

Clean Energy Future - Electric Vehicles

EV Charging Infrastructure 2020

Dawn Neville

Dawn.Neville@pseg.com

Business Development Manager – EV Programs
Renewables & Energy Solutions

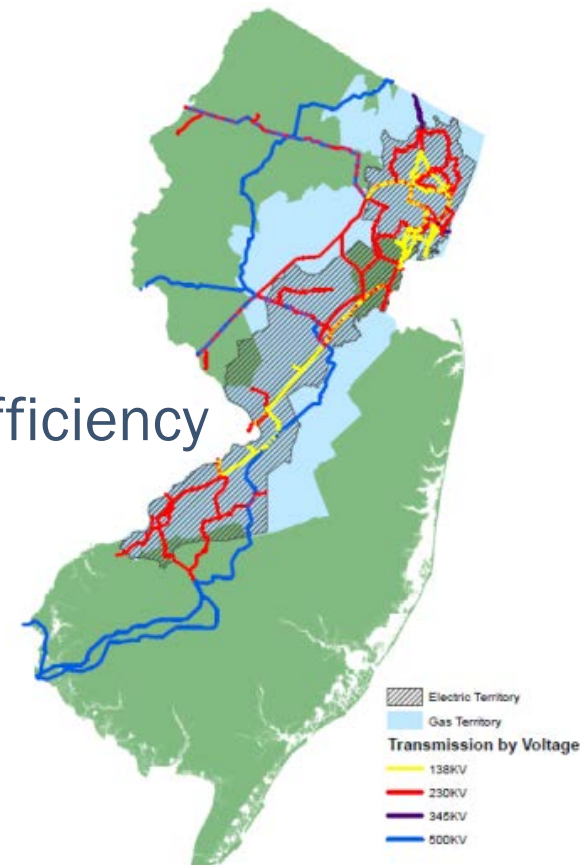
November 19, 2020



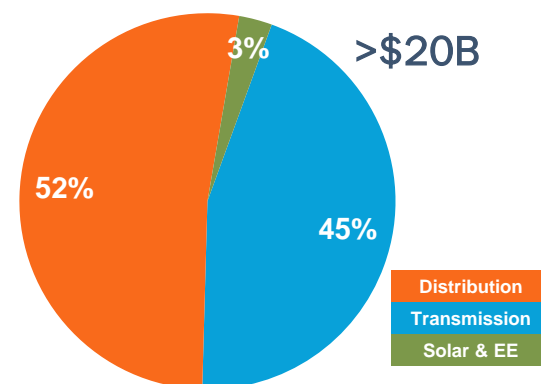
PSE&G – New Jersey’s largest:

- Electric and Gas Distribution utility
- Transmission business
- Leading investor in renewables and energy efficiency
- Appliance service provider

	Electric	Gas
Customers	2.3 Million	1.9 Million
5-Year Annual Customer Growth*	0.8%	0.7%
2019 Electric and Gas Sales	40,684 GWh	2,589M Therms**
Sales Mix (2019)		
Residential	33%	58%
Commercial	58%	38%
Industrial	9%	4%



PSE&G 2019 Rate Base***



N.J. Plug-In Vehicle Act

- 330,000 plug-in EVs by 2025
- 2 million EVs by 2035
- 85% of new vehicles by 2040
- 25% of State-owned non-emergency vehicles by 2025



- 1,000 Level Two chargers by 2025
- 400 DC fast chargers by 2025

- 15% of multifamily properties to have Electric Vehicle Service Equipment (EVSE) by 2025



The NJ Department of Environmental Protection (“DEP”) and the BPU will establish goals for medium and heavy duty vehicles by 12/31/2020

