State of The State: Electric Vehicles

ANJEC
January 24, 2023
• What we do
  • Accelerate and expand EV adoption in New Jersey
  • Develop and promote **PROGRAMS AND POLICIES**

• How we do it
  • **RESEARCH** necessary to inform programs and policies
  • Diverse coalition with unified voice for **ADVOCACY**

• State-based approach
  • Local market participants, for local action, based on local conditions
Electric Vehicles: 101
What Are EVs?

**LDV: Light-Duty Electric Vehicles**
- **Plug-In Hybrid Electric Vehicle**
  - Electric supplements fuel
  - Small to medium battery
  - ~20 - 50 miles electric range
  - Prius Prime, Chevy Volt

**Battery Electric Vehicle**
- All electric
- Large battery
- 150 - 350 miles range
- Tesla, Mach-E, Ford 150

**MHDV: Medium- and Heavy-Duty Electric Vehicles**
How are EVs fueled?

Most Charging Happens Where Cars Stay Parked (mostly at home, sometimes at work, ~95% of energy)

Level Two:
- 240 Volts AC – usually requires electric upgrade
- 10-20 miles of range per hour of charging
- Primary use in home and work

Level One:
- 110 Volts AC
- Plugs into a typical wall outlet
- 1-6 miles of range per hour of charge
- Most basic option included on all vehicles

Charging “En-Route” (when needed, ~5% of energy)

Public Chargers, Especially DC Fast Chargers, Address Key Range Anxiety Adoption Barriers

DC Fast Charge:
- 80% full within 15-30 minutes
- Public stations, specialized use
Why EVs matter
Electric Vehicle
New Jersey
Market Snapshot
EV Law

• Goals for NJ Transit and state fleet electrification
• Establishment of EV Rebate Program
• Goals for EV Adoption
  • At least 330,000 registered light-duty EVs by 2025
  • At least 2 million registered EVs by 2035
  • At least 85% of all light-duty vehicles sold/leased by 2040

Currently: 80k EVs
New Jersey Plug-in Electric Vehicle Registrations

![Bar chart showing annual registrations of plug-in hybrid and battery electric vehicles from 2011 to 2022.](chart.png)

- **Plug-in Hybrid Electric Vehicles**
- **Battery Electric Vehicles**

*2022 data available through 06.30.2022*
EV Law

• Goals for Charging Infrastructure
  • At least 400 publicly accessible DC Fast chargers in at least 200 locations by 2025 (at least 150kW)
  • At least 1,000 publicly accessible Level 2 chargers by 2025

Currently:
720 L2
157 DCFC
Currently:
720 L2
157 DCFC
Charging Stations
>150kW

- Existing Charging Stations
- Planned Charging Stations
Recent Market Advancements

• New Jersey adoption of California’s Advanced Clean Truck Rules

• National Electric Vehicle Infrastructure (NEVI) Formula Program
  • $15.4 million in first tranche, $104 million total to build out the public national charging network

• Federal tax credit of $7,500 per electric vehicle
Electric Vehicle Incentives
Residential Incentives

• New Jersey EV Sales Tax Exemption
• Federal Tax Credit for EVs (up to $7,500)
• BPU’s Charge Up New Jersey EV Rebate Program (up to $4,000 towards EV, $250 towards charger)
• Utility residential charging infrastructure incentive program
Municipal Incentives

• Electric School Bus Pilot Program
• BPU’s Clean Fleet Vehicle Incentive Program ($4,000 per vehicle, $1,500 per charger)
Other Incentives

• EDA’s NJ ZIP fleet electric vehicle voucher program ($20,000-$175,000)

• It Pay$ To Plug In program ($4,000 per L2 charging port; $200,000 per DCFC location)

• BPU’s EV Tourism Incentive Program

• BPU’s Multi-Unit Dwelling EV Charging Program ($1,500 for L2 charger)

• Utility DCFC and L2 commercial and public charging infrastructure incentive programs
Looking Forward
Looking Forward

• New Jersey utility investment in medium- and heavy-duty fleet charging

• Big Commitments by Global OEMs
  • General Motors, Honda, Mercedes-Benz, and Nissan have committed to being 100% electric

• Large delivery companies investing in electric trucks (Amazon, UPS, FedEx)

• Significant Consumer Interest
  • 71% of American expressed some level of interest in buying or leasing an EV

• New Jersey opportunity to join California in adopting Advanced Clean Cars II

Better Travel. Stronger Grid.
www.chargevc.org