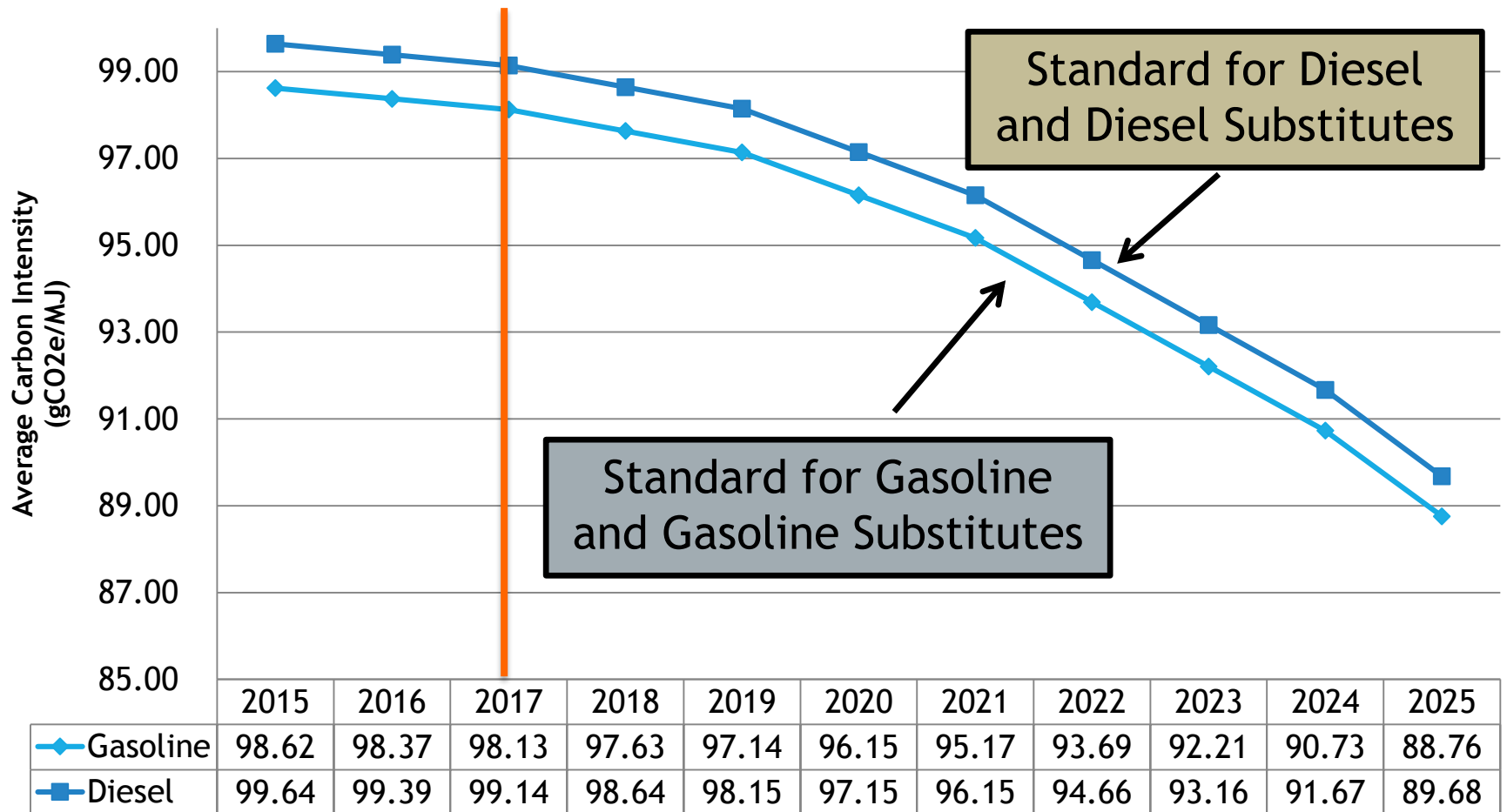


Oregon Clean Fuels Program

