

LCFS MARKET UPDATE

FEBRUARY 2021



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INDUSTRY HIGHLIGHTS

- The Biden administration moved quickly to issue executive orders to establish climate policies including rejoining the Paris climate accord, curbing greenhouse gas emissions, transitioning away from oil and gas, and accelerating transportation electrification.
- Through the **Diesel Emissions Reductions Act (DERA) National Grants Program**, the EPA will provide roughly \$46 million in funding for fleet projects that significantly reduce diesel emissions. See page 5 for details.
- The Federal Transit Administration (FTA) has opened funding in 2021 for the **Low or No Emission Vehicle Program (Low-No)**, which provides \$180 million to help transit agencies continue to purchase low-emission or zero-emission vehicles and the charging equipment needed to make the transition to clean fuels. Funding applications are due April 12, 2021.
- California transit and shuttle bus fleets planning to transition to zero-emission vehicles can obtain funding through the **VW Mitigation Trust**. Roughly \$10 million in funding is still available.

SRECTRADE HIGHLIGHTS

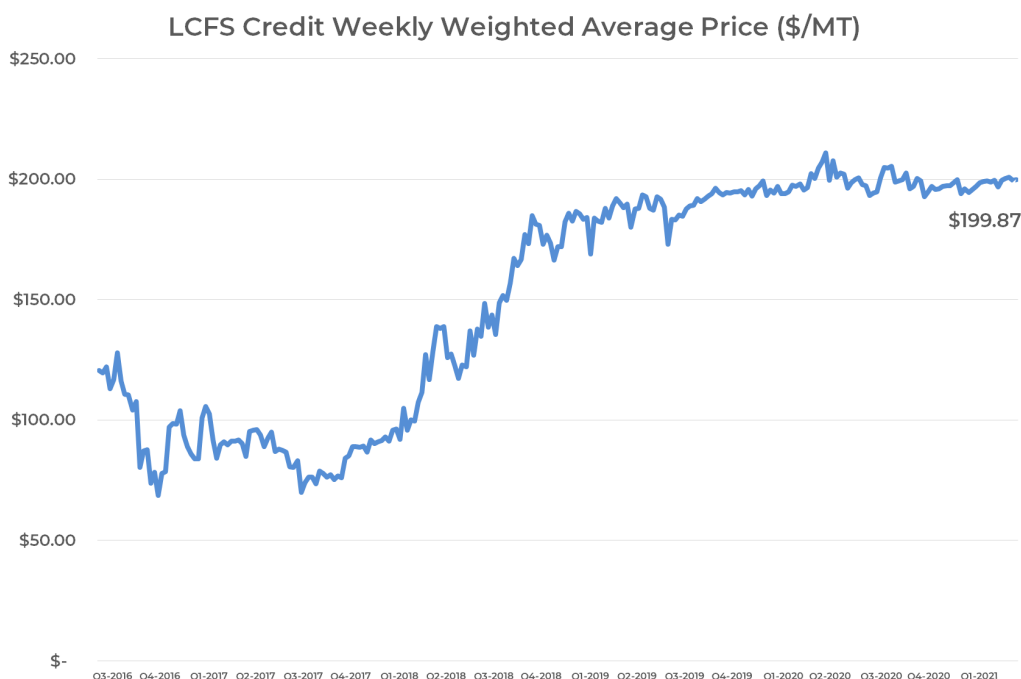
- RSVP to our next webinar "Getting the most out of LCFS and your Clean Fuels program" 9am PST March 23rd. RSVP via email to Mike.Saxton@SRECTrade.com with name, email, and title of attendees.
- **SRECTrade's LCFS Apple and Android Phone App** is helping fleet and equipment managers drive the use of LCFS throughout their organizations and ensure all eligible assets are generating income. Now you can in the **Oregon Clean Fuels Program (CFP)**!



RECENT CALIFORNIA LCFS CREDIT PRICE TRENDS

- Throughout the fourth quarter of 2020, the LCFS market saw steady credit prices.
- Weighted average pricing reported in the LCFS Registry Tracking Credit Bank and Transfer System (LRT-CBTS) ranged between \$193 and \$199 in Q4 2020.
- In January 2021, the pricing remained between \$195 and \$200 per credit.
- Recently the LCFS market has seen a slight dip in prices, trading between \$192 and \$195 in the first week of February.
- Near term pricing strength is expected to remain as carbon intensity reduction requirements continue to .
- Deficit and credit production data for Q4 2020 will not be released until April 30, 2021. As such, the market may continue to experience some degree of uncertainty in the near term due to the ongoing effects of COVID-19.

