

SUPPORT A.862/S.2962 TO ESTABLISH A CLEAN FUEL STANDARD

A clean fuel standard is an opportunity for New York to lower greenhouse gas emissions from the transportation sector, meet our ambitious climate goals, and create a safer, healthier New York, without additional resources from the State.

OVER TIME, NEW YORK WILL SEE:



REDUCED EMISSIONS

Reduced emissions from the transportation sector, which is currently responsible for 36% of New York's emissions.



INCREASED INVESTMENT & INNOVATION

Increased investment and innovation in electric vehicles, biofuels, and other low GHG transport solutions.



REDUCED EXPOSURE TO POLLUTANTS

Reduced exposure to harmful pollutants, saving billions of dollars in health costs and preventing premature deaths.



DECREASED COST

Decrease costs for businesses to switch to clean transportation options and the opportunity to grow the industry.

WHAT IS A CLEAN FUEL STANDARD?

A clean fuel standard (CFS) is a proven, efficient and cost-effective way to reduce CO2 emissions and pollution from the transportation sector.

A CFS effectively makes polluters pay for the development and deployment of cleaner fuels, including electricity, through a credit-trading system based on total life-cycle emissions.

We are calling on the New York Legislature to include a clean fuel standard in the Senate and Assembly one-house budgets and co-sponsor the bill.



WHAT IS A LOW CARBON FUEL STANDARD?

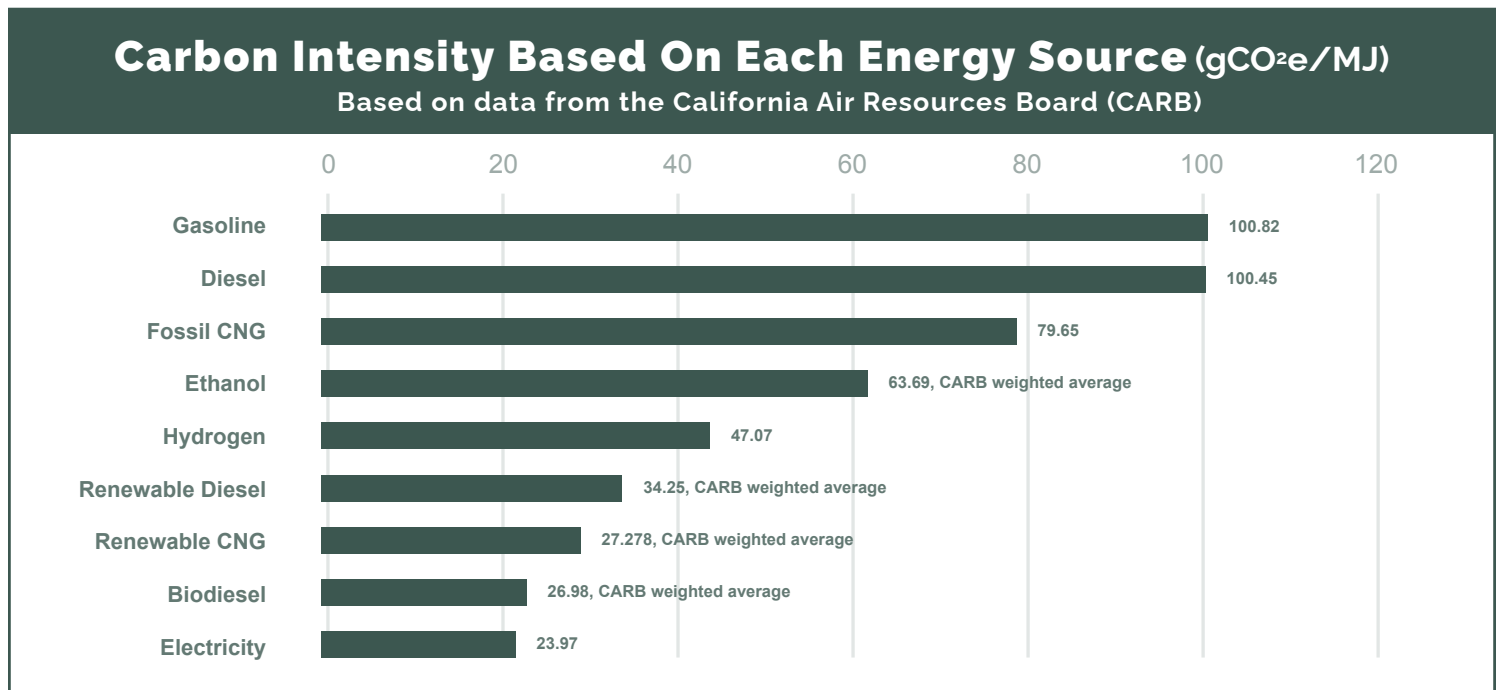
A low carbon fuel standard (LCFS) is a proven, efficient and cost-effective way to reduce CO₂ emissions and pollution from the transportation sector. An LCFS effectively makes polluters pay for the development and deployment of cleaner fuels, including electricity, through a credit-trading system based on total life-cycle emissions.

