



February 2010

## ***Recommendations to Reform California's Smog Check Program***

### **A Proposal from the California Environmental Dialogue**

The California Environmental Dialogue (CED) is an on-going dialogue among California business leaders, environmentalists, and government officials. Using dialogue to develop innovative policy solutions, our mission is to meet the needs of a healthy environment and a sound economy while improving the effectiveness and efficiency of our environmental regulatory system.

The CED has long worked on California's pressing air quality issues through both its Plenary and Clean Air Dialogue Working Group. In the past, the CED has supported a strong Smog Check program through, for instance, calling for the elimination of Smog Check's rolling exemption for light duty vehicles with model years that are 30 years or older (SB 42, 1997). (Please see <http://www.cedlink.org/publications.html> for this, and other, past CED-published consensus statements.)

The CED recognizes that California's Smog Check program is one of the State's most important air quality programs needed to meet state and federal air quality standards. The CED also recognizes that although the Smog Check program continues to generate large emission reductions from mobile source emissions, the program is not as effective as it could be, whether measured by emissions benefits or by program costs. While some deficiencies in the Smog Check program have been addressed - for instance, on January 1, 2010 diesel-powered passenger cars and light duty trucks, 1998 and newer, will also be required to be tested biennially in all areas of the state - there remain numerous areas needing reform and improvement.

Suggested improvements to the Smog Check program include: instituting OBD-only testing for newer model-year vehicles and annual testing of older model-year vehicles; addressing the widespread incidence of improper and incomplete inspection through providing the Bureau of Automotive Repair (BAR) the statutory authority to establish a performance metric for Test-Only and Gold Shield stations and technicians to achieve as a condition of testing "directed vehicles" as well as the ability for BAR to develop and enforce a truly punitive fine structure for those stations and technicians conducting improper inspections; incorporating motorcycles into the Smog Check program; recommending that BAR adopt regulations to implement section 44081 of the Health and Safety Code and require mandatory off-cycle testing and repair for any vehicle identified through a remote sensing program as a high emitting vehicle; and requiring

vehicles from model-years 1967 through 1975 previously subject to the Smog Check program and for which a commercial registration applies to be subject to Smog Check.

Therefore, the undersigned CED members endorse the following recommendations for modification to the Smog Check program and urge the California Legislature to adopt the requisite statutory changes needed to implement such programmatic reforms, which will provide immediate and budget-friendly improvements to air quality in California:

***1) Implement the exclusive use of On Board Diagnostic (OBD) testing for newer model-year vehicles (those post-2000 model years).***

California is one of only two states operating an Inspection and Maintenance program that fails to use On Board Diagnostic (OBD) testing exclusively for newer model-year vehicles. Twenty-seven of the twenty-nine states with federally mandated Inspection and Maintenance programs have discontinued tailpipe, visual, and functional testing for newer model-year vehicles, because they were deemed not cost effective. The primary advantages of OBD-only testing are a lower cost to the consumer and a more effective testing procedure. While the California Air Resources Board (CARB) estimates that California would lose less than one ton per day of emissions (which is less than one-half of one percent of the total program benefits) by adopting an OBD-only test, such an OBD-only test would save consumers approximately \$100 million in CY 2010 and up to \$324 million annually by CY 2020.<sup>1</sup> Based on these estimates, the cost to continue tailpipe testing as is currently used in California to capture that extra ton per day of emissions approaches \$1 million per ton, far in excess of being cost-effective. In addition, the procedure for conducting an OBD-based inspection can be completed in 5 minutes or less, compared to 20 minutes for a tailpipe test, and the equipment required for the inspection can be purchased for as little as 10% of the cost for the analyzer and dynamometer needed for tailpipe testing.

