

## TITLE 17. CALIFORNIA AIR RESOURCES BOARD

### NOTICE OF PUBLIC HEARING TO CONSIDER ADOPTION OF COOL CAR STANDARDS AND TEST PROCEDURES – 2012 AND SUBSEQUENT MODEL-YEAR PASSENGER CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY VEHICLES.

The Air Resources Board (ARB or the Board) will conduct a public hearing at the time and place noted below to consider adoption of new regulations to reduce greenhouse gas emissions from light- and medium-duty vehicles. The proposed regulation would set standards for vehicle window glazing. Solar management glazing will reduce the amount of radiant heat that enters the vehicle, allowing the interior temperature to remain cooler, and reducing the load on the engine from the air conditioner. This will enable the use of a smaller, more efficient air conditioner, which results in lower greenhouse gas emissions.

This notice summarizes the proposed regulatory action. The staff report presents the proposed regulation and information supporting the adoption of the regulation in greater detail.

DATE: June 25-26, 2009

TIME: 9:00 a.m.

PLACE: California Environmental Protection Agency  
Air Resources Board  
Byron Sher Auditorium  
1001 I Street  
Sacramento, CA 95814

This item will be considered at a two-day meeting of the Board, which will commence at 9:00 a.m., June 25, 2009, and may continue at 8:30 a.m., June 26, 2009. This item may not be considered until June 26, 2009. Please consult the agenda for the meeting, which will be available at least 10 days before June 25, 2009, to determine the day on which this item will be considered.

If you require special accommodations or language needs, please contact the Clerk of the Board at (916) 322-5594 or by Fax at (916) 322-3928 as soon as possible, but no later than 10 business days before the scheduled board hearing. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

### **INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW**

**Sections Affected:** Proposed adoption of California Code of Regulations, title 17, subarticle 9, new sections 95600, 95601, 95602, 95603, 95604, and 95605.

## **Background**

In 2006, the Legislature passed and Governor Schwarzenegger signed the California Global Warming Solutions Act of 2006, Assembly Bill 32 (AB 32) Stats. 2006, chapter 488. In AB 32, the Legislature declared that global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The Legislature further declared that global warming will have detrimental effects on some of California's largest industries including agriculture and tourism, and will increase the strain on electricity supplies. While national and international actions are necessary to fully address the issue of global warming, the Legislature recognized that action taken by California to reduce emissions of greenhouse gases will have far-reaching effects by encouraging other states, the federal government, and other countries to act.

AB 32 creates a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California, with the overall goal of restoring emissions to 1990 levels by the year 2020. To this end, ARB adopted an AB 32 Scoping Plan on December 12, 2008, which outlines the State's strategy to achieve the 2020 GHG emission reductions.

The "Cool Cars" proposal originally focused on solar reflective paints for automobiles. "Cool Paints for Automobiles" was approved as an Early Action item under AB 32 in June 2007. Glazing was added to the proposal, and the Cool Cars proposal was included in the "Vehicle Efficiency Measure" for light-duty vehicles in the 2008 Scoping Plan. The current Cool Cars proposal includes only the glazing component, and would provide an opportunity for automobile manufacturers to use a less powerful compressor in their air conditioners, as well as reduce the time a driver would activate his/her vehicle's air conditioner. The use of mobile air conditioners increases greenhouse gas pollutant emissions, as well as emissions of criteria pollutants.

## **Description of the Proposed Regulatory Action**

When a vehicle is parked in the sun, the sun's rays transmit energy into the vehicle through the sheet metal and windows, warming it to levels above ambient temperatures. If some of this energy were blocked or reflected back into the environment, the vehicle's interior temperature would remain cooler, and occupants would be less likely to activate the air conditioner. It would also allow manufacturers to use a smaller air conditioner that would result in fewer greenhouse gas emissions while still quickly cooling the vehicle.

The proposed regulation takes advantage of the fact that solar radiation is composed of both visible and invisible light. Slightly over half of the energy from solar radiation is invisible. Solar reflective or solar absorbing glazing can block the sun's invisible energy from entering the vehicle, while maintaining good visibility through the windows.

