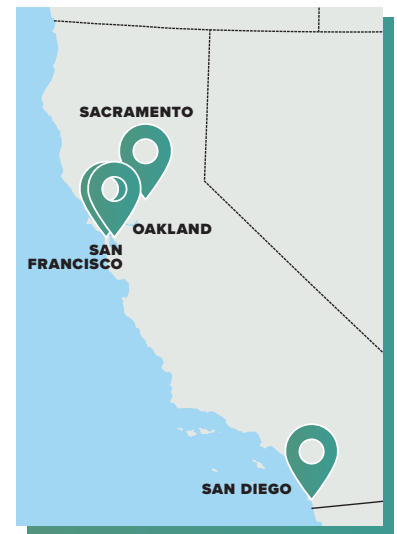


CASE STUDY

RENEWABLE DIESEL IN CALIFORNIA

Many cities and private companies have seen the importance and opportunity of replacing fossil diesel fuels with renewable diesel, a next stage biofuel derived from waste cooking oils, animal fat and excess soybean oils. Critically, renewable diesel can be used by a traditional engine and can immediately replace fossil diesel without investing in new or retrofit equipment. **San Francisco, Oakland, Sacramento, and San Diego have successfully switched to entirely renewable diesel, and UPS, Google and Boeing have also begun to phase in RD in their fleets.**



The state of California is one of the largest consumers of RD in the country, and its net supply has continued to grow ever since the State implemented the Low Carbon Fuel Standard (LCFS) program in 2011. Administered by the California Air Resources Board (CARB), the LCFS program reduces the carbon intensity (CI) of California's transportation fuels by requiring companies that sell or supply fuel to achieve carbon intensity targets. In essence, a clean fuel standard makes polluters pay for the development and deployment of clean alternatives and electric vehicles through a credit-trading system based on total life-cycle emissions of each fuel.

As a result, low CI fuels are cheaper and more accessible within the state. **In 2019, California reported over \$2.5 billion in credit value generated by the low carbon fuel standard, and over 15 million metric tons of annual greenhouse gas reductions.**¹ Due to the credit incentives, renewable diesel production and consumption are expected to increase exponentially over the next few years and replace fossil diesel.

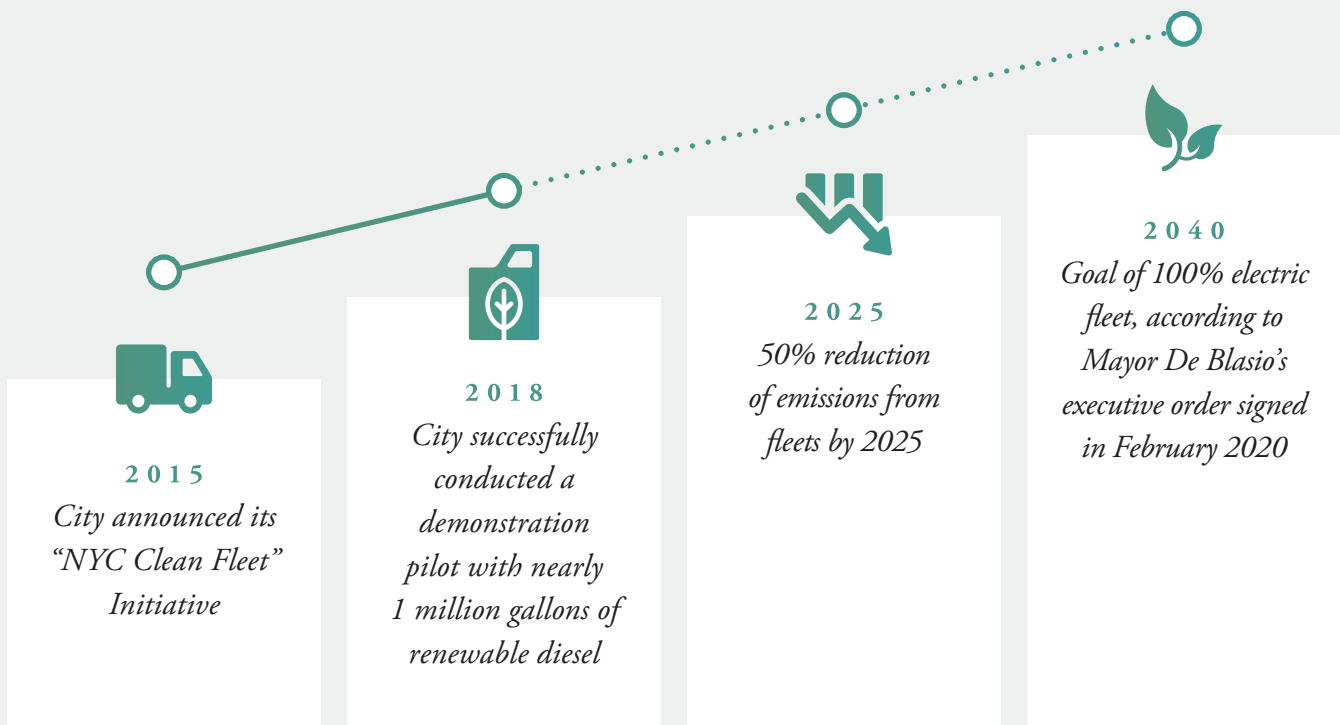
¹ https://ww2.arb.ca.gov/sites/default/files/2020-10/101420presentation_carb.pdf

