

*For EPA personnel and partners who wish to implement collaborative problem solving projects effectively.*

## Clean Air Nonroad Diesel Rule

*Agency's close interaction with concerned stakeholders greatly assists with the formation of Nonroad Diesel rule: Effort reduces toxic emissions, while providing a wide range of health benefits.*

### Background

Recent air quality data shows that about 115 million people live in counties that violate health-based air quality standards for ground-level ozone, or smog. About 65 million people live in counties that violate health-based air quality standards for airborne pollution—also known as particulate matter (PM). Nonroad diesel engines (such as compressors) contribute greatly to air pollution in many of our nation's cities and towns. Nonroad diesel engines account for 47 percent of diesel particulate matter and 25 percent of nitrogen oxides (NOx) from mobile sources, both of which contribute to serious national public health problems.

Nonroad diesel presented several technological, manufacturing, and market-based challenges in comparison to the highway diesel engine programs. The number of engine and equipment manufacturers was far larger and, from a technical standpoint, nonroad diesel engines encompassed a much wider performance range and faced more diverse operating conditions. Furthermore, many diesel equipment manufacturers had overseas markets just as large as the U.S. domestic market, so it was important to "harmonize the new requirements in key segments of the (global) marketplace" to the greatest extent possible.

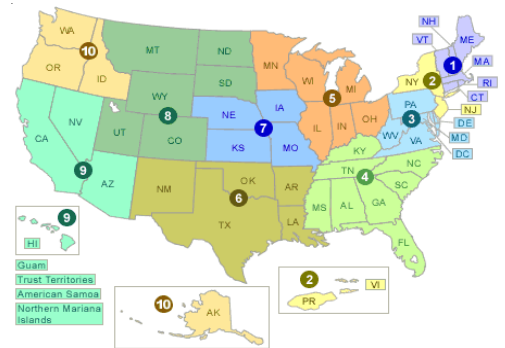
### Why The Clean Air Nonroad Diesel Rule Worked

The nonroad rule represents an unprecedented commitment and collaboration that included the White House, EPA, the Office of Management and Budget, the environmental community, states and local governments, engine and equipment manufacturers, refiners, technology companies, and other groups and associations. The emergence of the rule was built on the foundation of relationships forged during previous collaborations. Since the mid-1990s, many of these parties worked with EPA's Office of Transportation and Air Quality (OTAQ) on earlier regulations and collaborative efforts.

EPA's strategy for the collaborative process required intensive stakeholder outreach, involving one-on-one interaction with individual companies and groups. This approach was effective for fostering a sense of trust for the collaboration, and, moreover, the stakeholders claimed ownership of the rule, and were able to see their efforts in the final product.

### What Made the Clean Air Nonroad Diesel Rule Unique

The Nonroad Diesel Rule was distinguished by the level and manner of public involvement that went into creating it. EPA took time to actively engage industry stakeholders early and all throughout the process. In contrast to standard practice, the Office of



Management and Budget (OMB) was also involved early in the process. The collaboration between OMB and EPA allowed the rulemaking effort to proceed on an expedited basis. Additionally, EPA employed a shuttle diplomacy approach. Essentially, the Agency communicated directly with the broadly represented individual stakeholders rather than convening large groups from disparate sectors. Past experience demonstrated that large gatherings impeded open communication because stakeholders were concerned about revealing--thus compromising--competitive advantage.

### Lessons Learned

Lessons recorded from the collaboration for the Nonroad Diesel Rule point to some salient advice for similar ventures:

- Engage political leadership to actively demonstrate their support to stakeholders through personal involvement.
- Assess the likelihood that a collaborative process will result in a workable regulation.

The process they used was unlike any other process I've ever seen. They opened the door, let everybody in and made us all feel like the favorite child of the parent."

*- Bill Becker, State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO)*

- Dedicate sufficient human capital resources to the task. Stakeholders respect the agency when experts talk to experts.
- Be firm on clearly-defined environmental objectives, but flexible on implementation strategies.
- Invest substantial time and energy in laying the groundwork for trust between stakeholders and the agency.
- Share data and analysis openly to frame the issues and drive the process.
- Listen and learn about the specific issues facing stakeholders. Make site visits when possible.
- Expend every effort to see the situation from the stakeholders' point of view and demonstrate that you understand their point of view.
- Empower stakeholders by soliciting input and encouraging strategic opportunities for public communication.

## What Were the Results of the Rule

The stakeholders believe that the rule developed through the collaborative process was superior to any that would have been developed otherwise. EPA officials and stakeholders also concur that the Nonroad Diesel Rule is better because EPA learned through the process, and the Agency was effective in understanding the needs of each stakeholder.

Reducing NOx and PM emissions from nonroad diesel engines by more than 90 percent will provide a wide range of public health benefits. EPA estimated that by 2030 controlling those emissions would annually prevent about:

- Twelve thousand (12,000) premature deaths;
- Eighty-nine hundred (8,900) hospitalizations;
- One million (1,000,000) work days lost;
- Fifteen thousand (15,000) heart attacks;

- Six thousand (6,000) children's asthma-related emergency room visits; and,
- Two hundred eighty thousand (280,000) cases of respiratory problems in children.

Once all older engines are replaced, the health benefits of this rule are estimated to be \$80 billion annually. Estimated costs for the engine and fuel requirements are many times less, amounting to about \$2 billion annually in that time frame.

## Keys to Collaboration Exemplified

Six keys for collaborative problem solving were demonstrated in the Clean Air Nonroad Diesel Rule development process. In this instance, the air pollution generated in the nation's cities and towns by non-road diesel engines represented the **shared problem**. Additionally, nonroad engines currently meet relatively modest emissions requirements and therefore continue to emit large amounts of nitrogen oxides (NOx) and particulate matter (PM).

The **convener of stature** for the rule is embodied by the high level support extended by EPA, OMB, and the White House. The EPA Administrator's open involvement and public support for the rule helped establish its importance in the eyes of the stakeholders. Also, EPA and OMB officials recognized the public health benefits that curbing non-road diesel pollution could achieve.

OTAQ assumed the role of being the **committed leader** in the collaborative process. The OTAQ Director guided the overall process, and the Director of the Assessments and Standards Division for OTAQ also played a key leadership role from start to finish.

The **representatives of substance** included stakeholders from varying sectors, primarily: engine and equipment manufacturers; oil refiners; environmental groups; and nonprofit coalitions representing state and local governments.

The **clearly-defined purpose** for the collaboration could be articulated in two ways: Symbolically, the purpose is to eliminate the dark, plume emissions that are commonly associated with non-road diesel engines; and, specifically, the purpose is to cut emissions from construction, agricultural, and industrial diesel-powered equipment by more than 90 percent as well as to remove 99 percent of the sulfur in diesel fuel by 2010.

Throughout this collaboration, EPA spoke with high-level principals individually, shared information, and heard positions in a continuous round of ongoing conversations and continuous communications. Stakeholders from all sectors generally agree EPA attempted to create a transparent process and a **common information base**.

## For More Information

Assessment and Standards Division,  
Office of Transportation and Air Quality  
(734) 214-4636  
<http://www.epa.gov/innovation/collaboration>  
or  
OTAQ's nonroad page  
<http://www.epa.gov/nonroad/>