Under an LCFS, all fuels produced in or imported to a state are assessed on a carbon intensity (CI) scale that measures the full life-cycle emissions of each fuel, including extracting and refining oil, growing crops and producing biofuels, or generating electricity. Fuels more polluting than the standard generate deficits, and fuels cleaner than the standard generate credits. The pollution standard is reduced steadily each year, which creates a growing market for clean fuels.

The LCFS is NOT a tax. Resources generated by an LCFS don't go to the State. They stay in the private market. Those fuels with a "CI" below the benchmark generate credits for the producer/ importer; the further below the benchmark their CI score, the more credits they generate. Very low/negative CI and highly efficient fuels like electricity generate the most credits, where fuels with a CI above the benchmark generate deficits, which must be offset with clean fuel credits.

HOW DO WE ESTABLISH A CARBON INTENSITY SCALE?

The relevant state agency – the Department of Environmental Conservation – would establish a benchmark for carbon intensity based on each energy source and its associated lifecycle emissions. CIs of fuels would then be determined by program administrators and annually certified by third-party verifiers.



As an example, the graph above shows the weighted average scores of the predominant vehicle fuels used in California. Gasoline and diesel emit by far the most carbon emissions, while renewable biofuels and electricity are the lowest carbon and cleanest fuels.

Providers can:

- Blend lower CI biofuels into the gasoline they sell, or
- Buy credits from parties selling fuels below the standard, including EVs and fleets or retailers using or selling RNG, E85, biodiesel or renewable diesel.

The End Goal:

As higher-carbon fuels run deficits and lower carbon fuels earn credits, a funding mechanism for cleaner fuel options is put in place.

BENEFITS OF LOW-CARBON TRANSPORTATION FUELS

Transportation is responsible for 36% of New York's global warming pollution. Almost all of these emissions come from:



Gasoline



Diesel



Other petroleum-based fuels¹

Fortunately, New York has tremendous potential to move to a variety of clean fuels that can reduce the overall carbon intensity of the state's fuel supply. Scaling up the production and use of these clean fuels will benefit New York's drivers and economy in many ways.

Investing In Clean Fuels

The credits generated by low CI fuels will make it easier for transit agencies to move to electric buses, truck fleets and airlines to switch to low carbon biofuels, and could encourage ride-hailing companies to make EVs available to their drivers. A low carbon fuel standard would also help build technology innovation in the state. **By joining California, Oregon, and British Columbia in implementing an LCFS, New York would help create a market for clean fuels and set an example for other states—and ultimately, our federal government—to follow.**

ENDING THE ERA OF PETROLEUM IS KEY TO A CLEAN ENERGY FUTURE

Transportation fuels have been dominated by petroleum for so long that people think "fueling up" is limited to gas stations. But electricity and biofuels are powering a growing number of vehicles on the road today.

