California: Leading the Future of Transportation
Patricia Monahan, Commissioner, California Energy Commission
The Problem

Transportation is a major source of harmful air pollution, and the greatest and increasing source of greenhouse gas emissions (GHGs) in California.
Governor Newsom commits CA to 100% ZEV future
Executive Order N-79-20

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.
ZEVs Gaining Momentum and Market Share

California NEW ZEV and PHEV Sales

- BEV
- PHEV
- FCEV

California New Vehicle Market Share

- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017
- 2018
- 2019

Market Share:
- 0%
- 1%
- 2%
- 3%
- 4%
- 5%
- 6%
- 7%
- 8%
The Future of Transportation

is Zero Emission

and California is leading that future...
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
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.
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

6 out of 7 MTA Manhattan bus depots are located north of 100th Street

Source: WE ACT for Environmental Justice 1990
## Community Health Impacts for Northern Manhattan Residents

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

Source: New York City Environmental Health Data Portal
# Community Health Impacts for Northern Manhattan Residents

## Health Burden: Fine Particles (PM2.5)

<table>
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<tr>
<th></th>
<th>Central Harlem - Morningside Heights</th>
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<th>NYC</th>
<th>Compared with other NYC neighborhoods</th>
<th>Trend over time</th>
</tr>
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<tbody>
<tr>
<td>Attributable asthma emergency department visits among children under 18 years of age, 2012-2014</td>
<td>253.1</td>
<td>116.7</td>
<td>97.8</td>
<td>Worse</td>
<td>2005-2007-2012-2014</td>
</tr>
<tr>
<td>Attributable asthma emergency department visits among adults ages 18 and older, 2012-2014</td>
<td>116.4</td>
<td>40.8</td>
<td>42.2</td>
<td>Worse</td>
<td>2005-2007-2012-2014</td>
</tr>
</tbody>
</table>

## Health Burden: Ozone (O3)

<table>
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<tr>
<td>Attributable asthma emergency department visits among children under 18 years of age, 2012-2014</td>
<td>277.7</td>
<td>127.2</td>
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<td>Attributable asthma emergency department visits among adults ages 18 years and older, 2012-2014</td>
<td>136.2</td>
<td>46.5</td>
<td>54.1</td>
<td>Worse</td>
<td>2005-2007-2012-2014</td>
</tr>
<tr>
<td>Attributable asthma hospitalizations among children under 18 years of age, 2012-2014</td>
<td>46.2</td>
<td>20.6</td>
<td>24.0</td>
<td>Worse</td>
<td>2005-2007-2012-2014</td>
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<tr>
<td>Attributable asthma hospitalizations among adults ages 18 years and older, 2012-2014</td>
<td>11.7</td>
<td>4.8</td>
<td>6.6</td>
<td>Worse</td>
<td>2005-2007-2012-2014</td>
</tr>
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</table>

Source: New York City Environmental Health Data Portal
Timeline of WE ACT's Mass Transit Work & Impact

**Dump Dirty Diesel Campaign**

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).

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.

1996

**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 reopened on November 20th, 2014.

2008

2014
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.

New York Attorney Generals Office
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

Visit us online: www.weact.org
BACK ON TRACK
TRANSLIT IN THE ERA OF CLIMATE CHANGE AND COVID-19

TRI-STATE TRANSPORTATION CAMPAIGN

Mobilizing the Region
# Federal Emergency Relief Funds

## What is Needed?

$32-36 Billion Nationwide

## What Happens Without It?

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

## How Much Does the MTA Need?

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

## Status of Relief Talks

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 sanitization 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 turnstile 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 turnstile technology for passenger counts and emergency lockdowns 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.
<table>
<thead>
<tr>
<th>RIDERS</th>
<th>ELECTED OFFICIALS</th>
<th>BUSINESS</th>
</tr>
</thead>
</table>
| - 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.  
- Sanitize your hands before and after using public transit. When you arrive at your destination, wash your hands with soap and water.  
- Do not ride transit if you have symptoms of or have been exposed to COVID-19.  
- Plan more time for your commute to reduce the need to enter crowded trains or buses, or utilize an alternate form of transportation. | - Allocate emergency funding to transportation authorities to allow for continued public transit operations and COVID-19 response.  
- Communicate with residents and riders new transit rules via TV, radio, and social media.  
- Ensure culturally competent communications and include translations in locally spoken languages. | - Supply PPE to any employees that must return to the workplace or work in a public-facing capacity. Encourage hand-washing immediately upon arrival.  
- Screen employees for symptoms and exposure. Have a plan for when an employee tests positive, including disallowing use of public transit for exposed employees.  
- Provide information to employees on how to safely commute, travel to work, and maintain a safe working environment. |
| IMMEDIATE | MEDIUM | FUTURE-PROOFING |

- Limit single occupancy vehicle traffic within city limits to allow for efficient bus and bicycle mobility.  
- Implement incentives for carpooling and raise tolls on solo drivers to reduce congestion. | | - Implement paid sick leave and time off for all employees to prevent commuting while sick.  
- Issue an on-site employee reduction plan to allow for flexible schedules, telework, and staggered work hours. |
CLIMATE LEADERSHIP AND COMMUNITY PROTECTION ACT (CLCPA)

• 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

• Broad-based coalition of environmental, labor, environmental justice, and transit organizations
• Focus on transit, medium and heavy-duty vehicles, and major fleets like FHVs
• The MTA has committed to fully transition by 2040
• The governor has also committed five upstate agencies to electrification
TRANSPORTATION AND CLIMATE INITIATIVE (TCI)

- 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
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

- 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

1990 2005 2017

Million metric tons of CO2

Buildings - Residential
Buildings - Commercial
Industrial
Transportation
Electric Power
CLCPA Targets

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

Source: NYSERDA, DPS, EIA
New York DCFC Charging Landscape

- 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**

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