



Google.org's Proposed Changes to Staff ISOR
Zero Emissions Vehicle Program
Position Statement on ISOR

Google applauds the California Air Resources Board, its staff, partners, the California government, and the stakeholders for working toward a plan that will improve the quality of California's air for our children and for spurring business to overcome the challenge of air pollution. By driving technological innovation and inspiring the automakers to go further, we can improve our air quality and simultaneously decrease the emissions of greenhouse gases. California is yet again leading the way.

Google is doing its part. As a company we provide a fuel-efficient vehicle purchasing incentives for our employees: \$4,000 for electric vehicles, \$2,000 for plug-in hybrid electric vehicles (PHEVs), and \$1,000 for hybrid and compressed natural gas vehicles. Prior to offering the current fuel-efficient vehicle program, Google provided \$5,000 to its employees for purchasing a fuel-efficient (Toyota Prius or hybrid Honda Civic) vehicle and \$2,500 for leasing one. We launched our own plug-in vehicle initiative in June 2007 and have converted four Toyota Priuses and two hybrid Ford Escapes. Google has also dedicated millions of dollars toward investing in renewable energy companies and technologies and has installed what was the largest corporate solar photovoltaic installation. We are committed to this work as a company and are glad that California is committed to advancing vehicle technology and improving the state's air quality.

Google sees the ZEV Program as an opportunity for the automakers and the California residents. For the automakers it is a business opportunity to compete in a growing global market for advanced technology vehicles. The ZEV Program can be an appropriate guiding mechanism for the automakers to have the extra incentive to launch into and profit from this developing market. These advanced technology vehicles must scale to mass commercialization to reach economies of scale, making them more affordable to both the automakers and consumers and helping them realize a substantial market share. Our first two recommendations focus on mass commercialization and driving innovation while the last three -- the more minor recommendations -- focus on small, yet important points within the ISOR where Staff is recommending to extend the timeline for a weaker point within the ZEV Program or increase the credits for specific technologies that are not new or advanced.

ZEV Program Recommendations¹

- 1. Strengthen the Enhanced AT PZEV category (aka "Silver Plus"): make the minimum requirement for Enhanced AT PZEV a 25 mile EAER (Equivalent All Electric Range)**
- 2. Require at least 40% of ZEVs to be pure ZEVs in Phase III (the rest can be Silver +, as defined above)**
- 3. Don't change the current travel provision (section 177) -- let it sunset as planned**
- 4. Keep Silver Type C allowance sunset in place**
- 5. Don't modify existing NEV credit allowance**

Additional Information

1. Strengthen Silver + category to 25 Mile EAER minimum. Innovate through Silver +.
The Silver + vehicles are the bridge to reaching the ZEVs and they need to be an ambitious yet attainable goal for each original equipment manufacturer (OEM). The criteria for qualifying for Silver + status should be more rigorous, requiring a 25 mile EAER (note: 84% of the working population commutes 25 miles or less to work one way (Bureau of Transportation Statistics, U.S. Department of Transportation, 2003)). Silver + vehicle technology currently exists and, according to a number of recent studies (EPRI-NRDC, Argonne National Laboratory, etc.), they leave less of a footprint on air

quality than do their hybrid or even fuel cell counterparts. In order to be "the bridge" and gain new market share, they need to employ cutting-edge technology. The vehicles will also enjoy greater market acceptance if they meet the needs of most consumers and 25 EAER will help them do just that. Finally, Staff is proposing to use UDDS as the driving cycle standard for establishing equivalent all electric drive, but UDDS is an ideal scenario as opposed to real world driving conditions. Staff should use US06 instead as this standard simulates real world driving conditions for non-commercial driving and commuter driving more accurately.

2. Require at least 40% of ZEVs to be pure ZEVs in Phase III (the rest can be Silver +, as defined above)

The technology for zero emissions vehicles exists today. The only way to drive down the cost of these vehicles is by bringing them to scale. Additionally, these vehicles make the greatest progress toward improving air quality so having more of them on the road is integral to the success of the ZEV Program. The OEMs have many banked credits and they will be producing very few ZEVs in Phase III if the OEMs are only required to produce 10% of the current requirement. Finally, with companies like Tesla, Th!nk, and others coming out with their own plug-in vehicles, both PHEVs and pure BEVs, they will meet the needs of most or all of the OEMs through their own production, especially if the number of ZEVs they must produce is 10%. The ZEV Program needs to spur the large and medium automakers to produce vehicles that meet its standards otherwise it will not reach necessary scale, economies of scale, and efficiency gains. This is essential for mass commercialization. Similarly, our air quality will not realize the same improvements.

3. Keep Section 177 Travel Provision the same.

Extending the Section 177 Travel Provision only risks adding further delay without providing any substantial benefit. California should benefit from its own air regulations and allowing ZEVs sold and driven in other states will dilute the impact of the the ZEV Program and will not help the ZEV Program realize its intended impact. Air is not fungible and the reduction of criteria pollutants in another state will not directly improve the air quality in California.

4. Keep Silver Type C allowance sunset in place

The long term credit structure should favor strong hybrids over mild ones. Type C hybrids are relatively mild hybrids and we believe their credits should not be extended indefinitely. Extending them will not push the technology forward and lead toward further innovation.

5. Don't modify existing NEV credit allowance

We feel the ZEV Program should focus on full-function vehicles. In the past, NEVs were put out in great numbers in order to bank credits for future use, going against the original intent and spirit of the Program. Extending ongoing credits for these vehicles does little to encourage full-function zero emission vehicles. Once again, NEVs are not driven like full-function vehicles and, thus, California will not realize the necessary air quality improvements.

¹ Our recommendations are listed in order of priority to Google.