Electricity

When running on electricity, EVs produce zero tailpipe emissions. The pollution from EVs is limited to the source(s) of electricity used to charge them. Since New York already has a relatively clean electricity grid (only 39% of power generation comes from fossil fuels), EVs are much less polluting than gasoline cars. As the state continues to invest in a clean energy grid, EVs become even cleaner.

Biofuels

While EVs present tremendous medium and long-term opportunities to decarbonize the transportation sector, New York's existing vehicle population is dominated by internal combustion engines and these vehicles have typical use expectancies of 10 to 15 years. **Biofuels present an opportunity to decarbonize these vehicles now, and also present long-term opportunities to decarbonize the sectors least feasible to electrification, including heavy-duty on-road vehicles and commercial aviation.** Modern biofuels blend with or replace existing petroleum-based fuels without the need for vehicle modification or sacrifices in performance.

New York is already producing and using significant quantities of biofuels, and is poised to produce much more.

PUBLIC HEALTH

Petroleum-based fuels in transportation are not only the highest carbon emitters, they also emit three common pollutants associated with a wide range of negative health impacts:



Particulate Matter



Nitrogen Oxides



Ozone

Exposure to elevated levels of these three pollutants leads to emergency room visits, hospital admissions and premature death. The highest levels of air pollution are found in urban areas, particularly in low-income neighborhoods that are near highways or that have high levels of heavy-duty truck traffic. In New York City, exposure to particulate matter (and by extension other pollutants, see below) is higher for Asian- and African-Americans, Latinos and "other races" than it is for whites.² For example, the rate of asthma among children under 18 in the South Bronx is 13.3% – almost twice the national average.

A study conducted by the Environmental Defense Fund and American Lung Association in California found that communities could expect significant cumulative benefits from the LCFS and other cap and trade regulations in the state, including:

🌿 **Savings of \$8.3 billion** in pollution-related health costs

🌿 **Prevention of 600 heart attacks and 880 premature deaths** caused by air pollution

🌿 **Prevention of 38,000 asthma attacks** and almost 75,000 lost workdays

🌿 **Reduction of criteria pollutant emissions** by almost 180,000 tons

1) <https://www.nyscrda.ny.gov/-/media/Files/EDPPP/Energy-Prices/Energy-Statistics/greenhouse-gas-inventory.pdf>

2) Union of Concerned Scientists, op. cit.

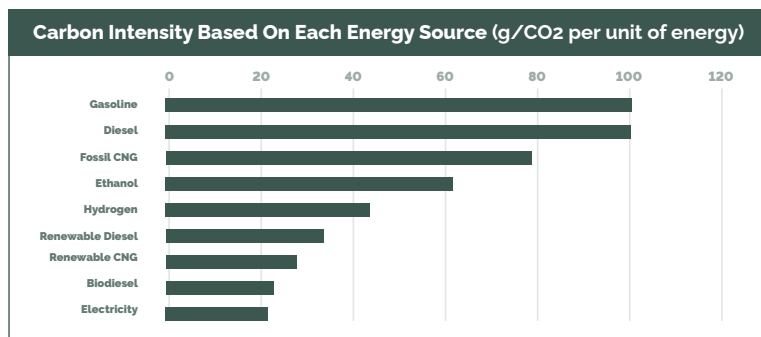
WHAT IS A CLEAN FUEL STANDARD?

A clean fuel standard is an opportunity for New York to lower greenhouse gas emissions from the transportation sector and meet our ambitious climate goals, without additional resources from the State.

HOW IT WORKS

A clean fuel standard works to transform the fuels market from one that relies almost entirely on petroleum-based fuels to a diversified one that uses a variety of clean alternatives. It effectively 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.

