in a nonattainment area unless the state can demonstrate that the project will cause no increase in ozone emissions.

These restrictions do not disappear when an area finally comes into attainment. Instead, former nonattainment areas face a legacy of EPA regulatory oversight. Before a nonattainment area can be redesignated to attainment, EPA must receive and approve an enforceable maintenance plan for the area that specifies measures providing continued maintenance of ozone standards and contingency measures to be implemented promptly if an ozone standard is violated.

Against these economic consequences, scientific uncertainties regarding the benefits of more stringent ozone standards have increased. Indeed, stringent ozone standards may have severe unintended consequences for public health. Studies show that by increasing the costs of goods and services such as energy, and decreasing disposable incomes, regulation can inadvertently harm the socio-economic status of individuals and, thereby, contribute to poor heath and premature death. The Norfolk Area Chamber of Commerce believes these scientific uncertainties should be better explored in order to best allocate resources in a manner that strengthens both the economy and the environment.

The air is getting cleaner, and current ozone standards need an opportunity to work. Therefore, in light of the economic hardship, reduction in funding for crucial civic services, and uncertain benefits all related to the stringent ozone standards that EPA is now considering, [business or association name] calls on EPA to retain the existing ozone standards in the final rule.

Sincerely,



Mark Zimmerer
President & CEO
Norfolk Area Chamber of Commerce

STATEMENT OF RUSS BAKER, MANAGER, ENVIRONMENTAL AND REGULATORY AFFAIRS DIVISION, OMAHA PUBLIC POWER DISTRICT

Mr. BAKER. Thank you, Senator Fischer.

Good morning. Thank you for inviting me to testify. My name is Russ Baker, and I am the manager of Environmental and Regulatory Affairs at Omaha Public Power District.

I am here testifying today on behalf of the Nebraska Power Association. I would like to take this opportunity to commend you for your hard work in the support of our association members throughout the State of Nebraska. We stand ready to continue to work with you to maintain and improve Nebraskans access to affordable, reliable and environmentally sensitive electric power.

The Nebraska Power Association is comprised of the 167 utilities that produce and deliver electricity to Nebraskans. We are a voluntary organization representing all segments of Nebraska's power industry, municipalities, public power districts, public power and irrigation districts and cooperatives which are engaged in generation transmission and distribution of electricity within our State.

Nebraska is the only State in the U.S. where every home and business is served by a publicly controlled utility. Publicly owned utilities exist to serve customers. There are no stockholders and thus no profit motive. Public power electric prices do not include a profit. Nebraskans utilities focus exclusively on keeping electric rates low and customer service high.

Today I will discuss the Nebraska Power Association's view of the EPA's proposal to update the air quality standards for ground-level ozone.

On November 25th of 2014, the EPA proposed to strengthen the National Ambient Air Quality Standards or ground-level ozone. EPA is proposing to update both the primary ozone standard to protect public health and the secondary standard to protect the public welfare. Both standards would be an 8-hour standard set within a range of 65 to 70 parts per billion.

Ozone is a pollutant that has respiratory health effects in humans and also impairs plant growth and damages crops. It is produced when emissions nitrogen oxides and volatile organic compounds react in the presence of sunlight.

Controls on nitrogen oxides and volatile organic compound emissions from vehicles, power plants and other sources have enabled many U.S. counties to meet the 75 parts per billion standard, but the number of counties in nonattainment status, currently at 227, would jump to 358 or 558 if the standard is revised to 75 parts per billion or 65 parts per billion respectively.

In the State of Nebraska, should the standard be set less than 68 parts per billion, the counties of Knox and Douglas would likely be classified as nonattainment, impacting 8,605 and 535,556 people respectively based on 2013 estimates.

The potential impact of these designations can be found in a study by NERA Economic Consulting that was commissioned by the National Association of Manufacturers. The study estimated that an ozone standard of 65 parts per billion could cost the economy $140 billion per year, eliminate 1.4 million job equivalents an-

nually and cost the average U.S. household up to $830 per year in the form of lost consumption.

We are hopeful that the EPA also considered the adverse effect a lower ozone standard may have on low income households and whether the possible benefits of lower ambient ozone levels offset the possible harmful effects of unemployment or having less disposable income to purchase necessary goods and services such as groceries, medicine, obtaining proper medical care or the ability to afford electricity which is needed for comfort, security, cooking and overall well-being.

While the Nebraska Power Association is supportive of ambient air quality standards that are protective of public health, we are also concerned with the ramifications of the proposed more stringent ozone NAAQS.

The impacts of a lower ozone standard in the potential designation of Nebraska's largest population center, the city of Omaha, as nonattainment for ozone, will have significant economic impacts on these areas and the State as a whole.

With significant economic and job loss impacts of a tight ozone standard, we feel the EPA reconsider the ultimate benefit of finalizing an ozone standard lower than the current 75 parts per billion standard.

EPA's own analysis indicates that significant reductions in ozone levels will be achieved absent a new ozone air quality standard by implementation of a number of other EPA regulations including the Cross-State Air Pollution Rule and Regional Haze Regulations. As such, the substantial costs associated with large sections of the country being designated nonattainment for ozone will needlessly be levied on those communities and States, while EPA already has regulations in place that will act to reduce ozone concentrations to the levels anticipated in the proposed rule.

It seems a rational approach would be to maintain the ozone standard at the current level, and allow other EPA regulations to act to lower ambient ozone levels. EPA could then revisit the issue during the next 5-year air quality standard review to assess the progress made in lowering ozone levels and determine if setting a lower ambient air quality standard is required as further incentive to reduce ozone levels.

Alternatively, if EPA determines that a newer lower ozone standard is required, the Nebraska Power Association suggests that EPA set the standard at 70 parts per billion and write the final rule such that implementation of the standard has the least economic impact on the country as possible.

EPA has already conducted modeling and an assessment of future ozone levels under current and proposed regulations and determined that ozone levels will drop significantly. Because EPA analysis shows that a majority of the country will achieve compliance with a lower ozone standard without any area-specific actions, at the discretion of the State involved, the final rule should allow for EPA analysis to substitute for the traditional requirements associated with the nonattainment designation.

There should be no need for a detailed analysis to form a plan to achieve compliance, no need for area-specific actions by existing sources of emissions and no need for the area to be subject to the

stringent nonattainment new source review permitting requirements that may act to stunt economic development.

This approach will allow for achievement of the ambient ozone goals while maintaining and minimizing the costs.

In summary, the Nebraska Power Association believes that the most prudent approach to attaining lower ambient ozone levels, without imposing a high cost on the country's economy, is to leave the current ozone standard in place and allow the impacts of other regulations EPA is implementing to act to lower ambient ozone concentrations, as EPA has determined they will.

Alternatively, if it is determined that a lower standard is required, the Nebraska Power Association believes that a standard set at 70 parts per billion is appropriate and implementation of the standard should allow States to use EPA's analysis and modeling as a remedy, or part of the remedy, for any area that is showing nonattainment with the new standard.

Again, thank you for the opportunity to appear today and I would be happy to answer any questions you might have for me.

[The prepared statement of Mr. Baker follows:]

Russell J. Baker

Manager – Environmental and Regulatory Affairs Division

Omaha Public Power District

On Behalf of the Nebraska Power Association

Oral Testimony before the Senate Committee on Environment and Public Works Committee Field Hearing in Columbus Nebraska

Impacts of EPA's Proposed Ozone Standard on Manufacturing and Utilities
September 1, 2015

Good morning Senator Fischer. Thank you for inviting me to testify. My name is Russ Baker and I am the Manager of Environmental and Regulatory Affairs at Omaha Public Power District. I am testifying today on behalf of the Nebraska Power Association (NPA). I would like to take this opportunity to commend you for your hard work and support of our association members throughout the state of Nebraska. We stand ready to continue to work with you to maintain and improve Nebraskans' access to affordable, reliable, and environmentally sensitive electric power.

The NPA is comprised of the 167 utilities that produce and deliver electricity to Nebraskans. We are a voluntary organization representing all segments of Nebraska's power industry: municipalities, public power districts, public power and irrigation districts and cooperatives which are engaged in generation, transmission, or distribution of electricity within our state.

Nebraska is the only state in the U.S. where every home and business is served by a publicly controlled utility. Publicly owned utilities exist to serve customers. There are no stockholders, and thus no profit motive. Public Power electric prices do not include a profit. Nebraska's utilities focus exclusively on keeping electric rates low and customer service high.

Today, I will discuss the NPA's views of EPA's proposal to update the air quality standards for ground-level ozone.

On November 25, 2014, the EPA proposed to strengthen the National Ambient Air Quality Standards (NAAQS) for ground-level ozone. EPA is proposing to update both the primary ozone standard, to protect public health, and the secondary standard, to protect the public welfare. Both standards would be 8-hour standards set within a range of 65 to 70 parts per billion (ppb).

Ozone is a pollutant that has respiratory health effects in humans and also impairs plant growth and damages crops. It is produced when emissions of nitrogen oxides (NOx) and volatile organic compounds (VOCs) react in the presence of sunlight. Controls on NOx and VOC emissions from vehicles, power plants, and other sources have enabled many U.S. counties to meet the 75

ppb standard, but the number of counties in "nonattainment" status (currently at 227) would jump to 358 or 558 if the standard is revised to 70 or 65 ppb, respectively. In the state of Nebraska, should the standard be set less than 68 ppb, the counties of Knox and Douglas would likely be classified as nonattainment impacting 8,605 and 535,556 people respectively (2013 estimates).

The potential impact of these designations can be found in a study by NERA[1] Economic Consulting that was commissioned by the National Association of Manufacturers (NAM). The study estimated that an ozone standard of 65 parts per billion (ppb) could cost the economy $140 billion per year, eliminate 1.4 million job equivalents annually and cost the average U.S. household $830 per year in the form of lost consumption. We

[1] National Economic Research Associates

are hopeful that the EPA also considers the adverse effect a lower ozone standard may have on low-income households and whether the possible benefits of lower ambient ozone levels offset the possible harmful effects of unemployment or having less disposable income to purchase necessary goods and services, such as groceries, medicine, obtaining proper medical care, or the ability to afford electricity which is needed for comfort, security, cooking and overall wellbeing.

While NPA is supportive of NAAQS that are protective of public health, we are also concerned with the rationale and ramifications of the proposed more stringent ozone NAAQS. The impacts of a lowered ozone NAAQS and the potential designation of Nebraska's largest population center, the City of Omaha, as nonattainment for ozone will have significant economic impacts on these areas and the state as a whole.

With significant economic and job loss impacts of a tightened ozone standard, we feel EPA should reconsider the ultimate benefit of finalizing an ozone standard lower than the current 75 ppb standard. EPA's own analysis indicates that significant reductions in ozone levels will be achieved absent a new ozone NAAQS by implementation of a number of other EPA regulations, including the Cross State Air Pollution Rule (CSAPR) and Regional Haze regulations. As such, the substantial costs associated with large sections of the country being designated nonattainment for ozone will needlessly be levied on those communities and states while EPA already has regulations in place that will act to reduce ozone concentrations to the levels anticipated in the proposed rule.

It seems a rational approach would be to maintain the ozone NAAQS at the current level and allow other EPA regulations to act to lower ambient ozone levels. EPA could then revisit the issue during the next five year NAAQS review to assess the progress made in lowering ambient ozone levels and determine if setting a lower NAAQS is required as further incentive to reduce ozone levels.

Alternatively, if EPA determines that a new lower ozone standard is required, the NPA suggests that EPA set the standard at 70 ppb and write the final rule such that implementation of the standard has the least economic impact on the country as possible. EPA has already conducted modeling and an assessment of future ozone levels under current and proposed regulations and determined that ozone levels will drop significantly. Because EPA's analysis shows that a majority of

the country will achieve compliance with a lower ozone standard without any area-specific actions, at the discretion of the state involved, the final rule should allow for the EPA analysis to substitute for the traditional requirements associated with a nonattainment designation. There should be no need for a detailed analysis to form a plan to achieve compliance, no need for area-specific actions by existing sources of emissions, and no need for the area to be subject to the stringent nonattainment new source review permitting requirements that may act to stunt economic development. This approach would allow for achievement of the ambient ozone goals while minimizing the costs.

In summary, NPA believes that the most prudent approach to attaining lower ambient ozone levels without imposing a high cost on the country's economy is to leave the current ozone

standard in place and allow the impacts of other regulations EPA is implementing to act to lower ambient ozone concentrations, as EPA has determined they will. Alternatively, if it is determined that a lower standard is required, NPA believes that a standard set at 70 ppb is appropriate and implementation of the standard should allow states to use EPA's analysis and modeling as a remedy or part of the remedy for any area that is showing nonattainment with the new standard.

Again, thank you for the opportunity to appear today and I would be happy to answer any questions you might have for me.

Senator FISCHER. Thank you Mr. Baker.

Next I would like to welcome John Kinter. He is the environmental manager of Nucor Steel which is located in Norfolk. Mr. Kinter has over 18 years of experience in environmental affairs, a graduate of the University of Nebraska's Environmental Studies Program. He has also served in the Nebraska Department of Environmental Quality as an environmental specialist.

We are very fortunate to have someone testify today who has as much experience with implications of environmental regulations as you do, sir. So please begin your testimony.

STATEMENT OF JOHN KINTER, ENVIRONMENTAL MANAGER, NUCOR STEEL NEBRASKA

Mr. KINTER. Thank you, Senator.

Senator Fischer, on behalf of our more than 1,000 Nebraska teammates and our over 23,000 teammates across the country, thank you for the invitation to testify today on the Environmental Protections Agency's proposed standard for ground-level ozone.

I am John Kinter, environmental manager of Nucor Steel Nebraska in Norfolk. Nucor Corporation is the largest steel producer in North America as well as the largest recycling.

In order to put into context the impacts of the administration's proposed ozone standard, I would like to take a minute to describe briefly the current state of the global steel industry.

For the past 18 months, steel imports have been surging into the United States at record levels. Our market is currently the strongest for steel demand which is attracting these imports. However, many of these steel imports are only competitive because they are illegally dumped or subsidized.

All too often, foreign governments provide their steel companies with substantial financial support, in violation of international trade laws.

As a result, U.S. steel makers are not benefiting from a stringer U.S. economy. In fact, thousands of steel jobs have been lost this year because of the impact unfairly traded imports are having on our market.

The effect of these job losses ripple beyond our industry since every one steel job supports an additional seven jobs in America.

In this difficult global steel market, any regulatory proposal that threatens to greatly increase our cost is of concern. Margins are already tight. By some estimates, the proposed ozone standard could be one of the costliest regulations ever.

