WSPA

Western States Petroleum Association

# FACT SHEET: California Low Carbon Fuel Standard

Sierra Research Inc. of Sacramento recently completed an analysis of California's Low Carbon Fuel Standard at the request of the Western States Petroleum Association. Sierra used data and information from government sources, including the federal Energy Information Administration (EIA), California Energy Commission (CEC) and the California Air Resources Board (ARB).

Key findings included:

- Based on EIA biofuel forecasts, California biofuel supplies will be inadequate for compliance with the Low Carbon Fuel Standard (LCFS) by 2015 when LCFS requirements start to become much more aggressive;
- Based on CEC biofuel price forecasts, even if the biofuel supplies CARB staff believes will be available are available, transportation fuel costs in California could increase dramatically;
- Even if supplies are available, the total cost of acquiring special biofuels in California in order to comply with the LCFS, could, based on CEC biofuel price forecasts, be as much as $54 billion between now and 2020.

- CARB's analysis of the LCFS assumes up to 2.73 billion gallons of ethanol per year from sugarcane will be available for use in California by 2020. Virtually all sugarcane ethanol, which has a lower carbon intensity than corn-based ethanol, comes from Brazil and according to CEC data no Brazilian ethanol has been exported to the U.S. since 2009. The Brazilian government's own export projections, cited by the CEC, suggest only 500 million gallons of sugarcane ethanol will be sent to the entire U.S. market in 2020.

  "It is clearly unlikely that the volumes of sugarcane ethanol assumed by CARB staff will be available in California during the period from 2012 to 2020," Sierra concluded. Sierra also said based on data prepared by the CEC, the cost of sugarcane ethanol from Brazil could be as much as twice the cost of gasoline.

- CARB also assumed that as much as 2.35 billion gallons of cellulosic ethanol will be available each year for use in California. The Sierra analysis notes the U.S. Department of Energy estimates just 12.6 million gallons of cellulosic ethanol will be available in 2012 and only 2 billion gallons available for the entire United States by 2020. Sierra noted that CEC forecast the cost of cellulosic ethanol to be approximately 2.75 times that of gasoline blendstocks.

  Cellulosic ethanol is made from wood fiber or other waste plant materials and therefore has a much lower carbon intensity than corn ethanol. However, production of cellulosic ethanol is more difficult and has not yet reached commercial scale.

- The Low Carbon Fuel Standard also depends on a significant increase in vehicles able to operate on 85 percent ethanol, called flex fuel vehicles. CARB's analysis of the LCFS assumes the number of FFVs will increase to 4.6 million vehicles by 2020. The Sierra Research analysis notes only 400,000 FFVs are operating in California today and changes in federal incentives to build more FFVs will phase out starting in 2015.

  "There is little reason to expect that the California FFV population will expand to the levels assumed by CARB staff between now and 2020," Sierra concluded.

- California currently restricts the ethanol content of gasoline to not more than 10 percent. However, CARB's own analyses of the LCFS program assume in some cases that 15 percent ethanol blends will be available. Sierra noted CARB has not initiated any of the actions that would be required to change the current 10 percent blend limit.