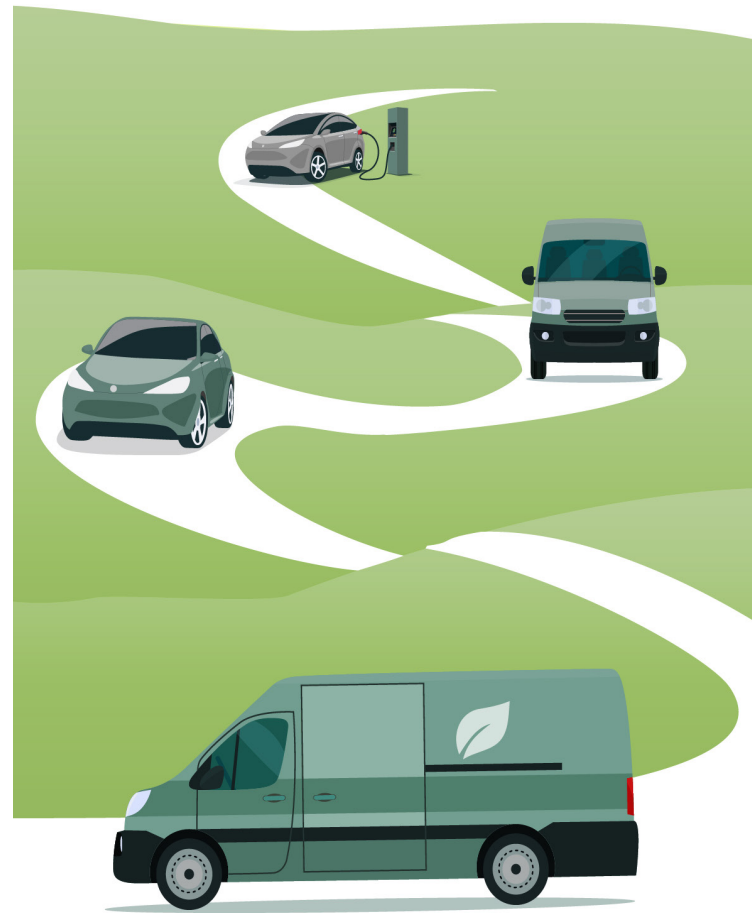
All fuel sources are assessed on a carbon intensity (CI) scale that measures their full life-cycle emissions.



Fuels that pollute more than the CI standard will **generate deficits**, and fuels cleaner than the standard generate credits. The credits generated by **low CI fuels** will make it easier for New York businesses to **move to electric** or clean alternatives.

- TRUCK FLEETS**
And airlines can switch to low carbon biofuels
- TRANSIT**
Agencies can move to electric and other clean fuel buses
- RIDE-HAILING**
Companies can make EVs available to their drivers

Each year, the **pollution standard is reduced steadily**, creating a growing market for clean transportation.



OVER TIME, NEW YORK WILL SEE:

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Reduced emissions from the transportation sector, which is currently responsible for 36% of New York's emissions.

INCREASED INVESTMENT & INNOVATION
Increased investment and innovation in electric vehicles, biofuels, and other low GHG transport solutions.

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A CLEAN FUEL STANDARD WILL SPEED ADOPTION OF ZERO-EMISSION VEHICLES (ZEVs)

Barriers to Meeting New York's Zero-Emission Vehicle Goals

New York's ZEV Goals

- 850,000 ZEVs on the road by 2025 goal set in the State Zero-Emission Vehicle Memorandum of Understanding.¹
- 6.9% progress, only 58,696 as of October 2019.²
- 30% zero-emission medium- and heavy-duty vehicle sales by 2030 and 100% by 2050 goal set by NY and 14 other states and District of Columbia.