Nucor operates 24 steel mills across the country. Today only one of those steel mills is in an area designated as being in nonattainment for ozone. Should the EPA decide to set a new standard at the lower end of the proposed range, Nucor will potentially have 19 steel mills in nonattainment areas, including our mill here in Nebraska. Going from 1 to 19 mills in nonattainment areas would be a drastic and costly change.

Lowering the ozone standard to 65 or even 70 parts per billion, would make it difficult to expand or build new industrial facilities. Companies wanting to build or expand will be faced with an expensive permitting process and be forced to install costly emission reduction controls. The EPA has acknowledged that existing tech-

nology will not be sufficient to achieve the level of reduction it is proposing. This puts companies in a difficult spot. We are being asked to make significant emission reductions, but the technology to achieve then does not exist.

Increased costs for emission control technology would not be the only hit to our bottom line. Nucor will also face increased energy prices as energy producers pass their compliance costs on to their customers.

Energy represents 20 percent or more of the cost of making a ton of steel. As I've already mentioned, steel companies compete against foreign steelmakers that receive subsidies from their governments, including energy subsidies.

To remain competitive, the steel industry needs global, reliable energy. The proposed ozone standard will make an already difficult competitive environment for American steelmakers that much worse.

The proposed rule will also hurt economic development for communities in Nebraska and around the country. Lowering the ozone standard will reduce investment, especially for the manufacturing sector which provides high-wage jobs. The timing couldn't be worse. Low energy prices make the U.S. an attractive place for manufacturing, but reducing the ozone standard will make building new facilities much less likely. Nothing dries up business investment faster than uncertainty.

Nucor believes the 2008 ozone standard of 75 parts per billion should be fully implemented and the environmental and health benefits measured before considering lowering the standard again.

EPA data shows the ozone precursor emissions have been cut in half during the last 10 years. Full implementation of the 2008 standard will result in additional remission reductions. Based on these facts, we believe it is unnecessary to lower the ozone standard at this time.

The U.S. is the one economic bright spot globally right now, let's not jeopardize this position by moving ahead hastily to implement a new ozone standard before we have even fully implemented the previous one. Thank you.

[The prepared statement of Mr. Kinter follows:]

United States Senate Committee on Environment & Public Works
Testimony of John Kinter
Environmental Manager, Nucor Steel Nebraska
September 1, 2015

Senator Fischer, on behalf of our more than 1,000 Nebraska teammates and our over 23,000 teammates across the country, thank you for the invitation to testify today on the Environmental Protection Agency's proposed standard for ground level ozone. I am John Kinter, Environmental Manager at Nucor Steel Nebraska in Norfolk. Nucor Corporation is the largest steel producer in North America, as well as the largest recycler.

In order to put into context the impacts of the Administration's proposed ozone standard, I would like to take a minute to describe – briefly – the current state of the global steel industry. For the past 18 months, steel imports have been surging into the United States at record levels. Our market is currently the strongest for steel demand, which is attracting these imports. However, many of these steel imports are only competitive because they are illegally dumped or subsidized. All too often, foreign governments provide their steel companies with substantial financial support, in violation of international trade laws. As a result, U.S. steelmakers are not benefitting from a stronger U.S. economy. In fact, thousands of steel jobs have been lost this year because of the impact unfairly traded imports are having on our market. The effect of

these job losses ripple beyond our industry since every one steel job supports an additional seven jobs in America.

In this difficult global steel market, any regulatory proposal that threatens to greatly increase our costs is of concern. Margins are already tight. By some estimates, the proposed ozone standard could be one of the costliest regulations ever.

Nucor operates 24 steel mills across the country. Today, only one of those mills is in an area designated as being in nonattainment for ozone. Should the EPA decide to set a new standard at the lower end of the proposed range, Nucor will potentially have 19 steel mills in nonattainment areas, including our mill here in Nebraska. Going from 1 to 19 mills in nonattainment areas would be a drastic and costly change.

Lowering the ozone standard to 65 or 70 parts per billion will make it difficult to expand or build new industrial facilities. Companies wanting to build or expand will be faced with an expensive permitting process and forced to install costly emission reduction controls. The EPA has acknowledged that existing technology will not be sufficient to achieve the level of reduction it is proposing. This puts companies in a difficult spot. We are being asked to make significant emission reductions but the technology to achieve them does not exist.

Increased costs for emission control technology would not be the only hit to our bottom line. Nucor would also face increased energy prices as energy producers pass their

compliance costs on to their customers. Energy represents 20 percent or more of the cost of making a ton of steel. As I have already mentioned, steel companies compete against foreign steelmakers that receive subsidies from their governments, including energy subsidies. To remain competitive, the steel industry needs affordable, reliable energy. The proposed ozone standard will make an already difficult competitive environment for American steelmakers that much worse.

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The U.S. is the one economic bright spot globally right now. Let's not jeopardize this position by moving ahead hastily to implement a new ozone standard before we have even fully implemented the previous one. Thank you.

Senator FISCHER. Thank you.

Next we have Dr. David Corbin, a professor emeritus of the Health Education and Public Health at the University of Nebraska in Omaha.

He is a fellow of the American School Health Association, as well as the representative of the Affiliate Governing Counsel to the American Public Health Association from the Public Health Association of Nebraska.

I would note that as is customary for Senate Environment and Public Works Committee hearings, we worked in a bipartisan matter to select witnesses, and I welcome Dr. Corbin to begin your testimony when you are ready. Nice to have you here.

STATEMENT OF DAVID E. CORBIN, PH.D., PROFESSOR EMERITUS, HEALTH EDUCATION AND PUBLIC HEALTH, UNIVERSITY OF NEBRASKA—OMAHA; FELLOW OF THE AMERICAN SCHOOL HEALTH ASSOCIATION; AFFILIATE GOVERNING COUNCIL REPRESENTATIVE TO THE AMERICAN PUBLIC HEALTH ASSOCIATION FROM THE PUBLIC HEALTH ASSOCIATION OF NEBRASKA

Mr. CORBIN. Thank you for the opportunity to present before you today. As you heard, I'm Dr. David Corbin from University of Nebraska in Omaha, and you already heard my other credentials.

My testimony will be both professional and personal since I also suffer from asthma. Since the main focus of this hearing is the impact of ozone standards on manufacturing industry, electric utilities and other stakeholders, I would first like to draw attention to another public health issue that I worked on to protect the public's health.

The issue was to the creation of smokeless environments including bars and restaurants. Many business owners testified about how they would go out of business if the law passed. The law did pass, business flourished and health improved. In short, what is good for health is good for business.

The Wellness Councils of America founded right here in Nebraska is one of the Nation's largest and most respected organizations for promoting healthy work sites.

They believe that the workplace is an ideal setting to address employee health and well-being. They also believe, as does any health-related organization, that prevention is better and less expensive than treatment.

A reduced ground-level ozone standard is a known method of prevention. The American Public Health Association and the American Lung Association are two of the countless health-related organizations that support a health protective standard for ozone.

A stronger ozone standard will prevent deaths, hospital admissions, asthma attacks and days missed at work and school. It is society's duty to protect the most vulnerable, of which I am included by virtue of being an older adult, having asthma and being a person who desires to exercise outside.

Other vulnerable groups are children, people with lung and cardiovascular conditions and even healthy adults who work in the outdoors.

Imagine the dilemma of a public health profession who has spent much of his or her career promoting exercise to improve health, who then has to advise people not to exercise outside because of high ozone levels.

Businesses, including those testifying here today, rightly promote safety and health. What business would want to have their own workers or their workers' families exposed to a known health hazard, especially since it can save the company money and health care costs and missed workdays. And since we already have effective methods of reducing ozone levels.

Nebraska's blessed with an abundant wind and solar resources that when exploited can help to keep ozone levels low and produce energy without adding more carbon dioxide to the atmosphere.

The world just experienced the hottest July in recorded history. High temperatures exacerbate ozone levels. The world successfully addressed our other ozone problem, the hole in the protective upper atmosphere via a worldwide effort that resulted in the banning of chlorofluorocarbons. Ground-level ozone is the opposite of protective, but it is a problem that can be solved.

The Lancet, one of the most prestigious medical journals in the world, published a report on June 23, 2015, in which they said, "Ground-level ozone and particulate air pollutants are elements that will be most affected by climate change. Climate change is predicted to elevate ground-level ozone levels over large areas of the U.S. and Europe."

If the threat to human health isn't enough, the very heart of our Nebraska agricultural economy is threatened by ground-level ozone. A study published in the journal of Atmospheric Environment said this: "Our results suggest that ozone pollution poses a growing threat to global food security even under an optimistic scenario of future ozone precursor emissions. Further efforts to reduce surface ozone concentration thus provide an excellent opportunity to increase global grain yields."

This information alone should be a call for strict standards on ground-level ozone. My own physician here in Nebraska, Dr. Linda Ford, who would have liked to be here to testify today but couldn't, she treats me for asthma and she's been the president of American Lung Association. She summed up the ozone situation succinctly: "Every little bit we decrease the levels of ozone, we'll save on health care costs. So where do you want to spend your money? If you want to take care of your people and prevent disease, you spend it on decreasing ozone."

I and millions of other Americas would love to breathe easier and spend less money on my asthma medication. Thank you.

[The prepared statement of Mr. Corbin follows:]

Testimony before the Senate Committee on Environment and Public Works, September 1, 2015, Columbus, NE

Thank you for the opportunity to present before you today. I am Dr. David Corbin, an Emeritus Professor of Health Education and Public Health at the University of Nebraska at Omaha and I am the Nebraska Affiliate Representative to the Governing Council of the American Public Health Association. My testimony will be both professional and personal since I also suffer from asthma.

Since the main focus of this hearing is the impact of the ozone standard on the manufacturing industry, electric utilities and other stakeholders, I would first like to draw attention to another public health issue that I worked on when businesses forecasted financial doom if laws were enacted to protect the public's health. That issue was the creation of smokeless environments including in bars and restaurants. Many business owners testified about how they would go out of business if the law passed. It did pass and business flourished and health improved. In short, what is good for health is good for business.

The Wellness Council of America, founded right here in Nebraska, is one of the nation's largest and most-respected organizations for promoting healthy worksites. They believe that "the workplace is an ideal setting to address employee health and well being." They also believe, as does any health-related organization, that prevention is better and less expensive than treatment.

A reduced ground-level ozone (GLO) standard is a known method of prevention. The American Public Health Association and the American Lung Association are two of the countless health-related organizations that support a health protective standard for ozone. A stronger ozone standard will prevent deaths, hospital admissions, asthma attacks and days missed at work and school.

It is society's duty to protect the most vulnerable, of which I am included by virtue of being an older adult, having asthma and my desire to exercise outdoors. Other vulnerable groups are children, people with lung and cardiovascular conditions and even healthy adults who work or exercise outdoors. Imagine the dilemma of a public health professional who has spent much of his or her career promoting exercise to improve health, who then has to advise people not to exercise outside because of high ozone levels.

Businesses, including those testifying here today, rightly promote safety and health. What business would want to have their own workers or their workers' families exposed to a known health hazard, especially since it can save the company money in healthcare costs and missed work days and since we already have effective methods of reducing ozone levels.

Nebraska is blessed with abundant wind and solar resources that when exploited, can help to keep ozone levels low and produce energy without adding more carbon dioxide to the atmosphere. The world just experienced the hottest July in recorded history. High temperatures exacerbate ozone levels. The world successfully addressed the other ozone problem (the hole in the protective ozone layer in the upper atmosphere) via a worldwide effort that resulted in the banning of chloroflurocarbons (CFCs). Ground level ozone is the opposite of protective, but it is a problem that can be solved.

The Lancet, one of the most prestigious medical journals in the world, published a report on June 23, 2015 in which they said: "Ground-level ozone (GLO) and particulate air pollutants are elements that will be most affected by climate change . . . . Climate change is predicted to elevate GLO levels over large areas in the USA and Europe."

If the threat to human health isn't enough, the very heart of our Nebraska agricultural economy is threatened by GLO. A study published in the journal **Atmospheric Environment** said this: "Our results suggest that O_3 (ozone) pollution poses a growing threat to global food security even under an optimistic scenario of future ozone precursor emissions. Further efforts to reduce surface O_3 concentrations thus provide an excellent opportunity to increase global grain yields . . . ." This information alone should call for strict standards on GLO.

My own physician in Nebraska, Dr. Linda Ford, who treats me for my asthma and who has been president of the American Lung Association summed up the ozone situation succinctly: "Every little bit we decrease the levels (of ozone), we'll save on health care cost. So, where do you want to spend your money? If you want to take care of your people and prevent disease, you spend it on decreasing ozone."

I, and millions of other Americans, would love to breathe easier and spend less money on asthma medication.

Respectively submitted,

David E. Corbin, PhD
Emeritus professor of health education & public health
University of Nebraska at Omaha
Nebraska Affiliate representative to the Governing Council of APHA
Board member of the Public Health Association of Nebraska

References:

Health and climate change: policy responses to protect public health. Retrieved Aug. 27, 2015: http://press.thelancet.com/Climate2Commission.pdf

Global crop yield reductions due to surface ozone exposure: 2. Year 2030 potential crop production losses and economic damage under two scenarios of O3 pollution: Retrieved Aug. 27, 2015: http://www.princeton.edu/~mauzeral/papers/Avnery%20Mauzerall%20etal%20ag%202030%20AE%202011.pdf

Omaha's air too smoggy? New EPA pollution rules could affect drivers, but help asthmatics and others. Retrieved Aug. 27, 2015: http://www.omaha.com/news/metro/omaha-s-air-too-smoggy-new-epa-pollution-rules-could/article_06b0a9d2-d028-51ad-9a00-2a0702df3d07.html

Additional support materials:

Health Risks of Ozone Pollution

AMERICAN LUNG ASSOCIATION.
Fighting for Air

Ozone is the nation's most widespread air pollutant.
Ozone (O_3) is a gas molecule made up of three oxygen atoms. Sometimes called smog, ozone pollution forms in the atmosphere when gases that come out of tailpipes, smokestacks and other sources react in the presence of sunlight. The gases that react to form ozone are volatile organic compounds, nitrogen oxides, and carbon monoxide.[1] Ozone levels typically rise between May and October when higher temperatures, increased sunlight, and stagnant atmospheric conditions transform air pollutants into ozone. Rising temperatures from climate change will make it harder to reduce ozone.

When a person inhales ozone pollution, it reacts chemically ("oxidizes") with the body's internal tissues causing inflammation, like a "sunburn" of the lung. Ozone acts as a powerful respiratory irritant at the levels frequently found across the nation especially during the summer months.

Independent scientists and U. S. Environmental Protection Agency (EPA) concluded that ozone pollution posed multiple, serious threats to health. The EPA engaged a panel of expert scientists, the Clean Air Scientific Advisory Committee, and the public in a four-year process to help them assess all available research. Their findings, published in 2013, are highlighted in the box below, along with a few of the hundreds of studies they cited.

