ElectrifyNY Municipal Toolkit

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Introduction

The internal combustion engine has seen its day. Electric vehicles are not just here to stay, they are the future. The transportation sector is the largest source of climate pollution in New York, representing 36 percent of the state's greenhouse gas emissions. Emissions from tailpipes are also responsible for smog, soot, and other toxins that contribute to adverse health outcomes, particularly in children and those suffering from chronic illness.

The good news is, change is coming. Nearly all of the major global automakers have made commitments to transform their platforms to focus on new lines of electric vehicles over the course of the next few years. Transitioning from vehicles powered by internal combustion engines to a transportation system powered by electricity will take careful planning and preparation.

There are over 11 million cars and light-duty trucks registered in New York State, less than 50,000 of those are electric vehicles. New York State, which follows California's Zero Emission Vehicle (ZEV) mandate, has committed to a goal of 850,000 zero-emission vehicles by 2025. New York has a long road ahead.

Local governments are vital in achieving this goal and well-positioned to lead by example to help propel New York's transition to a clean transportation future. This policy handbook offers a menu of actions municipalities can take to help move New York closer to achieving its electric vehicle goals and future.

Aside from the health and environmental benefits that come with reductions in air pollution and meeting state climate change mandates, transitioning to electric vehicles will bring significant economic benefits to households, businesses, and governments.

Electric vehicles are simply more efficient than their gas-guzzling counterparts, costing 50 to 70 percent less to operate. Electric vehicles have fewer moving parts than those powered by internal combustion engines, meaning a reduction in maintenance costs, which can be significant when it comes to managing municipal fleets. Fuel savings over the life of an electric vehicle can add up to thousands of dollars.

As you will see throughout this handbook, local governments across the country are leading the way in facilitating the transition to a clean, electric transportation future. The aim of this toolkit is to help local leaders understand and uncover the opportunities available to get municipalities on the path to electrify municipal fleets, public transit, and to help drive personal public investments in EVs through providing the necessary EV infrastructure. We hope this handbook serves as a helpful guide as your community moves forward.

1. Statewide Policy Context

In 2019, the state passed the Climate Leadership and Community Protection Act (CLCPA), setting greenhouse gas reduction goals of 40% of 1990 levels by 2030 and 85% of 1990 levels by 2050. The CLCPA is an important statewide backdrop to the electrification of transportation throughout the state.

New York State has set bold goals when it comes to EVs and it is important to understand the statewide context, so that municipal goals align with statewide commitments. As of 2020, New York State has committed to the following actions:

- 850,000 EVs on the road by 2025;
- 10,000 charging stations installed by 2021;

- An MOU adopting an action plan to transition to medium and heavy duty electric vehicle purchases by 2050; and
- 100% electrification of the MTA bus fleet by 2040.

In order to achieve these goals, the Department of Environmental Conservation (DEC), the New York State Energy, Research and Development Authority (NYSERDA), and the New York Power Authority (NYPA), have a number of programs to help municipalities and customers access electric vehicles and charging infrastructure, which are further discussed in in Section 7.

2. Lead by Example: Establish Policy Commitments and Goals

While statewide commitments are an important step in moving the state off of fossil fuels, translating these goals into action occurs at the local level. Local leaders can drive progress by promoting the widespread adoption of EVs. Not only are they a viable alternative to gas- and diesel-fueled vehicles, but they are also a wise investment that will serve to benefit the economic bottom line of local governments, businesses, and households. Leadership starts by committing local government to an EV transition and pushing the state and federal governments for the resources to succeed.

2.1. Commitments/Goals

The first step for local governments committing to EVs is to make a public commitment to fleet electrification. This can happen through a resolution, statement of support, or the adoption of a law directing a transition to an all-electric municipal fleet by a certain date. Codifying a commitment in a local law or ordinance is optimal, but

gaining local political support may take different forms at the start. Local laws can mandate the development of a comprehensive transition plan that includes an assessment of the existing fleet, EV procurement schedules by vehicle class, special considerations for emergency and heavy duty vehicles, and infrastructure and maintenance investments.

Examples:

1. Mayor of the City of Seattle Executive Order committing to a phase-out of fossil fuel municipal vehicles by 2030. *A sample ordinance modeled on the Seattle Executive Order is included in the appendix*.

