

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

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 2008 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's proposal would have the following effects in Tennessee:

- Tennessee businesses and individuals would incur control costs of up to \$2.2 billion;
- The majority of counties with ozone monitors would exceed the new standard;
- If Tennessee businesses and individuals installed all available emission controls for nitrogen oxides (NO_x), they would achieve only 26 percent of the necessary reductions, so EPA's proposal may not be achievable.
- All Tennessee counties would require NO_x reductions from unknown controls.

Another Burden on an Already Struggling Economy

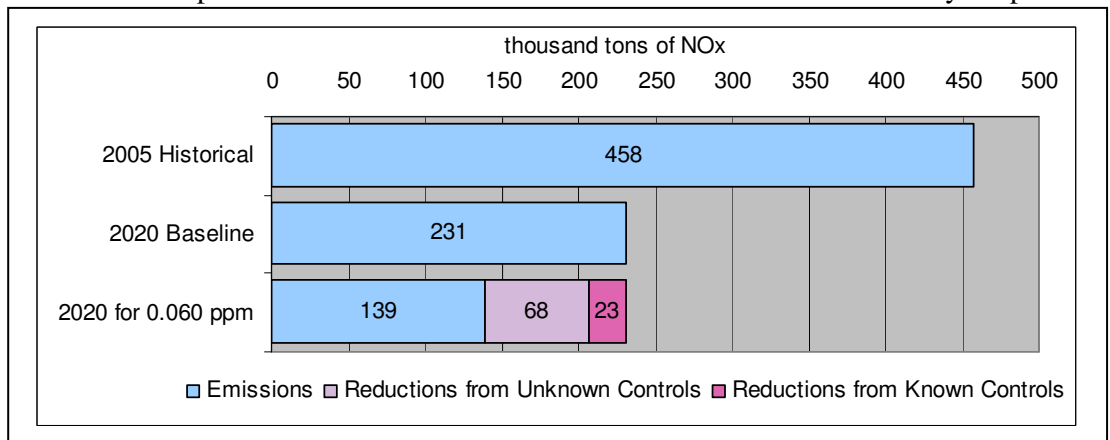
Areas such as Memphis, Nashville, Knoxville, Chattanooga, and other urban areas in Tennessee may become NA areas under the proposed standard. Consequences of an NA designation include:

- 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 Tennessee businesses less competitive and thus leads to direct employment losses—resulting in larger overall losses through multiplier effects.

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

Statewide Reductions

The figure below shows NO_x emissions in Tennessee in 2005, in 2020 under baseline conditions, and in 2020 for a new 60 ppb standard. The standard would require NO_x emissions in 2020 to be 39 percent below their projected baseline level and 70 percent below their 2005 level. Known controls achieve only 26 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 deemed NA.



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

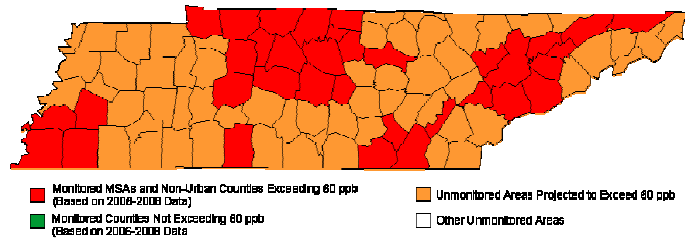
¹ Impact of EPA 2010 Ozone NAAQS Proposal on Tennessee's Economy (2010). Available from http://www.TNEnergyForum.com/uploads/files/26/OzoneEconomicImpact_TN.pdf.

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

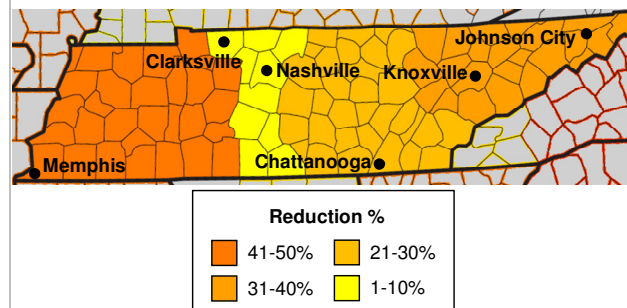
Tennessee Metropolitan Statistical Areas (MSAs) and Non-MSA Counties Not Attaining the Proposed 60 ppb Ozone Standard



Unknown Controls

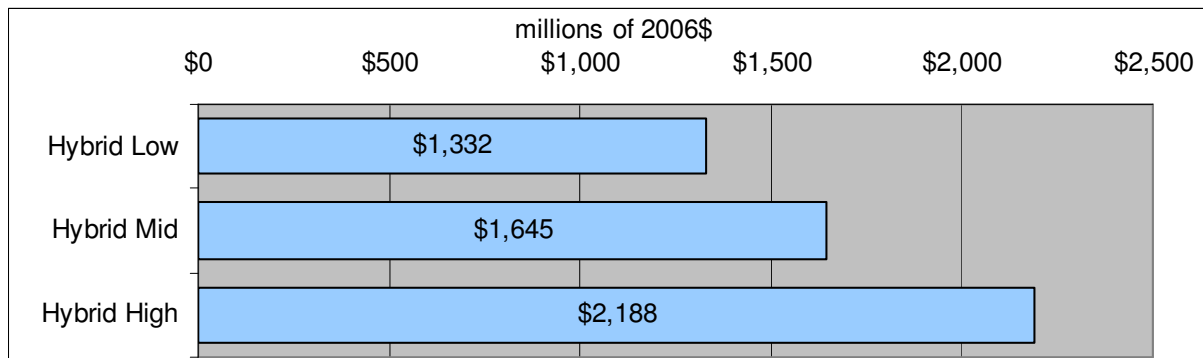
The map at right shows that all Tennessee counties would be required to reduce NO_x emissions from unknown controls to meet a new 60 ppb standard. Counties in western Tennessee would need to reduce emissions by more than 40 percent through unknown controls relative to their emissions in 2020 after application of known controls in the Modeled Control Strategy.

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



Sweeping Costs

As shown in the figure below, EPA estimates that under an ozone standard of 60 ppb, emission control costs for Tennessee will range from \$1.3 billion to \$2.2 billion in 2020 (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_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

Sources: EPA data in ozone docket