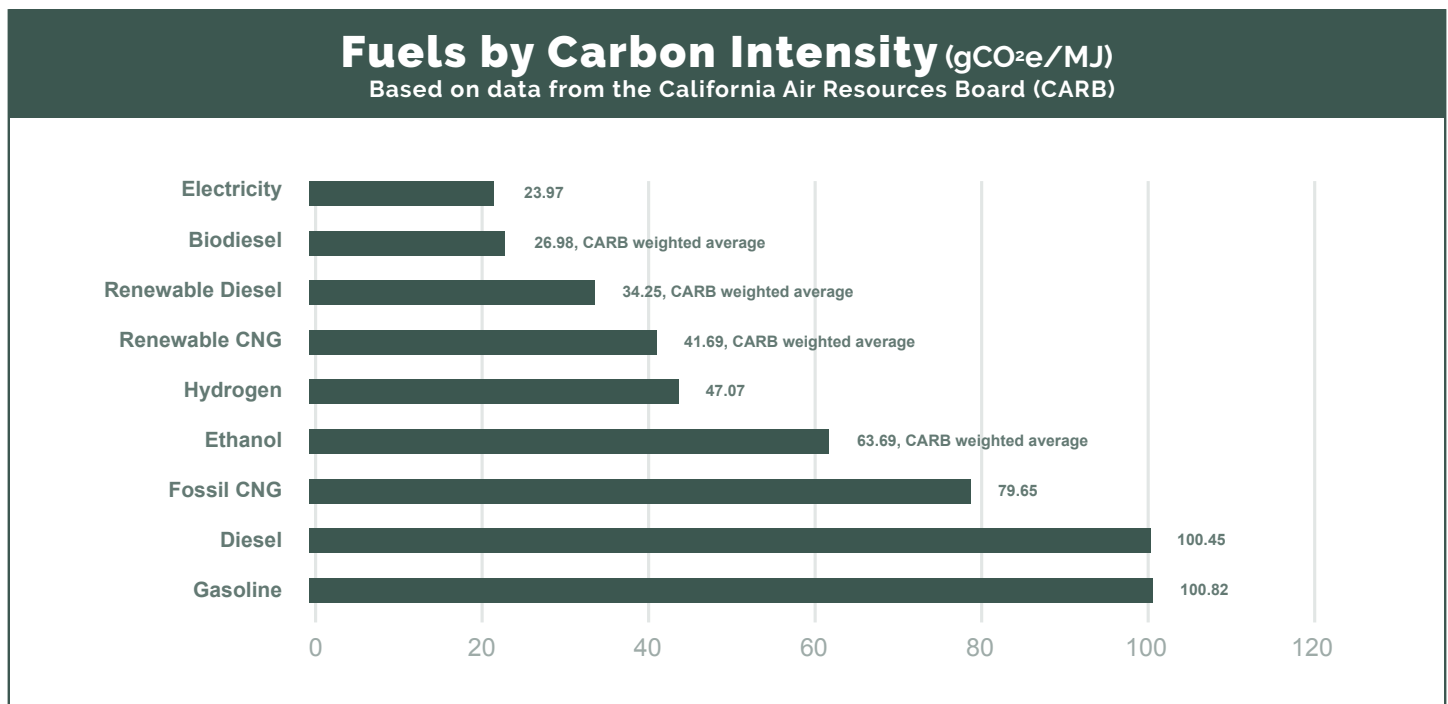
Main Barriers

- Vehicle cost, accessibility to charging, and the cost of commercial electricity rates are the **most commonly cited concerns about transitioning to ZEVs.**
- New York has **2.6% of Level 2 chargers and 15.8% of DC fast chargers** necessary to accommodate 850,000 EVs by 2025.

A clean fuel standard will break down barriers to obtaining electric vehicles and help New York reach ZEV goals.

What is a Clean Fuel Standard?

A clean fuel standard works to transform the fuels market from one that relies almost entirely on petroleum-based fuels to a diversified one that uses a variety of clean alternatives. It effectively 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.



All fuel sources are assessed on a carbon intensity (CI) scale that measures their full life-cycle emissions. Fuels that pollute more than the CI standard will generate deficits, and fuels cleaner than the standard will generate credits. The credits generated by low CI fuels will make it easier for New York businesses to move to electric or clean alternatives. Each year, the pollution standard is reduced steadily, creating a growing market for clean transportation, reducing costs for businesses to switch to clean fuels, and reducing harmful emissions from the transportation sector.

