Plugging In: Electric Trucks in the Northeast

Abby Swaine
SmartWay and Clean Freight Programs
US EPA Region 1
swaine.abby@epa.gov

Benjamin Mandel
Northeast Regional Director
CALSTART
bmandel@calstart.org

Dave Schaller
Industry Engagement Director
NACFE
david.schaller@nacfe.org

Adam Ruder
Assistant Director, Clean Transportation
NYSERDA
adam.ruder@nyserda.ny.gov

Susan McSherry
Director, Alternative Fuels
NYC Department of Transportation
smcsherry@dot.nyc.gov

June 25, 2020

https://northeastdiesel.org/
Over 250 Members
Commercial vehicles represent a small share of the global on-road fleet but contribute a disproportionate share of fuel consumption and emissions.

Data: ICCT (2015)

- 11% of global on-road fleet are HDVs
- 46% of on-road fuel consumption by HDVs
- 71% of on-road particulates by HDVs

Study: Kheirbek et al (2016)

NYC exposures and impacts:
Drive to Zero is an international multi-stakeholder initiative to accelerate the growth of zero-emission commercial vehicles.

**2025**
Near- and zero-emission commercial vehicles cost-competitive and commercially viable in beachhead applications and first-mover regions by 2025.

**2040**
Zero-emission commercial vehicles achieve 80% of new vehicle sales in first-mover regions by 2040.
TARGET ACTION

1

Target first-success beachhead markets where electrification works now, typically urban applications where vehicles travel along known routes and return to base for charging.
Zero-emission vehicles will come in waves, and our “beachhead” strategy targets applications where zero-emission technology is likely to succeed first.
BUILD ECOSYSTEMS

Build supporting “ecosystems” of success in key first-mover regions made up of aligned policies, incentives, infrastructure, and pilot projects.
Policy and Action Toolkit

Ecosystems of change can enable and accelerate the transition towards zero-emission commercial vehicles

POLICIES
- Exclusion zones
- Access restrictions
- Procurement requirements
- Sales requirements
- Fuel efficiency/GHG regulations
- Low-carbon fuel standards

INFRASTrUCTURE INVESTMENTS
- Depot charging
- Public infrastructure
- Corridor charging

FINANCIAL INCENTIVES
- Voucher purchase incentives
- Tax purchase incentives
- Congestion pricing
- Favorable electricity rates
- Battery production/purchase

PILOT PROJECTS
- Vehicle
- Infrastructure
- Business models
CALSTART designs and manages smart incentives for leading regions in the United States

Chicago had $11.3M electric/hybrid truck voucher program; $1.425M NG/Elec infrastructure; $1.275M Green Taxi (NG)

Program for hybrid, electric and NG trucks since 2014, $14.5M disbursed to date; new round launched late 2019, $35M now available

California has invested over $500M for hybrid and electric trucks and low-NOx engines. CALSTART helped design, and has managed for >10 years
Work concurrently and collaboratively between regions and industry worldwide to encourage global supply chain of critical components and manufacturers.
80 organizations worldwide have signed the Pledge

THE PLEDGE

Cities, governments, manufacturers, fleets and fuel suppliers agree to:

- Work together to accelerate early markets for zero- and near-zero emission trucks, buses and equipment.
- Share information with peer regions.
- Access best tools, research, assistance, data.

REGIONAL AND NATIONAL GOVERNMENTAL AGENCIES

Bay Area Air Quality Management District (BAAQMD)
British Columbia Province, Canada
California Air Resources Board (CARB)
California Energy Commission (CEC)
Canada
Chile Sustainable Energy Agency
Foothill Transit
K’ul, Group, Canada
Los Angeles Department of Transportation (LADOT)
New York State Energy Research & Development Authority
Quebec Province, Canada
South Coast Air Quality Management District (SCAQMD)
Västra Götaland Region, Sweden

CITIES

City of Helmond, Netherlands
City of Madison, WI, USA
City of Vancouver, Canada
New York City, NY, USA
Raymond Johansen, Mayor of Oslo
The Honorable Darrell Steinberg, Mayor of Sacramento
The Honorable Eric Garcetti, Mayor of Los Angeles
The Honorable Michael D. Tubbs, Mayor of Stockton