Which Came First? The EV or the Charging Station

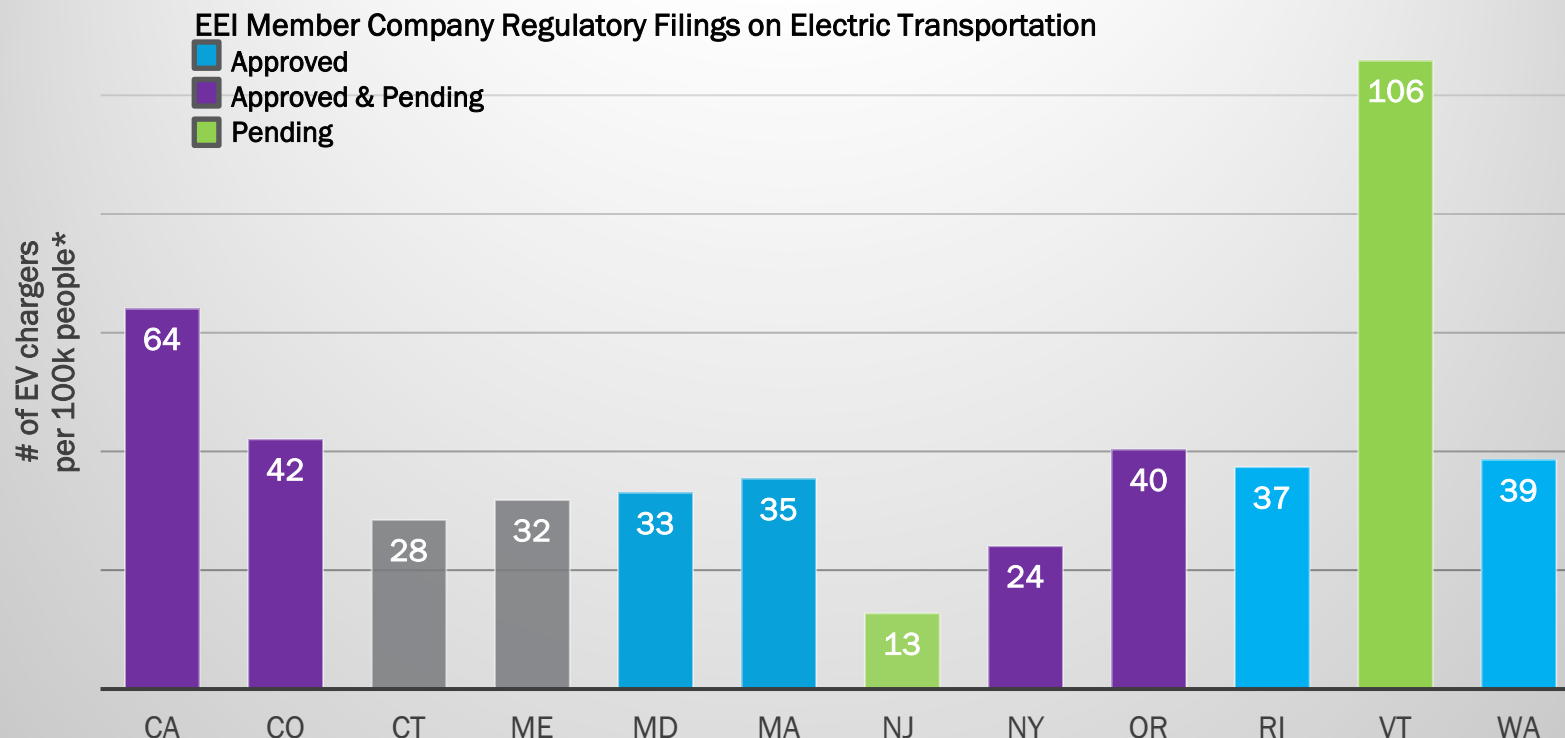
Transportation is the greatest source of greenhouse gas emissions and other air pollutants in New Jersey and the U.S. Electric vehicles can be game-changers when it comes to cleaning our air and reducing the cost of driving.



The largest obstacle that keeps millions of car-buyers from making the switch to plug-in vehicles isn't price, performance, or the availability of an EV that meets their needs. It's the lack of convenient access to charging stations.





Unfortunately, New Jersey lags in both EV penetration per capita and EV charging infrastructure compared to other states in California's zero emission vehicle (ZEV) program.

Public EV Chargers (of all types) per 100,000 People



* Data obtained in April 2020 from United States Department of Energy, Alternative Fuels Data Center, available at https://www.afdc.energy.gov/data_download and United States Census Bureau, National Population Totals and Components of Change: 2010-2017, available at <https://www.census.gov/data/datasets/2017/demo/popest/nationtotal.html>.

Clean Energy Future Overview

Energy Efficiency (EE)	Electric Vehicles (EV)	Energy Storage (ES)	Energy Cloud (EC)
\$1.0B* Investment 3 years	\$0.3B Investment 6 years	\$0.1B Investment 6 years	\$0.8B* Total Cost 6 years
			
<p>Programs for Residential and C&I Customers including low-income, multi-family, small business and local government</p> <p>*Approved 9/23/2020</p>	<p>Residential Smart Charging, Level 2 Mixed-Use Charging, Public DC Fast Charging, Vehicle Innovation</p>	<p>Solar Smoothing, Distribution Deferral, Outage Management, Microgrids, Peak Reduction for Municipal Facilities</p>	<p>Provides new software and product solutions to improve PSE&G processes and better manage the electric grid</p> <p><small>*Includes \$0.64 billion of investment receiving accelerated recovery and \$71 million of stipulated base spending to be recovered in the next rate case</small></p>

CEF: Electric Vehicles



Investment
\$0.3B

Spur the development of smart EV infrastructure and facilitate EV adoption across a broad range of customers and segments.

Subprograms

1. Residential Smart Charging
2. Level 2 Mixed-Use Charging
3. Public DC Fast Charging
4. Vehicle Innovation

Environmental Benefits



an electric mile is
70%
cleaner than an average mile
fueled by gasoline

14
million metric tons of CO₂ avoided
through 2035

Other Benefits

650
clean energy
jobs

Advancement of
NJ clean energy
goals

Mitigation of
EV market
barriers

& reduction
in range
anxiety

A Roadmap to Electrifying Transportation in N.J.



PSE&G is uniquely positioned to help build out the charging infrastructure to provide universal access.

PSE&G's proposal would spur residential EV chargers, and charging equipment at multifamily and municipal facilities.

PSE&G has taken the first steps through a charging pilot and partnerships to help put EV charging on the Turnpike and Parkway.

Driving Change: Electrifying Our Vehicle Fleet

- By reducing vehicle emissions through the electrification of our own fleet, PSEG hopes to set an example for others.
- As part of our plan to reduce CO2 emissions, the company is working to convert all passenger vehicles, such as sedans and SUVs, 62% of medium duty vehicles and 90% of heavy duty vehicles by 2030 to battery electric vehicles, plug-in hybrids or anti-idle job site work systems.

Fleet Electrification Status:

(As of Sept. 2020)

- Light Duty: 0.3%*
- Medium Duty: 18%
- Heavy Duty: 42%

Fleet Electrification Proposal: 2030

- Passenger Vehicles: 100%
- Light Duty: 72%
- Medium Duty: 62%
- Heavy Duty: 90%



Thank You