MOVING NEW YORK TOWARDS CLEAN FUELS

Municipal transportation is the third largest source of greenhouse gas emissions in city government, with diesel trucks and gasoline vehicles being responsible for about 80% of those emissions.² The City of New York operates the largest municipal fleet in the country with 30,000 total vehicles including more than 13,000 trucks and off-road vehicles that use diesel fuel. Vehicles used for everyday public services – emergency response trucks, fire engines, ambulances, garbage trucks, forestry bucket trucks, street paving units, and others – all run off fossil diesel fuels.

New York City made a commitment to reduce GHG emissions 80% by 2050 from 2005 levels (80 x 50), with an interim target to reduce emissions by 40% by 2030 (40 x 30) and 50% for the City fleet by 2025.³ The City is pursuing many alternatives for its fleet, and in February of 2020, Mayor Bill De Blasio signed an executive order calling for a 100% electric fleet by 2040. However, there is an extensive existing legacy fleet that utilizes diesel fuel.

DRIVING THE INITIATIVE FORWARD



² <https://nyc-ghg-inventory.cusp.nyu.edu/#data>

³ <https://onenyc.cityofnewyork.us/wp-content/uploads/2018/04/OneNYC-1.pdf>

In pursuit of its commitment to reduce GHG emissions, the City of New York is already taking steps to convert to renewable diesel to fuel its city trucking fleet.



In 2015, the City of New York announced its “NYC Clean Fleet” initiative, which focuses on converting the fleet to clean and renewable vehicles and fuels. As part of the plan, the City is looking to displace the use of conventional diesel fuel with alternative fuels, such as biodiesel and renewable diesel.⁴



In the summer of 2018, the City successfully conducted a demonstration pilot with nearly one million gallons of renewable diesel that fueled city trucks across several agencies. The program was able to complete a 60% reduction in greenhouse gas based on carbon intensity. Using renewable diesel in its pure form also results in a reduction of Particulate Matter (34%), Nitrous Oxide (10%) and Carbon Monoxide (12%). Based on the success of the demonstration, the City of New York is in the process of bidding and implementing a long-term contract for the purchase of renewable diesel for its municipal fleet.⁵

THE OPPORTUNITY FOR NEW YORK

With New York State lacking a clean fuel standard similar to the program implemented in California, the higher cost of clean fuels poses a roadblock for a successful implementation of this critical initiative. Adopting low carbon fuel regulations will provide economic incentives for renewable diesel fuel producers and distributors to establish and invest in a supply chain infrastructure in the northeast and provide clean fuels to the City of New York and other municipal and private fleets at a lower cost.

A well-developed and successfully executed clean fuel standard in New York would deliver tangible incentives for the production and supply of low-carbon fuels in the State while also reducing co-pollutants. These incentives would open doors to competitive renewable fuel markets, such as renewable diesel, in the transportation sector.

Within a year of implementing a clean fuel standard, New York City could cost-effectively replace all fossil fuel-use in government fleets. Currently, diesel fuel is 60% of New York City’s fuel use, but with full RD implementation in addition to the current electric, hybrid, and efficiency initiatives, it’s possible to meet the goal of 50% reductions by 2025 as soon as 2022. A New York State clean fuel standard is key to reaching this goal.

⁴ <https://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/NYC%20Clean%20Fleet.pdf>
⁵ <https://www1.nyc.gov/assets/lcas/downloads/pdf/fleet/Renewable-Diesel-Report-2019.pdf>