MANUFACTURERS

AxleTech
BAE Systems
Brilliant Power Systems
BYD
BYD Canada
Canadian Electric Vehicles
Charge Energy
Coaster Cycles
Effenco
Lightning Systems
Mitsubishi Fuso Truck
Motiv Power Systems
New Flyer Industries
Nikola Corporation
Nuvera Fuel Cells
Orange EV
Prestolite eDrive Systems
Proterra
Roush CleanTech
Siemens
StrapWing
Tevva
The Lion Electric Co.
TransPower
Unique Electric Solutions LLC
US Hybrid
West Valley Construction Company
Workhorse
XOS
Zenith Motors

FLEETS AND USERS

Blue Mountain Resorts
Ingka Group (IKEA)
Mayor USA
Ryder
XL

UTILITIES AND INFRASTRUCTURE PROVIDERS

Black & Veatch
East Bay Community Energy
Southern California Edison
USGRDCO

KNOWLEDGE AND SERVICE ORGANIZATIONS

Auto Research Institute
Charge across town
Clean Energy Canada
Coast to Coast Smart e-Mobility
Dunksy Energy Consulting
East Bay Clean Cities Coalition
Electric Vehicle Association of Atlantic Canada
Empire Clean Cities
Geotab
Greener by Design, LLC
International Commuter Challenge
Prospect Silicon Valley
Sim
Viatec
Windfall Ecology Centre

https://globaldrivetozero.org/about/pledge/
EXPAND

Expand to succeeding success markets as supply chain grows, costs decrease, and business case expands.
We are developing tools to drive market success

Resources for transformation: https://globaldrivetozero.org/tools/
Model availability to double by 2023

Total cumulative vehicle models, U.S. & Canada

<table>
<thead>
<tr>
<th>Year</th>
<th>Cumulative Available Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>95</td>
</tr>
<tr>
<td>2020</td>
<td>169</td>
</tr>
<tr>
<td>2021</td>
<td>185</td>
</tr>
<tr>
<td>2022</td>
<td>188</td>
</tr>
<tr>
<td>2023</td>
<td>195</td>
</tr>
</tbody>
</table>
M/HD ZEV model availability growing

Total cumulative vehicle models by vehicle type and year, U.S. & Canada
Drive to Zero focuses on the **HOW**

1. **TARGET ACTION.** Target first-success beachhead markets where electrification works now. Typically urban applications where vehicles travel along known routes and return to base for charging.

2. **BUILD ECOSYSTEMS.** Build supporting “ecosystems” of success in key first-mover regions made up of aligned policies, incentives, infrastructure, and pilot projects.

3. **COLLABORATE.** Work concurrently and collaboratively between regions and industry worldwide to encourage global supply chain of critical components and manufacturers.

4. **EXPAND.** Expand to succeeding success markets as supply chain grows, costs decrease, and business case expands.
The Northeast should be a first-mover region

Foundational elements in place:
- Densest part of the country—conducive duty cycles for ZECVs
- Leading vehicle incentive program in New York
- Growing ZEB volumes (see left)

Despite presence of foundational elements, the Northeast has failed to materialize as an early success market for ZECVs
- Northeast leadership on commercial vehicles is imperative for national and global climate/AQ goals

Clear and consistent policy signals and financial inducements are needed to form a unified and supportive regional market for ZECVs

Zero-emission buses in operation or on order in Northeast and Mid-Atlantic states (Zeroing in on ZEBs, CALSTART 2019)
**Drive to Zero: Northeast** will engage in coordinated strategies aimed at various levels of influence to make attainable the following outcomes by 2025:

- 10,000 ZE buses deployed
- 10,000 ZE trucks and vans deployed
- Zero-emission zone strategies piloted in >10 cities
- Requirements in place for ZEV-only purchases:
  - For all *public transit fleets* from 2030
  - For all *state* and >10 *municipal fleets* from 2035
  - For *private truck fleets* from 2040

*Achievement of these outcomes would signify that the Northeast is on track for major market transformation by 2040 (ZECV sales share of 75% or more)*
Thank you!