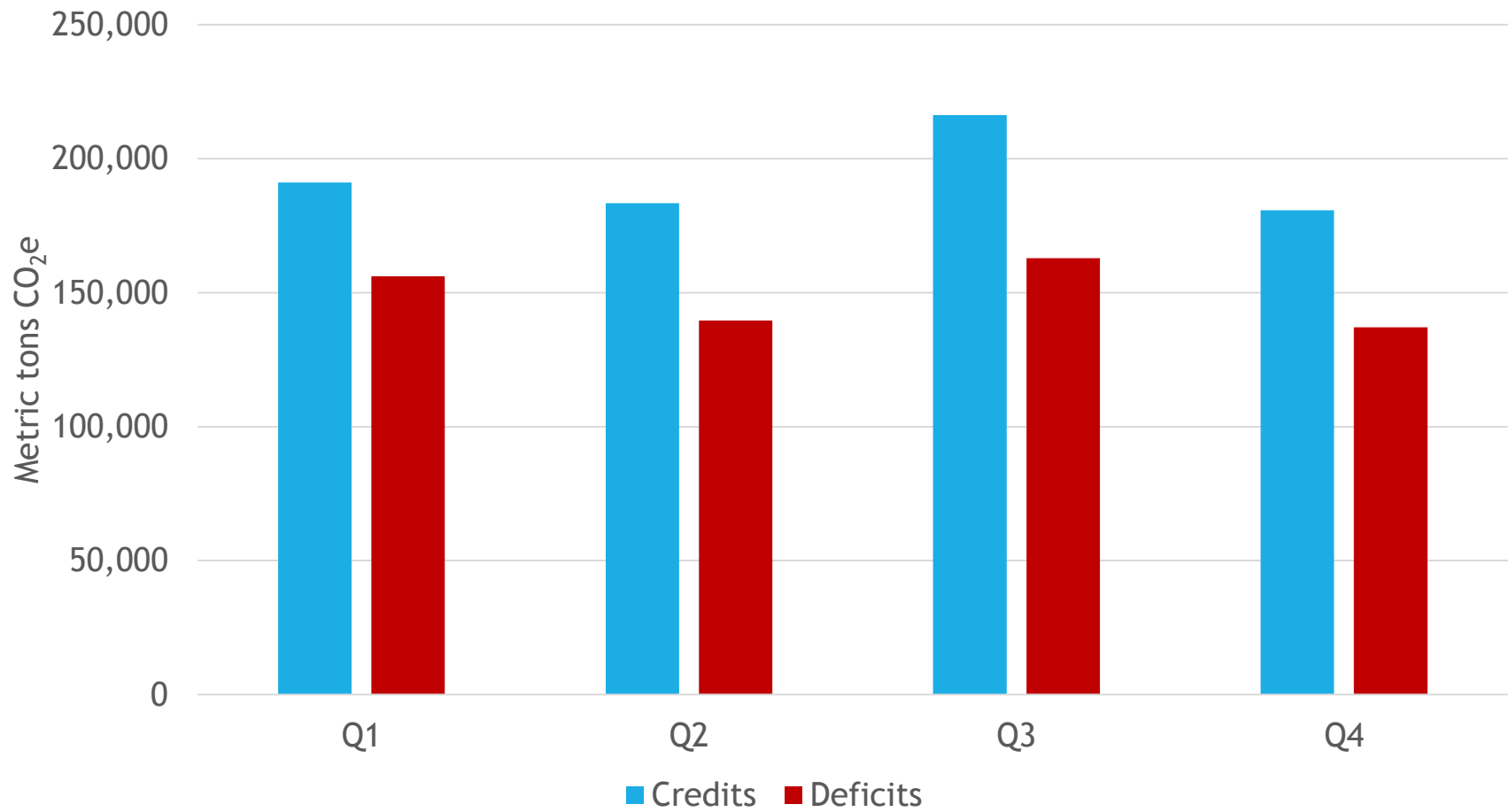
Clean Fuels Program Update Supporting Material

