

Transportation Electrification in the NYC Metro Area

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NYS's climate goals set ambitious electrification targets

Key Climate Leadership & Community Protection Act (CLCPA) Targets

- Net Zero GHG emissions by 2050
- 40% reduction in GHG emissions by 2030
- 100% zero-carbon electricity by 2040
- 70% renewable electricity by 2030
- 35-40% of benefits to Disadvantaged Communities

Transportation Sector Implications

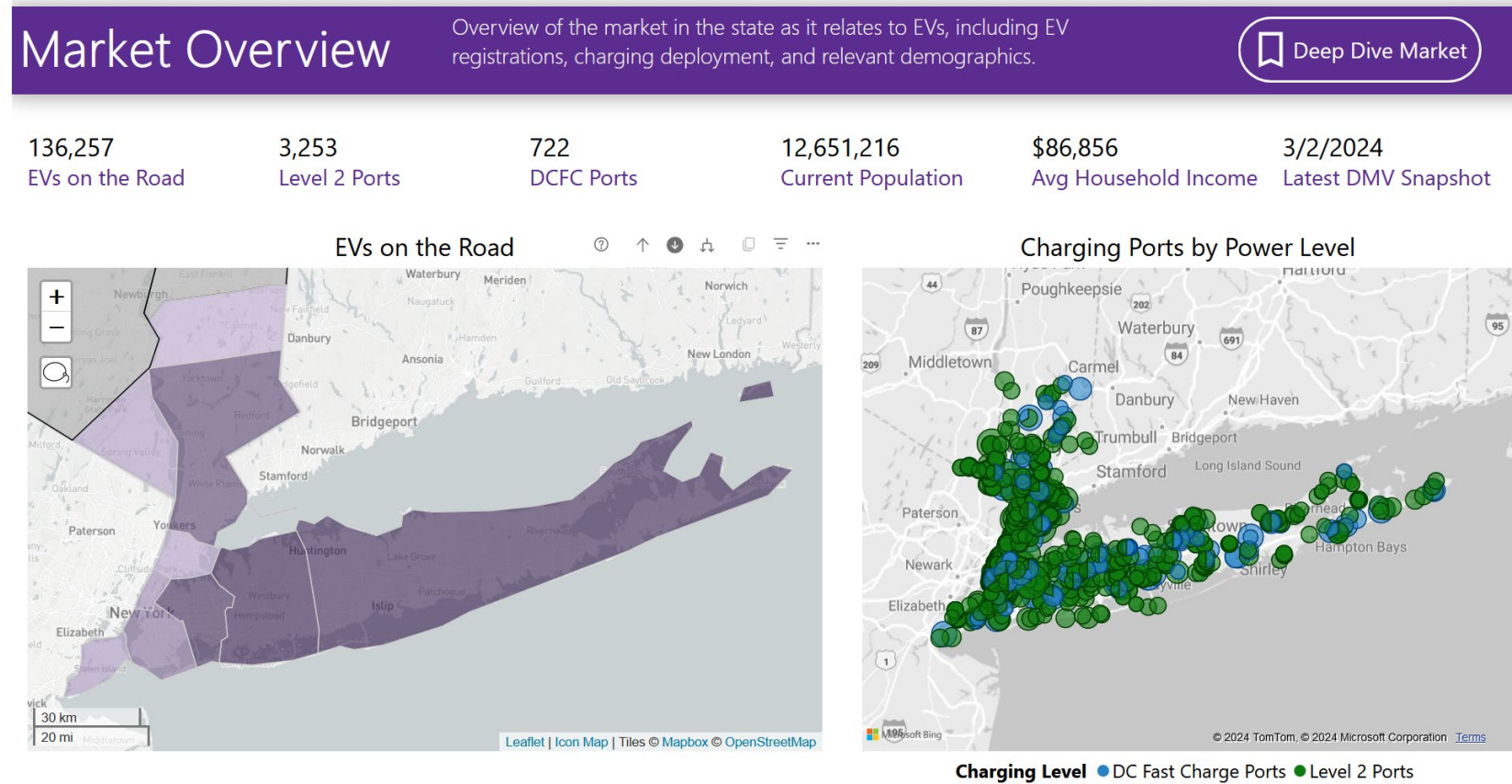
- Transportation sector produced 28% of NYS GHG emissions in 2019
- EV deployments are a primary strategy needed to achieve 2030 CLCPA GHG reduction target
 - 2-3 million light duty EVs (>90% new sales)
 - >80,000 MDHD EVs (40% new sales)

