

EPA’s 2010 Ozone NAAQS Proposal: The Real Cost to Ohio

EPA issued a proposed rule in January 2010 that would lower the primary National Ambient Air Quality Standard (NAAQS) for ozone from the current standard of 75 parts per billion (ppb) to a level between 60 and 070 ppb.

According to EPA’s information, a new ozone standard of 60 ppb would have the following effects in Ohio in 2020.

- Virtually all Ohio counties with ozone monitors would exceed the new standard under baseline conditions.
- Installing all available emission controls for nitrogen oxides (NO_x) achieves only 22 percent of the necessary reduction in NO_x emissions. If unknown controls are not available to fill the gap, some areas of the state would be in nonattainment.
- NO_x reductions from unknown controls would be required in all Ohio counties.
- Ohio businesses and individuals would incur control costs of up to \$5.6 billion per year based on EPA data.

Impacts on Economic Development

The costs of complying with a new ozone standard would make Ohio businesses less competitive and thus would lead to direct employment losses. These direct losses would generate larger overall losses through multiplier effects.

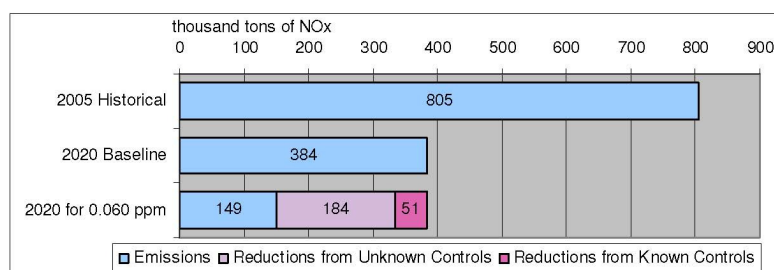
Consequences of ozone nonattainment for Cleveland, Cincinnati, Toledo, and other urban areas in Ohio can include the following.

- Restrictive permit requirements discourage companies from building major manufacturing facilities in the area. These requirements include offsetting new emissions and installing the maximum emission reduction technology without consideration of costs.
- Federal funding for highway and transit projects can be lost unless the state demonstrates that the projects will not increase emissions.

A more detailed discussion on the detrimental impact to Ohio’s economy can be found in “[Impact of EPA 2010 Ozone NAAQS Proposal on Ohio’s Economy](#)”¹

Statewide NO_x Reduction Requirements

The figure below shows NO_x emissions in Ohio in 2005, in 2020 under baseline conditions, and in 2020 for a new 60 ppb standard based on EPA data. The standard would require NO_x emissions in 2020 to be 61 percent below their projected 2020 baseline level and 81 percent below their 2005 level. Known controls achieve only 22 percent of the necessary reduction from the 2020 baseline. If unknown controls are not available to the extent assumed by EPA, some areas of the state would be in nonattainment.



Source: NERA preliminary analysis of EPA data in Docket No. EPA-HQ-OAR-2007-0225

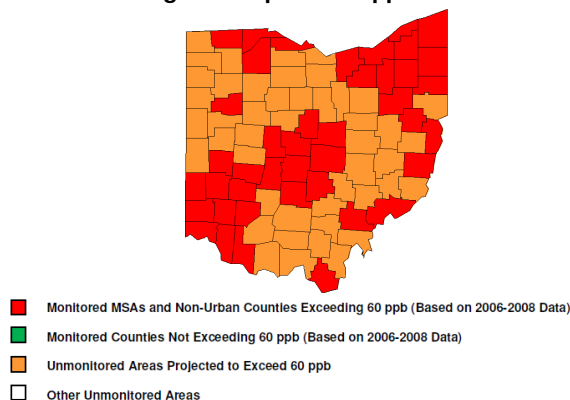
¹ Impact of EPA 2010 Ozone NAAQS Proposal on Ohio’s Economy (2010). Available from http://www.BuckeyeEnergyForum.com/uploads/files/24/OzoneEconomicImpact_OH.pdf.

State Impact

The map at right shows projected NA counties, shaded in , under a new ozone standard of 60 ppb based on EPA data. Because data are not available for many counties shaded in , the actual number of NA counties could be substantially larger than those identified by EPA.

Source: EPA, *Final Ozone NAAQS Regulatory Impact Analysis* (2008), Table 3a.18

OHIO
Metropolitan Statistical Areas (MSA) and Non-MSA Counties
Not Attaining the Proposed 60 ppb Ozone Standard

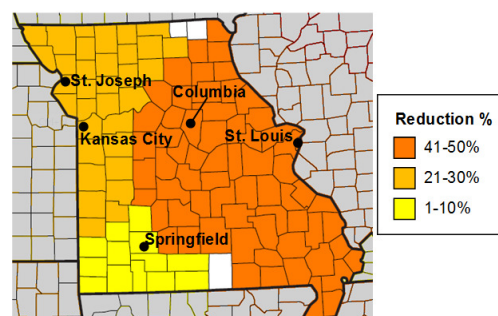


Reductions from Unknown Controls

The map at right shows that NO_x reductions from unknown controls would be required in all Ohio counties to meet a new 0.060 ppb standard. Counties in much of the state would need to reduce NO_x emissions more than 70

percent through unknown controls relative to their emissions in 2020 after application of the known controls in EPA's 2008 RIA Control Strategy.

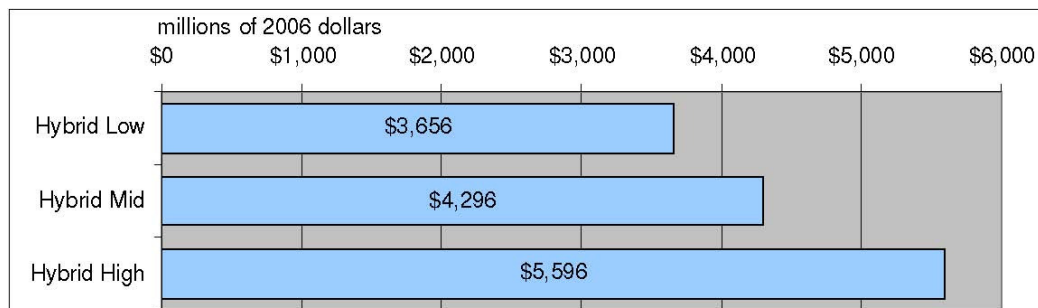
Source: EPA, *Supplemental Ozone NAAQS Regulatory Impact Analysis* (2010), Figure S2.2



Statewide Control Costs

The figure below shows ranges of estimated emission control costs for Ohio in 2020 under an ozone standard of 0.060 ppb based on EPA data (assuming these controls can be achieved). The estimates assume that unknown controls become more expensive as the level of necessary emission control increases.

As noted by EPA, this assumption aligns with the expectation that the average costs of unknown costs should be highest in areas relying most heavily on unknown controls relative to known controls. The annual cost estimates range from \$3.7 billion to \$5.6 billion based on EPA data.



Notes: Cost estimates reflect known and unknown controls for NO_x and known controls for VOC emissions; Hybrid Low, Mid, and High refer to alternative techniques for estimating the costs of unknown controls assuming marginal costs increase linearly from \$15,000/ton with low, mid, and high slopes; The ratio of unknown to known controls in EPA's Table S2a.6 for Cleveland-Akron-Lorain (29.84) is believed to be an error based on comparison with p. S5-5 and Table S2a.5. It has been changed to 2.15.

Sources: NERA preliminary analysis of EPA data in Docket No. EPA-HQ-OAR-2007-0225