CA LCFS MARKET UPDATE

Low Carbon Fuel Standard (LCFS) Market Overview

AUGUST 2020

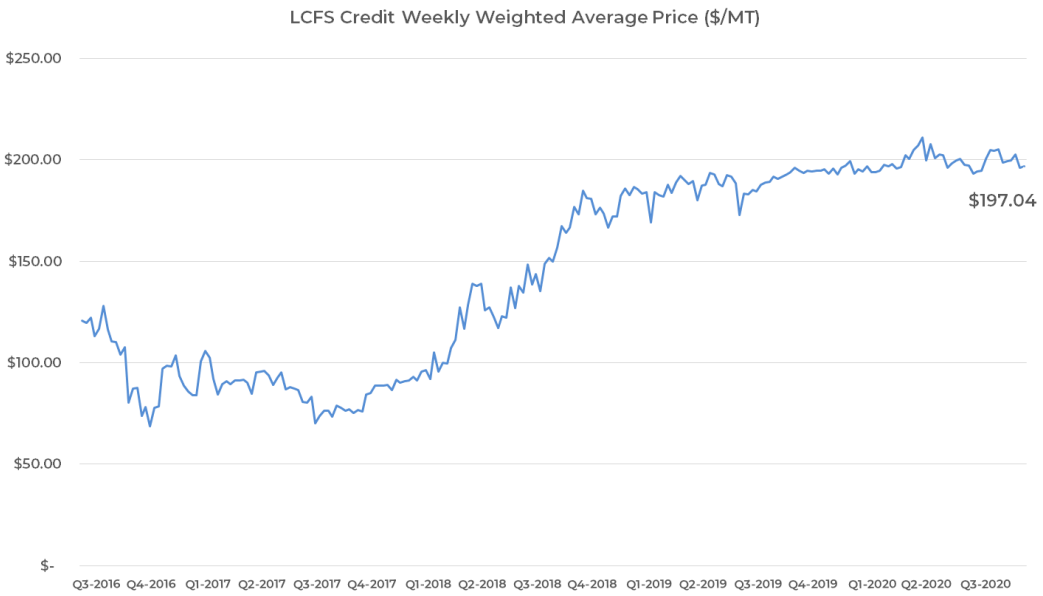
HIGHLIGHTS

- On May 28, 2020, the world's largest all-electric aircraft, the eCaravan, made its first flight over Washington State. The plane has a wingspan of over 50 feet, can hold 9 passengers, and is expected to be in commercial use by 2021.
- In late June 2020, House Democrats released a climate report discussing how California's LCFS program could be implemented at the national level. Along with using California's existing program as a strong foundation, the report considers the current proposal for a Midwest Clean Fuel Standard for wide scale adoption.
- In July 2020, the Center for Transportation and the Environment (CTE) published the first Guidebook for Deploying Zero-Emission Transit Buses to help more transit agencies make the transition to clean fuel vehicles.
- California is currently investing over $1 billion in Renewable Natural Gas (RNG) to increase in-state production. By 2024, the state's RNG sources will supply enough fuel to power over 13,000 natural gas trucks annually.
- SRECTrade announced its partnership with Dependable Supply Chain Services to help manage Dependable's transition to a clean fuel fleet. A full press release can be found here.
- SRECTrade launched the first LCFS Credit Calculator App which you can use to easily estimate your fleet's potential annual LCFS revenue.

RECENT CA LCFS CREDIT PRICE TRENDS

- Throughout the second quarter of 2020, the LCFS market saw a rebound from the March slump of COVID-19 credit prices.
- Weighted average pricing reported in the LCFS Registry Tracking Credit Bank and Transfer System (LRT-CBTS) ranged between $193 and $205 in Q2 2020.
- Recently the LCFS market has seen a steady trend in prices, trading between $195 and $201 in the last week of July and first week of August.
- On July 1, the California Air Resources Board (CARB) imposed a maximum cap on LCFS credit prices for 2020 at $217.97 per credit.
- Raw data on deficit and credit production for Q2 2020 will not be released until October 31, 2020. As such, the market may continue to experience some degree of COVID-19 uncertainty in the near term.

