

WESTERN STATES PETROLEUM ASSOCIATION

Energy and Water Nexus Summit!

Bay Planning Coalition



Tupper Hull
Western States Petroleum Association
October 24, 2012

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WE PERFORM

WE PRODUCE

LCFS and Fuel Costs

- Refiners in will have to recover 33 cents to \$1.06 per gallon to cover higher costs associated with LCFS
- Compliance costs could be much higher if the cost of carbon rises and becomes volatile – up to \$2.70 per gallon
- Massive shift in fuel trade flows
- Loss of up to 50% of the state's refining capacity



Impact of AB 32 Fuels Policies - Refining

Scenario if LCFS compliance is achieved solely through blending low CI blendstocks (e.g., sugarcane ethanol)

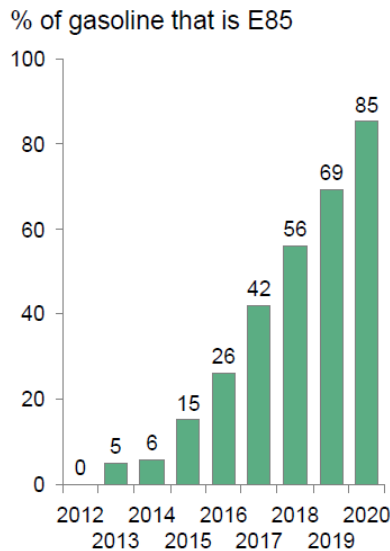
Model assumptions

No widespread adoption of low CI vehicles¹ by 2020, which would require:

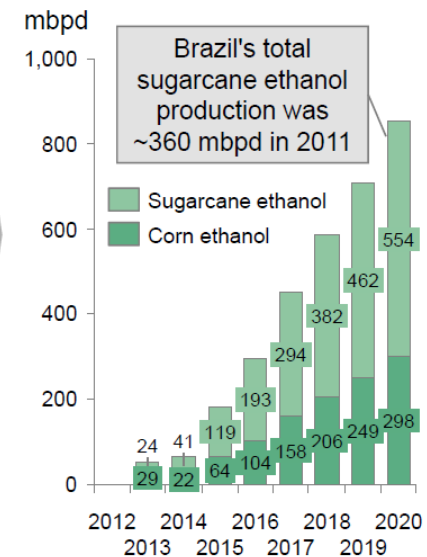
- Faster consumer uptake than historical hybrid uptake
- Significant technological advances
- Brand-new infrastructure network

Volume of sugarcane ethanol reaches 65% of total ethanol volume by 2014

LCFS targets will require majority E85 adoption



LCFS targets would require 554 mbpd of cane ethanol



Projected ethanol adoption would also require rapid development of shipping and transport infrastructure

1. Powered by renewable electricity, low CI hydrogen, or CNG
Source: CARB, Bloomberg, BCG analysis, Renewable Fuels Association