EPA Concludes Ozone Pollution Poses Serious Health Threats[2]

- ✓ Causes respiratory harm (e.g. worsened asthma, worsened chronic obstructive pulmonary disease [also known as COPD, which includes emphysema and chronic bronchitis])[3]
- ✓ Likely to cause early death[4]
- ✓ Likely to cause cardiovascular harm (e.g. heart attacks, strokes, heart disease, congestive heart failure)[5]
- ✓ May cause harm to the central nervous system[6]
- ✓ May cause reproductive and developmental harm[7]

The current national air quality standards do not protect millions of vulnerable people from the health threats from ozone pollution. Five groups of people are especially vulnerable to the effects of breathing ozone:[8]

- children and teens;
- anyone 65 and older;
- people with existing lung diseases, such as asthma and COPD;
- people with cardiovascular disease; and
- people—even healthy adults—who work or exercise outdoors.

EPA needs to set strong national air quality standards to protect public health as required under the Clean Air Act.

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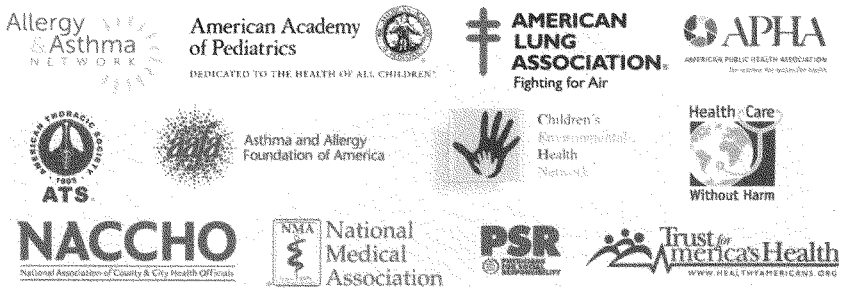
[1] U.S. Environmental Protection Agency. *Integrated Science Assessment of Ozone and Related Photochemical Oxidants (Final Report).* U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-10/076F, 2013.
[2] U.S. EPA., 2013.
[3] Mar TF, Koenig JQ. Relationship between visits to emergency departments for asthma and ozone exposure in greater Seattle, Washington. *Ann Allergy Asthma Immunol.* 2009; 103:474-9. Villeneuve PJ, Chen L, Rowe BH, Coates F. Outdoor air pollution and emergency department visits for asthma among children and adults: A case-crossover study in northern Alberta, Canada. *Environ Health Global Access Sci Source.* 2007; 6:40.
[4] Bell ML, Dominici F, Samet JM. A meta-analysis of time-series studies of ozone and mortality with comparison to the National Morbidity, Mortality, and Air Pollution Study. *Epidemiology.* 2005; 16:436-45. Levy JI, Chermerynski SM, Sarnat JA. Ozone exposure and mortality: An empiric Bayes metaregression analysis. *Epidemiology.* 2005; 16:458-468. Ito K, De Leon SF, Lippmann M. Associations between ozone and daily mortality: Analysis and meta-analysis. *Epidemiology.* 2005; 16:446-29.
[5] Ruidavets J-B, Cournot M, Cassadou S, Giroux M, Meybeck M, Ferrières J. Ozone air pollution is associated with acute myocardial infarction. *Circulation.* 2005; 111:563-569.
[6] Chen JC, Schwartz J. Neurobehavioral effects of ambient air pollution and cognitive performance in US adults. *Neurotoxicology.* 2009; 30:231-9.
[7] Salam MT, Millstein J, Li YE, et al. Birth outcomes and prenatal exposure to ozone, carbon monoxide, and particulate matter: Results from the Children's Health Study. *Environ Health Perspect.* 2005; 113:1638-44.
[8] U.S. EPA, 2013.

April 2014



August 11, 2015

President Barack Obama
The White House
1600 Pennsylvania Avenue Northwest
Washington, DC 20500

Dear Mr. President:

As leaders of national health and medical organizations, we appreciate your recent remarks on the tremendous benefits that the American people experience from federal limits on pollution in the air we breathe. We especially appreciate your recognition that not all communities are impacted equally when it comes to the health burdens of air pollution; we know many suffer disproportionately.

That's why we ask you to direct the U.S. Environmental Protection Agency to put in place an ozone standard that fully protects the millions of Americans still at risk from dangerous levels of ozone pollution. As you said in your speech announcing the Clean Power Plan, "Today, an African-American child is more than twice as likely to be hospitalized from asthma; a Latino child is 40 percent more likely to die from asthma." And we must not forget other vulnerable groups at risk, such as children and older adults; people with chronic diseases like asthma, heart disease, or COPD; those whose jobs require them to work outdoors; and people who live in low-income communities. Truly, these communities will not breathe easier until the national ozone pollution limit adequately protects them.

The National Ambient Air Quality Standards are a long-standing tool of the Clean Air Act to drive pollution reduction and protect public health. Under the law, the standards must be set based solely on the level needed to protect public health with an adequate margin of safety. The current ozone standard fails to meet that test. The good news is that EPA now has an opportunity to make things right by adopting a science-based, health-protective standard by October 1, 2015.

Not only will a more protective ozone standard drive cleanup in communities that continue to experience unhealthy air quality, it will also give people at risk from ozone pollution and their families the information they need to take steps to protect their health. For example, under the outdated standard in place now, air quality alerts fail to give parents like you all the information they need to keep their children with asthma safe on days when ozone levels could harm their health. To achieve healthy

air for all, EPA must first aim at the right target, by setting an ozone standard based solely on the scientific evidence of what is needed to protect public health.

As always, some oppose this opportunity for progress. The recent barrage of industry ads in Washington, DC is a perfect example of the continued "scaremongering tactics" that you so powerfully dismissed as "excuses for inaction" in your Clean Power Plan speech. As you said, "Every time America has made progress, it's been despite these kinds of claims. Whenever America has set clear rules and smarter standards for our air, our water, our children's health, we get the same scary stories about killing jobs and businesses and freedom." America need not choose between protecting our health and economic progress. The benefits of cleaning up air pollution have proven time and time again to far outweigh the costs, as you so clearly articulated.

When it comes to ozone pollution, the Clean Air Act allows communities that do not meet the new standard time to plan, adopt, and implement steps to reduce pollution and come into attainment. Measures that communities have put in place to meet the 2008 standard will help them attain an updated standard that protects the most vulnerable. So will existing technology; in some cases, simply turning on existing pollution control technology will help significantly. Finally, federal clean air rules in place now will also help states meet a more protective ozone standard.

By adopting a truly protective ozone pollution limit, America will be closer to fulfilling the purpose of the Clean Air Act: to protect the health of all Americans from deadly dangers in the air we breathe. The science clearly supports a much stronger ozone limit. Please, make the most of this opportunity, and give Americans the protection they deserve.

Sincerely,

Allergy & Asthma Network
American Academy of Pediatrics
American Lung Association
American Public Health Association
American Thoracic Society
Asthma and Allergy Foundation of America
Children's Environmental Health Network
Healthcare Without Harm
National Association of County and City Health Officials
National Medical Association
Physicians for Social Responsibility
Trust For America's Health

cc: Gina McCarthy, Administrator, U.S. EPA

Partial list of other organizations that support lowering the ozone levels:

Air Alliance Houston
American Nurses Association- RI
Athens County Fracking Action Network
Bridging the Gap
California Communities Against Toxics
Center for Biological Diversity
Center for Effective Government

Citizens Against Ruining the Environment
Citizens Environmental Coalition
Citizens for Pennsylvania's Future (PennFuture)
Clean Air Carolina
Clean Air Council
Clean Air Watch
Communities for Clean Air
Community In-power and Development Association Inc
DC Environmental Network
Diesel Health Project
Downwinders at Risk
Empire State Consumer Project, Inc.
Environmental Defense Fund
Environmental Law and Policy Center
Environmental Social Work Department in the College of Social Work at the University of Tennessee
Ethical Society of St. Louis
Green America
GreenLaw
Greenpeace
HEAL Utah
Improving Kids' Environment
Institute of Neurotoxicology & Neurological Disorders
Interfaith Power & Light
Interfaith Power & Light - DC, MD, NoVA
Jesus People Against Pollution
Jewish Environmental Initiative, a committee of the The Jewish Community Relations Council of St. Louis (JCRC)
Ka Wai Ola O Waianae
Labor Council for Latin American Advancement – Denver, CO
Labor Council for Latin American Advancement – St. Paul, MN
League of Women Voters
Lone Star Chapter of the Sierra Club

Medical Advocates for Healthy Air
Metro St. Louis Coalition for Inclusion and Equity
Mid-Missouri Peaceworks
Mid-South Peace & Justice Center
Midwest Coalition for Responsible Investment
Missouri Coalition for the Environment
Missouri Interfaith Power & Light
Mom's Clean Air Force
Montana Environmental Education Center
Montanans Against Toxic Burning
NAACP
NAACP Kansas City, Kansas
Nature Abounds
Penderwatch and Conservancy
People for Community Recovery
Physicians for Social Responsibility - Kansas City
Populists in Action
Powder River Basin Resource Council
Public Citizen
Respiratory Health Association
Safe Climate Campaign
Save the Dunes
Sciencecorps
Sierra Club
Southern Alliance for Clean Energy
St. Louis Climate Reality
Texas Campaign for the Environment
Texas Environmental Justice Advocacy Services (t.e.j.a.s.)
Texas Physicians for Social Responsibility
The Rachel Carson Council
Utah Clean Air Alliance
Utah Moms for Clean Air
Utah Physicians for a Healthy Environment
WE ACT for Environmental Justice

September 1, 2015 Senate Environment and Public Works Field Hearing:
"Impacts of the EPA's Proposed Ozone Standard on Manufacturing and Utilities."
Questions for the Record
Dr. David Corbin, Nebraska Affiliate Representative to the Governing Council of the American Public Health Association

Senator Barbara Boxer:

1. Could you please provide any additional information that you have regarding the scientific evidence linking higher ozone levels to health problems?

Thank you for the opportunity to provide more scientific evidence linking higher ozone levels to health problems. I am submitting a detailed letter with scientific references that was sent by several health-related organizations to EPA Administrator Gina McCarthy. (Editorial references are indicated by the numbers in parentheses and are listed at the end of this document).

One of the signatories to the letter is the American Public Health Association (APHA). I serve as the Nebraska Affiliate Representative to the APHA Governing Council and I am a member of the Environment Section of APHA.

Respectfully submitted,

David E. Corbin, PhD

Emeritus professor of health education and public health

University of Nebraska at Omaha

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List of Signatories:
American Academy of Pediatrics
American College of Preventative Medicine
American Heart Association
American Lung Association
American Medical Association
American Public Health Association
American Thoracic Society
Asthma and Allergy Foundation of America
Children's Environmental Health Network
National Association of County and City Health Officials
National Association for Medical Direction of Respiratory Care
Health Care Without Harm

Trust for America's Health

March 17, 2015
The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue
Washington, DC 20460
Sent via A-and-R-Docket@EPA.Gov
Re: EPA Docket I.D. No: EPA-HQ-OAR-2008-0699

Dear Administrator McCarthy:

As national organizations representing medical societies, public health and patient advocacy organizations, we write to provide comments to the U. S. Environmental Protection Agency on the proposed Ozone National Ambient Air Quality Standards. Our organizations appreciate and would like to express our support to the EPA for moving forward to update the current ozone standard, and welcome this opportunity to provide input to this process, which we hope will result in a standard that is better protective of public health. Our organizations urge you to select a level for the primary health standard that will meet the Clean Air Act requirement to protect the health of the public with an adequate margin of safety: 60 parts per billion (ppb).

EPA Must Protect the Health of the Public, including Sensitive Populations

The Clean Air Act establishes the primary National Ambient Air Quality Standard to protect public health from the nation's most widespread air pollutants. The Clean Air Act directs the Administrator to set standards that are "requisite to protect public health" with "an adequate margin of safety" (42 U.S.C. §7409 (b) (1)).

The list of populations who risk demonstrated harm from ozone pollution has grown significantly from the previous review. Children, people with asthma and other lung diseases, seniors, outdoor workers and people who have low socioeconomic status have long been shown to be vulnerable to ozone.

Newer evidence shows some otherwise healthy adults are especially sensitive to ozone exposure because of limitations in some nutrients and certain genetic variants. In addition to these groups, the Comments to Docket ID NO. EPA-HQ-OAR-2008-069 2 EPA's Integrated Science Assessment has documented evidence that suggests increased risk to fetal development and to cardiovascular harm (EPA, Integrated Science Assessment, 2013). Health-based standards must be set at levels that will protect all people, but particularly these sensitive groups.

Ozone poses a grave threat to public health at levels well below the current standard

The current standard of 75 ppb fails to meet the requirements of the Clean Air Act. Clinical and epidemiological studies have repeatedly shown that breathing ozone can threaten life and health at concentrations far lower than the 75 ppb 8-hour average standard.

Extensive, public reviews of the large body of evidence by EPA's independent science advisors, the Clean Air Scientific Advisory Committee (CASAC), and by EPA staff scientists have confirmed that

the 2008 primary ozone standard is set at a level that is too weak to protect public health. In fact, three successive CASAC panels -- each under different leadership -- have reached the same conclusion: the 2008 standard should not be retained.

As part of the advice to the EPA during the previous review that ended in 2008, CASAC sent letters repeatedly supporting a standard between 60 and 70 ppb (Henderson, 2006; Henderson, 2007). After EPA published its final decision in 2008, CASAC sent a rare letter to the Administrator commenting on the decision. The CASAC stated unequivocally that they disagreed with the decision to set the standard at 75 ppb. These scientists notified the Administrator that they "do not endorse the new primary ozone standard as being sufficiently protective of public health." (Emphasis in the original.) They urged that the Administrator or his successor "select a more health-protective" standard in the next review cycle (Henderson, 2008). It is important to note that their decision was based on the scientific evidence as it stood in 2006, the close of that review period.

When asked to reevaluate the evidence during EPA's ill-fated reconsideration of the 2008 standard in February 2010, CASAC again was explicit: "EPA has recognized the large body of data and risk analyses demonstrating that retention of the current standard would leave large numbers of individuals at risk for respiratory effects and/or other significant health consequences including asthma exacerbations, emergency room visits, hospital admissions and mortality" (Samet, 2010).

Now, the current CASAC has echoed this consensus again. In their letter to EPA on June 14, 2014, they stated it simply: "The CASAC finds scientific justification that current evidence and the results of the exposure and risk assessment call into question the adequacy of the current standard" (Frey, 2014).

We share the conclusion repeatedly presented to EPA by the CASAC: EPA cannot justify retention of the current standard based on the health evidence.

Multiple CASAC reviews have recommended a standard between 60 and 70 ppb.