The chart below shows historic pricing from 2016 through August 2, 2020 as reported by CARB:



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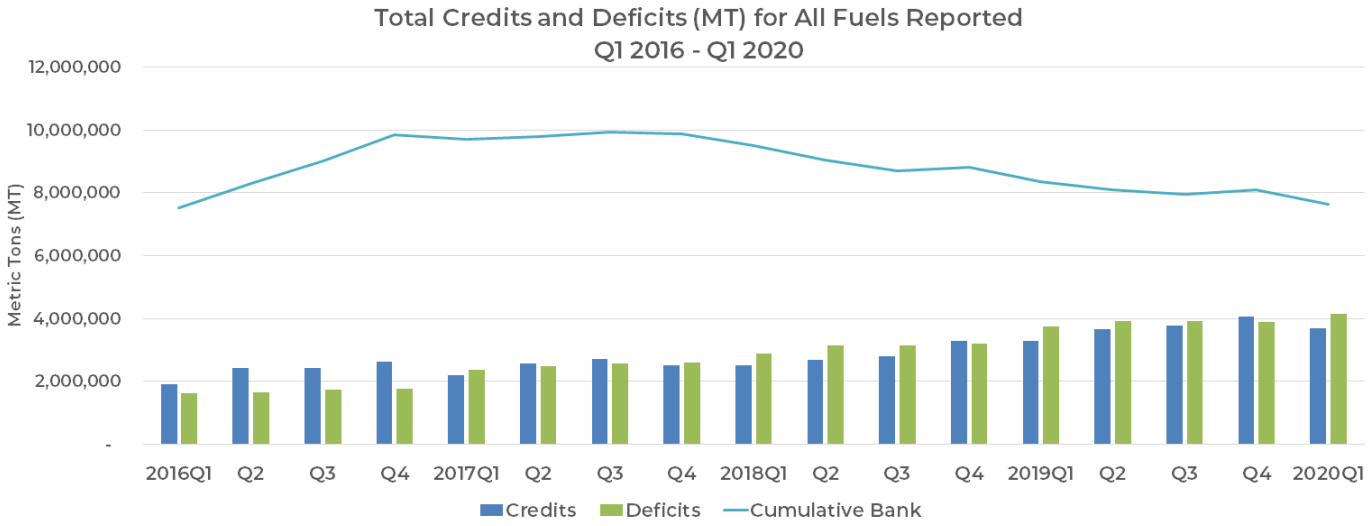
CREDIT AND DEFICIT REPORT

