

State of Oregon
Department of Environmental Quality

Memorandum

Date: June 22, 2006
To: Environmental Quality Commission
From: Stephanie Hallock, Director
Subject: Agenda Item H, Rule Adoption: Oregon Low Emission Vehicle Rules, Environmental Quality Commission meeting, June 22-23, 2006

Department Recommendation The Department of Environmental Quality (DEQ) recommends that the Environmental Quality Commission (EQC) repeal OAR 340-257 temporary rules and adopt Division 257 permanent rules; adopt OAR 340-256-0220; and amend Division 12 to require that new light and medium-duty vehicles sold in Oregon meet the low emission vehicle standards and related rules as presented in Attachment A.

Need for Rulemaking The proposed rulemaking is part of a joint effort by west coast governors to address global warming and reduce greenhouse gas emissions. Motor vehicles represent one of the largest sources of greenhouse gas emissions in Oregon. Federal vehicle emission rules do not require greenhouse gas reductions. Adopting the proposed vehicle emission standards would curb greenhouse gas emissions and provide additional reductions in smog and air toxics.

Under the federal Clean Air Act, states have two options for controlling emissions from new vehicles: rely on federal emission standards or adopt emission standards developed by California. In December 2005, the EQC adopted California standards by temporary rule as a placeholder for the permanent rule, currently proposed, which would take effect with the 2009 model year—the same year greenhouse gas reductions take effect in several other states. Adoption of the rule would not only bring the California low emission vehicle program to Oregon but also to Washington, which adopted the standards contingent on Oregon adopting them.

If the EQC does not adopt the proposed rules, federal vehicle emission standards will continue to apply in Oregon.

Background Federal law requires states that adopt California emission standards to do so identically, in order to prevent the need for manufacturers to produce a “third vehicle” (a vehicle that is different from that required by federal law and California standards) to meet the new standard. However, states do have flexibility to customize *implementation* of the standards.

To evaluate implementation options and related issues, while developing the proposed program, DEQ drew from the following sources:

- 2004 Governor's Advisory Group on Global Warming
- 2005 Governor's Vehicle Emissions Workgroup
- California Code of Regulations, Title 13, sections 1900 to 2235
- Washington Department of Ecology rules adopting California Motor Vehicle Standards

Early in 2004, Governor Kulongoski appointed business, community, and public leaders to the Governor's Advisory Group on Global Warming to develop a strategy for reducing greenhouse gas in Oregon. The group's final report is available online at <http://egov.oregon.gov/ENERGY/GBLWRM/Strategy.shtml>.

The 2004 report describes specific impacts to human health and Oregon resources that are likely to occur from climate change resulting from greenhouse gas emissions. According to the report, the long-term impact on Oregon citizens, economy, business and environment are likely to be extensive and destructive. Scientists at Oregon and Washington universities project the consequences of global warming in the Pacific Northwest to include increased coastal flooding and erosion, diminished snow pack, reduced river flows in summer, increased river flooding in winter, impacts on farm and forest productivity, increased energy costs, increased pressure on fish and wildlife and harm to human health. The report explains, "Several thousand of the earth's scientists...agree that global warming caused by greenhouse gas pollution from human activities represents a profoundly serious threat to human civilization and to even the most robust and insulated natural ecosystems."¹

The 2004 Governor's Advisory Group on Global Warming recognized that Oregon's contribution to the *global* problem of climate change is relatively small. However, greenhouse gas emissions from California, Washington, and Oregon combined make the West Coast the seventh largest emitter of greenhouse gas globally. Oregon efforts to reduce greenhouse gas will add to the collective efforts of other states and nations and provide national leadership in the prevention of climate change.

The advisory group recommended action in several major areas, including transportation. In August 2005, in response to one high priority recommendation, Governor Kulongoski appointed business and citizen representatives to the Governor's Vehicle Emissions Workgroup to investigate, but not necessarily reach consensus on, approaches to implementing California Emission Standards in Oregon. The workgroup met for five days in five weeks

¹ *Oregon Strategy for Greenhouse Gas Reductions*, Executive Summary

and issued a report to Governor Kulongoski on November 2, 2005. *The Governor's Vehicle Emission Workgroup Report* provides the basis for the current rule making and is available on request or online at: <http://www.deq.state.or.us/aq/aqplanning/orlev/docs/05Nov02WorkgroupRpt.pdf> Key issues and stakeholder positions discussed in the report are summarized below at "Stakeholder Involvement."

