

WESTERN STATES PETROLEUM ASSOCIATION

Adequate, Reliable & Affordable Fuel in a Low-Carbon World

American Association of Blacks in Energy

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President
April 18, 2012



Petroleum's economic contribution to US & California economy is significant

Jobs (direct and indirect)

- US - 9.1 million
- CA - 332,968

Labor income

- US - \$533 billion
- CA - \$17 billion

Taxes

- US - \$35.7 billion in income taxes in 2009
- CA - \$9.2 billion in taxes and fees to federal, state and local governments*



* Excludes property tax revenues

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Source: Purvin & Gertz, Assessment of Petroleum Industry Economic Impact to the State of California, June 2011, based on 2009 data; API by PricewaterhouseCoopers LLP.

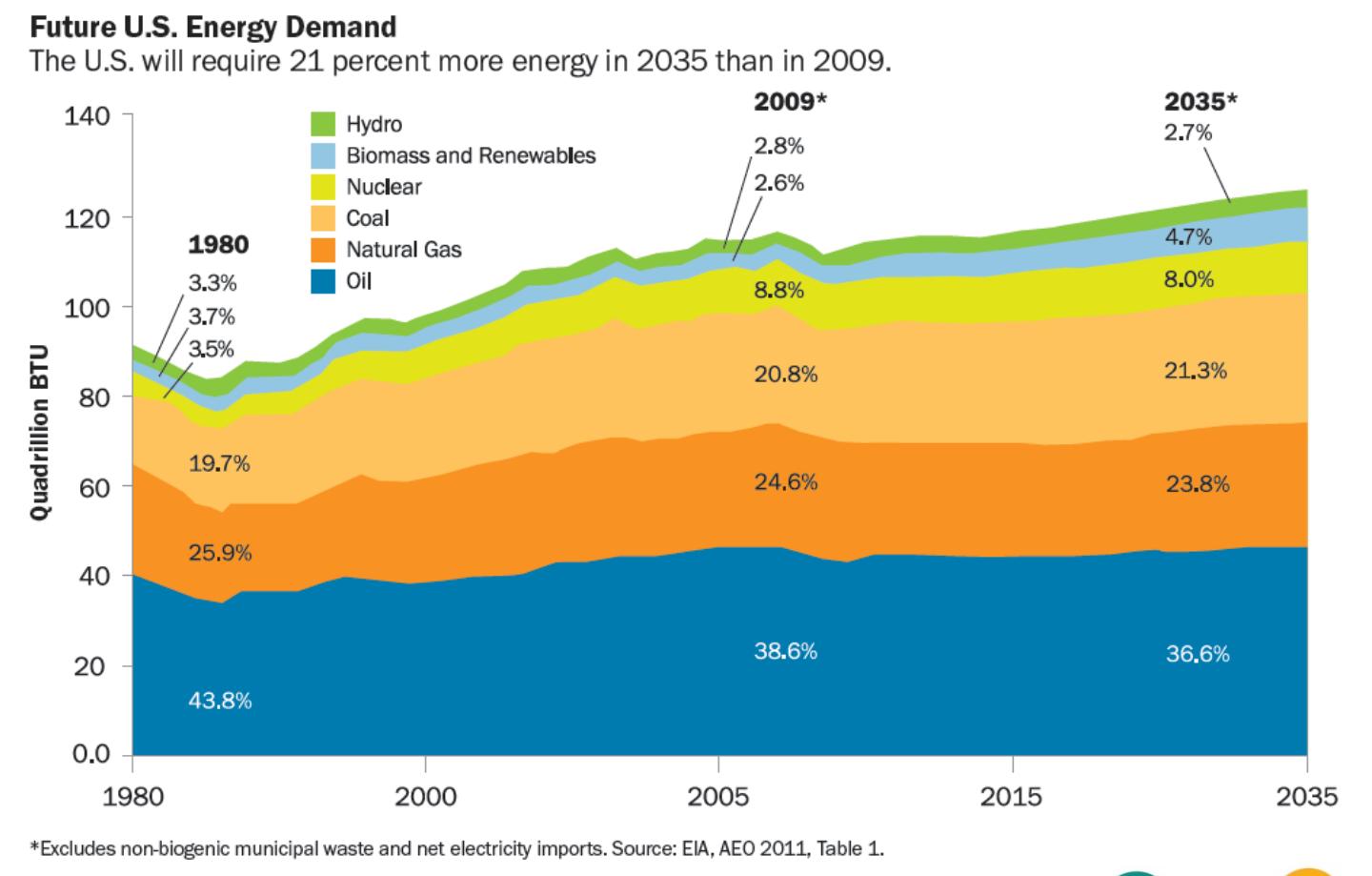
January 2012

WE PROVIDE

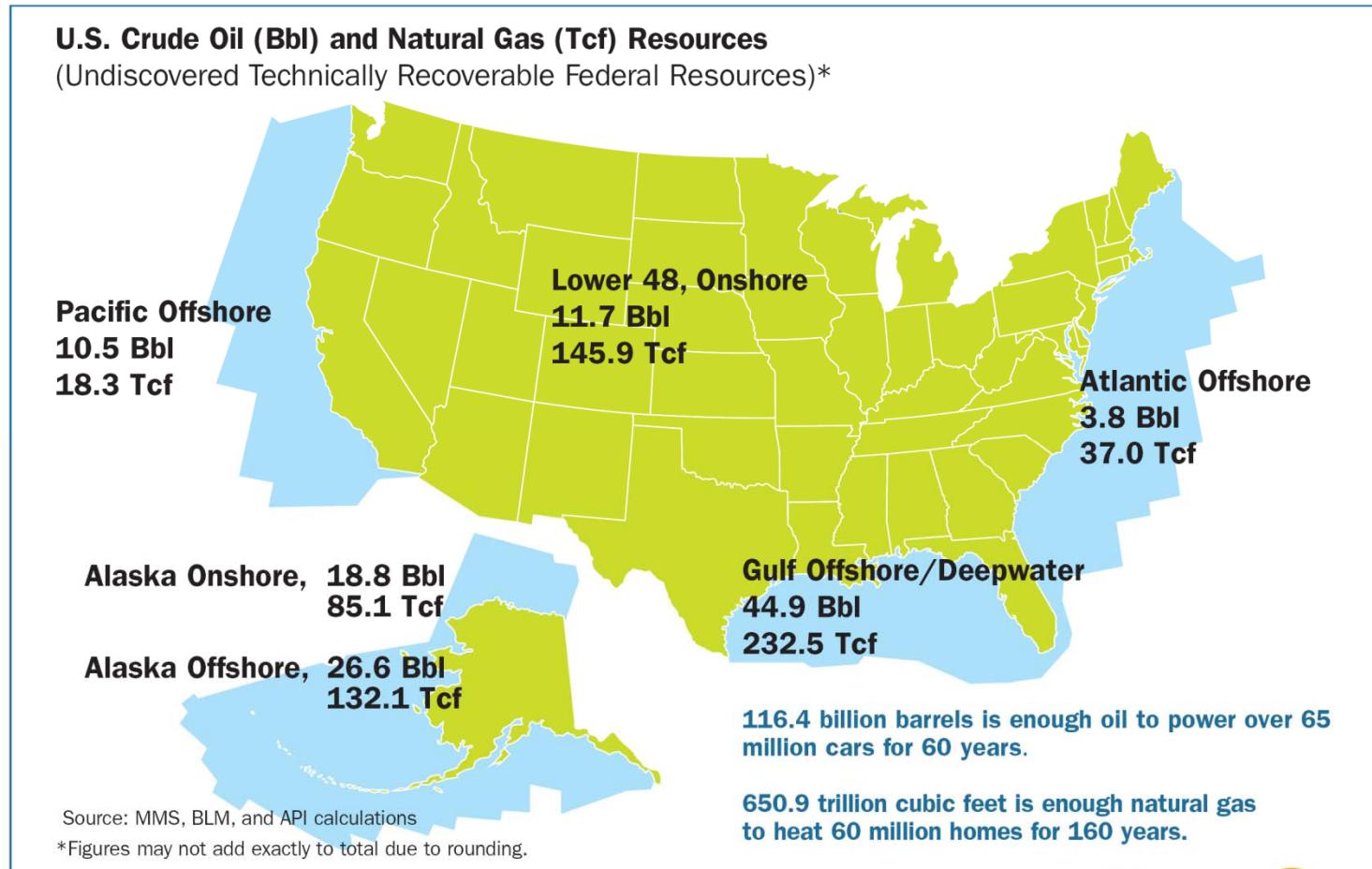
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Petroleum *is* a fuel of the future



The US has abundant oil reserves that are off limits

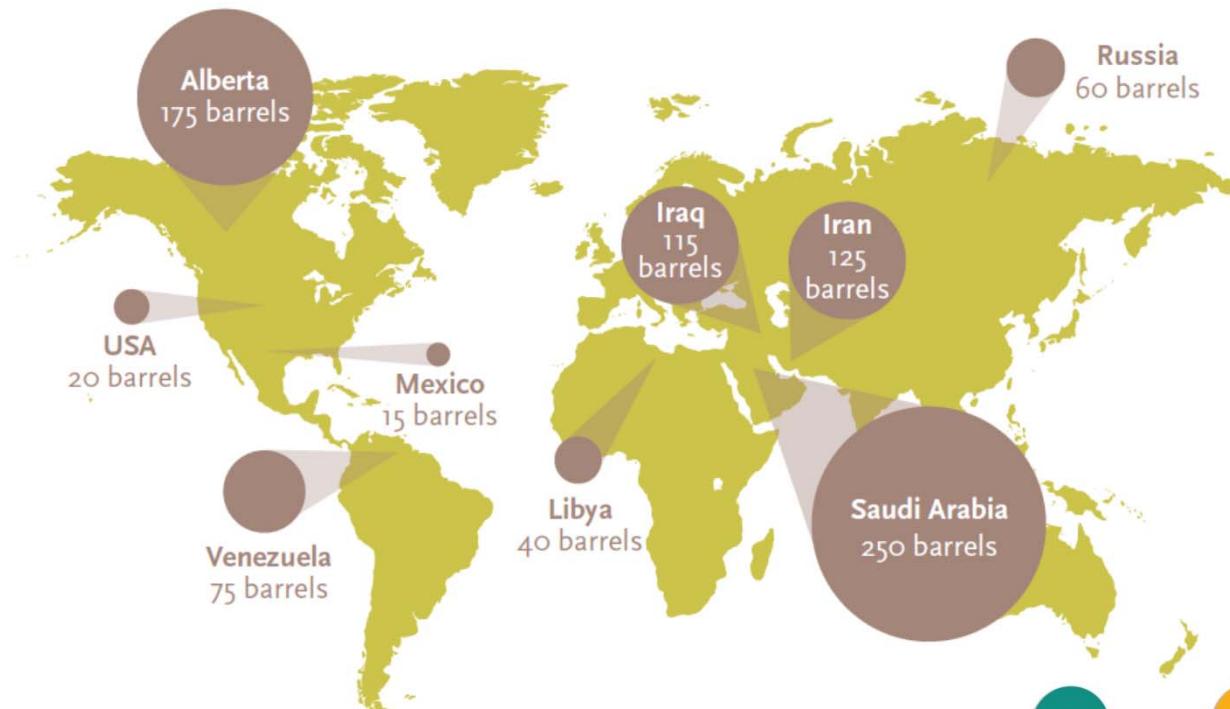


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Canada has the world's second largest oil reserves

