

California Environmental Protection Agency



**Air Resources Board**

# **Latest Biofuels Developments in California**

**Joint ISCC Technical Committee Meeting  
June 24, 2015**

# *AB 32 and the Low Carbon Fuel Standard*

In California, development of alternative fuels (including biofuels) is driven by

- The Global Warming Solutions Act of 2006 (AB 32) and
- The federal Renewable Fuel Standard.

AB 32 consists of a suite of measures designed to reduce GHG emissions to 1990 levels by 2020.

- The Low Carbon Fuel Standard (LCFS) is a key AB 32 strategy targeting the transportation sector.
- Transportation is
  - Responsible for almost 40% of total GHG emissions
  - Almost completely driven by petroleum
  - Resistant to cap and trade (another AB 32 program)

# *The Low Carbon Fuel Standard*

## ***LCFS goals:***

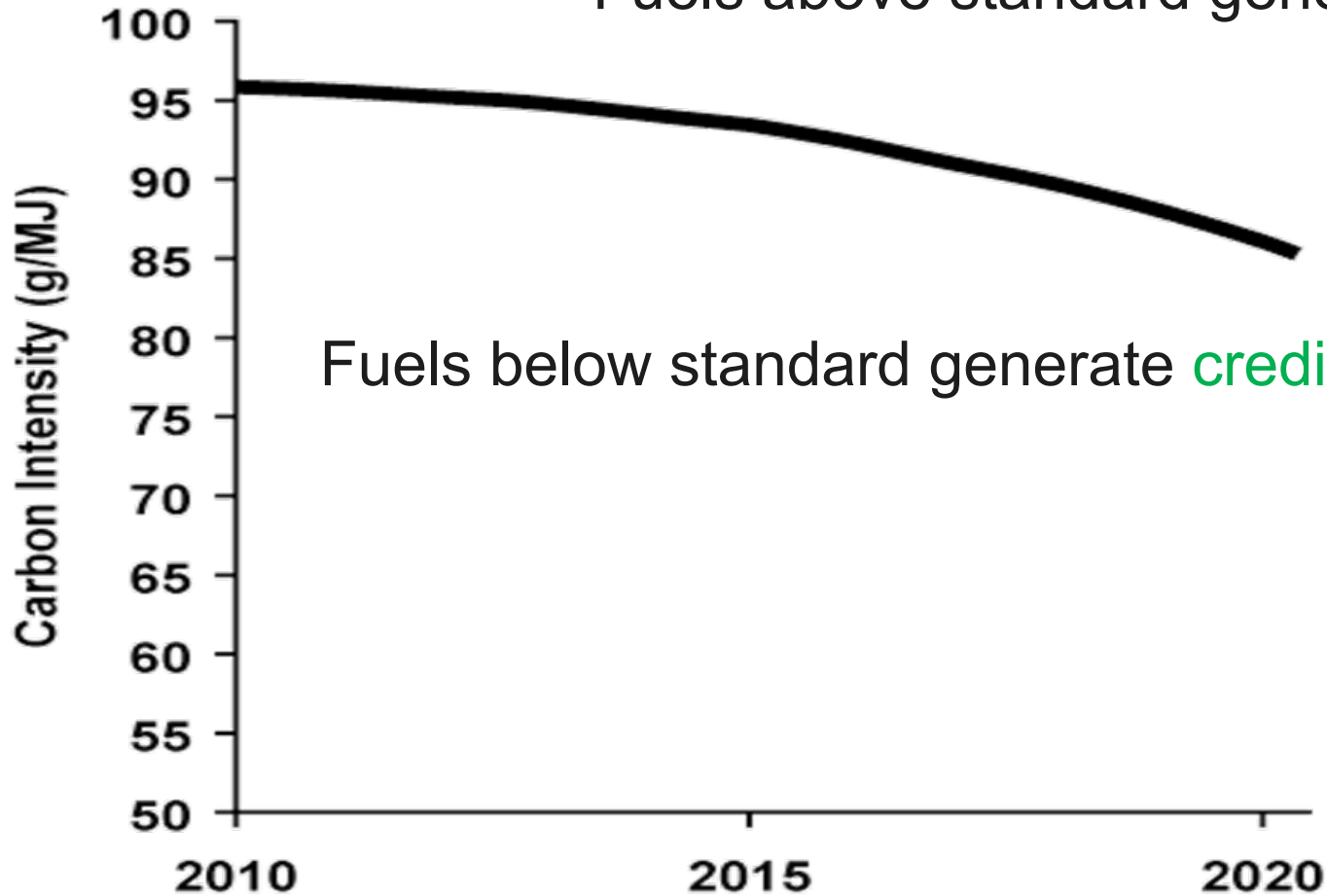
- Reduce the carbon intensity of transportation fuels, per mega joule of fuel energy, by at least 10% by 2020
- Diversify the California fuel pool