In developing Oregon's proposed Low Emission Vehicle rules, DEQ worked with the Washington Department of Ecology, which finalized Washington low emission vehicle regulations late last year. The agencies coordinated phase-in schedules and compliance verification methods to create a level playing field for automakers and dealers serving the Pacific Northwest. If this proposal is adopted, Oregon and Washington will join nine states (Maine, Massachusetts, Connecticut, New York, Rhode Island, Vermont, Pennsylvania, New Jersey and California) in adopting the California standards and a uniform set of requirements will apply to the West Coast and Northeast Coast.

Effect of Rule

Key features of the California vehicle emission standards and Oregon customizations are discussed at length in the *Governor's Vehicle Emission Workgroup Report*.

California vehicle emissions standards are divided into two main sections. One section contains requirements for reducing greenhouse gas emissions from motor vehicles and sets progressively restrictive emission limits from 2009 through 2016. The other section reduces emissions of traditional pollutants such as precursors to ground-level ozone (smog) and air toxics, and includes requirements for Zero Emission Vehicles (ZEVs) that will reach full effect in California in 2018. Ozone precursors include non-methane organic gases (NMOG) and oxides of nitrogen (NOx).² If Oregon adopts California standards by permanent rule, phase-in dates for the standards will match California's.

When California has fully phased in the greenhouse gas requirements by 2016, new vehicles must emit an average of 30% less carbon dioxide equivalent (CO₂E), which is a measure of greenhouse gas emissions.³ The targeted results are expected to be achieved using existing technologies or alternative fuels. Those technologies include turbo charging, cylinder deactivation, variable valve lift and timing, low-leak air conditioning, continuously variable transmissions, direct fuel injection, and electric power steering.⁴

When the second set of LEV requirements are fully phased in by 2020, they will

² *Governor's Vehicle Emission Workgroup Report*, pages 9 to 14.

³ *Governor's Vehicle Emission Workgroup Report*, pages 23 to 28.

⁴ *Governor's Vehicle Emission Workgroup Report*, pages 80 to 82.

lower NMOG emissions from new vehicles 12% to 21% and lower NOx approximately 30% more than federal vehicle emission standards. These rules will also reduce air toxics from new vehicles by 22% to 38%.⁵

The zero emission vehicle requirements (ZEV), which will be phased in by 2018, are intended to stimulate development and use of vehicles that emit no pollution at all, including battery/electric and hydrogen fuel cell vehicles. California has modified the ZEV requirements several times since they were first adopted to account for delayed development of ZEV technologies. Current California Air Resources Board (CARB) regulations provide the flexibility to meet much of the ZEV requirement by producing Partial Zero Emission Vehicles (PZEVs) and Advanced Technology Partial Zero Emission Vehicles (ATPZEVs), both of which produce very low amounts of pollution.⁶

As noted above, any state opting in to the California vehicle standards must adopt requirements identical to California's. However, opt-in states have flexibility in how those requirements are applied. DEQ's proposed rules adopt most California standards by reference, however, some requirements have been customized for implementation in Oregon. The following customizations are described under "Key Issues" below:

- Modified compliance date for fuel cell vehicles used in Oregon.
- Modified extended warranty requirement for PZEVs.⁷
- Non Methane Organic Gas (NMOG) fleet average phase-in provisions.
- Coordination with DEQ Vehicle Inspection Program.

Additional amendments are proposed for DEQ Division 12 enforcement rules to clarify the class, magnitude and base penalties for violations of the Oregon LEV rule (See attachment A3). Proposed Division 12 revisions establish a violation of major magnitude as one in which the manufacturer exceeds the emission limit by more than 10%. DEQ determined that the 10% threshold is consistent with other magnitude determinations in Division 12 and reasonably reflects the extent of environmental harm a violation of that magnitude would cause. Additional guidance will be developed to provide a plan for DEQ interaction with auto dealers and manufacturers, to emphasize DEQ technical assistance and to describe factors in assessing appropriate penalties.

