Power Surge: Sparking Success for Electric Vehicles

November 15th, 2023

New Jersey League of Municipalities

Today's Speakers

Mayor Robert H. Conley
City of Madison

Andrea Mandel
West Windsor Council President

Jennifer McHenry
New Jersey Department of Environmental Protection

Cathleen Lewis
New Jersey Board of Public Utilities

Tracey Woods
Energy Program Manager
Sustainable Jersey

Agenda for Today's Panel

- Madison's fleet electrification
- EV Outreach and planning board promotion of EV Infrastructure in West Windsor
- Update on DEP Multi-Family and Workplace Charging resources and an update on DEP grants
- EV planning for the whole community and NJBPU Updates
- Overview of Sustainable Jersey EV Resources

Power Surge-Sparking Success for Electric Vehicles

West Windsor Township

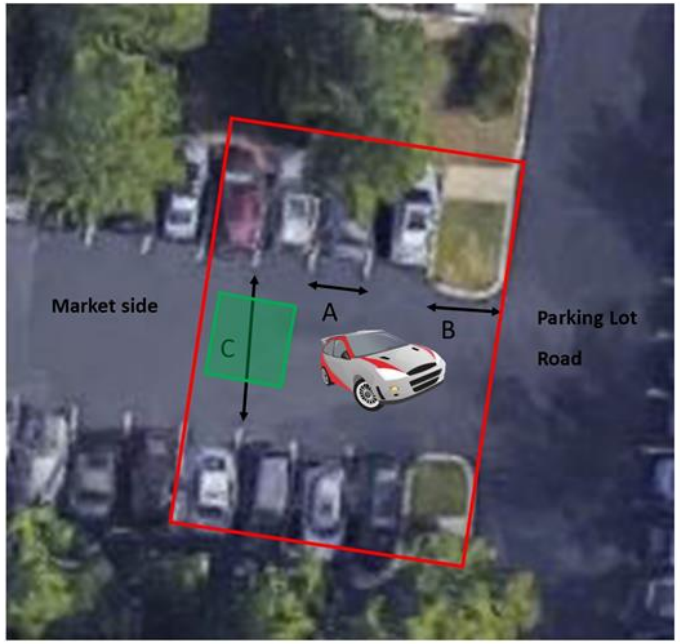
Andrea Mandel, Council President

How does West Windsor encourage EVs?

- National Drive Electric Week Show – 6 years!
- Environmental Commission and Green Team
- Planning Board
- Mayor and Township Council
- Encourage other private and public sectors in the township

National Drive Electric Week
West Windsor

2018 Early Planning



Farmer's Market—9/8/18 Maximum Space

Possible space loss:

1.Vendor on Market side – Griggs, usually puts a big truck along the 4th row—they should try to park on an angle but we may lose space.

2. Cars may be parked overnight and nothing we can do.

Approximate measurements:

A= 8.3' space width (typ) - 4 wide per side

B= 10' grass edge width

C= 20' across between spaces

ASM 8/25/18

1st Annual West Windsor NDEW

PROCLAMATION

National Drive Electric Week

September 8-16, 2017

Whereas, plug-in electric vehicles are now becoming a popular, practical and increasingly prevalent means of transportation, with real-world vehicle range, competitive pricing, increasing consumer choices and improved national charging infrastructure; and

Whereas, the transportation sector needs support to move toward adoption of clean energy technology, including plug-in electric vehicles, that reduces our dependence on foreign fuels and supports a healthy environment and economy; and

Whereas, West Windsor Township is dedicated to being a leader in the use of clean energy, establishing policies and programs that conserve energy, and promote sustainability; and

Whereas, September 8-16, 2018 has been designated as National Drive Electric Week throughout the United States to educate our citizens about the benefits of plug-in electric vehicles and to promote their adoption; and

Whereas, the citizens of West Windsor are coming together on September 8, 2018, to share information, learn about, and promote the use of plug-in electric vehicles with their neighbors and surrounding towns; and

Whereas, the West Windsor Township Environmental Commission and Township Council are also supportive of these ideals;

NOW, THEREFORE, BE IT RESOLVED, that Mayor Hemant Marathe and the Township Council of the West Windsor Township, do hereby proclaim September 8-16, 2018 as "Drive Electric Week" in the township and call upon all residents to join us in supporting the aims and goals of this worthwhile effort.

TOWNSHIP OF WEST WINDSOR IN THE COUNTY OF MERCER NEW JERSEY

In witness whereof, we hereunto set our signatures and cause to be affixed the Great Seal of the Township of West Windsor this 8th day of September, 2018.

Hemant Marathe, Mayor

Alison Miller, Council President

Virginia Manzari, Council Vice President

Jyotika Bahree, Council Member

Linda Geevers, Council Member

Ayesha Hamilton, Council Member

PROCLAMATION

National Drive Electric Week

September 25 – October 3, 2021

WHEREAS, plug-in electric vehicles are now becoming a popular, practical and increasingly prevalent means of transportation, with real-world vehicle range, competitive pricing, increasing consumer choices and improved national charging infrastructure; and

WHEREAS, the transportation sector needs support to move toward adoption of clean energy technology, including plug-in electric vehicles, that reduces our dependence on foreign fuels and supports a healthy environment and economy; and

WHEREAS, the State of New Jersey has recently passed legislation requiring and permitting the installation of Electric Vehicle Supply Equipment (EVSE) and infrastructure, which has long been encouraged by West Windsor; and

WHEREAS, West Windsor Township is dedicated to being a leader in the use of clean energy, establishing policies and programs that conserve energy, and promote sustainability; and

WHEREAS, September 25 – October 3, 2021 has been designated as *National Drive Electric Week* throughout the United States to educate our citizens about the benefits of plug-in electric vehicles and to promote their adoption; and

WHEREAS, the citizens of West Windsor are coming together on September 25, 2021, to share information, learn about, and promote the use of plug-in electric vehicles with their neighbors and surrounding towns; and

WHEREAS, the West Windsor Township Environmental Commission, Mayor and Township Council are supportive of these ideals;

NOW, THEREFORE, BE IT RESOLVED, that Mayor Hemant Marathe and the Township Council of West Windsor Township, do hereby proclaim September 25 – October 3, 2021 as *"Drive Electric Week"* in the township and call upon all residents to join us in supporting the aims and goals of this worthwhile effort.

TOWNSHIP OF WEST WINDSOR IN THE COUNTY OF MERCER NEW JERSEY

In witness whereof, we hereunto set our signatures and cause to be affixed the Great Seal of the Township of West Windsor this 25th Day of September, 2021.

Hemant Marathe, Mayor

Andrea Mandel, Council President

Linda Geevers, Council Member

Sonia Gawas, Council Member

Andrew Hersh, Council Member

Michael Stevens, Council Member

West Windsor Environmental Commission

Mercer County Sustainability Coalition

Regional Green Fest

DRIVE ELECTRIC

National Drive Electric Week™

https://driveelectricweek.org/ev101

Or scan:

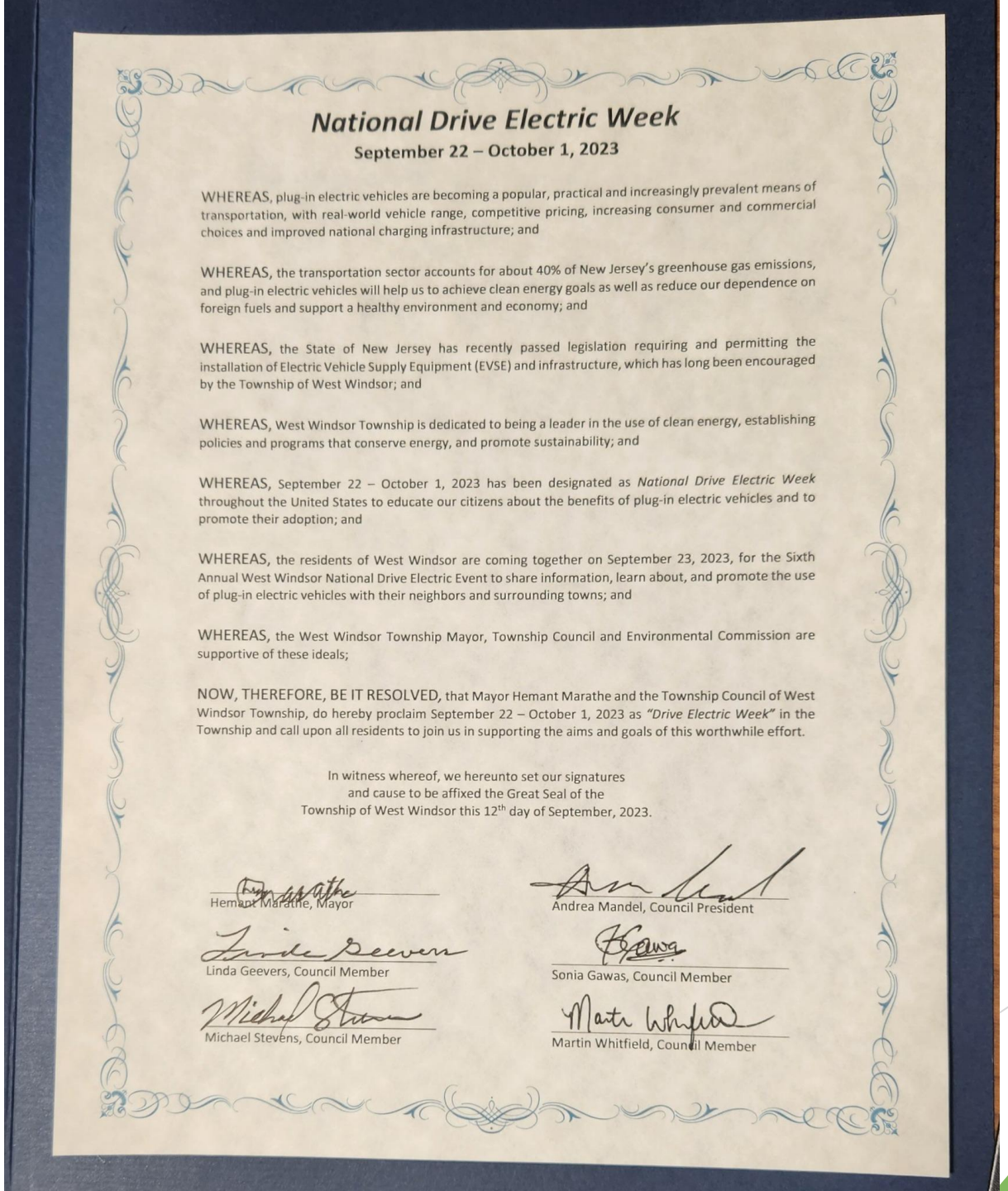
Contents

New Jersey Electric Vehicle Association

West Windsor
NDEW 2022
WW Community Day

West Windsor Township Council Proclamation

6th Annual National Drive Electric Week



National Drive Electric Week

September 22 – October 1, 2023

WHEREAS, plug-in electric vehicles are becoming a popular, practical and increasingly prevalent means of transportation, with real-world vehicle range, competitive pricing, increasing consumer and commercial choices and improved national charging infrastructure; and

WHEREAS, the transportation sector accounts for about 40% of New Jersey's greenhouse gas emissions, and plug-in electric vehicles will help us to achieve clean energy goals as well as reduce our dependence on foreign fuels and support a healthy environment and economy; and

WHEREAS, the State of New Jersey has recently passed legislation requiring and permitting the installation of Electric Vehicle Supply Equipment (EVSE) and infrastructure, which has long been encouraged by the Township of West Windsor; and

WHEREAS, West Windsor Township is dedicated to being a leader in the use of clean energy, establishing policies and programs that conserve energy, and promote sustainability; and

WHEREAS, September 22 – October 1, 2023 has been designated as *National Drive Electric Week* throughout the United States to educate our citizens about the benefits of plug-in electric vehicles and to promote their adoption; and

WHEREAS, the residents of West Windsor are coming together on September 23, 2023, for the Sixth Annual West Windsor National Drive Electric Event to share information, learn about, and promote the use of plug-in electric vehicles with their neighbors and surrounding towns; and

WHEREAS, the West Windsor Township Mayor, Township Council and Environmental Commission are supportive of these ideals;

NOW, THEREFORE, BE IT RESOLVED, that Mayor Hemant Marathe and the Township Council of West Windsor Township, do hereby proclaim September 22 – October 1, 2023 as *"Drive Electric Week"* in the Township and call upon all residents to join us in supporting the aims and goals of this worthwhile effort.

In witness whereof, we hereunto set our signatures
and cause to be affixed the Great Seal of the
Township of West Windsor this 12th day of September, 2023.

Hemant Marathe, Mayor

Andrea Mandel, Council President

Linda Geevers, Council Member

Sonia Gawas, Council Member

Michael Stevens, Council Member

Martin Whitfield, Council Member

West Windsor NDEW 2023

NEW JERSEY
Electric Vehicle
ASSOCIATION

Woodmont Apartment Chargers (Planning Board)

Nassau Park Mall (Planning Board)

Mercer County – West Windsor County Park and Golf Course

Private Companies and Locations

Carnigie Center

NRG

Outreach

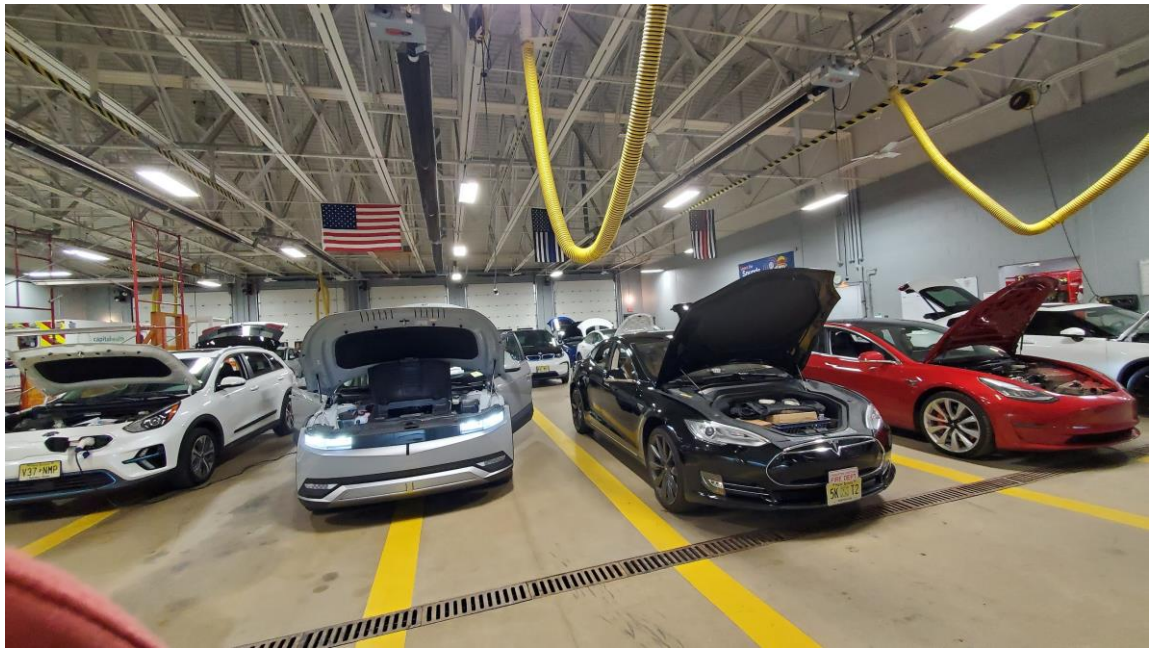
Green Fest and EV Shows
Mercer County Sustainability Coalition