A clean fuel standard can create the economic landscape that will make EVs cost-competitive and will help reach New York's ZEV goals.

OPPORTUNITY FOR ELECTRIC VEHICLES UNDER A CLEAN FUEL STANDARD

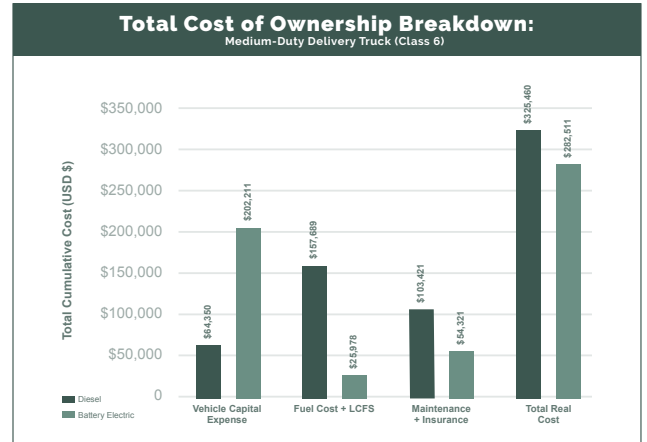
A Clean Fuel Standard Will Lower Total Costs – Ensuring EVs Cost Less Over Its Useful Life than Diesel

In California, the clean fuel standard directs a portion of credit proceeds generated by residential electric vehicle (EV) charging into point-of-sale EV rebates, which further lowers vehicle costs to consumers. CFS credit revenues on EV charging stations can also reduce the payback period on the station by at least 60%.

Due to the cost of gas, the annual cost of driving a new gasoline vehicle in the U.S. is over twice the cost of a battery electric vehicle - \$1,117 versus \$485.

Based on similar programs in other states, clean fuel standard credits create about \$100K - \$250K in total value for medium-duty delivery trucks over at least 10-to-12 year service life. With a clean fuel standard in place, a medium-duty EV truck can save >\$40,000 over its useful life relative to a medium-duty diesel truck, accelerating the rate at which bus and truck fleets would be able to adopt ZEVs. Without the CFS, an EV truck may not be more economic than a diesel unless it drives a significant number of miles.

New York State has generous purchase incentives available for all-electric trucks and buses, including the New York Truck Voucher Incentive Program, but a CFS can help further improve the total cost of ownership by addressing operating costs.



The California Air Resources Board (CARB) relied heavily on total-cost-of-ownership (TCO) analysis when justifying its ambitious Advanced Clean Trucks rule; the clean fuel standard has been critical in commercial ZEVs achieving TCO parity with diesel vehicles in California.


A CFS will significantly reduce barriers to investing in EV charging stations, which will support greater adoption of EVs.

A CFS means more EVs and more EVs mean more charging stations. Plugging in more EVs means greater electric load at times that are beneficial to the grid, particularly overnight. The additional revenue from electricity sales must be used to offset costs for utilities to maintain the grid. Therefore, EV adoption lowers the average cost of service, which exerts downward pressure on rates for all ratepayers whether they own an EV or not.

Each EV on the road will create

\$166


in annual benefits to New York electric ratepayers by 2030³



Achieving NY's EV adoption goals will reduce electricity rates

BY 6%


by 2050, resulting in annual savings of approximately \$144 per household⁴



Benefits will be highest on Long Island, where each EV will create

\$1,500

in value to ratepayers⁵



A Clean Fuel Standard Will:



Reduce Emissions



Increase Private Investment in EV Chargers



Lower EV Costs



Lower Electricity Costs for All Ratepayers

¹ <http://www.umich.edu/~umtriswt/PDF/SWT-2018-1.pdf>

² <https://www.autosinnovate.org/resources/electric-vehicle-sales-dashboard>

³ Plug-in Electric Vehicle Cost-Benefit Analysis: New York. M.J. Bradley, December, 2016.