2.2. Advocate for electric vehicle policies and incentives

Municipal leaders can play an important role in advocating for electric vehicle policies and incentives at the state and federal level that assist local government efforts. Municipalities can lobby for enhanced rebates and tax credits for electric vehicles and charging infrastructure, funding for municipal and public transit fleet conversions, and policies promoting vehicle to grid utility tariffs and electric vehicle-ready building codes. State and federal initiatives can help to drive action at the local level.

3. Electrify Municipal Fleets

Transitioning to all-electric vehicle fleets for light and heavy duty vehicles requires thoughtful long-term planning and the ability to tap into resources to facilitate the transition. This section highlights some of the tactics and tools to help ensure successful conversions.

3.1. Comprehensive fleet assessment

Developing a baseline of the existing municipal fleet is critical. Local governments should conduct a comprehensive fleet assessment of all light, medium and heavy duty vehicles to inform the development and implementation of a strategic multi-year fleet replacement plan. The plan can be used to establish annual electric vehicle procurement benchmarks allowing the municipality to develop sustainable funding plans for vehicle purchases, charging infrastructure, and fleet maintenance.

Examples:

1. The Drive Clean Seattle Implementation Strategy
2. The City of Minneapolis Electric Vehicle Study

3.2. Aggregate purchasing and shared services

One strategy that can help with the transition is partnering with other government entities to examine the feasibility of obtaining more favorable terms on electric vehicle purchases and leases. Municipalities can also look for cost-saving opportunities through centralized fleet maintenance operations with shared service agreements.

3.2.1. New York State Vehicle Marketplace (OGS)

The New York State Vehicle Marketplace offers state and local government entities the opportunity to purchase or lease electric vehicles for dealers under contract with the Office of General Services. Partnering with the state has the potential to offer a wider range of electric vehicle options and lower prices. The Office of General Services

occasionally partners with the Department of Environmental Conservation on aggregate purchasing of zero emission vehicles on behalf of state agencies and local governments.

3.2.2. The Climate Mayors Electric Vehicles Purchasing Collaborative

The Climate Mayors Electric Vehicles Purchasing Collaborative, a group of over 400 municipal leaders across the country committed to climate action, works to leverage the buying power of the Climate Mayors cities to reduce the costs for EVs and charging station acquisition for all cities in the U.S. to accelerate city fleet transition. The Collaborative is a resource for training, best practices, educational materials, and analysis support for your municipality's EV transition.

3.3. Heavy Duty Vehicles

Municipalities can begin to transition heavy duty fleets to EVs once a comprehensive fleet assessment is undertaken. Knowledge of drive cycles, duty cycles and operational considerations help the fleet manager estimate what charging infrastructure will be needed, and how often charging will be required. While heavy duty EVs are still becoming optimized for increased range performance, municipalities can ask utility companies to help with charging needs through providing EV infrastructure. There are also incentives available to help make the transition to heavy duty vehicles, such as NYSERDA's Truck Voucher Program.

Examples:

1. PG&E provides incentives for heavy duty fleet conversion

4. Public Transit

Mass transit is an integral component to a clean transportation future. The role of local governments in public transit and school transportation operations vary by municipality. While there is no one-size-fits-all approach, local leaders play an important role in promoting and advocating for clean transit solutions in their communities.

4.1. Electrify Public Transportation

In Governor Cuomo's 2020 State of the State address, he committed the 5 largest upstate transit authorities to fully electrify their fleets by 2035. All public transit agencies and school districts can follow this lead by committing to electrify bus fleets by 2035, which will ensure the state is on track to meet emissions reduction goals. Electric buses, while more costly upfront, offer significant savings over time due to reduced fuel and maintenance expenses. Communities will enjoy additional benefits with local air quality improvements. New York State has funding available to replace diesel buses with electric buses through its share of the Volkswagen Diesel Emissions Settlement. The Federal Transit Administration has a "Low or No Emission Bus Program" which has provided millions in funding to New York State. In 2019, Niagara Frontier Transportation Authority was awarded $2.5 million to upgrade the Cold Spring Bus Maintenance Facility with charging capability for future zero-emission battery-powered buses.