House Energy & Environment Committee Meeting
April 5, 2017

Clean Fuel Standards

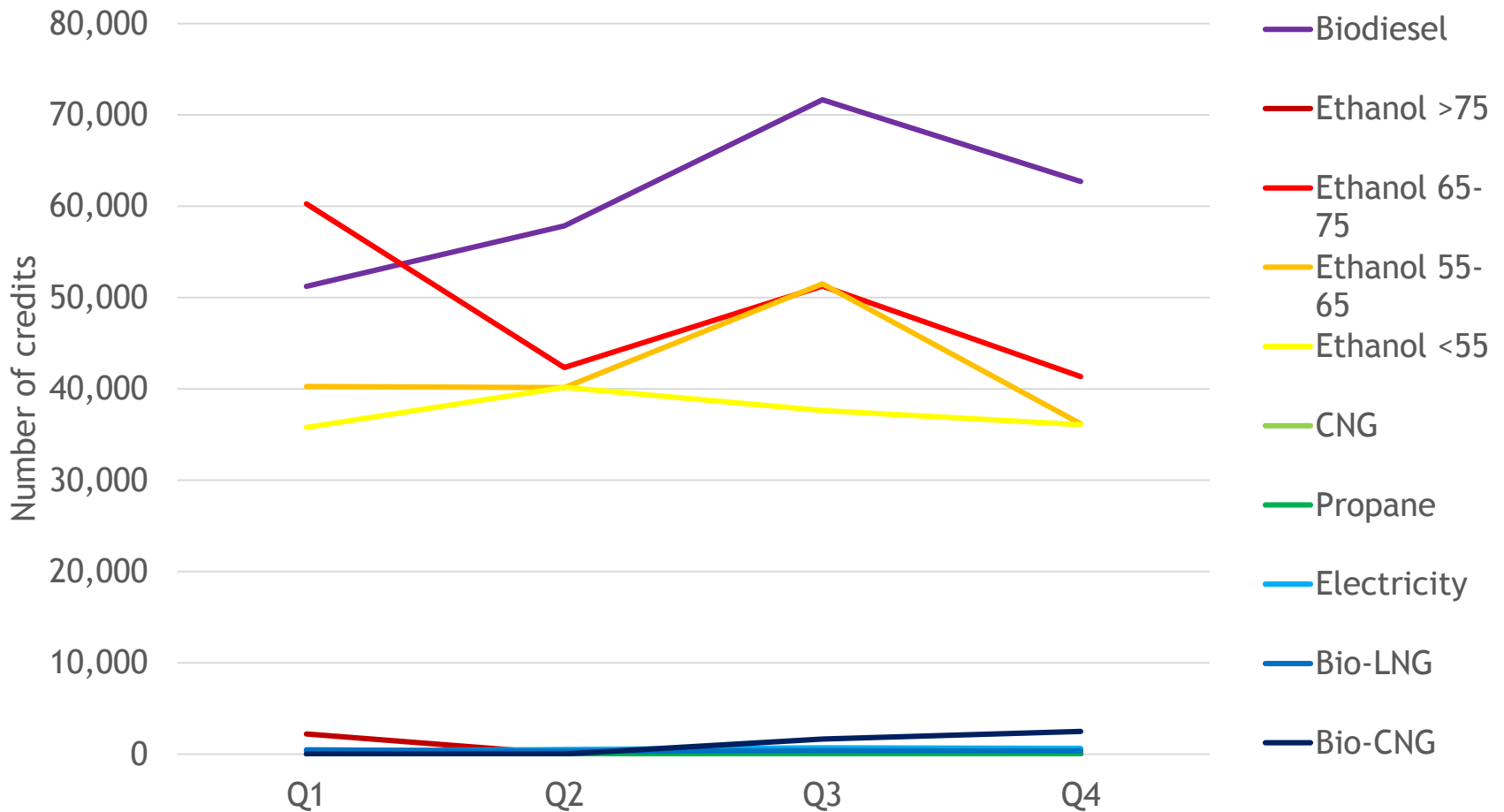


Over-Compliance in 2016



*Based on information submitted to the CFP Online System.

All Fuel Types Generating Credits



*Based on information submitted to the CFP Online System.