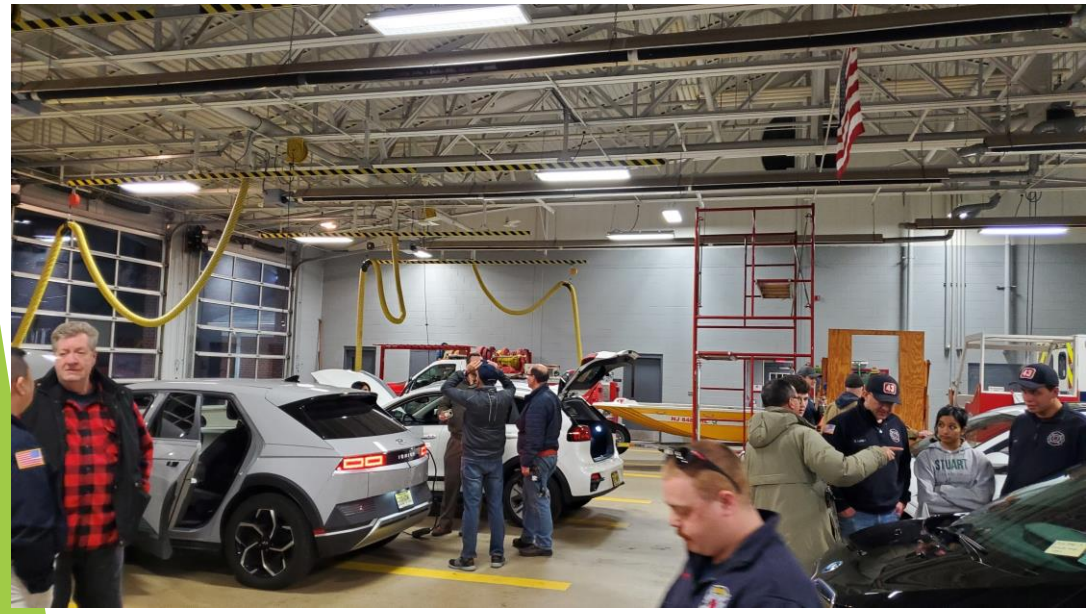
UPenn Hospital EV Show

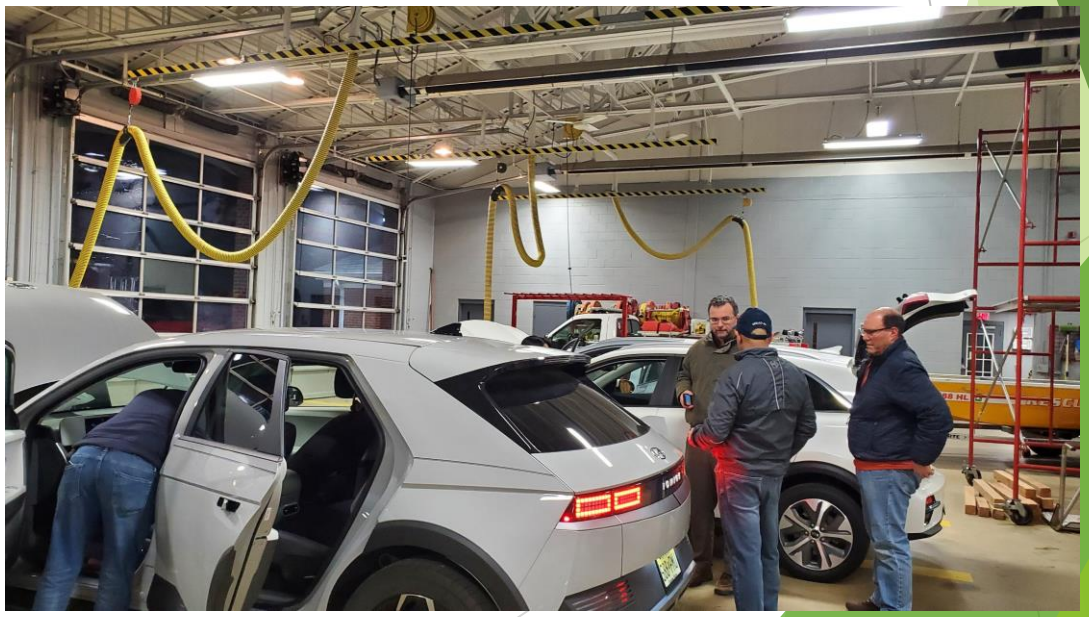
EV Presentation – Central NJ
Mensa regional gathering

Fire Department EV Training

West Windsor and Princeton Junction Fire Department training







Tiger Transit - Princeton University Bus Fleet & Charging Station


Electric Bus Fleet
17 NEW FLYER XE ELECTRIC BUSES
Free Shuttle Service For All
PRINCETON UNIVERSITY
NEW FLYER
100% Electric
35 feet
435 kWh BATTERY
~2.5–4 hours to full charge
(4 hours when charging 2 buses simultaneously)
~180–200 miles / 12 hours
(can fluctuate with climate and use of heater)
26
18
44 TOTAL PASSENGER LOAD
2
wheelchair accommodations (1 fully automated)
Electric heaters
Individual USB ports for device charging
Front-loading bicycle rack for three bikes
Transportation & Parking Services


NOTICE
Rainproof
heliox


WARNING
HIGH VOLTAGE
MAINTENANCE
ACCESS ONLY


PRINCETON
UNIVERSITY
26015
EMERGENCY EXIT


WeDriveU
NJMVC Route 1432
GVWR 44,533

West Windsor Township
First Township EV vehicle

EV Program Updates

Jennifer McHenry, Bureau of Mobile Sources
NJ Department of Environmental Protection

Agenda

- EV Laws and Ordinance
- EVSE at Multi-unit Dwellings and Workplaces; Toolkits
- It Pay$ to Plug in EVSE Grant Program Update
- eMobility: GoTrenton! Pilot Project

Electric Vehicle Policies

New Jersey is implementing a suite of strategies in a concerted effort to increase the number of light-duty electric vehicles (EV) on the road and to ensure sufficient public electric vehicle charging infrastructure.

Electric Vehicle Law

P.L. 2019, c.362

Established aggressive goals for EV adoption

Right-to-Charge Law

P.L. 2020, c. 108

Prevents the prohibition of EVSE in common interest communities

EVSE Installation Requirement Law

P.L. 2021, c. 171

Established the mandatory statewide model EVSE ordinance

Model Municipal EV Ordinance

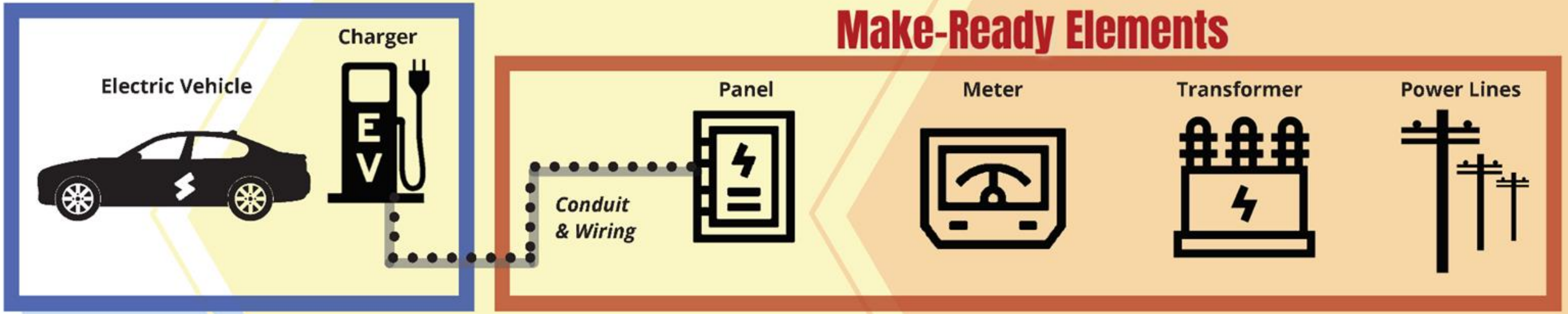
Established EVSE Requirements for new multi-unit dwellings and new parking lots/garages

What does *Make-Ready* mean?

A Guide to Electric Vehicle Infrastructure

Customer-Side *"Behind the meter"*

Utility-Side *"To the meter"*



Make-Ready is the pre-wiring of the electrical infrastructure at a site to enable it to accommodate a charger easily & efficiently. *Make-Ready infrastructure* includes service panels, junction boxes, transformers, meters, conduit, wiring, etc. *Make-Ready* does <u>not</u> include activation, hook-up or price of charger(s).

Model EV Ordinance

- Published on September 1, 2021, by NJ Department of Community Affairs
- Effective immediately in each municipality and supersedes any existing ordinances
- Authorizes and encourages EVSE and make-ready parking spaces
- Ensure towns are requiring installation and make-ready in a consistent manner
- Defines EVSE as a permitted accessory use in all zones

Requirements for New Multi-unit Dwellings

New MUDs with 5 or more units must comply with the following:

- **Immediately**: 15% of parking spaces shall be make-ready and 1/3 of those shall have EVSE installed;
- **Within 3 years**: install EVSE in an additional 1/3 of the original 15%
- **Within 6 years**: install EVSE in the final 1/3 of the original 15%
- **Overall:** at least 5% of EVSE must be accessible for people with disabilities

*You can install EVSE faster, if desired.

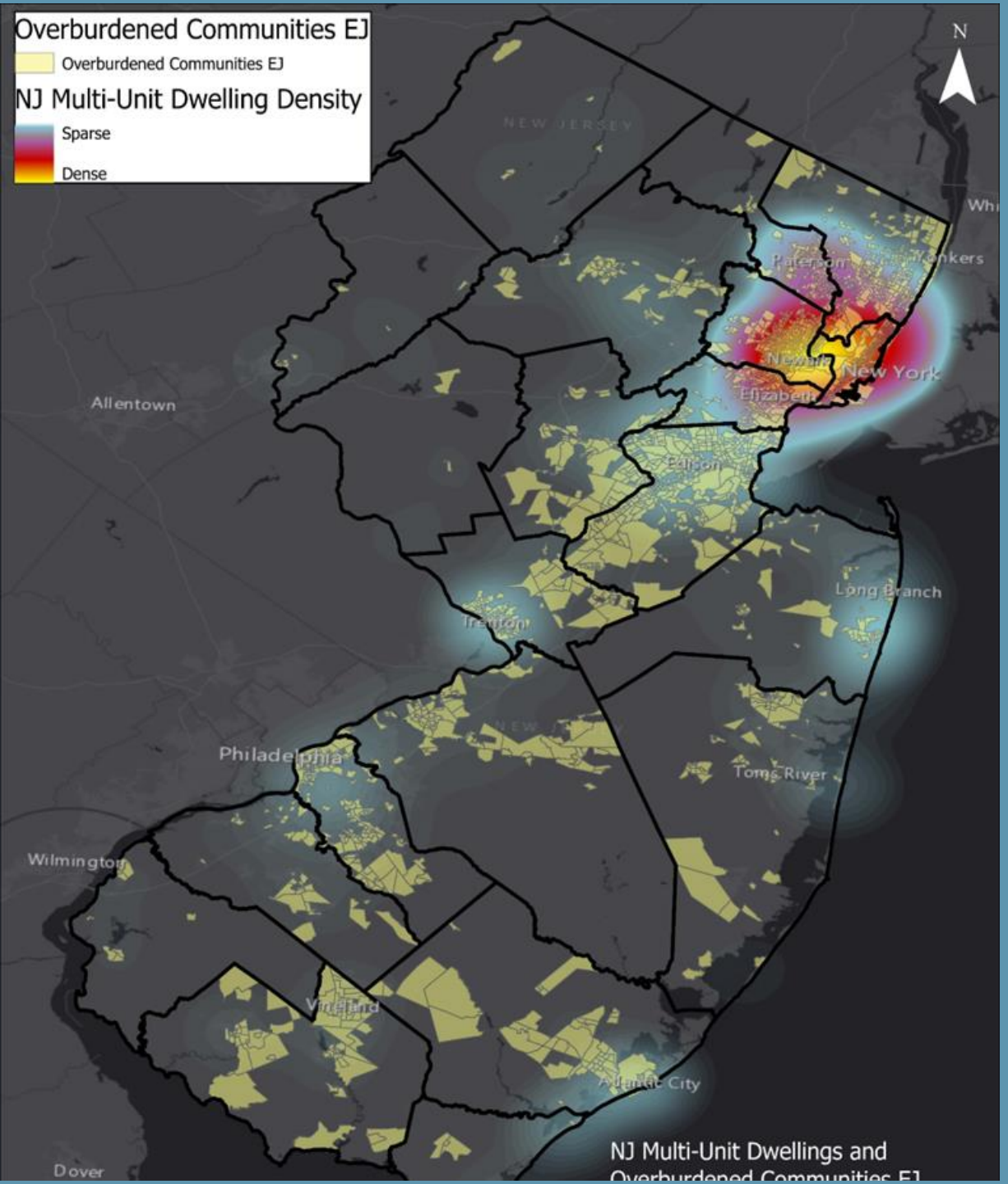
Mandatory Provisions for New Parking Lots and Garages

*Expansions to existing parking lots are also subject to the requirements of the model ordinance.

Exempt

- a retailer that provides 25 or fewer off-street parking spaces
- Municipality may encourage (but not require) additional EVSE or Make-Ready parking spaces.

# of Parking Spaces	# of Make-Ready Required (can be EVSE)
< 50	1
51-75	2
76-100	3
101-150	4
> 150	4%



Multi-unit Dwellings in NJ

1/3 of NJ residents live in multi-unit housing

More than 65,000 buildings with at least 5 or more units

Over 1 million individual units throughout NJ

DEP Multi-Unit Dwelling Toolkit

Multi-Unit Dwelling Toolkit

Multi-Unit Dwellings (MUDs) house more than 1/3 of New Jersey residents. Limited access to electric vehicle (EV) charging at MUDs is a major barrier to transportation electrification. These multi-family households often lack easy access to at-home charging, due to the lack of private garages, driveways, or proximity and availability of an electrical source. Access to reliable home charging is a major determining factor for someone considering an EV as their next vehicle since most charging occurs overnight at home, allowing drivers to take advantage of off-peak electrical rates. Lack of access to EV charging at home is an important equity issue, because non-residential EV charging options (e.g., workplace or public charging stations) are generally more expensive. Our goal is to ensure all residents have equitable access to clean transportation which includes charging stations at MUDs.

Due to the the many different types of MUDs, no one-size-fits-all solution exists for charging projects. This toolkit is a guide to encourage and support the installation of EV charging in multifamily communities and has been developed with New Jersey's existing legal and development framework in mind.

Download full Toolkit

Back to top

Multi-unit Dwelling Toolkit

EV Terminology

A Glossary of key EV terms used throughout this toolkit

Get Familiar

Checklist for EVSE at MUDs

A step-by-step guide for installing EV chargers at your multi-unit dwelling property.

Get Started

Survey Template

Conducting a survey of your residents is great way to gauge the current and future needs of your community.