The chart below shows historic pricing from 2016 through February 14, 2021 as reported by CARB:

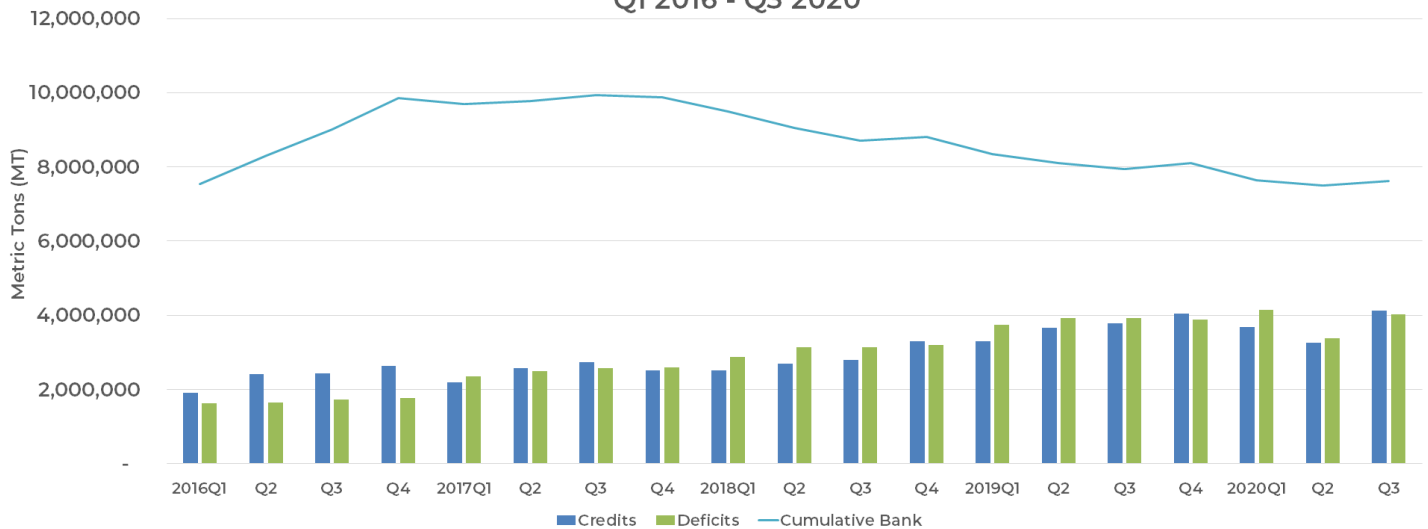


CALIFORNIA LCFS CREDIT AND DEFICIT REPORT

- On January 29, 2021, CARB released the **Q3 2020 credit and deficit data**.
- The market saw an overall increase in deficits and credits generated in Q3 2020 as well as a slight increase in the cumulative bank rebounding from the COVID-19 slump in Q2.

The chart below reflects the total credits and deficits since 2016 and the trends in the cumulative credit bank. The draw in the credit bank since 2017 corresponds to the increase in credits prices over the same time frame.