## ***LCFS Approach***

- Market based
- Fuel neutral
- Performance based
- Built around life cycle analysis

# Market- and Performance-Based

Fuels above standard generate **deficits**



# Effects on the California Fuels Market

## Total transportation energy use reported in California's LCFS program (million gge)

	2011	2012	2013	2014
CARBOB (gasoline)	12,948	13,089	12,788	13,064
ULSD (ultra-low sulfur diesel)	3,905	4,026	3,802	3,823
Ethanol	1,015	1,006	1,009	1,011
Biodiesel	13.95	22.45	88.20	85.47
Renewable diesel	1.97	9.56	106.50	115.44
CNG/LNG	82.41	94.84	100.98	91.79
Biogas	1.77	1.79	11.51	23.79
Electricity	0.36	1.27	3.49	3.95*
<b>Total</b>	<b>17,968</b>	<b>18,250</b>	<b>17,910</b>	<b>18,219*</b>
<b>Alt Fuel</b>	<b>1,115</b>	<b>1,136</b>	<b>1,319</b>	<b>1,331*</b>
<b>Alt Fuel (percent of total energy)</b>	<b>6.2%</b>	<b>6.2%</b>	<b>7.4%</b>	<b>7.3%*</b>
<b>Non-biofuel portion of alt fuel</b>	<b>7.6%</b>	<b>8.6%</b>	<b>8.8%</b>	<b>8.2%*</b>

Source: UC Davis Institute of Transportation Studies

# *Federal Commerce Clause Lawsuit*

- Multiple plaintiffs argued that the rule discriminated against out-of-state corn ethanol and crude oil.
- Trial court found against ARB but the Appeals court overturned
- Plaintiffs appealed to the Supreme Court, which Declined to hear the case
- Appeals court decision stands
  - No “facial discrimination”
  - Remanded the “discrimination in fact” question to the trial court

# *State Lawsuit on Process*

- POET pointed to procedural shortcomings
  - Environmental impact findings
  - Certain emails qualified as public comments on the rule.
- Trial court found in ARB's favor, but plaintiffs appealed.
- Appeals court found in favor of the plaintiffs but left the regulation in place. It ordered ARB to:
  - Re-adopt the regulation and remedy the shortcomings
  - Freeze the standard at 2013 levels pending re-adoption

Important outcome in both cases: the LCFS was not struck down.

# Re-adoption

- LCFS re-adoption culminates at the July 23rd public meeting when the Board votes on staff's proposal
- Key features of staff's proposal:
  - Creates a \$200 credit price cap and deficit rollover process (in case fuel/credit supply is short)
  - Retains the 10% CI reduction by 2020 goal (requires a re-drawn compliance curve)
  - Creates a 2-tiered pathway approval process (simplified, expedited processing of 1<sup>st</sup>-gen. fuel pathways)
  - Replaces the direct CI model (CA-GREET) with an updated version
  - Revises and expands indirect land use change values



# *Beyond Re-adoption*

- Reductions beyond 10% by 2020 had not been specified—until now
- The Governor issued an Executive Order which will require additional reductions:
  - GHG emissions reductions to 40% below 1990 levels by 2030 (interim step toward existing 80% by 2050 goal).
  - All state agencies to implement appropriate measures
  - ARB to update its climate change program scoping plan
  - ARB has stated that the LCFS will play a major role in meeting the Governor's targets.
  - Strong internal commitment to incorporate sustainability into the LCFS—and other programs.

# *Sustainability*

- So far, I've only mentioned only one sustainability parameter: GHG emissions
- But the Board directed us to consider a full range of sustainability parameters
- That work has gone slowly due to law suits, other challenges, and basic growing pains.
- Now, staff are dedicated to developing monitoring, verification, and sustainability provisions
- Considering a unified set of requirements covering the entire supply chain.

# *Sustainability*

- Advantage: Employ a system with state-of-the art internal protections throughout the supply chain
  - Conflict of interest
  - Traceability
  - Transparency
  - Risk management
  - Accreditation
- Among our alternatives is adopting a “gold standard” set of requirements (e.g., World Wildlife Fund’s) as our own.
- Certification bodies willing and able to certify to our “gold standard” would be on our “approved” list.

**Thank You**