

# Briefing on the Low Carbon Fuel Standard and Pilot Financial Mechanism

September 7, 2017

Dairy Subgroup #2 Meeting

**California Environmental Protection Agency**

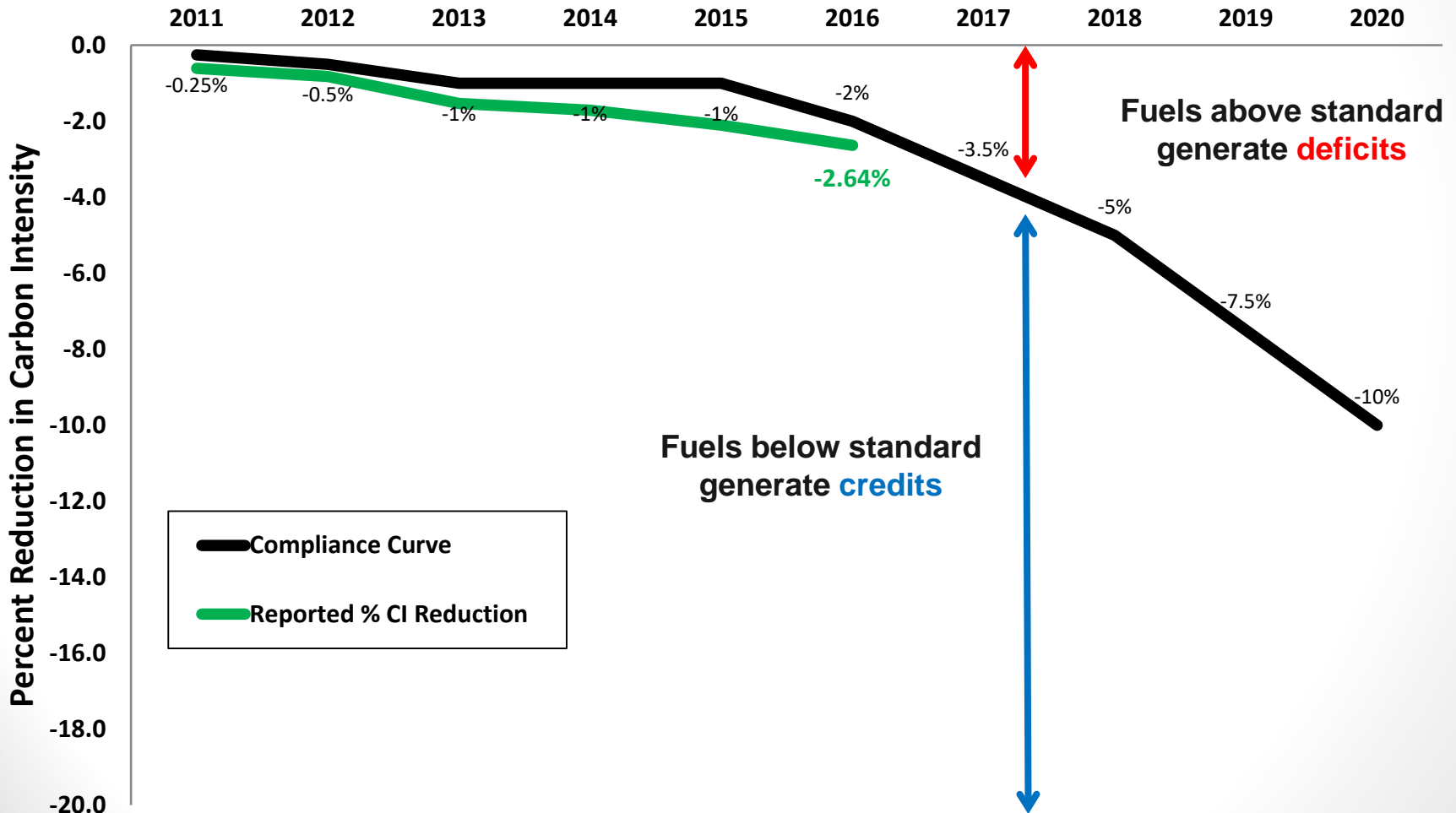


**Air Resources Board**



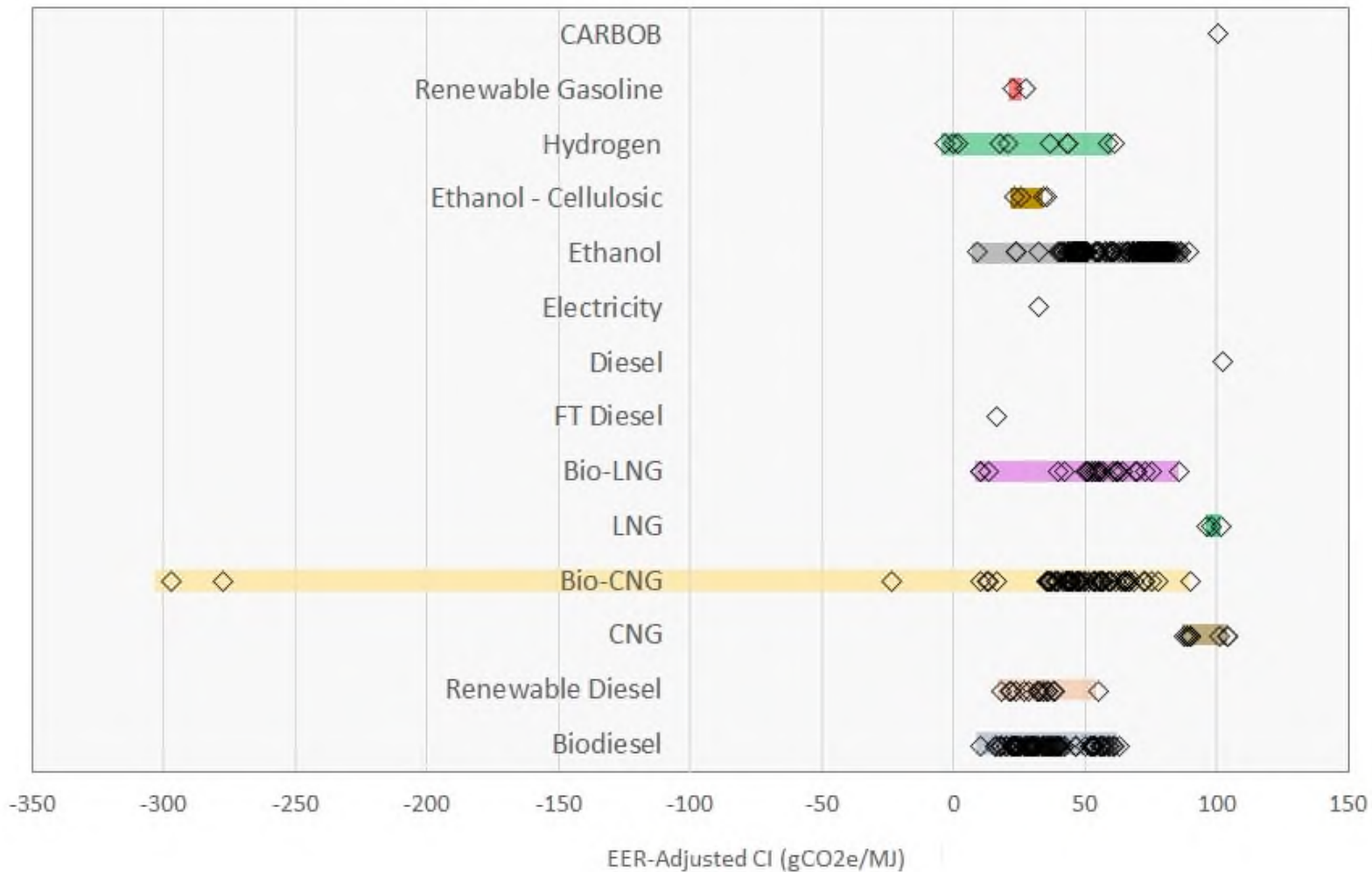
# How the LCFS Works

