

# California Adopts Revolutionary New Clean Car Standards

*February 10, 2012 by Whitney Hodges*

On January 27, 2012, the California Air Resources Board (“ARB”) notched a potential victory in the battle against greenhouse gas (“GhG”) emissions. In a unanimous vote, ARB adopted the Advanced Clean Cars (“ACC”) regulatory package, which is a program designed to deliver cleaner air, reduce GhG emissions, and help build the market for fuel cell and battery-electric vehicles. At the opening of the ARB hearing on this historic vote, Mary Nichols, ARB Chairman, predicted:

This program will make the cleanest cars and the new technologies commonplace. The Advance Clean Cars package will help clean our air, help us fight climate change, and perhaps most important for the average citizen, save thousands of dollars over the life of the vehicles. It also gives us the ability to brag that we are the clean car capital of the world.

The robust ACC program combines various automotive regulations into a package of standards and initiatives applicable to model years 2015-2025. The ACC program is designed to address two important environmental and public health threats – climate change and unhealthy levels of smog and particulate pollution – by substantially reducing, and potentially eliminating, heat-trapping emissions. The program is composed of three separate, yet equally important prongs: Zero Emission Vehicle Program, LEV III Standards, and Clean Fuel Outlet Program.

### **Zero Emission Vehicles Program**

First, the ACC program touts the Zero Emissions Vehicle (“ZEV”) regulation as the “technology forcing piece” of the package. This regulation requires a minimum number of battery electric, fuel cell electric, and plug-in hybrid vehicles to be sold in California. The anticipated target for this regulation is 1.4 million ZEV by 2025, accounting for 15% of the new vehicles sold. Future emissions-reduction efforts will need to be even more ambitious, as ARB predicts that 87% of the cars on the road will need to be ZEV to achieve the goal of reducing GhG emissions to 80% below 1990 levels by 2050. The plug-in hybrid car is the presumed transitional model for the next twenty years.

The new ZEV regulation simplifies the method for credit allocation based on zero emission ranges. Automobile manufacturers will receive 1.5 credits for 100-mile battery electric vehicles and 3.5 credits for 300-mile fuel-cell electric vehicles. The credit allocation method also allows automobile makers to bank ZEV credits indefinitely for use in later years.

Additionally, a special provision has been adopted that will allow automobile manufacturers to overcomply with GhG fleet standards (as discussed below) to offset ZEV requirements for 2018-2022. However, in order to be eligible, manufacturers must buy a certain percentage each of the four years.

"These robust, zero-emission vehicle standards will provide the market assurance automakers and the energy industry need to transform the electric vehicle into a mass-market success," said Don Anair, senior engineer with the Union of Concerned Scientists' Clean Vehicles program. "This landmark initiative will strengthen California's emerging electric vehicles industry, creating jobs and making zero-emission vehicles more affordable for consumers."

### **LEV III Standards**

The second piece of the package is ACC's LEV III regulations that control soot, smog-causing pollutants and GhG emission. LEV III aims to reduce fleet average emissions of new passenger cars, light-duty trucks, and medium duty passenger vehicles to super ultra-low-emission vehicle levels by 2025. In addition, the life durability requirements for vehicles have been increased from 120,000 to 150,000 miles. LEV III regulations also implement zero fuel evaporative emission standards for passenger cars and light-duty trucks, and more stringent evaporative standards for model year 2017-2025 medium-duty vehicles. Furthermore, GhG emissions will be reduced to 166 grams per mile – a 34% reduction from 2016 levels – and the standard will be achieved through more efficient drive trains and engines, the use of stronger and lighter materials, and other, already existing technologies.

These regulations were developed over the past three years through extensive coordination with the federal government and the automobile industry itself. This cooperative effort included a joint fact-finding process with shared technical and engineering studies. The program has been designed to harmonize with and parallel the federal rules proposed by the Obama administration in the summer of 2011.

### **Clean Fuels Outlet Program**

Finally, the third prong of the program is the Clean Fuels Outlet ("CFO") regulation, which is intended to ensure that ultra-clean fuels, like hydrogen, are available to meet vehicle demands associated with the special ZEV "overcompliance" provision. The CFO regulation ensures that adequate fueling infrastructure will be available by requiring construction of alternative fuel

stations. This requirement is triggered when there are 20,000 alternative fuel vehicles using a particular fuel. The regulation also includes a modification that lowers the activation trigger to 10,000 vehicles for air basins. This is intended to complement auto manufacturers' early commercialization plans to market fuel cell vehicles. The regulation does include a penalty provision for manufacturers' noncompliance, if ARB is able to substantiate a claim that the manufacturer(s) knowingly falsified a report.

Currently automobile manufacturers, industrial gas suppliers, non-government organizations and the State of California are negotiating a Memorandum of Agreement ("MoA") to support up to 100 clean fuel stations as an alternative to the CFO. If the MoA process is successful, then the requirement to build clean fuel stations will end. However, if the MoA process does not succeed, then the CFO requirements remain in force.

### **End Results**

In hard numbers, by 2025, the ACC program is designed to deliver:

- 34% decrease in GhG emissions from cars including a 52 million-ton reduction of GhG emissions by 2025 and a cumulative 870 million-ton reduction of GhG through 2050;
- 1.4 million ZEV and plug-in hybrid vehicles on Californian roads by 2025;
- 1 in every 7 new cars sold in California will be a ZEV or plug-in hybrid (roughly 15.4%);
- \$5 billion savings for California drivers in operating costs; and
- 75% reduction in smog-forming emissions.

### **Other ACC Program Benefits**

Not only is the ACC program expected to benefit California air quality, the program is also designed to increase State revenue. ARB analysts estimate that the program will save Californians \$22 billion through 2025. Even after paying for the clean car technology, individual consumers are projected to save \$4,000-\$6,000 over the average life of a car sold in 2025. Specifically, the added cost of the technological improvements will be fully recovered from fuel savings in approximately the first three years of the car's ownership. In addition, by 2025, the program is projected to create 21,000 new jobs across the State as consumers spend less on gas and more on other consumer goods. It remains to be seen whether these projections will materialize.