NACAA
national association of clean air agencies

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Washington, DC 20460

To Whom It May Concern:

The National Association of Clean Air Agencies (NACAA) appreciates this opportunity to comment on the U.S. Environmental Protection Agency's (EPA's) proposed Tier 3 Vehicle Emission and Fuel Standards (Tier 3).[1] NACAA is a national, non-partisan, non-profit association of air pollution control agencies in 43 states, the District of Columbia, four territories and 116 metropolitan areas. The air quality professionals in our member agencies have vast experience dedicated to improving air quality in the U.S. These comments are based upon that experience. The views expressed in these comments do not necessarily represent the positions of every state and local air pollution control agency in the country.

NACAA strongly supports EPA's Tier 3 proposal to further strengthen the federal program to regulate emissions from passenger cars and light trucks and lower sulfur levels in gasoline. We demonstrated our support for this proposal in our testimony at the agency's April 24, 2013, public hearing in Philadelphia and in our written statement submitted for the record of the April 29, 2013, public hearing in Chicago. We are so supportive because we know of no other strategy that can achieve such substantial, immediate and cost-effective reductions in air pollution as Tier 3.

The Tier 3 Vehicle and Gasoline Sulfur Standards Will Provide Significant Emission Reductions and Air Quality Benefits

More than 158 million people across the nation currently live in areas where the air they breathe violates at least one of the health-based National Ambient Air Quality Standards (NAAQS). Mobile source emissions, including those from the passenger cars and light trucks that are the focus of this proposal, are a primary contributor to these violations, playing an especially central role in elevated levels of ozone and fine particulate matter ($PM_{2.5}$). The adverse health and welfare impacts associated with exposure to ozone

[1] EPA's proposed rule, *Control of Air Pollution from Motor Vehicles: Tier 3 Vehicle Emission and Fuel Standards* (May 21, 2013), is available at http://www.gpo.gov/fdsys/pkg/FR-2013-05-21/pdf/2013-08500.pdf.

and $PM_{2.5}$ are numerous, serious and well documented, including premature death as well as aggravated respiratory conditions, decreased lung function, irregular heartbeat and heart attacks, among others. The vehicles to be affected by Tier 3 standards contribute to other air quality problems as well, including toxic air pollution, regional haze and the eutrophication of water bodies. The emission reductions that would result from the Tier 3 program proposed by EPA will benefit the citizens in every state and locality across the country.

In October 2011, NACAA published a study documenting the costs and air quality benefits of a Tier 3 program modeled on California's Low Emissions Vehicle III (LEV III) program, including tighter standards for tailpipe emissions of non-methane organic gases (NMOG), nitrogen oxides (NO_x) and an average gasoline sulfur standard of 10 parts per million (ppm).[2] That report details how reducing sulfur in gasoline will enable the use of improved emissions control technology on new cars and light trucks (sulfur poisons and inhibits the performance of catalysts that control vehicle exhaust resulting in increased vehicle emissions), and result in an overnight reduction in emissions from the existing fleet (due to improvement in the effectiveness of NO_x controls on existing Tier 2 vehicles) on the order of nearly 300,000 tons of NO_x. This is equivalent to taking 33 million cars off our nation's roads in 2017 when the program would begin and is the most significant reduction in onroad air pollution emissions EPA has proposed in many years.

Further, by 2030, the Tier 3 program would result in reductions in onroad mobile source emissions of NO_x, volatile organic compounds (VOCs) and carbon monoxide (CO) of at least 25 percent from current levels. EPA's comprehensive analysis of Tier 3 bears out NACAA's estimates, finding that the national onroad emissions inventory would be reduced in 2017 by 284,000 tons of NO_x (8 percent), 45,000 tons of VOCs (3 percent), 747,000 tons of CO (4 percent), 1,625 tons of benzene (4 percent) and 15,000 tons of total air toxics (3 percent). By 2030, these reductions would increase to 525,000 tons of NO_x (28 percent), 226,000 tons of VOCs (23 percent), 7,500 tons of $PM_{2.5}$ (10 percent), 5,765,000 tons of CO (30 percent), 8,581 tons of benzene (36 percent) and 90,000 tons of total air toxics (23 percent). In addition, emission reductions will continue to accrue beyond 2030 as more of the vehicle fleet turns over to Tier 3.

The Benefits of Tier 3 Come at a Modest Cost

While the emission benefits of Tier 3 are very high, the costs of the program are very low. In our 2011 study, NACAA predicted an increase in the cost of gasoline of less than a penny a gallon and EPA has found the same (EPA's analysis estimated 0.89 cents per gallon).