⁵ *Governor's Vehicle Emission Workgroup Report*.23 to 28, for more information.

⁶ *Governor's Vehicle Emission Workgroup Report*. pages 49 to 59, for more information.

⁷ *Governor's Vehicle Emission Workgroup Report*: Warranties, page 39; ZEV/PZEV, page 49; Exemptions, page 60; Phase-in provisions, page 62.

Stakeholder Involvement In the fall of 2005, members of the Governor's Vehicle Emissions Workgroup discussed implementation of a Low Emission Vehicle program in Oregon. Key issues and stakeholder positions are discussed in the *Governor's Vehicle Emissions Workgroup Report* and summarized below.

Public Comment The proposed permanent Oregon LEV rules were available for public comment from January 17 through March 3, 2006, during which time, DEQ held public hearings in Portland, Medford, Bend, and Pendleton. DEQ received 5,000 comments ranging from brief e-mails to extensive technical discussions of specific regulations. In general, auto manufacturers oppose adoption of the program as well as specific program elements. An overwhelming majority of individuals who submitted comments support the new rules. Comments and DEQ responses are summarized in Attachment B.

Key Issues **Benefits of Oregon Low Emission Vehicles (LEV):** The Governor's Vehicle Emissions Workgroup did not reach agreement regarding the benefits of the Low Emission Vehicle program. Automobile manufacturers opposed the Oregon LEV program on the basis that it would not reduce greenhouse gas emission enough to affect global warming. The Oregon Environmental Council, Better World Club, and Northwest Automotive Trades Association supported the program on the basis that it would help reduce greenhouse gas emissions as well as smog and toxics. Despite disagreement about the impact on greenhouse gas and global warming, all workgroup participants agreed that, for smog and air toxics, California emission standards provide an incremental reduction beyond the federal standards; however, there was disagreement over the significance of that additional benefit.⁸

Costs: Auto manufacturers assert that the greenhouse gas rules will increase the initial purchase price of California-compliant cars by as much as \$3,000, and that the cars will not be economical for Oregon consumers. DEQ estimates of the cost of Oregon LEV are derived from California Air Resources Board (CARB) cost analyses. Those estimates predict the Oregon LEV standards will increase the average cost of a vehicle approximately \$1,200 by 2016 but will produce a net savings to consumers in reduced fuel costs.⁹

Oregon LEV implementation features: DEQ's proposal would adopt California vehicle emission standards with the following modifications:

Zero emission vehicle requirements: DEQ proposes to adopt the Zero emission vehicle (ZEV) requirement, but to delay the deadline for manufacturers to provide Type III ZEVs (hydrogen fuel cell vehicles) in Oregon. The delay would

⁸ Governor's Vehicle Emission Workgroup Report, pages 29 to 32.

⁹ Governor's Vehicle Emission Workgroup Report pages 41 to 42.

allow DEQ and the EQC to monitor the development of a hydrogen-refueling infrastructure. Under this proposal, Type-III ZEV's would be required three years after DEQ made a finding that:

- 1) California regulations are modified to require Type III ZEVs in proportion to each state's fleet size, and
- 2) Oregon's hydrogen refueling infrastructure is adequate to support the fuel-cell vehicles.

Other vehicles used to meet the ZEV requirements—including battery-electric vehicles, partial zero emission vehicles (PZEV) and advanced technology partial zero emission vehicles (ATPZEV) will be required in 2009 under this rulemaking as specified in the California program.

Extended (PZEV) warranty: Under California provisions, manufacturers must provide low-emission PZEVs and ATPZEVs with a 15-year or 150,000 mile warranty on all emission-related components. The warranty requirement ensures that manufacturers will design emission control systems that last as long as today's more durable vehicles. DEQ's proposal does not require the extended warranty. However, to ensure that Oregon does not receive less durable vehicles, it does require that PZEVs include the same quality components as those vehicles supplied to states that require the warranty. Even without the extended warranty, PZEV and ATPZEV vehicles will be covered by the federal 8-year or 80,000 mile warranty, as are all California-compliant vehicles. DEQ's proposed rule also retains the extended ten-year warranty for batteries used in some ATPZEVs (hybrid electric vehicles) to ensure that the cost of replacement batteries is covered.