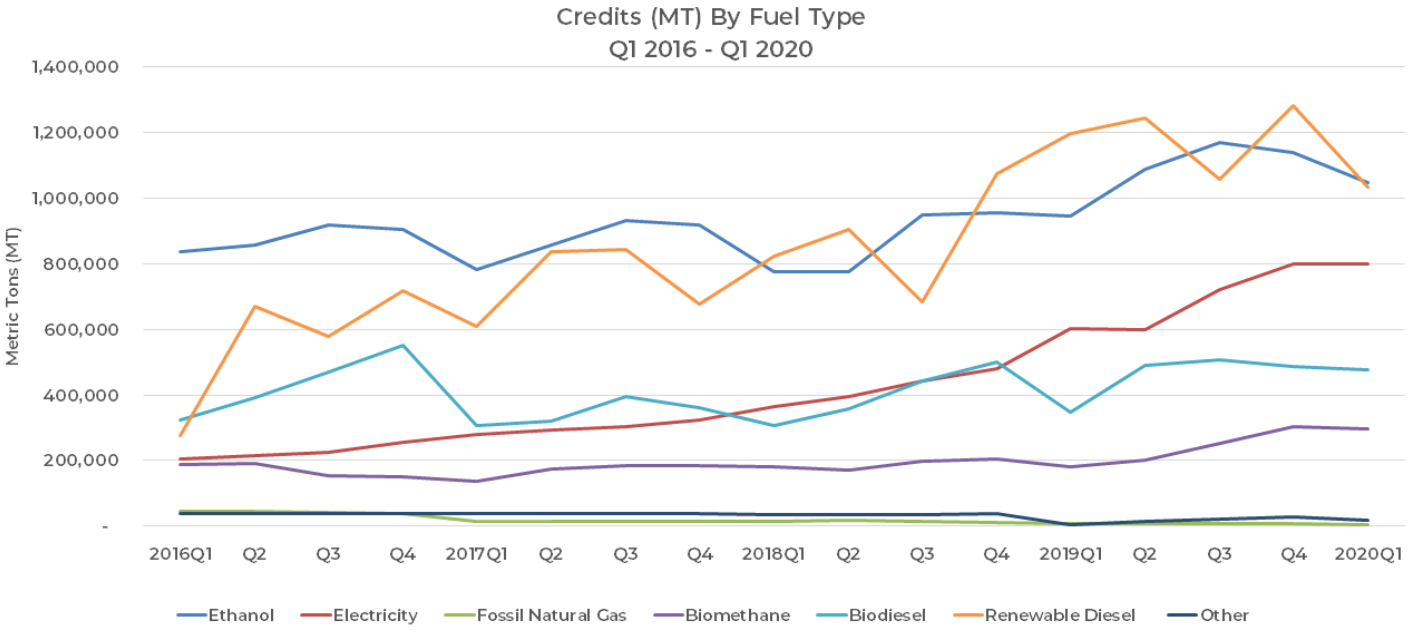
- On July 31, 2020, CARB released the Q1 2020 credit and deficit data.
- The market saw a record high in deficits generated in Q1 2020 as well as a significant draw upon the cumulative bank.
- Deficits outpaced credits with 3.68 mm credits issued in Q1 2020 vs. a total balance of 4.14 mm deficits generated.

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.



- Due to deficit generation largely outpacing credits issued in Q1 2020, there were larger draws on the cumulative bank. Between Q4 2019 and Q1 2020, the bank saw a 5.7% decrease from 8.1 mm credits to 7.7 mm credits. As deficit generation continues to outpace credits issued, we expect to see more drawn upon the cumulative bank.
- There was also a significant decrease in credit volume with 3.68 mm credits produced, down 9.2% from Q4 2019's volume of 4.05 mm which may be due to the impacts of COVID-19.

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



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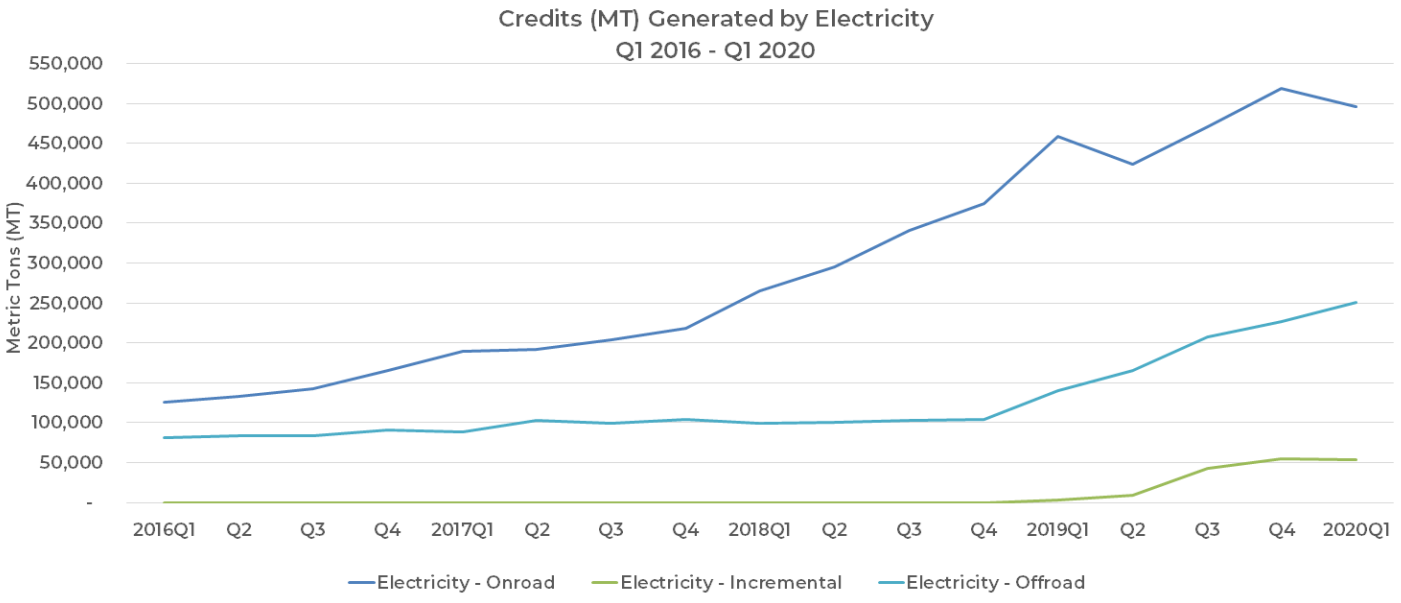
Fuel Type	Change from Q4 2019 (%)	Change from Q1 2019 (%)	Change from Trailing Four Qtr. Avg. (%)
Ethanol	-8.2%	10.5%	-3.6%
Renewable Diesel	-19.4%	-13.6%	-13.5%
Bio-CNG	-3.6%	63.2%	26.2%
Hydrogen	-10.4%	53.9%	12.9%
Electricity	0.0%	32.7%	17.5%
All Fuels	-9.2%	11.9%	-0.5%