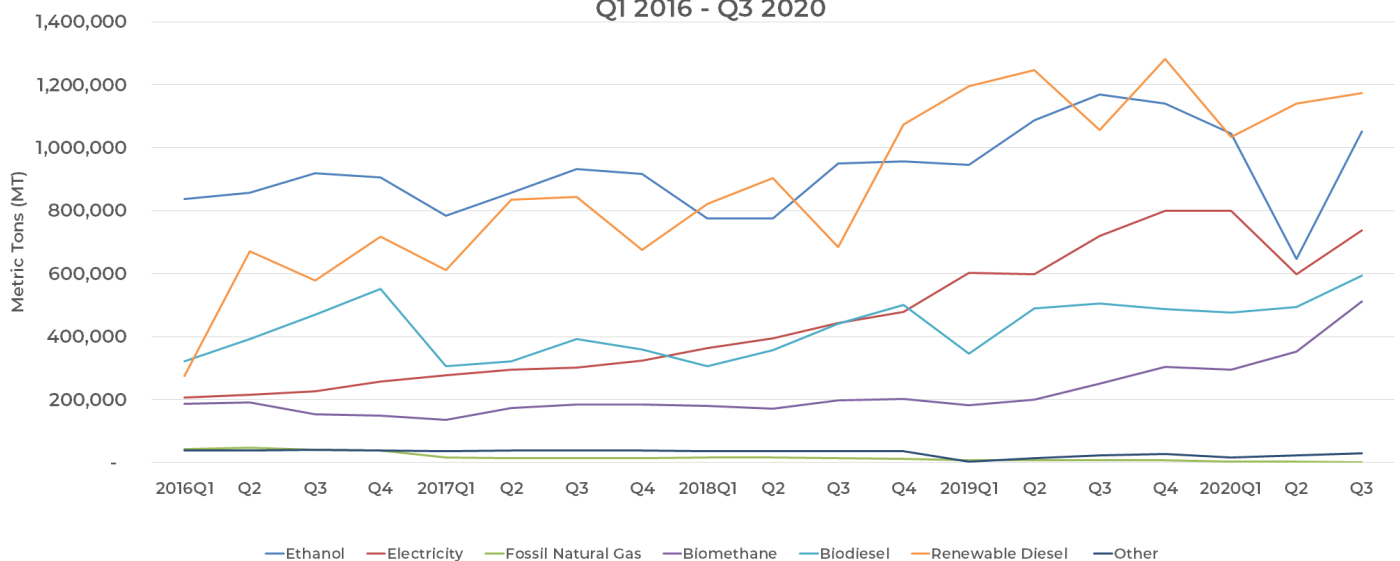
Total Credits and Deficits (MT) for All Fuels Reported
Q1 2016 - Q3 2020



- Credits outpaced deficits with 4.13 mm credits issued in Q3 2020 vs. 4.01 mm deficits generated. Credit volume increased significantly with 4.13 mm credits produced, up 27% from Q2 2020's volume of 3.25 mm.
- Between Q2 2020 and Q3 2020, the bank saw a 1.5% increase from 7.5 mm credits to 7.6 mm credits.
- The credit bank grows throughout the year and is typically higher at the year-end. This is because new credit-generating assets are added throughout the year while the CI Standard remains level throughout the year for deficit generators. When the stricter CI standard goes into effect at the start of each new year, immediately there is an increase in deficits generated, thus increasing demand for credits in the bank.