Examples:

1. The Metropolitan Transportation Authority has committed to an all-electric New York City Transit bus fleet by 2040.
2. The Capital District Transportation Authority is planning an All-Electric Bus Line.

3. California commits to electrify all fleets by 2040.

4.2. EV Car-share Partnerships

Car-share companies present an opportunity to expand access to electric vehicles, particularly for low-income households. Municipalities can partner with car-share organizations on pilot programs to test the most effective and efficient methods to offer the community EV car-sharing options. Programs that focus on serving multi-family buildings can help to break down barriers to EV use by providing access to convenient and affordable charging opportunities and vehicles.

***Examples**:*

1. Chattanooga, TN,
2. Sacramento, CA,
3. Los Angeles, CA

4.3. EV Ride-Share Resolutions

Ride-hailing services such as Lyft, Uber, and traditional taxis allow for expanded use of electric vehicles in a municipality. When ride-share services use electric vehicles, emissions can be reduced up to 53% compared to a private vehicle trip using an internal combustion engine. Municipalities can partner directly with ride-share companies to offer incentives for drivers that choose to switch to EVs. In Columbus, OH this is being done through the Transportation Service Provider Battery Electric Vehicle Rebate Program. Municipalities can also set targets for conversion to EVs for ride-share companies that operate within their district. The Electrify California Ride-Sharing legislation provides an example that can be scaled to a municipal level. Once

partnerships are established with ride-share companies, both parties can benefit from investment in ride-share charging hubs. Installation of fast chargers in high traffic areas for ride-share drivers, such as airports, can help relieve range anxiety and provide charging for the general public as well.

4.4. First / Last Mile Solutions

Not every household is situated within a reasonable walking distance to public transit options. This is commonly referred to as the last mile problem. Municipalities can partner with local transit agencies to develop non-fossil last mile solutions utilizing electric vehicles, e-bikes, e-scooters and other modes of transport. See section 5.9 for more information about implementing shared e-bikes and e-scooters.

Examples:

1. The American Public Transportation Association offers examples of local first/last mile solutions.

4.5. School Bus Electrification

In addition to transitioning public transit buses to all electric fleets, school districts can also commit to phasing out standard buses for electric bus fleets. As mentioned above, there are significant cost savings and health benefits to investing in electric bus fleets. School buses also present the opportunity for battery backup to stabilize the energy grid. Municipalities can help school districts transition to electric bus fleets through partnerships with utility companies that pay for the cost of the electric buses in exchange for battery storage over time. Municipalities can also take advantage of

available statewide funding such as the Clean Transportation NY Beneficiary Mitigation Plan that provides grants to increase electrification of the State transportation system. Additionally, local leaders can lobby their state officials to provide statewide funding for school bus electrification programs.

Examples:

1. Virginia calls for utilities to cover cost of electric school buses and associated infrastructure through HB75.
2. Dominion Energy electric transportation initiative replaces diesel school busses in Virginia.
3. California Air and Resource Board provides $7.5 million in grant funding to pay for Zero-Emission Electric Bus Deployment.

There are also a number of private companies that help support school districts in the transition to electric buses through private financing options. Many companies can provide the buses and charging infrastructure with budget-neutral financing, and will even help with grant applications.

5. Ensure EV Charging Access and Infrastructure is Robust

The key to a successful transition to electric vehicles is a robust network of charging infrastructure. Accessible charging points increases consumer confidence in the reliability of EVs. Publicly available stations also offer alternatives to drivers that may not have the option of charging at home. Local governments can take a lead role in

promoting EV infrastructure investments through building and parking ordinances, streamlined permitting, utility partnerships, and public access initiatives.

The New York State Energy Research and Development Authority (NYSERDA) serves as a resource for planners and municipalities working to make their communities EV-ready, including best practice guides for EV charging stations. This section takes a look at opportunities for local government action on charging access.

5.1. EV-Ready Building Codes

Municipalities can play an effective role in helping to facilitate the adoption of electric vehicles in their communities through updates to the local building code; requiring all new building construction to be EV-ready. This will ensure that new buildings are properly equipped to handle the installation and operation of EV charging infrastructure. The knowledge that a residence or workplace will have the capacity to accommodate charging stations eliminates a potential consumer deterrent from the purchase or lease of an electric vehicle.