- A contributor to the credit decrease was Ethanol, down by 93.9k credits from 1.14 mm credits in Q4 2019 to 1.05 mm credits generated in Q1 2020.
- There was a significant decrease in renewable diesel in Q1 2020. 1.03 mm credits were generated in Q1 2020, down 19.4% from 1.28 mm credits in Q4 2019.
- There was a 10.4% decrease in Hydrogen in Q1, down to 3.9k from 4.3k credits. Although small, hydrogen as a fuel has seen a 53.9% increase in the last year.

- Electricity as a fuel has been consistently increasing in credit generation since 2016. Credits generated in Q1 2020 from on-road electricity decreased to 549.4k from the record high of 573.7k in Q4 2019. Off-road vehicles increased 10.6%, up from 226.3k credits to 250.2k.
- In the Q1 2020 credit and deficit data, the credits generated by electricity were broken down into vehicle types beginning in Q1 2019. Electricity credits generated by onroad light duty and medium duty electric vehicles largely contributed to the total electricity onroad credit generation in Q1 2020 with 541.5k credits out of 549.4k credits. The majority of these credits were generated with residential EV charging with grid average carbon intensity (CI) or base credits. For electricity credits generated from off road vehicles, electric forklifts and fixed guideway systems showed a steady increase since 2016.
- In 2020, Carbon Intensity (CI) targets took another step down in the Compliance Standard, from a 6.25% to 7.50% CI reduction. The market will likely continue to see an uptick in deficit production through 2020, barring any major changes in fuel production.



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GRANT PROGRAMS UPDATE

- Through the Tribal Transit Program, the Federal Transit Administration will provide $5 million for transportation start-ups and projects. Funding will also be directed toward transportation planning costs. Proposals must be submitted by 11:59 PM EDT on August 24, 2020.
- The CEC announced a $20 million Grant Funding Opportunity (GFO) for the Zero-Emission Transit Fleet Infrastructure Deployment to help transit agencies obtain EV and hydrogen charging stations. Applications must be submitted before 5:00 PM PT on October 2, 2020.
- Starting June 3, 2020, the NYC Clean Trucks Program is providing roughly $9.8 million from Volkswagen Settlement Funds to replace diesel medium and heavy-duty trucks with electric trucks to reduce carbon emissions.

POLICY & REGULATORY UPDATES

- Advanced Clean Truck Rule - On June 25, 2020, CARB announced the first-ever rule (click CARB logo) to replace diesel trucks with zero-emission trucks. The regulation, which will begin in 2024, will require a percentage of trucks in California to be zero-emission and this percentage will increase over time. It is expected that there will be roughly 100,000 ZEV trucks by 2030. By 2035, the rule mandates that more than 50% of trucks sold in the state must be zero-emission.

