

# Electrifying transportation in NJ and in your town



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The EV revolution is underway. The shift to clean-running, planet-saving electric vehicles is happening worldwide as consumers, auto manufacturers and policy makers awaken to the imperative that we must quickly and drastically reduce greenhouse gas emissions.

Federal, state and local governments have an important role to play in establishing the infrastructure, financial incentives and legal frameworks needed to put the EV movement on a fast track. This resource paper focuses on what communities can do to lay the groundwork for the transition to full adoption of electric vehicles.

Electrifying transportation will go a long way in fighting climate change in NJ.

Cars and light duty trucks account for more than 30 percent of greenhouse gas emissions in NJ.

# Why EVs?

Transportation is the largest source of climate pollution in New Jersey, and emissions from cars and light-duty trucks also account for about 30 percent of the State's total hydrocarbons and oxides of nitrogen emissions, which contribute to the formation of ground-level ozone or "smog" during the summer

months.<sup>1</sup> These pollutants have a profound impact on public and personal health, especially in high-population areas where gas and dieselpowered vehicles spew pollution along roadways where people live.

There is an urgent need to electrify transportation by replacing internal combustion engine (ICE) vehicles with advanced new electric vehicles





(EVs) that reduce transportation-related pollution and also change where those emissions take place. At the same time, EVs bring other benefits through reduced operating costs, an enjoyable driving experience and the potential for reduced electricity costs for all ratepayers.<sup>2</sup>

Among the ambitious goals set by President Biden early in his administration to address

climate change is a commitment to reduce greenhouse gas emissions (GHGs) by 50 percent by 2030 compared with 2005 levels, and to reach net zero emissions economywide by no later than 2050. The transition to electric vehicles and the charging infrastructure to support them are fundamental steps in delivering on that promise. The administration's *American Jobs Plan* released in April 2021 commits a \$15 billion investment to build a national network of 500,000 charging stations through a combination of grant and incentive programs for state and local governments and the private sector.

# What's happening in NJ?

New Jersey has adopted aggressive goals to reduce greenhouse gases. The State's 2020 *Energy Master Plan* outlines key strategies to reduce energy consumption and emissions

Governor Murphy has signed landmark laws to boost the use of plug-in electric vehicles in New Jersey. from the transportation sector, including encouraging electric vehicle adoption, electrifying transportation systems, leveraging technology to reduce emissions and miles traveled, and prioritizing clean transportation options in underserved communities.

In January 2020 Governor Murphy signed landmark legislation (S2252/A4819) to boost the use of plug-in electric vehicles in New Jersey. The new law:

- Created a rebate program for electric vehicle purchases;
- Set aggressive goals for NJ's network of public charging stations – 400 public fast charging stations at 200 locations along major highways and throughout NJ's communities by 2025, as well as goals for charging stations at multifamily homes and hotels by 2025 and 2030;
- Set aggressive goals for electric vehicle sales 330,000 electric vehicles by 2025, increasing to two million by 2035 and 85 percent of all new light duty vehicles sold or leased in NJ being electric by 2040;

- Set ambitious timetables for transitioning State-owned vehicles and NJ Transit buses to all-electric, especially in environmental justice communities by 2040;
- Authorized the NJ Board of Public Utilities to create an incentive program for at-home EV chargers.

In July 2021, Governor Murphy signed legislation amending the *Municipal Land Use Law* to include provisions for electric vehicle supply equipment (EVSE) and make-ready parking spaces. This law requires that municipalities make this equipment a permitted accessory use in all zoning districts without a variance (C.40:55D-70).

<sup>1</sup> https://www.drivegreen.nj.gov/dg-emissions.html

<sup>3</sup> "Electric Vehicle Costs: Today's electric vehicles offer big savings for consumers," *Consumer Report*, Oct. 2020

Electric vehicles are an important component in reaching the targets of NJ's Energy Master Plan.

<sup>&</sup>lt;sup>2</sup> Full Market Vehicle Electrification in New Jersey: The opportunities, impacts and net benefits for light, medium and heavy-duty electric vehicles – ChargEVC

Electric NJ Transit buses are being introduced in Camden as part of the NJ Transit Bus Electrification Mandate.