Switching to OBD-only testing for vehicles manufactured in 2000 and later would save California consumers substantially, without significantly compromising the effectiveness of the current Smog Check test at reducing emissions, as detailed in the March 2009 report by CARB, entitled “Transitioning Away from Smog Check Tailpipe Emission Testing in California for OBD II Equipped Vehicles.” Statutory changes, however, are required to allow OBD-only testing of newer model-year vehicles. The CED, therefore, recommends that such statutory authority be enacted. Furthermore, so that there is no net loss of emissions reductions, the CED supports the coupling of this recommendation with the following recommendation on implementing annual Smog Check inspections for older vehicles.

***2) Implement annual Smog Check inspections for older vehicles, 15 years and older (likely pre-1996 model years).***

It is well established that vehicles that are 15 years and older have much higher Smog Check failure rates than newer vehicles and that their emissions are significantly higher when they do fail the Smog Check inspection. Implementing annual Smog Check inspections for vehicles that

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<sup>1</sup> California Air Resources Board (2009), *Transitioning Away from Smog Check Tailpipe Emission Testing in California for OBD II Equipped Vehicles*. March 2009.

are 15 years and older would reduce emissions by 19.6 tons per day and would ensure that older model year vehicles remain as low emitting as possible. The increased inspection costs that would be borne by owners of older vehicles could be offset by the simultaneous implementation of OBD-only testing for newer vehicles.<sup>2</sup> Offsetting certificate fees is one option for addressing increased costs for older vehicles. For those vehicle owners who cannot afford the increased repair costs, BAR currently administers the Consumer Assistance Program that pays up to \$500 per vehicle for emission related repairs. Furthermore, potential emission reductions of older model-year vehicles could be enhanced by legislating that only high performing stations are assigned the responsibility to conduct required Smog Check tests for such vehicles.

**3) Give BAR the statutory authority to establish a performance metric for Test-Only and Gold Shield stations and technicians to achieve as a condition of testing “directed vehicles” under Health and Safety Code section 44010.5.**

It has been clearly shown that there is widespread incidence of improper and falsified Smog Check inspections by technicians.<sup>3</sup> Thus, it is critical to have a performance metric by which to identify the best performing stations and technicians to receive the “directed vehicles.”<sup>4</sup> At this time, BAR does not have the statutory authority necessary to establish performance criteria for the Test-Only network as a condition of testing “directed vehicles” under Health and Safety Code section 44010.5.

Incorporating a performance metric into the Smog Check program would help to identify the best performing stations and technicians. By directing older, high-emitting vehicles to higher performing stations, many of the deficiencies noted in previous studies could be addressed, and a portion of the shortfall in emissions could be corrected. The CED, thus, recommends that BAR be given the statutory authority to establish a performance metric for Test-Only and Gold Shield stations and technicians to achieve as a condition of testing “directed vehicles” under Health and Safety Code section 44010.5.

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<sup>2</sup> According to the report entitled *April 2004 Evaluation of the California Enhanced Vehicle Inspection and Maintenance (Smog Check) Program*, dated September 2005, BAR and CARB reported that the annual Smog Check inspection would cost consumers approximately \$101 million annually in additional Smog Check inspection fees (based on \$46 per inspection) and an additional \$72 million in repair costs for a total of \$173 million annually. According to the CARB report entitled *Transitioning Away from Smog Check Tailpipe Emission Testing in California for OBD II Equipped Vehicles*, dated March 2009, the consumer savings for moving to OBD-only testing on 2000 and newer model year vehicles would range from \$63 million to \$148 million in 2010. By 2020, the savings increase to a range from \$139 million to \$323 million, with other estimates favoring the higher end of the range.

<sup>3</sup> According to the report by the Inspection and Maintenance Review Committee (IMRC) entitled *Review of the Smog Check Program, August 25, 2009*, studies conducted by BAR, CARB, and independent researchers have found high refail rates on vehicles that had received and failed a Smog Check inspection and then subsequently passed the test. This research indicates that these failing vehicles should not have passed the Smog Check inspection in the first place, thus suggesting improper or falsified inspection by technicians. In its presentation, *A Comparison of Roadside Tests to Previous Smog Checks*, delivered December 15, 2009, the IMRC reports this refail rate to be 51% according to its own research, which is currently pending peer review for publishing.