Examples:

1. Atlanta, GA,
2. Boulder, CO,
3. Palo Alto, CA

5.2. EV Parking

Similar to new building construction, municipalities can require new parking facilities be designed to accommodate the installation of charging infrastructure. Parking

enforcement rules can also be amended to discourage the use of EV designated parking spaces by drivers of gasoline and diesel fueled vehicles. Public parking facilities can offer free or discounted parking for electric vehicles.

Examples:

1. The City of Cincinnati, OH, offers free parking for all electric vehicles.
2. The Cities of Redmond, WA and San Diego, CA have adopted regulations governing the use of EV-designated parking spaces.

5.3. Streamlined Permitting

Permitting for the installation of electric vehicle charging infrastructure can be streamlined to encourage rapid deployment. A task force can be assembled to examine potential roadblocks that may exist in the permitting process and make recommendations on improvements to expedite the process. Priority could be given to installations that co-locate with renewable generation. Municipalities can work with their local electric utility to ensure a seamless process from installation to operation at public and private locations.

Examples:

1. NYSERDA guidelines on proper installation of public charging stations.
2. San Jose, CA and Loma Linda, CA are examples of municipalities that have adopted streamlined EV charging infrastructure ordinances.

5.4. Public Access to Charing

One barrier to increased EV ownership is a lack of visible and accessible charging infrastructure, which in turn can contribute to range anxiety for consumers. Municipalities can help to address this problem by installing publicly accessible charging stations on government property. They can take advantage of incentives and grants offered by the state and their electric utility to help cover the costs of installation and operation. Municipalities can also encourage the installation of charging infrastructure at commercial properties and multifamily residences through property tax exemptions.

Resources:

1. NYSERDA's Charge Ready NY program offers public and private entities $4,000 rebates per publicly accessible charging port installed at public parking facilities, multi-family buildings, and workplaces.
2. NYPA's Evolve NY program has invested $250 million in EV infrastructure and services including installation of 200 DC fast chargers along key interstate corridors, creation of EV charging hubs at major airports, and development of EV model communities.

5.5. Curbside Charging

Thanks to a 2014 New York law, municipalities now have the option of purchasing the streetlight infrastructure from their electric utility. There are many potential benefits to municipal ownership including cost savings from efficient lighting, and increased access to public WiFi. Another potential community benefit could come in the form of curbside EV charging. Municipalities can modify certain streetlights to serve

as charging ports in neighborhoods where residents rely predominantly on street parking.

Examples:

1. Berkeley, CA was the first municipality in the nation to offer a curbside EV charging program.
2. Los Angeles, CA installed curbside EV charging stations on over 130 streetlights.

5.6. Workplace Charging

Municipalities can help their communities transition to EVs and set an example through supporting workplace charging for employees. Other than homes, the second most frequent parking location is the workplace. Providing access to charging in the workplace encourages employees who do not have access to at home charging to make the transition to an EV. Employers can apply for programs such as Empire Clean Cities Charge to Work NY program that provide financial support to workplaces installing EV chargers. Workplace charging can be an employee perk for city and county employees as well as local businesses, universities, and healthcare facilities.

5.7. Signage

Signage is an important consideration wherever an electric vehicle charging station is located. Appropriate signage can help EV drivers locate charging stations, optimize use of charging stations by designating parking spaces as EV-only, and provide information about charging station regulations.

Resources:

1. The U.S. Department of Energy offers a guide for EV charging station signage.

5.8. Discounted Parking Rates for EVs

Cities can support a transition to EVs by rewarding EV drivers through incentive programs that help them save money over time. Municipalities can offer EV drivers free or discounted parking at all city parking meters and garages, reduced tolls, and allowing access to carpool or HOV lanes.

Examples:

1. Sacramento, CA offers 50% discount on parking rates for electric vehicles
2. NY Department of Transportation's Clean Pass Vehicle program allows electric vehicles to occupy HOV/LIE lanes regardless of the number of occupants in the vehicle.

5.9. Municipal Micro-mobility

In addition to encouraging communities to invest in EVs, micro-mobility options such as e-bikes and e-scooters can help a community lower overall emissions and transition away from fossil fuels. In order to establish shared e-bike or e-scooter systems, cities may consider public-private partnerships, which creates a broad and diverse coalition of support for electrification, as well as stimulate innovation in the electric micro-mobility market. These micro-mobility options are great for "first and last" mile solutions (see section 4.4) as well as for using in place of a personal vehicle when traveling locally.