Sales percentages proposed under the Advanced Clean Trucks standard, June 2020

Year	Class 2b-3	Class 4-8 straight trucks	Class 7-8 tractors
2024	~~3%~~ 5%	~~7%~~ 9%	~~3%~~ 5%
2025	~~5%~~ 7%	~~9%~~ 11%	~~5%~~ 7%
2026	~~7%~~ 10%	~~11%~~ 13%	~~7%~~ 10%
2027	~~9%~~ 15%	~~13%~~ 20%	~~9%~~ 15%
2028	~~11%~~ 20%	~~24%~~ 30%	~~11%~~ 20%
2029	~~13%~~ 25%	~~37%~~ 40%	~~13%~~ 25%
2030	~~15%~~ 30%	50%	~~15%~~ 30%
2031	35%	55%	35%
2032	40%	60%	40%
2033	45%	65%	40%
2034	50%	70%	40%
2035	55%	75%	40%

Source: Union of Concerned Scientists

- INVEST in America Act - On June 3, 2020, the U.S. House Committee on Transportation and Infrastructure established an act (click on logo) to replace the Low-or-No Emission Vehicle program, a federal grant program for state and local transit agencies, with the Zero Emission Bus Program. The bill would provide $350 million annually for EV charging and hydrogen fueling infrastructure and $250 million per year for Community Climate Innovation Grants to fund larger transportation projects.
- The Climate Crisis Action Plan - In June, the House Select Committee on the Climate Crisis released a report on how to achieve net zero emissions in the United States by 2050, address pollution in environmental justice (EJ) communities, and work toward net-negative emissions. The action plan will also prepare for the effects of climate change, prioritize the health of families, and preserve U.S. land and waters for future generations.

ADDITIONAL LCFS PROGRAMS

Oregon

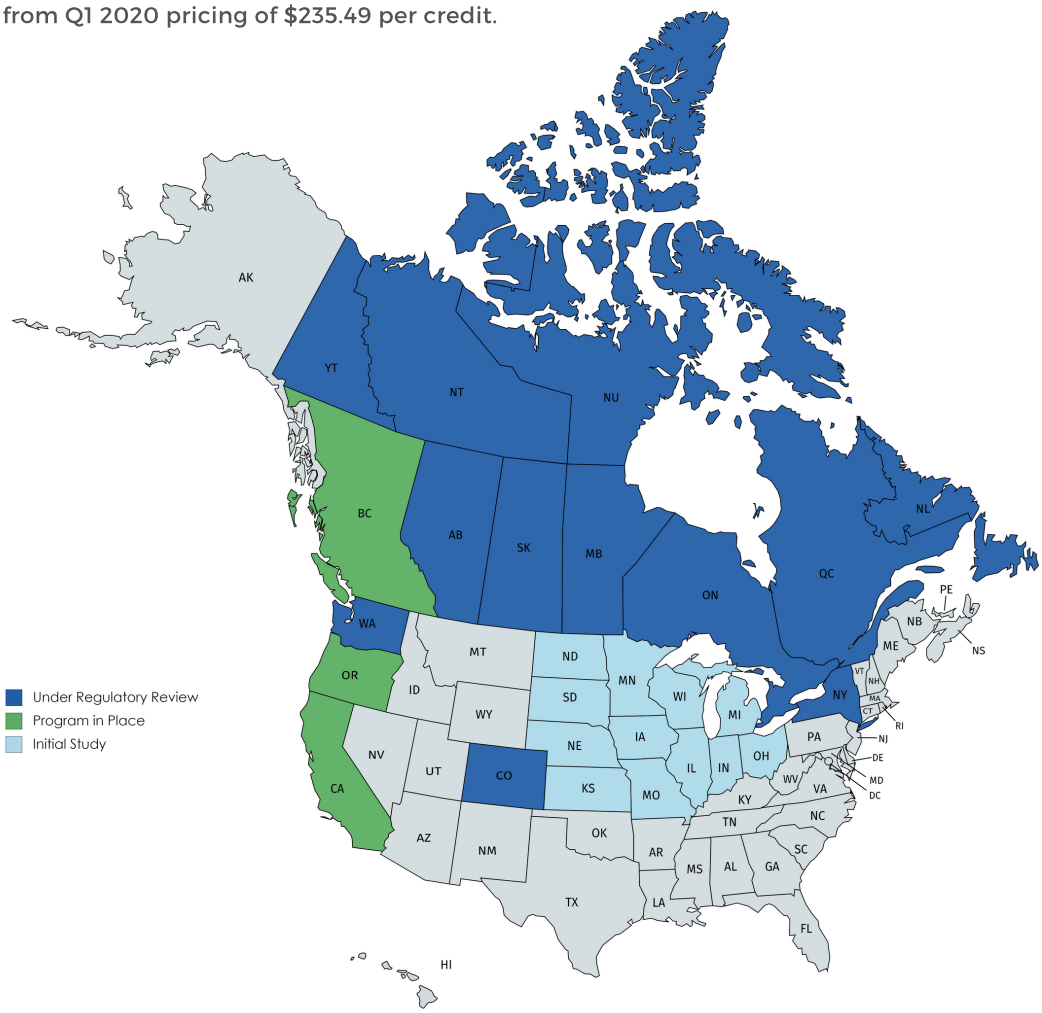
SRECTrade also operates in the Oregon Clean Fuel Program (OR CFP). Due to the updates to the CFP Online system, the credit and deficit data for Q1 2020 is delayed until end of August. CFP average prices for Q2 2020 dropped significantly from Q1 2020, averaging at $115.58/credit. July 2020 weighted average price rebounded to $140.25 per credit, up $18.63 from June 2020 average price of $121.62 per credit. Recently the CFP prices in Oregon have trended lower between $115-127/credit.

