

CLEAN FUELS MARKET UPDATE

MAY 2022



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INDUSTRY HIGHLIGHTS

➤ On March 21, the Securities and Exchange Commission (SEC) proposed a [rule change](#) that would require public companies to disclose information about how they are measuring and managing climate risks and report GHG emission and targets, both direct (Scope 1 and Scope 2) and indirect (Scope 3). If adopted, the rules would require these disclosures as soon as 2024.

➤ On April 30th, California was able to exceed past records by meeting [100% of its energy demand with renewable electricity](#). Roughly two-thirds of the energy was supplied through solar power.

➤ On May 2nd, the Biden administration confirmed that through the bipartisan infrastructure law, [\\$3.1 billion will be allocated to increase the U.S. production of lithium ion batteries](#) to accelerate the transition to zero-emission vehicles.

SRECTRADE HIGHLIGHT

➤ Download SRECTrade's latest version (1.4.1) of the LCFS Credit Calculator App to estimate credit values through Oregon's CFP and California's LCFS program. Get the free app for your [iPhone](#) or [Android](#). For hydrogen, RNG, and other fuel types, reach out to cleanfuels@srectrade.com.

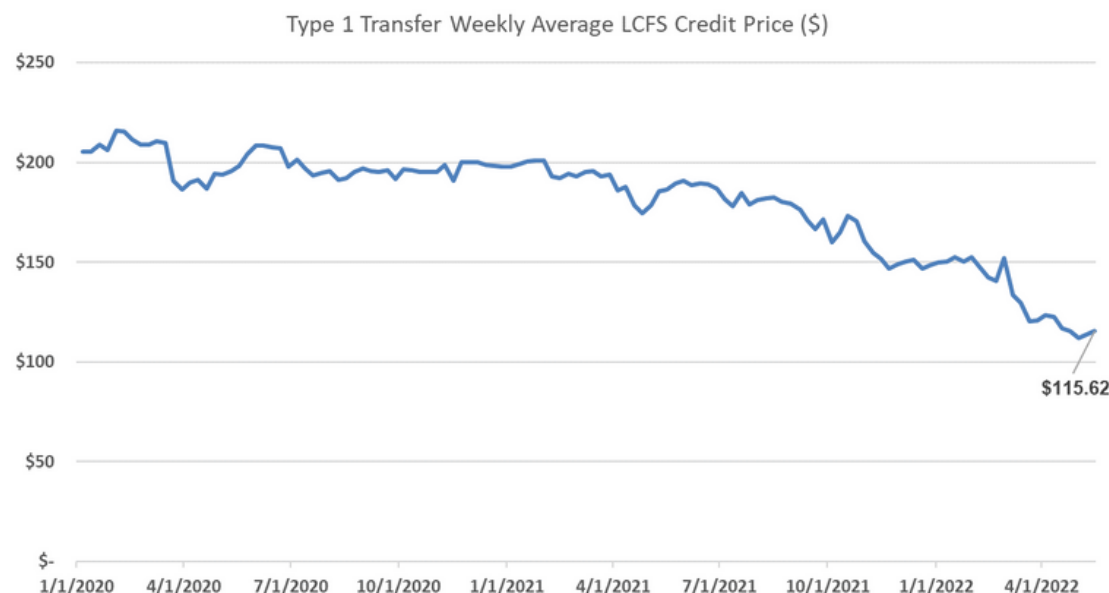
➤ Now wholly owned by [Xpansiv Ltd.](#), SRECTrade, Inc. enables clients to access, manage, and monetize environmental commodities globally. To learn more about how we can help your company meet its ESG goals, contact SRECTrade.



RECENT CALIFORNIA LCFS CREDIT PRICE TRENDS

- Since February 2022, the California LCFS market has experienced substantial market volatility, seeing prices go from \$150 after Q1 issuance to \$115 after Q2 issuance.
- Prices had already been declining through late 2021 and into Q1 of 2022, but the selloff continued past Q1 as global markets responded to the Russia-Ukraine conflict, rising commodity prices, and other economic factors.
- LCFS market data released by CARB on April 30th signaled a significant build in the credit bank as renewable diesel, renewable natural gas, and electricity continued to grow at a rate that outpaced deficits.
- Market participants are anticipating a proposal from CARB for more stringent carbon intensity targets for 2030 and beyond as part of planned rulemaking efforts to align the LCFS program with California's GHG targets.
- Deficit and credit production data for Q1 2022 will be released July 31, 2022.