Get Feedback

Requirements for New Multi-Unit Dwelling Construction

A Mandatory Electric Vehicle Ordinance requires new multi-unit dwellings to have EV charging

Review the Requirements

Benefits of Installing EV Charging Stations

There are numerous benefits to installing EV chargers within your MUD community. See how your property and residents can benefit.

Explore

Compare Grant Opportunities

Find the incentive program that will best support your project needs.

Compare

FAQs and Additional Resources

Still have questions? Check out these additional resources to find commonly asked questions and project guidance.

Get Answers

EV Charging Station Consideration Matrix

The EV Charging Station Consideration Matrix is a tool for multi-unit dwelling property management, owners, and HOAs to use as guidance in the consideration and selection of appropriate EV charging stations for their property.

Visit

Tools of the Trade

The Vehicle Charging Innovations for Multi-Unit Dwellings (VCI-MUD) project has produced multiple resources to further help you plan for your EV installation project. Check out the *MUD Building Self-Evaluation Survey* and *Technology Selection Tool* for detailed guidance documents based on your property's specific characteristics.

*This is not a DEP website

Learn more

Workplace Charging

U.S. Department of Energy has funded the national EV Acceleration Challenge.
Two programs funded are the Charge@Work campaign and the EMPOWER program. Both programs have 3 primary components:

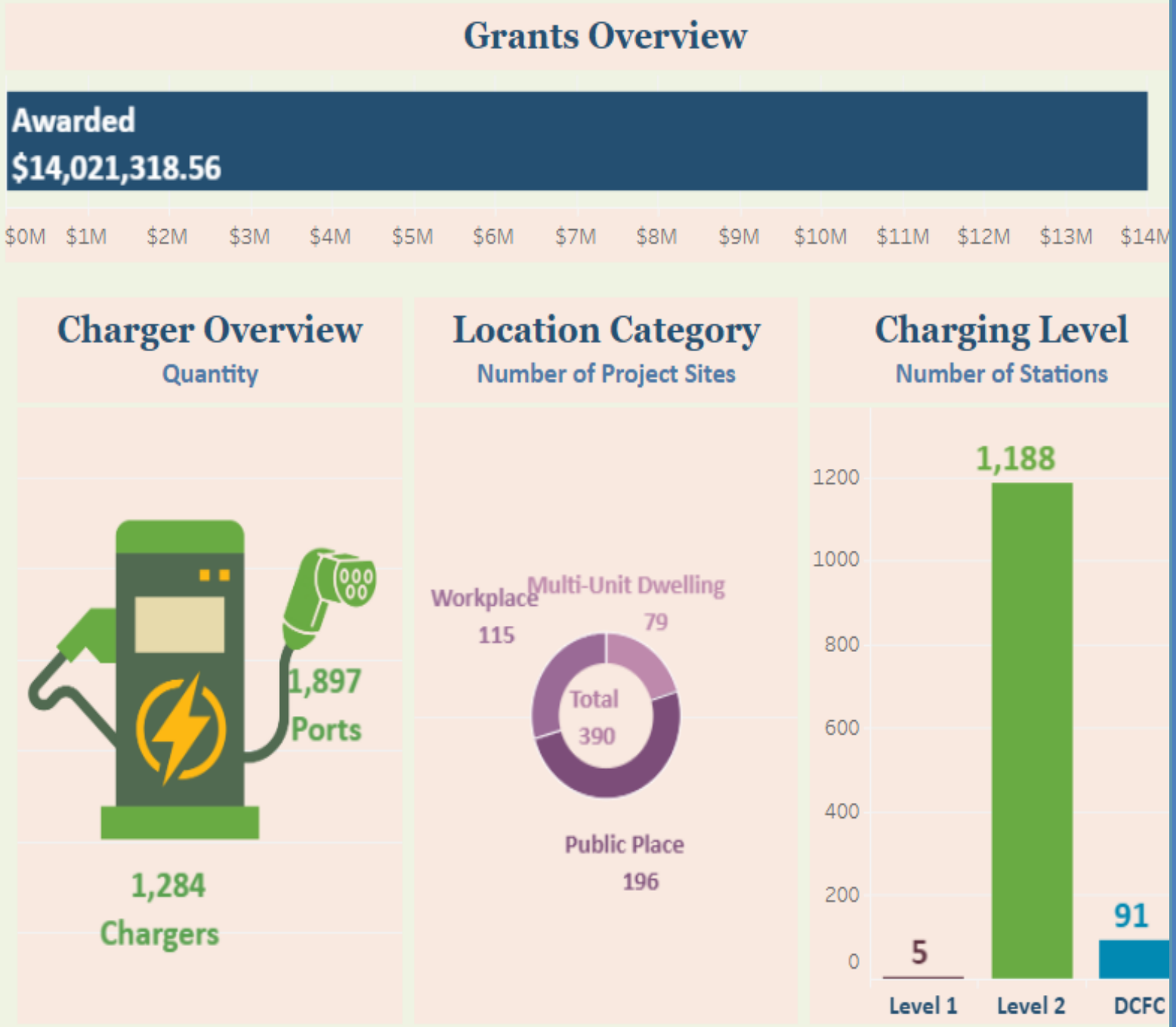
1. **A pledge**
2. **Technical assistance**
3. **A certificate**

CHARGE@WORK
POWERING WORKPLACE CHARGING

EMPOWER
WORKPLACE CHARGING

It Pay$ to Plug In Grant

- $750 per port for Level 1 charging stations
- Up to $4,000 per single port/$8,000 per dual-port, networked L2 charger
- Maximum of 20 ports per location (either 10 dual-port, or 20 single-port)
- Applicants may not be approved for more than $500,000.00 in projects in a calendar year
- Eligible costs: Purchase of charging station(s) **and** associated delivery and activation fees, warranty, network subscription, maintenance contract, and leasing agreement (if applicable)



It Pay$ to Plug In

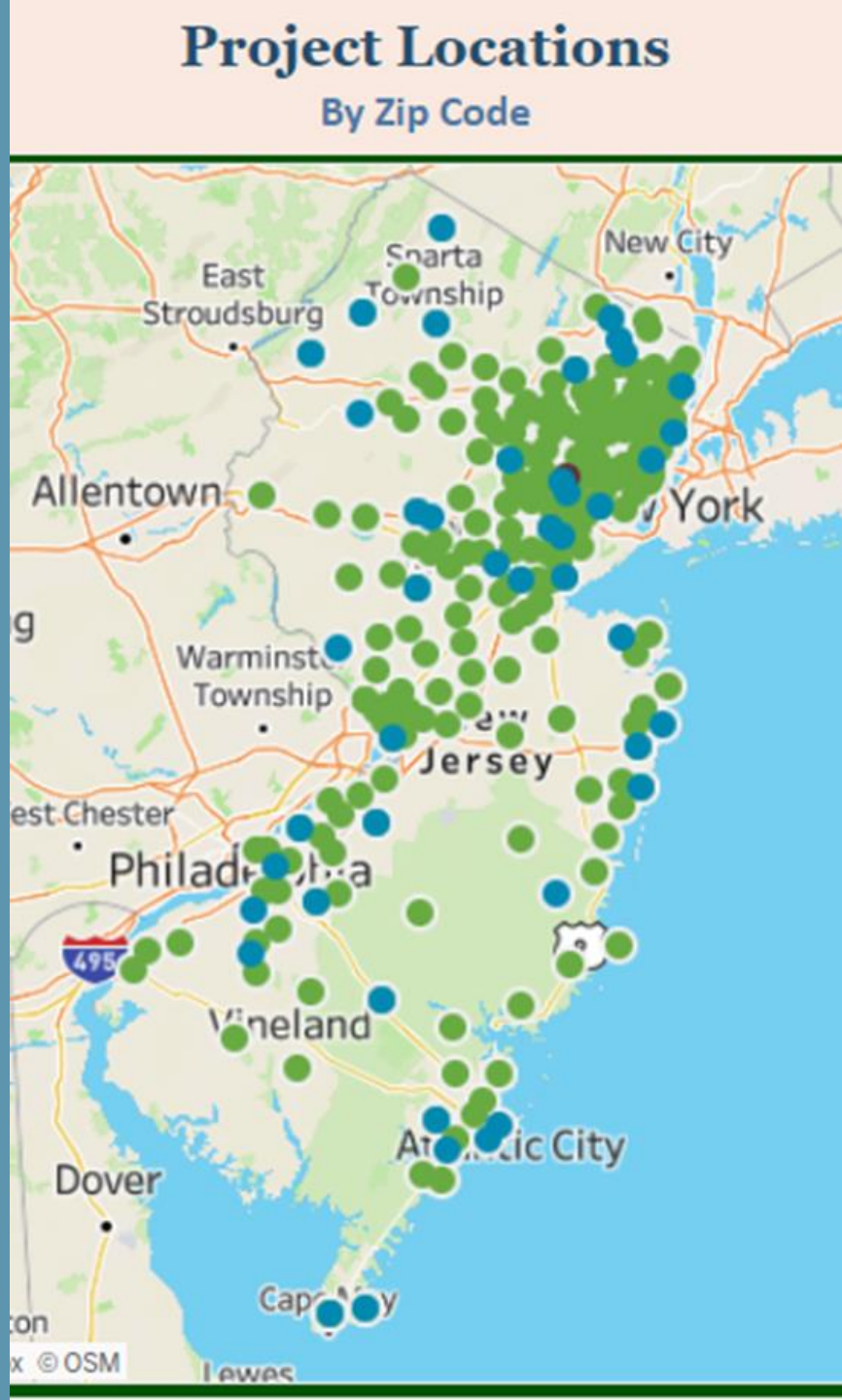
Grant Program Success

- Overall:
- More than $14 million funded
- 1,284 chargers (1,897 ports)

It Pay$ to Plug in
Project Locations

390 project locations

- 50% Public
- 30% Workplace
- 20% MUDs

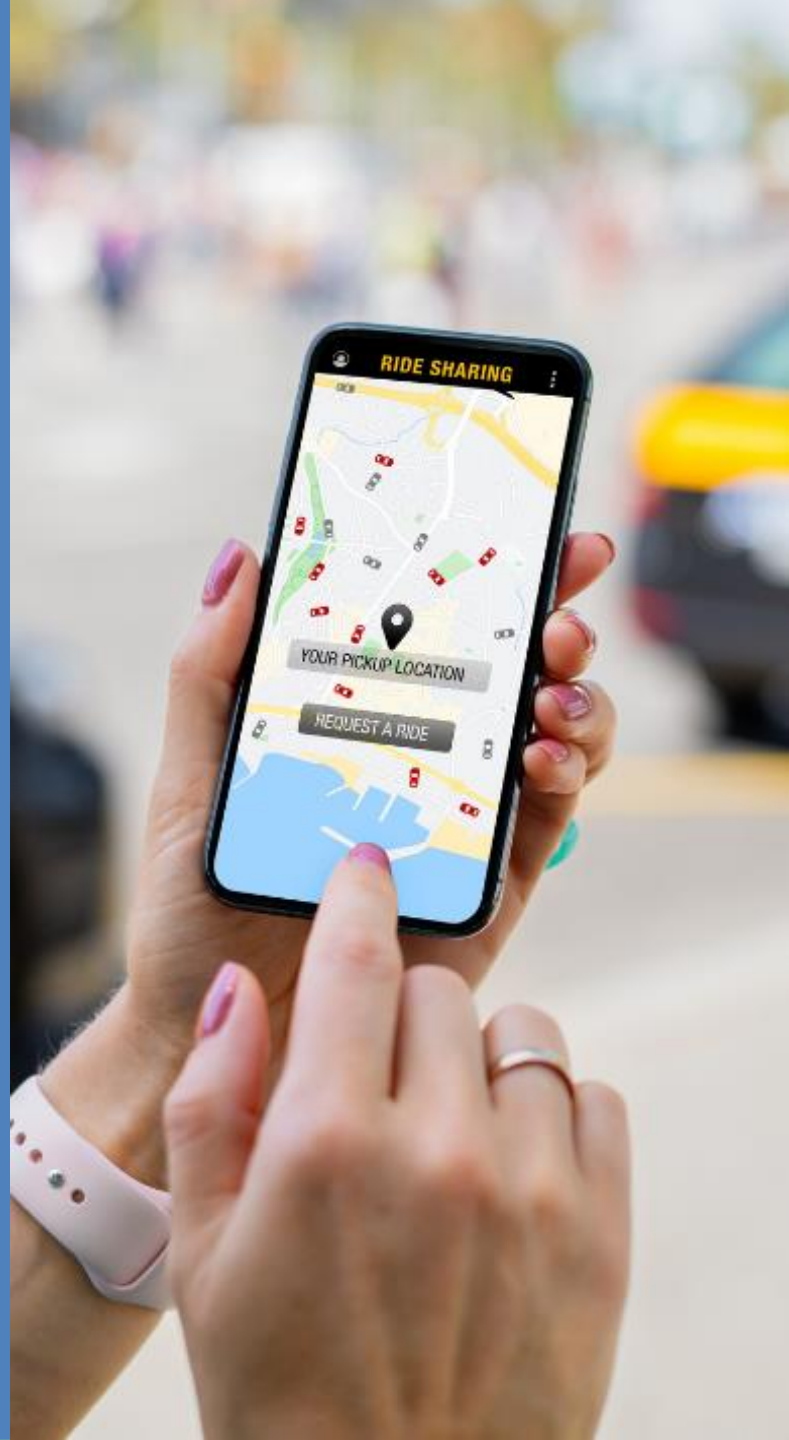


What is eMobility?

A multifaceted approach must be taken to reduce the emissions from the transportation sector. eMobility is one approach that provides clean transportation to citizens who may not own their own vehicle.

Shared Transportation using EVs:

- ✓Rideshare
- ✓Carshare
- ✓Ride hailing
- ✓Shuttle Services
- ✓And more



DEP's eMobility Grant Program

New Jersey is bringing zero emission transportation options to overburdened communities through eMobility programs.

Current projects:

Isles, Inc./GoTrenton! – Rideshare, carshare, and shuttle service for Trenton.
Zapp Electric Inc – DCFC to support rideshare and carshare vehicles in the Greater Newark and Gloucester areas
Township of Woodbridge – Shuttle service to fill transportation gaps between Metropark Station and Woodbridge Train Station
Jersey City/Via - Transition existing fleet to EVs
Envoy/Blink - EVs for carsharing near affordable housing
Zipcar – EVs for carsharing near affordable housing

ISLES, INC: GOTrenton! eMobility Pilot

- Riders use an app to hail shuttle
- Only $2.00 per ride!
- Soft launch - October 2023
  - ✓ 448 rides
  - ✓ 96 unique users
- Workplace Van & ADA accessible vehicle coming

DRIVECLEANNJ

Visit www.nj.gov/dep/drivegreen

Join DEP mailing list for updates and funding announcements www.state.nj.us/dep/stopthesoot/sts-listserv.htm

Contact Us

Jennifer McHenry
Jennifer.Mchenry@dep.nj.gov

NJDEP Bureau of Mobile Sources
drivegreen@dep.nj.gov

drive green new jersey

Follow us on social media!