2017 Forecast: Fuels are Available

Fuel	Demand	Deficits	Credits
Gasoline Blendstock	1,428 MGals	437,500	
Diesel	737 MGals	239,400	
Banked Credits, 2016			160,000
Gasoline Substitutes			
Ethanol	160—190 MGals		200,000—600,000
Electricity	60—85 GWh		41,000—43,700
Diesel Substitutes			
Biodiesel	40—45 MGals		190,000—280,000
Renewable Diesel	40—50 MGals		265,000—395,000
Natural Gas	1.7—3.0 MDGE		4,500—15,000
Propane	0.8—1.3 MGals		1,200—2,000
TOTAL		676,900	862,000—1,496,000

*Taken from the ICF forecast for 2017

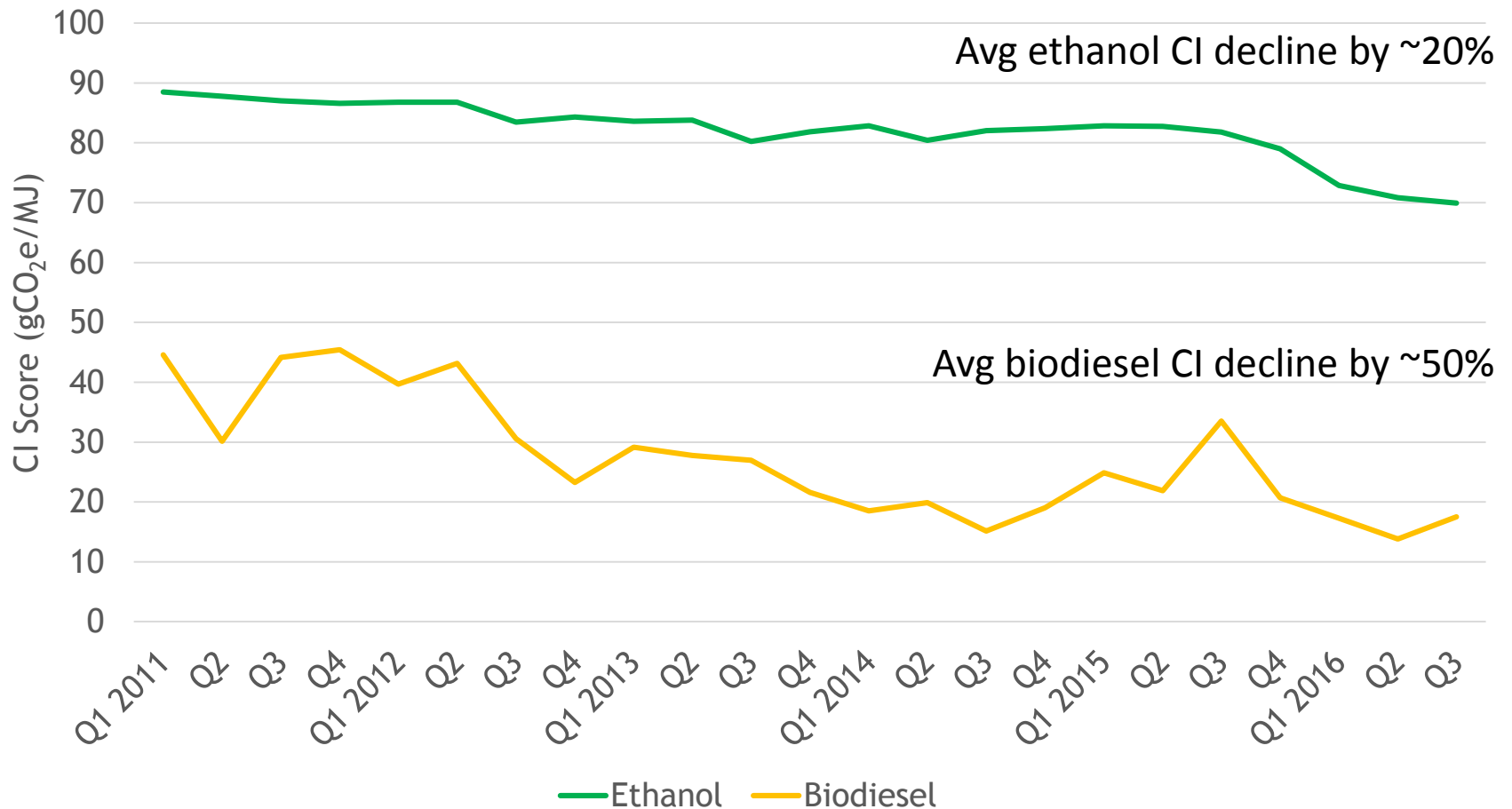
Long-Term Compliance

- The Clean Fuels Program can be achieved through a diverse fuel supply using a combination of ethanol, biodiesel and renewable diesel from various feedstocks, electricity, natural gas, renewable natural gas and propane for compliance.
- Over-compliance in the early years of the program reduces the need for new fuels or infrastructure and reduces compliance costs.
- By using a combination of approaches, there is potential for meeting the 2016-2025 requirements without exhausting the bank of credits and nearly reaches credit and generation parity in 2027.