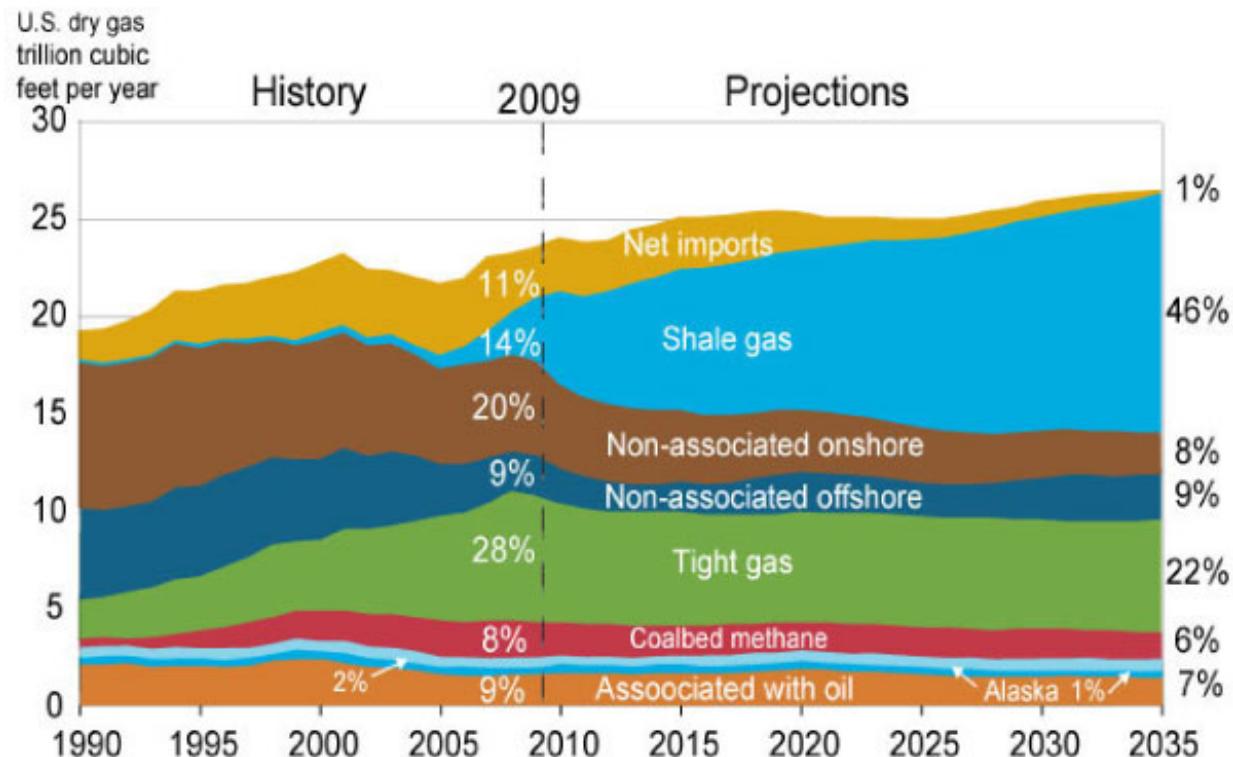
Comparative Oil Reserves (billions of barrels)

Source: *Oil & Gas Journal*, 2007



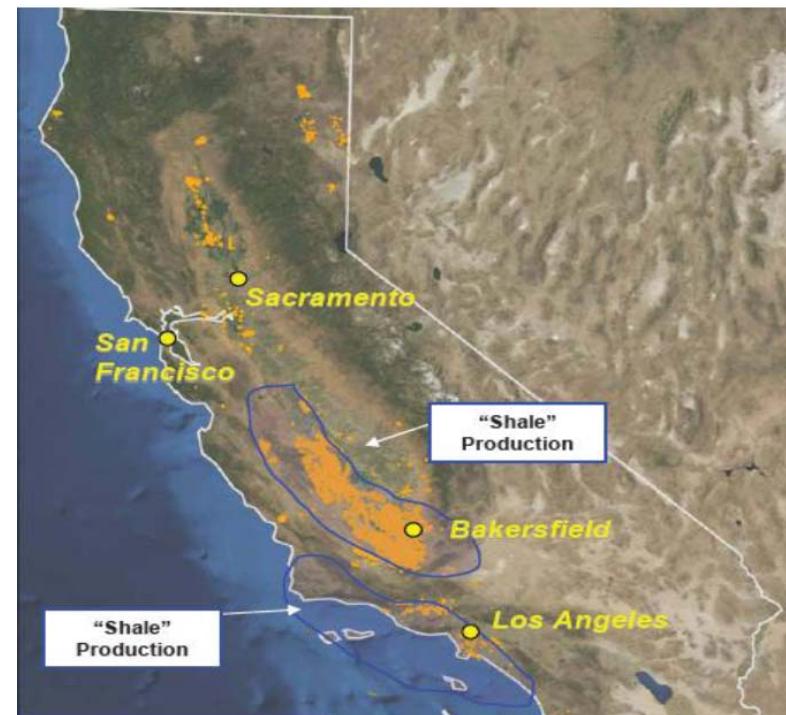
Hydraulic fracturing is key to unlocking U.S. shale resources

U.S. Natural Gas Supply, 1990-2035



California shale could be a game changer

- New EIA estimate – California's Monterey Shale formation contains 15.4 billion barrels of technically recoverable oil
- Total California proved reserves are 2.8 billion barrels
- 15 billion barrels could replace all of California's foreign imports for 43 years at current consumption rates



Source: U.S. Energy Information Administration | Review of Emerging Resources: U.S. Shale Gas and Shale Oil Plays, July 2011

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Oil industry supports voluntary disclosure

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Frac Focus
Chemical Disclosure Registry

HYDRAULIC FRACTURING HOW IT WORKS

GROUNDWATER PROTECTION

CHEMICAL USE

REGULATIONS BY STATE

FIND A WELL BY STATE

FREQUENT QUESTIONS

Hydraulic Fracturing & HOW IT WORKS

This technique uses a specially blended liquid which is pumped into a well under extreme pressure causing cracks in rock formations underground. These cracks in the rock then allow oil and natural gas to flow, increasing resource production.