Instagram @DriveCleanNJ

Facebook NJDEPAQES

Twitter @NewJerseyDEP

NJ BPU:

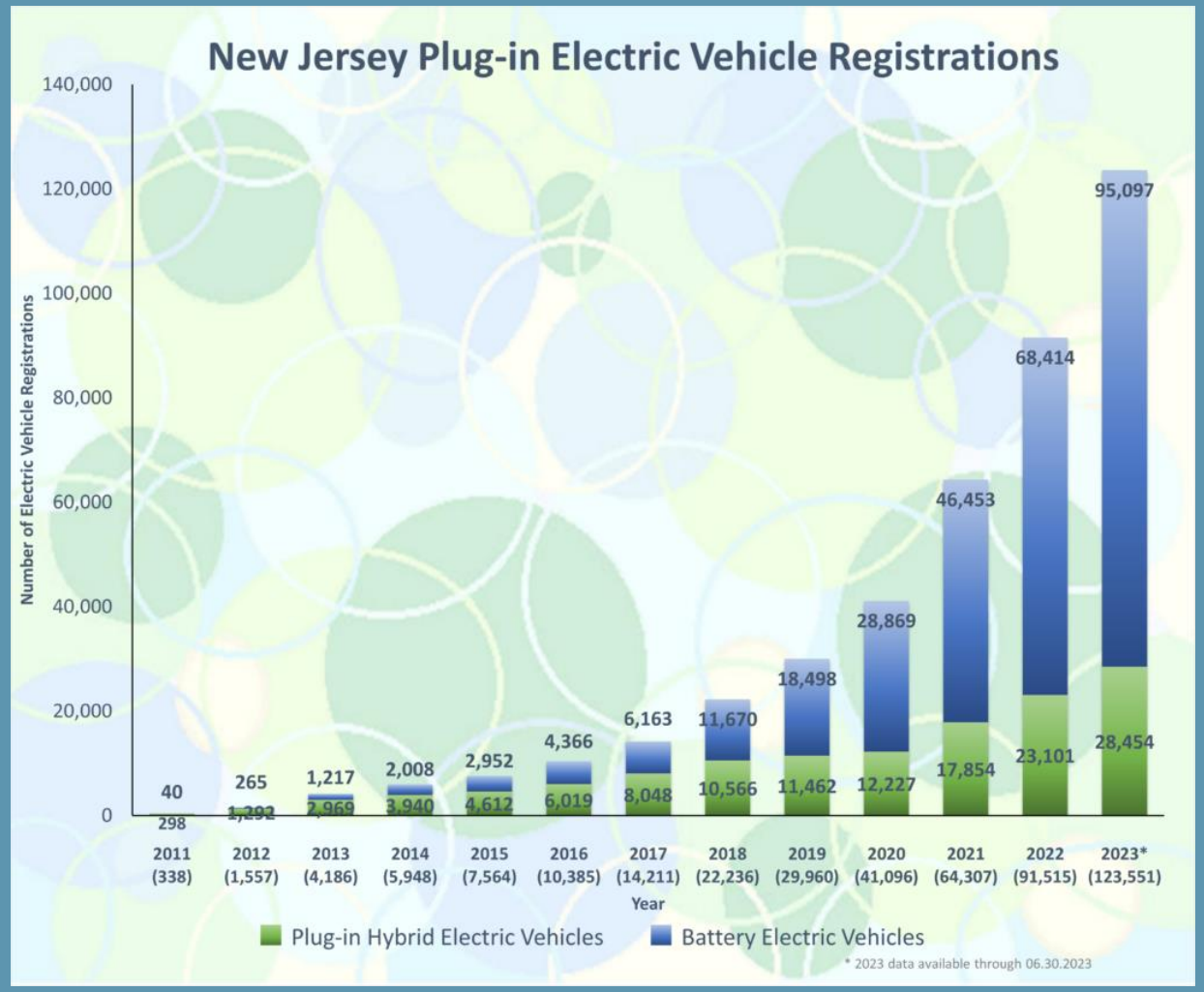
Driving EV Adoption

November 15, 2023
NJ League of Municipalities Mini-Conference

EV Goals

- At least 330,000 registered light-duty plug-in EVs by December 2025;
- At least 2 million registered light-duty plug-in EVs by December 2035;
- At least 85 percent of all new light-duty vehicles sold or leased in the State shall be plug-in EVs by December 2040;
- At least 25 percent of State-owned non-emergency light-duty vehicles shall be plug-in EVs by December 2025; and
- 100 percent of State-owned non-emergency light duty vehicles shall be plug-in EVs by December 2035.

EV Registration



- EVs now comprise 12% of new vehicle sales
- EVs now comprise 9.5% of new vehicle registrations

https://dep.nj.gov/wp-content/uploads/drivegreen/nj-plugin-registrations-1024x847.png

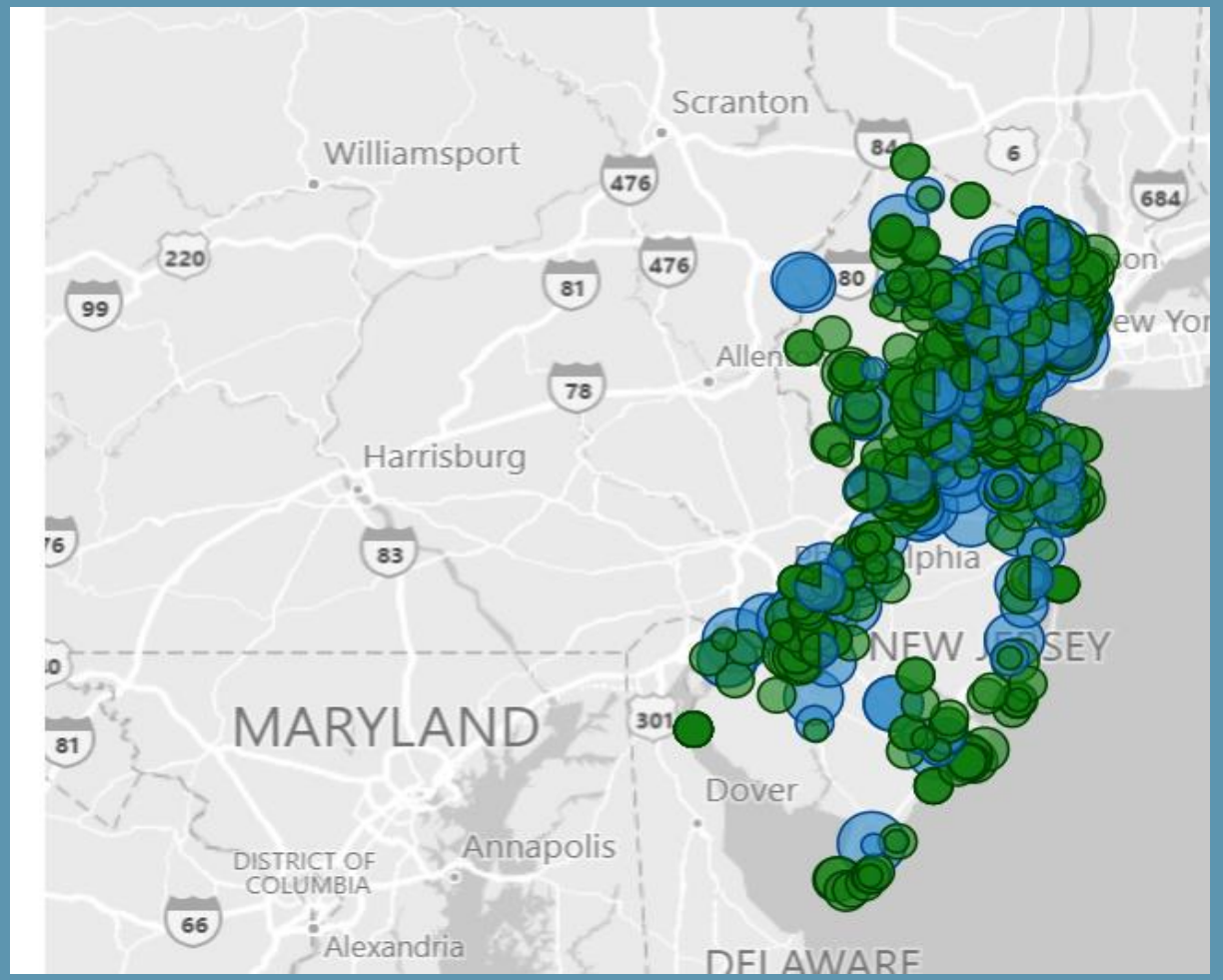
EV Charging Goals

- At least **400 DC Fast Chargers** shall be available for public use at no fewer than 200 charging locations in the State by December 2025.
- At least **1,000 Level Two chargers** shall be available for public use across the State by December 2025.
- At least **15 percent** of all multi-family residential properties in the State shall be equipped with EVSE for the routine charging of plug-in electric vehicles by December 2025.
- At least **20 percent** of all franchised overnight lodging establishments shall be equipped with EVSE for routine electric vehicle charging by guests of the establishment by providing Level Two EVSE by December 2025.

Charging Map

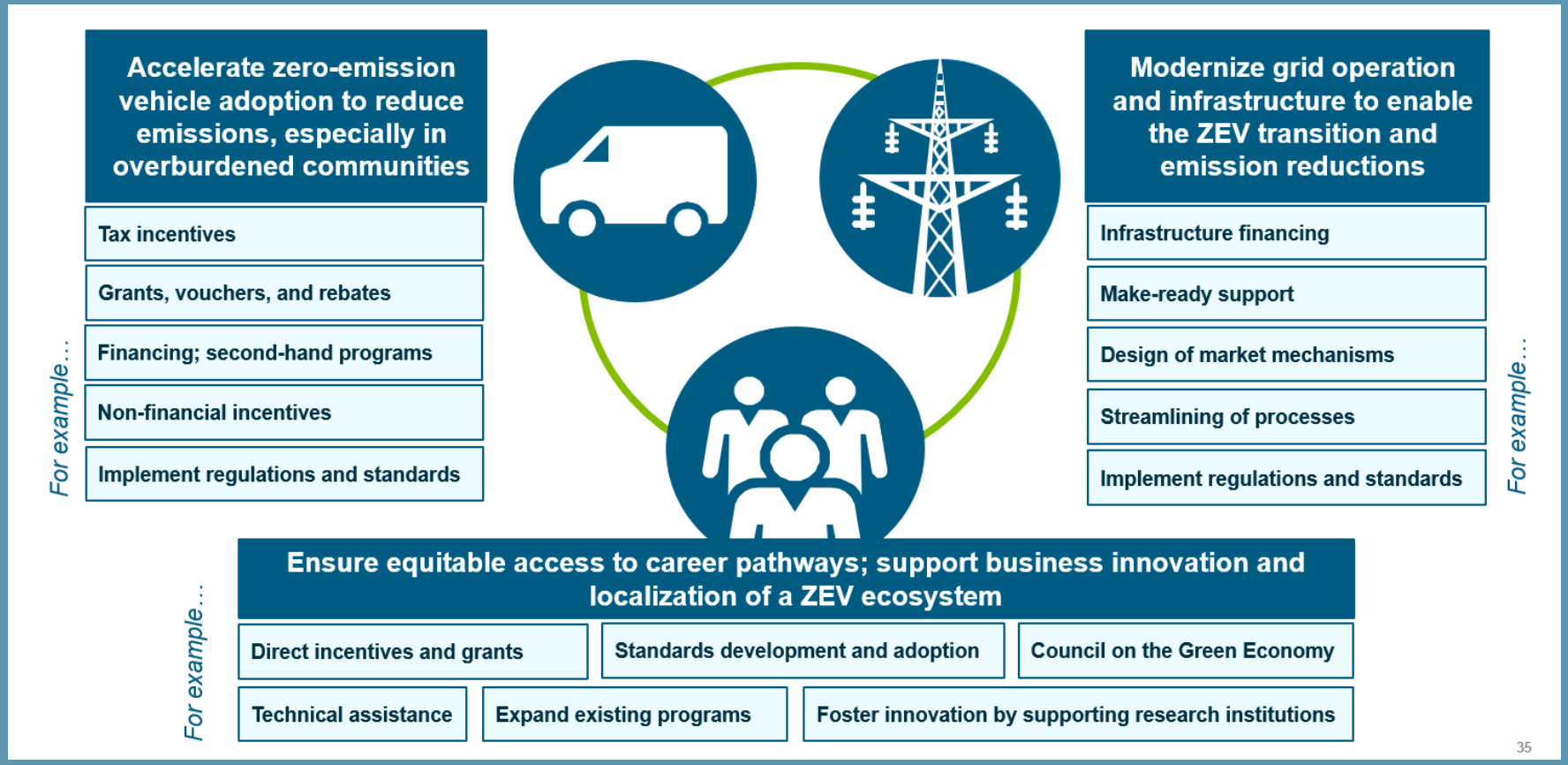
900 +
Fast
Chargers

2000 +
Level 2
Chargers



https://dep.nj.gov/wp-content/uploads/drivegreen/evaluatenj.png

A Whole of Government Approach:
NJ's EV ecosystem planning



New Jersey EV Awards

- 5,380 electric vehicles for private or personal use
- 246 electric vehicles for local government
- 5,782 charging stations with 9,537 ports at 1,530 locations
- 9 eMobility projects that will increase access to clean, shared transportation in overburdened communities
- 458 electric trucks and cargo vans
- 201 electric school buses and 242 electric buses and shuttle buses
- 179 electric airport and port vehicles and equipment

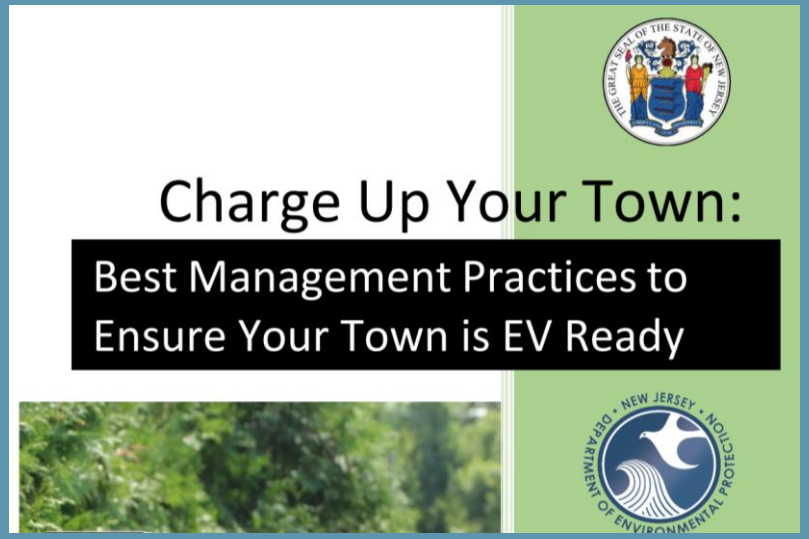
National Electric Vehicle Infrastructure (NEVI)

- $104 million in Formula Funding for 5 years, for:
  - Corridor Charging along designated Alternative Fuel Corridors
  - MUST be at least four (4) 150kW simultaneous chargers
  - No more than 1 mile off an exit every 50 miles
- Funding runs through NJDOT
- Over $2 billion in Competitive solicitations for Community Charging
- Tax Credits for Manufacturing and Purchasing
  - Vehicles
  - Chargers
  - Batteries
- Other Competitive funding for:
  - School Buses
  - Transit
  - Ferry
  - Port
  - Battery Recycling
  - Workforce Development

EV Ordinance

- All Applications for installation of EVSE (charging station) or Make-Ready parking spaces ***shall be*** considered **permitted accessory use and permitted accessory structure in all zoning or use districts** and ***shall not*** require a variance.
- Applies to existing buildings and new buildings. If existing, it ***shall not*** **require site plan approval** and ***shall*** **be approved through issuance of zoning permit**.
- **Parking spaces** with EVSE and Make-Ready equipment ***shall be*** included in the calculation of **minimum required parking spaces.**
- **Parking spaces** with EVSE or Make-Ready ***shall*** **count as at least 2 parking spaces** (no more than 10% reduction of total).
- Municipalities may deviate from the Reasonable Standards (Section F) of the model ordinance by amending the ordinance through the normal amendment process. However, this does not authorize a municipality to require site plan review for the installation of EVSE or Make-Ready parking spaces.