⁴ Id.

⁵ Benefit-Cost Analysis of Electric Vehicle Deployment in New York State. E3, 2019.

MEMBERS OF THE CLEAN FUELS NY COALITION INCLUDE:

New York League of Conservation Voters	Ceres	Northeast Dairy Producers Association
Natural Resources Defense Council	ChargePoint	Northville Industries
Union of Concerned Scientists	Clean Communities of Central NY	Neste
Coalition for Renewable Natural Gas	Clean Energy	NGVAmerica
Energy Vision	Darling Ingredients Inc.	New York Farm Bureau
American Lung Association	E2	Pacific Ethanol
American Organic Energy	Electrify America, LLC	Plug Power
Alliance for Automotive Innovation	Empire Clean Cities	POET
Alliance for Clean Energy NY	Empire State Forest Products Assoc.	Proterra
Aria Energy	EVgo	Renewable Energy Group, Inc.
Attis Innovations	Fortistar LLC	Renewable Fuels Association
Audi of America	General Motors	RNG Transportation LLC
BAE Systems	Generate Capital	Sustainable Dairy Technologies
Bio	Low Carbon Fuels Coalition	Tesla
BTR Energy	The Lion Electric Co.	TruStar Energy LLC
BYD Motors	Lucid Motors	Urban Future Lab
California Electric Transportation Coalition (CaETC)	Lyft	Vanguard Renewables
CALSTART	National Biodiesel Board	Velocys
	Natural Upcycling	Volkswagen Group of America
	Noblehurst Green Energy	

BRONX*Times*

How beer delivery is creating cleaner air in the Bronx

By Jason Cohen
January 19, 2021



Manhattan Beer is one of the few distributors in the area that have begun to transition to clean fuels.

As the south Bronx is known as [asthma alley](#) and the borough has the [highest asthma rate](#) in the city, one business in Hunts Point is helping to reduce air pollution while delivering alcohol.

Manhattan Beer, 955 E 149th St., is one of the few distributors in the area that have begun to transition to clean fuels.

Manhattan Beer invested in their first compressed natural gas (CNG) truck in 2001 and since has purchased 175 additional CNG trucks making up half of their fleet. A clean fuel

standard can help other businesses make a similar switch and clean the air in Hunts Point, one of the most polluted areas of New York City.

Juan Carcino, senior director of fleet operations and sustainability, has been with Manhattan Beer for 23 years. He is proud to work for a company that cares about the environment.

“It’s (natural gas) has had a massive impact,” he said. “I know there’s a difference because I’m from the Bronx and if you went to Hunts Point 20 years ago you felt the pollution as soon as you walk in. Our goal is to be out of the diesel business.”

Carcino, 42, who has two children with asthma, knows full well about the importance of what Manhattan Beer is doing.



According to Carcino, the goal of the company is not just to make money, but to provide better lives for its employees and the city.

“One thing I always look at is how to protect the kids,” he explained. “I believe that by doing my part this is how we can give back to our community.”

Today, only 20% of the Manhattan Beer fleet uses diesel, but the hope is to be all natural gas or electric within three years.

A [case study](#) released by the [Clean Fuels NY Coalition](#) shows the opportunity to reduce transportation emissions and create cleaner air for all New Yorkers.

A clean fuel standard would transform the fuels market from one that relies almost entirely on petroleum-based fuels, to a diversified one that uses a variety of clean alternatives. Producers of more polluting fuels pay for the development and deployment of clean alternatives, which drive down the cost so businesses like Manhattan Beer Distributors can make the full transition to clean fuels.

Julie Tighe, president of the New York League of Conservation Voters, spoke about the Clean Fuels NY Coalition and Manhattan Beer.

“We’re pushing the government to establish a clean fuel standard so we can encourage the use of electric vehicles and natural gas fuels as we transition our transportation sector,” Tighe said.

