

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

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 North Carolina:

- The majority of counties with ozone monitors would exceed the new standard under baseline conditions;
- In some cases, businesses would have to reduce emissions by more than 70 percent;
- With existing technology, less than half of the necessary reductions would be achieved. This means that even if business installed all available controls, EPA’s proposal will not be achievable and many counties would be in perpetual non-attainment; and
- It would cost North Carolina businesses and individuals as much as \$4.2 billion, according to EPA estimates.

Another Burden for an Already Struggling Economy

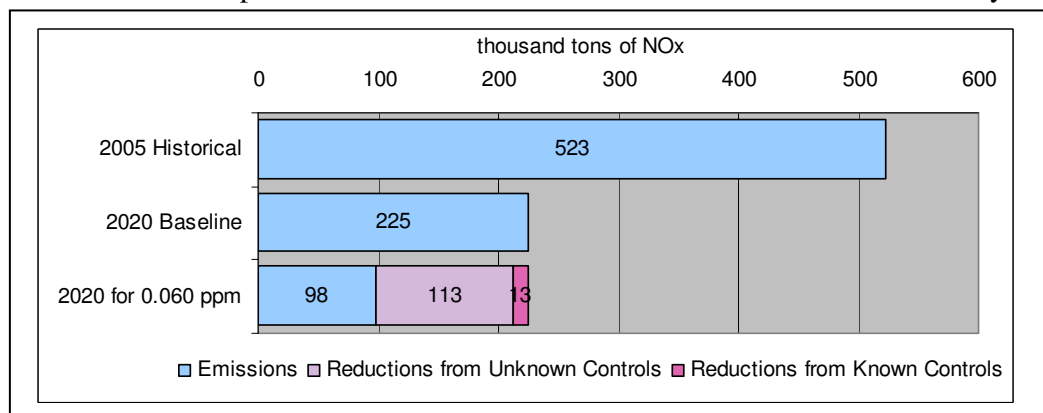
Consequences of ozone nonattainment for Charlotte, Raleigh, Winston-Salem, and other urban areas in North Carolina can include the following:

- 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.
- Costly compliance will make North Carolina businesses less competitive and thus lead to direct employment losses. These direct losses will generate larger overall losses through multiplier effects.

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

Statewide Reduction Requirements

The figure below shows NO_x emissions in North Carolina 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 56 percent below their projected baseline level and 81 percent below their 2005 level. Known controls achieve only 10 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

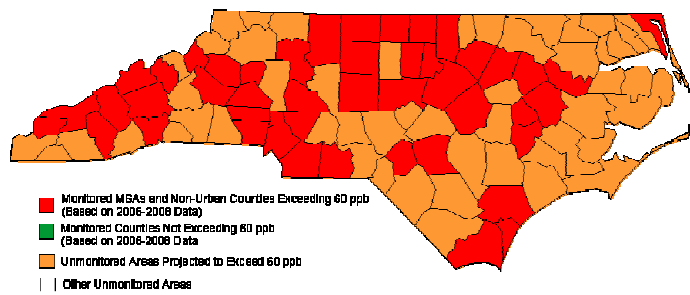
¹ Impact of EPA 2010 Ozone NAAQS Proposal on North Carolina’s Economy (2010). Available from: http://www.ncenergyforum.com/uploads/files/16/OzoneEconomicImpact_NC.pdf.

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

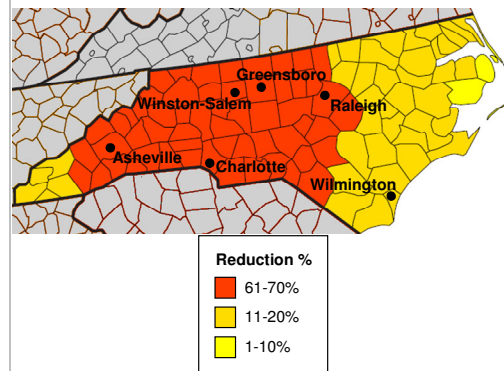
NORTH CAROLINA
Metropolitan Statistical Areas (MSAs) and Non-MSA Counties Not Attaining the Proposed 60 ppb Ozone Standard



Areas of Reduction

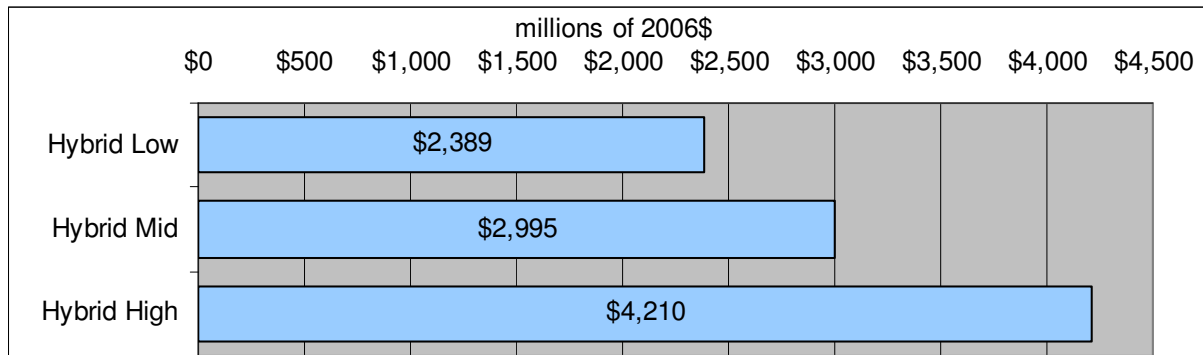
The figure to the right shows that *all* North Carolina counties would need to make reductions to meet a 60 ppb ozone standard, and most would need to reduce their NO_x emissions by 61-70 percent.

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



Unknown Controls, Exorbitant Costs

The figure below shows ranges of EPA's estimated emission control costs for North Carolina 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. The cost estimates range from \$2.4 billion to \$4.2 billion.



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