

2016 Journalist's Guide & Expert Sources: California's ZEV Program



CALIFORNIA
Clean Cars Campaign

The California Air Resources Board (CARB) is conducting a midterm review of its groundbreaking Zero Emission Vehicle (ZEV) program to determine if the current structure will allow California to meet its clean transportation and climate goals. This guide provides background on the ZEV Program and forthcoming review, and highlights the necessary updates being proposed by consumer, public health and environmental groups to ensure the state meets its goal to put a minimum of 1.5 million zero-emission vehicles on California roads by 2025.

ZEV GOALS

The deployment of a large ZEV fleet is vital to help California meet its 2030 greenhouse gas emissions reduction and air quality goals.

- California Governor Jerry Brown issued a 2012 executive order setting a goal of putting a minimum of 1.5 million ZEVs on the road in California by 2025.
- The following year, Brown and the governors of seven other states with ZEV programs signed an MOU to put 3.3 million ZEVs on the road in California, Connecticut, Maryland, Massachusetts, New York, Oregon, Rhode Island, and Vermont by 2025.
- SB 1275, signed into law in 2014, requires California to put 1 million ZEVs on the road by 2023 while spurring programs to ensure all Californians, especially lower-income households, benefit.

WHAT IS A ZEV?

Zero Emission Vehicles – or ZEVs – are vehicles that do not emit tailpipe pollution while being driven. ZEVs include pure battery electric vehicles (BEVs) and hydrogen fuel cell vehicles. “Transitional” ZEVs are plug-in hybrid electric vehicles (PHEVs) that operate part of the time on electricity from the grid, and part of the time on an internal combustion engine.

KEY DATES

Mid-November:

ARB releases a Staff Report analyzing the current ZEV market, including consumer demand, infrastructure development, and technological advancements since 2012.

December 8 & 9, 2016:

ARB Board Meeting midterm review of Advanced Clean Cars program.

WHAT IS THE ZEV PROGRAM?

California's ZEV Program, administered by CARB, requires major manufacturers of passenger vehicles and light trucks to sell enough ZEVs as a percent of their total sales to meet a certain ZEV credit benchmark in a given year. By 2025, CARB intended the program to result in over 15 percent of all new cars and trucks sold in the state being ZEVs and plug-in hybrids.

So far, the ZEV program has been successful, spurring over 25 models of electric cars and adding close to 250,000 ZEVs and plug-in hybrids on the road in California to date. However, analysis of the program shows that the required number of ZEVs on the road in 2025 will be much lower than originally estimated due to an excess production of ZEV credits.

MIDTERM REVIEW

At the urging of the automotive industry during the last ZEV program review in 2012, CARB established a midterm review process to assess the progress of the program and allow the Board to make adjustments, if needed. This allows CARB to adjust the program to address a projected shortfall in the volume of ZEVs on the road by 2025.

ZEV TECHNOLOGY EXCEEDING EXPECTATIONS

Advancement in ZEV technology today has thoroughly exceeded expectations. When the ZEV rules were last revised, the average battery electric vehicle in 2018 was expected to have a real-world range of roughly 70 miles between charges, and no improvement was assumed through 2025. Already, today's cars are way ahead. The 2016 Nissan Leaf has exceeded this goal, while the range of Tesla's forthcoming Model 3 and the Chevy Bolt will exceed 200 real-world miles.

The unforeseen result of the advancement in technology, together with a multitude of extra-credit provisions and automakers "banking" or holding on to a large amount of credits until a later date, is contributing to a ZEV credit glut. This glut threatens to curb the volume of ZEVs on the state's road by 2025, and further limit California's ability to hit aggressive targets in 2030, 2040 and 2050.

WHAT'S A ZEV CREDIT?

ZEV credits are the "currency" of the ZEV Program. Automakers receive credits for vehicles placed in the ZEV states. The number of credits they receive is based in part on vehicle range and technology. If automakers fall short of their sales requirement, they can purchase credits from other car makers.