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

Credits (MT) By Fuel Type
Q1 2016 - Q3 2020

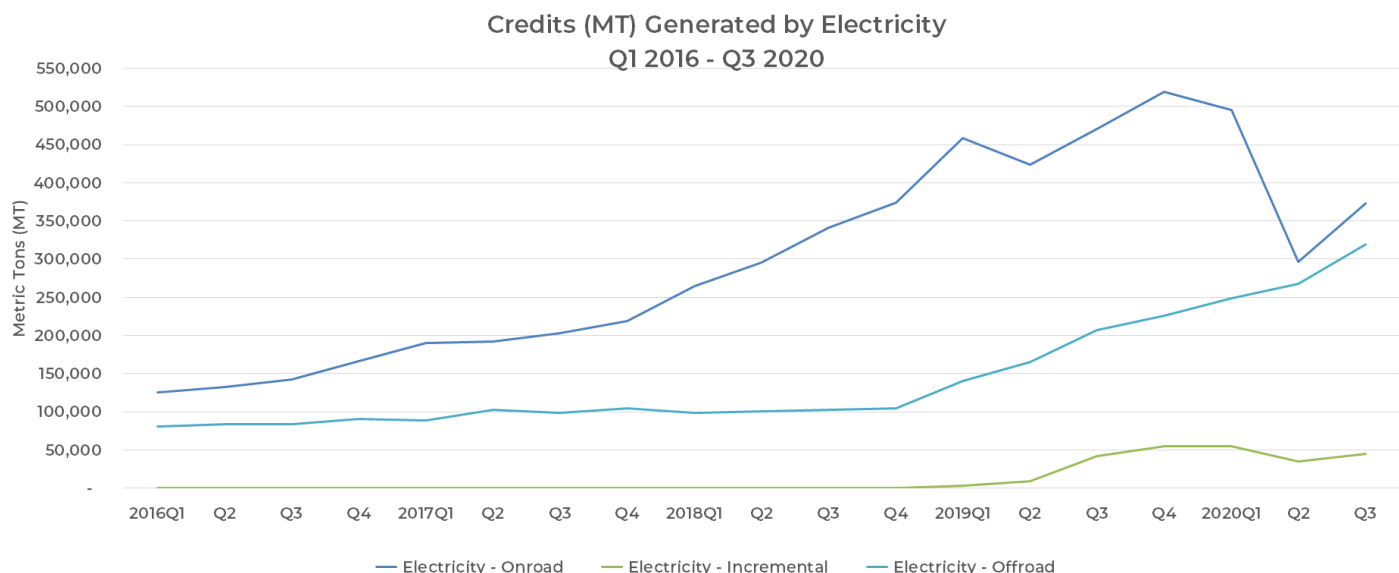


Fuel Type	Change from Q2 2020 (%)	Change from Q3 2019 (%)	Change from Trailing Four Qtr. Avg. (%)
Electricity	23.2%	2.5%	1.2%
Hydrogen	39.4%	8.7%	11.4%
Bio-CNG	47.4%	111.2%	74.9%
Renewable Diesel	2.8%	11.1%	4.0%
Ethanol	62.8%	-10.0%	5.2%
All Fuels	27.0%	9.4%	12.0%

- Credits produced from hydrogen increased 39.4% in Q3, up to 4.2k from 3k credits.
- Biogas or Bio-CNG credits increased by 47.4% from Q2 2020, up to 335.9k credits in Q2 2020 from 335.9k credits. Since early 2019, Bio-CNG has steadily increased as a fuel.
- There was a slight increase in renewable diesel in Q3 2020. 1.17 mm credits were generated in Q2 2020, up 11.1% from 1.14 mm credits in Q2 2020.
- The largest contributor to the credit increase was Ethanol, rebounding by almost 400k credits to 1.05 mm credits from the large decrease of credits generated in Q2 2020.

- Electricity as a fuel has been consistently increasing in credit generation since 2016 until Q2 2020 began a COVID-19 related decrease. Credits generated in Q3 2020 from on-road electricity rebounded to 373.5k from the record 3-year low of 296k in Q2 2020. Off-road vehicles increased 23.2%, up from 267.4k credits to 319.1k.
- Electricity credits generated by onroad light duty and medium duty electric vehicles largely contributed to the total electricity onroad credit generation in Q3 2020 with 364.4k credits out of 373.5k credits. The majority of these credits were generated with residential EV charging with grid average carbon intensity (CI) or base credits. There was a slight rebound in onroad and incremental electricity credits from the decrease related to COVID-19 in Q2 2020. For electricity credits generated from off road vehicles, electric forklifts and fixed guideway systems showed a steady increase since 2016.
- In 2021, the Carbon Intensity (CI) reduction target will become stricter, increasing from a 7.50% to 8.75% CI reduction. The market may continue to see an uptick in deficit production through 2021, barring any major changes in fuel production.

The chart below shows credit volume generated by electricity since 2016



CLEAN FUEL PROGRAM UPDATES

Oregon Clean Fuels Program

SRECTrade engaged in a series of advisory committee workshops last fall to discuss proposed changes to the Clean Fuel Program (CFP). On December 22, 2020, the Oregon Department of Environmental Quality (DEQ) **published these proposed changes** which focuses on provisions related to electricity, including expanding eligibility to new types of electric vehicles, adjusting calculations for forklift credit generation, updating methodologies for calculating the CI of electricity, allowing the use of RECs to claim zero carbon electricity, and allowing for advanced crediting for public fleets. SRECTrade submitted comments recommending broadening and simplifying program access and usability. The public comment period ended January 29, 2021 and the proposed changes will be considered by the Environmental Quality Commission in March 2021. If approved, the changes could take effect later this year.

Washington State

State lawmakers introduced **HB 1091** which would establish a Clean Fuels Program to limit transportation emissions to 10% below 2017 levels by 2028 and 20% by 2035. The program as proposed would operate similarly to those of California and Oregon and include mechanisms for certifying electricity has a carbon intensity of zero using renewable energy credits. HB 1091 passed the House Committee on Environment & Energy and will be taken up by additional committees over the next few weeks.