She commended Manhattan Beer for switching to natural gas and hopes more companies follow suit.

Tighe noted that the MTA uses electric buses; it could generate \$10,000 a year per bus. She added that the MTA has committed to buying 500 electric buses.

“The idea is to get zero emissions by 2050,” she said. “We know this is something that not only would reduce pollution, but also particularly other pollutants that have a significant impact on health.”

CRAIN'S

NEW YORK BUSINESS

January 22, 2021 04:51 PM

Why New York needs a clean fuel standard

Kevin Miller

As we head into 2021, New York state and its local governments are focused on one thing: getting the state economy back on a sustainable growth path, funding vital state programs, and helping communities recover from the devastation of the pandemic.

The pandemic has highlighted the link between public health and environmental pollution; it has also given us a glimpse of what a future could look like with cleaner air.

New York can chart a path forward that achieves statewide climate, public health, and economic development goals by, eliminating barriers to significant private investment in clean technology and infrastructure—in line with New York's Climate Leadership and Community Protection Act.

A study conducted by Harvard University found that communities with high levels of air pollution are more affected by Covid-19 compared to those who live in less polluted areas. In New York, transportation emissions account for 30% of the state's overall emissions, and half of New Yorkers live in areas with failing air quality. We need to dramatically improve our air quality, strengthen public health measures and get New Yorkers back to work without burdening already stressed budgets.

A clean fuel standard accomplishes these objectives by facilitating the transition away from fossil fuels towards cleaner fuels, promoting transportation electrification, attracting businesses and private investment to the state and creating jobs in clean transportation infrastructure.

A clean fuel standard would require fuel suppliers like oil refiners and importers to reduce the greenhouse gases (GHG) associated with their fuels while encouraging the production and use of low-carbon alternative fuels and expanded transportation electrification. These initiatives would help create a dependable, long-term market for clean fuels and drive investment into these industries, without additional cost to the state or taxpayers.

To meet New York's goal of having 850,000 electric vehicles on the road by 2025, the state needs a 1500% increase in adoption of the new vehicles over five years with a commensurate increase in access to charging infrastructure at home, work, around town and along highways. A clean fuel standard addresses both of these targets, as well as broader GHG reduction targets, by attracting investment in EV charging and generating significant funding that can be used to

expand access to the benefits of electric transportation across the state. Program funds can also be earmarked for providing additional support for low- and moderate-income communities, whether or not they own a personal vehicle.

Clean fuel standards work by attracting investment in cleaner fuels and infrastructure. This can help fleet operators electrify faster, thereby eliminating harmful localized air pollution from diesel engines. It also improves the business case for owning and operating charging stations, which accelerates deployment and further encourages more electric vehicles. In California, payback periods on charging stations have been cut in half because of the state's clean fuel standard. In fact, over the course of 2013 through the first half of 2020, California's clean fuel standard generated over \$1.2 billion in value that has gone towards transportation electrification projects in the state and expanded the use of electricity as a transportation fuel (displacing gasoline and diesel) by over 3600%.

Critically, a clean fuel standard can be implemented at no additional cost to the state, meanwhile creating the market to ensure long-term, sustainable financing to reach New York's ambitious climate goals outlined in the Climate Leadership and Community Protection Act. This is increasingly important while New York faces an economic downturn, which is estimated to cost the state \$63 billion in revenue through 2024.

California has been the home to the rapidly growing clean transportation industry, supporting 300 companies and more than 20,000 jobs. In the next five years, California's clean fuel standard could generate more than \$2.5 billion for transportation electrification, including electrifying public transportation, marine ports, and school bus fleets. New York cannot afford to pass up this opportunity to restart the clean economy, address air pollution and climate change, and become a national leader in transportation electrification.

By including a clean fuel standard in the Senate and Assembly one-house budgets, the State Legislature can catalyze significant investment in clean transportation and create a safer, healthier New York.

Kevin Miller is the director of public policy at ChargePoint.