[LEARN MORE ABOUT CASING >](#)

SITE SETUP

A HISTORIC PERSPECTIVE

Hydraulic Fracturing: How it Works

History of Hydraulic Fracturing

Hydraulic Fracturing: The Process

Site Setup

Fracturing Fluid Management

Looking for information about a well site near you?

FIND A WELL

Search for nearby well sites that have been hydraulically fractured to see what chemicals were used in the process.

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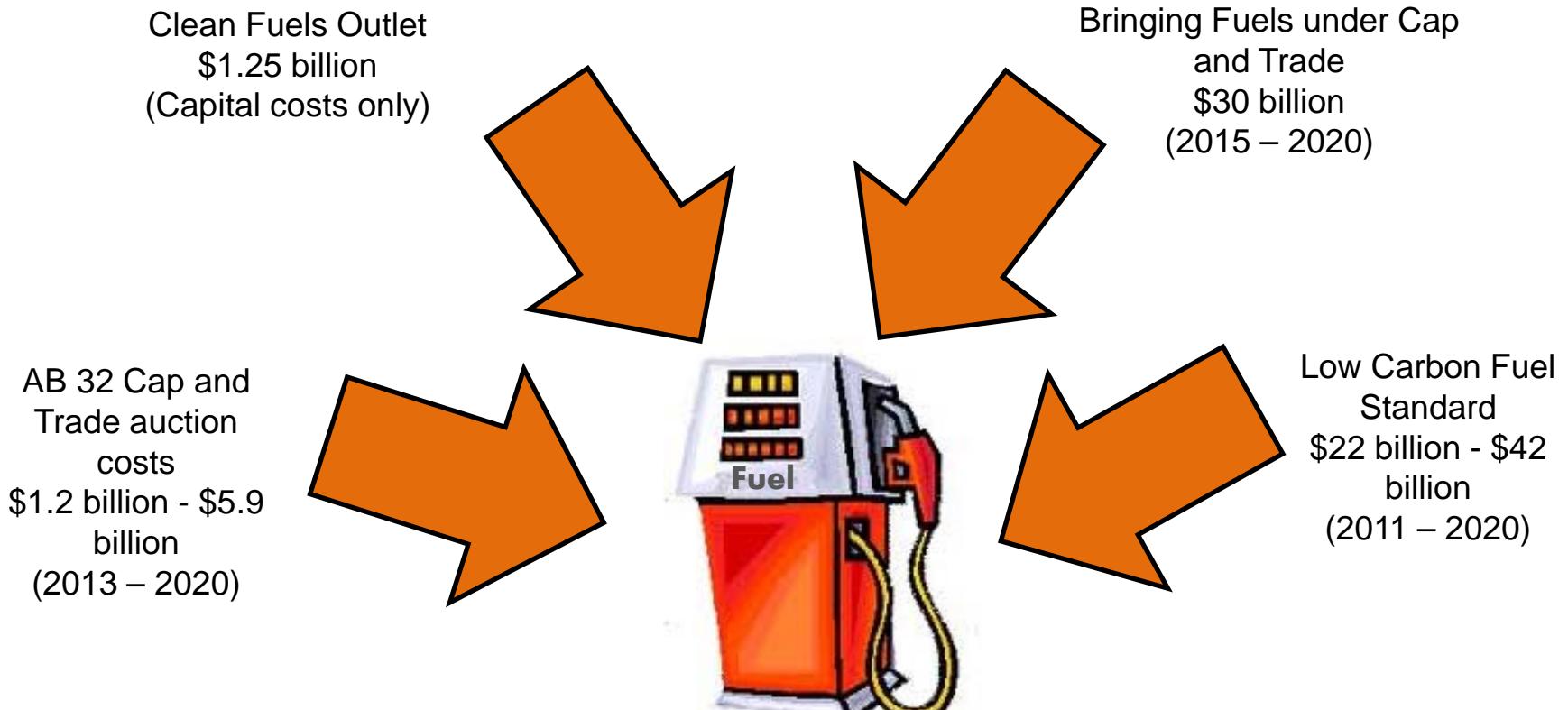
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8 Source: Frac Focus, Ground Water Protection Council, Interstate Oil & Gas Compact Commission

