



Delivering Clean Freight Solutions in NYC



Event Speakers



Joy Gardner
Executive Director,
Empire Clean Cities



Andrew Diaz
Freight Planner, NYC DOT
Freight Mobility Unit



Susan McSherry
Director, NYC DOT
Alternative Fuels Program



Housekeeping Notes:

Each presentation will last 15–20 minutes. A 30–minute Q&A session will follow.

Presentation outline:

- Brief policy overview from **Tiffany–Ann Taylor**, Deputy Director at NYC DOT's Freight Mobility Unit
- **Joy Gardner**: Overview of Alternative Fuel Options
- **Andrew Diaz**: Other Freight Mobility Unit Programs
- **Susan McSherry** and **Joy Gardner**: Overview of Funding Opportunities

Submit your questions using Zoom's Q&A function.

Questions submitted during the presentations will be answered during Q&A at the end of the webinar.



Alternative Fuel Options in New York





Joy Gardner
Executive Director



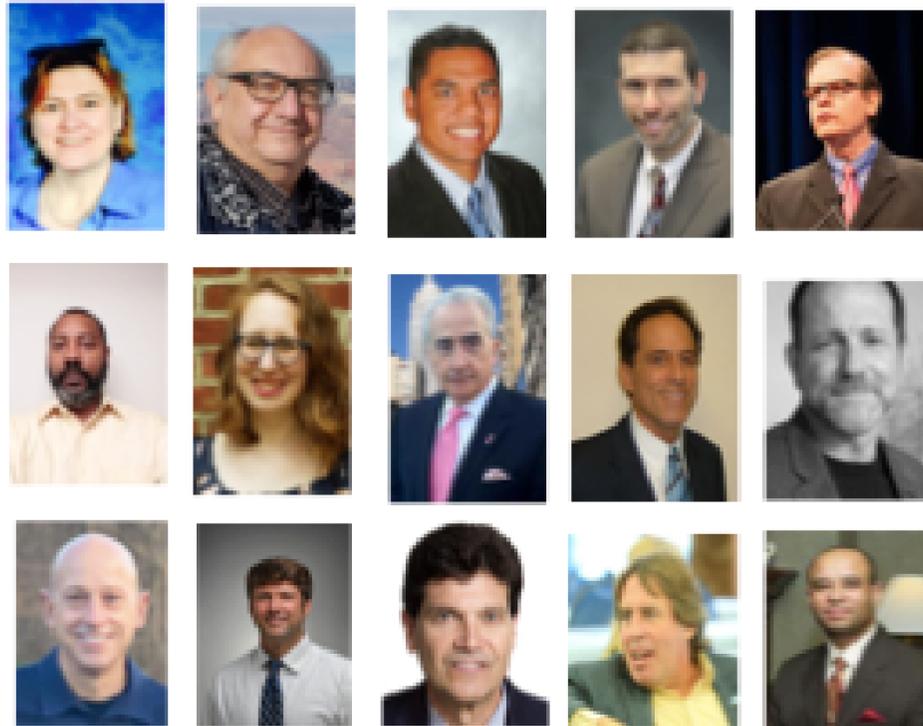
Lidia Henderson
Program &
Comms Manager



Jazmine Espeut
Clean Cities Intern



Will Cooke
Mission Electric Intern



Who are we?

Empire Clean Cities

We are a New York-based 501(c)(3) not-for-profit environmental organization.

Our mission is to **ensure clean air for future generations** by providing citizens and stakeholders with reliable information about alternative fuels and advanced vehicle technologies.

Mission Electric is our EV campaign and online resource hub, relaunched in 2020.



What We Do

- Connect fleets with fuel providers, industry partners, and resources
- Offer training and access to technical assistance
- Identify funding and incentive opportunities
- Provide education and outreach to decision makers, fleets, and the public
- Collect and analyze Regional data
- Alternative fuel corridor planning

Why alternative fuels?



Savings

Alternative fuels and sustainable fleet practices can save you money on fuel and maintenance expenses.



Cleaner Air

Alternative fuels can greatly reduce harmful emissions compared to conventional fuels. This can help improve local air quality and the environment around us.



Quieter Rides

By not having an internal combustion engine, driving an EV is virtually silent, and the electric motor provides instant torque with a smooth ride.



