



# **California: Leading the Future of Transportation**

Patricia Monahan, Commissioner, California Energy Commission

**SEPTEMBER 2020**



# The Problem

Transportation is a major source of harmful air pollution, and the greatest and increasing source of greenhouse gas emissions (GHGs) in California.



# **The Solution**

Clean zero-emission transportation.

# Governor Newsom commits CA to 100% ZEV future



# Executive Order N-79-20

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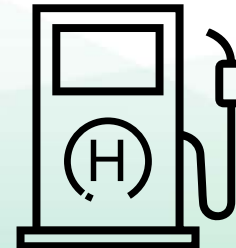
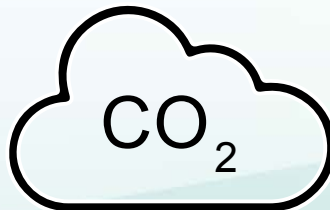
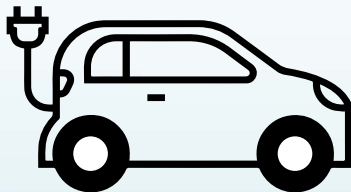
## Executive Order Goals

### ZEV by 2035:

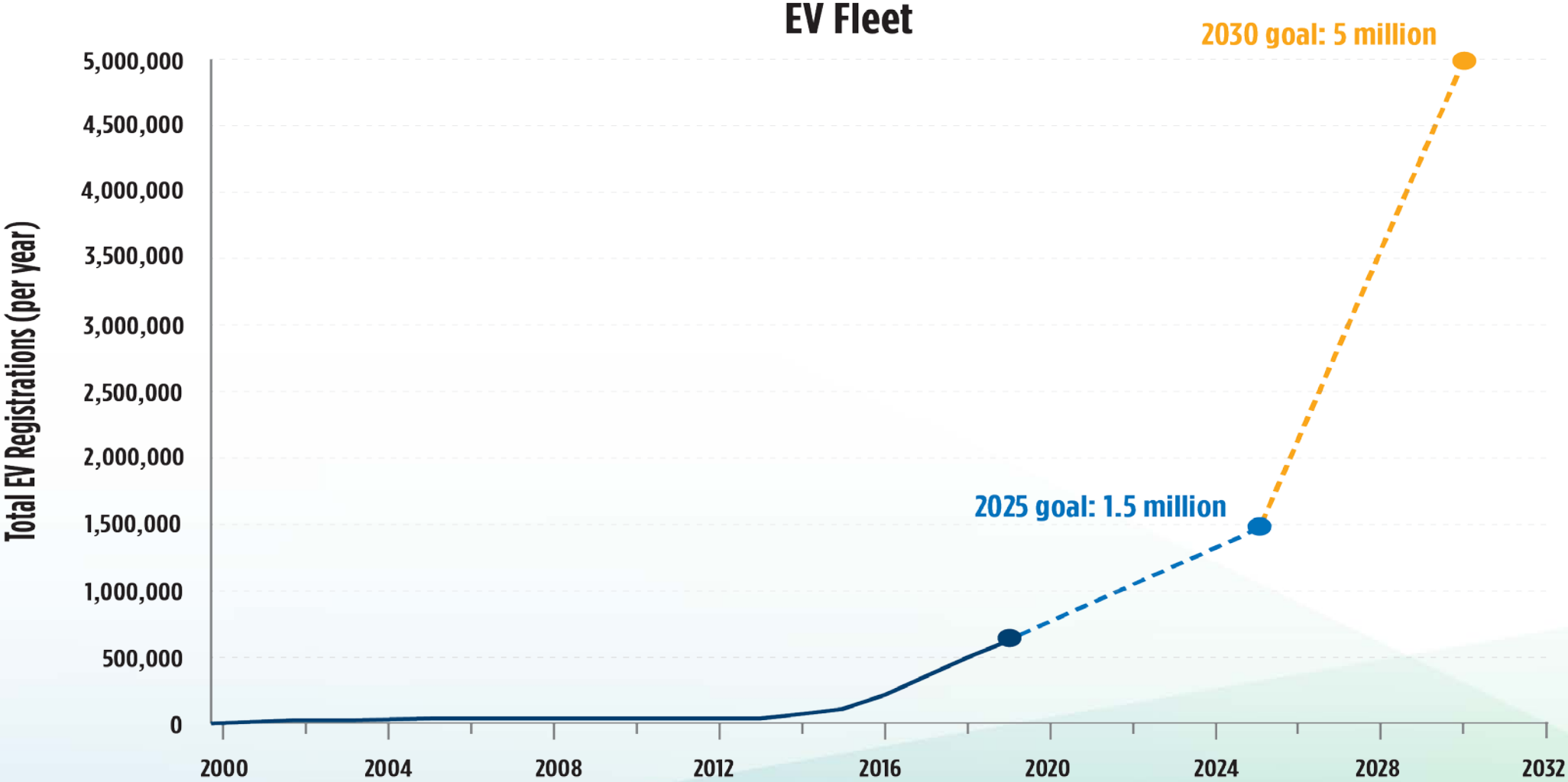
- ✓ All new passenger vehicles
- ✓ Existing drayage trucks
- ✓ Existing off-road vehicles and equipment, where feasible

