



NJ BPU: Driving EV Adoption

September 23, 2022
Lunch and Learn

EV Charging Station Comparison



	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 Highway rest stops
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 - 350 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 <i>Adapted from NYSERDA</i>
Station hardware cost	\$500 - \$1,000 per port	\$600 - \$5,000 per port	\$7,000 - \$50,000 per port

- At least 330,000 registered light-duty EV by December 2025;
- At least 2 million registered light-duty 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 EVs by December 2025;
- 100 percent of State-owned non-emergency light duty vehicles shall be plug-in EVs by December 2035

EV Goals



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.



Federal Priorities

- Funding for charging stations across the country
- Funding for federal fleet electrification
- Incentives for personal EVs
- Incentives for replacing diesel vehicles with ZEVs

New Jersey's Got That!

- It Pay\$toPlug, Clean Fleet, EV Tourism, utility programs
- Clean Fleet
- Charge Up New Jersey
- NJZIP, RGGI diesel replacement program

Federal EV Funds

NEVI : National Electric Vehicle Infrastructure

Formula Funding

\$104 million over 5 years for New Jersey

- Focused on corridor charging build out on Alternative Fuel Corridors and Interstates.
- “Built Out” requires a minimum of Four 150kW chargers (total of 600kW of simultaneous charge) every 50 miles less than 1 mile off the roadway.
- AFC designations due May 13, 2022
- Plan due August 1, 2022

Competitive Funding

\$2 Billion over 5 years

- Focused on community charging
- Local and state governments can apply
- Awaiting rules to be released

Other Funding

- School Buses
- Transit Buses
- Ferry
- Port
- Battery recycling
- Workforce
- Awaiting rules to be released

Utility Charging Programs



- Utility Filings
Make Ready
Incentives
- Public
 - Workplace
 - MUD



- Fast Charging
- PSEG – 1200
 - ACE – 100
 - JCPL- 200



- Level 2
- PSEG – 3500
 - ACE – 1500+
 - JCPL- 900

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.

What does *Make-Ready* mean?

A Guide to Electric Vehicle Infrastructure

Customer-Side "Behind the meter"

Utility-Side "To the meter"

Make-Ready Elements

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 not include activation, hook-up or price of charger(s).

Electric Vehicle
a vehicle that has a battery or equivalent energy storage device that can be charged from an electricity supply external to the vehicle with an electric plug

Port(s)
the part of the charger that connects to the electric vehicle

Charger
equipment that powers the port(s)

Site/Location physical address of the charger(s)

New Jersey Department of Environmental Protection • Bureau of Mobile Sources
July 2021

DriveGreen.nj.gov

Clean Fleet Program

- Electric vehicles are now included on the State Purchasing Contract under Award T0099
- Clean Fleet Electric Vehicle Incentive Program
 - Designed to encourage local and state government entities to add EVs to their fleet
 - Grants awarded on rolling basis until funding expended
- Questions? EV.programs@bpu.nj.gov



Clean Fleet EV Incentive Award Caps

	EVs	Charging stations
Local governments, entities, schools		
<i>serving populations < 20,000</i>	4	2
<i>serving populations > 20,000</i>	10	4
<i>serving populations > 50,000</i>	14	8
Local governments		
<i>serving populations > 100,000</i>	20	15
State agencies, boards, commissions, universities, and counties	20	15

www.NJCleanEnergy.com/EV

Clean Fleet Incentive Amounts

- FY 23 incentives:
 - \$4,000 for a Battery Electric Vehicle
 - \$5,000 for a public L2 charger (up to cost of charger)
 - \$4,000 for a fleet L2 charger (up to cost of charger)
 - Overburdened Municipalities are eligible for a 50% bonus in award

EV Tourism



- Targets tourism destinations across the state
- FY 23 incentives for chargers:
 - \$5000 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.