The chart below shows historic pricing from Q1 2020 through May 15, 2022 as reported by CARB. Since the middle of May 2022, the market has continued to experience further price declines with recent transactions pricing at ~\$100/CA LCFS credit.



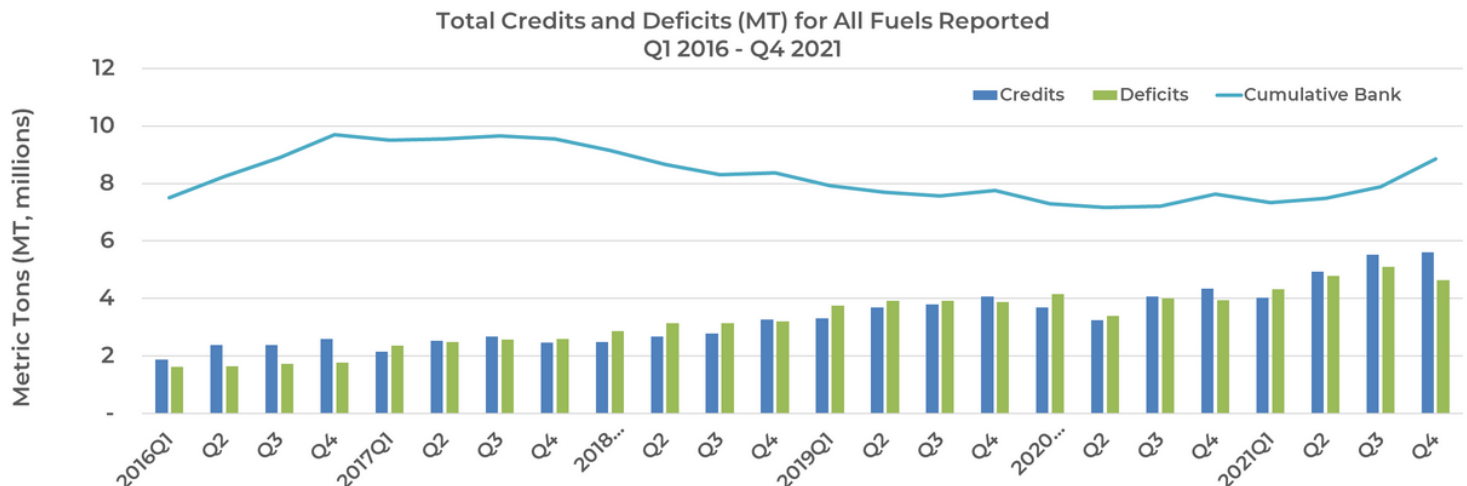
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CALIFORNIA LCFS CREDIT AND DEFICIT REPORT

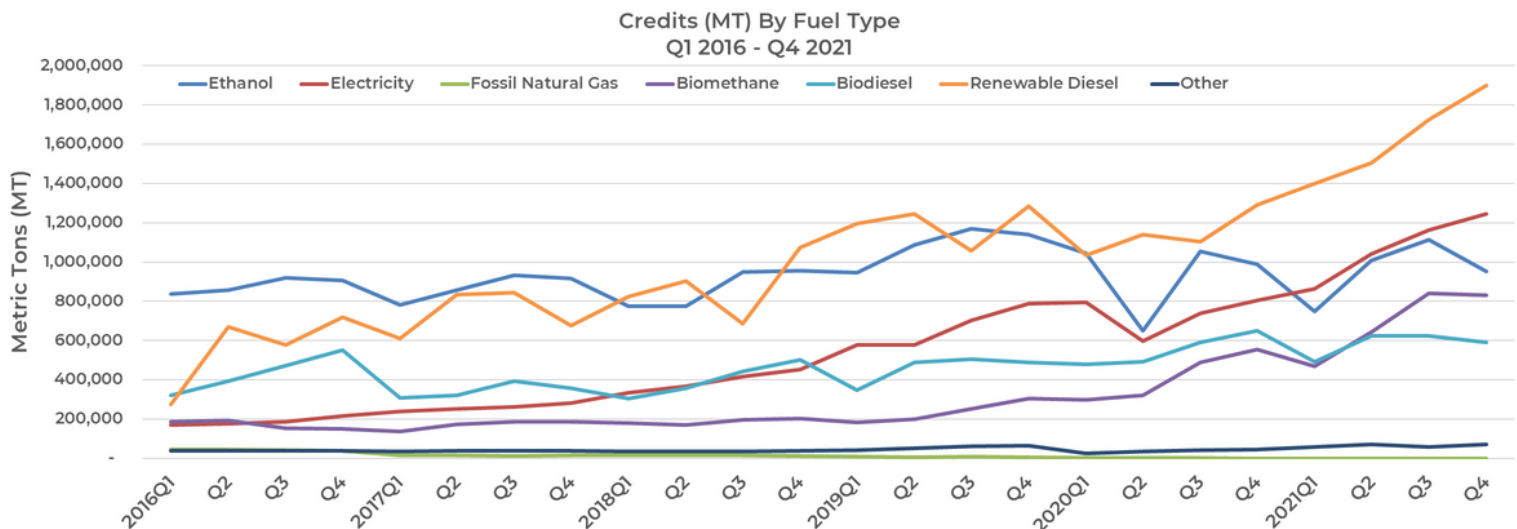
- On April 30th, 2022, CARB released the **Q4 2021 credit and deficit data**.
- The market saw an increase in the credit bank of nearly 971k credits, the largest ever quarter over quarter increase.
- This compares with a net credit buildup of 411k in Q3 2021 and 401k in Q4 2020. Overall, the credit bank increased 12.3% from 7.9 million to 8.87 million.
- 5.61 million credits were issued in Q4 2021 compared to 4.64 million deficits generated.