Not only have the three separate CASAC committees, under three different Chairs, unanimously confirmed that the current ozone standard is not protective of public health, but each recommended that the standard should be set in the range of 60 to 70 ppb.

In each of the three comment letters the CASAC wrote to EPA Administrator Stephen L. Johnson, the independent experts charged with advising EPA unanimously recommended selection of an 8-hour average ozone NAAQS within the range of 60 to 70 ppb (Henderson 2006; Henderson 2007; Henderson 2008).

During the reconsideration of the 2008 Ozone NAAQS, CASAC reaffirmed its support for the selection of an 8-hour average ozone NAAQS within the 60 – 70 ppb range (Samet, 2010). Again, that recommendation came based solely on the studies that had been available during the prior review, a period that closed in 2006.

Now able to fully consider the additional studies available in the 2007 to 2012 period, the most recent CASAC summarized extensive scientific evidence in their recommendations to EPA for a range from 70 to 60 ppb:

> The CASAC further concludes that there is adequate scientific evidence to recommend a range of levels for a revised primary ozone standard from 70 ppb to 60 ppb. The CASAC reached this conclusion based on the scientific evidence from clinical studies, epidemiologic studies, and animal toxicology studies, as summarized in the Integrated Science Assessment (ISA), the findings from the exposure and risk assessments as summarized in the HREA, and the interpretation of the implications of these sources of information as given in the Second
> Draft PA (Frey, 2014).

However, the CASAC concluded that new evidence showed that even that range is too broad, noting that "based on the scientific evidence, a level of 70 ppb provides little margin of safety for the protection of public health particularly for sensitive subpopulations" (Frey, 2014).

> At 70 ppb, there is substantial scientific evidence of adverse effects as detailed in the charge question responses, including decrease in lung function, increase in respiratory symptoms, and increase in airway inflammation. Although a level of 70 ppb is more protective of public health than the current standard, it may not meet the statutory requirement to protect public health with an adequate margin of safety" (Frey, 2014).

CASAC concluded the evidence showed that a level of "60 ppb would certainly provide more public health protection than a standard of 65 or 70 ppb and would provide an adequate margin of safety.(Frey, 2014).

The significantly stronger scientific and medical evidence available in this current review led CASAC to provide even more explicit comments than during the 2008 review and the subsequent reconsideration process. Their explicit conclusion that 60 ppb meets the requirement to provide more protection and an adequate margin of safety raises questions about EPA's decision to exclude 60 ppb from the proposal.

Our organizations offer evidence that demonstrates why 60 ppb should be adopted as the level of the health-based standard.

The evidence for a standard of 60 ppb has grown.

The scientific and medical understanding of the mechanisms by which exposure to ambient ozone pollution harms human health has grown considerably stronger since 2007. The EPA evaluated 1,000 new studies in the current review, studies that have been published since the completion of the 2006 Criteria Document. These studies inform our understanding of the health impacts of ozone at low concentrations.

Multiple chamber studies provide robust evidence of harm to healthy adults down to 60 ppb. Adding to previous research by Adams (2002) and Adams (2006), both Brown et al (2008) and Kim et al (2011) provide still more evidence that exposures down to 60 ppb can reduce lung function and cause inflammation that meets the American Thoracic Society's criteria for judging adversity. The subjects in these chamber studies were healthy young adults -- not children, the elderly, or people with asthma who are more susceptible to ozone. The chamber studies establish solid evidence that concentrations above 60 ppb would provide significant risk not only to many healthy adults, but most critically, to susceptible populations, including children, seniors and people with asthma and other chronic lung diseases.

Epidemiological studies provide real-world evidence for the need for 60 ppb. The analysis presented in the Policy Assessment digs deeper into six epidemiological studies in the U.S. and Canada and provides further real-world evidence that a standard of either 70 ppb or 65 ppb fails to provide adequate protection. These studies (Bell et al., 2006; Cakmak et al., 2006b; Dales et al., 2006; Katsouyanni et al.,2009, Mar and Koenig, 2009; Stieb et al, 2009) examined the positive and statistically significant associations from the most serious health threat—premature death—as well as from hospital admissions and emergency department visits. In most locations where increased risk was found, the ozone levels would have met the weaker standards of either 70 or 65 ppb, but would have failed to meet a standard set at 60 ppb. (Policy Assessment, pp. 4-13 to 4-15).

A standard of 60 ppb would result in a far greater reduction in premature morbidity and mortality. The EPA's estimates show that compared to meeting a standard of 65 ppb or 70 ppb, meeting a standard of 60 ppb would prevent many more premature deaths and hospital admissions, asthma attacks and days missed at work and school. Looking just at the parts of the nation expected to meet a standard of 60 ppb by 2025 (not including California), EPA provides a table of these estimates based on established modeling projections.

Nationwide Benefits of Attaining Standard in 2025 Throughout the United States (except California)			
Measure	60 ppb	65 ppb	70 ppb
Premature Deaths Avoided in 2025	**7,900**	4,300	1,440
Asthma Attacks Avoided in Children in 2025	**1,800,000**	960,000	320,000
Respiratory Hospital Admissions Avoided in 2025	**2,900**	1,500	510
Asthma Emergency Department Visits Avoided in 2025	**4,100**	2,300	1,400
Missed School Days Avoided in 2025	**1,900,000**	1,000,000	330,000

Taken from Table ES -11 of the U.S. EPA, Regulatory Impact Analysis of the Proposed Revision to the National Ambient Air Quality Standards for Ground-level Ozone, November 2014. EPA -452/P-14-006. Estimates based on modeling and assumptions explained in detail in the document. California was excluded because it is not expected to meet these standards in 2025.

Growing evidence expands health effects of ozone exposure

Your decision must be founded in the strongest requirement of the Clean Air Act: that the NAAQS not only protect public health, but include an adequate margin of safety. In both the prior review ending in 2008 and in the 2010 reconsideration, our organizations recommended strongly that the primary 8-hour standard should be 60 ppb based on the available evidence. In addition to the strong evidence of increased morbidity from ozone down to 60 ppb, multiple well-reviewed studies had identified a new, strong association with premature death, with no discernable threshold, that made the risks to the large, vulnerable groups even graver. Even during the prior reviews, the evidence demonstrated that standards between 65 and 70 ppb would not be effective in protecting public health with an adequate

margin of safety.

Since the 2008 standard, new research has added weight to the evidence showing the extensive impact of ozone. Research not only confirms the previous conclusions about ozone's impact on human health, but adds to and clarifies the impact on multiple physiologic systems, including respiratory and cardiovascular. Examination of long-term exposure has identified outcomes beyond the traditional concerns to include the central nervous system and reproductive and developmental effects. The growing evidence of effects associated with breathing ozone for longer periods adds to the urgency to set the most protective standard now to reduce those exposures.

Respiratory Health Effects, including Premature Mortality

The largest body of research documents the impact of ozone on respiratory symptoms, lung function changes, emergency department visits for respiratory disease, and hospital admissions. Since the previous review large studies examining exposures in multiple cities and continents have shown the consistent and pervasive threats to respiratory health.

New studies confirm the impact on children with asthma. Multiple studies demonstrated increased pulmonary inflammation (Berhane et al., 2011; Khatri et al., 2009; Barraza-Villerreal et al, 2008), and increased risk of hospital admissions (Silverman and Ito, 2010; Strickland et al., 2010).
Several large studies looking at single cities and multiple cities confirm that breathing ozone increases the risk of hospital admission and emergency department visits for respiratory conditions (Katsouyanni et al, 2009; Lin et al., 2008a; Wong et al., 2009; Darrow et al., 2011); Stieb et al., 2009). Multiple- and single-city studies showed increased risk of respiratory hospital admissions and emergency department visits in cities that met the current ozone standard of 75 ppb (Cakmak et al., 2006; Dales et al., 2006; Katsouyanni et al., 2009; Stieb et al., 2009) or where most cities would have met standards set at either 65ppb or 70 ppb (Cakmak et al., 2006; Katsouyanni et al., 2009; Stieb et al. 2009).

The American Thoracic Society summarized some of the new studies in the attached editorial in the American Journal of Respiratory and Critical Care Medicine advocating EPA adoption of a standard of 60 ppb (Rice, et al., 2015).

> Highlights of this new body of evidence include a study of emergency department visits among children aged 0 to 4 in Atlanta, which found that each 30 ppb increase in the 3-day average of ozone was associated with an 8% higher risk of pneumonia and a 4% higher risk for upper respiratory infection (5)[Darrow et al 2014]. Several studies have demonstrated dose-response relationships between ozone exposure and childhood asthma admissions at exposure levels in the 60 to 80 ppb range (6–9)[Strickland et al 2014, Strickland et al 2010, Gleason et al 2014, Silverman et al 2010]. Similar associations have been found for adult admissions for asthma (9–11) [Silverman and Ito 2010, Glad et al 2012, Meg et al 2010] and COPD(12, 13)[Ko and Hui 2012, Media-Ramon et al 20076]. A population-based cohort study of generally healthy adults found that FEV1 was 56 mL lower after days when ambient ozone ranged from 59 to 75 ppb compared to days with levels under 59 ppb (14) [Rice et al 2013]. Controlled human exposure studies have re-affirmed lung function decrements in healthy adults after exposure to 60 to 70 ppb of ozone (15,16) [Schelegle et al 2009, Kim et al 2011]. Perhaps of greatest concern, there is now stronger evidence of increased mortality in association with ozone (17–19) [Peng et al 2013, Romieu et al 2012, Zanobetti and Schwartz 2008], particularly among the elderly and those with chronic disease(20, 21)[Medina-Ramon and Schwartz 2008, Zanobetti and Schwartz 2011].

Cardiovascular Health Effects, including Premature Mortality

Evidence is accumulating about the cardiovascular effects of ozone, with the strongest evidence for increased risk of premature death. Previous studies have shown adverse associations between ozone exposure and various cardiovascular health endpoints, including alterations in heart rate variability in older adults (Park et al., 2005), cardiac arrhythmias (Rich et al., 2006), strokes, (Henrotin et al., 2007) heart attacks (Ruidavets et al., 2005), and hospital admissions or cardiovascular diseases (Koken et al., 2003). Newer large epidemiologic studies from the U.S. (Zanobetti and Schwartz, 2008b), Europe (Samoli et al., 2009) and Asia (Wong et al 2010) have provided evidence of premature death from cardiovascular effects, including two large studies that confirmed the effect after controlling for particulate matter exposure (Katsouyanni et al 2009; Stafoggia, 2010).

Reproduction and Development Effects

A growing body of research raises concerns about longer-term exposure to ozone, particularly during pregnancy. Some toxicological studies warn that ozone may affect development of the pulmonary system and central nervous system. Several large studies in California and Australia point to association of prenatal ozone exposure with low birth weight and impaired fetal growth (Salem et al., 2005; Morello-Frosch, et al. 2010; Hansen et al 2007, Hansen et al 2008;Mannes et al 2005). Low birth weight is linked to increased risk of chronic disease as adults (Rogers et al., 2012; Berends et al., 2012).

Central Nervous System Effects

Increased research since the last review has expanded evidence of the potential effects on the central nervous system. Toxicological studies provide evidence that short- or long-term exposure to ozone may affect cognitive abilities, such as memory (Rivas-Arancibia et al., 1998), and may produce changes similar to those seen in human neurodegenerative disorders (Rivas-Arancibia et al., 2010; Santiago-López et al., 2010; Guevara-Guzman et al., 2009). The only human epidemiological study found an association for long-term ozone exposure with reduced performance on specific tests (Chen and Schwartz 2009). While more research is clearly needed, these studies provide added weight for selecting the most protective level.

Mortality Effects

Breathing ozone can kill. Short-term increases in ozone were found to increase deaths from cardiovascular and respiratory causes in a large 14-year study in 95 U.S. cities. The relationship between mortality and ozone was evident even on days when pollution levels above 60 ppb were excluded from the analysis. (Bell, et al., 2004). A series of meta-analyses and multi-city studies has documented an increase in premature death following ozone exposures below 75 ppb, particularly among the elderly (Bell, et al., 2005; Levy et al., 2005; Ito et al., 2005).

Furthermore, research has focused on controlling for weather variables in assessing the effect of ozone on mortality. A case crossover study (Schwartz, 2005) of more than one million deaths in 14 U.S. cities found that "the association between ozone and mortality risk is unlikely to be confounded by temperature."

Multiple new studies have confirmed that ozone causes premature deaths (Zanobetti and Schwartz, 2008b; Samoli et al., 2009; Wong et al 2010) and provided evidence that these deaths occur even after controlling for other pollutants, including particulate matter (Stafoggia, 2010; Katsouyanni et al.,

2009).

Of special concern the risk of premature death from ozone showed up more frequently in communities with higher unemployment or that had a higher percentage of Black/African-American population, as well as in individuals who were Black/African-American or who had lower socioeconomic status. (Median-Ramón and Schwartz, 2008). EPA needs to ensure the strongest, most protective standards are in place to prevent this deadly pollutant from threatening the lives of thousands of Americans.

Millions of Americans face greater risk from breathing ozone pollution

Research has shown that many groups face greater risk from breathing ozone pollution or are more vulnerable to the harm because of their activities or residence. Their greater risk may come from age, preexisting diseases or genetics, as well as income. Greater vulnerability may stem from outdoor occupations or activities or from living in areas with higher ozone exposures.

Children and adolescents

Children are acutely vulnerable to the hazardous effects of air pollution (AAP, 2004). Relative to adults, children tend to spend more time out of doors, they are often more physically active, they breathe more rapidly, their airways are narrower and they inhale relatively more pollutants in proportion to their body weight (AAP, 2003). Additionally, lung growth continues long after birth, with as much as 80 percent of the alveoli developing during childhood and adolescence (Diertert et al., 2000).

Epidemiologic evidence indicates that children face additional health risks beyond the adverse effects observed in the general population. Children experience acute effects such as difficulty breathing (Triche et al., 2006), increased hospitalizations (Burnett et al., 2001), and emergency room visits (Tolbert et al., 2000) from ozone exposure at concentrations below the current standard and may suffer long-lasting effects such as stunted lung function in young adulthood (Tager et al., 2005).

A national standard of 60 ppb would reduce children's exposures of concern from ozone by 95 to 100 percent. A standard of 60 ppb would provide critical protection for children from the dangers from ozone compared to the current standard, according to EPA's Risk and Exposure Assessment. The strength of that protection draws a stark comparison to the far weaker options of 65 ppb to 70 ppb. By contrast, a standard of 70 ppb would reduce such exposures by only 15 to 35 percent, while a standard of 65 would reduce such exposures by 30 to 65 percent (EPA, Risk and Exposure Analysis, 2014).