<sup>4</sup> In order to comply with state law, the California Department of Consumer Affairs/Bureau of Automotive Repair (DCA/BAR) directs a portion of the vehicles registered in Enhanced Smog Check Areas to Test-Only and Gold Shield stations. These vehicles are called “directed vehicles.” Enhanced Areas are those parts of the state with “serious”, “severe”, or “extreme” ozone pollution problems.

***4) Repeal sections 44050 - 44053 of the Health and Safety Code and add a new section to the Health and Safety Code that authorizes BAR to develop a fine structure through statute that would authorize fines up to \$5,000 per violation in accordance with section 125.9 of the Business and Professions Code.***

While the CED endorses the use of incentives to encourage exemplary performance, such as the abovementioned establishment of a performance metric for stations and technicians to achieve as a prerequisite for receiving “directed vehicles,” it recognizes that punitive actions are sometimes necessary. As indicated above, there is evidence of widespread falsification and improper testing by Smog Check inspection stations. Furthermore, current fines for conducting improper Smog Check inspections fail to change technicians’ behavior. When technicians are issued a citation under current provisions of the Health and Safety Code, they are only required to undergo additional training and they pay no monetary fine. Station owners receive a modest monetary fine when such violations are identified.

The CED supports adding a new section to the Health and Safety Code that authorizes BAR to develop a fine structure through statute that would authorize fines up to \$5,000 per violation in accordance with section 125.9 of the Business and Professions Code. The CED also recommends the timely revocation of both station and technician licenses for performing Smog Checks, due to improper testing. For both the fine and revocation review structure, the CED suggests that intentionality, or lack of intentionality, be a key consideration. Statutory or process changes may be needed to streamline the removal of licenses more quickly.

***5) Implement a non-loaded-mode biennial Smog Check inspection on motorcycles.***

California’s Smog Check program can be significantly strengthened by including motorcycles. Motorcycles are about 15 times more polluting than cars<sup>5</sup>, and yet motorcycle owners are not required to have their vehicles inspected like car owners are required to do. Every day, an additional 5.2 tons of smog forming pollutants are released into California’s air due to motorcycles.<sup>6</sup> While most motorcycles now come equipped with catalytic converters, many motorcycle owners remove the factory installed emissions control equipment and replace it with “custom” parts that allow far more pollutants to be released from the engine. Studies show that tampered motorcycles emit approximately ten times more pollution than non-tampered

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<sup>5</sup> While properly maintained motorcycles are about twice as fuel-efficient as conventional cars and emit less carbon dioxide, they release large amounts of hydrocarbons and nitrogen oxides, which results in the release of about fifteen times more air pollution per mile than the average new car or light-duty truck. April 2009 California Department of Motor Vehicles data indicates that there are approximately 500,000 2000-2009 model year motorcycles currently registered in California. It has been estimated that the cost to consumers to incorporate motorcycles into Smog Check would have an initial start up cost of roughly \$2.5 million in the first year, with ongoing annual costs of about \$3-4 million.

<sup>6</sup> EMFAC2007, Technical Support Document section 4.11 On-road Motorcycle Activity, Technology Groups, and Emission Rates, [http://www.CARB.ca.gov/msei/onroad/doctable\\_test.htm](http://www.CARB.ca.gov/msei/onroad/doctable_test.htm), Appendix 4.11-D, comparing FTP Bag 1 HC emission zero mile emission rates.

motorcycles, which already significantly exceed automobile emissions.<sup>7</sup> Biennial Smog Checks would provide an important way for the state to ensure motorcycles are not using deficient parts or otherwise emitting excess pollution into the air. Emissions reductions from motorcycles are already included in CARB's State Implementation Plan to attain federal health-based air quality standards for ozone and are needed to ensure California can meet its federal obligations.

