WASHINGTON — President Obama will announce tough new nationwide rules for automobile emissions and mileage standards on Tuesday, embracing standards that California has sought to enact for years over the objections of the auto industry and the Bush administration.

The rules, which will begin to take effect in 2012, will put in place a federal standard for fuel efficiency that is as tough as the California program, while imposing the first-ever limits on climate-altering gases from cars and trucks.

The effect will be a single new national standard that will create a car and light truck fleet in the United States that is almost 40 percent cleaner and more fuel-efficient by 2016 than it is today, with an average of 35.5 miles per gallon.

Environmental advocates and industry officials welcomed the new program, but for different reasons. Environmentalists called it a long-overdue tightening of emissions and fuel economy standards after decades of government delay and industry opposition. Auto industry officials said it would provide the single national efficiency standard they have long desired, a reasonable timetable to meet it and the certainty they need to proceed with product development plans.

Yet the industry position represents an abrupt about-face after years of battling tougher mileage standards in the courts and in Congress, reflecting the change in the political climate and the automakers’ shaky financial condition. The decision comes as General Motors and Chrysler are receiving billions of dollars in
federal help, closing hundreds of dealerships and trying to design the products and business strategy they will need to survive.

“For seven long years, there has been a debate over whether states or the federal government should regulate autos,” said Dave McCurdy, president of the Alliance of Auto Manufacturers, the industry’s largest trade association. “President Obama’s announcement ends that old debate by starting a federal rulemaking to set a national program.”

Mr. McCurdy, a former Democratic congressman from Oklahoma, has been working with Mr. Obama and his advisers on the issue since early this year.

In announcing the new program at the White House, Mr. Obama will be accompanied by Gov. Jennifer Granholm of Michigan and Gov. Arnold Schwarzenegger of California, along with auto industry executives and environmental leaders.

The administration’s decision resolves a question over California’s application for a waiver from federal clean air laws to impose its own, tougher vehicle emissions standards. Thirteen states and the District of Columbia have said they plan to adopt the California program.

The new national fleet mileage rule for cars and light trucks of 35.5 miles per gallon by 2016 roughly corresponds to the California requirement, which will be shelved as a result. The current national standard is slightly more than 25 miles per gallon.

The California plan, first proposed in 2002, had been stalled by industry lawsuits and the Bush administration’s refusal to grant a waiver from less stringent federal rules, although California has been given dozens of such exemptions over the last 40 years.

The program will also end a number of lawsuits over the California standards, officials said.

“This is a very big deal,” said Daniel Becker, director of the Safe Climate Campaign, who has pushed for tougher mileage and emissions standards for two decades with the goal of curbing the gases that have been linked to global warming.
"This is the single biggest step the American government has ever taken to cut greenhouse gas emissions."

The administration had faced a June 30 deadline set by Congress to decide whether to grant California’s application to put its emissions rules into effect. President Obama became personally involved in the issue because he was also trying to find a way to rescue American auto companies from their financial crisis.

One ranking industry official said that the administration wanted to get the new mileage rules in place before General Motors made a decision on a bankruptcy filing, which could happen by the end of this month. The new rules also provide some certainty for Chrysler, which is already under bankruptcy protection, so that it can plan its future models.

To meet the new federal standards, auto companies will have to drastically change their product lineups in a relatively short time.

The companies have declined so far to comment on the costs involved in meeting a fleet standard of 35 miles a gallon. For starters, the automakers will probably have to sharply reduce the number of low-mileage models, like pickup trucks and large sedans.

The president’s decision will also accelerate the development of smaller cars and engines already under way.

But Mr. McCurdy said the industry could meet the new mileage targets using existing technology and improvements in future models. He said that 130 models already got 30 miles a gallon or better on the highway.

In January, Mr. Obama directed the Environmental Protection Agency to reconsider the Bush administration’s past rejection of the California application. He also instructed the Transportation Department to draw up rules to complement a 2007 law requiring a 40 percent improvement in mileage for autos and light trucks by 2020. The Bush administration wrote no regulations to enforce the 2007 law.

Mr. Obama will direct the E.P.A. and the Transportation Department to jointly write enforcement regulations.
Daniel J. Weiss, director of climate strategy at the liberal Center for American Progress, said that under the White House plan, California would retain the ability to set its own emissions standards in the future when the current program expired.

He also said the new administration program was very close in language and intent to a provision in the climate change and energy bill now before the House Energy and Commerce Committee. That bill calls for a “harmonization” of the California and federal regulatory programs to provide a nationwide standard.

Mr. Obama has been thinking about the future of the American automobile industry for years. He co-sponsored two bills in 2006, during his second year as a United States senator, one to raise fuel economy standards and the other to encourage the use of alternative fuels.

During the presidential campaign, he gave a speech in Detroit chastising the American automobile industry for doing too little to reduce the nation’s dependence on foreign oil and improve their vehicles’ efficiency.

“The auto industry’s refusal to act for so long has left it mired in a predicament for which there is no easy way out,” Mr. Obama said.

That inaction has been a factor in the current dire state in which General Motors and Chrysler find themselves. The Japanese automakers are far ahead in developing smaller, more efficient vehicles, although they, too, will have to adjust their product lines.

Fran Pavley, the California state senator who sponsored the legislation that established the California standard, praised the decision as she traveled to Washington Monday to join the White House meeting on Tuesday.

She said through a spokeswoman that California would work on its own rules while the federal regulations were drafted. “This cleans up our air, reduces our dependence on foreign oil and continues to allow California to lead the way,” she said.

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