Older Adults

Multiple factors place older adults at greater risk from ozone and other air pollutants, including greater time spent outdoors after age 65, the gradual decline in the functioning of the body's systems that accompany aging and an increase in the responsiveness to ozone (EPA, ISA 2013). Recent studies also added to the existing evidence that older adults face greater risk of premature death from ozone (Medina-Ramón and Schwartz 2008; Zanobetti and Schwartz, 2008a; Cakmak et al 2011).

Chronic Disease

Individuals with preexisting lung disease face substantial risks. People with asthma, particularly children but also adults, have shown exacerbated respiratory symptoms in multi-city studies (Mortimer

et al.,2002, Romieu et al., 1996 and 1997; O'Connor et al., 2008). Studies have tracked increases in hospitalization among adults suffering from chronic obstructive pulmonary disease (Peel et al., 2007; Median-Ramón, et al., 2006). Newer research, in a large, multi-continent study, also shows increased risk of premature death from cardiovascular disease triggered by ozone pollution (Katsouyanni et al., 2009).

Outdoor workers and exercisers

Outdoor workers as well as active adults who exercise outdoors (Brauer et al., 1996; Korrick et al., 1998) are particularly vulnerable to ozone exposure due to greater exposure because of time spent outdoors and activity levels. A recent study of lifeguards in Galveston, Texas, provided evidence of the impact of even short-term exposure to ozone on healthy, active adults. Testing the breathing capacity of these outdoor workers several times a day, researchers found that many lifeguards suffered increased obstruction in their airways when ozone levels were higher (Thaller et al., 2008).

Socioeconomic Status

Several large studies have identified that individuals who have low socioeconomic status or who live in communities with low socioeconomic status face higher risk of hospital admissions and emergency department visits associated with ozone pollution (Lin et al., 2008; Cakmak et al., 2006b; Burra et al., 2009). As noted earlier, additional studies have identified people who live in communities with high unemployment or other markers of low socioeconomic status as having greater risk of premature death from ozone pollution (Bell and Dominici , 2008; Katsouyanni et al., 2009). Meeting a standard of 60 ppb would provide greater protection to groups already facing substantial challenges.

We call on EPA to adopt a standard of 60 ppb

The Clean Air Act requires that the EPA set the standard based on the need to protect public health "with an adequate margin of safety." In 2001, the Supreme Court unanimously ruled that protecting health was the only legal basis for the standard. The existing standard fails to protect public health with a margin of safety. EPA must strengthen it.

Given the weight of evidence, we urge you to set the eight-hour ozone standard at 60 ppb to protect against known and anticipated adverse health effects and to provide a margin of safety as required by the Clean Air Act.

Sincerely,

American Academy of Pediatrics
American College of Preventive Medicine
American Heart Association
American Lung Association
American Medical Association
American Public Health Association
American Thoracic Society
Asthma and Allergy Foundation of America
Children's Environmental Health Network
Health Care Without Harm
National Association of County and City

Health Officials
National Association for Medical Direction
of Respiratory Care
Trust for America's Health

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Senator FISCHER. Thank you very much, Dr. Corbin.

Next we have Mr. Mark Zimmerer, president and CEO of the Norfolk Area Chamber of Commerce, a life-long Nebraskan Mr. Zimmerer has also served as the director of the Northeast Nebraska Child Advocacy Center, Faith Regional Health Services, an advocacy group dedicated to working to achieve child-focused approaches and child abuse and negligent cases.

Mark, you are to be commended for your community service and working with abused and at-risk children.

Prior to being selected as the Chamber's new president, Mr. Zimmerer served on the organization's board of directors. I am looking forward to hearing from you and I know you will offer great insight on how the proposed ozone rule will impact the small business community in Norfolk, Nebraska. When you are ready, please begin.

STATEMENT OF MARK ZIMMERER, PRESIDENT AND CEO, NORFOLK AREA CHAMBER OF COMMERCE

Mr. ZIMMERER. Thank you. Thank you. Thank you, Senator Fischer, for having me testify today.

I'm Mark Zimmerer, president and CEO of the Norfolk Area Chamber of Commerce. Representing our 650 businesses, in which Nucor is one, and we are deeply concerned about the harmful impact of the EPA's recent proposed rule to make ozone standard more stringent could have on a struggling economy. Ozone standards at the levels considered and EPA's proposal could push virtually the entire country into nonattainment.

Where local communities face burdens in attracting and keeping commercial and industrial activity, not only vital to creating jobs, but also to providing tax revenue that supports important local services like public safety and education.

We all value clean air. The managers and employees of the companies we represent, as well as their families, we all breathe the same air. We are proud that the emissions of ozone-forming emissions have been cut in half since 1980, leading to a 33 percent drop in ozone concentrations.

Moreover, EPA just updated these ozone standards just 6 years ago. This country can expect to see even greater reductions in ground-level ozone as States make up lost ground in putting the current standards into effect.

Indeed, States are currently committing substantial resources, both in time and money, toward achieving emission reductions under those current ozone standards. Yet despite over three decades of cleaner air and before States can catch up with the EPA's delays on implementing existing ozone standards, EPA is now proposing a new stringent standard between 70 and 65 parts per billion.

In some areas, this proposed range is out or near the level of ground—background ozone that is naturally occurring or internationally transported pushing even remote counties far from industrial activities into nonattainment.

According to EPA's own data, even the pristine Grand Canyon and Yellowstone National Park would fail proposed ozone standards.

If finalized, EPA's proposed stringent ozone standards could limit business expansion in nearly every populated region in the States and impair the ability of U.S. companies to create new jobs.

The Clean Air Act carries even stiffer consequences for nonattainment areas, directly impacting economic vitality of local communities and making it difficult to attract and develop business.

Increased costs associated with restrictive and expensive permit requirements would likely deter companies from sitting new facilities in nonattainment areas.

We cannot stand by and allow our economy to be collateral damage as a result of more unnecessary and unfunded regulations. Nonattainment designations will have profound impact on infrastructure development vital to the business community.

Beginning 1 year from the date of nonattainment designation, federally supported highway and transit projects cannot proceed in nonattainment areas unless the State can demonstrate that the project will cause no increased ozone emissions. These restrictions do not disappear when an area finally comes into attainment. Instead, former nonattainment areas face a legacy of EPA regulatory oversight.

Against these economic consequences, scientific uncertainties regarding the benefits of more stringent ozone standards have increased.

Indeed, stringent ozone standards may have severe unintended consequences for public health. Indeed, stringent ozone standards may cause the increase of cost of goods and services, such as energy and decreasing disposal incomes. Regulation can inadvertently harm social economic status of individuals and thereby contribute to poor health and premature death.

The Norfolk Area Chamber of Commerce believes these scientific uncertainties should better explored in order to best allocate resources in a manner that strengthens both the economy and environment.

The need for balanced government policies and reasonable flexibilities has never been greater, and no single regulation threatens to disrupt this balance more than the EPA's ozone rule.

The air is getting cleaner and current ozone standards need an opportunity to work. Therefore, in light of the economic hardship, reduction in funding for crucial civic services and uncertain benefits all related to the stringent ozone standard that EPA now is considering, the Norfolk Area Chamber of Commerce calls on the EPA to retain the existing ozone standard of 75 parts per billion. Standard for ground-level ozone. Let us meet these requirements before once again moving the target. Thank you.

[The prepared statement of Mr. Zimmerer follows:]

NORFOLK AREA
Chamber of Commerce

609 W. Norfolk Ave.
Norfolk, Nebraska
402.371.4862
norfolkareachamber.com

Dear Senate Environment & Public Works Committee Members:

As the Norfolk Area Chamber of Commerce representing our 650 + businesses, both large and small, that employ millions of Americans, we are deeply concerned about the harmful impact that the Environmental Protection Agency's (EPA) recently proposed rule to make ozone standards more stringent could have on the still struggling economy. Ozone standards at the levels considered in EPA's proposal could push virtually the entire country into "nonattainment" – where local communities face burdens in attracting and keeping commercial and industrial activity not only vital to creating jobs, but also to providing tax revenue that support important local services like public safety and education. This proposal's hardship to the American worker is real and immediate, while the benefits are unverified and uncertain. Therefore, the Norfolk Area Chamber of Commerce strongly urges you to retain the current ozone standard when finalizing this proposal.

We all value clean air. The managers and employees of the companies we represent as well as their families all breathe the same air. We are proud that emissions of ozone-forming emissions have been cut in half since 1980, leading to a 33% drop in ozone concentrations. Moreover, EPA just updated ozone standards six years ago. These current standards are behind schedule due to EPA effectively suspending their implementation from 2010-2012 while the Agency unsuccessfully pursued reconsideration. This country can expect to see even greater

reductions in ground-level ozone as states make up lost ground in putting the current standards into effect.

Indeed, states are currently committing substantial resources – both in time and money – towards achieving emissions reductions under those current ozone standards. Yet despite over three decades of cleaner air and before states can catch up with EPA's delays in implementing existing ozone standards, EPA is now proposing a new stringent standards between 70 and 65 parts per billion that would bring vast swaths of the country into nonattainment. States like Nebraska will be required to meet such regulations while at the same time receiving less federal dollars than in years past. In some areas, this proposed range is at or near the level of background ozone that is naturally occurring or internationally transported, pushing even remote counties far from industrial activity into nonattainment. According to EPA's own data, even the pristine Grand Canyon and Yellowstone National Parks would fail the proposed ozone standards.

If finalized, EPA's proposed stringent ozone standards could limit business expansion in nearly every populated region of the United States and impair the ability of U.S. companies to create new jobs. EPA's proposed range would immediately add red tape to companies seeking to grow even in areas that can attain those standards. The Clean Air Act carries even stiffer consequences for nonattainment areas, directly impacting economic vitality of local communities and making it difficult to attract and develop business. Increased costs associated with restrictive and expensive permit requirements would likely deter companies from siting new facilities in a nonattainment area. Making America a less attractive place to do business in

this way risks shipping jobs overseas. We cannot stand by and allow our economy to be collateral damage as a result of more un-necessary and unfunded regulations.

Companies building a new facility or performing major modifications to certain existing facilities resulting in increased ozone concentrations in, or near, a nonattainment area will be required to meet the most stringent Clean Air Act standard by installing the most effective emission reduction technology regardless of cost. As well, states are mandated to offset any ozone-forming emissions from new projects or projects undergoing major modifications by reducing emissions from other existing sources in a nonattainment area. If no party is willing to provide offsets, then the project cannot go forward. This offset can be a 2-to-1 ratio in certain situations. Nonattainment designation also has profound impact on infrastructure development vital to the business community. Beginning one year from the date of the nonattainment designation, federally-supported highway and transit projects cannot proceed in a nonattainment area unless the state can demonstrate that the project will cause no increase in ozone emissions.

These restrictions do not disappear when an area finally comes into attainment. Instead, former nonattainment areas face a legacy of EPA regulatory oversight. Before a nonattainment area can be re-designated to attainment, EPA must receive and approve an enforceable maintenance plan for the area that specifies measures providing continued maintenance of ozone standards and contingency measures to be implemented promptly if an ozone standard is violated.

Against these economic consequences, scientific uncertainties regarding the benefits of more stringent ozone standards have increased. Indeed, stringent ozone standards may have severe unintended consequences for public health. Studies show that by increasing the costs of goods and services such as energy, and decreasing disposable incomes, regulation can inadvertently harm the socio-economic status of individuals and, thereby, contribute to poor heath and premature death. The Norfolk Area Chamber of Commerce believes these scientific uncertainties should be better explored in order to best allocate resources in a manner that strengthens both the economy and the environment. The need for balanced government policies and reasonable flexibilities has never been greater, and no single regulation threatens to disrupt this balance more than the EPA's ozone rule.

The air is getting cleaner, and current ozone standards need an opportunity to work. Therefore, in light of the economic hardship, reduction in funding for crucial civic services, and uncertain benefits all related to the stringent ozone standards that EPA is now considering, the Norfolk Area Chamber of Commerce calls on EPA to retain the existing ozone standards of 75 parts per billion (ppb) standard for ground-level ozone. Let us meet these requirements before moving the target again.

Sincerely,

Mark Zimmerer
President & CEO
Norfolk Area Chamber of Commerce

Senator FISCHER. Thank you very much and I thank you all for your thoughtful testimony.

It's clear that you and the groups you represent have strong appreciation for the importance of a healthy environment and strong driving communities here in Nebraska. But there are clearly some major issues with the proposed rule that would impact both rural and metropolitan areas of the State.

I would like to open up this first question to all the members of the panel, if you would like to weigh in on it.

In your view, how do we as Nebraskans ensure that our air quality is at the highest standard and how will this proposed rule impact efforts to safeguard our air quality? Do you think the costly top down Federal standard from Washington, DC, basically, is it a help or is it going to be a hindrance? Why don't we start with you, Mr. Baker.

Mr. BAKER. Thank you, Senator Fischer, for that question.

I think, you know, from my perspective and I think you've heard, for sure Mr. Kinter and Mr. Zimmerer, speak about it, background levels of ozone are about half of what that standard is and it's influenced by a lot of different conditions that are beyond our control.

For instance, when there is burning that done in Kansas in the Flint Hills, we get particulates in ozone that cross over into the State of Nebraska and cause us air quality problems.

Global transport from Asia and from States that are west of Nebraska also factor into it as well.

The Federal Government in the way I think that they're looking at this ozone standard in ratcheting down basically to a background of, will not allow any States that are going to be impacted to have any sort of economic development opportunities.

I think as you heard Mr. Kinter talking, and I would wholeheartedly agree from a utility perspective, we're getting to the point right now where there is not a technology that's available that you can deploy to reduce the kinds of emissions that EPA is calling for. So it really is—it is a hindrance, and it's almost like we're at the law of diminishing returns on lowering a standard down a level that's almost immeasurable.

The health impacts of it, I would—I would argue to some of Dr. Corbin's points that he's making are hard to measure. We don't have absolute data that shows a direct cause and impact, it's extrapolated across a whole population of a country and not looked at specifically on a county or city basis.

The lowering of that standard I think is a hindrance to our Nation and to our communities as a whole. That would be my perspective.

Senator FISCHER. If I can follow up with you on that, you mentioned fires in the Flint Hills of Kansas and then you talked about States west of us and even overseas. We're seeing millions of acres burn west of us, and we've all seen the effect on the red sky in the morning and at night that we see all across the State. I've traveled all across the State this month, I can tell you that every part of Nebraska has been affected by those fires to the west of us.

Is there anything in the proposed rules that would take that into account that would allow for flexibility for a natural occurring event that we as a State have absolutely no control over when

they're measuring the parts per billion on this, or is it just—is it just strict and we would be in nonattainment and then how do we get out of nonattainment?

Mr. BAKER. Thank you, Senator, for that question.