*Taken from the ICF draft illustrative scenarios for 2016-2025

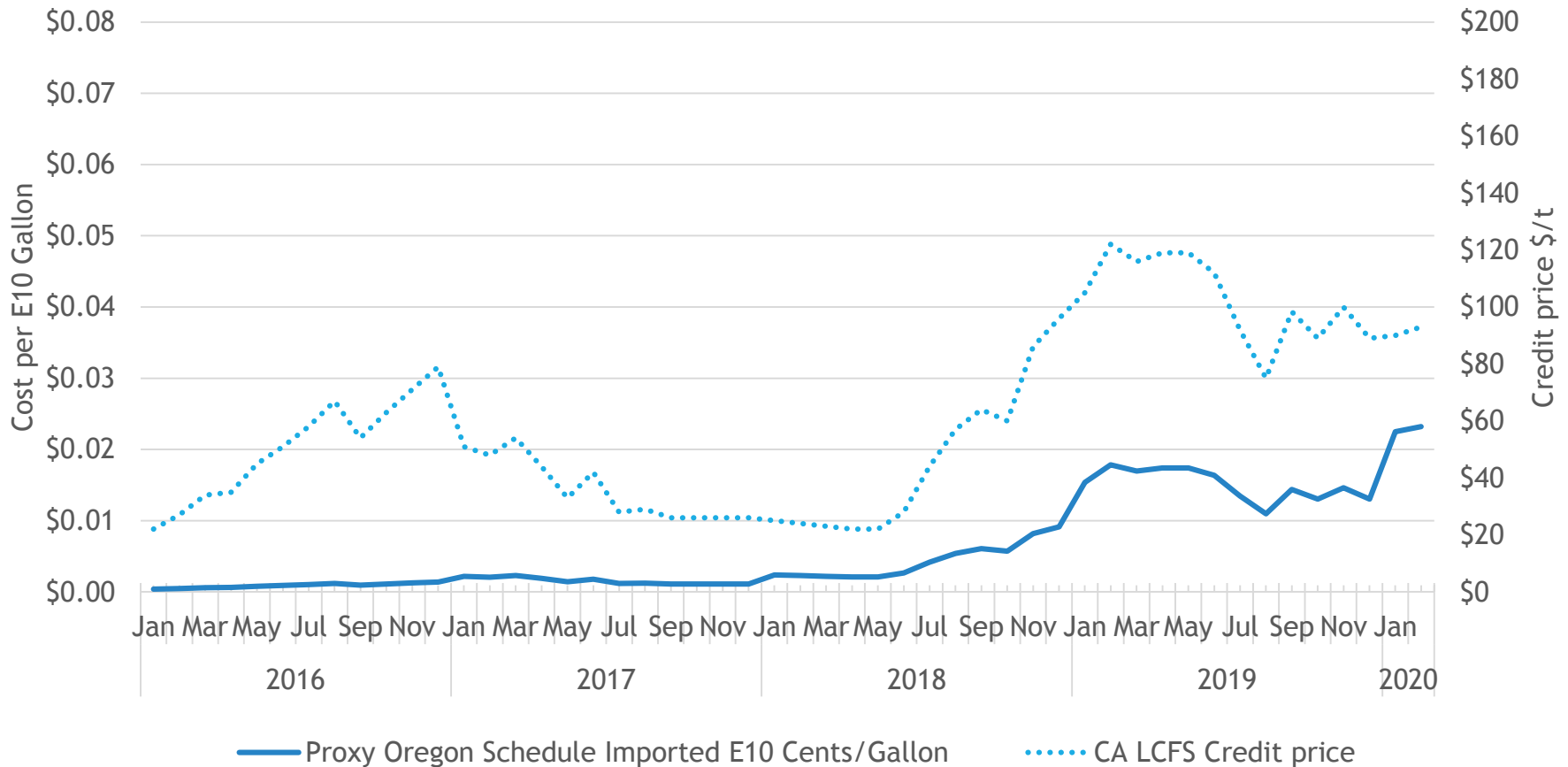
Clean Fuels Program