New York

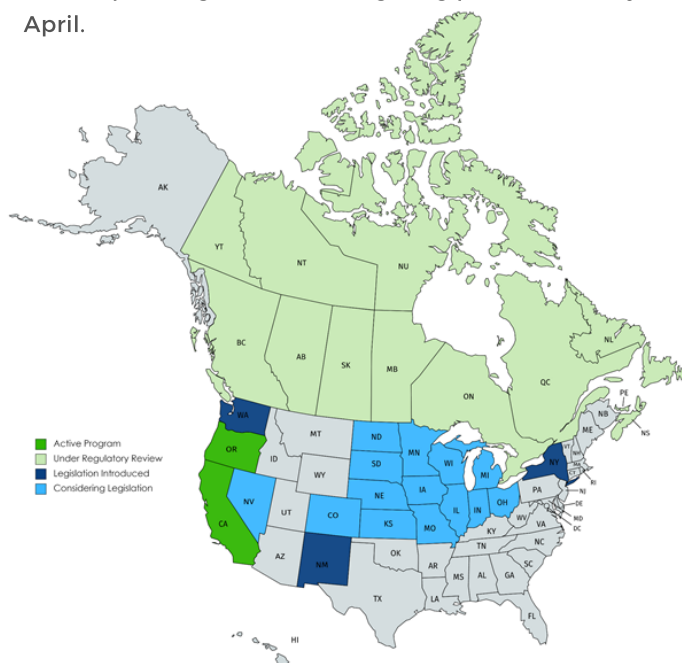
State lawmakers introduced **AB 862** which would establish a low carbon fuel standard program to reduce on-road transportation emissions by 20% by 2032. A push for similar legislation fell short last year after failing to pass out of committee. The bill could be taken up during the state budgeting process as early as April.

New Mexico

Following Governor Grisham's **call for the creation of a Clean Fuel Standard** in her 2021 policy agenda, New Mexico legislators introduced the **Clean Fuel Standard Act (SB 11)** which would reduce the carbon intensity of fuels by 10% below 2018 levels by 2030 and 20% by 2040. The bill is being addressed in the Senate Tax, Business, and Transportation Committee and if passed, the Environmental Improvement Board would create specific rules, processes, and requirements for compliance.

Canada

State regulators from Environment and Climate Change Canada **published proposed regulatory language** for a national clean fuel program. The program includes three main credit categories: projects that reduce emissions from oil and gas extraction, drop-in low carbon fuels (e.g. ethanol), and fuels that displaced oil and gas in transportation applications such as electricity and hydrogen. The public comment period ends March 4. Credit generation begins once the program is approved, which could be as soon as this year.



Changes to existing programs and new markets may present opportunities for your organization to generate more revenue.

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GRANT PROGRAMS UPDATE

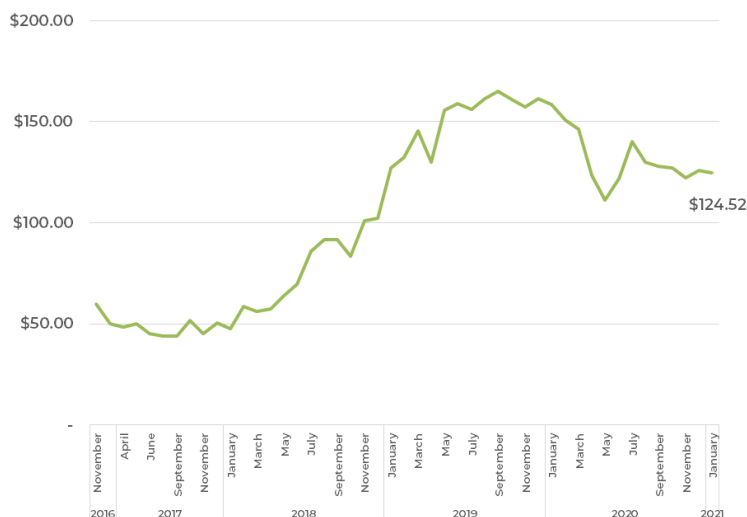
- Through the **Diesel Emissions Reductions Act (DERA) National Grants Program**, the EPA will provide approximately \$46 million in funding for projects that significantly reduce diesel emissions, particularly projects that specifically impact poor air quality areas. Join the information session webinar on February 11 at 2:00 pm ET to learn more. The deadline for submitting questions is March 5, 2021 and the final deadline for applications is March 16, 2021 at 11:59 p.m. ET. Selected applicants will be notified by May and the funding will be dispersed through October 2021.
- The **California Air Resources Board (CARB)** has allocated \$25 million in funding for the state's Hybrid and **Zero-Emission Truck and Bus Voucher Incentive Project (HVIP)**, which works to help businesses transition to cleaner fleets of medium- and heavy-duty trucks. New will voucher request forms will open in the spring of 2021.
- To support Governor Newsom's executive order to transition to clean fuel vehicles by 2035, the **California Energy Commission (CEC)** has allocated up to \$115 million to implement 200 hydrogen fueling stations in California. The stations will be able to charge fuel cell electric vehicles (FCEVs).