MUD EV Charger Incentive

- For owners and property managers of Multi-Unit Dwellings (MUDs)
- MUDs – apartments, condos and townhouses with 5 or more units and dedicated off-street parking.
- Sites are eligible for up to 6 L2 chargers



- \$4,000 per L2 charger
- Overburdened Municipalities may receive 50% bonus

EVSE Requirements

All BPU EV Charging Programs have similar basic requirements

- Dual Port Chargers
- Networked Chargers
- Data Sharing
- **NEW in FY23 Compliance Filing – must use pre-certified EVSE**
- Stacking Incentives
- **Utility Programs are required to verify that the combination of federal, state and utility funds may not exceed 90% of the total costs. If they do, the utility program will reduce the**
- **NJBPU programs may not stack with It Pay\$ to Plug In.**
 - * check specific program rules for details

All applications can be found at njcleanenergy.com/ev



It Pay\$ to Plug In NJDEP's Grant Program for EV Charging Stations

Level 1 and Level 2 Chargers

*Up to \$4,000 per port for Level 2 chargers at public places, multi-family homes, and workplaces (for employees, visitors and fleets).
First come, first served.*

Corridor Fast Chargers

Up to \$200,000 per location for public DC fast chargers along major roadways. Competitive solicitation.

Community Fast Chargers

Up to \$200,000 per location for public DC fast chargers where people live and work. Competitive solicitation.

www.drivegreen.nj.gov/plugin.html



Charge Up New Jersey

Funding & Incentive Summary

Year	Incentives	Funding
Year One - Post Purchase Incentive	6914	\$33,261,000
Year Two - Waitlisted Post-Purchase Incentives	1,520	\$7,231,900
Year Two - Point of sale Incentives (Approved)	3,791	\$12,828,425
Year Two - Point of sale Incentives (Pending)	1235	\$4,370,850
Total	13,460	\$57,679,175

Charge Up New Jersey

Year Three

- Plug-In Electric or Plug-In Hybrid Vehicle (PHEV until December 31, 2022)
- Must be purchased or leased in the State of New Jersey
- Must be registered in NJ to a NJ licensed driver
- MSRP must be less than \$55,000
- \$25/emile up to **\$4,000** for vehicles with MSRP under \$45,000
- \$25/emile up to **\$2,000** for vehicles with MSRP between \$45,000-\$55,000
- Point-of-Sale Incentive
- Purchased after the FY22 launch until funding is exhausted

NEW in FY 2023- RESIDENTIAL CHARGER PROGRAM

- \$250 Rebate for an eligible residential charger

MHDV Charging

Straw Proposal for the Medium Heavy Duty EV EcoSystem was released on June 30, 2021. Six stakeholder meetings were scheduled and comments were due on October 5, 2021.

The Straw Proposal looks at:

- What will charging look like?
 - Public charging
 - On-site charging
- How do we encourage EV adoption for fleets
 - Light duty
 - Medium duty
 - Heavy Duty
- What role will energy storage and renewable energy play?

Updated MHD Straw proposal coming 2022

NJ ZIP: Zero-emission Incentive Program – At a glance

NJEDA's RGGI-funded Voucher Pilot for Medium Duty Vehicles



Funding

\$44.25M in voucher pool (expanded from an initial \$15M pool), sufficient to fund purchase of approximately 300 vehicles

Timing

First come, first serve with rolling approvals, open until all funds committed. Set asides by location and for small businesses to ensure equitable access.

Eligibility

Businesses or institutions operating or domiciling zero-emission medium-duty vehicles in Greater Camden, Newark, New Brunswick, and Shore Areas

Voucher Amounts

Vehicle Class	Voucher \$
Class 2b	\$25,000
Class 3	\$55,000
Class 4	\$75,000
Class 5	\$85,000
Class 6	\$100,000

Bonus voucher criteria

- Minority-, women-, or veteran-owned business
- Small business
- Small business scrappage
- 25% NJ-manufactured
- Public access for driver readiness and education

Basic program requirements

- \$1000 application fee
- Buy new ZEV & register in NJ
- 3 years operation, 75% in NJ and 50% in EJ
- Vendor provides charging and in-state maintenance plan
- Comply with audit requirements

NJZIP

PROJECT AND PROGRAM OUTCOMES

Overall program participation to-date

\$44.25M available // \$29.2M approved voucher applications to-date

This is representative of 125 approved applications for 271 vehicles!

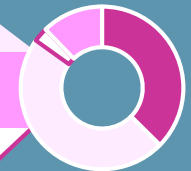


Purchaser demographics

66 approved applicants are minority-owned businesses (53%)

17 approved applicants are women-owned businesses (14%)

4 approved applicants are veteran-owned businesses (3%)



119 approved applicants are small businesses (95%)



Emissions impacts

In just the first 24 approved applications, the DEP has projected that the vehicles procured through NJ ZIP will **avoid more than 60,000 short tons of CO2!**

More Information

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