Biofuel CI Trends in California



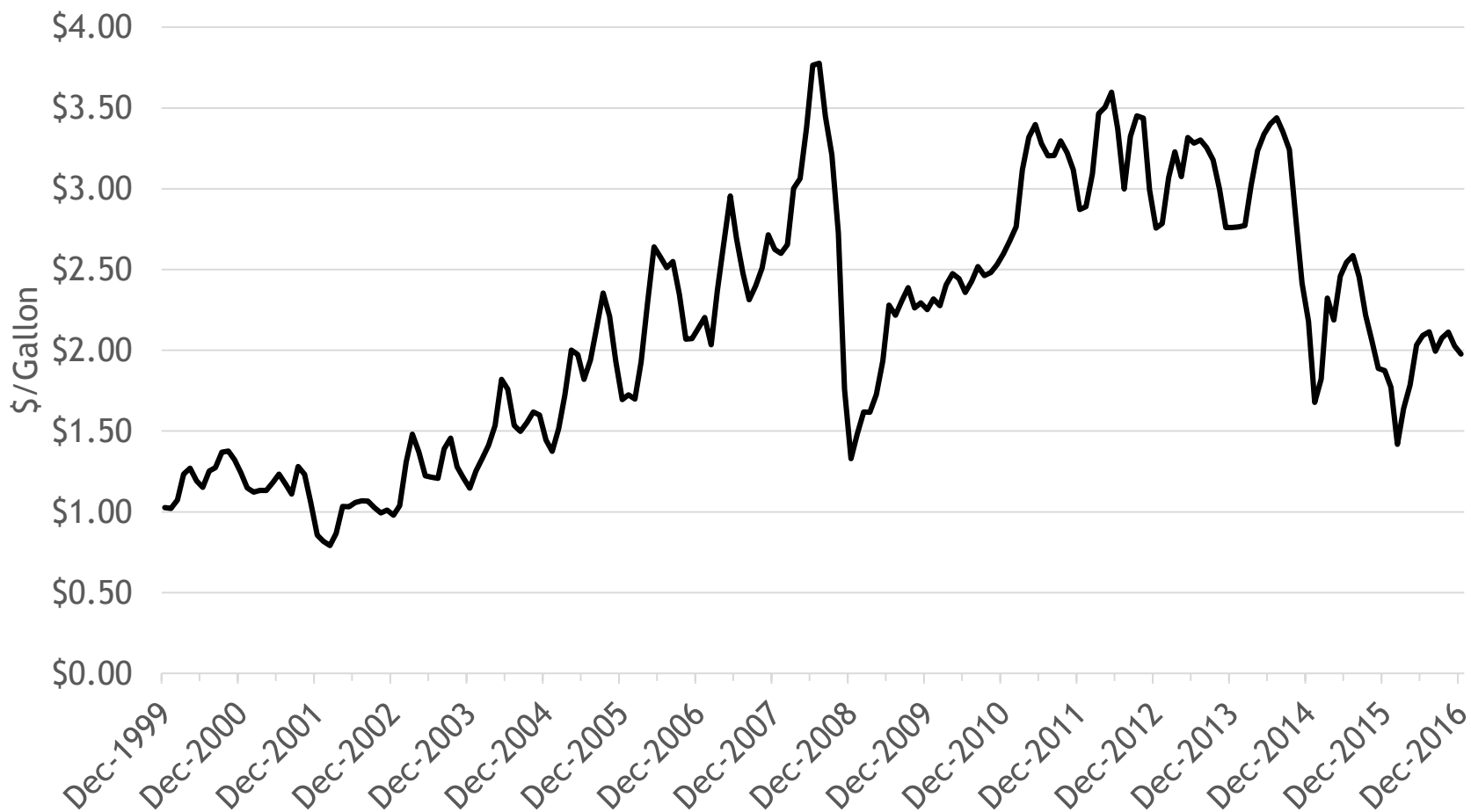
*Represents the average carbon intensities as reported through the CARB LRT-CBTS