Benjamin Mandel
Northeast Regional Director
CALSTART
bmandel@calstart.org

For more information and to sign the Drive to Zero Pledge:
www.globaldrivetozero.org
Run on Less: Electric Trucks in Regional Haul and related guidance reports

June 17, 2020
North American Council for Freight Efficiency

• Unbiased, non-profit
• Mission to double freight efficiency
• All stakeholders
• Scale available technologies, guide future change and Run on Less demonstrations.
• Primary focus: Tractor-trailers

www.NACFE.org
Three Pillars of NACFE Work

1. Scale Current Techs
2. Improve Information Flow
3. Guide Future Techs

Confidence Reports
Trade Shows
Annual Fleet Fuel Study
Run On Less Demonstrations
Thought Leadership
Collaboration Reports
Workshops
Electrification Guidance Reports
Thank You to Our Sponsors

2020 Fiscal Support

Gold

Silver

Bronze
Regional Haul

More Regional Haul: An Opportunity for Trucking?

- Drop in Length of Haul
- Warehousing
- Technology Trends
- An Opportunity
  - Drivers
  - Alternative Fuels
  - Others?


https://nacfe.org/regional-haul/
Run on Less Regional

Day 18 of 18

Congratulations to Our Drivers!

OCTOBER 7 – 25 2019

Run on Less Regional Sets Impressive Efficiency Benchmark

RESULTS

8.3
Average MPG

$8,249
Dollars saved

$9,003,550,961
Annualized Potential Savings

Potential savings represents the savings that are possible across the industry if all regional-haul trucks operated at this level.

June 2020
Efficiency Opportunity

Run On Less Regional confirmed that the 800k trucks in North America could use much less fuel.

*measured in billion gallons of diesel

Download the report at: https://nacfe.org/run-on-less-regional-report/
Conclusions

1. High efficiency requires commitment
2. Optimize performance using big data and connectivity
3. Understand and act on the variety in duty cycles
4. Drivers are attracted to regional haul
5. Return to base is ideal for electric trucks
6. Growth in Regional Haul is Good

Run On Less Data Benefits

- NREL/NACFE Report: Battery Electric Powertrains
- Ballard/NACFE Report: Hydrogen Fuel Cell Trucks in Regional Haul
- Free downloadable data set
Electric Trucks

Collaboration

• Fleets
• OEMs (Existing & New)
• Suppliers
• Dealerships (Sales/Service)
• Governments

• Charging System Suppliers
• Utility Companies
Guidance On Electric Trucks

# 1
Electric Trucks: Where They Make Sense
May 2018

# 2
MD Electric Trucks: Cost Of Ownership
October 2018

# 3
Electric Trucks: Charging Infrastructure
March 2019

# 4
Viable Class 7 & 8 Electric, Hybrid & Alt Fuels Tractors
December 2019

Now Free Online at (https://nacfe.org/future-technology/)
Findings: Parity To Diesel

Class 3 - 6
Dark Blue = EV is Better

Class 7 & 8
Medium Duty Trucks

- Close to base
- Limited range
- Consistent, dedicated routes
- Total cost calculator
- “Unknown...difficult to monetize benefits”
  - Noise
  - Design flexibility
  - And on

June 2020
Infrastructure

- Complex
- Large amount of power fast
- Involve all stakeholders early
- Time to complete with truck availability
- Be flexible
HD Tractors Technology Bridge

**PRESENT: 2020**
Technology immature
Many unknowns & challenges

**“MESSY MIDDLE”: 2030**
Many optimized solutions
Growing infrastructure
Multi fuel choices

**FUTURE: 2040**
Innovation & maturation
Facts replace estimates
Learning curves

Fast charging everywhere
Long life, low cost batteries
Acceptable weights

Legacy Diesels
Natural Gas

Diesel Advancements
Natural Gas

Battery Electric
Hydrogen Fuel Cells
Renewable Natural Gas & Diesel

CBEV from Clean Energy
Alternative Fuels

TRADITIONAL PETROLEUMS
- Gasoline
- Diesel
  - Bio-Diesel
  - Ethanol Blends
  - Methanol Blends
- Renewable Diesel