Canada

The objective of the Canadian Clean Fuel Standard is to achieve up to 30 mm tonnes of annual reductions in greenhouse gas emissions by 2030, making a significant contribution toward exceeding Canada's target of reducing national emissions by 30% of 2005 levels by 2030. In June, the Environment Minister scaled back the Clean Fuel Standard in the short term to give the fossil fuel industry time to recover amid COVID-19. The new proposal will see a higher cut beginning in 2026. Due to the impacts of the COVID-19 pandemic, the publication of the proposed Clean Fuel Standard regulation for the liquid fuel class has been delayed to the Fall 2020. In late 2021, the regulations for the liquid fuel class will be finalized and implemented in 2022.

British Columbia, Canada

British Columbia's low carbon fuel standard (BC-LCFS) was introduced to reduce the carbon intensity (CI) of fuels used in the province of Canada. In late July, British Columbia extended their LCFS program through 2030 and increased to 20% carbon intensity (CI) reduction target for 2030, aligning with California and Oregon. The average price per credit was $206.23, down from Q1 2020 pricing of $235.49 per credit.



SRECTRADE PARTNERS WITH DEPENDABLE SUPPLY CHAIN SERVICES

Through partnering with Dependable Supply Chain Services, SRECTrade is working to manage the Company's portfolio of LCFS credits from its electric transportation fleet powered by 100% renewable energy.

Throughout its locations in Southern California, Dependable holds a wide range of electric vehicles and assets from electric yard trucks and forklifts to EV charging stations.