### ZEV by 2045:

- ✓ All medium- and heavy-duty vehicles, where feasible

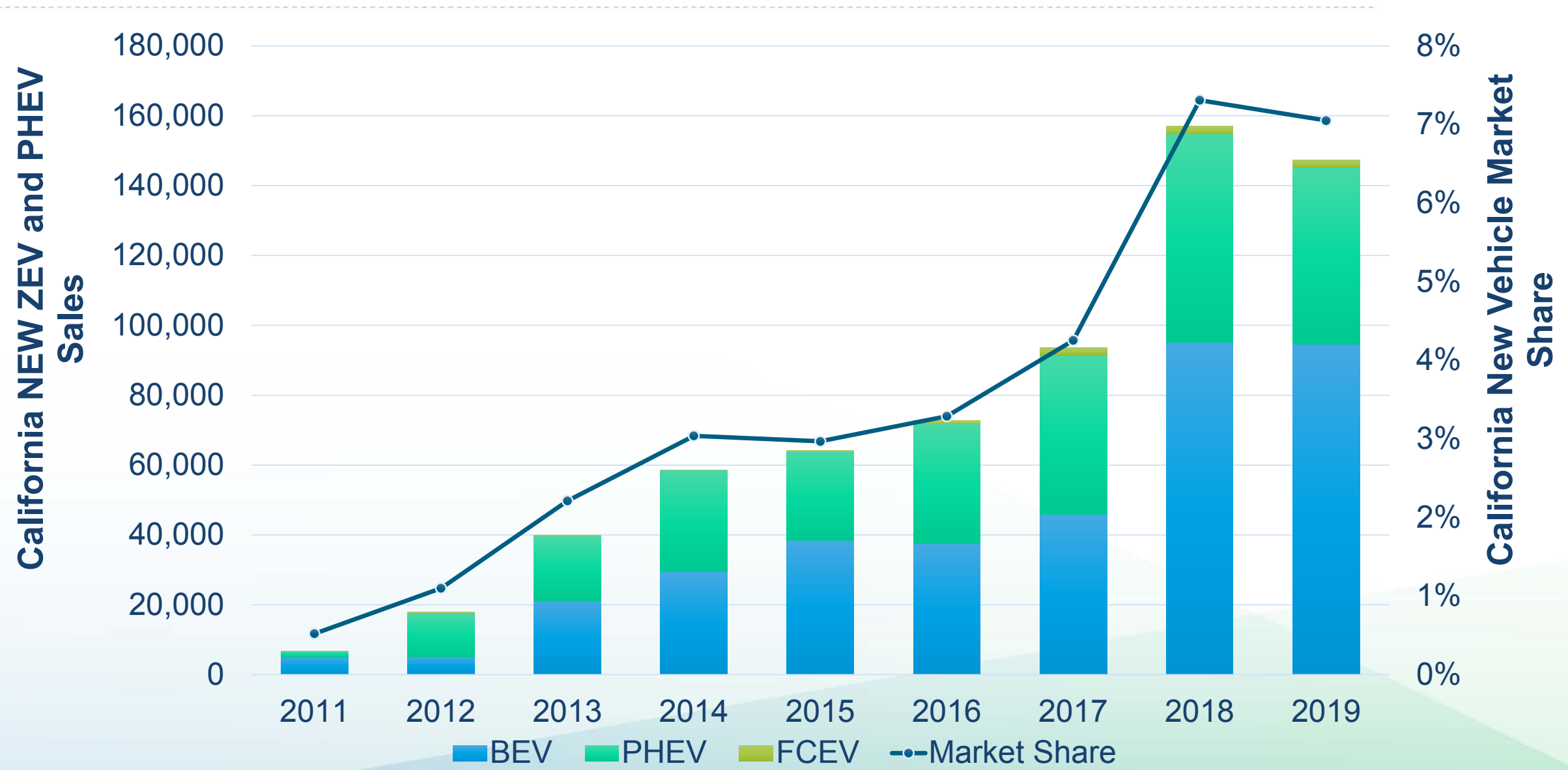


# CA is making good progress towards 5 million ZEVs by 2030



Source: California New Car Dealers Association

# ZEVs Gaining Momentum and Market Share



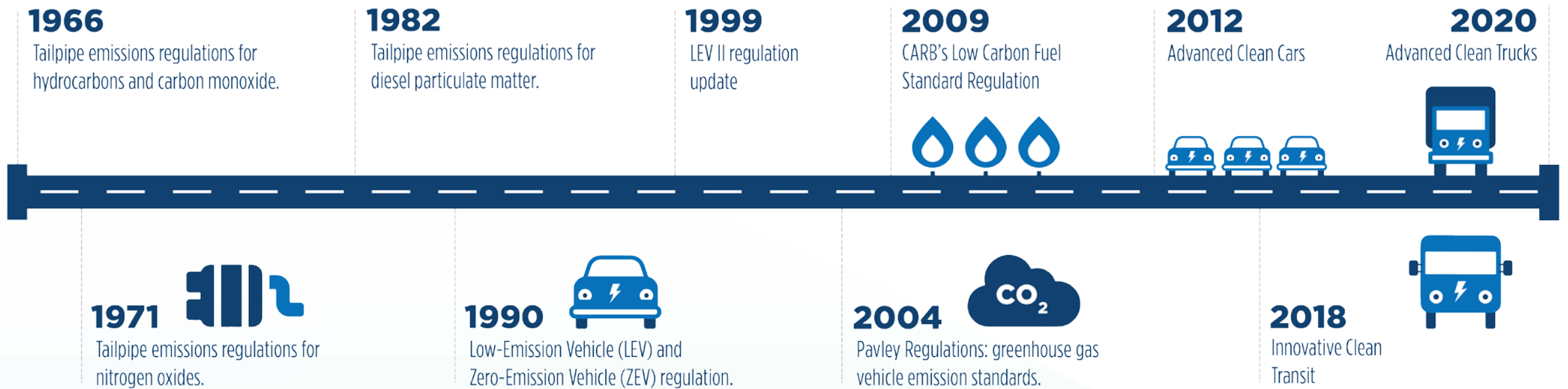


*The Future of Transportation*

# ***is Zero Emission***

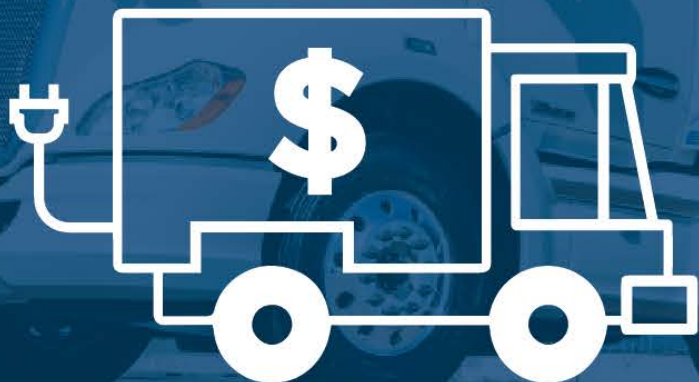
*and California is leading that future...*

# Regulation Leadership Timeline



# Advanced Clean Trucks

WORLD'S FIRST ZEV TRUCK REQUIREMENT



100%

ZERO-EMISSION TRUCK SALES  
BY 2045

# 14 ZEV MANUFACTURERS

in California designing and building cars, buses, motorcycles and trucks.

- TESLA
- BYD
- PROTERRA
- ZERO
- MOTIV
- LUCID
- KARMA AUTOMOTIVE
- EL DORADO NATIONAL CALIFORNIA
- FARADAY FUTURE
- PHOENIX MOTORCARS
- XOS
- GREENPOWER MOTOR CO.
- GILLIG
- ADOMANI



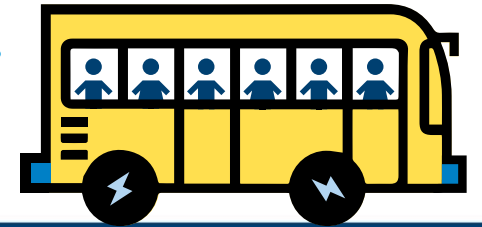
# Investing in School Buses with Vehicle-to-Grid Capability





# Thank You!

ZERO EMISSIONS



# WE ACT FOR ENVIRONMENTAL JUSTICE



Kerene N. Tayloe, Director of Federal Legislative Affairs

# WHO WE ARE

Since 1988, we have worked to build healthy communities by ensuring that people of color and/or low income participate meaningfully in the creation of sound and fair environmental health and protection policies and practices.



