State of California
AIR RESOURCES BOARD

Resolution 09-41

June 25, 2009

Agenda Item No.: 09-6-4

WHEREAS, the Legislature has enacted the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code section 38500 et seq.), which declares that global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California, and requires a comprehensive multi-year program to reduce California's greenhouse gas (GHG) emissions to 1990 levels by 2020;

WHEREAS, section 38510 of the Health and Safety Code designates the Air Resources Board (ARB or Board) as the State agency charged with monitoring and regulating sources of GHG emissions that cause global warming in order to reduce such emissions;

WHEREAS, sections 38560 and 38562 of the Health and Safety Code require the Board to adopt rules and regulations, including GHG limits and emission reduction measures, in an open public process to achieve maximum technologically feasible and cost-effective GHG emission reductions;

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize ARB to adopt standards, rules, and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, the Board approved a list of early GHG actions at its June 21, 2007, hearing and approved additions to the list at its October 25, 2007, hearing;

WHEREAS, the "Cool Paints" measure to reduce GHG emissions from light-duty and medium-duty vehicles through improved solar reflectivity of automotive paint was designated as an Early Action Measure;

WHEREAS, nothing in the approval of the early GHG action list limits the Board's consideration of related or other GHG reduction measures;

WHEREAS, the Cool Paints measure evolved into the current Cool Cars measure, focusing on improved solar control for automotive glazing;

WHEREAS, California's transportation sector is the leading source of GHG emissions in the state, contributing almost 40 percent of the state's annual GHG emissions;

WHEREAS, light-duty and medium-duty vehicles less than or equal to 10,000 pounds gross vehicle weight (GVW) account for approximately 30 percent of California

transportation sector emissions, making them the largest contributor towards transportation GHG emissions;

WHEREAS, without the Cool Cars measure the use of air conditioners in light-duty and medium-duty vehicles less than or equal to 10,000 pounds GVW will increase GHG emissions and associated fuel burned on average by 26 percent;

WHEREAS, solar management glazing technologies are currently available and in limited use on vehicles both in Europe and the United States, and have been demonstrated to reduce interior heat gain in parked vehicles;

WHEREAS, reduced solar heat gain is associated with the potential to reduce both the size of the air conditioner compressor and air conditioner use;

WHEREAS, both reduced air conditioner use and reduced air conditioner compressor size is associated with reduced GHG emissions and associated fuel use;

WHEREAS, the Board has historically adopted comprehensive performance-based standards whenever possible rather than prescriptive standards;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project that may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, the Board has considered the impact of the proposed regulation on the economy of the State and the potential for adverse economic impacts on California business enterprises and individuals;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code;

WHEREAS, the Board finds that:

> The proposed regulation was developed in an open public process, in consultation with affected parties through two public workshops, numerous individual meetings, and other outreach efforts;
>
> The proposed regulation was developed using the best available economic and scientific information and will achieve the maximum technologically feasible and cost-effective GHG emission reductions from light-duty and medium-duty vehicles;
>
> The GHG emission reductions resulting from the implementation of the proposed regulation are expected to be real, permanent, quantifiable, verifiable, and enforceable by ARB, and the proposed regulation complements, and does not interfere with, other air quality efforts;

The proposed regulation minimizes the administrative burden of implementing and complying with the regulation;

Compliance with the proposed regulation will not disproportionately impact low-income communities since vehicles operate throughout California and reduced GHG emissions are benefits from the regulation that will be shared by low-income communities;

There exist adequate data to support the adoption of the proposed regulation and to establish that the regulation will help accomplish the objectives of AB 32;

Requiring the use of solar management glazing on light-duty and medium-duty vehicles less than or equal to 10,000 pounds GVW will result in reductions in GHG emissions;

The level of solar management proposed for the 2012 model-year can already be met by the average glazing supplier, and has been used in some automobiles already in production, thereby demonstrating both the technological and economic feasibility of the proposal;

Implementation of the proposed regulation beginning with the 2012 model-year is feasible for light-duty and medium-duty vehicles because the technologies exist to meet the 2012 standards, and few vehicle modifications will be required;

While technology is available beginning in the 2012 model year to meet the proposed solar management levels, comments received indicate that time in addition to that provided in the Staff Proposal is needed to phase-in those levels across the vehicle fleet;

While technology is available from limited suppliers for the 2014 model year to meet the later, more stringent, requirements, comments received indicate that time in addition to that provided in the Staff Proposal is needed to ensure wide-spread product availability necessary for full penetration across the vehicle fleet;

While the proposed standard is a performance standard, albeit one of limited scope, in that the type of compliant glazing is not specified;