The chart below reflects the total credits and deficits since 2016 and the trends in the cumulative credit bank.



- Renewable diesel continued to be the largest contributor to both total credits generated and to the increase in net credits, contributing to 33.8% of all credit generation and increasing 10% quarter over quarter.
- Renewable natural gas credit generation dropped slightly quarter over quarter, its first such drop since Q1 2021.
- Of note, renewable natural gas's average carbon intensity (CI) score remained flat from Q3 2021 after dropping substantially from -36 to -62 from Q2 to Q3 2021.
- Electricity credits continued to increase at a steady rate primarily due to stable growth in on-road electric vehicle credits.
- Diesel volume dropped substantially, over 17.5%, to its lowest level ever in the LCFS program.

The chart below depicts the credit volume issued by fuel type since 2016.



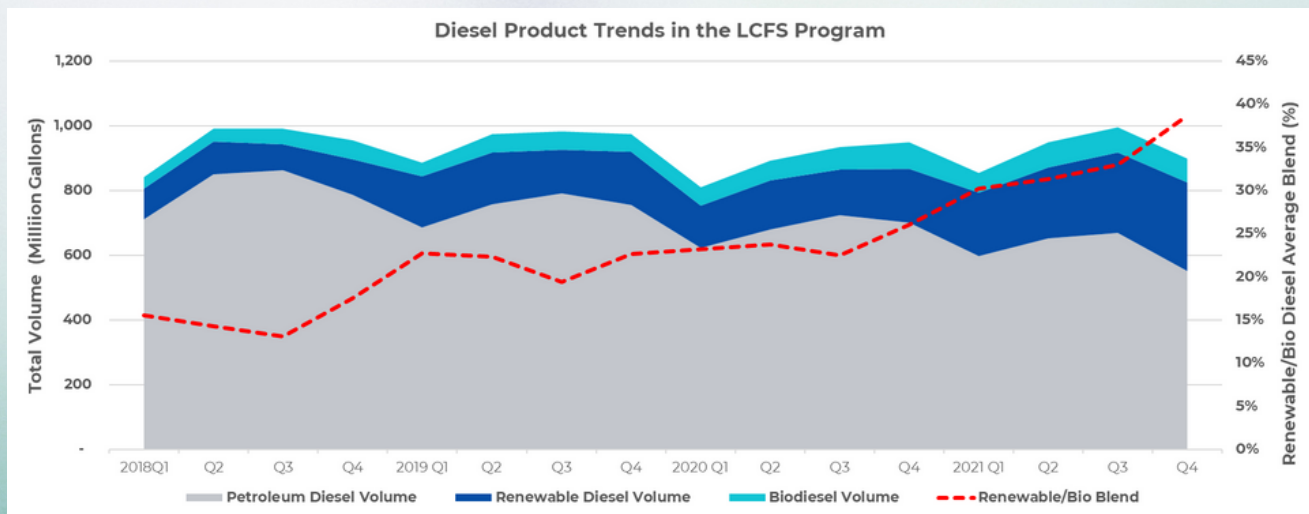
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SPOTLIGHT: RENEWABLE vs. PETROLEUM DIESEL

The steady adoption of renewable diesel, a drop-in fuel for diesel applications, has gained steam in recent quarters as strong LCFS revenue continues to incent renewable diesel production and it begins to reach price parity with its fossil counterpart. This past quarter petroleum diesel saw its biggest quarter over quarter drop in volume since the beginning of the pandemic (Q1 2020), while renewable diesel continued its upward trajectory.