- The **Clean Off-Road Equipment (CORE) Voucher Incentive Project** awarded all of its \$44 million in funding in August 2020 and is no longer accepting applications. Stay tuned for changes to this popular funding program.
- Fleet owners in California may be eligible for grant funding through the **Carl Moyer Memorial Air Quality Standards Attainment Program** (Carl Moyer Program), which aims to help reduce emissions through clean vehicle engines and equipment. Eligible vehicles include heavy-duty vehicles (HDV), school and transit buses, and public fleets. Funding opportunities vary by local air district.



Oregon CFP Weekly Weighted Average Price (\$/MT)



OTHER LCFS CREDIT PRICE TRENDS

- SRECTrade also operates in the **Oregon Clean Fuel Program (OR CFP)**. CFP average prices for Q4 2020 were steady averaging at \$126.05/credit. January 2021 weighted average price remained lower at \$124.52 per credit, down \$1.25 from December 2020 average price of \$125.77 per credit. Recently the CFP prices in Oregon have trended between \$122-128/credit.

RENEWABLE ENERGY CREDIT (REC) PAIRING BENEFITS FOR CA LCFS

- SRECTrade pairs carbon-free electricity with your vehicle electricity consumption through the REC book-and-claim process, which generates **20% - 35% more credits**, yielding significantly higher proceeds for your organization. This mechanism also enables you to claim that **your equipment is powered by 100% renewable electricity**.
- SRECTrade procure RECs on your behalf and matches these RECs with the quarterly kWh consumption of your EV assets. We finance this process at no additional cost to our agency clients.
- For organizations with existing or planned renewable energy assets, SRECTrade provides REC management and transaction services to help monetize your RECs.
- **Contact SRECTrade at cleanfuels@srectrade.com or (415) 763-7732 ext 4** to learn more about our REC management and procurement services.



CREDIT CALCULATOR MOBILE APP

SRECTrade's credit calculator app is growing in popularity as a useful tool for organizations to efficiently and accurately educate their teams on the value of their LCFS credit-generating assets. Our latest release allows organizations to estimate revenue from Oregon-sited EV assets for the **Oregon Clean Fuels Program**.

Once downloaded, follow three simple steps to build a model of your estimated annual gross value from LCFS or CFP credit sales.

The app is available for both [Android](#) and [iOS](#).

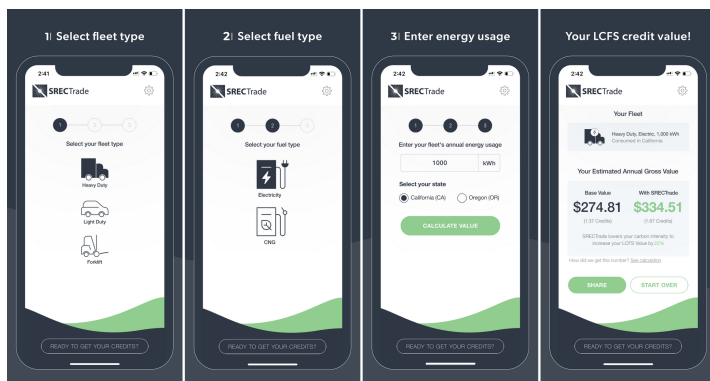
UPCOMING EDUCATIONAL EVENTS

SRECTrade will be speaking and exhibiting at a range of educational events throughout the year, both virtually and in-person. Join us to learn how you can get paid via the California LCFS Program at these upcoming events:

- **March 3:** [Commercial Fleet Electrification panel](#) moderated by SRECTrade, featuring presentations by Genentech, Firefly Transportation, and Dependable Supply Chain Services.
- **March 23:** Getting The Most Out Of LCFS and your Clean Fuels Programs - RSVP via email to Mike.Saxton@SRECTrade.com with your name, email, and title of attendees.

Spread the word and tell a colleague who you would like to see planning for and benefiting from these environmental commodity programs as well.

We hope to see you soon!





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. The regulations are complex and the benefits are hard to access - we make it easy for you. 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 150,000+ assets on its tech platform, SRECTrade manages 20 traded products in 10 regulated markets with > 99% client retention. Through SRECTrade you get paid and accelerate deployment of clean energy and transportation equipment, while minimizing time, cost, and risk of complex and diverse regulatory programs.

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