**NORTHERN  
MANHATTAN  
BASED**

**MOBILIZE  
PEOPLE OF  
COLOR  
AND/OR  
LOW INCOME**

**ENVIRONMENTAL  
AND  
CLIMATE  
JUSTICE**

**COMMUNITY  
-BASED  
PARTICIPATORY  
RESEARCH**

**PLANNING  
AND  
PRACTICES**

**FEDERAL,  
STATE, AND  
LOCAL  
POLICY**

# FOCUS AREAS



**CLEAN  
AIR**



**CLIMATE  
JUSTICE**



**HEALTHY  
HOMES**



**SUSTAINABLE  
LAND USE**



**AFFORDABLE,  
EQUITABLE TRANSIT**



**OPEN & GREEN  
SPACE**



**WASTE, PESTS  
& PESTICIDES REDUCTION**



**TOXIC FREE  
PRODUCTS**



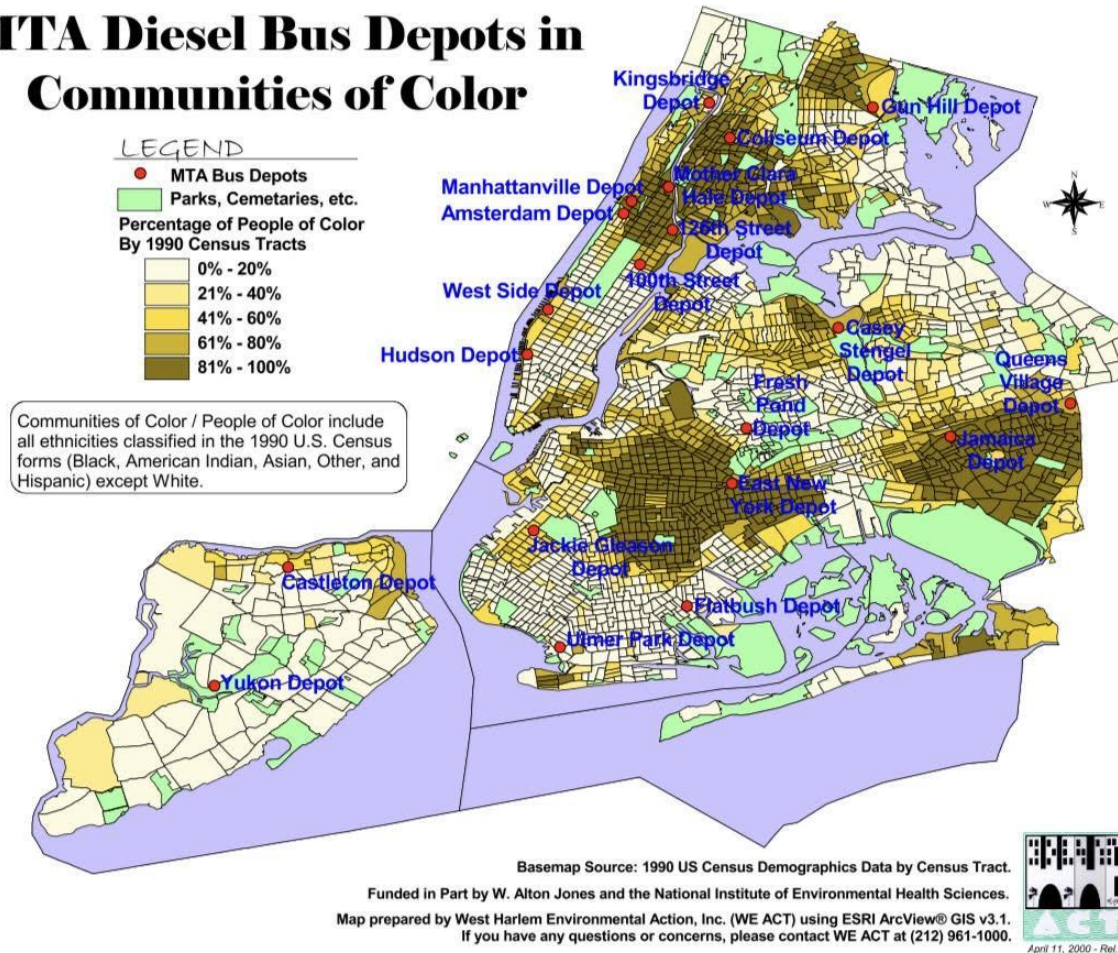
**FOOD  
JUSTICE**



**WATER  
QUALITY**

# Mass Transit Impacts on Public Health in Northern Manhattan

## MTA Diesel Bus Depots in Communities of Color









**6 out of 7 MTA  
Manhattan bus  
depots are located  
north of 100<sup>th</sup>  
Street**

# Community Health Impacts for Northern Manhattan Residents

	Central Harlem/Morningside Heights	Manhattan	NYC
Asthma ER visits for children 5 to 17 ( 2016)	565.4	261.4	215.3
Asthma hospitalization for children 5 to 17 (2016)	62.0	27.9	27.2
Asthma among public school children, age 5 to 14 years old ( per 1000 children ) 2013-2014	91.2	68.4	73.8

Source: New York City Environmental Health Data Portal

# Community Health Impacts for Northern Manhattan Residents

Health Burden: Fine Particles (PM2.5)				Central Harlem - Morningside Heights	
Estimated health events attributable to PM2.5 exposures, (average annual rate per 100,000 residents)	Central Harlem - Morningside Heights	Manhattan	NYC	Compared with other NYC neighborhoods*	Trend over time
Attributable asthma emergency department visits among children under 18 years of age, 2012-2014	253.1	116.7	97.8	Worse	 2005-2007-2012-2014
Attributable asthma emergency department visits among adults ages 18 and older, 2012-2014	116.4	40.8	42.2	Worse	 2005-2007-2012-2014
Health Burden: Ozone (O3)				Central Harlem - Morningside Heights	
Estimated health events attributable to ozone (O3) exposures, (average annual rate per 100,000 residents), April through September	Central Harlem - Morningside Heights	Manhattan	NYC	Compared with other NYC neighborhoods*	Trend over time
Attributable asthma emergency department visits among children under 18 years of age, 2012-2014	277.7	127.2	118.8	Worse	 2005-2007-2012-2014
Attributable asthma emergency department visits among adults ages 18 years and older, 2012-2014	136.2	46.5	54.1	Worse	 2005-2007-2012-2014
Attributable asthma hospitalizations among children under 18 years of age, 2012-2014	46.2	20.6	24.0	Worse	 2005-2007-2012-2014
Attributable asthma hospitalizations among adults ages 18 years and older, 2012-2014	11.7	4.8	6.6	Worse	 2005-2007-2012-2014

Source: New York City Environmental Health Data Portal

# Timeline of WE ACT's Mass Transit Work & Impact

## Dump Dirty Diesel Camapign

In May 1997, WE ACT launched a major public awareness campaign urging the MTA to commit to modifying bus depots to accommodate natural gas buses, and to invest in clean-fuel buses only.