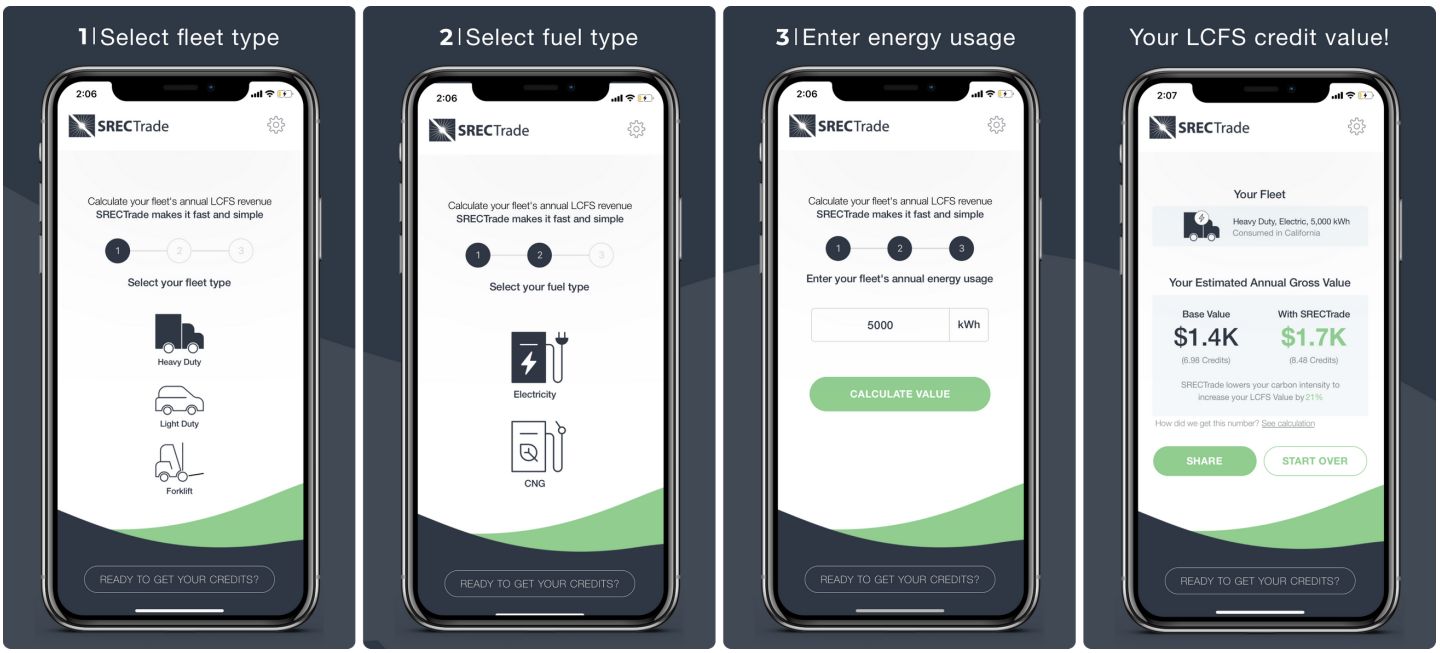
Along with owning a variety of clean fuel assets, Dependable is working to deploye its own solar energy facility to power its electric fleet. A full press release can be found here.

LCFS CREDIT CALCULATOR PHONE APP

We are happy to announce the launch of the SRECTrade LCFS Credit Calculator app to model your clean fuel vehicle's annual credit allowance and projected value in the Low Carbon Fuel Standard (LCFS) program.

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

The app allows you to share your model results via automated email and easily connect with SRECTrade directly from within the app if you have further questions or want to find out more about our management and software services.



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RENEWABLE ENERGY CREDIT (REC) PAIRING BENEFITS

- SRECTrade pairs vehicle electricity consumption with carbon free electricity through the CA LCFS REC book and claim process. This provides EV assets with an uplift in their issued LCFS credits.
- Given each REC yields between 20-35% more LCFS credits, the REC pairing is a beneficial transaction for us to facilitate on behalf of our clients.
- Please contact us for more information about how we can help your EV assets benefit from pairing your fuel consumption with renewable energy to reduce the carbon intensity of your electricity consumed.

CONTACT US

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(415) 763-7732 ext 4

ABOUT US

SRECTrade offers LCFS credit management and transaction services to electric vehicle (EV) fleet operators, OEMs, EV charging station owners, and other asset owners. We help our clients navigate the entire LCFS process including asset registration, ongoing reporting requirements, application of low CI pathways, transacting, settlement, and remittance of funds. Our domain expertise in environmental commodity markets allows us to provide our clients with industry leading regulatory and market knowledge. Please reach out to cleanfuels@srectrade.com for more information.

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