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OZONE

THE ISSUE

Ozone is one of six federal criteria pollutants regulated by U.S. Environmental Protection Agency (EPA) under the *Federal Clean Air Act*. EPA sets a numeric standard for ozone, designates areas exceeding the standard, and mandates that states attain the standard. States must submit for federal approval a State Implementation Plan (SIP) for each non-attainment area. If the standard is not achieved at the specified date, EPA can impose sanctions such as withdrawal of federal highway funds and a freeze on road construction.

Ozone levels have long challenged Texas' two largest urban areas—Houston-Galveston-Brasoria (HGB) and Dallas-Fort Worth (DFW)—although continuous, dramatic improvement has occurred in the last 10 years. During the last five years, EPA has imposed three different standards. Within months after meeting the one-hour ozone standard in DFW, EPA switched to a stricter eight-hour 85-ppb standard. Shortly after the state submitted SIPs for the 85-ppb standard, EPA strengthened the standard to the current 75 ppb. Under this strict standard, five more urban areas in Texas would become non-attainment. Non-attainment status is a major barrier to economic growth.

Ozone is produced by a reaction of nitrogen oxides (NOx) and volatile organic compounds (VOCs) in the presence of heat and sunlight. Unfortunately, Texas has optimal conditions for ozone formation. Ozone-producing emissions predominantly derive from mobile sources and industrial point sources. Mobile sources include “on-road” vehicular traffic and “off-road” construction equipment and vehicles. The majority of emissions now are from mobile—not industrial—emissions, even in the Houston region with its massive petrochemical complex.

Although required to attain the ozone standard, the state lacks legal authority to directly regulate mobile sources, i.e., engines and fuels. This is pre-empted authority of the federal government. The Legislature has reduced mobile emissions through creative means and special exemptions: emission inspections, Texas Emission Reduction Program (TERP), Low-Income Vehicle Repair & Replacement, and Texas Low Emission Diesel (TXLED). At extraordinary cost, these measures yield only a portion of mobile-emission reductions necessary for attainment.

Unlike many states, Texas has aggressively regulated industrial sources of ozone. In the Houston area, major sources must reduce NOx by 80 percent and VOCs 50-70 percent. Federal engine standards coming online in the next few years will continue to lower mobile emissions without onerous, costly state regulation. Purchase of a new vehicle is an effective way to reduce ozone emissions.

THE FACTS

- ★ Without timely federal action to reduce mobile source emissions, attainment of the new 75-ppb standard by state measures alone is likely impossible.

TEXAS PUBLIC POLICY FOUNDATION

- ★ In addition to DFW and HGB, the new 75-ppb standard will trigger non-attainment for the Beaumont-Port Arthur, San Antonio, Tyler-Longview, Austin, and El Paso areas, perhaps covering 34 counties. TCEQ will be required to submit seven, instead of two, SIPs at great cost to the state in financial and human resources.
- ★ Non-attainment is established by highest ozone levels at one monitor (the “design value”) and not by average ozone level across a region. The majority of monitors in the DFW and HGB areas attain the current standard. Thus, the majority of the population has air quality that meets the standard.
- ★ TCEQ has adopted regulatory controls and submitted an SIP to EPA for DFW, demonstrating attainment in 2010. Already stringently regulated, HGB cannot reach attainment by 2010. A request to reclassify and extend the attainment date for HGB is pending before EPA.
- ★ In DFW, mobile sources emit 80 percent of NO_x; in HGB, mobile sources emit 62 percent of NO_x, according to a 2005 TCEQ inventory. Mobile sources dominate ozone formation.
- ★ Texas citizens have made major financial investment in reducing ozone. As of April 2008, TCEQ has issued TERP grants of more than \$545 million for purchase of replacement vehicles and equipment or retrofit of diesel engines. The majority of the now-annual \$200 million TERP fund derives from title fees.
- ★ Since 2004, the Legislature has appropriated \$30 million for air-quality studies. TERP funds directed \$18 million to the New Technology Research and Development Fund. Additional appropriations of \$12 million support air-quality studies and modeling needed to meet federal SIP requirements.
- ★ TCEQ models show that power plants account for an extremely small part of ozone in the DFW area. On average, the nine large East Texas power plants contribute only 1 percent of DFW ozone; plants inside the nine-county non-attainment area contribute .7 percent; all power plants in Texas account for 2.29 percent of DFW ozone levels.

RECOMMENDATIONS

- ★ Demand EPA assume its responsibility to address mobile sources of ozone formation.
- ★ Urge EPA and the U.S. Congress to transform the convoluted, costly, ineffective SIP process imposed on states.
- ★ Challenge scientific justification and practicability of new 75-ppb ozone standard.
- ★ Avoid legislation that imposes growth inhibiting regulatory controls on counties that attain air-quality standards, especially state-only permitting requirements.
- ★ Assure that state-funded air-quality studies and related research meet practical needs of TCEQ.
- ★ Avoid additional grant programs for mobile sources supported by fees on all Texans.
- ★ Avoid legislation mandating additional controls on industrial sources when mobile sources are the ozone drivers.

RESOURCES

- *Adopted Eight-hour Ozone Attainment Demonstration State Implementation Plan (SIP) for the Dallas-Fort Worth Area*, Texas Commission on Environmental Quality (May 2007).
- *Adopted Eight-hour Ozone Reasonable Further Progress State Implementation Plan (SIP) for the Dallas-Fort Worth Area*, Texas Commission on Environmental Quality (May 2007).
- *Adopted Eight-hour Ozone Reasonable Further Progress State Implementation Plan (SIP) for the Houston-Galveston, Brazoria Area*, Texas Commission on Environmental Quality (May 2007).
- *Legislative Briefing on Mobile Source Emissions*, Office of the Chief Engineer, Texas Commission on Environmental Quality (Mar. 2008).