There are provisions that they speak about in the regulations where a State would be able to, more or less make a plea to EPA to say we've got certain conditions that are existing that are beyond the control that you can—that you should take into account.

But the fact of the matter is, there are no real definitive boundaries on what they can do, it's subjective and up to the interpretation of EPA and the agreement of EPA on whatever—whatever evidence or whatever sort of information that you bring forward from a State. That's the way that I understand that.

It's not as—it's not as definitive as what is stated to the regulation, so there are provisions to do that.

I would say most, or at least from a utility perspective, you probably view that as maybe being a little skeptical of how—of how they would interpret that and maybe apply that given the plethora of other regulations that we're facing in the utility industry for sure, I'm sure some of the other, if not all the other industries, in the State of Nebraska.

Senator FISCHER. OK, thank you.

Mr. Kinter.

Mr. KINTER. Yes, thank you. Mr. Baker hit on a lot of—a lot of good points that I would just echo for Nucor. And no one would disagree that we want to live in a prosperous and healthy community and have clean air. What Nucor is concerned about is the uncertainty.

We're talking about specifically ground-level ozone and looking at a 65, 70 or keeping it at 75, there's uncertainty with that. We just don't know where this thing's going to eventually go. And to Mr. Baker's point about what's happening that's out of our control in Kansas, how is that really going to impact us when that can be a huge impact on raising the background levels which even tightens it even more for us.

The permitting process that's already in place is effective. We believe the 75 parts per billion number is the right number right now. We're making significant progress to getting to that point and would challenge anybody to question the quality that we have here in Nebraska specifically on our air quality.

The other point is that on the regulatory burden side is that we have to stay competitive. And in order to stay competitive on a global market, we're competing with countries that basically are cheating the system through manipulating currency and trading practices that are currently in place that are being allowed. And the more that we have these stringent, burdensome regulatory, and costly I might add, regulations, the harder it's going to be for us to compete. And where is the return on that?

Again as I said, the health's important to us. We all work and live in these communities as well, that's part of our mission statement at Nucor, but there has to be a cost benefit analysis and were getting to the point of, as Mr. Baker said, a point of it just doesn't make any sense.

Senator FISCHER. Thank you. Dr. Corbin.

Mr. CORBIN. I agree about uncertainty. The uncertainty that I'm concerned about is when I'm going to have my next asthma attack or when my asthma is going to get worse.

It would be hard for me to believe as a public health professional that all of these medical associations and public health groups that I've listed on the hand out are somehow conspiring against business. They are trying to make the country healthier and they are all of the belief that lowering the standards will do that.

The—and by the way, I should point out conspire means breathe together, the original and that's what we should all be doing: We should all be breathing together, not working against each other.

So there's ample evidence and usually we have what's called a precautionary principle and that it says when it's—when you're in doubt about when it's going to harm your health, you error on the side of good health.

Senator FISCHER. Thank you.

Mr. Zimmerer.

Mr. ZIMMERER. Well, part of my resume you left off, I ran the wellness program at Faith Regional Health Services as one of my other duties——

Senator FISCHER. My apologies, my apologies.

Mr. ZIMMERER. Appreciate—I appreciate the doctor's comments on this, you know, but I'm also a Husker fan and you say, well, how is that related? Well, you know, when we talk about the new coach, Coach Riley isn't setting the team goal to reach the Super Bowl. Of course not. That's not attainable through the college system. So what they do is they set goals to win the Big 10 and then maybe win the national championship, but those are all attainable goals. Those are something you can put the team's efforts toward.

This goal that they're setting now is unattainable and it's unrealistic and it's just going to put our businesses at risk, so I'll leave it at that.

Senator FISCHER. If I can follow up with you. I believe from the standard that was set in 2008, California basically is in nonattainment; do you know about that?

Mr. ZIMMERER. I do, yes.

Senator FISCHER. And they get, like, a waiver or something, is that right, for the next 20 years, and it's accepted that they will never attain the previous standard or the current standard that we have from 2008; is that correct?

Mr. ZIMMERER. Absolutely.

Senator FISCHER. What happens to California if we see the standard lower? Are we just saying, well, you couldn't meet the previous one, we know that, and we know you're never going to meet this one too? What happens?

Mr. ZIMMERER. And that is the concerning part, Senator, when we're talking about, you know, you're in a nonattainment area, we talk about critical infrastructure needs of our highway system, you know, possibly being at risk here, how is that fair that Nebraska is hindered by these restrictions and not some other State? These are——

Senator FISCHER. So California wouldn't have to—they wouldn't be affected by any of those restrictions even though they're in a nonattainment area, because they have this waiver basically 20

years right now, so they can continue to build roads, they can continue to build manufacturing plants even though they're never meeting the standards?

Mr. ZIMMERER. I believe EPA has yet to clarify that, but I believe if they are lifting the ban on the restrictions for California, then that would, yet, eliminate the violations.

Senator FISCHER. OK. Thank you.

I have some questions for Mr. Baker. And I do thank you for your testimony and I'm very happen you're here today.

As you mentioned, Nebraska's a hundred percent public power State. I happen to be very proud of the fact that Nebraskans own the electricity that we use. Do you believe that Nebraska and Nebraskans will be disproportionately affected by this rule because we are a public power State, and what actions are the utilities in the State going to have to take in order to meet the standard if it—if it is lowered to 65 parts per billion? What actions are going to have to be taken, and do you have any idea what the cost of that will be?

Mr. BAKER. Thank you for that question, Senator.

You know, as a public power entity, I don't know that it would be fair to say that public power in and of itself would be singled out or have a disproportionate impact. I will go back to some of my testimony that says we have no profit margin that's built into our rate structure, so any and all costs on this regulation, and the myriad of other regulations, are a direct pass-through to our customer owners because of that.

You know, you might be able to draw a conclusion and say at, you know, public power entities without a profit, it is—it is a direct impact to our customer owners, so in that way, you could, but I don't know that the——

Senator FISCHER. So basically, every Nebraskan's going to be paying more for electricity?

Mr. BAKER. They will pay whatever—well, whatever those utilities that are representing them need to spend more money in order to be in compliance with this particular rule, it will directly impact that bottom line.

To some of your other questions on that, you know, logically and as we talked about before, you know, when you're facing a regulation and when something with the ozone they're looking at nitrogen oxides, I think it would be reasonable to assume the EPA is looking for any industries, in particular though electric generating companies and those facilities, to put in technologies that would control nitrogen oxides.

I would say in most cases, almost all of the utilities in the State of Nebraska have deployed technologies to remedy that. We have put in catalytic reduction units, you know, much like a, you know, much like a catalyst on a car, you know, to control the emissions on many of our big units.

We also deploy what they call low nitrogen oxide burners and technologies that do some things to reduce nitrogen oxides that way as well. Again, we're getting to a point where there wouldn't be much more that we could really do.

I would also caution and bring to the forefront that half of the ozone that we're measuring comes from natural background. Of the

half that's remaining, it's only a fractional part that's really coming from industry. The large majority of that remaining fraction is coming from transportation.

It seems to me that a strategy would be better to focus on kind of the mobile sources much like in the State of California. Those are some of the reasons why those areas suffer from such huge attainment issues because they have so many people that are on the roads and that's why you see a lot of the California emissions on vehicles, they're different than the rest of the Nation. It's because of transportation.

So it seemed with fuel, fuel efficiency standards and such like that, you can make more. You can get more bang for the buck than you would on limiting the economic development opportunities of whole parts of our country and whole parts of our State by reducing that standard. There would be very little on the industrial side that you could do to control some of those emissions.

Senator FISCHER. Are there discussions by the EPA to further reduce emissions from vehicles? Do you know or has the focus been on utilities and manufacturing with these rules?

Mr. BAKER. You know, my experience has been it's hard to say with EPA right now. We've—I've got my hands full just worrying about producing electricity in the myriad of regulations that we're facing on that front. And of course, we've just recently had the Clean Power Plan which is, you know, trying to do other things, you know, to the industry.

So would they be looking at fuel efficiency standards, I think a reasonable person would say that they probably are looking at ways to ratchet that down.

But I don't know if the fuel efficiency standards, how much they actually take credit for that in issues like ambient air quality standards with ozone. I'm not sure about that.

Senator FISCHER. OK. I would like to take a minute and highlight the—what you believe is a very robust energy portfolio that many Nebraska utilities are now incorporating and I commend our utilities for taking the initiative to introduce these new fuel sources like natural gas for utilizing renewable energy sources to produce electricity. I think a balanced energy portfolio is very, very important for all of us here in this State and in this country.

And I also know that we are blessed that we have an abundance of natural resources in this country and they need to be managed correctly so that we can ensure domestic energy security as we move forward.

Mr. Baker, I would ask if you can describe more about the impact that these proposed standards and if you want to throw in other EPA regulations, that would be fine, would have on our energy reliability and what are the potential costs that utilities face.

You know, we as Senators, we always hear about regulations and most of the time the negative impact that they have on Nebraska families, so I would ask your opinion on that.

Mr. BAKER. Thank you, Senator. I appreciate that question and that perspective.

You know reliability, as I stated in my opening remarks, is, you know, is critical to the success of utilities in the State of Nebraska.

We want reliable, affordable and environmentally sensitive electric generation for our customer owners.

Reliability, I would say would be impacted in some ways and it should be no surprise, I think to you, that, you know, the EPA has a concerted effort to try and reduce the dependence of coal fire generation in the United States. The regulations—an objective observer would say there's a whole-scale effort to try and limit the amount of electricity that's produced by that fuel source.

A reduced ozone standard could have, when measured with all the other regulations that we're facing, have the impact of reducing our ability to generate electricity using coal. That added to all the other, you know, the Cross-State Air Pollution Rule, the Clean Power Plan, limitations that we have on coal ash of where we can bury it and what we need to do with it and how we need to measure on that and issues on water discharges and thermal issues and just the entire, you know, the entire list of different regulations that we face, really limit our ability to produce coal.

Two of the utilities in the State of Nebraska have nuclear in their portfolios. Omaha Public Power District does. Nebraska Public Power District does. We're very proud to have that zero carbon producing generation in our portfolios, and many utilities have been—begun adding a lot of renewables into the mix as well.

If you diminish the amount of coal fire generation that we have and only to our proximity to mines where we have very affordable transportation rates, you know, to use that coal and to generate electricity in a very clean manner with proven technologies, you know, to capture some of these contaminants, what you're left with are a lot more renewables, right.

The Clean Power Plan is really pushing to bring more renewables into a portfolio. That's the tie-in to the reliability because the renewables aren't there all the time; solar is not there at night. Wind doesn't blow in July in the State of Nebraska, or in many parts of the country when it's very, very hot. So what do you do when you can't produce base-load generation using our tried and true and clean, you know, coal fire generation and you have limited access to nuclear in these days, you have nothing left. You have some natural gas which we have in the State of Nebraska, but we need a huge amount of infrastructure build-out to bring a lot of natural gas, unlike maybe the State of Texas.

So you would—that is where you would have the unreliability aspect, because you would need to have some base-load generation to supply activity when the sun's not shining and when the wind's not blowing.

And absent—absent having a build-out of natural gas or fossil reserves that you can rely on, that I think would be the tie into to the reliability.

Senator FISCHER. Statewide, could you tell me how much of our portfolio for electricity is a percentage that would be reliant upon a coal-fired plant? I've heard two-thirds; is that about what it is?

Mr. BAKER. I think somewhere a little more than 50 percent right now in its current state, but you may or may not be familiar, like at Omaha Public Power District, last year our board of directors made an announcement we're retiring three of the units. Three of the five units that we have at our North Omaha power plant.

It wasn't a direct result of the Clean Power Plan, it wasn't a direct result of the Mercury and Air Toxic Standard, it wasn't a direct result of the Cross-State Air Pollution Rule. I'm just naming a couple, two or three right now, as an example; it was because of the myriad of regulations that we were facing where we looked and said that these units were not going to be viable and it wasn't economically feasible to invest a whole lot of money for their continued operation. And when we look to the future and, of course, our planning horizon is 15 or 20 years into the future, you know, we needed to make some certainty in decisions that we were making. So we last year made a decision to retire three units at our North Omaha power station.

That will have a consequence of improving, you know, on an air quality emission profile that will be less air emissions coming from those units because the will no longer be in operation.

Senator FISCHER. How do you handle your base-load capacity then? If, I mean, you mentioned with renewables, if the wind doesn't below, you can't turn on the lights, there's no storage right now for the electricity produced in that way?

Mr. BAKER. Correct.

Senator FISCHER. So how are you going to manage—if we have a turnover really quickly, which I don't think is possible to see that happen very quickly, to close coal-fired electric plants, but if you do have a turnover, how do you handle base-load capacity and what—what do you see, I guess, happening to the utility in the future then?

Mr. BAKER. So at Omaha, Nebraska Public Power District, I can tell you we had some excess capacity that was in our portfolio so we could take those units out of service, and keep in mind three units of the five is about half of the generation from that facility, so it's a little shy of 300 megawatts of generation that we were going to take out of or portfolio.

That margin, we were still OK looking to the future from my company's perspective, I don't foresee us building another nuclear plant for baseload. Renewables, as I've already stated, are kind of there to fill in some gaps. With an inability to build any future coal-fire generation, the only thing that we would really have left to add for extra capacity would be natural gas combined cycle is where we would look to meet that gap. I would say that would.

Senator FISCHER. And you would have to fill that gap with a source like natural gas, correct?

Mr. BAKER. At some point you would have to build extra generating capability to take up the slack and to cover those times when renewables aren't there. And right now the only thing that's really left would be natural gas, in my opinion, and kind of looking at, you know, looking at the future right now in the short term, that's—that would probably be it.

Senator FISCHER. We had talked about a nonattainment designation and the impact that it may have. I would like to know since you represent OPPD, what impact do you think a designation of nonattainment would have on Omaha, how would that affect further development really in the metropolitan area of our State?

Mr. BAKER. Thank you, Senator.

You know, as you have heard, I think it would be crippling. The permitting that you would need to undergo for bringing in any new sources, any new industries into the area would be massive and very expensive. Not to mention some of the unintended consequences that you would have.

I know from first hand working with organizations like the Metro Area Planning Agency in Omaha metro area, we've been looking at this issue for over 5 years. Omaha Public Power District, the State of Nebraska and really even the State of Iowa, because this isn't—it would affect Omaha for sure and Douglas County and some of the surrounding counties, it would also effect Iowa, so the Iowa Department of Natural Resources has been involved.

We have been in a partnership with some of those other groups to do what they call Little Steps, Big Impact. And so some of the consequences of nonattainment from the perspective of the inability to bring in other industries which are so vital to kind of the economic viability of those communities, but some of the simple things like the way that you would dispense your gasoline may have to change and some limitations that we would have on our ability to car pool, there might be local standards or State standards or maybe even a Federal, you know, through EPA imposed on us where you would have to do more, you know, more car pooling.