While not feasible in the early years of the standards, a broad performance standard based on a future comprehensive test procedure could achieve equivalent or greater greenhouse gas emission reductions from later model year vehicles while providing more flexibility to manufacturers;

The proposed regulation is economical to the consumer over the life-cycle of the vehicle; the window glazing technologies will result in operating cost savings that exceed the initial capital cost, producing a net savings to the owner over the life-cycle of the vehicle; and

No reasonable alternative considered, or that has otherwise been identified and brought to the attention of ARB, would be more effective at carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected private persons and businesses than the proposed regulation:

WHEREAS, the Board further finds that:

The proposal to require the use of solar management glazing in light-duty and medium-duty vehicles is cost-effective, technologically feasible, and necessary to carry out the purposes of the California Global Warming Solutions Act of 2006;

The economic and cost impacts of the amendments have been analyzed as required by California law, and the conclusions and supporting documentation for this analysis are set forth in the Initial Statement of Reasons;

The regulatory action will have some impact, although not significant, on small businesses that provide solar management materials and that replace automotive glazing;

The alternatives considered or otherwise brought to the Board's attention are unnecessarily relaxed, achieving less benefit than staff's proposal;

Pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, the proposed regulation will not result in any significant adverse impacts on the environment;

As new vehicles replace those in the current fleet, the proposed regulation is estimated to result in the reduction of over 0.7 million metric tons of carbon dioxide emissions statewide. By 2040, reductions of about 1.2 million metric tons are anticipated, as described in the Staff Report on the regulation; and

The 2020 benefits will be achieved at no net cost and will instead achieve an estimated cost savings of approximately $39 per metric ton of carbon dioxide reduced. While the modifications described below and approved herein may slightly alter the above cost and benefit numbers, as will be reflected in the Final Statement of Reasons, they do not alter the Board's findings because the modified regulation will result in increased benefit while maintaining a cost savings at full implementation.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves for adoption new sections 95600, 95601, 95602, 95603, 95604, and 95605, in title 17, California Code of Regulations, as set forth in Attachment A hereto, with the modifications set forth in Attachment B, further modified as follows: for the 2012-15 model years a 50 percent Tts windshield standard and remaining glazing to meet requirements as proposed, said standards for the windshield to be phased in at 25 percent of covered vehicles in model year 2012, 50 percent in model year 2013, and 100 percent in model years 2014 and

2015; and in 2016 and later model years a 40 percent Tts standard for windshields, sidelites, and backlites for all covered vehicles.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to take final action to adopt the regulation as set forth in Attachment A, with the modifications set forth in Attachment B and described above, and such other conforming modifications as may be appropriate, and then to adopt the new regulation after making the modified regulatory language and any additional supporting documents available for public comment for a period of 15 days, provided that the Executive Officer shall consider such written comments regarding the modifications as may be submitted during this period, shall make further modifications as may be appropriate in light of the comments received, and shall present the regulation to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED that the Board further directs the Executive Officer to attempt, as part of developing proposed standards under AB 1493 (Pavley (Stats. 2002, Chap. 200)) for the 2017 and later model years, a review of technologies and measurement methods available to meet an alternative compliance path that through performance standards would achieve reduced interior temperatures, or equivalent performance, equal to or greater than under the 40 percent Tts 2016 and later model year glazing standards approved herein, as demonstrated by test procedures to be developed.

BE IT FURTHER RESOLVED that the Board hereby determines that the regulations adopted herein will not cause California motor vehicle standards, in the aggregate, to be less protective of the public health and welfare than applicable federal standards.

BE IT FURTHER RESOLVED that the Board hereby finds that separate California standards are necessary to meet compelling and extraordinary conditions.

BE IT FURTHER RESOLVED that to the extent such action is necessary, the Executive Officer shall, upon adoption, forward the regulation to the United States Environmental Protection Agency with a request for a waiver or confirmation that the regulations are within the scope of an existing waiver of federal preemption pursuant to section 209(b) of the federal Clean Air Act, as appropriate.

I hereby certify that the above is a true and correct copy of Resolution 09-41, as adopted by the Air Resources Board.

Monica Vejar

Monica Vejar, Clerk of the Board

Resolution 09-41

June 25, 2009

Identification of Attachments to the Resolution

Attachment A: Proposed Regulation Order, as set forth in Appendix A of the Staff Report: Initial Statement of Reasons, as published and posted May 8, 2009.

Attachment B: Staff's Suggested Modifications to the Proposed Regulation Order, presented at the June 25, 2009, Board hearing.