DEQ omitted the extended warranty requirement due to concerns about the long-term economic impact on independent auto repair shops, especially in rural Oregon. Repair work covered under an extended warranty could be done by franchised dealers only. That limitation would decrease work available for independent auto repair shops. Eliminating the extended warranty would not significantly reduce the emission reduction benefits that will result from the ZEV requirements in Oregon.

NMOG fleet average phase-in: Non-Methane Organic Gas (NMOG) fleet-average emission limits have been in effect in California for several years. California's fleet-average regulations provide a three-year transitional period during which manufacturers may produce autos that emit above or below the required limit provided that the net balance of emissions is resolved in the fourth

¹⁰ *Governor's Vehicle Emission Workgroup Report*, pages 70 to 71.

year of the program. Furthermore, manufacturers earn credits for producing vehicles that emit below the limits. They may carry forward surplus credits to offset future emission limit shortfalls. These provisions can distort a manufacturer's compliance profile when a state adopts California rules in the middle of the fleet average transitional period. For example, a manufacturer may earn emission credits in California during 2006, 2007, and 2008 to offset deficits in 2009, 2010, and 2011. This situation would produce problems for manufacturers in a state that begins its program in 2009 when the manufacturer is beginning a three-year period of deficits. Different states use different approaches to address this situation. Some states recognize emission credits earned during the three-year transitional period while forgiving any debits. Others only require manufacturers to report their NMOG fleet average emissions without actually requiring manufacturers to meet that limit in their particular area.

The proposed Oregon LEV rule incorporates phase-in provisions adopted in Washington, which require manufacturers to meet the NMOG fleet average emission limit at the end of the three-year transitional period. During the phase-in period, manufacturers may earn emission credits in each of the three years, and may drop up to two years of emission debits. The balance of the three-year transitional period is then carried forward. This approach provides manufacturers with a fair opportunity to make use of previously accrued credits without allowing three straight years of noncompliance. It also provides a consistent phase-in approach in Oregon and Washington.

Other issues: The auto industry raised additional technical, legal and implementation issues during the public comment period. These issues and DEQ's response are described in the Comment Summary and Agency Response (Attachment B).

Implementation Compliance and enforcement: All but two of the states that have opted-in to the California standards enforce their regulations by denying registration and titling to new vehicles that do not meet the standards. Oregon DMV does not currently have statutory authority to deny vehicle registration for noncompliant cars.

The Governor's Vehicle Emission Workgroup recommended that the Governor seek legislative authority in the future to deny vehicle titling or registration to new vehicles that do not comply with California standards.¹⁰

The proposed Oregon LEV rules rely on enforcement methods, other than registration denial, including dealer education and outreach, review of DMV records, and occasional dealer inspections (triggered by DMV data suggesting non-compliance). During the phase-in period (2006-2009), DEQ staff would

launch the program with outreach activities, including reviewing requirements with auto manufacturers, providing information to dealers and independent auto repair shops, working with Oregon DMV on procedures for tracking vehicle registrations, managing the early banking of emission credits, and developing an internal DEQ data tracking infrastructure to support the program.

After 2009, staff would review annual reports from manufacturers to verify compliance with emission standards and ZEV sales targets, review DMV registration records to identify non-compliant vehicles, conduct dealer outreach and occasional inspections, investigate cross-boarder sales issues, pursue enforcement actions as needed, and keep Oregon rules current with changes to California LEV rules. CARB will continue to conduct all emission certifications for new vehicle types and technologies developed for opt-in states.