GASEOUS FUELS
- Liquid Propane
- CNG
- LNG
- DME
- Renewable Nat Gas

HYDROGEN
- Hydrogen Injection into Diesel
- Diesel & BEV Hybrid
- Gasoline & BEV Hybrid
- Solar Charging
- LP Injection into Diesel

ELECTRIC
- Battery Electric
- CNG & BEV Hybrid
- Nitrogen & BEV Hybrid

LIQUID NITROGEN

GASEOUS FUELS

June 2020
Focus On Regional Haul Electrification

- Run on Less Regional
- Regional Haul thought leadership
- Electric truck guidance reports
- Identify high-potential regional trucking routes
- Support implementation on first- and next-mover deployments
- Scale best practices in infrastructure deployment
- Increase confidence in the value of electrification
Regional Prioritization

- Range (grade, climate, etc.)
- Regenerative braking (traffic)
- Electricity as a fuel (tariffs)
- Weight?

- State policies (financial incentives, ZEV mandates, climate commitments, etc.)
- Utility programs & plans
- Training programs

Sweet spot for electrification

- Air quality
- Equity & environmental justice
- Freight movement (now & projected)
Getting to Know Each Other

2 Pager: FLEETS on UTILITIES

2 Pager: UTILITIES on FLEETS

UTILITIES

FLEETS

June 2020
Why Consider Electrification Now?

Financial

- Incentives are/will be available that can cover some of the costs of conversion

Facilities

- Obtain required power levels BEFORE your neighbors
- Obtaining power/infrastructure can take years
- Might be easier to relocate than upgrade
- Physical layout of your lot will change

Change is Coming: Even with diesel

- Regulations & tech changes for NOx & GHG
Confidence Reports

Complete, unbiased review of available technologies for fleet confidence to adopt.

Can be viewed as either:
- Diesel fuel savings
- Range extenders for alternative fuels
Wave Of Changes Coming

Mike Roeth, 260.750.0106, mike.roeth@nacfe.org
Dave Schaller, 260.602.5713, david.schaller@nacfe.org

Follow NACFE at: LinkedIn  Facebook  www.NACFE.org  www.RunonLess.com
New York Truck Voucher Incentive Program

Northeast Diesel Collaborative

June 25, 2020
New York State Transportation Overview

• The transportation sector is the biggest source of greenhouse gas (GHG) emissions in New York State, contributing over 35% of total emissions.

• The vast majority of class 3-8 trucks and buses operate on diesel fuel.

• Diesel emissions include carbon dioxide, particulate matter and nitrogen oxides (NOx) - carbon dioxide contributes to climate change, and particulate matter and NOx can harm human health.

• New York State is committed to meeting multiple clean energy goals, including a 40% reduction in GHG emissions by 2030 and 85% reduction by 2050.
Why NYS Cares About Electric Trucks

- MD/HD trucks and buses make up 5% of registered vehicles in New York State but emit 18% of the transportation GHG emissions
- Truck pollution is heavily concentrated in densely populated areas, and particularly in disadvantaged communities
- Electric trucks help reduce the negative impacts of diesel emissions
- Transportation electrification helps grow New York’s economy
  - Electric truck components are manufactured in New York
  - Electric trucks save fleets money
  - Electricity is generated in New York; diesel is purchased from out-of-state
Why Buy Electric Trucks

1. Reduce and stabilize your fuel costs
2. Dramatically reduce maintenance costs
3. Meet your sustainability goals
4. Satisfy the demands of stakeholders
What is NYTVIP?

• NYTVIP provides point-of-sale discounts (vouchers) to reduce the cost of zero-emission and alternative fuel vehicle technologies

• Vouchers reduce the upfront purchase costs and the payback period associated with clean trucks and buses

• Program brings together vehicle manufacturers, dealers (Contractors), and fleets to get cleaner trucks and buses on the road

• Scrappage ensures removal of the oldest, dirtiest diesel engines from New York State roads
Voucher History