ANJEC recommends that all municipalities adopt the NJ

Department of Community Affairs model ordinance as a minimum to ensure the implementation of this requirement through the site plan application review process. (*https://www.nj.gov/ dca/dlps/home/modelEVordinance.shtml*)

# What towns should do

Counties and municipalities have an important role to play in transitioning communities away from internal combustion engines that run on gasoline and diesel, cause air pollution and contribute to climate change.

### The Secaucus Police Department uses a Ford Escape Hybrid.

### Pass an ordinance

Municipalities should adopt the State-approved model ordinance to provide a predictable path forward for EVSE developers and installers applying for zoning variances and construction permits.

### Transition municipal fleets to EVs

Municipalities throughout the State are purchasing electric fleet cars, police cruisers, school buses, garbage trucks and more. According to a 2020 *Consumer Report* study,<sup>3</sup> EVs have clear advantages that can add up to large savings for

multi-vehicle fleets. "Overall, (battery-powered) EVs were estimated to save consumers about 60 percent on fuel costs compared with the average vehicle in their class."

In the study, drivers of battery electric and plug-in hybrid electric vehicles also reported saving 50 percent on their repair and maintenance costs, when averaged over a typical vehicle lifetime. In addition, EVs are expected to depreciate at the same rate as ICE vehicles in the same class over the first five years of ownership.



### Update the municipal master plan

When reexamining their master plans, municipalities should include language that identifies plug-in electric vehicles (PEVs) as part of the local transportation strategy. New Jersey law encourages municipalities to plan for the development of electric vehicle charging infrastructure by identifying existing and proposed sites for EV charging when reexamining their master plans. The law also amends the "Local Redevelopment and Housing Law" to require consideration of public electric vehicle charging infrastructure, in appropriate locations, and in local redevelopment plans.

## Install EV charging infrastructure for public use

Convenient, reliable access to EV charging helps create vibrant communities. Downtown districts become more appealing to shoppers and tourists, who can linger longer without the fear of being stranded when their cars run out of charge. Companies who provide EV charging for workers, customers and suppliers enhance their image as places that care about people and the environment.

Many New Jersey towns are installing EV infrastructure in municipal parking facilities and

encouraging commercial and industrial centers to provide EV-friendly parking spaces for their customers, employees and suppliers.

Counties and municipalities should provide guidance for property owners, homeowner associations, employers and developers on best practices for installing charging infrastructure. Assistance can include identifying funding opportunities to acquire and install EV charging stations on their property.

### About EV charging levels

**Level 1:** These charging stations provide charging through 120 volt (V) AC dedicated circuit breakers. Based on battery type and vehicle,

Level 1 charging adds about 2 to 5 miles of range to a plug-in electric vehicle per hour.

**Level 2:** These charging stations provide charging through 240V or 208V AC dedicated circuits of 20 to 100 amps, depending on the charging station requirements. Based on the battery type, charger configuration, and circuit capacity, Level 2 charging adds about 10 to 20 miles of range to a PEV per hour of charging time.

**DC Fast Charging:** These charging stations provide charging through a 480V or 208V AC



Electric Vehicle Ride & Drive at ANJEC Environmental Congress in 2018 at Mercer County Community College. dedicated circuit. DCFC enables rapid charging and is often located along heavy traffic corridors and at public charging locations Based on battery type and vehicle, DCFC can add about 60-80 miles of range to a PEV in 20 minutes of charging time. About 95 percent of NJ locations currently have a DC Fast Charger within a 25-mile radius.

### Amend zoning to encourage EV infrastructure

Building, zoning and parking codes and other ordinances should establish requirements or incentives for installing charging stations, including pre-wiring parking facilities for future installations. The permitting and inspection process should help facilitate installation.

- Zoning ordinances can specify criteria for charging station size, accessibility, maintenance, lighting, signage, and other site design elements in different zoning districts or in public places.
- Zoning codes should include charging stations in the calculation for minimum required parking spaces and/or provide density bonuses for installation of charging stations.
- Zoning ordinances can also require that a percentage of parking spaces be outfitted with



or prewired for charging stations in new multiunit residential, commercial, industrial or large parking lot construction.

# ✓ Spread the word!

There are many ways local governments can encourage adoption of electric vehicles by the public.