EVs are Proliferating Rapidly

- Sales in 2023 were up 80% over 2022's record-setting pace

- More than 90 EV models now available in NYS; more models of all shapes and sizes coming soon

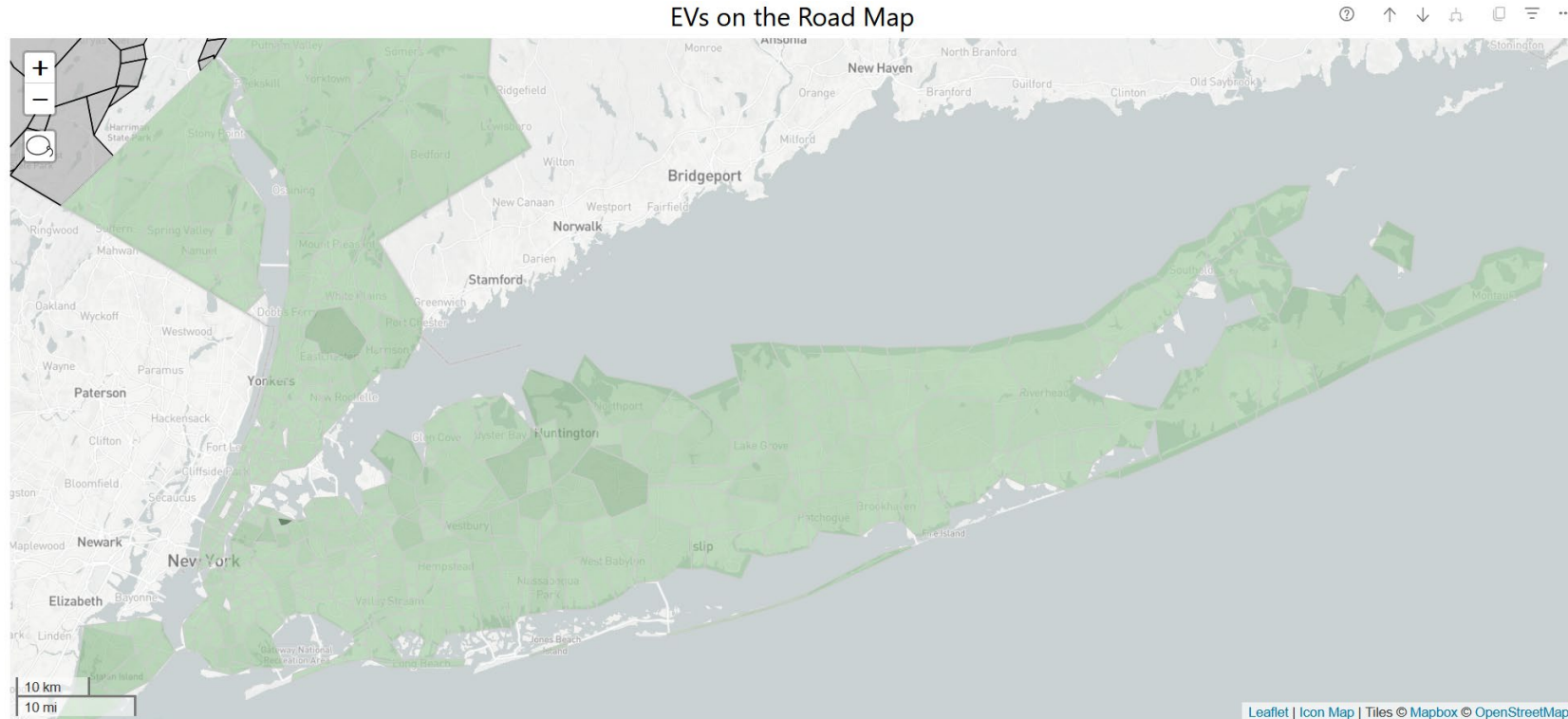
- MHD ZEV sales are still nascent but approximately 200 models in a variety of vocations & sizes available in 2023¹