First round was active from 2013 through mid-2018

<table>
<thead>
<tr>
<th>Technology</th>
<th># Fleets</th>
<th># Vehicles</th>
<th>Voucher Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPF</td>
<td>9</td>
<td>124</td>
<td>$2,452,304.80</td>
</tr>
<tr>
<td>EV</td>
<td>18</td>
<td>65</td>
<td>$5,673,093.00</td>
</tr>
<tr>
<td>CNG</td>
<td>4</td>
<td>71</td>
<td>$3,033,524.00</td>
</tr>
<tr>
<td>CNG Conversion</td>
<td>4</td>
<td>15</td>
<td>$334,272.00</td>
</tr>
<tr>
<td>Hybrid (HEV)</td>
<td>22</td>
<td>83</td>
<td>$1,198,179.20</td>
</tr>
<tr>
<td>HEV Conversion</td>
<td>3</td>
<td>236</td>
<td>$1,830,776.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>594</strong></td>
<td><strong>$14,522,149.00</strong></td>
</tr>
</tbody>
</table>
# Voucher Funding Sources

<table>
<thead>
<tr>
<th>#</th>
<th>Funding Source</th>
<th>NYS Agency</th>
<th>Vehicle Types</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CMAQ</td>
<td>NYSDOT</td>
<td>Class 3-8 Battery Electric Vehicles</td>
<td>$10M</td>
</tr>
<tr>
<td>2</td>
<td>Volkswagen Settlement</td>
<td>NYSDEC</td>
<td>Class 8 Trucks</td>
<td>$3.6M</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td>Class 4-7 Trucks</td>
<td>$4.8M</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td>Class 4-8 Electric Transit Buses</td>
<td>$16.7M</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>$35.1M</strong></td>
</tr>
</tbody>
</table>
Eligible Vehicle Technologies

- Weight classes 3-8 (>10,000 lbs)
- Fuel types:
  - Battery electric (BEV)
  - Hydrogen fuel cell electric (FCEV)
  - Plug-in hybrid electric (PHEV)
  - Conventional hybrid (HEV)
  - Compressed natural gas (CNG)
  - Propane (LPG)

- Repowered vehicles are eligible
  - Must be certified with an operational lifespan of 10 years
  - BEV only

* PHEV, HEV, CNG and LPG engines must comply with 0.02 g/bhp-hr “Low-NOx” standard
Manufacturers

Original Equipment Manufacturers (OEM), Upfit/Retrofit Manufacturers (URM), or engine/powertrain producers with vehicle(s) to be sold through the Program

• Submit *Vehicle Eligibility Application*

Contractors

Dealers / vendors that market and sell approved vehicles through the Program and receive voucher payment from NYSERDA

• Submit online *Contractor Application*
• Submit online *Voucher Application*
• Responsible for providing documentation to Voucher Help Center to redeem voucher

Vehicle Fleets

Commercial, non-profit, or non-federal government fleets that use point-of-sale discounts to purchase or lease new BEV or AFV

• Must scrap an eligible diesel vehicle
• Works with Contractor to supply all information for Voucher Application / redemption
• Responsible for compliance with Semi-Annual Fleet Usage reporting requirement
# Voucher Amounts for Trucks

<table>
<thead>
<tr>
<th>Vehicle Technology</th>
<th>Incremental Cost %</th>
<th>Vehicle Weight Class (GVWR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3*</td>
<td>4</td>
</tr>
<tr>
<td>BEV</td>
<td>95%</td>
<td>$ 60,000</td>
</tr>
<tr>
<td>FCEV</td>
<td>95%</td>
<td>$ -</td>
</tr>
<tr>
<td>PHEV</td>
<td>90%</td>
<td>$ -</td>
</tr>
<tr>
<td>HEV</td>
<td>90%</td>
<td>$ -</td>
</tr>
<tr>
<td>CNG</td>
<td>90%</td>
<td>$ -</td>
</tr>
<tr>
<td>Propane</td>
<td>90%</td>
<td>$ -</td>
</tr>
</tbody>
</table>

*Class 3 BEV eligible for 80% of incremental cost up to cap
Vehicle Scrappage Requirements

- Goal: Reduce diesel exhaust emissions by replacing older, dirtier diesel buses with new electric buses
- Eligibility: Vehicles with 1992-2009 model year diesel engines
  - Vocation and GVWR must be similar to new vehicle
Thank you!

https://nyserda.ny.gov/truck-voucher-program

Program Administrator
NYSERDA
Patrick Bolton
Senior Project Manager
patrick.bolton@nyserda.ny.gov

Outreach and Technology Transfer
CALSTART
Benjamin Mandel
Northeast Regional Director
bmandel@calstart.org

Voucher Help Center
Center for Sustainable Energy
NYTVIP@energycenter.org
NYC Clean Trucks Program has Launched!