In terms of impacts on refiners, EPA estimates that 111 refineries could potentially be affected by Tier 3. Of this total, 16 would need to install new equipment to comply with Tier 3. Of the remaining 95 refineries, 66 could meet the requirements by modifying their existing equipment and 29 already comply with Tier 3 or could do so by making operational changes.

NACAA estimated the cost of Tier 3 vehicle emission control technologies to be about $150 per vehicle – less than 1 percent of the average cost of a new car today. EPA's analysis shows the cost will be even lower, at $130 per vehicle in 2025.

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[2] NACAA's study, *Cleaner Cars, Cleaner Fuels, Cleaner Air: The Need for and Benefits of Tier 3 Vehicle and Fuel Regulations* (October 31, 2011), is available at http://www.4cleanair.org/Documents/NACAATier3VehandFuelReportFINALOct2011.pdf.

EPA expects the total annual cost of the Tier 3 program to be $3.4 billion in 2030. This compares to the estimated total monetized benefits of Tier 3 of up to $23 billion in 2030. Clearly, the benefits far outweigh the costs by about 7:1.

Opponents of Tier 3 contend that the cost of low-sulfur fuel will be not less than a penny a gallon, but between 6 cents and 9 cents per gallon. However, in making this estimate they did not account for the mitigating impacts of EPA's proposed set of flexibilities, all of which have proven successful in prior fuel programs adopted by the agency (e.g., lowering gasoline vapor pressure). These include 1) an annual average sulfur standard with an ability to use a higher per-gallon cap; 2) an averaging, banking and trading program that would allow refiners six years – January 1, 2014 through December 31, 2019 – over which to spread out their investment and receive credit for early compliance by over complying with the current 30-ppm average sulfur standard from 2014 through 2016; 3) relief for small refiners and refineries – those producing fewer than 75,000 barrels a day – in the form of a three-year delay in compliance until December 31, 2019; and 4) relief for economic and technical hardship, available to all refiners.

The Cost Effectiveness of Tier 3 Is High

As part of its draft Regulatory Impact Analysis (RIA),[3] EPA concludes that the cost effectiveness of the proposed Tier 3 vehicle and fuel standards is less than $4,500 per ton of hydrocarbon (NMOG)+NO_x removed in 2030 – a rate that is far more cost effective than most other potential NO_x reduction measures being considered in various parts of the country. Reducing emissions that cause air pollution is a "zero-sum game." Foregoing reductions from one source category means seeking reductions from another. Cars and light trucks are responsible for a considerable share of emissions across the country, usually more than 30 percent and frequently 50 percent. In the absence of a federal Tier 3 program, areas in need of emission reductions will have no choice but to turn to other, more expensive, less cost-effective measures, including controls on small businesses, to meet their statutory clean air obligations. Moreover, achieving emission reductions of the magnitude that will result from Tier 3 could be extremely difficult in areas where there may not be sufficient sources to control, or where state and local regulation of certain sources is politically unacceptable.

Tier 3 Will Create Jobs

Tier 3 will also provide new employment opportunities. In its draft RIA, EPA projects that the work refineries will need to undertake to satisfy the Tier 3 requirements will create about 1,000 front-end design and engineering jobs and 6,000 construction jobs for a total of 7,000 new jobs. The agency notes that the petroleum sector employed about 65,000 workers in 2009. Therefore, the new jobs to be created as a result of Tier 3 would increase employment in the petroleum sector by over 10 percent compared to 2009 levels.

Tier 3 Vehicle Technologies and Gasoline Are Already Available

Not only is Tier 3 tremendously effective from an air quality perspective – low in cost, high in cost effectiveness and good for the economy – it is feasible today. EPA's proposed Tier 3 vehicle tailpipe standards are modeled on California's LEV III program. The potential technologies for this program are

[3] EPA's *Draft Regulatory Impact Analysis: Tier 3 Motor Vehicle Emission and Fuel Standards* (March 2013), is available at http://www.epa.gov/otaq/documents/tier3/420d13002.pdf.

consistent with, and almost entirely the same as, those on today's California's vehicles, including precious metal catalyst loading, optimized close-coupled catalysts, secondary air injection pumps and evaporative control systems. Further, California's gasoline already achieves 10-ppm sulfur on average. Finally, gasoline in other nations, including those in the European Union and Japan, is subject to a 10-ppm cap. China has also adopted requirements for 10-ppm sulfur, to take effect in 2017.