Support domestic economy

Many alternative fuels can be developed domestically, utilizing a country's resources and strengthening the economy.

Biodiesel

What is biodiesel?

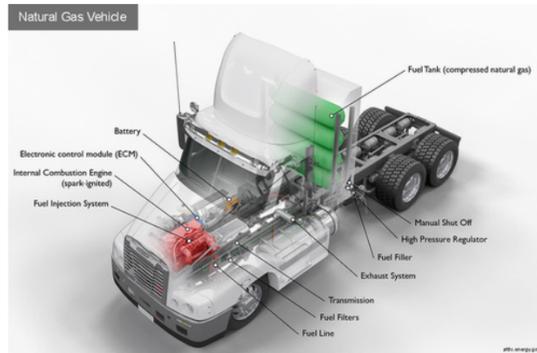
- Domestically produced, renewable fuel
- Manufactured from vegetable oils, animal fats, restaurant grease
- Can be blended and used with diesel in existing vehicles
- Common concentrations: B2, B5, B20, B100

Benefits:

- Reduces greenhouse gas (GHG) emissions
- Biodegradable
- Cleaner-burning replacement for diesel fuel
- Similar payload capacity, range, horsepower, and torque as diesel.
- B20 suitable for nearly all unmodified diesel engines (no vehicle replacement required)



Natural Gas



What is Natural Gas?

- Hydrocarbons, predominantly methane (CH₄). It can be used in the form of compressed natural gas (CNG) or liquefied natural gas (LNG).
- Conventional natural gas is extracted from gas and oil wells
- Renewable natural gas can be produced from landfills and livestock operations

Benefits:

- Horsepower, acceleration, and cruise speed are comparable with those of equivalent, conventionally fueled vehicles.
- Tends to be less corrosive fuel, reducing maintenance costs and increases the lifespan of an engine.
- Domestic availability and produced, established distribution network, relatively low cost.
- NGV can reduce GHG, NO_x and CO emissions.
- RNG can be carbon negative.

Electric

What is an electric vehicle?

- Onboard rechargeable batteries store energy to power one or more electric motors.
- Batteries are charged using electricity from the grid and energy recaptured during braking, known as regenerative braking.

Benefits:

- Vehicles that run only on electricity produce no tailpipe emissions
- Higher upfront costs, but fuel and maintenance savings overall
- Fewer moving parts = reduced maintenance costs
- Quieter drive, better for driver's hearing and community impact
- Instant torque, allowing tow and haul of large payload at lower speeds
- Vehicle to Grid (V2G) Potential



Electric Vehicle Charging

	Current Type	Voltage (V)	Charging Time	Primary Use	Connector
Level 1	Alternating Current (AC)	120V	2-5 miles of range per hour of charging	Residential	
Level 2	AC	240V	10-20 miles of range per hour of charging	Residential Commercial	
DC Fast	Direct Current (DC)	480V	60-80 miles of range per 20 minutes of charging	Commercial	
Wireless	AC	240V	10-20 miles of range per hour of charging	Residential Commercial	

Idle Reduction

What is idling?

- Running a vehicle's engine when the vehicle is not in motion

Benefits of anti-idling policies and equipment:

- Fuel cost savings
- Reduction in petroleum consumption
- Less engine wear
- Reduction in air pollution
- Reduction in noise pollution
- Saving on expensive tickets - idling is against the law!

Idle reduction is the “low-hanging fruit” of fuel economy

NYC
Environmental
Protection



**BILLY
NEVER
IDLES**

**NEITHER
SHOULD YOU**



**IDLING IS POLLUTING
SHUT YOUR ENGINE OFF**

Maintenance & Fleet Rightsizing



Keep your vehicles in shape:

- Keep engines properly tuned and tires properly inflated
- Use the recommended grade of motor oil

"Rightsize" your fleet:

- Eliminate unneeded vehicles
- Use smaller, more efficient vehicles when possible
- Detroit: \$1 million saved!



