



pecoSM

AN EXELON COMPANY

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Impact of Electrification on the Electric Distribution System

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Overview

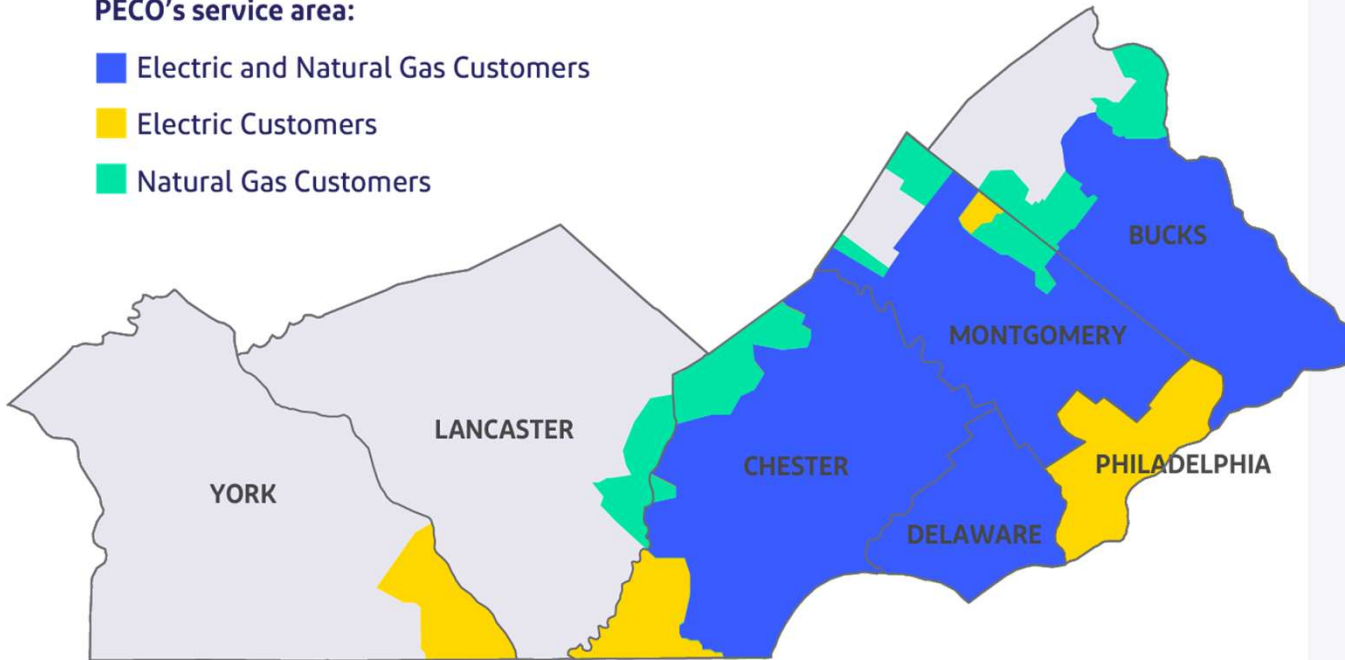


Headquartered in Philadelphia, PECO is Pennsylvania's largest electric and natural gas energy delivery company, bringing power to nearly 1.7 million electric customers and more than 553,000 natural gas customers in southeastern Pennsylvania. PECO is a subsidiary of Exelon Corporation (NASDAQ: EXC), the largest fully regulated utility company in the nation with more than 10 million customers and, employs approximately 3,000 employees.

Who We Are

PECO's service area:

- Electric and Natural Gas Customers
- Electric Customers
- Natural Gas Customers



2,100
square miles



1.7 million
electric customers



553,00
natural gas customers



10%
commercial/industrial



90%
residential

Our Path to Clean

Within PECO and across the Exelon utilities, we are on a Path to Clean, building on emission reduction goals currently in place and transitioning to a cleaner energy future. Our Path to Clean includes goals to:



Cut operations-driven emissions in half by 2030



Achieve net-zero operations-driven emissions by 2050



Support customers and communities in reaching their clean energy goals



Support for Transportation Electrification

- ✓ PECO has been a leading stakeholder in Pennsylvania promoting transportation electrification for more than a decade, including serving as one of the anchor participants in the Drive Electric PA coalition
- ✓ The company:
 - Funded the earliest regional EV adoption forecasts developed in the state
 - Hosts major stakeholder and public education EV education events
 - Offers incentives for EV infrastructure development and TOU rates for EV owners
 - Provides a web-based EV Customer Toolkit
 - Assists legislators in the development of proposals to authorize utility investments in EV infrastructure
- ✓ PECO has also developed internal subject matter experts (SMEs) who specialize in working with customers developing large EV infrastructure projects