Comments on Other Aspects of the Tier 3 Proposal

Use of Ethanol in Certification Fuel – NACAA supports the concept of ensuring that fuels used for certification purposes should more closely reflect real-world fuels. Given the prevalence of E10 (gasoline containing 10 percent ethanol by volume) in the marketplace, we encourage EPA to replace the currently used indolene with E10 as an emissions certification fuel. We are concerned that EPA has proposed to require that E15 be used as certification fuel. At this time, E15 is only a small segment of the U.S. fuels market and the prospect of it becoming a widely used automotive fuel in the future is questionable. Further, use of E15 in the existing vehicle fleet will have adverse impacts on vehicle emissions (e.g., aldehydes or NO_x). Therefore, we recommend that in the final Tier 3 rule EPA specify E10 as a test fuel and continue to monitor the use of E15 in the marketplace. Should use of E15 become significant, the agency can then consider the pros and cons of revising test fuel specifications to include E15.

US06 PM Standards – For the Supplemental Federal Test Procedure EPA has proposed that the standards for PM be met based on the US06 test, which represents aggressive highway driving, since the greatest concern regarding PM formation and sensitivity of engine controls is due to high-speed, high-load driving conditions. In particular, the agency has proposed a US06 PM standard of 10 milligrams per mile (mg/mi) for vehicles at or below 6,000 pounds gross vehicle weight rating (GVWR) and a standard of 20 mg/mi for heavier light-duty vehicles, to be phased in over a five-year period beginning in 2017. However, given EPA data showing that manufacturers appear to be controlling PM emissions from heavier light-duty vehicles over severe duty cycles, EPA requests comments on whether it should adopt a common US06 standard of 10 mg/mi for all light-duty vehicles. NACAA has reviewed EPA US06 PM emissions test data provided in a March 1, 2013, agency memorandum available in the Tier 3 rulemaking docket.[4] According to the test data shown in Figure 8 (on final US06 PM emission results) of that memorandum, it is clear that US06 PM emission results for vehicles under *and* over 6,000 pounds GVRW are far below 10 mg/mi. In fact, no vehicle tested is over 4 mg/mi and most are substantially lower. Given the significance for air quality and public health of reducing PM emissions, NACAA recommends that EPA adopt US06 PM standards below 10 mg/mi for all affected light-duty vehicles – under and over 6,000 pounds GVWR – as supported by the agency's test data.

Evaporative Emission Standards – EPA proposes new evaporative emission standards to reduce total evaporative emissions from all gasoline-powered highway vehicles to near-zero levels. The program would require new evaporative emission control technology on new vehicles as well as system design improvements to achieve improved in-use system performance and extend useful life. The proposed approach also introduces a new canister leak emission standard and would apply California's onboard diagnostic requirements nationwide. NACAA endorses these proposed requirements. Also related to evaporative emissions, with respect to the In-Use Verification Program (IUVP) requirements for the leak emission standard, EPA notes in the proposal that fuel and evaporative control system leaks are influenced

[4] *Test Program to Establish LDV Full Useful Life PM Performance* (March 1, 2013), EPA memorandum from Rafal Sobotowski to EPA Docket No. EPA-HQ-OAR-2011-0135.

to a significant degree by age as well as design and other factors. The agency, therefore, seeks comment on whether to extend leak emission IUVP testing to vehicles beyond the four-year age point, perhaps to six or eight years. Because of the importance of in-use confirmatory testing for older vehicles, NACAA believes EPA should extend testing beyond the four-year point.

Federal Action on Tier 3 Is Imperative

State and local air pollution control agencies are relying on EPA to adopt the Tier 3 rule. Section 177 of the Clean Air Act authorizes states to opt into California's LEV III tailpipe standards, but not all states are able to take advantage of this opportunity. Moreover, the Clean Air Act precludes all states except California from adopting low-sulfur gasoline standards. Therefore, it is imperative that the federal government take action this year to adopt Tier 3. If the rule is not promulgated by December 31, 2013, Tier 3 may not apply to the 2017 model year of vehicles and an entire year of benefits will be lost. This delay will have a serious and adverse impact on human health and welfare.

When promulgating this final rule, EPA should provide a clear path forward for state and local agencies with respect to transitioning from current boutique fuel programs to the federal Tier 3 program including a streamlined SIP process and related guidance.

Conclusion

In closing, NACAA applauds EPA for proposing the Tier 3 package and reiterates its strong support for this program, which will benefit all citizens throughout the country. As we stated at the outset, our association knows of no other air pollution control strategy that can achieve such substantial, immediate and cost-effective emission reductions as Tier 3. We urge EPA to take final action to adopt this rule as soon as possible, but no later than December 31, 2013.

Once again, thank you for this opportunity to provide comments on the Tier 3 proposal.

Sincerely,

Nancy L. Seidman
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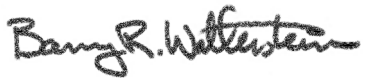

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