

## EPA's 2010 Ozone NAAQS Proposal: The Real Cost to Pennsylvania

In January 2010, the Environmental Protection Agency (EPA) proposed a rule to 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 70 ppb. Under the Clean Air Act, areas that do not meet the new standard would then be considered “non-attainment” (NA). An NA designation can hinder economic development and limit business expansion in an already struggling economy. EPA cites no new health studies as the reason for lowering the standard, but believes the prior administration did not go far enough in 2008 when the standard was lowered from 80 ppb to 75 ppb. EPA’s proposal would have the following effects in Pennsylvania:

- Virtually all counties with ozone monitors would exceed the new 60 ppb standard;
- If Pennsylvania businesses and individuals installed all available emission controls for nitrogen oxides (NO<sub>x</sub>), they would achieve only 28 percent of the necessary reduction in NO<sub>x</sub> emissions, so EPA's proposal may not be achievable;
- NO<sub>x</sub> reductions from unknown controls would be required in all Pennsylvania counties;
- Pennsylvania businesses and individuals would incur control costs of up to \$3.2 billion.

### **Another Burden for an Already Struggling Economy**

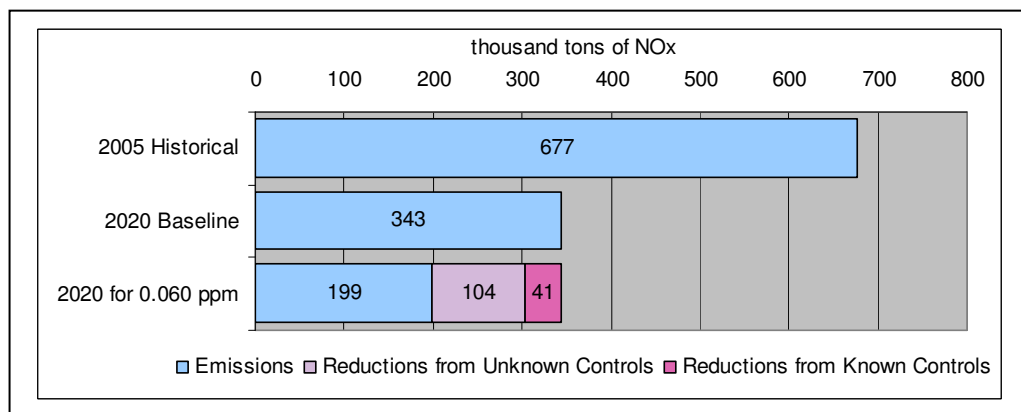
Consequences of ozone nonattainment for Pennsylvania, Pittsburgh, and other urban areas in Pennsylvania can include:

- Restrictive permit requirements that 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.
- Loss of federal funding for highway and transit projects unless the state demonstrates that the projects will not increase emissions.
- Costly compliance that makes Pennsylvania businesses less competitive and thus leads to direct employment losses—generating larger overall losses through multiplier effects.

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

### **Statewide Reductions**

The figure below shows NO<sub>x</sub> emissions in Pennsylvania in 2005, in 2020 under baseline conditions, and in 2020 for a new 60 ppb standard. The standard would require NO<sub>x</sub> emissions in 2020 to be 42 percent below their projected baseline level and 71 percent below their 2005 level. Known controls achieve only 28 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.



Note: Known controls include EPA's Modeled Control Strategy and supplemental controls. Sources: EPA data in ozone docket

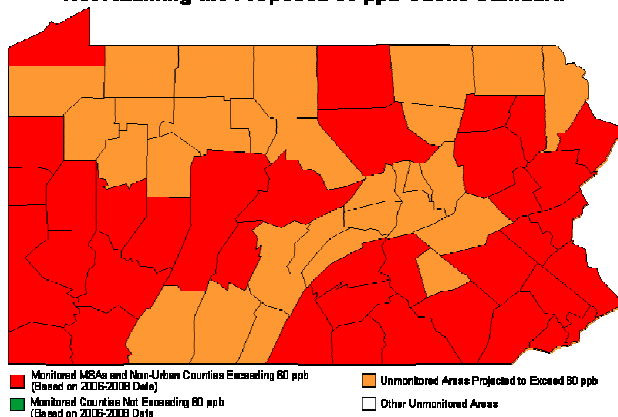
<sup>1</sup> Impact of EPA 2010 Ozone NAAQS Proposal on Pennsylvania’s Economy (2010). Available from [http://www.KeystoneEnergyForum.com/uploads/files/18/OzoneEconomicImpact\\_PA.pdf](http://www.KeystoneEnergyForum.com/uploads/files/18/OzoneEconomicImpact_PA.pdf).

## 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

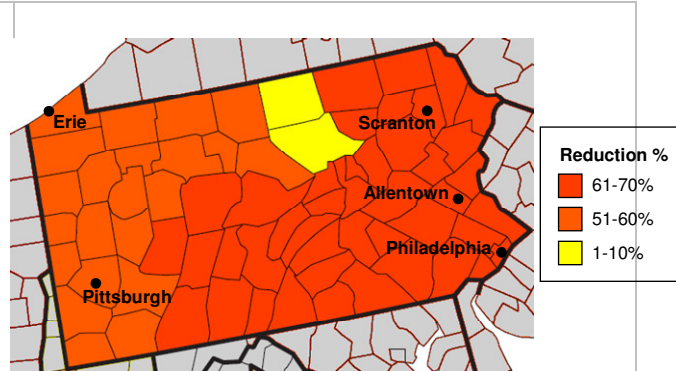
**Pennsylvania  
Metropolitan Statistical Areas (MSAs) and Non-MSA Counties  
Not Attaining the Proposed 60 ppb Ozone Standard**



## Areas of Reduction

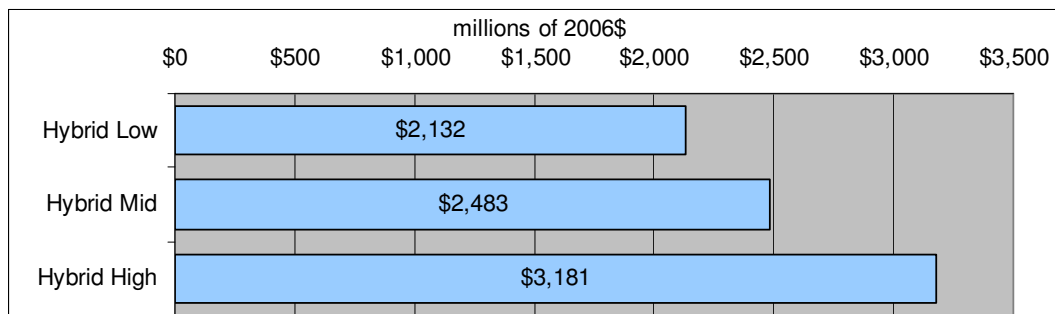
The map to the right shows that NO<sub>x</sub> reductions from unknown controls would be required in all Pennsylvania counties to meet a new 60 ppb standard. Counties in most of the state would need to reduce NO<sub>x</sub> emissions by more than 50 percent through unknown controls relative to their emissions in 2020 after application of known controls in the Modeled Control Strategy.

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



## Unknown Controls, Exorbitant Costs

As shown in the figure below, EPA estimates Pennsylvania's emission control costs to range from \$2.1 billion to \$3.2 billion in 2020 under an ozone standard of 60 ppb (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.



Notes: Cost estimates reflect known and unknown controls for NO<sub>x</sub> 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

Sources: EPA data in ozone docket