- Educate residents on the benefits EVs and various incentive programs that make them more affordable to buy or lease.
- Let the public know about available charging stations in the community and publicize online locator tools to help residents and visitors easily find a nearby charging station.
- Celebrate success with public ceremonies, press announcements and publicity on the town website and social media:
  - When new charging stations are installed;
  - When the town purchases new electric police cruisers, recycling trucks, school buses or other fleet vehicles;
- Brag about GHG savings due to the community's adoption of EVs.

# **Funding sources**

**It Pays to Plug In** – provides grants to offset the cost of purchasing and installing electric vehicle charging stations for businesses, governments, nonprofit organizations, educational institutions and non-multiunit residences

Clean Fleet Electric Vehicle Incentive Program – grant funding to support the purchase of up to two eligible electric vehicles (EVs) and one Level-Two electric vehicle charging station for local and State government authorities in New Jersey. Subject to the availability of funds.

**Charge Up New Jersey program** – NJ Clean Energy Program incentives up to \$4,000 on new battery electric or plugin hybrid electric vehicle with a range of more than 200 miles priced under \$45,000, and a \$2,000 rebate for vehicless under \$55,000. Subject to fund availability.



# Find a public EV charger near you

It's easy to find a place to plug in when you're on the road in your electric vehicle. The NJ **Public EV Charging Locator is** an interactive map that provides locations, directions, contact information and charger types for more than 300 public charging places in the State.

The NJ Public EV Charging Locator

Many New Jersey towns are installing EV infrastructure in municipal parking facilities.

Federal income tax credit of up to \$7,500 for the purchase of new allelectric vehicles and between \$2,500 and \$7,500 for plug-in hybrids. Municipalities cannot claim the tax credit directly, but vehicle dealers who sell or lease vehicles to governmental units are able to claim the tax credit.

NJ sales tax exemption – Legislation enacted in 2004 provides a sales tax exemption for new or used zero emission vehicles that are battery or fuel-cell powered. Municipalities cannot claim the tax credit directly,

but vehicle dealers who sell or lease vehicles to governmental units are able to claim the tax credit.

Electric Vehicles on NJ State Purchasing Contracts through New Jersey START, a State purchasing agency. (Select "Contracts/Blankets"





and enter the word hybrid in the "Contract/Blanket Description" field to browse the offerings.)

All New Jersey local governments are able to purchase vehicles with discounted

pricing through New Jersey START, a state purchasing agency. There are several PEVs, including BEVs and PHEVs, available to purchase through their contracts. Select "Contracts/Blankets" and enter the word hybrid in the "Contract/Blanket Description" field to browse the offerings.

Climate Mayors Electric Vehicle Purchasing Collaborative – Enables local governments to leverage their collective buying power and purchase or lease electric vehicles and charging stations through competitively bid contracts. This program is open to all US cities, counties, state governments and public universities. The Collaborative also provides training, best practices, educational resources and analysis support, creating a one-stop shop to support EV transitions for public fleets.

Educational Services Commission of New Jersey purchasing Co-op – All NJ local governments can purchase EV charging stations with discounted pricing.

# **Other Resources**

- ANJEC webinar, "Get Ahead of the Stampede: Electric Vehicle Charging in Your Town," May 25, 2021 – includes recording, slide presentations and resources
- NJ Best Management Practices for Ensuring Your Town is EV-Ready
- Full Market Vehicle Electrification in New Jersey: The opportunities, impacts and net benefits for light, medium and heavy-duty electric vehicles ChargEVC
- Drive Green New Jersey The State's official website for electric transportation information

- Alternative Fuel Vehicle Readiness: A Guidebook for Municipalities, North Jersey Transportation Planning Authority
- Siting and Design Guidelines for Electric Vehicle Supply Equipment – Clean Cities, US Dept. of Energy
- Creating EV-ready Towns and Cities: A Guide to Planning and Policy Tools
- An Electric Vehicle Toolkit for Local Governments – Environment New Jersey
- Charge Local: A Guide to Installing EV Charging Stations for Municipalities – Environment New Jersey





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For over 53 years, The Association of New Jersey Environmental Commissions has been a statewide nonprofit organization that provides leadership, education, and support for environmental commissions and other local boards and public officials, and partners with other organizations to advocate for strong state and regional environmental policy.