Additional Tools & Resources

- **Vehicle search tool and detailed information:**
<https://afdc.energy.gov/vehicles/search/>
- **Alternative Fueling Station Locator:**
<https://afdc.energy.gov/stations>
- **Funding and Incentives:**
www.empirecleancities.org/incentives.html





How We Can Help

- Greenfleet: emissions assessment and recommendations
- Unbiased connections to vendors and manufacturers
- Training & alternative fuel planning for fleets
- Assistance with funding applications and proposals



Freight Mobility Overview

Delivering Clean Freight Solutions in NYC

April 28th, 2021



Freight Mobility Overview

Agenda

- Introduction
- Freight Programs
 - Off – Hour Deliveries
 - Commercial Cargo Bike Pilot Program
 - Neighborhood Loading Zones

Introduction



Regional & Strategic Planning

Sub-division overview

The Regional & Strategic Planning (R&SP) unit is a subdivision of the Transportation Planning and Management Division. It was established in early 2015, (formerly known as Planning and Sustainability). R&SP seeks to improve transportation from a broader lens, coordinating with partners at the regional level.

The sub-division leads the coordination around:

- accessibility
- congestion management
- equity
- **freight mobility**
- clean vehicles and fuels
- regional planning
- transportation demand management
- urban mobility

Freight Mobility Unit

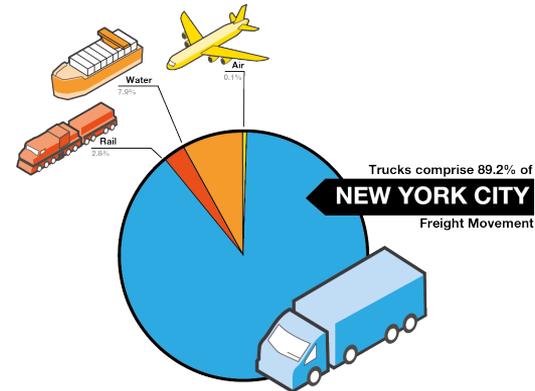
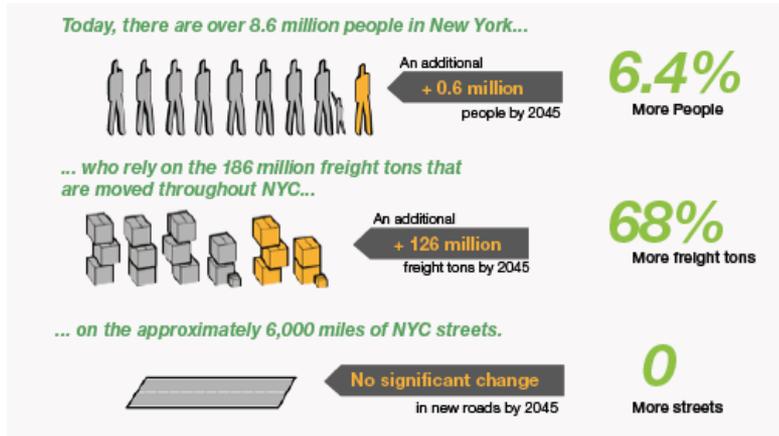
- **Unit Established in 2007**
- Advancing policies and programs that:
 - Improve **safety and efficiency of truck deliveries**
 - **Mitigate the adverse impacts** of trucks on infrastructure and communities
 - Supports the city's **economic competitiveness and livability**

Serving **8.4 million** residents,
4.5 million jobs, and
62 million tourists
per year



A Growing City

Freight Influences and Commodity Flow



Data Source: NYMTC Regional Freight Plan,
American Census Survey

Strategic Plan & Freight Movement

Freight Goals

1. In partnership with the freight industry, **improve the safety, environmental performance, and economic efficiency of truck deliveries** across the five boroughs.
2. **Foster a culture of regulatory compliance** in the trucking industry.
3. **Expand partnerships with the freight and trucking industry** to encourage sharing of data to better manage truck movements throughout the City.



Our Freight Vision

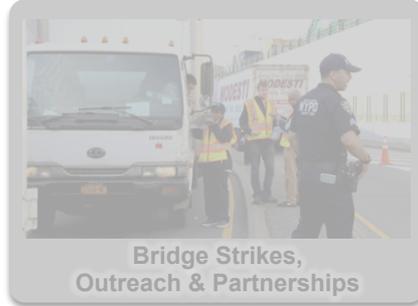
Enhance the **economic vitality** and **quality of life** for all New Yorkers by providing for the **safe, equitable, efficient, and responsible** movement of goods.