CA transportation fuel challenges

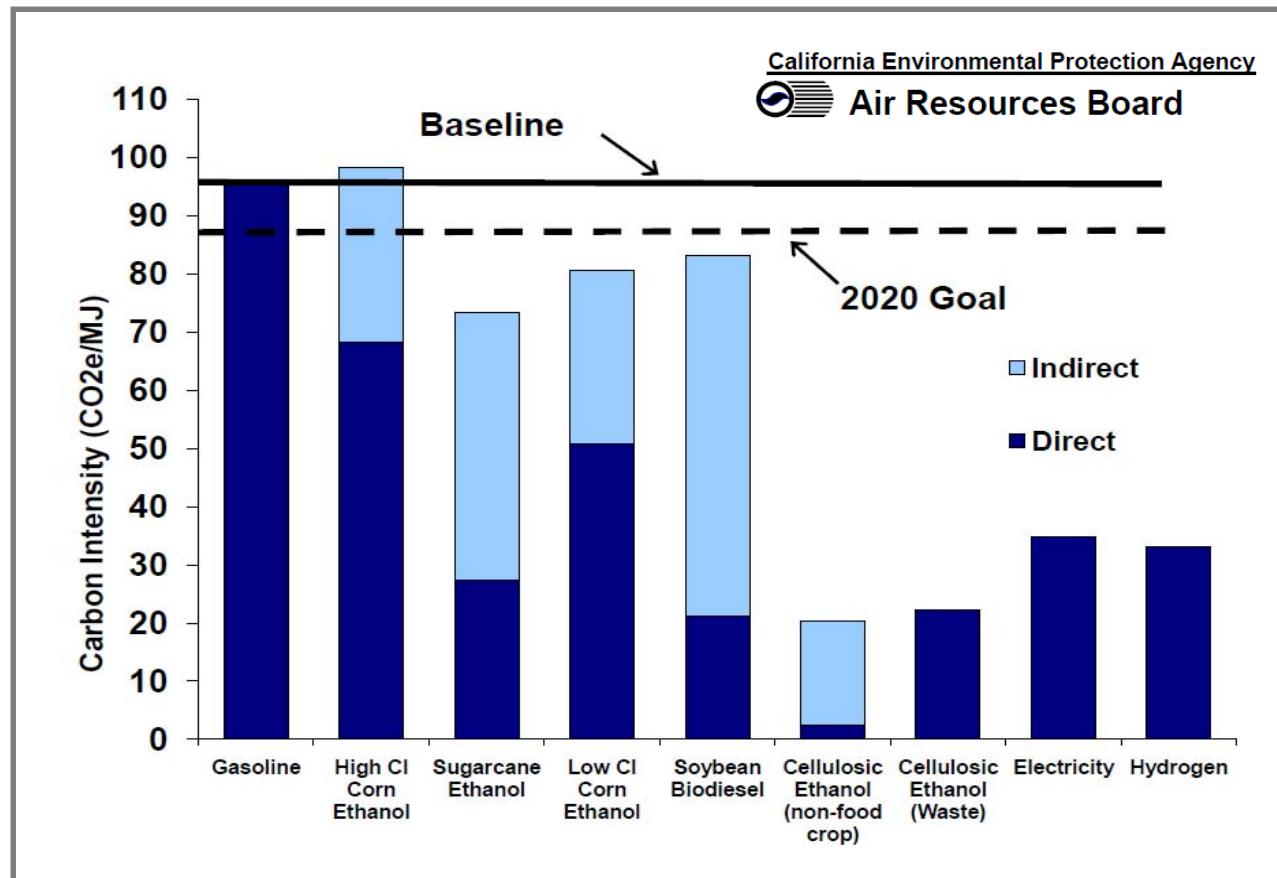
- Low Carbon Fuel Standard
- Cap and Trade
- Fuels Under Cap and Trade
- Clean Fuels Outlet