In addition to other implementation approaches, a revision to Division 256 will authorize the DEQ Vehicle Inspection Program (VIP) in Portland and Medford to augment compliance efforts in some cases. The new rule would prevent emission certification of a vehicle that does not comply with California standards, if the vehicle is of model year 2009 or newer, has fewer than 7,500 miles and was previously registered in another state. Since vehicle registration is contingent on VIP emission certification in Portland and Medford, this provision, in effect, denies registration to those non-compliant out-of-state vehicles (see Attachment A2). While the universe of individuals and dealers affected by this compliance approach would be very small, it would deter residents and dealers in Portland or Medford from purchasing non-compliant vehicles for use or sale in Oregon. VIP staff would conduct an under-the-hood inspection for the California emissions label to verify compliance. This rule revision would not change the current VIP vehicle emissions test procedures or standards.

No comments were received on the proposed VIP rule change. During the phase-in period (2007-2009) DEQ staff would develop communication and outreach materials on this aspect of the ORLEV program.

Resources to support the program: The proposed permanent rules add a provision requiring large automakers to pay an annual permit fee to support the program. Permit fees for each manufacturer would be determined annually. The \$200,000 needed to support the program would be apportioned among manufacturers according to their market share of vehicles delivered in Oregon. Manufacturers oppose the proposed fee as discussed on pages 16 and 17 of Attachment B, "Summary of Public Comment and Agency Response."

Legal risk of customizing Oregon LEV: Many opt-in states have customized implementation of California standards to best serve their needs. The legality of such customization has not been definitively established by the courts. However,

EPA has stated that it believes customizing implementation is permissible, so long as variations from California standards do not trigger the need for a “third car” to meet the state standard.

The Alliance of Automobile Manufacturers (AAM) commented that Oregon customizations of the California standards—eliminating the extended warranty for PZEVs and extending the date by which hydrogen fuel-cell vehicles must be delivered in Oregon—violate the identicality requirement of the federal Clean Air Act. AAM argues that Oregon must either adopt the ZEV requirement identically with California or eliminate the ZEV requirement entirely. DEQ believes that neither of the proposed customizations violates the Clean Air Act requirement for identicality or the prohibition against creating the need for a “third car.” (See Attachment B for more discussion).

Customizations made by other opt-in states remain untested in court and the risk of litigation appears small. If a customization were ever disallowed under the Clean Air Act, the remedy would simply be to align the state program fully with California rules or return to the federal standards.

Next Steps

If the EQC adopts the proposed permanent rules, DEQ will begin implementing the Oregon LEV program by focusing on outreach to regulated and affected parties, and by developing systems and procedures for implementing the full program in model year 2009.

Commission Authority

The Commission has authority to take this action under ORS 468.020, 468A.025, and 468A.360.

- Attachments**
- A Proposed Rule Changes:
 - A.1 Division 257: Permanent Oregon Low Emission Vehicle Rules
 - A.2 Division 256: New Rule for Vehicle Inspection Program
 - A.3 Division 12: Amendments to Enforcement Rules
 - B Summary of Public Comments and Agency Response
 - C Presiding Officers' Report on Public Hearings
 - D Relationship to Federal Requirements Questions
 - E Statement of Need and Fiscal and Economic Impact
 - F Land Use Evaluation Statement
- Available Upon Request**
- 1. All public comments (available for inspection).
 - 2. *Governor's Vehicle Emission Workgroup Report*. Also available online at: <http://www.deq.state.or.us/aq/aqplanning/CalLev/Index.htm>
 - 3. *Governor's Greenhouse Gas Strategy Report, Executive Summary*. Also available online at: <http://egov.oregon.gov/ENERGY/GBLWRM/docs/Global-Main.pdf>
 - 4. Summary of greenhouse gas reduction strategies recommended by the Governor's Advisory Group on Global Warming. Also available online at: <http://egov.oregon.gov/ENERGY/GBLWRM/docs/GWReport-Final.pdf>
 - 5. Governor Kulongoski's letter concerning Low Emission Vehicle rules.
 - 6. Oregon LEV II Analysis, Washington State Dept. of Ecology Oct. 13, 2005.

Approved:

Section: _____
David Collier

Division: _____
Andrew Ginsburg

Report Prepared By: Dave Nordberg
Phone: (503) 229-5519