## Compliance Curve



# Carbon Intensity Values

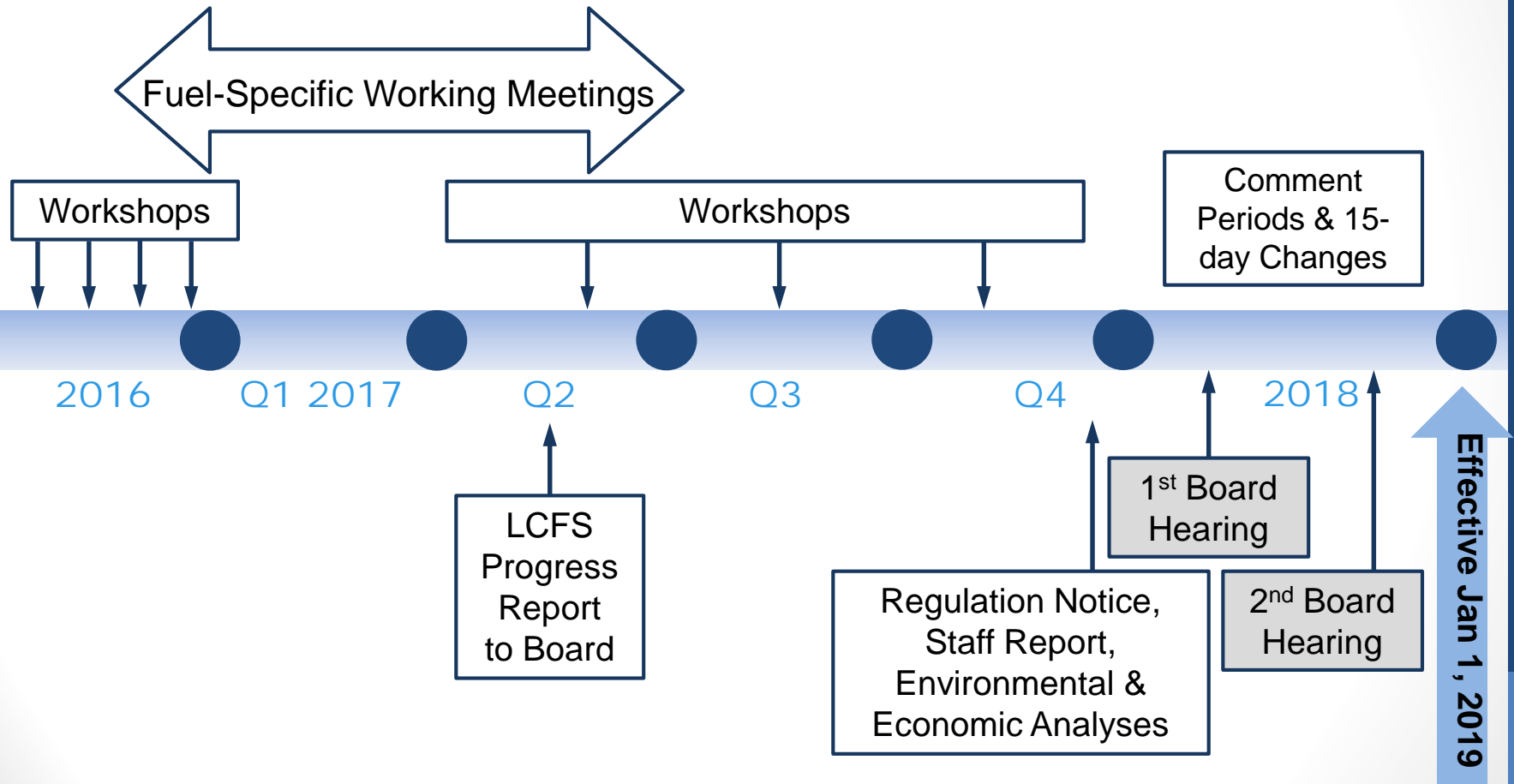
Carbon Intensity Values of Current Certified Pathways (2017)