Regulations have cumulative impacts on fuel costs

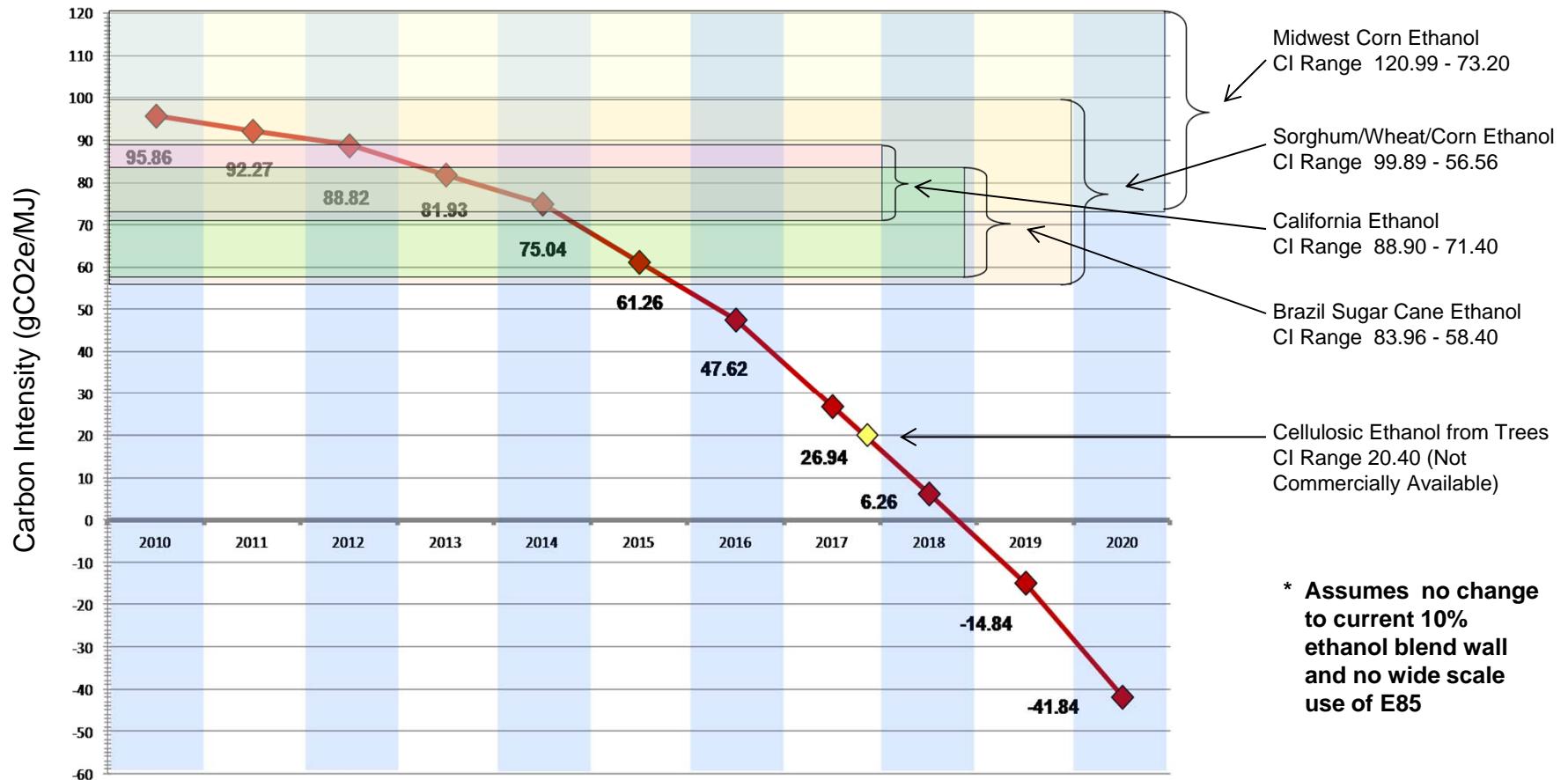


Source: California Air Resources Board, Clean Fuels Outlet regulation; Clean Fuels Outlet Workshop III, July 13, 2011; Review of CARB Staff Analysis of “Illustrative” Low Carbon Fuel Standard (LCFS) Compliance Scenarios, Sierra Research Inc., February 20, 2012; Evaluating the Policy Trade-Offs in ARB’s Cap-and-Trade Program, California Legislative Analysts Office, February 9, 2012

Performance based or picking winners and losers?

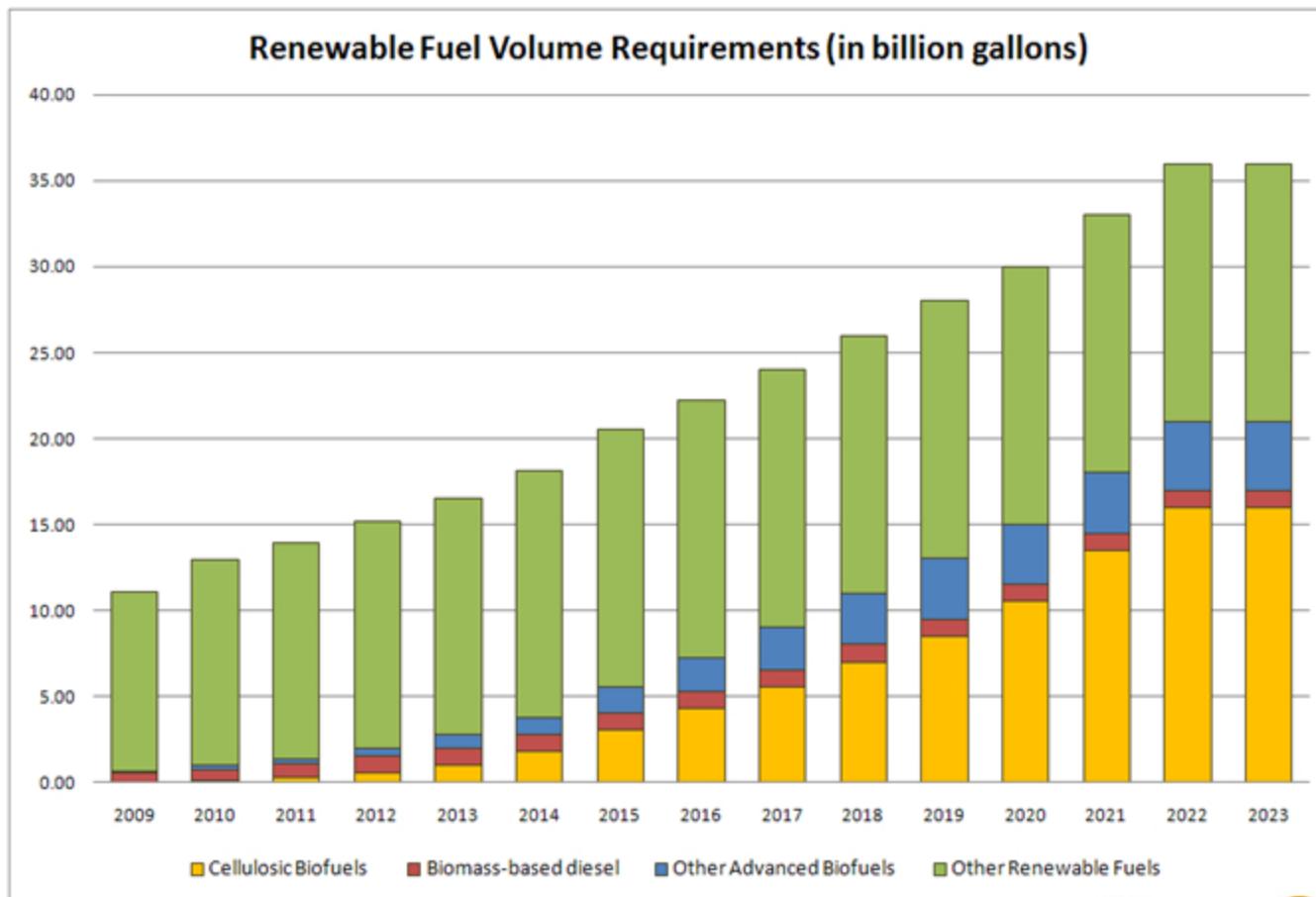


Carbon intensity of ethanol needed to meet LCFS*



* Assumes no change to current 10% ethanol blend wall and no wide scale use of E85