This has compounding effects on the supply and demand dynamic in the LCFS program. With renewable diesel replacing conventional diesel, fewer deficits are created while more credit are generated. This trend is one of the primary factors contributing to the current oversupply of credits in the program, which has driven credit pricing down.

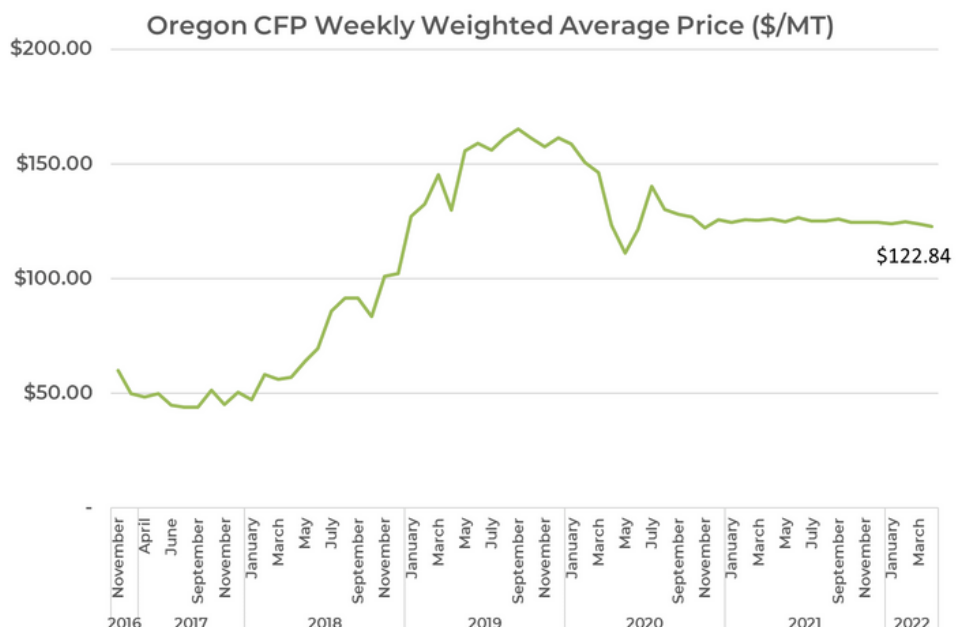


OREGON CFP MARKET UPDATE

The Oregon Clean Fuels Program (OR CFP) pricing has remained steady, as it has since the beginning of 2021, OR CFP pricing has remained largely unchanged, hovering between \$122 and \$126 (see chart as reported by the OR DEQ). Since March 2022, the OR CFP market has experienced downward pricing pressure with recent transactions pricing around \$115/OR CFP credit.

SRECTrade manages and monetizes a variety of assets under the California LCFS, Oregon CFP, and other emerging clean fuels markets as well as renewable energy credit (REC) markets across North America.

Contact us at cleanfuels@srectrade.com or call (415) 763-7732 to start generating revenue from your clean energy assets.



2022 CALIFORNIA REGULATORY OVERVIEW

As California continues its transition to zero-emission transportation, keep track of current and planned regulation that can impact your fleet, facility equipment and energy strategy at present and for the future.

..... CURRENT

Indirect Source Rule (ISR)

This program requires warehouse operators in the South Coast AQMD region above 100,000 sq/ft to take actions to electrify warehouse activities and trucks that visit said warehouses to improve air quality. Stakeholders have challenged this rule in a lawsuit, arguing that the enforcement is outside AQMD authority.

Innovative Clean Transit (ICT) Rule

Adopted in 2018, this rule requires all public transit agencies to transition to a zero-emission bus fleet by 2040. According to CARB, they are on track to begin enforcement of the rule, which starts with requiring 25% of new bus purchases for large transit agencies to be zero-emission from 2023 onwards.

Zero-Emission Airport Shuttle

This rule requires all airport shuttle operators to transition to zero-emission fleet by 2035, beginning the transition in 2027 with 33% required to be zero-emission.