Freight Mobility Programs



Freight Mobility Programs Focus



Off-Hour Deliveries

2

Off-Hour Deliveries

Forward
Thinking.



Goal: *Shift commercial deliveries to off-peak hours (7pm-6am)*

OHD's Environmental Benefits:

- **Reduces** congestion
- **Reduces** truck idling
- **Reduces** vehicles circling the block

Our Role: Technical support, tailored implementation, curb access (where feasible)

Who We Target: Transporters and receivers of various sizes.

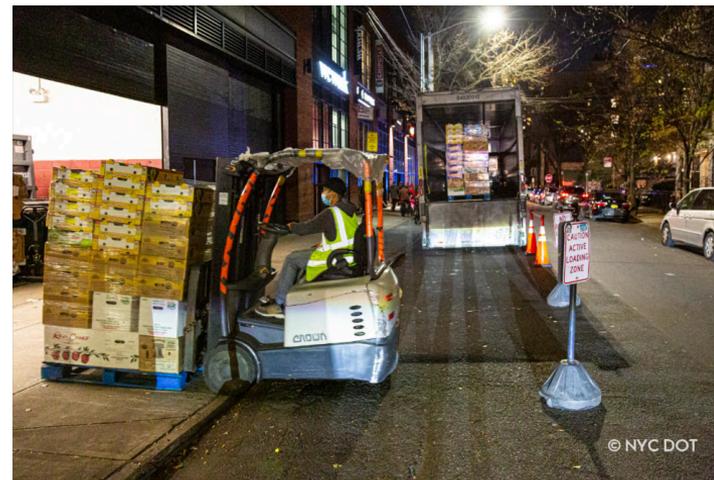


Image: Program partner conducting OHD.

Off-Hour Deliveries

Forward
Thinking.



Off-Hour
Deliveries

Sample of Current Partners



just salad

odeko

Wegmans



TARGET

z u u l

Off-Hour Deliveries

Forward
Thinking.

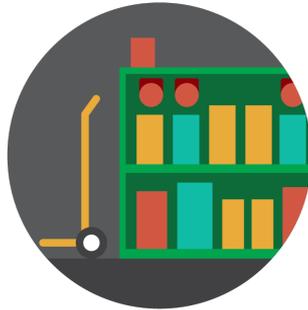


Receiver Benefits

Notably, receivers reported a number of benefits to their operations after implementation.



**GOODS DELIVERED
OUTSIDE STORE HOURS**



**GOODS PREPARED
BEFORE STORE OPENS**



**REDUCED DELIVERY
COSTS**



**MORE CERTAINTY ON
TRUCK ARRIVAL TIMES**

Off-Hour Deliveries

Forward
Thinking.



Transporter Benefits

Transporters also reported a number of benefits to their operations after implementation.



EFFICIENT
DELIVERIES



REDUCED TRANSIT TIME
AND FUEL COSTS



LESS PARKING
HEADACHES



MORE PREDICTABLE
DELIVERY WINDOWS



IMPROVED TRUCK
UTILIZATION



REDUCED
DELIVERY COSTS

Off-Hour Deliveries (OHD)

Forward
Thinking.