1 – Calstart, Global Drive to Zero – ZETI Data Explorer, US and Canada

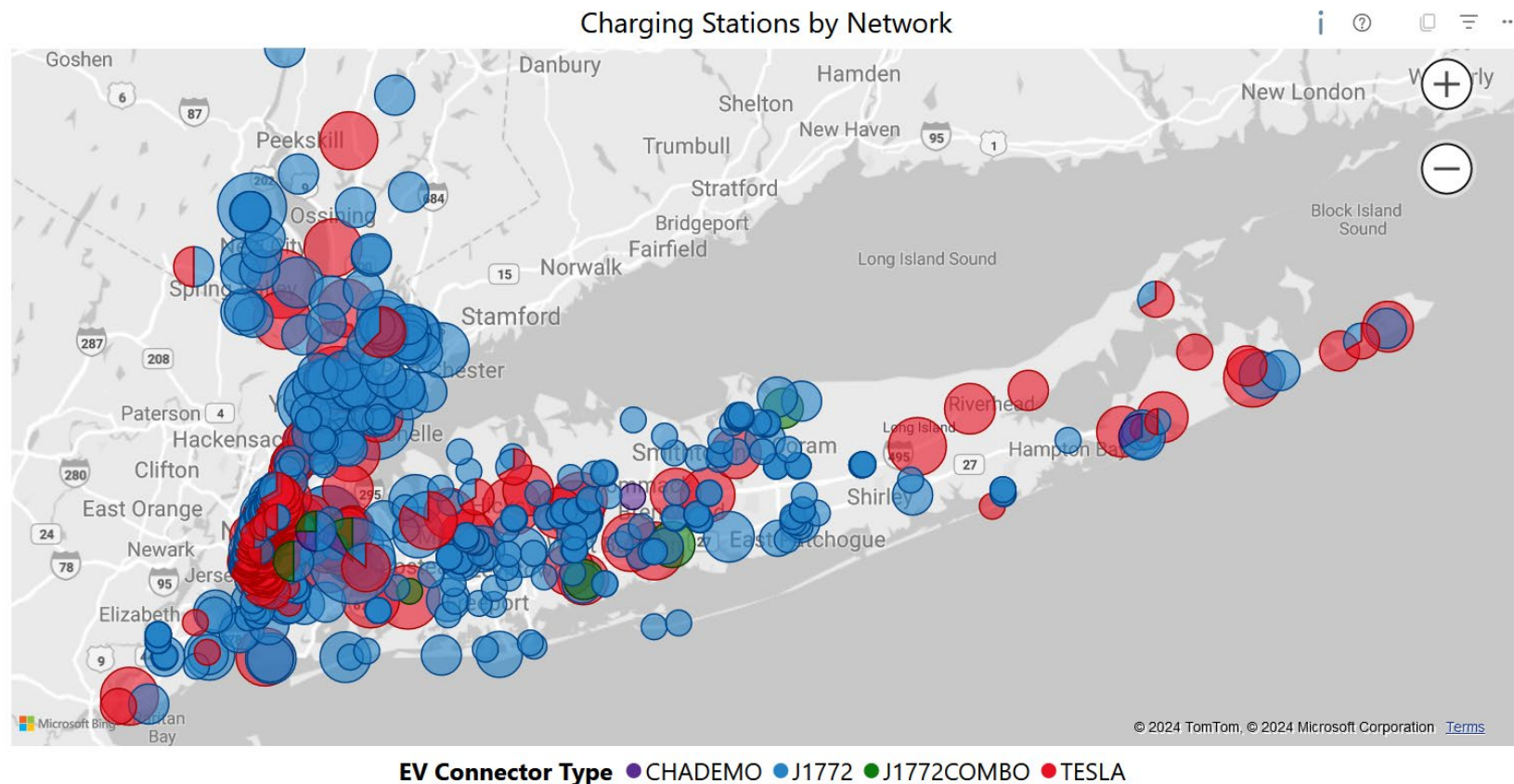
EVs in the NYC Metro Area

- > ~136,000 EVs on the road in the NYC metro area (in NYS)
- > About 65% of all EVs in NYS
- > 43% (~60,000) are Teslas
- > EVs were more than 12% of new car purchases in last 6 months in NYC area



Public Charging in the NYC Metro Area

- > ~4,000 charging ports in the NYC metro area (in NYS)
- > Only about 37% of all public charging in NYS
- > ~80% are Level 2
- > Most DC fast chargers are Tesla connectors