Advanced Clean Fleets (ACF) Regulation

The ACF sets a 2045 or earlier deadline for all medium- and heavy-duty fleet operators to transition to a zero-emission fleet. This regulation is set up to support the success of the Advanced Clean Trucks rule. The segments affected are:

- Drayage trucks at ports and railroads by 2035
- Public fleets by 2045, where feasible
- High priority and federal fleets by 2045, where feasible

Advanced Clean Trucks (ACT) Rule

The ACT, passed in June 2020, aims to accelerate the deployment of medium- and heavy-duty vehicles, by two ways: requiring manufacturers to sell an increasing percentage of zero-emission trucks from 2024 onwards, and by requiring large fleets to submit reports detailing their fleet makeup that will inform regulations moving forward.

..... DEVELOPING

Zero-Emission Forklift

This CARB rule requires forklift operators to phase out internal combustion (IC) forklifts and transition to zero-emission forklifts in stages, depending on class and capacity. This measure is scheduled for Board consideration in 2023.

Zero-Emission CHE

The rule amends CARB's existing cargo handling equipment (CHE) regulation to transition to zero-emissions, which is estimated to be scheduled for Board consideration in 2024.

Zero-Emission TRUs

The CARB rule requires the new transport refrigeration units (TRUs) to "green up" and facility owners to report on all TRUs that operate at their facilities.

Have questions regarding clean fuel regulation outside of California?

For additional information, email cleanfuels@srectrade.com.

GRANT PROGRAMS UPDATE

\$500mm EPA Clean School Bus Program Open for Applications

The Environmental Protection Agency (EPA) has started accepting applications for the [Clean School Bus Rebates](#). The Clean School Bus Program is part of the Bipartisan Infrastructure Law with the purpose of helping schools across the U.S. replace their current school bus fleets with low- or zero-emission buses.



CAL eVIP Funds Chargers in Alameda County

Through CAL eVip, the [Alameda County Incentive Project](#) has almost \$4 million remaining in Level 2 EV charger funds to expand zero-emission infrastructure within the county. The project will continue to award funding on a first-come, first-served basis and has committed to allocating half of the funding to Disadvantaged and Low-Income Communities. Funding for DC fast chargers has been fully reserved.



HVIP Funding Still Available

The [Zero-Emission Truck and Bus Voucher Incentive Project \(HVIP\)](#), which invests in the transition to clean transportation, still has available funding through its current wave which began on March 30, 2022 with roughly \$430 million. The project helps fund incentives for zero-emission transit buses, school buses, drayage trucks, and tractors. \$122 million is still available for public school buses and \$54 million is still available for public transit buses.

For an updated table on available funding, see [HVIP's website](#).



CORE Opens \$125 million in July

The [Clean Off-Road Equipment Voucher Incentive Project \(CORE\)](#) will reopen in July 2022 with \$125 million in funding. The program will continue to help fund the purchase of zero-emission off-road equipment in California including tractors, TRUs, forklifts, cargo handling equipment, and more.

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FCI CREDITING LOWERS YOUR CAPITAL INVESTMENT IN DC FAST CHARGERS

To accelerate the deployment of DC fast chargers (DCFC) in California, the California Air Resources Board (CARB) provides a mechanism, known as DC Fast Charging Infrastructure (FCI) Crediting, to fund the deployment of DCFCs.

The FCI crediting mechanism guarantees a minimum amount of LCFS credits per quarter based on charging capacity and uptime.

Basic criteria for eligibility include:

- The DC Fast Chargers must be publicly accessible and intended for light-duty vehicles
- The charging station owner is the only party who can generate the credits in their own CARB account
- The chargers need to have been commissioned on or after January 1, 2019
- Capital and operational expenditure reports must be submitted on a quarterly basis

SRECTrade manages and monetizes FCI credits. Reach out to learn more about how FCI crediting can fund the initial deployment of your DCFCs.



CONTACT US

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ABOUT US

SRECTrade helps you get paid on the use of zero-emission vehicles and fueling equipment that you already own, such as electric light-duty vehicles, forklifts, trucks, and charging stations. SRECTrade is the largest agent manager of EV assets for California's Low Carbon Fuel Standard (LCFS) and the trusted partner across North America for similar programs already redefining equipment plans and budgets. With 175,000+ assets on its tech platform and more than 64,000 assets under management, SRECTrade operates in 14 compliance markets across 20 unique environmental commodities with > 99% client retention. We help you get paid to accelerate deployment of clean energy and transportation equipment, while minimizing time, cost, and risk of complex and diverse regulatory programs.



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