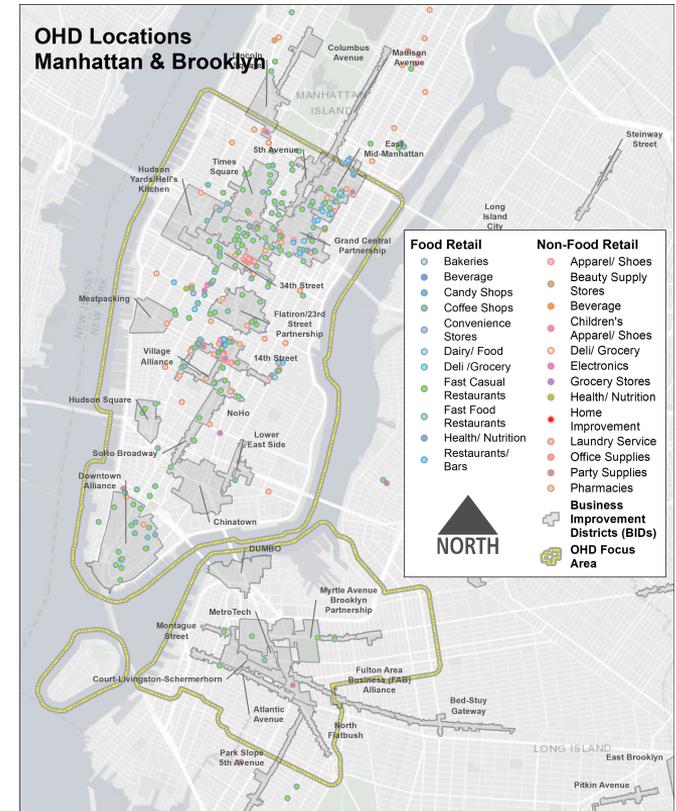


2019 April announcement, Mayor de Blasio:

- **Off-Hour Deliveries Program Expansion**
- **New Target:** triple OHD locations
 - *From 500 to 1,500 by end of 2021*
- **Expand Outreach & Marketing**
 - *Targeted areas in Manhattan & Brooklyn*
 - *Digital and print media campaign*

2021 January progress:

- **Continue** to expand the program, despite COVID-19 challenges
- **Focus Areas:** highly-congested during the daytime
 - Manhattan – South of 59th Street
 - Downtown Brooklyn
 - Downtown Jamaica and Flushing



Commercial Cargo Bike Pilot Program

3

Commercial Cargo Bike Pilot Program

Greening the last mile

- Focus on congested, dense areas of Midtown and Lower Manhattan
- Specifics
 - Launched in 2019, with guidelines on vehicle specifications, safe operation, education and enforcement, and data sharing.
 - Largest Pilot Program in the United States
- Why cargo bikes?
 - Contribute to OneNYC goals of sustainability,
 - Increases freight mobility,
 - Increases safety,
 - Reduces congestion.



Image: Examples of Cargo Bikes

Commercial Cargo Bike Pilot Program

Program Statistics

- DOT has doubled the number of participants (6 Companies)
- DOT has tripled the number of cargo bikes (approx. 350)
- Regardless of business size or vehicle type (must be in compliance with the law), may participate in the pilot program.
- Continued program expansion through 2021



Neighborhood Loading Zones

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Neighborhood Loading Zone (NLZ) Program

Program Details

- Launched demonstration project in Summer 2019
- Aim to reduce double parking on residential streets by providing space for various loading activities.
- NLZ's help to
 - **Reduce** vehicle Idling
 - **Reduce** vehicles circling blocks
 - **Reduce** vehicle honking noise
 - **Increase** neighborhood safety
- DOT has installed 111 loading zones along 26 corridors city-wide and will continue to expand in 2021.
- The Freight Team is also continuing community engagement and [feedback](#) on the program.



Figure: Location of all current NLZ locations.

Contact information

nyc.gov/trucks

Email: freightmobility@dot.nyc.gov



NYCDOT



nyc_dot



nyc_dot



NYCDOT



Expanding the Success of NYC DOT Hunts Point Clean Trucks Program



NYC Clean Trucks Program

New York City Transportation Overview:

- ✓ New York City is committed to meeting clean energy goals to reduce greenhouse gases 40% from 1990 levels by 2030 and 80% by 2050
- ✓ The majority of Class 4 to Class 8 trucks in New York City operate on diesel
- ✓ Diesel emissions include carbon dioxide, particulate matter and nitrogen oxide (NOx)
 - Particulate matter and NOx harm human health
 - Carbon dioxide contributes to climate change
- ✓ Deploying electric and alternative fuel trucks helps reduce the negative environmental impacts of vehicles that typically operate on diesel

- ✓ The NYC Clean Trucks Program is being offered by the NYC DOT to promote sustainable transportation and a cleaner environment in NYC, with funds allocated from the federal Volkswagen Settlement

- ✓ The NYC Clean Trucks Program offers rebate incentive funding to reduce diesel exhaust emissions by replacing older, heavy polluting diesel trucks with new battery electric, or EPA emission compliant alternative fuel (compressed natural gas, diesel-electric hybrid, and plug-in hybrid) and diesel trucks.