Staff is proposing that newly manufactured passenger vehicles less than or equal to 10,000 pounds GVW use solar management glazing. Beginning with model-year 2012, windshields would be required to transmit no more than 50 percent of the total solar energy into the vehicle. This includes visible light, as well as ultraviolet and infrared

(heat) energy, and would be accomplished using generally available technology. Rooflites that transmit no more than 30 percent of the total solar energy would also be required. The balance of vehicular glazing would be required to transmit no more than 60 percent of the total solar energy. Most glass manufacturers currently offer this level of solar control. A second tier requirement for the windshield, limiting total solar transmission to no more than 40 percent, would begin with model-year 2014. Two glazing manufacturers have publicly stated that they have or will have met or exceeded this level of control by 2014. Staff is further proposing options wherein manufacturers may trade improved performance in one glazing area for reduced performance in another.

The proposed regulation also requires that automotive glass replaced on vehicles that would be subject to these requirements also comply with applicable transmission requirements. Staff is not proposing that solar management glass be required for vehicles not originally sold with it.

Current automobile glazing has various supplier and safety information on it. The proposed regulation has a placeholder for requiring glazing (new and replacement) to have symbols/icons or other identifiers so that glazing replacers, consumers, and enforcement personnel can readily identify complying product. At the hearing, staff plans to propose specific symbols/icons or other identifiers to further that requirement. Staff may also propose additional changes to the Board at the hearing.

In complying with the proposed regulation, vehicle manufacturers are responsible for ensuring the use of properly labeled glass meeting the required standards. Glazing manufacturers are responsible for providing properly labeled glazing that meets indicated standards, and businesses providing glazing replacement are responsible for ensuring that only properly labeled glazing is utilized. All must keep appropriate records.

This proposal would provide GHG emission reductions throughout California. Staff estimates reductions of almost 0.7 million metric tons of carbon dioxide (MMT CO<sub>2</sub>) per year by 2020 and 1.2 MMT CO<sub>2</sub> per year by 2040 due to reductions in vehicular fuel consumption. The proposed requirements are estimated to result in a per vehicle lifetime cost of about \$111, based on anticipated increases in cost for solar management glazing. This cost would be offset over time by fuel savings resulting from reduced mobile air conditioner use, and the potential for a smaller air conditioner. The overall average fuel saving is estimated at 4.4 gallons per year per vehicle. At \$3.67 per gallon projected fuel cost, this corresponds to a \$16 per year reduction in fuel costs. Thus, the additional cost would have a payback period of around 7 years. Criteria pollutants such as oxides of nitrogen and reactive organic gases would also be reduced.

### **COMPARABLE FEDERAL REGULATIONS**

There are no federal regulations comparable to the proposed regulation.

## **AVAILABILITY OF DOCUMENTS AND AGENCY CONTACT PERSONS**

The Board staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the proposed regulatory action, which includes a summary of the economic and environmental impacts of the proposal. The report is entitled: Cool Car Standards and Test Procedures – 2012 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.

Copies of the ISOR and the full text of the proposed regulatory language may be accessed on the ARB's Web site listed below, or may be obtained from the Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814, (916) 322-2990 at least 45 days prior to the scheduled hearing on June 25, 2009.

Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact persons in this notice, or may be accessed on the ARB's Web site listed below.

Inquiries concerning the substance of the proposed regulation may be directed to the designated agency contact persons, Dr. Marijke Bekken, Staff Air Pollution Specialist, at (626) 575-6684, or Ms. Sharon Lemieux, Manager, Emission Research Section, at (626) 575-7067.

Further, the agency representative and designated back-up contact persons to whom non-substantive inquiries concerning the proposed administrative action may be directed are Lori Andreoni, Manager, Board Administration & Regulatory Coordination Unit, (916) 322-4011, or Amy Whiting, Regulations Coordinator, (916) 322-6533. The Board has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. This material is available for inspection upon request to the contact persons.

This notice, the ISOR and all subsequent regulatory documents, including the FSOR, when completed, are available on the ARB Internet site for this rulemaking at [www.arb.ca.gov/regact/2009/coolcars09/coolcars09.htm](http://www.arb.ca.gov/regact/2009/coolcars09/coolcars09.htm)

## **COSTS TO PUBLIC AGENCIES AND TO BUSINESSES AND PERSONS AFFECTED**

The determinations of the Board's Executive Officer concerning the costs or savings necessarily incurred by public agencies and private persons and businesses in reasonable compliance with the proposed regulations are presented below.