Section 44011 of the Health and Safety Code currently provides BAR the authority to test motorcycles providing that it first identify a test procedure and promulgate regulations. However, Section 44012 of the Health and Safety Code requires that any Smog Check inspection conducted in the enhanced areas of the state be a loaded mode test using a dynamometer. Implementing motorcycle emission testing using a loaded mode test procedure would require a complete new design for the dynamometer at a significant expense and would create a very high cost for implementation. However, other types of tests are available to ensure that motorcycle emission control equipment is installed and operating correctly, such as visual tests and 2-speed idle tests. Therefore, Section 44012 of the Health and Safety Code should be amended to allow a simplified test procedure for motorcycles as determined by BAR and CARB.

***6) Recommend that BAR adopt regulations to implement section 44081 of the Health and Safety Code and require mandatory off-cycle testing and repair for any vehicle identified through a remote sensing program as a high emitting vehicle.***

Remote Sensing Devices (RSD) may be used in urbanized areas to identify high emitting vehicles. Remote sensing technology measures pollutants in vehicle exhaust from the side of the roadway and is effective at identifying high emitting vehicles. Previous reviews of RSD technology (such as the March 2008 Eastern Research Group report entitled *Evaluation of Remote Sensing for Improving California's Smog Check Program*) have determined that RSD offers potential for identifying high emitting vehicles that would benefit from off-cycle emission inspections and could be useful for fleet characterization and Smog Check performance evaluations. Supplementing the I/M program with an RSD measurement program can effectively reduce mass emissions from high emitting vehicles operating on California roadways through incentive programs offering funding for repair and/or scrap and replacement. Recent legislation (AB 923, 2004) allows for air pollution control districts to spend Carl Moyer funding for such incentive programs. The CED therefore recommends that such an RSD program be incorporated into California's Smog Check program for purposes of identifying high emitting vehicles and offering assistance to repair and/or scrap and replace such vehicles as necessary.

***7) Require vehicles from model-years 1967 through 1975 previously subject to the Smog Check program and for which a commercial registration applies to be subject to Smog Check inspections.***

Recent research by the Inspection and Maintenance Review Committee (IMRC) has indicated that many pre-1976 model-year vehicles were observed on the road with extremely high tailpipe

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<sup>7</sup> Ibid.

emissions, which would place them in the gross polluter category.<sup>8</sup> This research also showed that many of these vehicles are driven on a daily basis, including during rush hour, and are used for business purposes. For these reasons, it appears that many of the early 1970s vehicles should be brought back into the Smog Check program. Thus, the CED recommends that vehicles from model-years 1967 through 1975 previously subject to the Smog Check program and for which a commercial registration applies, once again be subject to Smog Check inspections.

***8) Dedicate resources to mitigate impacts on small business and jobs from program changes.***

While recognizing the aggregate economic and efficiency benefits of the proposed Smog Check program changes, the CED also recommends a full assessment of impacts to small businesses, such as individually owned Smog Check stations. The CED urges that measures be included in changes to the Smog Check program to mitigate or reduce any negative impacts and assist businesses to best transition and operate as part of the revised Smog Check program. These measures could include transition grants for eligible applicants, loan guarantees or subsidies for equipment replacement or cost recovery assistance, business model and economic analysis, and job training and workforce development placement programs for any displaced workers.

California must use every cost-effective and budget-friendly measure possible to meet Federal air quality standards. Greater emission reductions must be achieved from the Smog Check program in order to achieve federally mandated clean air standards and to protect the health of California's citizens.

The CED believes that the abovementioned reforms to the Smog Check program will provide immediate and budget-friendly improvements to air quality in California. We strongly recommend that the California legislature take immediate and unequivocal action to address the aforementioned recommendations in order to ensure the continued efficacy of the state's Smog Check program.

Sincerely yours,

**The California Environmental Dialogue**

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<sup>8</sup> Inspection and Maintenance Review Committee (2009), *Review of the Smog Check Program, August 25, 2009*. August 2009. April 2009 California Department of Motor Vehicles data indicates that there are approximately 100,000 1967 – 1975 commercially registered trucks currently in California.

## CED Member Organizations



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