# Potential LCFS Credit Value (2020)

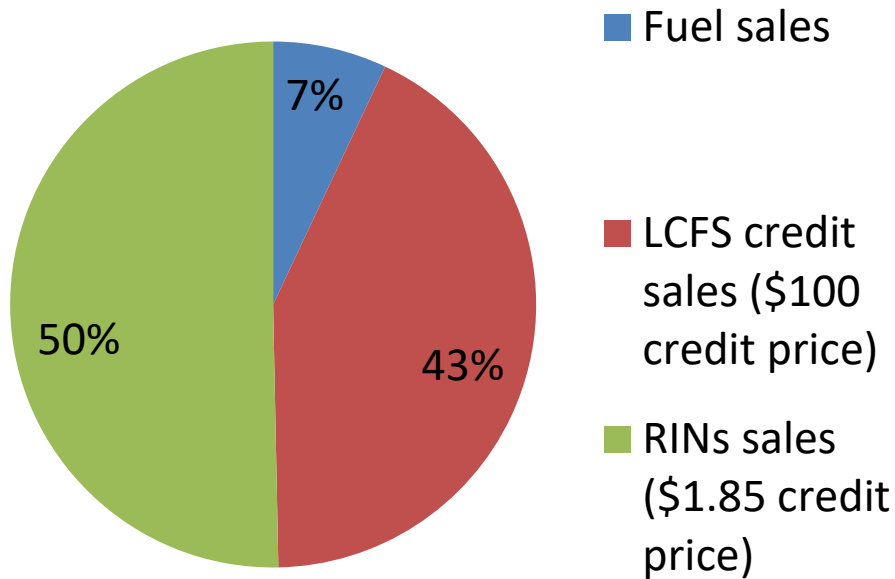
| Fuel               | Assumed CI Value (g/MJ) | LCFS Credit Price (\$/MT CO <sub>2</sub> e) |       |       |       | Units    |
|--------------------|-------------------------|---|-------|-------|-------|----------|
|                    |                         | 50  | 100   | 150   | 200   |          |
| Corn Ethanol       | 71                      | 0.07  | 0.14  | 0.22  | 0.29  | \$/gal   |
| Cellulosic Ethanol | 30                      | 0.24  | 0.48  | 0.72  | 0.96  | \$/gal   |
| Biodiesel          | 30                      | 0.37  | 0.74  | 1.11  | 1.48  | \$/gal   |
| Renewable Diesel   | 30                      | 0.38  | 0.76  | 1.14  | 1.52  | \$/gal   |
| Hydrogen           | 88                      | 0.80  | 1.60  | 2.40  | 3.20  | \$/kg    |
| Landfill NG        | 40                      | 2.10  | 4.20  | 6.30  | 8.40  | \$/mmBTU |
| Dairy NG           | -276                    | 18.92                                       | 37.84 | 56.76 | 75.67 | \$/mmBTU |
| Electricity        | 105                     | 0.04  | 0.07  | 0.11  | 0.14  | \$/kW-hr |

# LCFS Amendments: Public Process

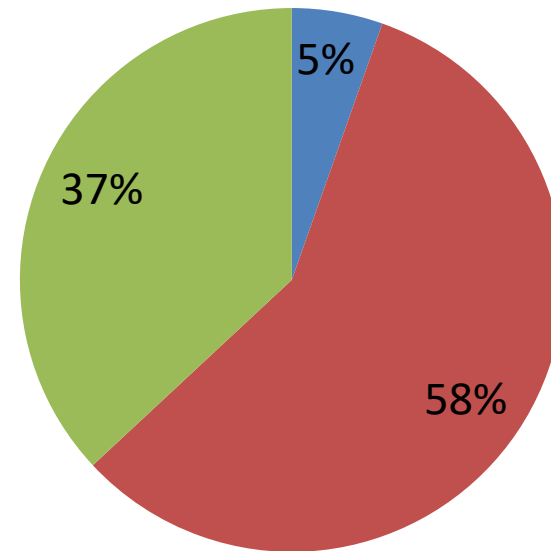


# Why a Financial Mechanism May Be Necessary?

Sources of revenue from a scrape conversion and digester project



Sources of revenue from a covered lagoon and digester project



Note: Based on SLCP Strategy assumptions, page 119

# Two Mechanisms being Considered

- Two mechanisms are considered: Contracts for Difference and Put Options.
- Both will decrease the exposure of developers and investors to fluctuations of environmental credit prices.
- Risk is not eliminated – some risk is transferred to the Program Administrator.
- Full presentation and feedback received for workshop conducted on June 26 can be accessed at:  
[https://www.arb.ca.gov/fuels/lcfs/lcfs\\_meetings/lcfs\\_meetings.htm](https://www.arb.ca.gov/fuels/lcfs/lcfs_meetings/lcfs_meetings.htm)
- We welcome suggestions of other alternatives or modifications to the alternatives presented.

# Timeline for Pilot Financial Mechanism

| Date          | Milestone                             |
|---------------|---------------------------------------|
| Jun 2017      | Workshop draft proposal concepts      |
| Jul-Aug 2017  | Receive feedback from workshop        |
| Sept-Oct 2017 | Prepare draft proposal                |
| Nov 2017      | Workshop draft proposal               |
| Dec 2017      | Consider feedback and revise proposal |
| Jan 1, 2018   | Final proposal                        |



Thank You