Which, you know, on the surface would be a good thing, but there's also that negative impact of what kind of build-out you would need from a public transportation perspective, which we may not have the ability to do.

But for the last 5 years, we've been trying to work to educate the communities of what these negative impacts would be, absent really any industrial impact, just on the lifestyles of people and try to encourage them to car pool when it made sense, try to encourage them to mow their lawns in the evening.

There are a lot of unintended consequences of setting that standard too low which at this point, depending on where that level is, could really impact—could impact individuals and families in the community in very negative ways.

Senator FISCHER. Thank you very much for answering my questions; I appreciate it.

Next, Mr. Kinter, you're up. Here we go. You mentioned the very difficult global environment that we're seeing with our steel companies now. I guess I would like you to expand on that a little bit and really how that's going to affect Nucor specifically, if you could, and how you're going to deal with your competition.

Mr. KINTER. OK, first off, Nucor is never afraid of a fight, as long as it's on a level playing field.

Senator FISCHER. I've toured your plant, so tough people.

Mr. KINTER. And that's what we talk about a lot is that we're not afraid to compete as long as it's on a level playing field.

Senator FISCHER. Exactly.

Mr. KINTER. So I would start off with that and say that again, to what we have here in America versus the air quality in different parts of the world is completely different. And we're asked to continue to operate and be permitted under such regulatory burden, it's hard for us to compete.

Again, not saying that the rules and regulations and the permits that are in place are for the right thing. We do agree we need to operate in a healthy and safe manner, but in order to stay competitive with the markets right now, and some of this understand is outside of the scope of the EPA; it has to do with the trading issues that of course we've talked publicly a lot about, I'm sure you're aware of as well.

Just to put it in perspective—and Mr. Baker did a great job of covering as well—but our second largest input to making steel is energy. We are the largest fired electricity in the State of Nebraska, so as you can imagine our power bill is significant the way it is already.

Our estimates are looking at 20 to 30 percent increase in electrical costs, specifically to this rule, and that's on not to mention the Greenhouse Gas Rules and the Clean Power Rule and things that are coming along the pipeline there as well.

So to put it in perspective, we have 24 operating steel mills in this country, billions just for us specifically here in Nebraska, which multiply it by all our other plants. Again when our margins are so tight, as I mentioned in our testimony, that millions of dollars equates to less profit and less success for the company.

Of course, we have a number of shareholders and folks that we need to continue to be profitable. And there are numerous examples of steel companies today, right now, that are shutting down because they're no longer profitable and successful. So we definitely have concerns with that.

In regards to the renewable discussion, I would just add that for Nucor, we have many customers that are into their own business as well, so we are supportive of that. Under two circumstances: One, it needs to be reliability, and it also needs to be economical. Those are the two things that we should be looking at when we're looking at renewables.

Right now, because of coal and what it is, specifically for Nebraska that's a huge baseload for us. And we are concerned about the new born in the renewable energy business, where is the reliability going to be and of course the costs associated with it.

Senator FISCHER. Can you tell me the difference in how you produce steel as a company here in the United States and compare it to how steel is produced overseas and what you can tell us about the environmental impact on both of those cycles?

Mr. KINTER. Sure. Sure.

Nucor, hundred percent of the steel that Nucor makes is with the electric arc furnace technology——

Senator FISCHER. Tell us, how does that work, though.

Mr. KINTER. We use electricity to basically create an arc in our furnace which melts the steel at approximately 300 degrees Fahrenheit, that's the electric arc furnace technology. Nucor basically invented that and it started in Europe in the early 1960s, and Nucor kind of took that and expanded upon it. We now produce almost 20 million tons of steel in the United States all using electric arc furnace technology.

In doing so, our greenhouse gas emissions are a third to two-thirds less than what we would call an integrated facility which uses the natural iron ore out of the ground to produce steel. So sig-

nificantly much more energy intensive process, because you're taking it from the ground and produce the steel, where a lot of the process has already happened when we take the scrap metal and put it to electricity.

So environmentally, our impact is much less. Obviously, we're recycling a product that otherwise would have ended up in a landfill. And that's a success story on the scrap side as well because, you know, there are still many countries that don't have a way of recycling scrap. We have that here. We have a great network of scrap handlers and dealerships throughout the country that scrap has become a great example of how recycling should work. I mean, we've always said we were green before green was really cool, because we've been doing it since the 1960s.

Senator FISCHER. Good. Your comment that the proposed rule will hurt economic development, and you said reduce investment in communities in Nebraska that that's disturbing to hear. Can you talk about how the manufacturing sector typically grows around one of your steel mills and do you see additional facilities develop around your steel mill, what about jobs, you know, just the effect on a local area with say one of your 24 plants?

Mr. KINTER. Sure. Sure. With every one steel job, seven more are created in the community. And when you look at various partners that we have specifically in Norfolk, we have a number of facilities and industries have grown around Nucor and buying various pieces of steel or supplying us with inputs that we need for making steel.

One thing to point out, and we focused a little bit on Omaha and the concerns there, but one thing to consider is I would—we would consider Norfolk to be in a rural part of the State, more or less. And when it comes to ozone and how we're going to get to the levels EPA is proposing is through two ways: is through offsets and it's through technology.

Senator FISCHER. You said the technology's not there to reach, to reach the proposed rules. Did I hear that correctly in our opening?

Mr. KINTER. For the steel-baking electric arc business, the SER technologies that Mr. Baker talked about are out there. We have yet to find somebody that can put a CR system on an electric arc furnace. As you've seen the facility before that would be very challenging to do that.

It's not there yet, could it be there in 10 to 20 years, possibly. Offsets is the way that Nucor would have to go and in looking at a rural community, where do we get the offsets from? There isn't a whole lot of manufacturing, although we're proud of our manufacturing areas that we have in Norfolk, there are some, but when you look at Nucor and what we do and where we need to get those offsets.

Technology isn't there yet, and there really aren't offsets for us to grow. So to your point about growing in Norfolk and bringing in more business, quite honestly the last thing from the environmental perspective what we would probably want to do right now is try to attract somebody that produces a lot of NO_x and volatile organic compound emission in Norfolk because that would keep us from growing.

Senator FISCHER. Under the proposed rule, do you have to find an offset in a local community within a certain radius? You said

the offsets aren't available in Norfolk, can you look—can you look elsewhere? Can you look anywhere in the State? Can you look in other States or is it specific to a region that you're located in? I don't know the answer.

Mr. KINTER. There is some flexibility in that. Again, it's how it's interpreted and how even the State of Nebraska would look at that and how the different areas are set up when a nonattainment actually comes in place.

And again, speaking on—to the uncertainty about 65 percent, 70, that's a big difference. 70 versus 65. 70 is one thing, but when you start talking about 65, that would stop Nucor from growing, period. There just wouldn't be any way we can get down to the levels we need to, as far as expanding.

Does Mr. Baker alluded to 70 offers some flexibility, but again, it's just the challenge to figure out how we would get there and where those offsets would come from.

1.8 million people in Nebraska. We do have some industries in Nebraska, but unfortunately it would be hard to come up with where those offsets would come from, no matter where it is in the State.

Senator FISCHER. You know, a lot of times I hear about, you know, rules and regulations, how burdensome they are. Can you tell me any current rules, regulations out there, if you have to go through a permitting process, to expand, what's the effect of that? You know, I can speak to environmental impacts statements with road building, they can last 6 to 8 years. We have a case where one lasted 19 years to go through, what kind of permitting process do you have to go through with your company, and what are we looking at for a timeframe there?

Mr. KINTER. Sure. We're what you would call a class one major source of Nebraska. There's very few, I think there is 20 or so on that list. And we go through a process called new source review and the prevention of sedimentary program and the also the Title 5 operating permit process—the Title 5 operating permit process and in private business, we don't have a whole lot of patience, of course, and there's always opportunities for us to get better with project planning and working with the State agencies to get the permits.

But as an example, when we went through our recent expansion here, about 2 years ago, it took us approximately 15 months to get our most recent air quality permit. Typically, EPA and even DEQ will say 12 to 18 months for that process to happen. We're concerned that if we move into these lower ozone ground-level numbers we're talking about, and nonattainment specifically, who knows how long it would take. Because you're looking at what they call a lowest achievable emission rate technology, which is, again, back to this whole technology thing that we don't even know what that is right now on an electric arc furnace. So to go in with a new permit to try to talk about some technology that doesn't even exist yet to get to us where the levels we need to be, we don't know how we would do it.

So yes, it's a—the permitting process right now that we have in place takes time. Again, the DEQ here, specifically in Nebraskans, been great to work with, been a great, you know, to work with over

the years. But again, this uncertainty and then moving into these new levels that we're talking about and the process it would take to get there, not to mention EPA oversight on all of our permits, which is what we have, we may never get a permit.

Senator FISCHER. Does the EPA ever account for costs in the permitting process? Do they ever consider that, or is that just up to you?

Mr. KINTER. Well, again, when we're talking specifically about establishing ambient air quality levels such as the ground-level ozone, EPA is required to do a cost benefit analysis. And the recent case ruling that came out in regards to EPA not specifically doing that cost benefit analysis, I think, came back to haunt them a little bit.

And again, that's where our concern is with this one as well is that where is the cost benefit analysis and are we really getting enough bang for our buck, quite honestly, to—in having the healthier air and citizens being more healthy. We're not—we don't see that correlation, quite honestly.

Senator FISCHER. OK. Good lead in for my question, thank you very much. Good lead in for questions for Dr. Corbin. And again, thank you so much for being here. I appreciate your testimony.

Mr. CORBIN. I feel a little alone.

Senator FISCHER. That's what happens when you're a minority witness, so. No, but I'm very, very happy that you're here. I appreciate your views on this, sir.

The EPA concludes that long-term exposure to ozone likely causes respiratory mortality based on a single study, and you mentioned that I believe the Jerrett 2009 study. Did you mention that in your testimony?

Mr. CORBIN. No, I mentioned the Lancet study.

Senator FISCHER. The Lancet study, OK. The study that I have here was a Jerrett 2009 study, and that study found that there was an association between long-term ozone exposure and mortality caused by respiratory diseases, but it—but not in southern California where the highest ozone concentrations in the country occur.

That didn't make any sense to or for me. Wouldn't it make—wouldn't it make sense that there would be an association found where we have the highest ozone concentrations exist?

Mr. CORBIN. Yes, that's a 2000—I'm not familiar with that study.

Senator FISCHER. OK.

Mr. CORBIN. But there's been plenty since then that don't say that. And I might just want to respond a little bit because I've been attending OPPD meetings for at least 3 years now on a regular basis, their board meetings. I'm familiar with their goal for renewables with 10 percent, and now I'm very proud to say because of people have gone before OPPD and tried to make a case for renewables, that they've—that they are going to close down those units and change to coal and that we also live in a different environment in terms of how the—we're part of the Southwest Power Pool here and OPPD and so when people talk about, you know, businesses, the fastest growing business in the United States and, indeed, in most of the world is renewables. And that's what's creating most the jobs.

Companies like Facebook and Google are going a hundred percent renewable energy and they'll—the reason they're going to Iowa instead of Nebraska is because Iowa has higher renewable energy and they also have a lower rates than we do in Nebraska. So higher renewables; lower rates. So better health.

Warren Buffett is—Berkshire Hathaway Energy is heavily invested in that, and who here wouldn't want to say that after Fukushima that we are glad that there are regulations on our nuclear plants to make sure that we are all safer and that we don't have a terrible incident like they did there. That's when Federal regulations are at their best.

I can't deny that there are rules that sometimes don't make sense, that's what we need to do is make—make those so that they really work and that—but to use your—what you were saying earlier, that California hasn't been in compliance, so why is everybody worried about everything when everybody can get extensions time and time again. OPPD's had extensions on certain things.

So, if anything, you could argue the EPA is too weak because they keep giving groups and all kinds of things extensions. And then, of course, the air is—the air that we all breathe, and so you've already talked about the fires and all of those kinds of things.

So it is something that we're all in it together. And as I said to Russ before we started, we're not adversaries, we want the same end. We just disagree, somewhat, on how fast and when and what the best ways to get there.

So I think that there's—there's—we certainly are making progress in a lot of this from a public health point of view. I don't think the progress is fast enough; obviously, there are people who differ in that opinion.

But I think there's a lot of evidence to say—and I know some people don't like to hear the word climate change, but the fact is it's not a belief. It's real. And it is those things that we are talking about renewable energies and all of those things that are going to hurt the State more if we don't do something now.

Senator FISCHER. I've been looking at the Clean Power Plan regulations that have been finalized and you mentioned Iowa and perhaps Nebraska has lost some business opportunities here in the State because of the less expensive energy electricity in Iowa.

Iowa joins Nebraska as being one of the 10 biggest losers under the Clean Power Plan, and Nebraska, I always say, that that means that the people of Nebraska are the losers because we do have public power in this State.

But in Iowa, I'm just amazed—and I'm off topic here, I fully admit that—but I am amazed that they would be listed under this Clean Power Plan as one of the 10 biggest losers because of their wind development. And it just, to me, it shows how bizarre some of these rules and regulations are that come out because they don't get credit for that.

So being a Nebraskan, I'm kind of hopeful that we're going to see businesses come to the State of Nebraska for our less expensive electricity because Iowa doesn't get any credit.

Mr. CORBIN. That's one——

Senator FISCHER. So I mean——

Mr. CORBIN. That's one time when I would agree that the rules don't make sense.

Senator FISCHER. Yes, it's just bizarre.

Mr. CORBIN. You don't get credit for what you've already done.

Senator FISCHER. Exactly, no, I do fully agree with you, you know, that we're all here to work and make sure that we do have clean air, clean water in this State. It's a valuable resource, so it, you know—to find ways that we can work together and continue to have an open dialog and respect, I think that's very important.

Mr. CORBIN. And that bureaucracy, by the way, runs both ways. So to try to get a permit in some places in Nebraska to put solar panels on your home, in some places it's multi-page this and that, and you have to have—if it's a hot water, you have to have a steam fitter and water doesn't get hot enough for a steam fitter and electricians have to come and approve it and an electrician may or may not know anything about solar. So those—I'm all for——

Senator FISCHER. You and I can work on some issues here.

Mr. CORBIN [continuing]. Streamlining the rules and making them as simple as possible.

Senator FISCHER. No, I agree. And both wind development now and the siting and the building of transmission lines, there's a lot of my neighbors and friends who are upset about the process there. So there's—there's always challenges. There's always challenges that we're going to——

Mr. CORBIN. And public health, I mean, when aren't they? Did the automobile industry say please let us put seat belts and air bags into cars? That's nothing more that we would remember do, but we did it, people are safer and the roads are safer.