Secure funding from \$12,000 up to \$185,000 per truck replacement, depending on fuel type and truck class size.



What is the Volkswagen Settlement Funding?

- ✓ Funded through the New York State Department of Environmental Conservation (NYSDEC) under the Volkswagen Diesel Emission Environmental Mitigation Trust Agreement for State Beneficiaries, Puerto Rico and the District of Columbia (VW Trust)
- ✓ The Environmental Mitigation Trust's chief goal is to reduce NOx emissions in the transportation sector
- ✓ NYSDEC will direct approximately \$9.8 million to the NYC Clean Trucks Program, to fund medium- and heavy-duty replacement trucks.
- ✓ Emphasis is to fund all-electric, zero emission trucks
- ✓ Targets Environmental Justice communities that have historically been subject to a disproportionate amount
- ✓ of diesel exhaust emissions

NYC Clean Trucks Program Evolved from HPCTP

- ✔ Funding is now available for fleet applicants in 20 program-approved NYC Industrial Business Zones (IBZs).
 - Eligible trucks for replacement must be located in or provide service within 0.5 miles of program-approved
- ✔ IBZs for the previous 24 months.

Bronx	Brooklyn	Queens	Staten Island
Bathgate	Brooklyn Navy Yard	Jamaica	North Shore
Eastchester	East New York	JFK	West Shore
Hunts Point	Flatlands/Fairfield	Long Island City	
Port Morris	Greenpoint/Williamsburg	Maspeth	
Zerega	North Brooklyn	Ridgewood/SoMA	
	Southwest Brooklyn	Steinway	
		Woodside	

Fleet Eligibility Requirements

Businesses that move goods, commercial truck owners, and fleets that operate in port drayage

	Beverage Distributors		Freight Delivery (Heating, Air Conditioning, Home Appliance)
	Concrete/Cement Haulers		Newspaper/Magazine Deliveries
	Construction/Demolition Equipment Haulers		Office Supplies (Paper & Plastic)
	Food and Produce Distributors		Service Vehicles (Plumbing, Welding)
	Fuel Delivery		Towing Companies
	Goods Delivery (Furniture, Home Improvement Supplies)		Waste/Recycling Haulers

Battery Electric Replacement Truck Incentives

- ✓ There is no limit on the number of battery electric replacement trucks a fleet can purchase



Class 4	\$100,000
Class 5	\$110,000
Class 6	\$125,000
Class 7	\$150,000
Class 8	\$185,000

The incentive shall be based on the prevailing DEC approved incentive amounts.

Non-Electric Replacement Truck Incentives

The program also funds the purchase of CNG, diesel-electric hybrid, plug-in hybrid electric, and new diesel meeting specific requirements based on fleet size



CNG



Hybrid



Diesel

CNG Replacement Truck

Diesel Electric Hybrid

Plug-In Hybrid Electric

Diesel Replacement Truck

	CNG Replacement Truck	Diesel Electric Hybrid	Plug-In Hybrid Electric	Diesel Replacement Truck
Class 4	\$30,000	\$25,000	\$55,000	\$12,000
Class 5	\$40,000	\$35,000	\$60,000	\$13,000
Class 6	\$50,000	\$45,000	\$70,000	\$20,000
Class 7	\$55,000	\$50,000	\$100,000	\$21,000
Class 8	\$60,000	\$55,000	\$120,000	\$30,000

Trucks Eligible for Replacement Must Meet the Following Requirements:

Eligible Model Year Engine: 1992 – 2009

- Class 4 to Class 7 local goods movement or commercial diesel-fueled truck
- Class 8 port drayage or local freight diesel-fueled truck
- Vehicles must have been operating within New York City for the past 24 months
- (additional details apply)