NYS is already advancing many initiatives boosting EV sales

- **Advanced Clean Cars II (ACCCII) and Advanced Clean Trucks (ACT) regulations**
 - DEC adopted ACCII regulations in Dec 2022, requires 100% light-duty ZEV sales by 2035
 - DEC adopted ACT regulations in Dec 2021, requires an increasing percentage of MHDV sales to be ZEVs through 2035, up to 40-75% (depending on vehicle type)
- **Drive Clean Rebate**
 - Provides up to \$2,000 off the purchase price of light duty ZEVs
 - More than 140,000 rebates issued since the program started in 2017
- **NY Truck Voucher Incentive Program (NYTVIP)**
 - Provides point-of-sale incentives of up to 100% of the difference in cost between a diesel truck or bus and an equivalent electric one
 - \$66 million available through VW Settlement funds and federal CMAQ funds

NYS EV charging programs cover a range of EV infrastructure needs

➤ **Public Service Commission Make-Ready Program & EV Tariffs**

- Make-Ready Program: \$1.2B in ratepayer-funded incentives across NY's six investor-owned utilities to install 1,500 DC fast charging and over 50,000 level 2 ports by 2025
- EV-oriented commercial tariffs that provide demand charge relief for stations with limited utilization

➤ **New York Power Authority EVOlve NY**

- \$250M investment in DC fast chargers, fleet charging statewide, EV outreach; >100 ports in service

➤ **National EV Infrastructure Program**

- \$175M in federal funds for DC fast chargers along major highways, additional sites will become eligible after highways are covered

➤ **NYSERDA Charge Ready & DC Fast Charger Program (LDVs)**

- \$12M in rebates for Level 2 charging stations at workplace, multi-family building locations
- \$16M in grants for DCFC in upstate regions, funded by VW Settlement, supporting ~125 ports

➤ **DEC Municipal ZEV grants**

- Up to 80% of costs for EV charging, H2 fueling stations installed by municipal governments

➤ **State and federal tax credits**

- 50%, up to \$5,000 state tax credit
- 30% up to \$100,000 federal tax credit



Electric School Buses

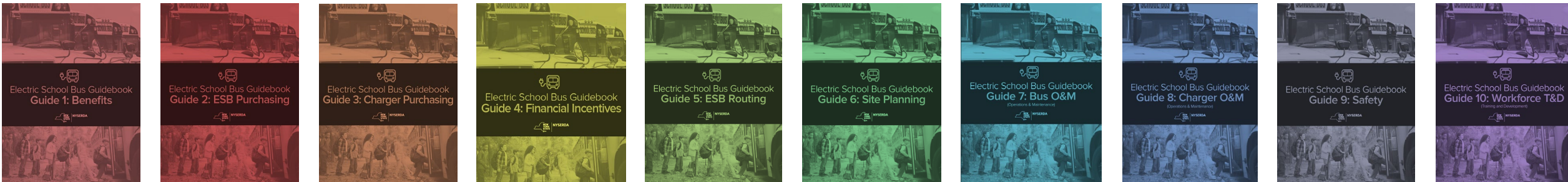
ESB Policy and Progress

- > Full transition of the school bus fleet from combustion engine vehicles to zero-emission vehicles
 - By 2027: all school bus purchases must be zero-emission vehicles
 - By 2035: all school buses in operation must be zero-emission
- > Electric School Buses
 - ~60 buses on the road
 - EPA Round 1 & 2: 330 buses (\$127M)
 - NYSBIP: 34 applications for 145 buses so far
 - **Nearly 500 buses** will be on NYS roads soon
- > District Support
 - 200+ studies underway or completed
 - Another 100-200 are coordinating with BOCES districts to apply
 - Including all outreach, **approx. half of all districts** are in the pre-planning and planning stages



NYSERDA Resources for Schools

- > **New York Electric School Bus Roadmap:** policy document developed with extensive stakeholder input describing the state of the market for ESBs, what NYS needs to do to meet the requirements, and transition costs
- > **Electric School Bus Guidebook:** provides living resources to help fleet owners and key partners get familiar with key terms, concepts, and near-term actions to take



- > **Fleet Electrification Planning:** provides a district-specific pathway to full electrification, NYSERDA provides 75% or 100% cost-share for the study and provides project management and technical review of the plan
- > **New York School Bus Incentive Program:** covers up to 100% of the cost difference between diesel/gas and electric buses and charging funds

Opportunities and Challenges for ESBs

- > With the current planning support and incentives, ESBs are attainable for schools across NYS
- > Challenges remain for bringing enough electrical capacity to school bus depots – both cost and timeline pose problems
- > More workforce training is needed, but mechanics and drivers have been enthusiastic about ESBs once they have tried them
- > ESBs offer additional opportunities for operations and maintenance savings and new revenue streams like vehicle-to-grid