Senator FISCHER. If I can ask you some specific questions with your credentials and background with public health if you would know these for me, the answers.

Do you know how many asthma attacks in children nationwide would be prevented if we lower that ozone standard? Do you have any information available on that?

Mr. CORBIN. I believe it's in the—in one of the documents that I did that I handed in, but I don't have the exact, but there are plenty of organizations that have computed that and, of course, it is an estimate.

Senator FISCHER. Right.

Mr. CORBIN. But they all agree that it would definitely go up. And that's when you get into the argument about what's—how many kids deaths are acceptable and how many aren't.

And so like I said, all of these organizations that are on this one letter to President Obama trying to urge the ground-level ozone level to be more strict, they have studied this extensively.

Senator FISCHER. OK. And do you know how many studies were done and that the EPA looked at between the association between the ozone and asthma symptoms when they did their integrated some kind assessment, do you know how many studies they looked at?

Mr. CORBIN. I do not. I would, again, put most of my—the most respected one that I've seen that's come out is a very extensive report and it not all about ozone, but that's the Lancet report which came out this year in June.

Senator FISCHER. I had information that there were 33 studies and only 12 of those found an association between ozone and asthma symptoms, can you address that?

Mr. CORBIN. I can. I cited my experience with working on tobacco issues. We heard the same thing, how do you know it's tobacco that's causing cancer and not the air pollution, the mold in your house, and all of these kind of things? It is complicated.

But there's no evidence, that I know of, that says adding ozone will make your asthma better. It almost—it won't make everybody's worse; but it will make a lot of people's worse.

Senator FISCHER. OK. I just wanted to point that out for the record that in the 33 studies, there were 12 that found an association between the ozone and asthma symptoms. And this was from the EPA with their integrated science assessment.

Mr. CORBIN. Remember the ozone goes with the other pollutants that are coming from some of the same sources, so.

Senator FISCHER. Right.

Mr. CORBIN. They go together.

Senator FISCHER. Right. Well, thank you so much. Appreciate you being here today.

Mr. CORBIN. Thank you.

Senator FISCHER. Mr. Zimmerer, again, I thank you for your testimony on Federal regulations and the impact that they have on businesses and how they affect growth, economic growth in our communities, which in turn affects all of our families here in the State of Nebraska.

I know that local businesses work hard to provide their communities with jobs, they have public service support and, of course, everyone tries hard to protect the environment, it's a priority it for all of us.

You mentioned in your testimony that the ozone standards considered in the EPA's proposal would impose real and immediate hardships to the American worker. Can you tell me what you mean about that?

Mr. ZIMMERER. Absolutely. And I think my colleagues to my right also mentioned these in their statements, but just talking about the capital investment needed for companies to come into compliance. Great companies like Nucor Steel, they have to invest capital in these projects where, in fact, they could be invested in increasing their goods and services and increasing their market to create jobs that will put more taxes in our communities, tax dollars in our communities, to pay for those community service programs that help enhance the lives of our neighbors.

Senator FISCHER. So this—obviously, you believe then that this proposal would have a really large ripple effect, then, throughout a local community in the workers that live there?

Mr. ZIMMERER. Absolutely. You know, when we're talking about a large tax base, you know, those taxes are divvied up amongst many programs and services, but some of those expenses will have to come out of that. The State burden for these types of regulations will trickle down to the city, and in that case, programs will have to be cut, services will have to be cut. And, you know, I would hate to be at the city council chambers when I have to decide which one of those programs is more important than the other.

And so I think that's where I look at it from a city perspective as well is we need to do this in a balanced approach. And I understand the doctor here, and I was going to give him a hug when he wasn't feeling loved.

But you know, we have to do it with balance. And that's what I ask for. We can't have EPA acting as its own form of government; it is an agency to be controlled by, you know, by the people, and when I hear, you know, 14 State Governors wrote in a letter with concerns that, you know, bring us to the table when we're discussing this. Help us help you get to where the doctor wants to be, you know. That's—that's what we want. We just want balance. We can't have one without the other. So to be successful, we have to work together.

Senator FISCHER. We talked about a little bit earlier when I was interrupting to ask questions, but the EPA updated their ozone standards in 2008 and you mentioned in your statement the EPA delayed implementing the 2008 ozone standard for 2 years while it pursued reconsideration, and so States are just now catching up with implementing that standard.

Particularly, since the EPA proposed implementation rules for the standard, I think it was just this past December; is that correct?

Mr. ZIMMERER. Correct. Correct.

Senator FISCHER. Now, the EPA is proposing new ozone standards that are going to overlap those 2008 standards, so how does the—how does the delay in implementation challenge local communities, local businesses when they're tasked with putting together a plan in order to meet the new—the new standards coming when they're still working on the old ones, where does that put businesses?

Mr. ZIMMERER. Right. Well the bad part about presenting last is John pretty much answered that question. That uncertainty in the life of businesses is chaos. It leads to more expenses. It leads to inefficiencies in management and, obviously, that does have a ripple effect.

And I think the States are experiencing the same thing, that's why the Governors are so concerned about it.

So we are managing, you know, we weren't quite sure where we were going to go and now we're sure again, but yet we're going to add more uncertainty by bringing it to the 70 or 65 level, that's just absurd.

Senator FISCHER. So when you're working on implementing the standards, what, do you have a partnership with the State Department of Environmental Quality? Are you working more with the States since they're trying to implement the EPA's rules; is that true?

Mr. ZIMMERER. Well, you know, just and——

Senator FISCHER. I guess I'm saying instead of directly with the EPA, you're working more with the State level, right?

Mr. ZIMMERER. Absolutely. I'm starting at the city level. I'm working with our partners at Nucor Steel, you know, how can we make them better? How can we improve the quality of services they provide in their work? How can they make the environment better? And I'm doing that with all of our businesses.

But this is just one example of, you know, everybody—like said in my statement: We're breathing the same air. We all want what's best. The ozone levels continue to decrease, so let's see where they go. And then we can have time to study. We can see what that—what that foreign pollutants are doing to our ozone. We can tell what the fires are doing to it. We can do more studies on how it affects asthma in children.

But, you know, these things need further study. And I think my two gentlemen to my right said, you know, they don't even know how to get to where they want to be. So if we don't have any ideas of how to get there, then we are putting the cart in front of the horse.

Senator FISCHER. You know, I understand and hear from our utilities. I hear from large businesses who know about these proposed rules or final rules, as the case may be, when they come through, what about our Main Street businesses, our smaller businesses that truly are, I believe, the life blood of our communities around this State from, you know, from Omaha to Valentine? It's our local folks that are, you know, working hard. Are they aware in your position with the Chamber? Are they aware of what may be coming and do they have any idea of what's—what the effect will be?

Mr. ZIMMERER. Well, I think some of them like to—suffer from the ostrich hiding, you know, his head in the sand and—but, you know, it's my job as the chamber president to educate them on the possible consequences of such regulation. And I think Russ mentioned that, you know, were looking at a 30 percent utility increase, that is significant.

I mean, we are super conservative here in Nebraska. We all know that and, you know, we beared the recession pretty well. We're not out of it by any means, but we did that because we keep our costs low, you know. We're conservative. We don't spend over and above what we can. And so to add this 30 percent cost onto these already burdened businesses will have significant costs.

Senator FISCHER. When we had talked earlier if an area has to go into a nonattainment classification and is then able to reach attainment, what's the process there that the EPA follows? Is there a certain number of restrictions that have to be in place for a designated time period or is it just lifted and growth can continue, you can continue building roads, you know? How does that work? And what's the time period from the nonattainment to attainment to being able to grow again?

Mr. ZIMMERER. The time period is unclear, other than what I've mentioned as far as how it affects our roads and infrastructure that way.

But, you know, once an area comes into attainment, they have to—they have to put in a plan of action with the State—through the State and then through the Federal Government to stay and remain in that action, or in that attainment area, and that can be significant because what they're going to be looking at is new businesses, new industry coming in there that are going to have ozone emissions.

And to be honest, even if you go back from out of attainment to attainment, there are businesses, businesses like to be conservative

as well, they like to have the facts and uncertainty about whether they can fall back into that area of compliance, really is going to prohibit them from creating new businesses or growing in our—in that particular area. And that's probably the scariest part is they're just not going to do it. And what's really scary is, I think to John's point, is they're going to do it in other countries.

Senator FISCHER. So you believe that even when restrictions are lifted, it's really going to be hard to encourage businesses to come to an area that's been in a nonattainment classification?

Mr. ZIMMERER. Yes, I guess I would have to think the EPA's got a mindset and say I really don't know what's going to happen. You know, but let's just do it anyway. I don't want to go that approach. It doesn't make sense. We have to know what the consequences are, how we're going to get there before we can put these restrictions in place.

Senator FISCHER. OK. I would like to ask you all just a couple questions here for closing.

First of all, how do you view EPA regulations—and we've touched on this—but how do you view EPA regulations when we look the economic growth for our communities and for our State? If you have an opinion on what kind of impact they have—and we've touched on that somewhat—but I would like to just hear any closing comments you may have on that.

Mr. BAKER. I have some comments that I would love to make on that.

You know, we're not opposed to EPA. You know, I have a recollection of EPA being created because we have rivers that were catching on fire, we had open dumps that were in people's backyards that were contaminating groundwater, that were contaminating drinking water for many communities. I mean, it was necessary, and some would argue maybe even overdue at that point.

I think what I'm feeling and maybe what my company and my industry are feeling right now is just, you know, we've taken care of maybe the largest percentage of big problems. We don't have rivers that are catching on fire. We don't have open dumps that are out there. We, you know, we have mechanisms and processes and permits that are in place right now that really have improved our environment.

And I don't think anybody in the United States—and I would argue maybe even worldwide—would want to have a perspective, well, we're going to go out and destroy the environment. We want to preserve our natural resources and we want to use them as good stewards of the land that, you know, that we're—that we have communities in.

So we support preservation and enhancement of natural resources and that. I think, and I go back to maybe a little bit of some of my comments that I provided earlier, you know, we're now—now that we've taken care of a lot of really big issues and have really improved the situation across our Nation with these laws. Now, what we're facing are—we're facing energy policy that's being enacted through regulation.

So trying to change the whole source, at least from the energy perspective, of how you're going to generate electricity. Not what

limitations you should have on conducting commerce, but actually transforming the country through regulatory process.

And we're also maybe down on the tail end where some of these regulations, you don't have a direct cause and effect of ratcheting the standard lower or limiting an emission further or pushing for technology development that is very, very costly and may have very marginal benefit in the long term. That's the part I think that, at least from my company and maybe from electric utility perspective in the State of Nebraska, that's the part where we have problems.

There's a lot of unknowns, a lot of uncertainty that, you know, we tried to express to you in our testimony and that, marginal benefit for what could be a very extreme cost and really not for the sake of improving the environment in the way that I think Congress foresaw EPA and the creation of EPA to do. So that's kind of my perspective, Senator.

Senator FISCHER. Thank you.

Mr. KINTER. No doubt that there was and there still is a need for EPA regulations, I don't think anybody will disagree with that.

We are reaching a point of diminishing impact and return on these rules to the point where it's hard to run a business because of the scrutiny we have with our permits and how we're required to operate our facilities. Much more hands-on approach now, and as Russ alluded to, we're getting much more detailed in our permits.

So definitely a need for EPA to be there. We've had a great relationship with EPA over the years and working through issues, but where do you draw the line between, you know, the American way and being able to operate your company the best way possible, and still being in compliance and the definition of compliance continues to change?

Senator FISCHER. Thank you.

Mr. CORBIN. I used to teach high school right outside Washington, DC, at Bladensburg and I would take my students to the EPA for field trips. As you know, the EPA started under the Nixon administration, and I agree with all the reasons why it was created because we did have rivers catching on fire and we had smog that was worse than it is today, and I guess the argument would—it is—the critical thing is where you draw the line.

And the way I understand right now with the Clean Power Plan also is that the States have the opportunity to submit their plan. I would encourage Nebraska to do that and to work with all the people to create that plan. Not to let it go to the Federal Government and say you're not going to create your own plan, so we're going to create it for you. That's exactly what people have been arguing against, yet the way I understand it, too, we—we've filed a lawsuit saying it wasn't even a good thing to do.

So the EPA is good. Like I've said before, there are times when any law—and the reason why we don't just have one session and then say, oh, well, the laws are done is because we try to improve upon them as time goes on.

The question is: What is the improvement and what side does it fall toward? And, obviously, being in public health, I'm most interested in the public—in preserving the public's health, which I think a lowering of the standard would do.

Mr. ZIMMERER. Yes, EPA, it is a need—it's needed here in the United States and I believe that, you know, when we talk about that balance, and I've said that more than once today, that's what we're looking for. We're looking for, you know, with the economy and with our public health and—you know, I agree with the doctor here. But there are other health consequences. If we're taking money out of families' pockets, we know what they are, they have higher rates of depression, they are higher rates of obesity, they have—don't receive appropriate medical care, and I could go on and on. And those—that isn't coming from research, that's coming from my personal experience in dealing with these families and working with them.

And so that's, I think, you don't always have to—you know, you also have to balance economy with health, but you have to look at all aspects of health as well. So that's where I leave that.

Senator FISCHER. OK. Thank you. As we conclude the hearing today, I want to, again, expression my gratitude to each of the witnesses for testifying. We were privileged to hear from a group of Nebraska stakeholders who provided details on the challenges faced by businesses, families and communities as the Administration finalizes the proposed rule to lower the ground-level ozone standard.

Nebraska is unique. We are the only 100 percent public power State in the Nation. We own the electricity that is generated and consumed within our borders.

Nebraska is also blessed to have a robust manufacturing industry and small business community, and these are important assets that create jobs, ensure that our rural communities and municipalities continue to thrive.

Currently, Nebraska has zero counties in nonattainment; however, under the proposed rule, 57 Nebraska counties will be classified as being in nonattainment, and many of these communities are in rural and primarily agricultural areas.

Furthermore, or the EPA's modeling and data, interpretation cannot verify that tightening the ozone standard will result in health benefits. So I have serious concerns about the impact of the proposed rule and what it will do to impose on small businesses and energy-intensive businesses and industries some really, I believe, negative impacts.

It is clear that imposing additional rules and permitting requirements on our utilities and job creators will only stifle economic growth and drive up the costs of important projects. We should not be in the business of creating unnecessary regulations that generate more red tape. Instead, we need to explore policy options that promote growth and enable our job creators' communities and our families to prosper.

So I look forward to utilizing the insights that I received from all of the stakeholders here today at this hearing to do exactly that.

Again, I thank you, the witnesses, for appearing today. And the hearing is now adjourned.

[Whereupon, at 11:46 a.m., the hearing was adjourned.]

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