## Clean Fuel/Clean Air Campaign



Gov Pataki and MTA commit to a fleet-wide strategy to drastically reduce emissions from its fleet of over 4,200 diesel buses, and increase commitment to cleaner fuels like compressed natural gas (CNG).

## Mother Clara Hale Bus Depot

WE ACT, the Mother Clara Hale Community Task Force (MCHCTF) and MTA joined together in a historic process in order to create a cooperative vision for the rebuilding of the Mother Clara Hale Bus Depot.

Mother Clara Hale Bus Depot bus depot officially re-opened on November 20th, 2014

2000

## Title VI Complaint

WE ACT and several Northern Manhattan community residents filed a Title VI Complaint with US DOT charging the MTA with violating the civil rights of Northern Manhattan residents. In response to that complaint, the DOT concluded that the MTA must give due consideration to EJ principles in its siting decisions.

2008

2014

1996



## **Outcomes of Coalition/Community led efforts to Clean up MTA Transit Fleet in 2000**

1. Eliminate dirty diesels, and to create the world's cleanest transit fleet;
2. Add 300 Compressed Natural Gas buses and 250 hybrid-electric buses to the fleet and build three new depots that are CNG-compatible;
3. Use low-sulfur diesel fuel and install advanced emission controls on over 3,000 remaining diesel buses by the end of 2003;
4. Accelerate the phase-out of the oldest, dirtiest diesels in the fleet
5. Establish a public process led by the NYS Department of Environmental Conservation to create a vehicle-based emissions standard requiring all new bus purchases to meet CNG emissions levels, regardless of the fuel used, and to establish New York State's first emissions testing facility for diesel buses and trucks.

Source: Natural Resources Defense Council

<https://www.nrdc.org/media/2000/000412>

# Mother Clara Hale Bus Depot Features Demanded by WE ACT and the Task Force to the community and MTA



- Best available technologies on all emission sources
- Prioritized assignment of hybrid electric buses to the MCH Depot
- Sufficient indoor parking to house the entire bus fleet
- Leadership in Energy and Environmental Design (LEED) designation
- Incorporated “green design” elements into the new structure, such as a green roof
- Landscaping and green spaces
- Independent third party monitor and monitoring reporting
- Prioritized local minority and women owned businesses for project’s needs
- Local hire and training program

Source; WE ACT For Environmental Justice

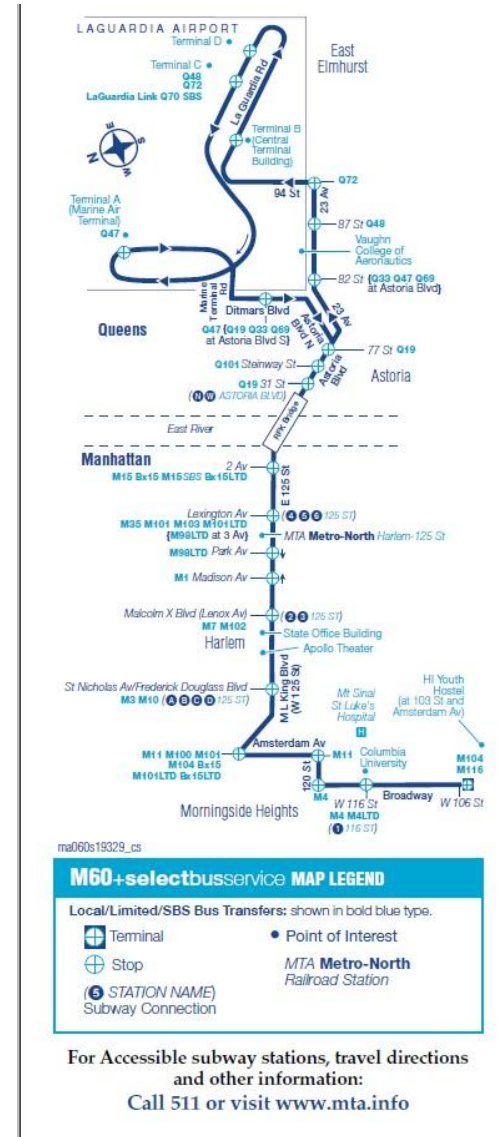
<https://www.weact.org/campaigns/mother-clara-hale-bus-depot/>

# WE ACT's Work for Cleaner School Buses in New York City



In 2004, WE ACT in coalition with a number of stakeholders including then State Senator David Paterson, former New York City School Chancellor Joel Klein, New York City Councilmember Bill Perkins worked together to advocate for upgrades to school buses and guidelines for NYC School buses, specifically to will help reduce pollution from idling school buses and improve air quality around New York City's neighborhoods.