Tools to Use



Provides best practices and helps answer FAQs

FAQs

- **Are existing developments included?**

  No there are no requirements for existing developments.

- **What about rehabs and renovations?**

  Rehabs or Renovations that do not touch or create additional parking have no additional requirements through this ordinance. However if construction reconfigures or creates parking dedicated to that construction, the requirements are applicable to those spaces.

- **Where should chargers be located in developments?**

  The numerical requirement is based on all required, off-street new parking spaces in an MUD Development. The law/ordinance does not dictate where the EVSE and Make-Ready parking spaces must go (common areas, assigned parking). Best practices for EV adoption would suggest that the charging stations should not go in assigned or deeded parking spaces. The arrangement is best worked out at the land use board level during application review.

FAQs cont.

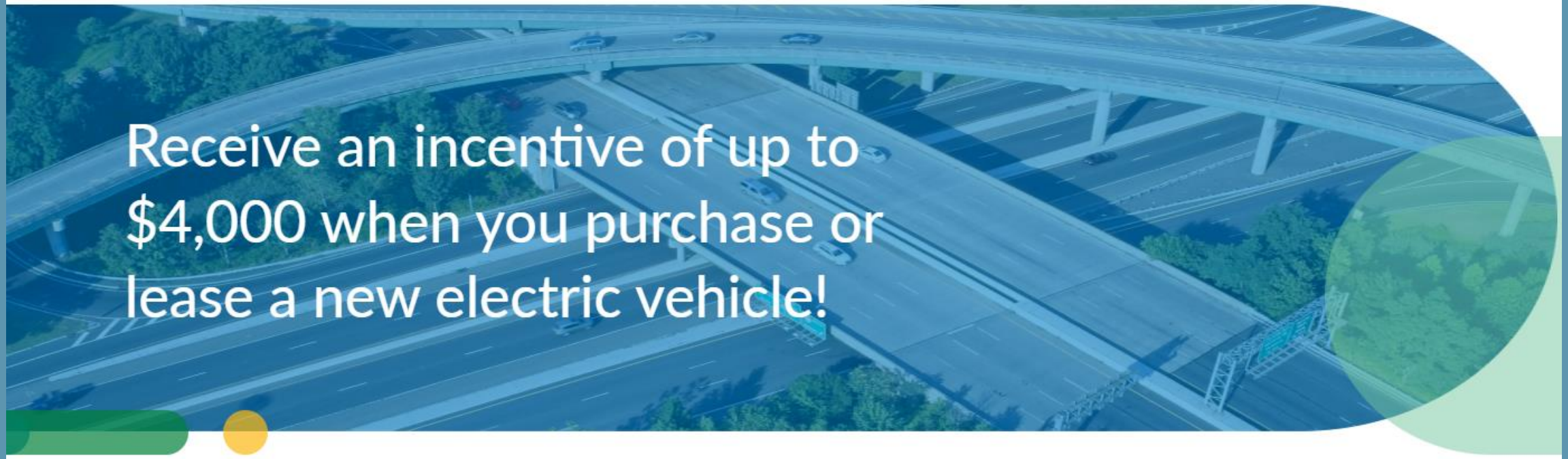
- **What happens to our current EV ordinance? Can we require more chargers?**

The statewide EVSE ordinance supersedes existing EVSE ordinances. The municipality does not technically need to adopt the ordinance in order for it to be effective. However, adoption allows municipalities to address local concerns and to make it a simpler process for residents and developers to determine the appropriate rules for EVSE and Make-Ready parking space installation

Charging and Homeowners Associations

1. P.L. 2020, c. 108 prohibits common interest communities from adopting rules that prohibit or unreasonably restrict the installation or use of EVSE in the designated parking space of a unit owner. (https://www.njleg.state.nj.us/2020/Bills/PL20/108_.PDF).

2. P.L. 2020, c. 80 80_.PDF (state.nj.us) requires a developer to offer to install, or to provide for the installation of, an electric vehicle charging station into a dwelling unit when a prospective owner enters into negotiations with the developer to purchase a dwelling unit.



Receive an incentive of up to $4,000 when you purchase or lease a new electric vehicle!

Charge Up New Jersey promotes clean vehicle adoption in the state by offering incentives of up to $4,000 for the purchase or lease of new, eligible zero-emission vehicles, including battery electric and plug-in hybrid electric. By shifting away from gasoline and diesel use, it creates many environmental and economic benefits, including less air pollution and reduced greenhouse gas emissions.

Charge Up New Jersey

FY24 is the fourth year of the Program, which has provided over $90 million to over 25,000 Electric Vehicles.

Current Incentive:

- Must be a licensed New Jersey Driver;
- Must be registered in the state of New Jersey;
- Point-of Sale Incentive from an Eligible Dealer;
- $25/ per e-mile;
- Up to $4000 for vehicles with an MSRP under $45,000;
- Up to $1500 for EVs with an MSRP between $45,001 and $55,000; and

chargeup.njcleanenergy.com

Residential Charger Program

A $250 rebate for eligible home EV chargers.

Chargers must be on a Compliant Network.

NJDEP| Drive Green NJ | Network Service Providers

Utility Charging Programs:

Over $215 Million in EV infrastructure investment

Utility Filings

Make Ready Incentives

- Public
- Workplace
- MUD

Fast Charging

- PSEG – 1200
- ACE – 100
- JCPL- 200
- RECO-30

Level 2

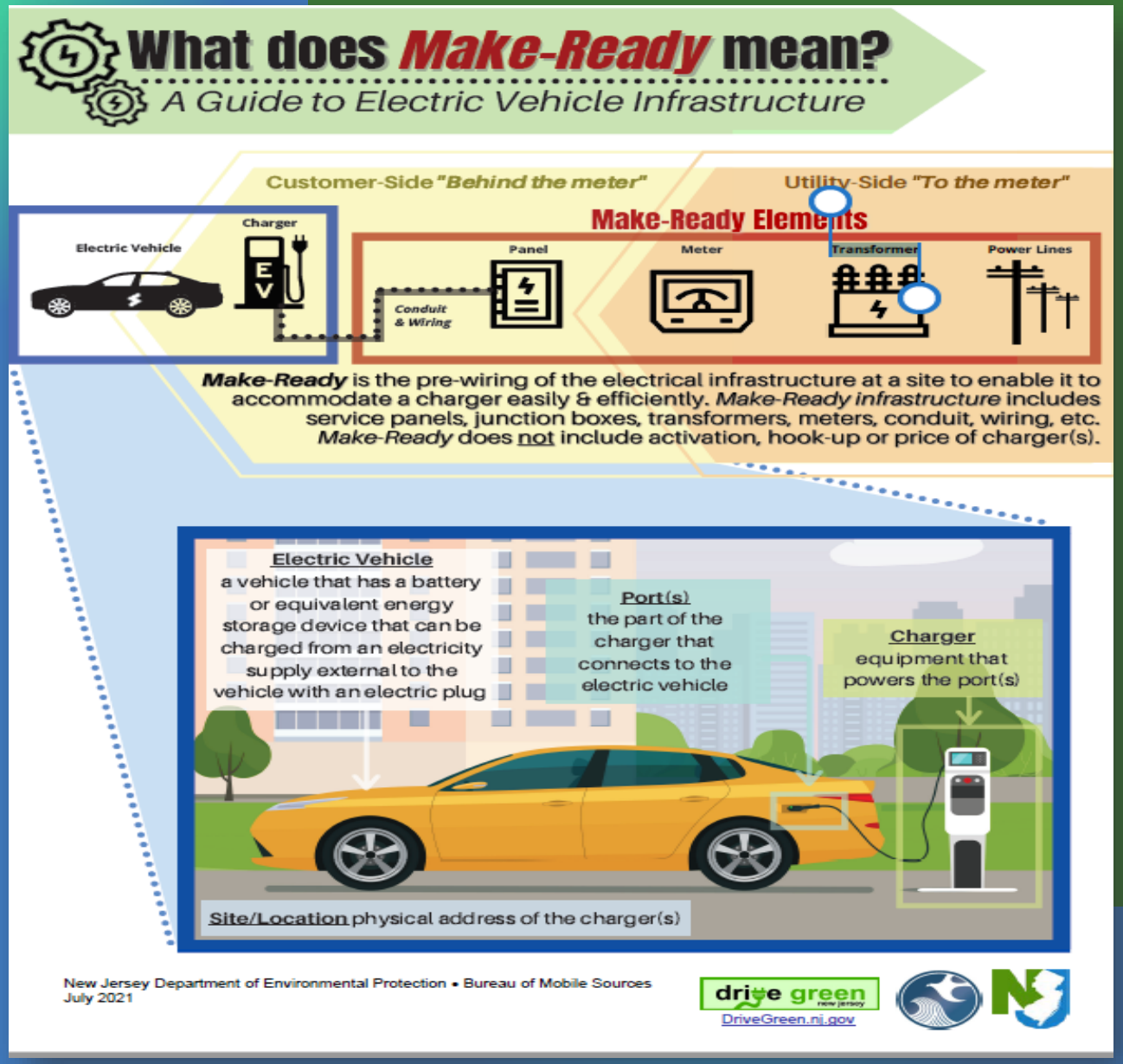
- PSEG – 3500
- ACE – 1500+
- JCPL- 900
- RECO-400

Utility Programs

- Make-Ready for residential, L2 workplace, L2 MUD, L2 public and DCFC public chargers.
- No utility ownership until Areas of Last Resort.
- MUD rates must be substantially similar to residential rates.
- Demand Charge Solution.
- Can cover no more than 90% of total cost of project with federal, state and utility funding.
- Must be a universal charger, proprietary charges must be collocated, receive smaller incentive.
- Data sharing.

Make Ready

The infrastructure required to power an EV charger is called the Make-Ready work. By the end of 2022 all 4 electric utilities will provide programs to incentivize those costs.



Non-IOU customers

- Customers in a municipal utility's service area are not eligible for the same Make-Ready incentives through their utility.
- To address this BPU applied for and received USDOE funding to provide incentives for Make Ready for residential, MUD and public charging.
- Funding levels:
  - Level 2 charger – up to 50% of the cost, up to $5,000
  - Fast Charger – up to 50% of the cost, up to $50,000
- Application can be made by applying for any of the EV charger programs listed on njcleanenergy.com/ev, there is a question regarding Non-IOU funding
- For residential charging email EV.Programs@bpu.nj.gov

EVSE Requirements

To provide consistency across our programs, BPU EV Program requirements include:

- Energy Star certified, as required by the Appliance Act (applicable for Level 1 & 2 chargers)
- Vehicles and chargers may not be purchased prior to application
- Meet or exceed federal uptime requirement – 97%
- Networked dual-port charger that is on a network pre-approved by the State
- Incentives may be stacked with utility make-ready incentives, up to the amounts allowed by the utility's stipulation of settlement. BPU incentives may not be stacked with the New Jersey Department of Environmental Protection's ("NJDEP") It Pay$ to Plug In Program for the same charger

All applications can be found at njcleanenergy.com/ev

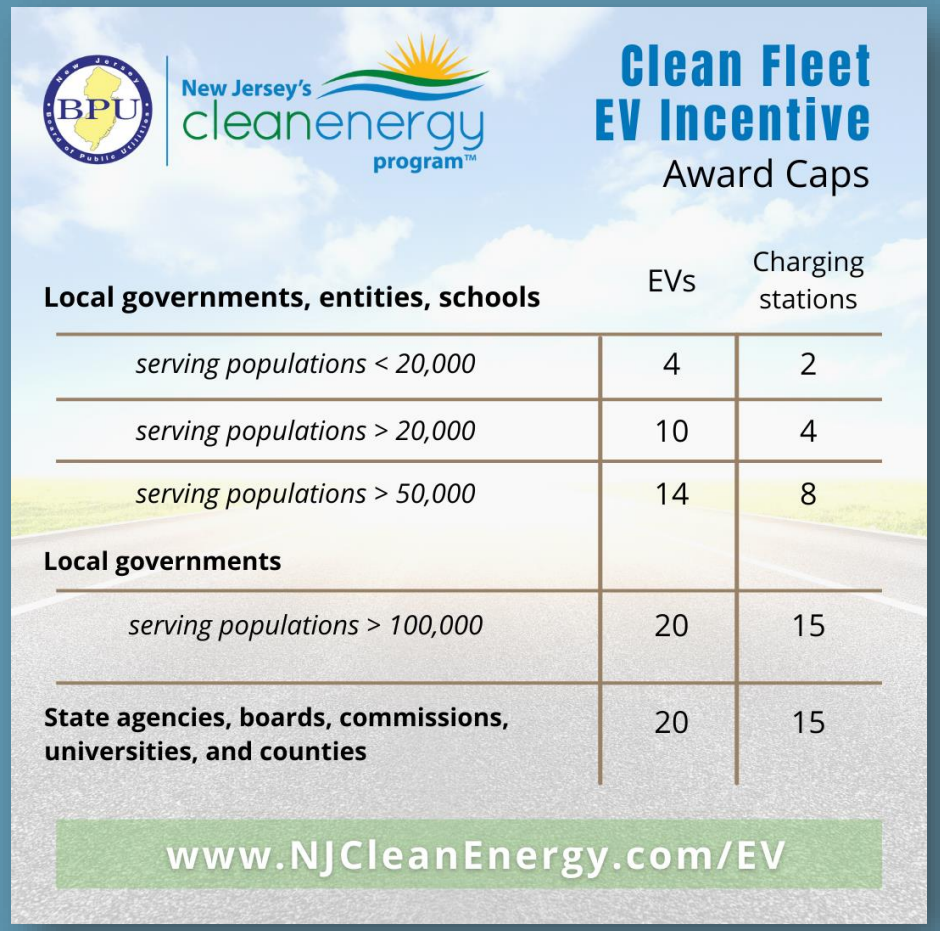
Clean Fleet

Incentive Program for state, county and local government and non-profits.