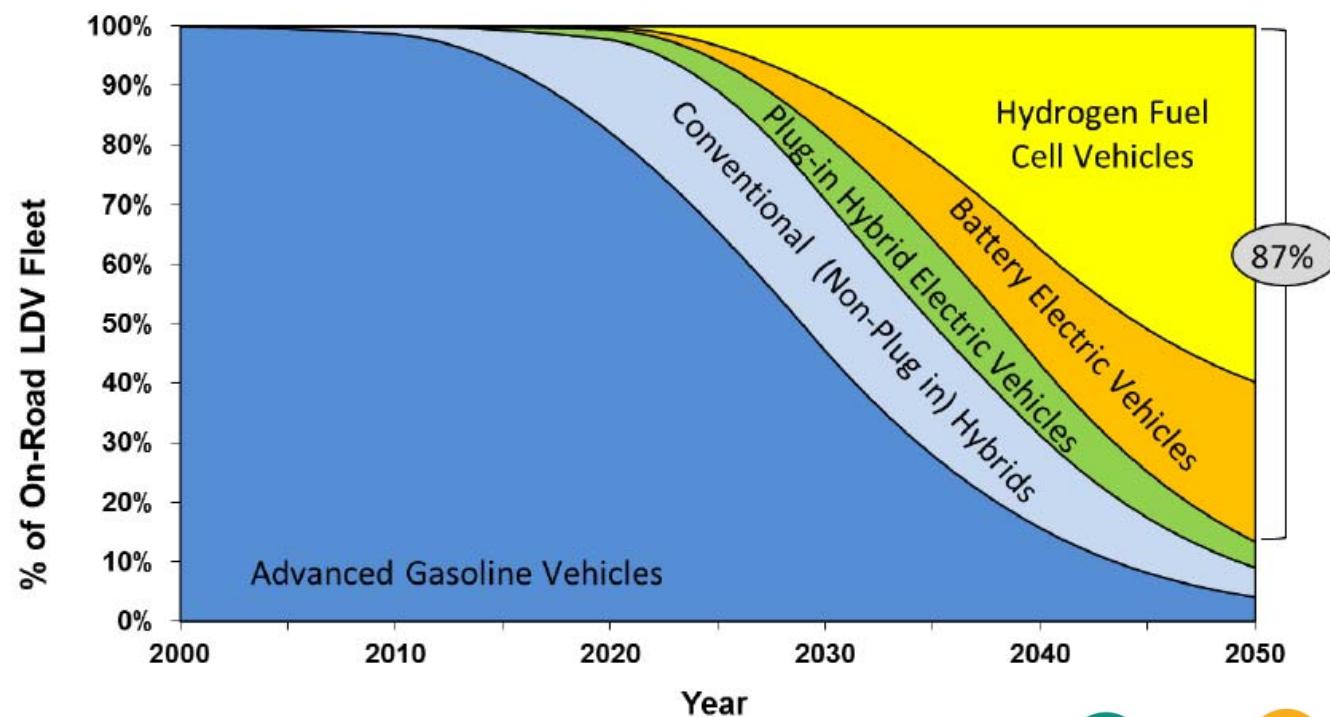
Federal RFS overestimates biofuel supply



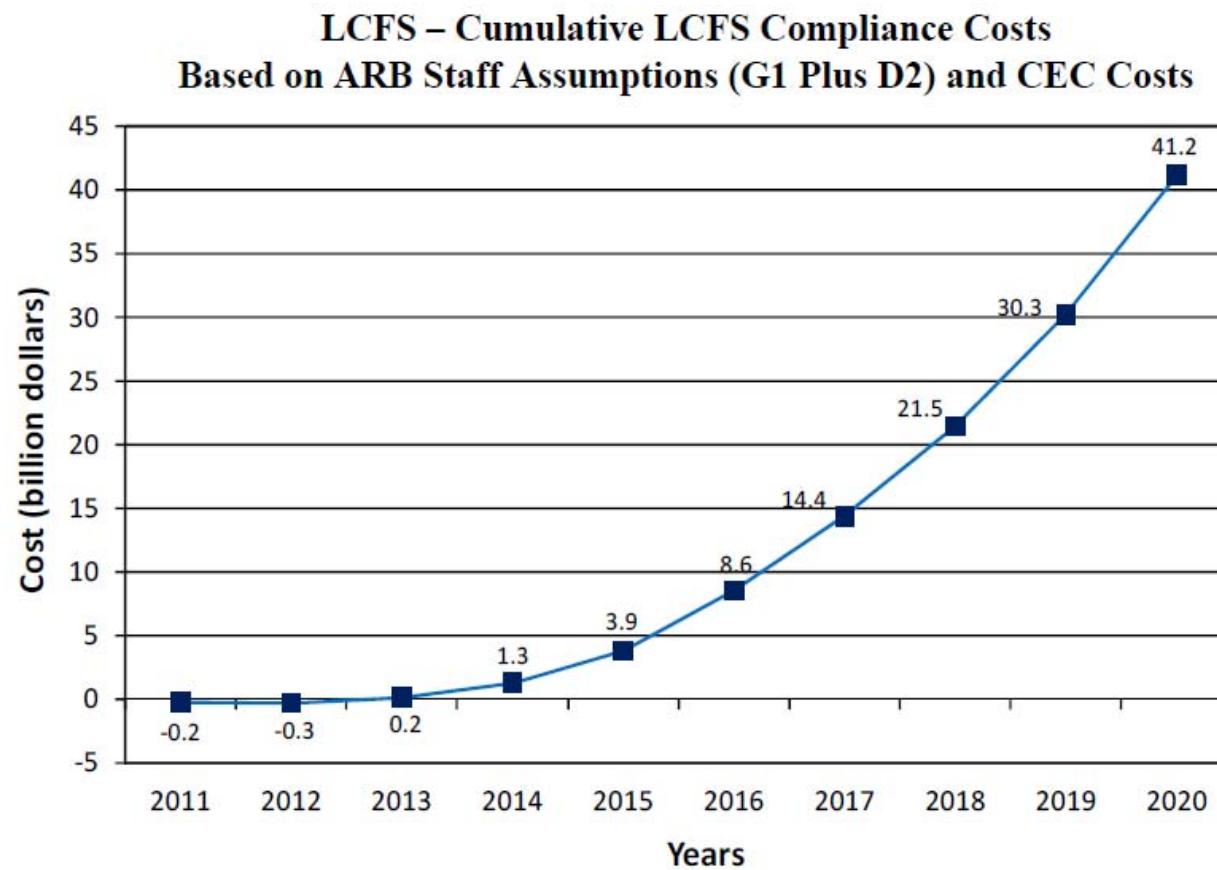
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CARB's Advanced Clean Cars Program is extremely aggressive