Expanding the Success of NYC DOT Hunts Point Clean Trucks Program
Cleaner trucks for a greener New York City! The NYC Clean Trucks Program is being offered by the NYC DOT to promote sustainable transportation and a cleaner environment in NYC.

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.

Incentives help ease the financial burden of purchasing new trucks.

Cleaner, more efficient technology produce fewer harmful emissions.

Less emissions mean a healthier and cleaner New York City.

Contact us at nycctp@tetratech.com. Or call 877-310-2733
NYC Clean Trucks Program Evolved from HPCTP

✔ Funding for 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.

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

Contact us at nycctp@tetratech.com. Or call 877-310-2733
Fleet Eligibility Requirements

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

<table>
<thead>
<tr>
<th>Beverage Distributors</th>
<th>Freight Delivery (Heating, Air Conditioning, Home Appliance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete/Cement Haulers</td>
<td>Newspaper/Magazine Deliveries</td>
</tr>
<tr>
<td>Construction/Demolition Equipment Haulers</td>
<td>Office Supplies (Paper &amp; Plastic)</td>
</tr>
<tr>
<td>Food and Produce Distributors</td>
<td>Service Vehicles (Plumbing, Welding)</td>
</tr>
<tr>
<td>Fuel Delivery</td>
<td>Towing Companies</td>
</tr>
<tr>
<td>Goods Delivery (Furniture, Home Improvement Supplies)</td>
<td>Waste/Recycling Haulers</td>
</tr>
</tbody>
</table>
Battery Electric Replacement Truck Incentives

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

<table>
<thead>
<tr>
<th>Class</th>
<th>Incentive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 4</td>
<td>$100,000</td>
</tr>
<tr>
<td>Class 5</td>
<td>$110,000</td>
</tr>
<tr>
<td>Class 6</td>
<td>$125,000</td>
</tr>
<tr>
<td>Class 7</td>
<td>$150,000</td>
</tr>
<tr>
<td>Class 8</td>
<td>$185,000</td>
</tr>
</tbody>
</table>

Incentives listed are subject to change after August 6, 2020. Any changes will be made with at least 30 days notice. Actual funding cannot exceed program limits for replacement truck incremental costs.
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.

<table>
<thead>
<tr>
<th></th>
<th>CNG Replacement Truck</th>
<th>Diesel Electric Hybrid</th>
<th>Plug-In Hybrid Electric</th>
<th>Diesel Replacement Truck</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 4</td>
<td>$30,000</td>
<td>$25,000</td>
<td>$55,000</td>
<td>$12,000</td>
</tr>
<tr>
<td>Class 5</td>
<td>$40,000</td>
<td>$35,000</td>
<td>$60,000</td>
<td>$13,000</td>
</tr>
<tr>
<td>Class 6</td>
<td>$50,000</td>
<td>$45,000</td>
<td>$70,000</td>
<td>$20,000</td>
</tr>
<tr>
<td>Class 7</td>
<td>$55,000</td>
<td>$50,000</td>
<td>$100,000</td>
<td>$21,000</td>
</tr>
<tr>
<td>Class 8</td>
<td>$60,000</td>
<td>$55,000</td>
<td>$120,000</td>
<td>$30,000</td>
</tr>
</tbody>
</table>
Trucks Eligible for Replacement Must Meet the Following Requirements:

☑ 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)

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
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
Program Team Overview

- The NYC Clean Trucks Program is an environmental initiative offered by the NYC DOT to promote sustainable and a cleaner environment in New York City.
- 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@tetratech.com
• Or call 877-310-2733
Plugging In:
Electric Trucks in the Northeast

https://northeastdiesel.org/

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