Examples:

1. Public-private partnerships for EVs in Oregon
2. CDPHP, an Albany-area health insurance group, partnered with the Capital District Transit Authority to bring bike-share to the region
3. Denver calls for permit applications for dockless scooters

Another micro-transit option is establishing an on-demand shuttle. This allows people to travel within a city while leaving their personal vehicles at home. Riders with similar routes can be grouped together, saving downtown parking spaces, fuel, and reducing traffic levels. These shuttles offer flexibility that isn't available with fixed-route public transit options. A great first step is to request a demo from the Downtowner.

5.10. Contracts with Utilities

Electric Vehicle infrastructure can be expanded within a community through partnerships with local utilities. Utility companies can install, own and operate public EV charging stations that give consumers options when they do not have the ability to charge at home. Many utilities also develop special contracts for apartments and multifamily buildings in which the residents who participate in the program get an additional charge on their energy bill for the cost of charging their EV. These programs can expand consumer interest in purchasing an EV as they allow for EVs to be accessible to people that would not otherwise have a place to charge. Partnerships with utility companies can also directly benefit low-income EV owners through the use of incentive programs such as free or discounted charging rates in lower income parts of a community. Utility companies also offer a number of incentive programs such as rebates for the installation of a charger, and even rebates from the purchase of an EV.

Examples:

1. Utility companies in Oregon provide rebates for installation of residential chargers
2. San Diego Gas and Electric Power Your Drive Program installs free and low cost EV chargers for multifamily residences
3. Sacramento Municipal Utility District provides incentives for businesses to transition their fleets to EVs

6. Education and Awareness

Local governments can play an important role in supporting public education efforts on the technology, cost, and environmental benefits of EVs. Direct communication with constituents, public outreach events, and partnerships with auto dealers, manufacturers, and community groups are avenues local governments can explore.

6.1. Electric vehicle information clearinghouse

Keeping track of all the various EV incentives and initiatives at the federal, state and local level can be challenging. Municipalities can serve as a clearinghouse for information on electric vehicles. A one-stop shop for information on rebates, federal tax credits for EVs, state charging infrastructure tax credits, available state funds, utility programs, dealership partnerships, and local initiatives. By collecting, updating, and making this information accessible, local governments can help educate the public and help residents and businesses transition to clean transportation.

Resources:

1. Plug In America maintains a database, searchable by state, of EV incentives.

2. NYSERDA offers a detailed electric versus internal combustion engine vehicle cost comparison tool that factors in available incentives and localized energy and fuel costs.

6.2. Utility cost comparison tool

Utility cost comparison tools allow consumers to compare electric vehicles models with internal combustion engine vehicles of similar classes based on fuel efficiency, available incentives, and total cost of ownership. Consolidated Edison and National Grid currently offer utility cost comparison tools.

6.3. Mapping publicly accessible charging stations

Maps of publicly accessible charging stations allow EV drivers to easily identify the location, availability, and type of chargers.

Resources:

1. NYSERDA Electric Vehicle Station Locator.
2. Plug In America Electric Vehicle Charging Station Map.
3. PlugShare Charging Location Database and Map.

6.4. Outreach events

Electric vehicle outreach events can be powerful tools to engage and educate people in your community. Local community based organizations and clean energy advocates can be great partners. These groups can help by featuring stories, cultivating media, hosting informational workshops, EV drive programs, promotional events, social media, and more. In addition to outreach events, continued engagement through online

platforms can raise public awareness, and maintaining online engagement through locally targeted platforms will help make a municipal transition to EVs a transparent process, while providing relevant and localized resources.

Examples:

1. New Yorkers for Clean Power is an organization focused on partnering with municipalities and businesses to promote EVs through workshops, webinars, media and other outreach events.
2. Sponsor an event for National Drive Electric Week in September
3. Sustainable Westchester is a coalition of local governments in Westchester County that partner on clean and sustainable energy initiatives, including the promotion of EVs and charging infrastructure.
4. Create a website or web page with local information on EV charging stations, events and incentives similar to the City of Tacoma website.