- $4,000 for a light duty BEV
- $10,000 for a BEV Class 2b-6
- $5,000 for a L2 Public Charger
- $4,000 for a L2 Fleet Charger
  - Up to $5,000 for Make Ready for a Fleet Charger
- $50,000 for a DCFC – Public or Fleet
  - Up to $50,000 for Make Ready for a Fleet Charger

A 50% Bonus for Overburdened Municipalities

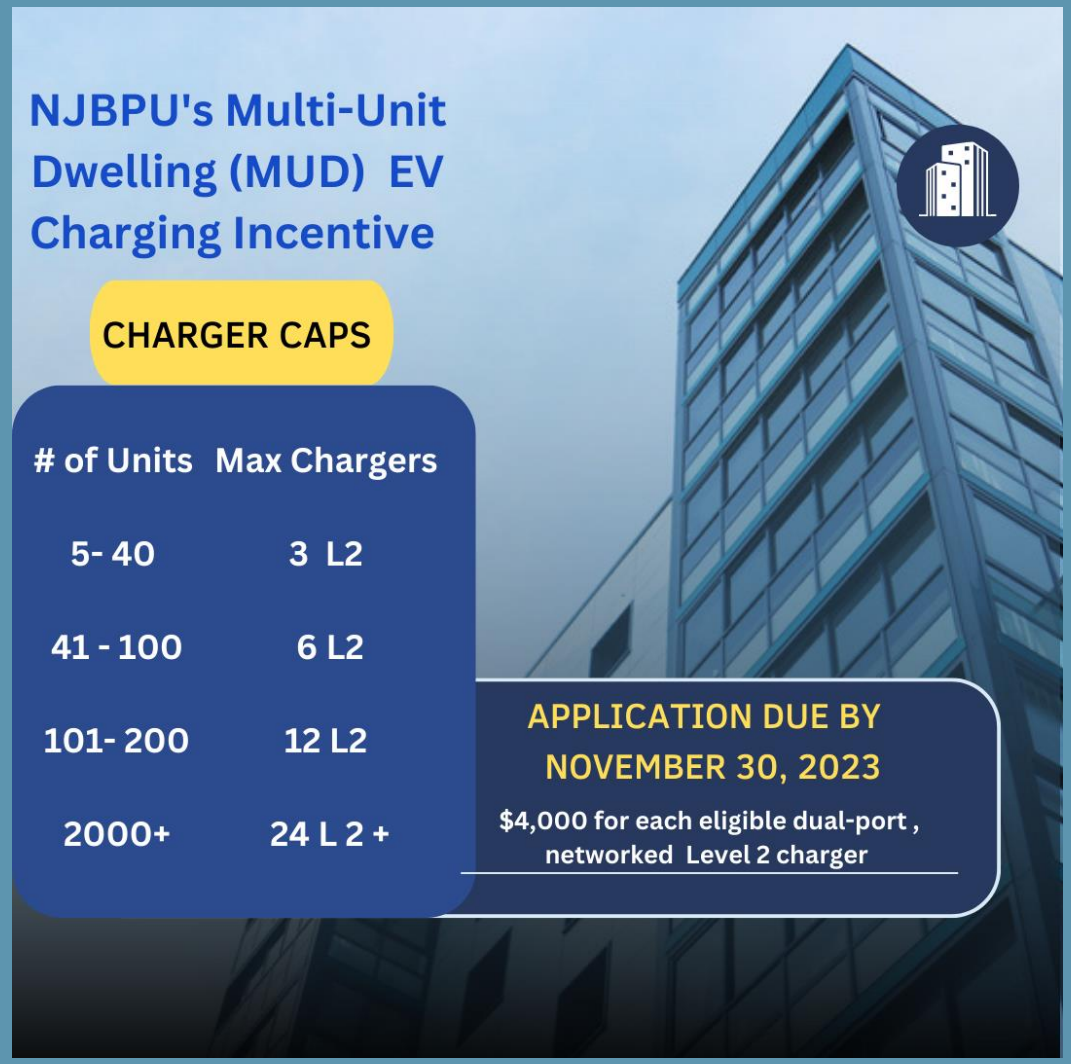
Applications due November 30, 2023



Multi-Unit Dwelling (MUD)

Incentive for condos, apartments, townhouse developments with 5 or more units. Provides $4,000 for each Level 2 charger.

Developments in Overburdened Municipalities and deed restricted low and moderate income housing are eligible for $6,000 for each Level 2 charger.



EV Tourism

- Targets tourism destinations across the state
- Incentives for chargers:
  - $5,000 per L2 charger (up to cost of charger)
  - $50,000 per charger (up to cost of charger)
- Sites are eligible for up to 6 L2 chargers and 2 DCFC.

- Applications due November 30, 2023
- Questions? EV.programs@bpu.nj.gov

More Information

Cathleen Lewis
Clean Transportation
Programs Manager
Cathleen.Lewis@nj.bpu.gov

Visit
NJCleanEnergy.com
Newsletter
NJCleanEnergy.com/NEWSLETTER
Listservs
NJCleanEnergy.com/LISTSERVS

@NJCleanEnergy

Introducing Sustainable Jersey

- **Certification program** for municipalities and schools in New Jersey
- **Tools, resources, and guidance** to help municipalities and schools become more sustainable
- **Grants and funding** for municipalities and schools
- **Regional Hubs**

91%

OF NJ POPULATION LIVES IN A **REGISTERED OR CERTIFIED COMMUNITY**

83%

OF MUNICIPALITIES **PARTICIPATING**

67%

of NJ public school districts registered with Sustainable Jersey for Schools

SJ Statistics

25,569
Actions
Implemented

Sustainable Jersey

2009 Program Started | 83% Participating | 91% Population

136 Bronze | 70 Silver | 5 Gold Stars

Sustainable Jersey for Schools

2014 Program Started | 67% Districts Participating | 1,150 Schools Registered

293 Bronze | 44 Silver | 47 Digital Schools Stars

Statistics current as of 10/31/23

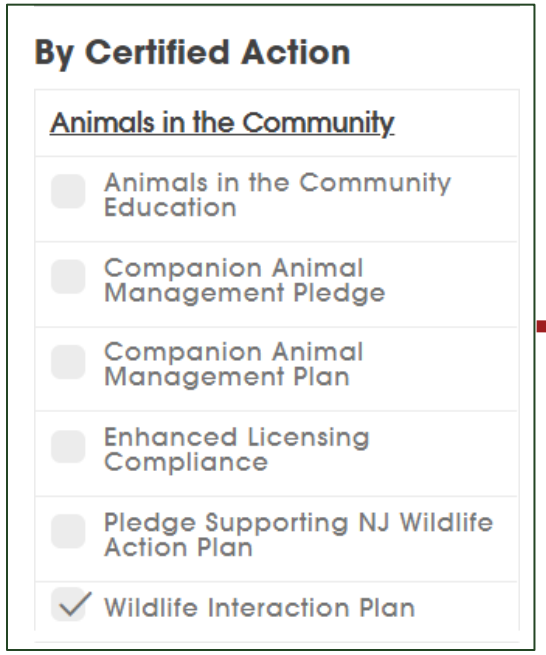
Municipal Energy Actions

	Energy Efficiency	Renewable Energy	Alternative Fuel Vehicles
Municipal Operations	• Energy Efficiency for Municipal Facilities • Energy Tracking and Management	• On-Site Geothermal • On-Site Solar +10 pt storage/resilience + 5 pt solar thermal • On-Site Wind • Buy Renewable Energy	• Fleet Inventory • Purchase Alternative Fuel Vehicles • Meet Green Fleet Targets
Community Energy Use	• Energy Assistance Outreach • Commercial Energy Efficiency Outreach • Residential Energy Efficiency Outreach • Community Energy Plan / Climate Action Plan	• Make Your Town Solar Friendly • Municipally Supported Community Solar • Solar Outreach • Renewable Government Energy Aggregation (R-GEA)	• Make Your Town Electric Vehicle (EV) Friendly • Public EV Chargers • Electric Vehicle Outreach

Participants Map Search

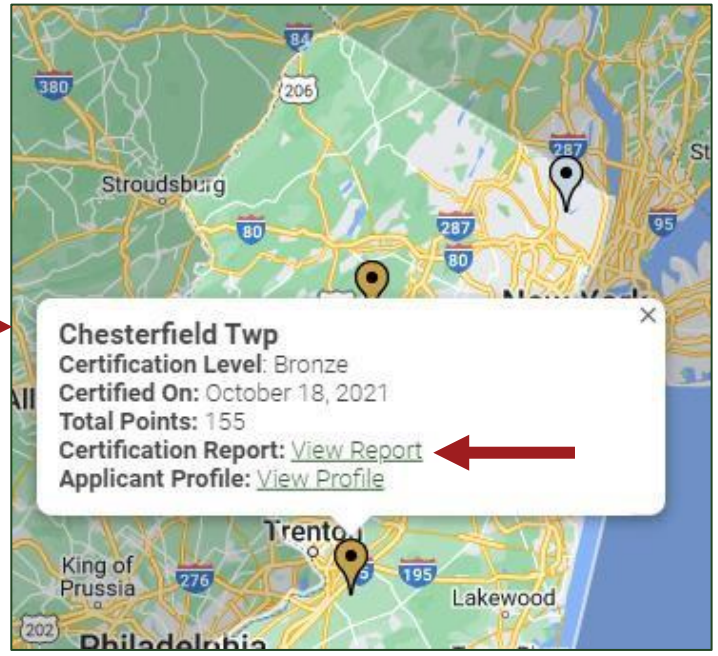
Use the Participating Municipalities & Approved Actions (*sustainablejersey.com/certification/search-participating-municipalities-approved-actions*) page to find examples of documentation from certified towns and connect with municipal green teams

Search by action



View certified towns approved for that action

View certification report for example documentation



Fleet Inventory

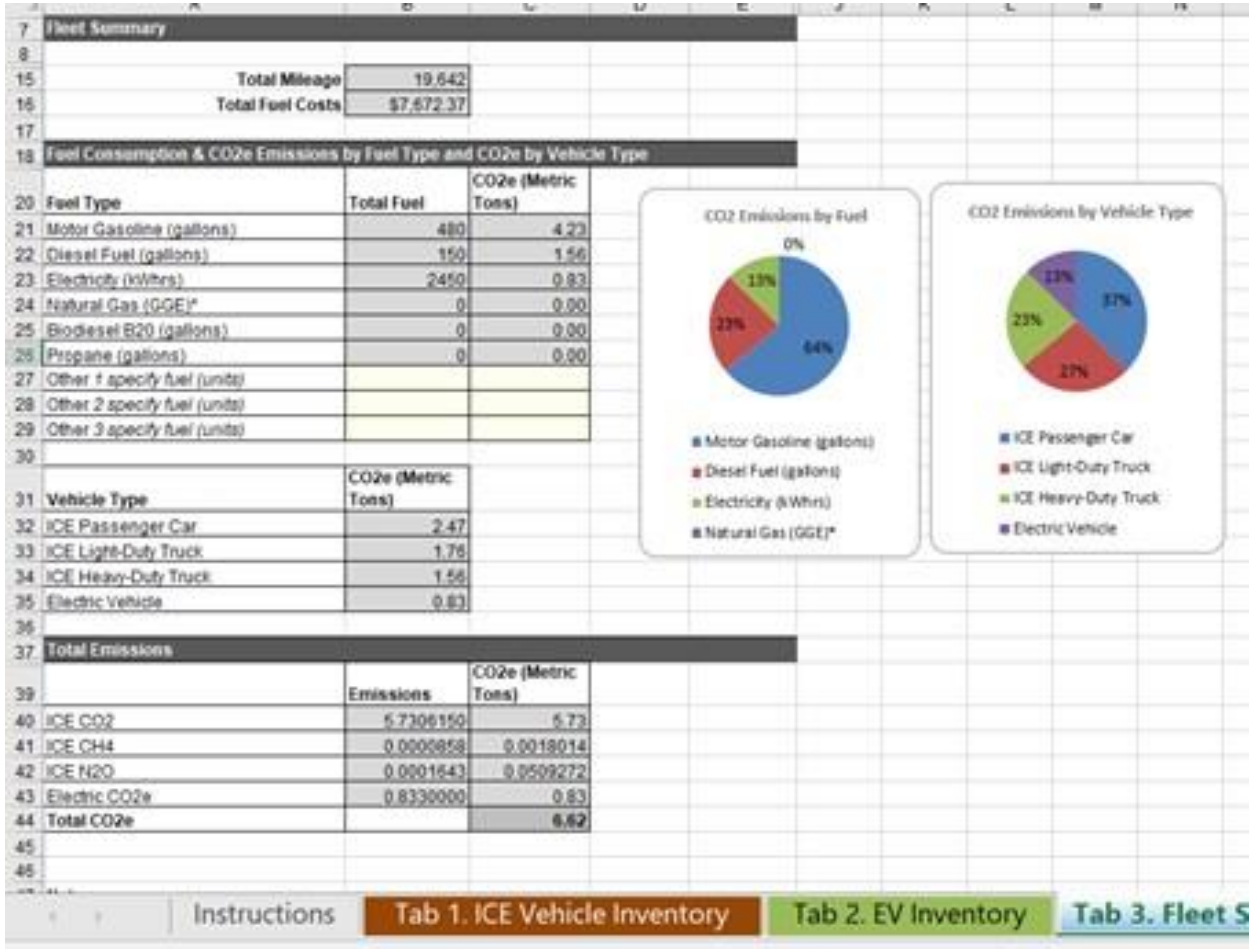
- Evaluate current vehicle use
- Fleet planning exercise
- Automatically calculate fleet emissions

Fleet Analysis

Atlas Public Planning (DRVE) Tool

Dashboard for Rapid Vehicle Electrification

- Free fleet analysis tool
- Prioritized order of electrification
- Provides information about comparable EVs



Fleet Summary

Total Mileage	19,642
Total Fuel Costs	$7,672.37

Fuel Consumption & CO2e Emissions by Fuel Type and CO2e by Vehicle Type

Fuel Type	Total Fuel	CO2e (Metric Tons)
Motor Gasoline (gallons)	480	4.23
Diesel Fuel (gallons)	150	1.56
Electricity (kWhrs)	2450	0.83
Natural Gas (GGE)*	0	0.00
Biodiesel B20 (gallons)	0	0.00
Propane (gallons)	0	0.00
Other 1 specify fuel (units)		
Other 2 specify fuel (units)		
Other 3 specify fuel (units)		

Vehicle Type	CO2e (Metric Tons)
ICE Passenger Car	2.47
ICE Light-Duty Truck	1.76
ICE Heavy-Duty Truck	1.56
Electric Vehicle	0.83

Total Emissions

	Emissions	CO2e (Metric Tons)
ICE CO2	5.7306150	5.73
ICE CH4	0.0000858	0.0018014
ICE N2O	0.0001643	0.0509272
Electric CO2e	0.8330000	0.83
Total CO2e		6.62

Sustainable Jersey Fleet Inventory Spreadsheet

www.sustainablejersey.com/fileadmin/media/Actions_and_Certification/Actions/Energy/SJ_Fleet_Inventory_Spreadsheet_2022.xlsx

Public EV Charging Infrastructure

- Awards points for installation of public EV charging stations
- Clear municipal role
- EV infrastructure resources
  - Charger types
  - Site design

	AC Level 1	AC Level 2	DC Fast Charger
Voltage	120V 1-Phase AC	208V or 240V 1-Phase AC	480V 3-Phase AC
Suitable for Installation	Single-family Multi-family	Single-family Multi-family Commercial Municipal/Private Fleet	Municipal/Private Fleet Public Metro Areas
Amps	12-16 Amps	12-90 Amps (typical 32 Amps)	<125 Amps (typical 60 Amps)
Charging loads	1.4 - 1.9 kW	2.5 - 19.2 kW (typical 7 kW)	<90 kW (typical 50 kW)
Charge time for vehicle	3-5 miles of range per hour	10-20 miles of range per hour	80% charge in 20-30 minutes
Best for	6+ hour or overnight charge	2-6 hour dwell times	High turn over
Station hardware cost	$500 - $1,000 per port	$600 - $5,000 per port	$7,000 - $50,000 per port