Figure 1. On Road Light-Duty Vehicle Scenario to Reach 2050 Goal



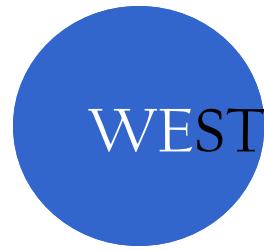
LCFS costs are significant



Constitutionality of LCFS is in question

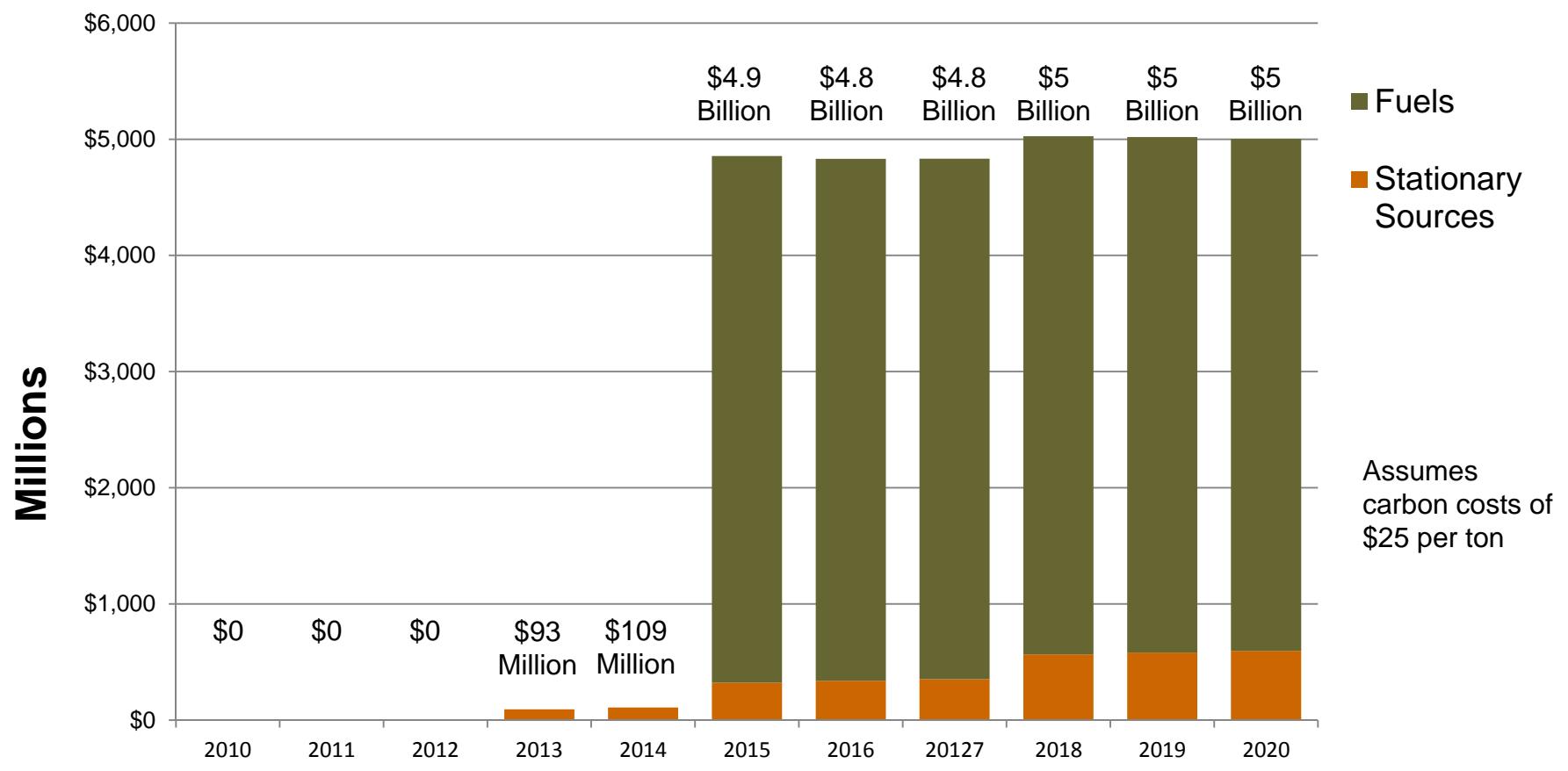
- U.S. District Judge Lawrence J. O'Neill ruled in December 2011 the LCFS is unconstitutional because it:
 - ✓ Discriminates against crude oil produced outside the state
 - ✓ Discriminates against ethanol produced outside the state
 - ✓ Impermissibly attempts to regulate commerce outside of the state's borders
- Judge O'Neill issued a temporary injunction again enforcement of LCFS during appeals
- CARB is in the process of appealing; seven other states are opposing CARB's appeal





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Fuels under CA cap and trade dramatically increase costs



Clean Fuels Outlet is unfair, costly for CA refiners

- New regulations require oil companies to build, maintain and supply hydrogen fueling stations at service stations they do not own or operate
- Initial cost for refiners: \$1.25 billion (does not include costs of supplying, maintaining and operating facilities)



Are there better, cheaper alternatives?

- Carbon tax
- Linked carbon fee
- Technology fund
- Clean Fuel Outlet regulation – modifications or elimination
- LCFS – elimination or adjusted implementation



Conclusion

- Consumers will be the ultimate judges of the success of California's transportation fuels and climate change strategies
- They expect energy to be abundant, reliable and affordable
- They expect it 24-7, 365 on demand
- Meeting consumer expectations is essential to meeting CA's policy objectives
- Policies must be based on sound science, be technically feasible and be cost effective



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