6.4.1. Outreach to Low-Income Communities

Increasing EV use within a community often means that those who can afford to make the investment benefit from transitioning to EVs, while those who can't afford it continue to suffer from the pollution associated with driving internal combustion engine vehicles. In order to make sure underserved communities don’t get left behind, municipalities can actively engage these communities through outreach events and partnerships with local community-based organizations.

Examples:

1. Local Utility Partners with Community Based Organization to provide EVs to staff, and provides community car sharing

6.5. Dealer Partnerships

Explore partnerships with community groups and dealerships to create programs offering local residents and businesses discounts and other benefits for EV purchases. Municipalities can help foster relationships between dealerships and utility companies to maximize consumer benefits and assist with the rebate process, like Burlington's Preferred Electric Vehicle Dealer Network. The Green Energy Consumers Alliance connects drivers to a one-stop shop for dealer discounts, rebates and EV information through the Drive Green program.

7. Financing and Incentives

A significant barrier for many municipalities in transitioning to EVs is the initial upfront cost of the vehicles themselves as well as the charging infrastructure and maintenance. Thankfully there are resources in the form of rebates and incentives offered locally, statewide and nationally.

7.1. Local Resources

A good starting point for assessing options for financing a transition to EVs for a municipality is to begin with reaching out to the local regional planning commission and local economic development boards and councils. Local regional commissions and economic development councils often have the most up to date information about where and how to access various incentive programs and may even have local grants that can be applied to EV infrastructure. Regional incentives can also be found through the Clean Energy Technology Center.

7.2. State Agency Resources

New York State provides incentives and rebates through the NYSERDA and DEC. Incentives include rebates for investments in ZEV and for electric vehicle charging infrastructure. Municipalities that purchase or lease a new ZEV are eligible for rebates of up to $7,000 per vehicle, depending on the vehicle's battery range. State funding is also available to municipalities for charging infrastructure through rebates at varying levels for investments in faster charging stations such as Level 2 networked chargers and Direct Current Fast Chargers (DCFC).

Information on the ZEV Clean Vehicle, Drive Clean Rebate, and Municipal ZEV Infrastructure Grant Programs and other statewide programs can be accessed through the following links:

Municipal Clean Vehicle Rebate Program

Municipal ZEV Infrastructure Grant Program

NYSERDA Truck Voucher Program

NYSERDA Clean Energy Communities

Drive Clean Rebate Program

DEC Volkswagen Diesel Emissions Settlement for School Bus Electrification

DOT Transportation Alternatives Program, Congestion Mitigation and Air Quality Improvement Act

Charge NY

Tax Credit for Public and Workplace Charging

Charging Stations for NYPA Customers

7.3. Federal Incentives

The federal government can be a resource for education about EV transition and financing options including federal tax credits, grants and incentives. Local governments can take advantage of federal grants for transportation funding and apply those funds to EVs and related infrastructure.

Resources:

1. Low or No Emission Bus Grant
2. Federal tax credits for EVs
3. Fixing America's Surface Transportation Act
4. Clean Cities Coalition; taking part in this coalition will allow access to funding opportunities with the Department of Energy

Appendix 1: Sample Ordinances

Below are sample ordinances and policy guidance for local policies related to electric vehicles. Some of the templates may be from state legislation but can be amended to apply to a municipality.

A. *Fleet Electrification Action Plan Template* (Modeled after Seattle's Executive Order)

1. Tacoma, WA's Transportation Electrification Action Plan. Highlights include a plan to implement low-income EV carshare, public-private partnership to prototype heavy-duty electric vehicles
2. Austin, TX's Carbon Neutral Fleet Resolution and subsequent Fleet Electrification Study and Plan. Highlights include fleet assessment,

provides economic benefits of EVs, specific vehicles targeted for electrification

B. *Electrify Public Transportation Sample Ordinance*

C. *EV Ride-Share Resolutions*

D. *School Bus Electrification Ordinance*

E. *EV-Ready Building Codes*

1. *Palo Alto*

2. *Atlanta*

f. *EV Parking*

g. *Streamlined Permitting*

h. *Curbside Charging*

i. *Signage*

j. *Micro-mobility (E-bikes and E-scooters)*

k. *Discount Parking Rates for EVs*

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