Estimating the Impact of the CFP



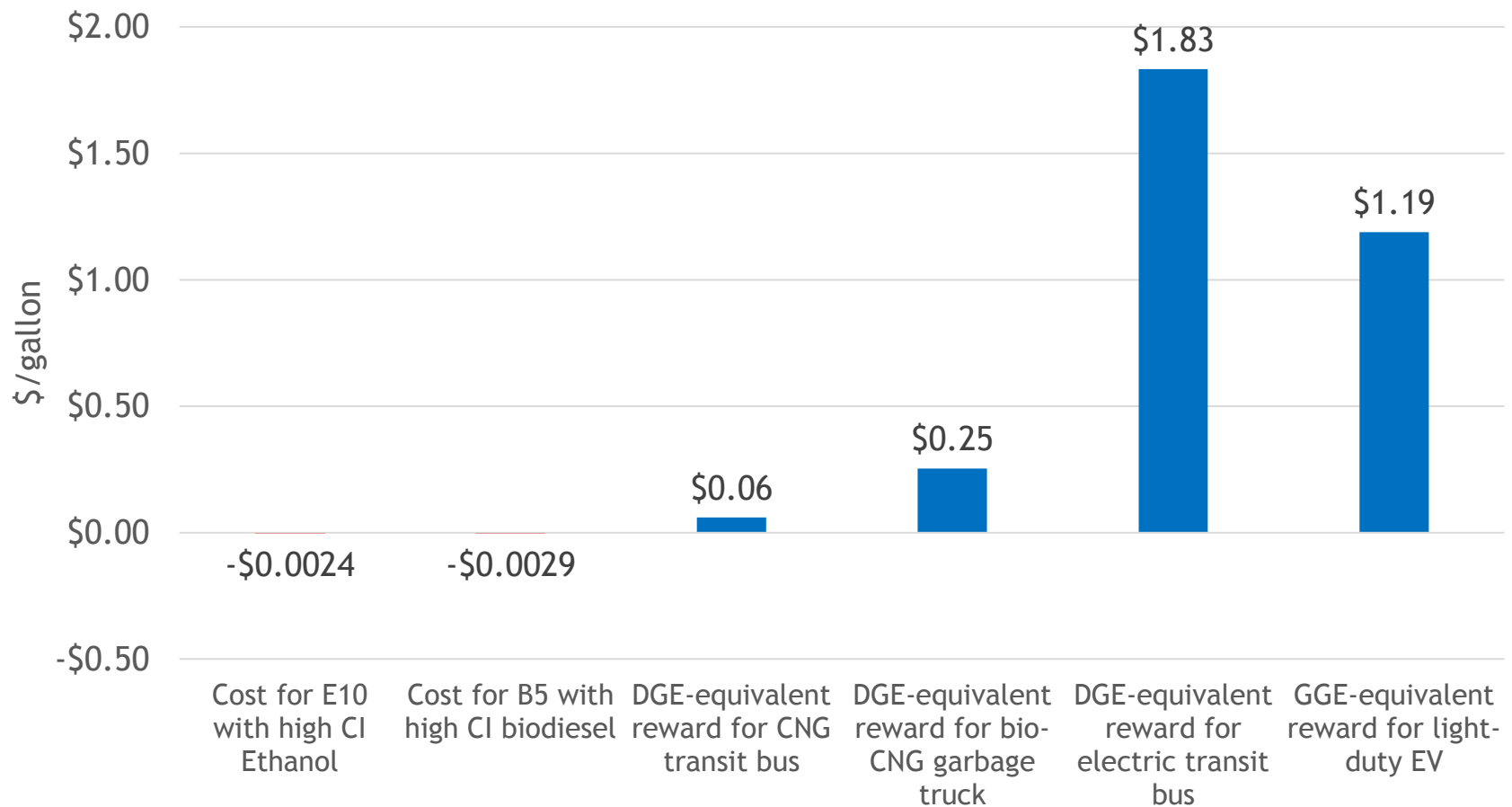
*If California's actual credit prices are laid over Oregon's timeline, this is the estimated impact of the CFP on retail gasoline that is blended with high-CI ethanol.

Oregon Retail Gasoline Prices



*Data from U.S. Energy Information Administration

At the Current \$50 Credit Price...



*Credit price based on independent assessments