

California's low-carbon fuel standard has oil companies anxious

April 28 2009, By Dale Kasler

In car-crazy California, a new fuel standard ordered by state officials to curb greenhouse gases could dramatically change how vehicles run. It also could have a huge effect on cost.

The petroleum industry and some economists say the new standard adopted by the state Air Resources Board on Thursday will cost motorists billions, because blending gasoline will become considerably more complicated.

But state officials and environmentalists say the "low-carbon fuel standard" will actually save Californians money by reducing oil consumption and ushering in a competitive new era of biofuels and electric vehicles.

The stakes are enormous. The price of fuel can have a significant impact on the state's economic health. When gas hit \$4.50 last summer, it severely hurt tourism and caused delivery companies to impose fuel surcharges.

Gasoline now sells for a relatively affordable \$2.35 a gallon on average, but the state's already strict fuel formulas create a delicate balance between supply and demand. Even minor supply glitches have caused big price spikes because only a small number of refiners make gas to California's specifications.

Business advocates say significant price increases during a recession



could be disastrous. They are casting a wary eye at the fuel standard.

"Reformulating the fuel supply -- we shouldn't undergo that without a certain amount of trepidation," said Dorothy Rothrock, senior vice president of the California Manufacturers & Technology Association.

Every time California has instituted stricter clean-air standards for motor fuel, "they all have had a cost associated with it," said Cathy Reheis-Boyd, chief operating officer at the Western States Petroleum Association. "I know there's going to be a cost associated with this."

A big problem, she said, is that the air board's standards will limit the use of corn-based <u>ethanol</u> in gasoline -- leaving refiners with a major hurdle.

Yet the Air Resources Board, in approving the low carbon standard Thursday, dismissed forecasts of higher costs. The board's staff contends that when the standard is fully operational, in 2020, Californians will save about \$11 billion a year.

"It's the reduction in the use of petroleum," said board spokesman Dimitri Stanich.

The first-in-the-nation carbon standard is a key element in California's goal of reducing overall volume of greenhouse gases 25 percent by 2020, as required by a 2006 state law. The air board's standard dictates that the "carbon intensity" of fuels be reduced starting in 2011, ramping up to a 10 percent cut by 2020.

The board believes the standard will encourage the development of hydrogen, electricity and biofuels to power vehicles. But there's much controversy about how the standard treats what is currently the leading biofuel, ethanol made from corn.



Corn ethanol is now a staple of the transportation scene. It makes up 6 percent of the gas sold in California, and that's going to grow to 10 percent next year.

But the air board decided that corn ethanol is not so great for limiting greenhouse gases. The argument goes like this: Eager to cash in on ethanol demand, farmers around the world plow up grasslands and chop down trees to make way for corn, a process that releases more carbon dioxide into the atmosphere.

The air board's ruling infuriated the corn ethanol industry, which is in severe financial distress already. Companies like Sacramento's Pacific Ethanol Inc. are on the verge of bankruptcy.

It also angered the petroleum refiners, who argued that they have few viable options for meeting the 10 percent carbon reduction if they don't get much credit for using corn ethanol. The alternatives, for the most part, consist of fuel technologies that are still expensive or are in the early stages of commercialization.

"We have no way to know how we're supposed to comply with this," Reheis-Boyd said.

She said the only real solution is to blend in ethanol made from sugar cane -- which gets a better "carbon score" from the air board. But that means importing it from Brazil and paying costly U.S. import tariffs, she said.

All told, her association believes fuel costs in California could rise \$3 billion a year.

Air board officials and environmentalists said the refiners are crying wolf. The standard will phase in slowly in the early years. Refiners and



entrepreneurs will have plenty of time -- and economic incentive -- to make inexpensive biofuels, hydrogen-based fuels, even ethanol from such "cellulosic" materials as switchgrass.

"The program starts off on a rather gentle slope," said Roland Hwang, vehicle policy director at the Natural Resources Defense Council in San Francisco. There are even ways of making ethanol out of corn that can reduce its "total carbon score," he said.

But Severin Borenstein, director of the Energy Institute at the University of California, Berkeley, said there's no certainty that these emerging technologies will be ready to meet the demand.

The air board "is betting that with the phase-in, those (alternative) fuels are going to get a lot cheaper," Borenstein said. "They might, but there certainly is not any guarantee at all."

The impact on the economy wouldn't be "devastating," but the new standard is an inefficient way of attacking greenhouse gases, he said.

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