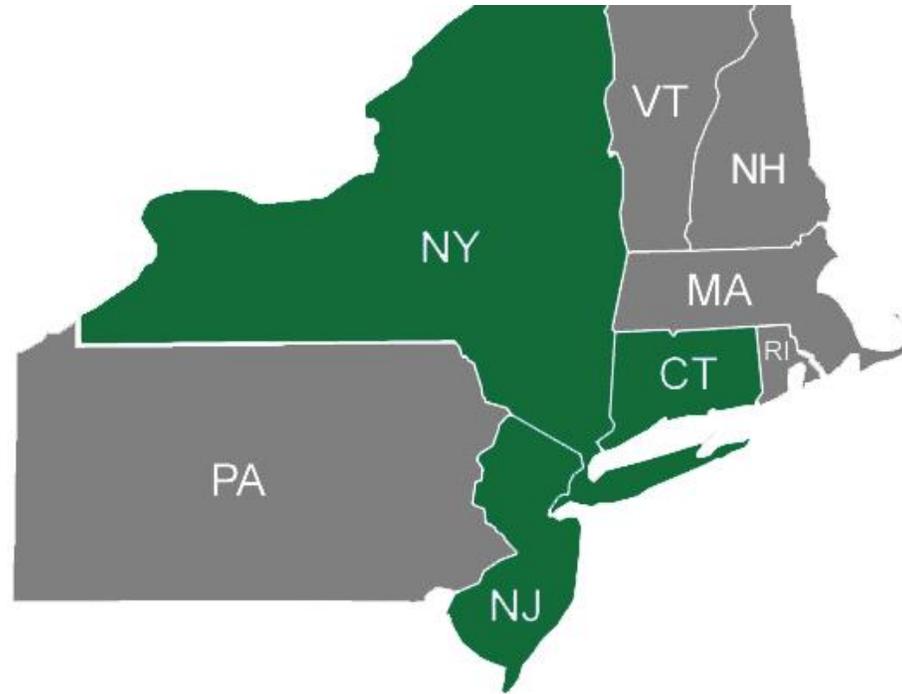
- Scrapping of the older truck is required, which ensures the removal of older, polluting diesel trucks from New York City

Replacement Trucks Must Meet the Following Requirements:

- ✓ Must be a brand-new truck
- ✓ Perform the same function as the diesel-powered truck being replaced
- ✓ Class 4 to Class 8 trucks must be replaced with trucks in the same weight class as the old truck. (additional details apply)
- ✓ Be operated within 0.5 miles of NYC Clean Trucks Program-approved IBZs twice a week
- ✓ AVL is required in order to monitor emissions benefits and program compliance

Replacement Truck Mileage

- ☑ Must average 5,000 miles per year, or more, for 5 years
- ☑ At least 70% of the total vehicle miles traveled (VMT) must be within the Tri-State area of New York, New Jersey and Connecticut



Vision Zero Vehicle Safety Enhancements

- ✓ NYC Clean Trucks Program embraces this important initiative
- ✓ Vehicle Safety Enhancements must be installed and maintained on each replacement truck
 - Backup alert system (audible alert; visual alert; or radar detection)



Side Guards



Split Mirror Design



Cross-over Mirror



Passenger Door Down View Mirror

Not an IBZ Eligible Fleet?

- ✓ NYS Truck Voucher Incentive Program – applies to Fleets outside of IBZs

<https://www.nyserda.ny.gov/All-Programs/Programs/Truck-Voucher-Program>

✓ Want to Go Electric?

Con Ed Infrastructure Supports between 85% - 87% of utility side costs, capped at \$1.2 per participant

<https://www.coned.com/en/our-energy-future/technology-innovation/electric-vehicles/make-ready-program>

Program Team Overview

- ✓ Tetra Tech, Inc.; Gladstein, Neandross & Associates (GNA); and Integrated Strategic Resources are contractors working with NYC DOT to administer the program



Contact Information:

- www.nycctp.com
- Email us at nycctp@tetrattech.com
- Or call 877-310-2733



December 2020



Funding Opportunities

- **New York State:**
 - VW Settlement Funding (NYTVIP and NYCCTP)
 - Charge Ready NY (L2 Chargers)
- **Federal (pending budget):**
 - US Dept. of Energy's Office of Energy Efficiency and Renewable Energy (EERE): <https://eere-exchange.energy.gov/>
 - EPA's Diesel Emission Reduction Act (DERA): www.epa.gov/dera/national
- **Make-Ready and other local utility programs**
- **Learn more about funding and incentives:** www.empirecleancities.org/incentives



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Keep in touch!



Thank you for attending!

Q&A

Please only submit questions using the Zoom Q&A function.



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