Pursuant to Government Code sections 11346.5(a)(5) and 11346.5(a)(6), the Executive Officer has determined that the proposed regulatory action would not create costs or savings to any State agency or in federal funding to the State, costs or mandate to any local agency or school district whether or not reimbursable by the State pursuant to Government Code, title 2, division 4, part 7 (commencing with section 17500), or other nondiscretionary cost or savings to State or local agencies.

In developing this regulatory proposal, ARB staff evaluated the potential economic impacts on representative private persons or businesses. Individuals and state and local agencies may face an increase of approximately one half of one percent in the cost of automobiles purchased. This will be offset by the reduction in fuel use attendant with reduced need for air conditioning and resultant lower greenhouse gas emissions. Other than the small increase in the cost of a new automobile, ARB is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

The Executive Officer has made an initial determination that the proposed regulatory action would not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action may lead to the creation of jobs within the State of California, but would not affect the creation of new businesses or elimination of existing businesses within the State of California. It may result in the expansion of businesses within the State of California. The proposed regulation could result in a possible increase in research positions to develop any improvements needed in solar management capabilities for window glazing. A detailed assessment of the economic impacts of the proposed regulatory action can be found in the ISOR.

The Executive Officer has also determined, pursuant to California Code of Regulations, title 1, section 4, that the proposed regulatory action would affect small businesses that supply window replacement services. However, the cost to use specified window glazing will be absorbed by the consumer.

In accordance with Government Code sections 11346.3(c) and 11346.5(a)(11), the Executive Officer has found that the reporting requirements of the regulation which apply to businesses are necessary for the health, safety, and welfare of the people of the State of California.

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the Board or that has otherwise been identified and brought to the attention of the Board would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

### **SUBMITTAL OF COMMENTS**

Interested members of the public may present comments orally or in writing at the meeting, and in writing or by e-mail before the meeting. To be considered by the Board, written comment submissions not physically submitted at the meeting must be received **no later than 12:00 noon, June 24, 2009**, and addressed to the following:

Postal mail: Clerk of the Board, Air Resources Board  
1001 I Street, Sacramento, California 95814

Electronic submittal: <http://www.arb.ca.gov/lispub/comm/bclist.php>

Facsimile submittal: (916) 322-3928

Please note that under the California Public Records Act (Government Code section 6250 et seq.), written and oral comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request. Additionally, this information may become available via Google, Yahoo, and any other search engines.

The Board requests but does not require that 30 copies of any written statement be submitted and that all written statements be filed at least 10 days prior to the hearing so that ARB staff and Board Members have time to fully consider each comment. The Board encourages members of the public to bring to the attention of staff in advance of the hearing any suggestions for modification of the proposed regulatory action.

### **STATUTORY AUTHORITY AND REFERENCES**

This regulatory action is proposed under that authority granted in Health and Safety Code, sections 38501, 38510, 38560, 38562, 38580, 39600 and 39601. This action is proposed to implement, interpret and make specific Health and Safety Code sections 38501, 38505, 38510, 38550, 38551, 38560, 38562, 38580, 39003, 39500, 39600 and 39601

### **HEARING PROCEDURES**

The public hearing will be conducted in accordance with the California Administrative Procedure Act, Government Code, title 2, division 3, part 1, chapter 3.5 (commencing with section 11340).

Following the public hearing, the Board may adopt the regulatory language as originally proposed, or with non substantial or grammatical modifications. The Board may also adopt the proposed regulatory language with other modifications if the text as modified is sufficiently related to the originally proposed text that the public was adequately placed on notice that the regulatory language as modified could result from the proposed regulatory action; in such event the full regulatory text, with the modifications clearly indicated, will be made available to the public, for written comment, at least 15 days before it is adopted.

The public may request a copy of the modified regulatory text from the ARB's Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD

/s/

James N. Goldstene  
Executive Officer

Date: April 28, 2009

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs see our Web –site at [www.arb.ca.gov](http://www.arb.ca.gov).*