ZEV CREDITS—OVER-CREDITING COULD KEEP ZEVS OFF THE ROAD

Because of the unforeseen technological ZEV boom, additional extra-credit provisions, and new entrants to the market like Tesla Motors, the current ZEV crediting structure is having the perverse effect of diminishing the actual number of ZEVs required, as automakers are able to produce far fewer ZEVs to comply with the program than previously predicted.

- Automakers are earning more credits per vehicle than expected because their vehicles have a much longer range than was forecast.
- The ZEV program awards credits based on the estimated electric range of vehicles under city-only driving range, which can inflate the actual range of vehicles by about 30% versus real-world driving.
- The program allows automakers to store a large volume of historical credits and, in many cases, use these without restrictions. This means the current over-compliance will reduce the actual number of ZEVs required during the 2018-2025 period.
- The "Travel loophole" currently allows automakers to effectively multiply credits earned for selling ZEVs in California to cover compliance obligations in other states with ZEV programs, leaving these states without the ZEV product offerings that consumers demand.
- If Tesla is even mildly successful in hitting its sales targets, the ZEV credits it receives (and sells to other automakers) would be enough to enable Tesla, alone, to supply the entire industry's pure ZEV obligations. In theory, no other automaker would need to place a single ZEV on the road.

CALIFORNIA SHOULD NOT:

make reaching clean air targets dependent on the presumption of automakers greatly exceeding the ZEV standards on a voluntary basis.

THE ZEV PROGRAM SHOULD:

provide the floor to ensure, with confidence, the state will meet its targets.

WHY THIS MATTERS

An overproduction of credits could create an underproduction of ZEVs, leading to a significant gap in the clean air, economic benefits, and the choice of models promised to consumers.

California should not make reaching clean air targets dependent on the presumption of automakers greatly exceeding the ZEV standards on a voluntary basis. The ZEV program should provide the floor to ensure, with confidence, the state will meet its targets.

FIXING THE ZEV PROGRAM

Potential Adjustments

Health, scientific, consumer and environmental experts propose that CARB consider modest adjustments to the program to account for technological advancement, new entrants to the marketplace, and various extra-crediting provisions that are likely to limit the amount of ZEVs sold in California far into the future.

Small changes would restore the intent of the program to reach the 1.5 million ZEV goal in California, and 3.3 million vehicles on the road by 2025 in eight states, while providing clear signals to manufacturers about the future direction of the program.

Midterm review assessments will be presented to the Board in December 2016.

Specific adjustments include:

- Update the credits given per vehicle to better reflect technology progress as well as real-world range, as opposed to an inflated range.
- Add a protective floor by requiring that some fraction of credits used come from newly produced vehicles.
- Ensure the end of credit travel to Section 177 ZEV states as currently scheduled.

WITHOUT ADJUSTMENTS:

- California is likely to see a substantial shortfall in actual ZEVs sales – 6 percent of new cars in 2025 rather than the intended 15 percent.
- The program will not compel manufacturers to meet the 2025 ZEV sales benchmarks.
- California will be at a serious disadvantage to reach 2030 greenhouse gas emission and air quality targets.
- The goal of transforming the passenger vehicle fleets to zero emission vehicles will be significantly delayed. In turn, the national electric vehicle market will suffer as the number and diversity of vehicle models offered to consumers remains limited. The U.S. could fall behind the international market as other nations proceed more quickly with the transition to ZEVs.

EXPERT SOURCES

Simon Mui

Natural Resources Defense Council
smui@nrdc.org

Shannon Baker-Branstetter

Consumers Union
sbaker-branstetter@consumer.org

Bill Magavern

Coalition for Clean Air
bill@ccair.org

Dave Reichmuth

Union of Concerned Scientists
DReichmuth@ucsusa.org

Bonnie Holmes-Gen

American Lung Association in California
bonnie.holmes-gen@lung.org

Kathryn Phillips

Sierra Club
kathryn.phillips@sierraclub.org

John Shears

Consultant, Cleaner Transportation and Alternative Fuels, Center for Energy Efficiency and Renewable Technologies
shears@ceert.org

For more information on this resource, please contact Sage Welch at: sage@catercommunications.com