# MTA Electric Pilot on M60 Route



# Let's Stay Connected



WE ACT For Environmental Justice  
Offices: Harlem, NY & Washington,  
DC

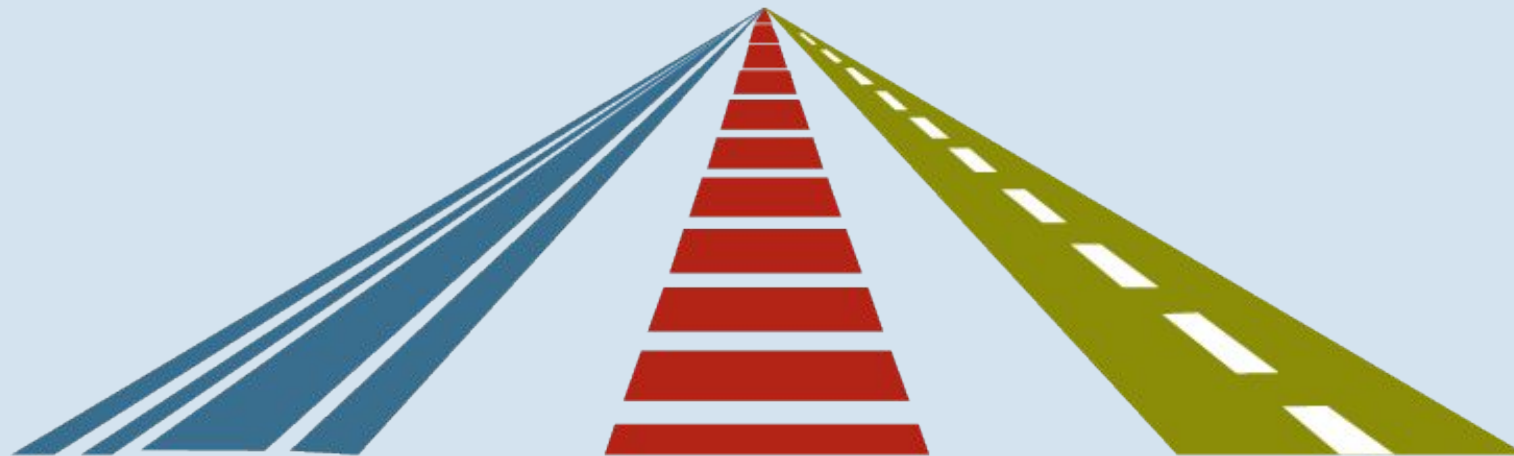
Kerene Tayloe [kerene@weact.org](mailto:kerene@weact.org)

Visit us online: [www.weact.org](http://www.weact.org)

# BACK ON TRACK

TRANSIT IN THE ERA OF CLIMATE CHANGE AND COVID-19

TRI-STATE TRANSPORTATION CAMPAIGN



*M o b i l i z i n g   t h e   R e g i o n*

# FEDERAL EMERGENCY RELIEF FUNDS

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## WHAT IS NEEDED?

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**\$32-36 Billion Nationwide**

## HOW MUCH DOES THE MTA NEED?

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**\$4 Billion to make it to the end of 2020**  
**\$8 Billion for 2021**

## WHAT HAPPENS WITHOUT IT?

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**Catastrophic cuts in service and workforce**  
**Virtual shut down of commuter rail lines**  
**Inability to meet debt payments**

## STATUS OF RELIEF TALKS

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**Currently suspended by the White House**

# RECOMMENDATIONS FOR TRANSIT AGENCIES

## IMMEDIATE















-  Require and provide masks to enter any public transit service.
-  Establish a Decision Support System and playbook of recommended operations options for various crowding and service scenarios.
-  Increase cleaning frequency in high-traffic areas, especially high-touch surfaces.
-  Install spacing indicators on the floors of platforms, trains, and buses for physical distancing.
-  Train and continually update all transit staff on disease transmission and protocols to reduce its spread.
-  Use all communication channels to urge compliance with agency and city COVID guidelines.
-  Improve communication with riders with accessible wayfinding, transit ambassadors, and clear service alternatives.
-  Supply PPE for all transit staff and contract staff; improve ventilation where possible.
-  Provide safe, clean restroom facilities for workers throughout the system.
-  Ensure contractors and vendors provide PPE, testing, and healthcare to their workers.
-  Open windows on buses and train cars where feasible to improve airflow.
-  Install hand sanitation stations at bus stops, subway entries, and platforms.
-  Create opportunities for two-way communications so riders can report non-compliant conditions.
-  Create virtual forums soliciting input from riders regarding their transportation needs.
-  Increase bus service on routes along train lines to reduce crowding. Increase bus frequencies on high-demand routes. Utilize TSP to improve bus speeds.
-  Coordinate with DOT to deploy emergency bus lanes in key corridors to increase service and reduce crowding.
-  Explore far-UVC sanitization for stations, trains, buses, and air ventilation systems.
-  Utilize electrostatic sprayers for rapid surface cleaning.
-  Aggregate and make public station and train crowding data in real time using proprietary and third-party data.

## MEDIUM

-  Develop a smart messaging system for real-time crowding and service alternatives alerts.
-  Work with Departments of Health to monitor surface and air samples for viral load in stations, trains, and buses.
-  Implement turnstyle passenger count tracking to monitor physical distancing in stations.
-  Reduce touchpoints at vending and other machines by installing virtual, voice, and camera-activated technologies; disinfect remaining touchpoints between customers.
-  Log and display most recent train, bus, and platform cleaning time and date.
-  Test the use of increasing heat to 133 degrees in train cars and buses regularly to sanitize and reduce the viral load.
-  Partner with micromobility providers to offer alternative transportation options.
-  Collaborate with partner systems to share best practices.
-  Explore installation of thermal and video camera technology for automated temperature checks and mask compliance.
-  Review and modify off-peak and peak fares and schedules to create incentives for off-peak travel.