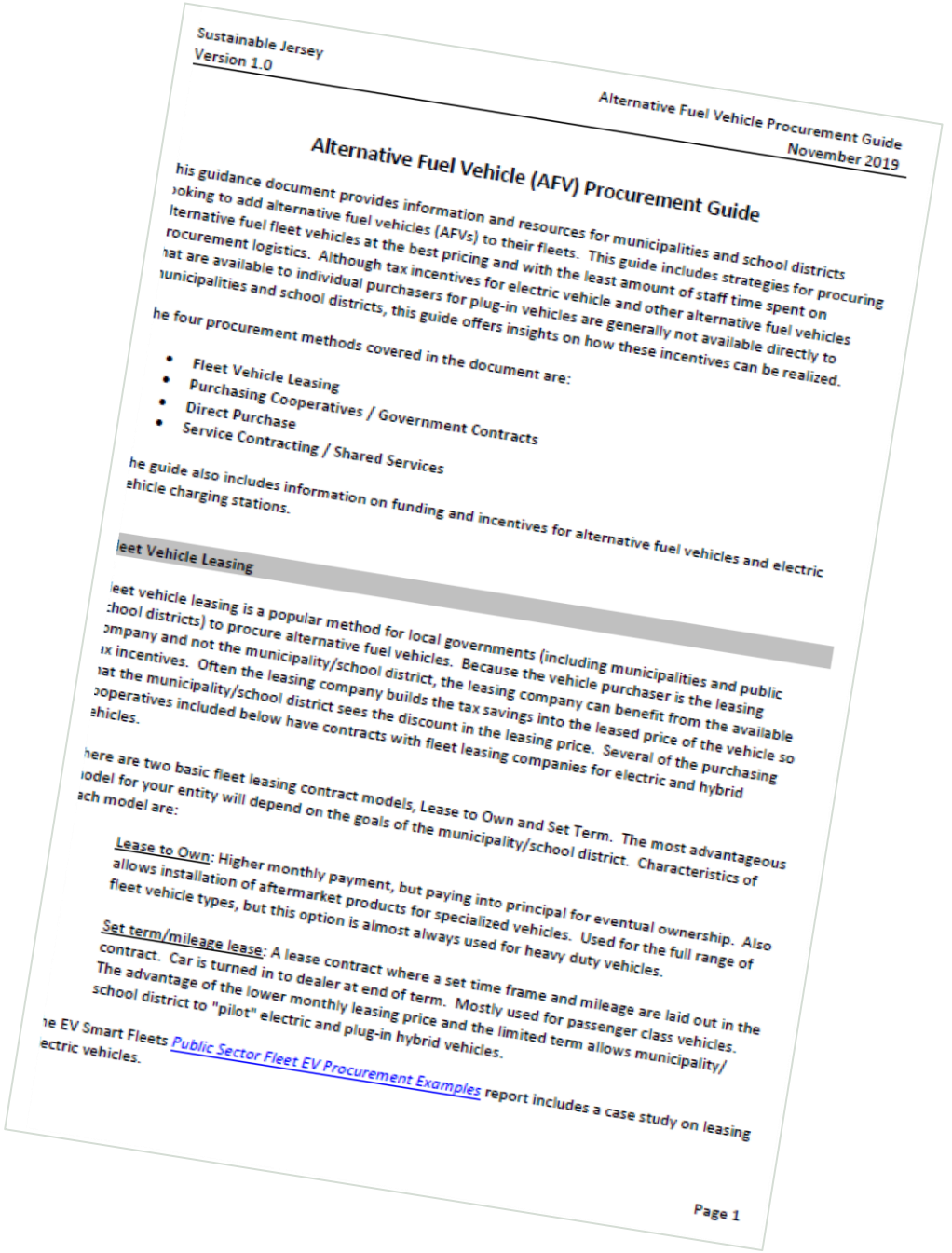
Adapted from NYSERDA

Image from NJDEP. *Charge Up Your Town: Best Management Practices for Ensuring Your Town is EV-Ready*. 2021 nj.gov/dep/drivegreen/pdf/chargeupyourtown.pdf

Purchase Alternative Fuel Vehicles

- Awards points for purchase of electric and other alternative fuel fleet vehicles
- Sustainable Jersey Alternative Fuel Vehicle Procurement Guide
  - Guidance for capturing tax credits
  - Procurement options

www.sustainablejersey.com/fileadmin/media/Actions_and_Certification/Actions/Energy/Sustainable_Jersey_Alternative_Fuel_Vehicle_Procurement_Guide.pdf



Sustainable Jersey
Version 1.0

Alternative Fuel Vehicle Procurement Guide
November 2019

Alternative Fuel Vehicle (AFV) Procurement Guide

his guidance document provides information and resources for municipalities and school districts
ooking to add alternative fuel vehicles (AFVs) to their fleets. This guide includes strategies for procuring
lternative fuel fleet vehicles at the best pricing and with the least amount of staff time spent on
rocurement logistics. Although tax incentives for electric vehicle and other alternative fuel vehicles
hat are available to individual purchasers for plug-in vehicles are generally not available directly to
unicipalities and school districts, this guide offers insights on how these incentives can be realized.

he four procurement methods covered in the document are:

- Fleet Vehicle Leasing
- Purchasing Cooperatives / Government Contracts
- Direct Purchase
- Service Contracting / Shared Services

he guide also includes information on funding and incentives for alternative fuel vehicles and electric
ehicle charging stations.

leet Vehicle Leasing

leet vehicle leasing is a popular method for local governments (including municipalities and public
:hool districts) to procure alternative fuel vehicles. Because the vehicle purchaser is the leasing
ompany and not the municipality/school district, the leasing company can benefit from the available
ax incentives. Often the leasing company builds the tax savings into the leased price of the vehicle so
hat the municipality/school district sees the discount in the leasing price. Several of the purchasing
ooperatives included below have contracts with fleet leasing companies for electric and hybrid
ehicles.

here are two basic fleet leasing contract models, Lease to Own and Set Term. The most advantageous
odel for your entity will depend on the goals of the municipality/school district. Characteristics of
ach model are:

Lease to Own: Higher monthly payment, but paying into principal for eventual ownership. Also allows installation of aftermarket products for specialized vehicles. Used for the full range of fleet vehicle types, but this option is almost always used for heavy duty vehicles.

Set term/mileage lease: A lease contract where a set time frame and mileage are laid out in the contract. Car is turned in to dealer at end of term. Mostly used for passenger class vehicles. The advantage of the lower monthly leasing price and the limited term allows municipality/school district to "pilot" electric and plug-in hybrid vehicles.

he EV Smart Fleets *Public Sector Fleet EV Procurement Examples* report includes a case study on leasing
ectric vehicles.

Page 1

EV Considerations

Vehicle Miles Travelled

- Select vehicles that:
  - Are driven enough to allow lower fueling and maintenance costs to offset higher vehicle price
  - Have enough downtime to be charged between duty cycles

Parking and Charging

- Where will vehicle be parked?
- Will charging infrastructure be available?

What do fleet users think about adding EVs to fleet?

Will fleet users embrace the new technologies?

- Arrange a test drive/demo
- Outreach to fleet users

Users may have information about vehicle usage that can inform vehicle purchases

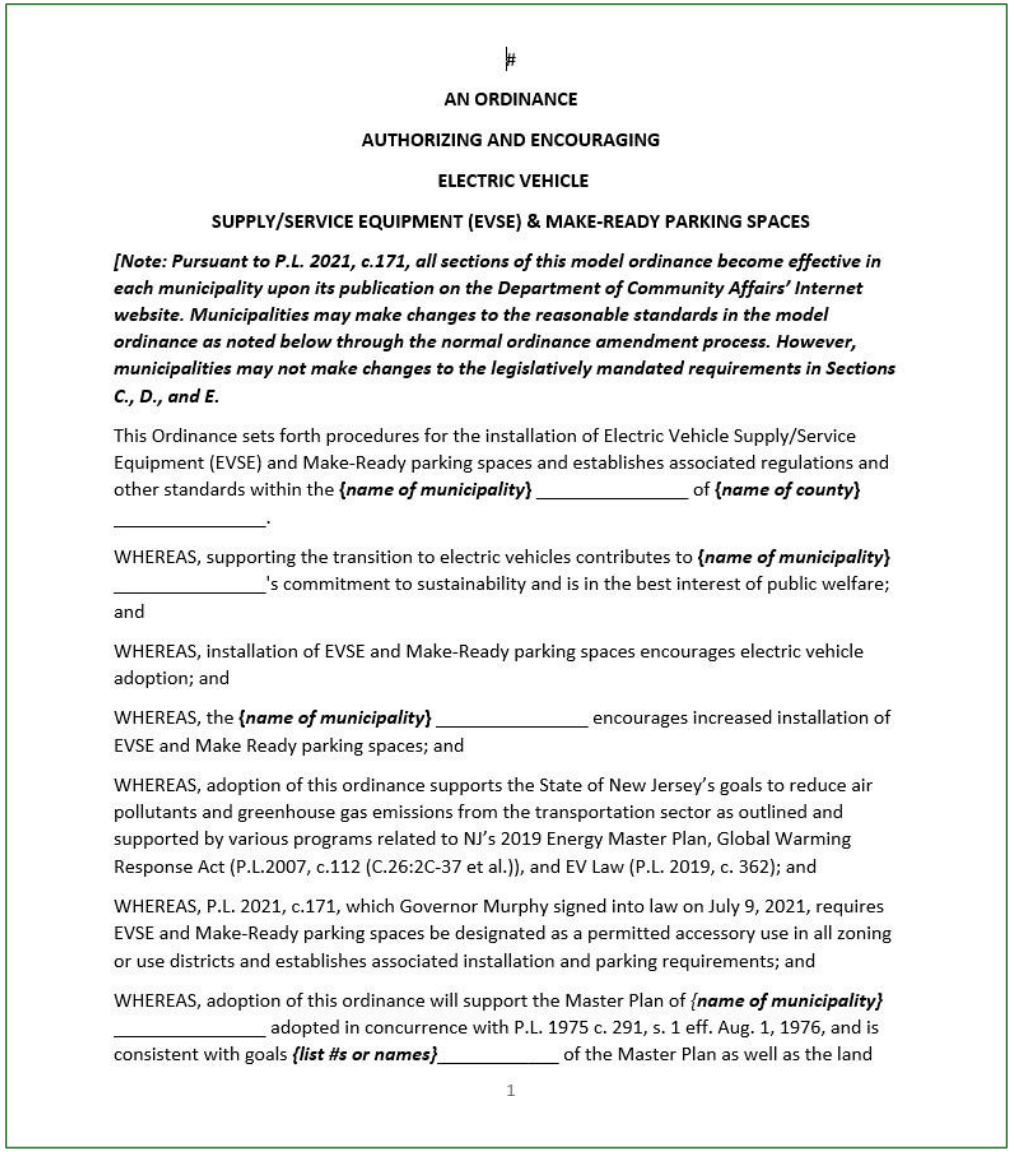
Additional EV Actions

Make Your Town EV Friendly

- Awards points for:
  - Adopting Model Statewide EVSE Ordinance
  - First responder training for EVs
  - Permitting/inspection best practices

EV Community Outreach

- Awards points for supporting adoption of EVs through outreach to multiple types of vehicle owners



AN ORDINANCE

AUTHORIZING AND ENCOURAGING

ELECTRIC VEHICLE

SUPPLY/SERVICE EQUIPMENT (EVSE) & MAKE-READY PARKING SPACES

[Note: Pursuant to P.L. 2021, c.171, all sections of this model ordinance become effective in each municipality upon its publication on the Department of Community Affairs' Internet website. Municipalities may make changes to the reasonable standards in the model ordinance as noted below through the normal ordinance amendment process. However, municipalities may not make changes to the legislatively mandated requirements in Sections C., D., and E.

This Ordinance sets forth procedures for the installation of Electric Vehicle Supply/Service Equipment (EVSE) and Make-Ready parking spaces and establishes associated regulations and other standards within the ***{name of municipality}*** _____ of ***{name of county}*** _____.

WHEREAS, supporting the transition to electric vehicles contributes to ***{name of municipality}*** _____'s commitment to sustainability and is in the best interest of public welfare; and

WHEREAS, installation of EVSE and Make-Ready parking spaces encourages electric vehicle adoption; and

WHEREAS, the ***{name of municipality}*** _____ encourages increased installation of EVSE and Make Ready parking spaces; and

WHEREAS, adoption of this ordinance supports the State of New Jersey's goals to reduce air pollutants and greenhouse gas emissions from the transportation sector as outlined and supported by various programs related to NJ's 2019 Energy Master Plan, Global Warming Response Act (P.L.2007, c.112 (C.26:2C-37 et al.)), and EV Law (P.L. 2019, c. 362); and

WHEREAS, P.L. 2021, c.171, which Governor Murphy signed into law on July 9, 2021, requires EVSE and Make-Ready parking spaces be designated as a permitted accessory use in all zoning or use districts and establishes associated installation and parking requirements; and

WHEREAS, adoption of this ordinance will support the Master Plan of *{**name of municipality}* _____ adopted in concurrence with P.L. 1975 c. 291, s. 1 eff. Aug. 1, 1976, and is consistent with goals ***{list #s or names}***_____ of the Master Plan as well as the land

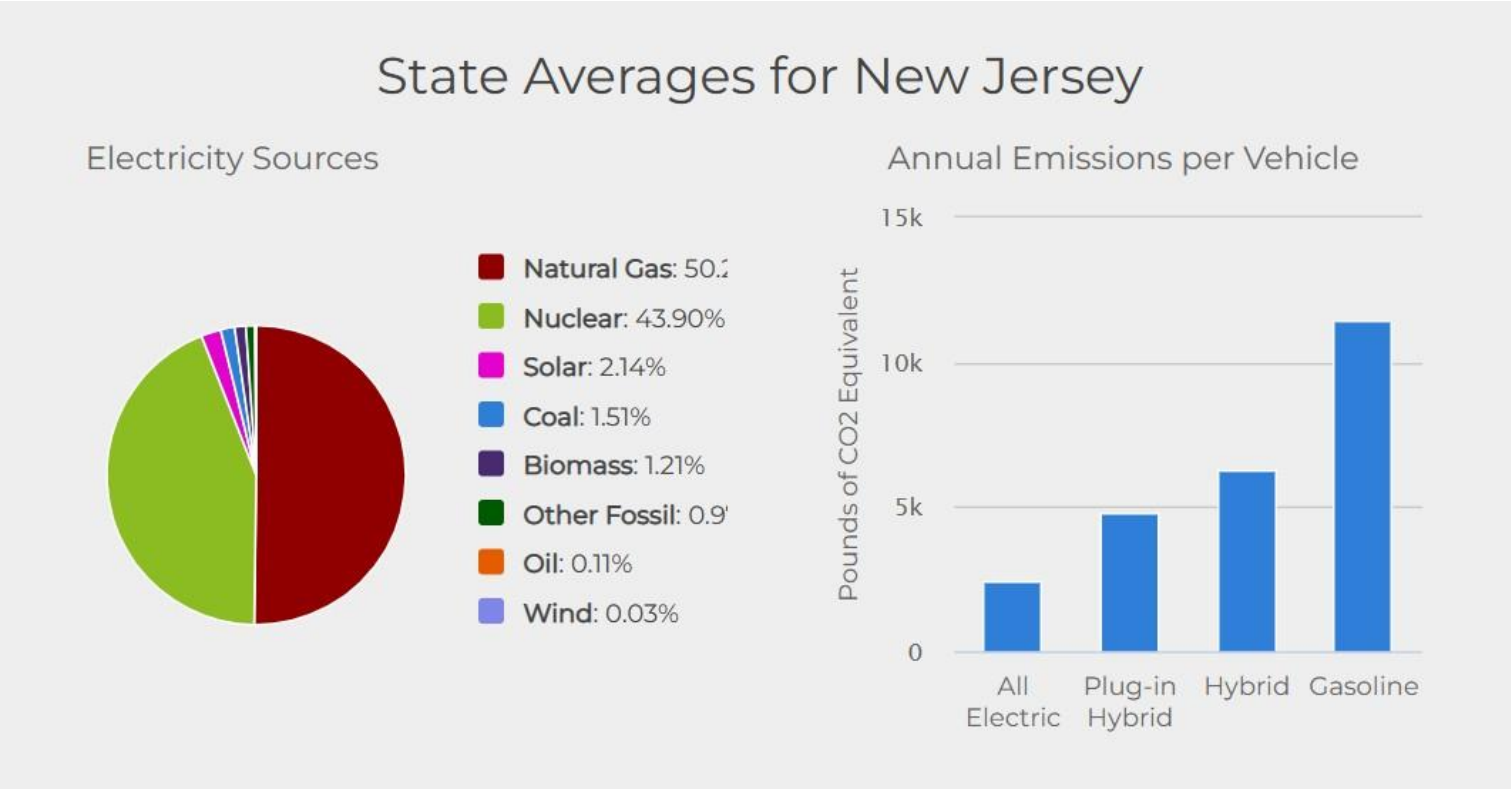
1

DCA Model Statewide EVSE Ordinance
www.nj.gov/dca/dlps/home/modelEVordinance.shtml