## FUTURE-PROOFING

-  Speed up deployment of app-based fare collection to reduce touchpoints.
-  Deploy UWB with CBTC to permit high service frequency and better coordination between service and track work.
-  Fast-track CBTC construction to reduce headways and passenger volume.
-  Install antimicrobial surfaces on high-touch surfaces in stations and rolling stock.
-  Install cashless payments at all bus doors and impermeable barriers for drivers.
-  Deploy pass products, fare capping, and other incentives to encourage rider use of contactless fare media.
-  Leverage app-based turnstyle technology for passenger counts and emergency lockouts when platforms are above capacity.
-  Improve air quality by upgrading ventilation systems in vehicles and indoor spaces.
-  Include anti-microbial ventilation systems in all future procurements for rolling stock and station improvements.
-  Deploy Automated Train Control to increase worker safety.

	RIDERS	ELECTED OFFICIALS	BUSINESS
IMMEDIATE	<ul style="list-style-type: none"> <li> Wear a mask at all times while on transit, talk quietly to avoid spread by vocalization, and keep six feet between you and other riders when possible.</li> <li> Sanitize your hands before and after using public transit. When you arrive at your destination, wash your hands with soap and water.</li> <li> Do not ride transit if you have symptoms of or have been exposed to COVID-19.</li> <li> Plan more time for your commute to reduce the need to enter crowded trains or buses, or utilize an alternate form of transportation.</li> </ul>	<ul style="list-style-type: none"> <li> Allocate emergency funding to transportation authorities to allow for continued public transit operations and COVID-19 response.</li> <li> Communicate with residents and riders new transit rules via TV, radio, and social media.</li> <li> Ensure culturally competent communications and include translations in locally spoken languages.</li> </ul>	<ul style="list-style-type: none"> <li> Supply PPE to any employees that must return to the workplace or work in a public-facing capacity. Encourage hand-washing immediately upon arrival.</li> <li> Screen employees for symptoms and exposure. Have a plan for when an employee tests positive, including disallowing use of public transit for exposed employees.</li> <li> Provide information to employees on how to safely commute, travel to work, and maintain a safe working environment.</li> </ul>
MEDIUM		<ul style="list-style-type: none"> <li> Limit single occupancy vehicle traffic within city limits to allow for efficient bus and bicycle mobility.</li> <li> Implement incentives for carpooling and raise tolls on solo drivers to reduce congestion.</li> </ul>	<ul style="list-style-type: none"> <li> Implement paid sick leave and time off for all employees to prevent commuting while sick.</li> <li> Issue an on-site employee reduction plan to allow for flexible schedules, telework, and staggered work hours.</li> </ul>
FUTURE-PROOFING			

# CLIMATE LEADERSHIP AND COMMUNITY PROTECTION ACT (CLCPA)

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- Based on the latest climate science, the Climate Act's targets are among the most rigorous of any major economy in the world.
- Every New Yorker will play a key role in protecting our communities and ensuring a sustainable future.
- Together, we will transform New York's economy, create new jobs, and stimulate industry and innovation, while building more resilient communities to benefit, and protect, all New Yorkers.

# ELECTRIFY NY

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- Broad-based coalition of environmental, labor, environmental justice, and transit organizations
- Focus on transit, medium and heavy-duty vehicles, and major fleets like FHV's
- The MTA has committed to fully transition by 2040
- The governor has also committed five upstate agencies to electrification

# TRANSPORTATION AND CLIMATE INITIATIVE (TCI)

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- TCI is a multi-state regional agreement to invest revenues from oil and gas companies into transit and clean transportation
- Twelve jurisdictions are a part of TCI, all in the Northeast
- Companies would pay fees for pollution caused by motor gasoline; revenues could be used for electrifying transit, building EV charging stations, EV rebates, and other programs
- A final agreement from the participating states is pending



Department  
of Public Service

# Regulatory Landscape for Electric Vehicle Charging in New York

September 25, 2020

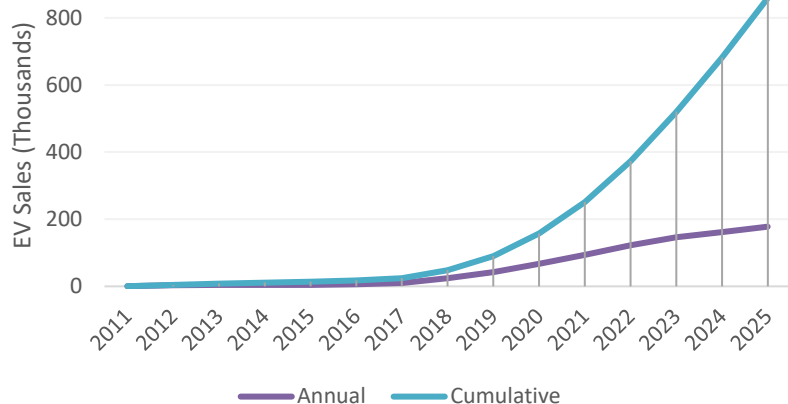
# Regulatory History of EV Charging in NY