EV FAQs

EVs Have a Lower Carbon Footprint

EVs charging in NJ generate less than 1/4th emissions of gasoline vehicles



Screenshot of U.S DOE Alternative Fuel Data Center's New Jersey *Emissions from Hybrid and Plug-In Electric Vehicles webpage.* https://afdc.energy.gov/vehicles/electric_emissions.html

Total Cost of Ownership

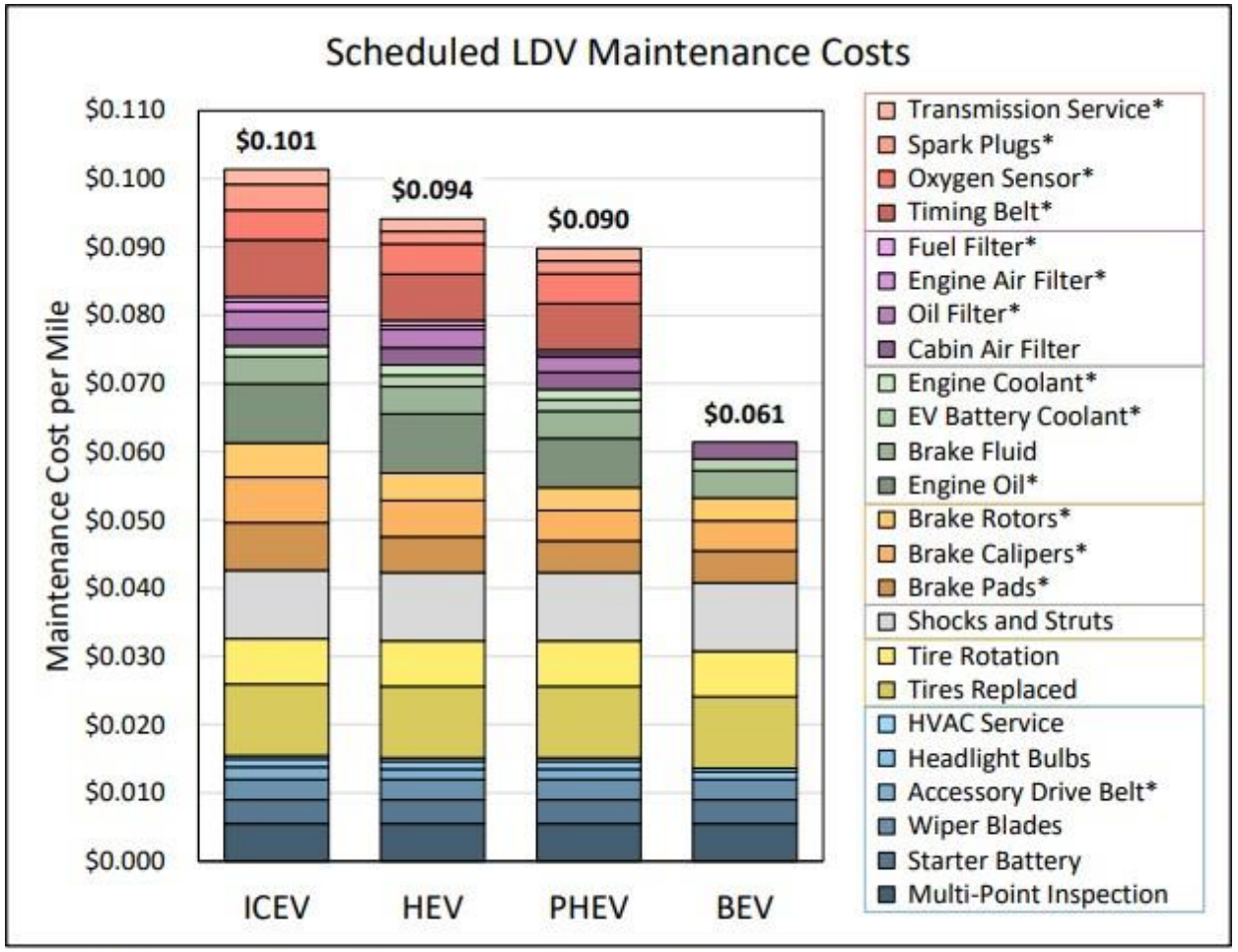


FIGURE ES-4 Per-mile maintenance costs by powertrain (*Service intervals that vary by powertrain)

Graph from Argonne National Laboratory report sited below.

When comparing cost of EV with traditional vehicle consider **Total Cost of Ownership**

- Lightweight EV fuel cost in NJ is 51.4% less*
- Lightweight EVs cost 40% less to maintain than ICE cars**

*University of Michigan. *Relative Costs of Driving Electric and Gasoline Vehicles in the Individual U.S. States*. 2018**.** http://umich.edu/~umtriswt/PDF/SWT-2018-1.pdf

** U.S. DOE. Argonne National Laboratory. *Comprehensive Total Cost of Ownership Quantification for Vehicles with Different Size Classes and Powertrains.* 2021. https://publications.anl.gov/anlpubs/2021/05/167399.pdf

EV FAQs

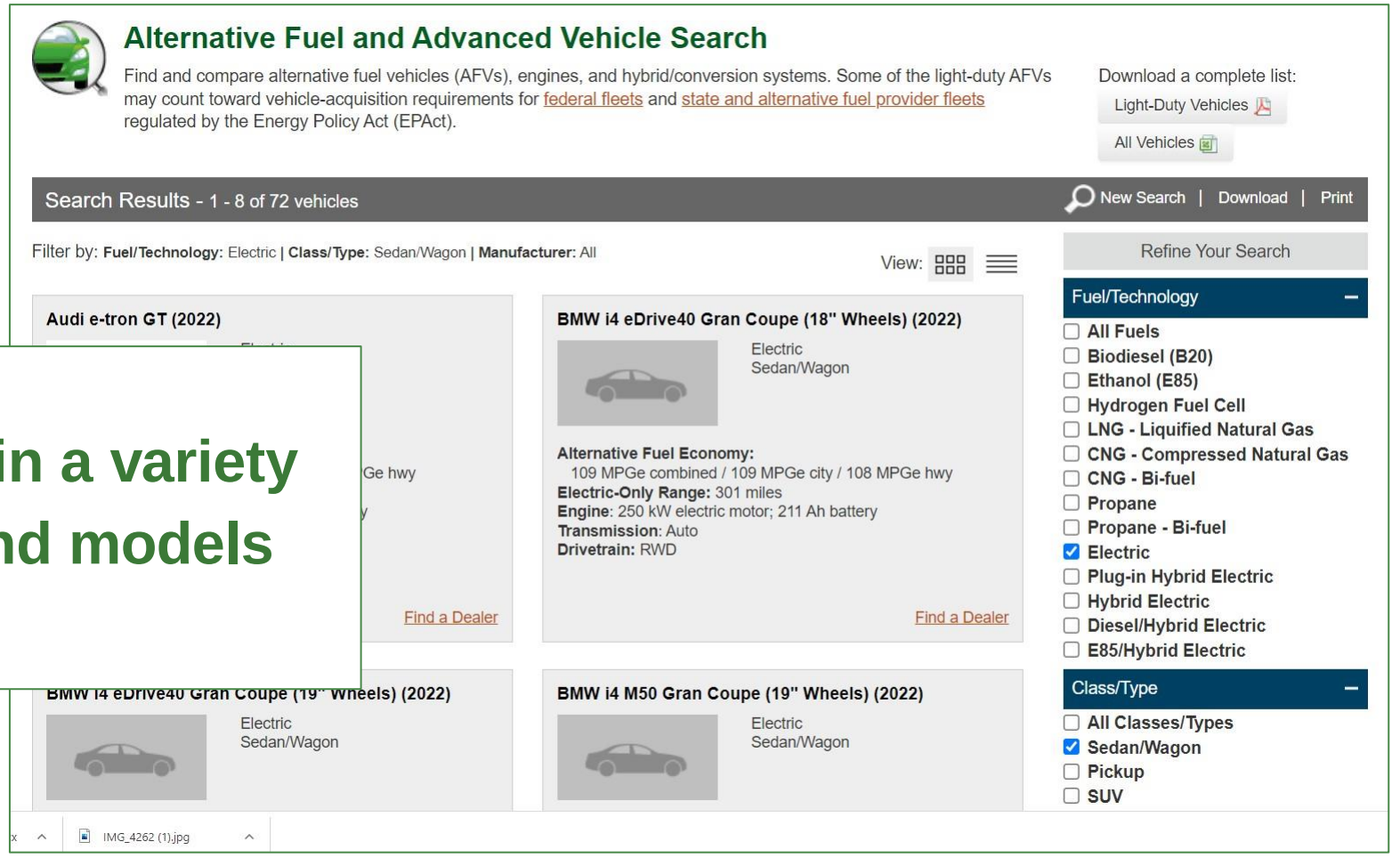
EVs Are Safe

- Insurance Institute of Highway Safety (IIHS) has found equivalent if not superior safety for EVs
- While EVs are safe there is special first responder training available for EVs

https://www.iihs.org/news/detail/with-more-electric-vehicles-comes-more-proof-of-safety

EV FAQs

EVs come in a variety of sizes and models



Screenshot from U.S. DOE Alternative Fuel Vehicle AFV Vehicle Search
https://afdc.energy.gov/vehicles/electric_availability.html

New Federal Tax Credits for EV/EVSE

Light Duty EV Tax Credit

- up to $7,500 per vehicle
- MSRP cap, income cap, assembly/sourcing requirements
- options to transfer credit to dealer at point of sale

Used EV Tax Credit

- used EVs eligible for federal tax credits up to $4,000 or 30% of sales price

New Tax Credit for Commercial EVs

- 30% of sales price or incremental cost of qualified commercial EV

New Alternative Fuel Equipment Tax Credit

- Up to 30% of cost for EVSE and other AFV fueling equipment
- Eligible fueling equipment must be installed in census tracts:
  - where poverty rate is at least 20%, or
  - median family income is less than 80% of state medium family income level

For information on these tax credits -- https://afdc.energy.gov

Sustainable Jersey Technical Assistance (TA)

COMPLETE STREETS TECHNICAL ASSISTANCE

- Bicycle network planning
- Corridor/neighborhood Complete Streets Assessment
- Training on how to create or update a Complete and Green Streets policy

Complete Streets TA funded by:

- NJTPA
- TA provided by Sustainable Jersey in collaboration with Voorhees Transportation Center (VTC) at Rutgers University

ENERGY TECHNICAL ASSISTANCE

- Identify and apply for NJCEP and/or utility incentives for facility upgrades
- Establish energy tracking system for facility energy use

Energy TA funded by:

- NJ Board of Public Utilities
- Investor-owned utilities:
  - Elizabethtown Gas
  - New Jersey Natural Gas
  - PSE&G
  - South Jersey Gas

Learn More

For more information and to apply for technical assistance visit:
www.sustainablejersey.com/grants/

Sustainable Jersey Underwriters and Sponsors

Program Underwriters

Gardinier Environmental Fund

Geraldine R. Dodge Foundation

New Jersey's cleanenergy program™ njcleanenergy.com

PSEG Foundation

Robert Wood Johnson Foundation

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Atlantic Health System

solar landscape

Atlantic Shores offshore wind

Bayshore Family of Companies

FirstEnergy Foundation

New Jersey American Water

NJM Insurance Group

Northfield Bank

Ocean Wind An Ørsted & PSEG project

CMC Energy Services

Covanta

EV Resource Group Design. Build. Maintain

First Environment

Greener by Design

Google

HEVI

PosiGen Solar Energy and Energy Efficiency

Red Oak

Republic Services

IG: Sustainable_Jersey | Twitter: @SJ_Program and @SJ_Schools | FB: @SustainableJersey | LinkedIn: sustainable-jersey

SUSTAINABLE JERSEY GRANTS PROGRAM

PSEG Foundation

New Funding Cycle Announced!

- $200,000 in grants are available to New Jersey municipalities participating in the Sustainable Jersey program
- $2k, $10k and $20k grants for sustainability projects and green team support

Informational Webinar	Application Deadline	Award Notifications	Performance Period
1-2:30pm on Thursday, **December 7, 2023**	By 11:59pm on Friday, **February 9, 2024**	By **late April 2024** with an event in **late May 2024**	**10k/20k Grants:** 18 months **2k Grants:** 12 months

Learn More & Apply

Sustainable Jersey Sessions - New Jersey League of Municipalities

GET BETTER BUY-IN WITH EQUITABLE COMMUNITY ENGAGEMENT STRATEGIES
Tuesday, 11/14, 2:00pm – 3:15pm, Room 420

COMMUNITY ENERGY PLANNING: LESSONS LEARNED & LOOKING AHEAD
Tuesday, 11/14, 3:45pm – 5:00pm, Room 421

SUSTAINABLE JERSEY PROGRAM UPDATE
Wednesday, 11/15, 9:00am – 10:15am, Room 420

WHAT'S NEW IN ENERGY EFFICIENCY OUTREACH CAMPAIGNS
Wednesday, 11/15, 10:45am – 12:00pm, Room 421

INVESTING IN ACTIVE TRANSPORTATION: TEST IDEAS, FIND FUNDING
Wednesday, 11/15, 2:00pm – 3:15pm, Room 420

THINK OUTSIDE THE BIN: NON-MANDATED RECYCLING INITIATIVES
Wednesday, 11/15, 2:00pm – 3:15pm, Room 421

POWER SURGE: SPARKING SUCCESS FOR ELECTRIC VEHICLES
Wednesday, 11/15, 3:45pm – 5:00pm, Room 421

PLANNING FOR LOCAL RESPONSES TO CLIMATE CHANGE
Thursday, 11/16 9:00am – 10:15am, Room 420

TREE STEWARDSHIP IMPROVES COMMUNITY RESILIENCE
Thursday, 11/16 10:45am – 12:00pm, Room 421

STORMWATER MANAGEMENT: MAP, MONITOR AND MAINTAIN
Thursday, 11/16 2:00pm – 3:15pm, Room 420

Thank You!

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