- April 2018: [Proceeding Regarding EVSE&I](#) directed Staff to identify and address immediate and long-term actions to support ZEV growth, specifically directed Staff to host a technical conference and expeditiously issue a whitepaper – 18-E-0138
- Nov. 2018: [Residential EV Tariff Order](#) EV-specific TOU rates filed with traditional residential customer charge
- Feb 2019: [DCFC Program Order](#) established six-year per-plug incentive program
- Jan 2020: [EV Make-Ready White Paper](#) proposal provides up 90% support to cover the costs of making a sites ready for public EV charging

EV Make-Ready Program Adopted by Commission July 16, 2020

# NYS Clean Energy Goals Impacting Transportation

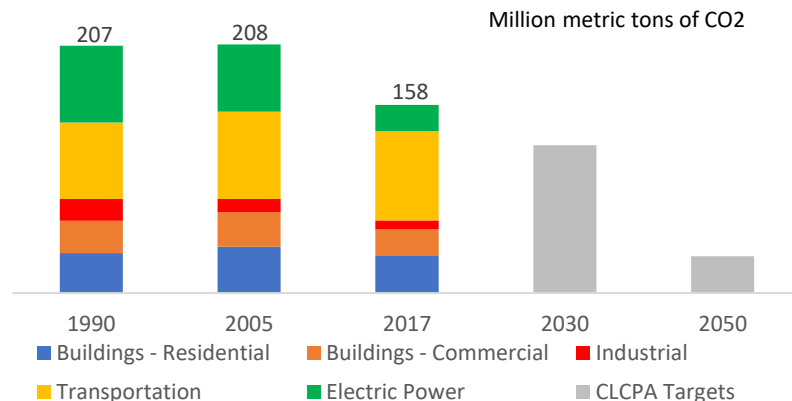
## Zero Emissions Vehicles MOU



- 850,000 EVs on NY roads by 2025 (~8%)
- ~50,000 EVs today (<1%)

## CLCPA GHG Targets

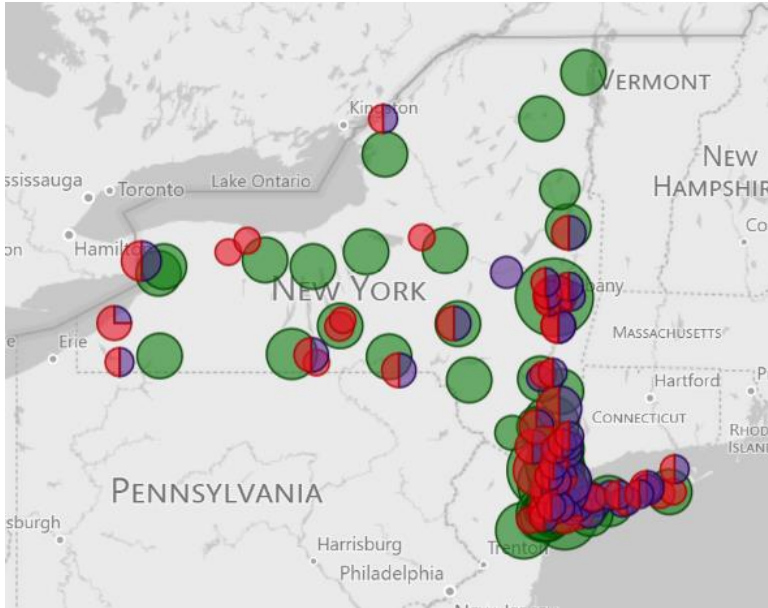
*Note: CO2e calculations do not fully reflect methodology required by CLCPA*



- 40% GHG ↓ by 2030... 85% by 2050
- 35-40% programming to benefit DAC

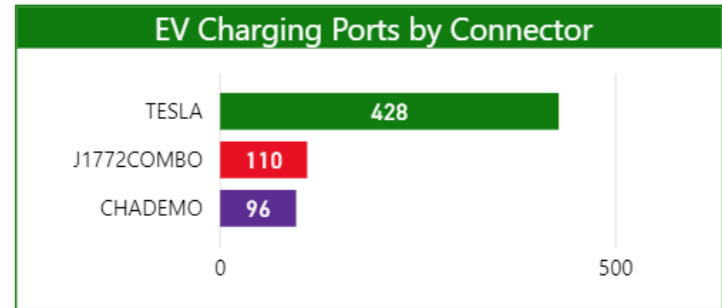
1.8 - 2.2 million ZEVs needed to meet 2030 GHG↓ goal

# New York DCFC Charging Landscape



Source: Atlas EV Hub, Size of Circle Based on # of Ports

- Tesla makes up the majority of publicly available DCFC stations in NY
- Range anxiety is #1 concern cited by potential EV buyers in the US



Significant increase in stations needed to support  
EV growth targets

# EV Make-Ready Program Adopted by Commission July 16, 2020

- \$701 million budget; \$206 million dedicated to disadvantaged communities
- Budget sized to incentivize enough EV charging stations support 850,000 ZEVs by 2025
  - 53,773 level 2 and 1,500 direct current fast chargers
- Program is active now; Midpoint review begins Oct 2022; program ends Dec 31, 2025
- Fleet Assessment Service created to aide fleet owners with site feasibility and rate analysis
- \$85 million dedicated to prize competitions in disadvantaged communities

Primary focus of the program is light duty vehicles



Department  
of Public Service

# Questions