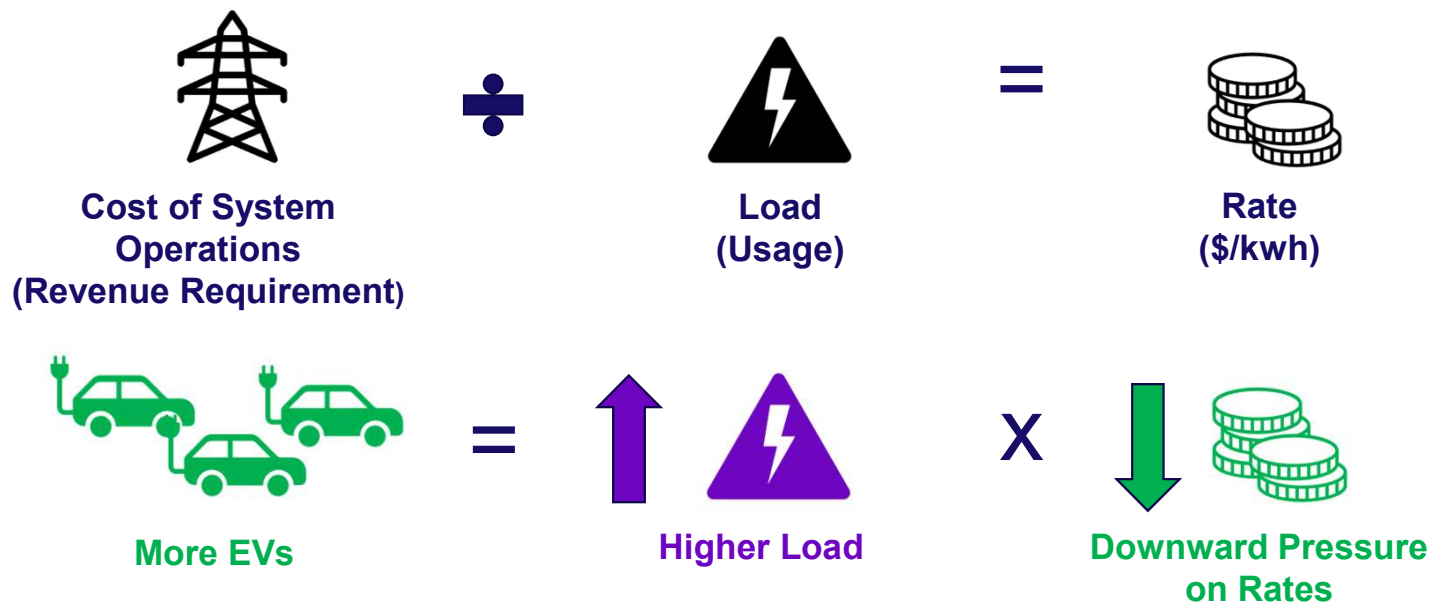
Pennsylvania EV Ownership Trends

Fuel type	2/29/2024	Percent Increase since March 7, 2023
BEV	64,206	46.8%
PHEV	38,027	59.5%
HEV	279,298	26.0%
Fuel Cell	1	0.0%
Total	381,532	31.9%

- The death of the EV market in the US is exaggerated to say the least
- PHEVs are making a genuine comeback as a consumer option
- The complexities of the revised IRA federal tax credit, delays in delivery of new EV offerings, and higher interest rates have slowed EV market growth in Q4 2023 and early 2024
- Automakers appear to be pivoting toward production of more affordable EVs, but the arrival date for these models are uncertain

Electric Vehicles Save All Utility Customers \$\$\$

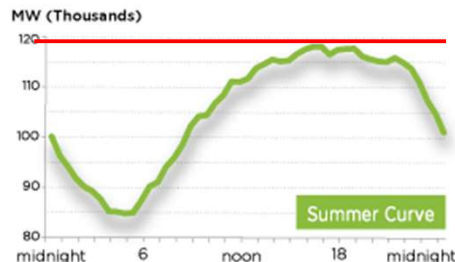
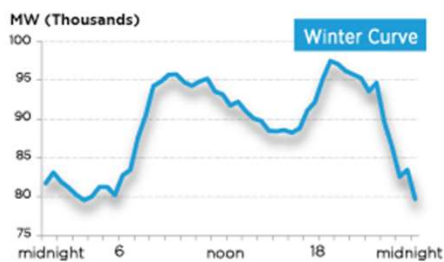
Setting Electric Rates is Complicated, but the Basics are Simple



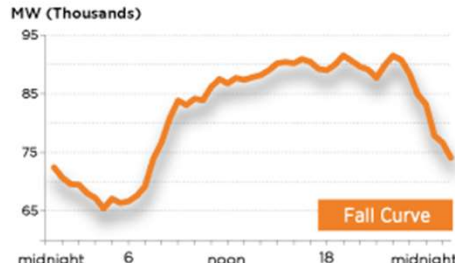
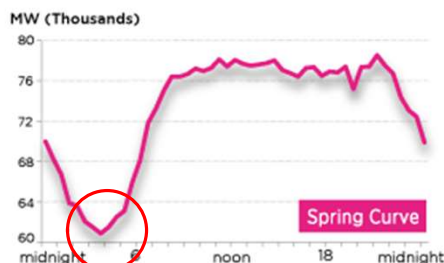
An average all-electric vehicle can contribute more than *\$200 per year to meeting the cost of maintaining reliable electric service, putting downward pressure on everyone's electric rates

*Based on electric distribution and transmission rates for a battery electric vehicle driving 12,000 miles per year

Electric Vehicles Make More Efficient Use of the Electric Grid



Distribution load peaks in the late afternoon on a hot summer day, but falls to almost half that level on an early spring morning

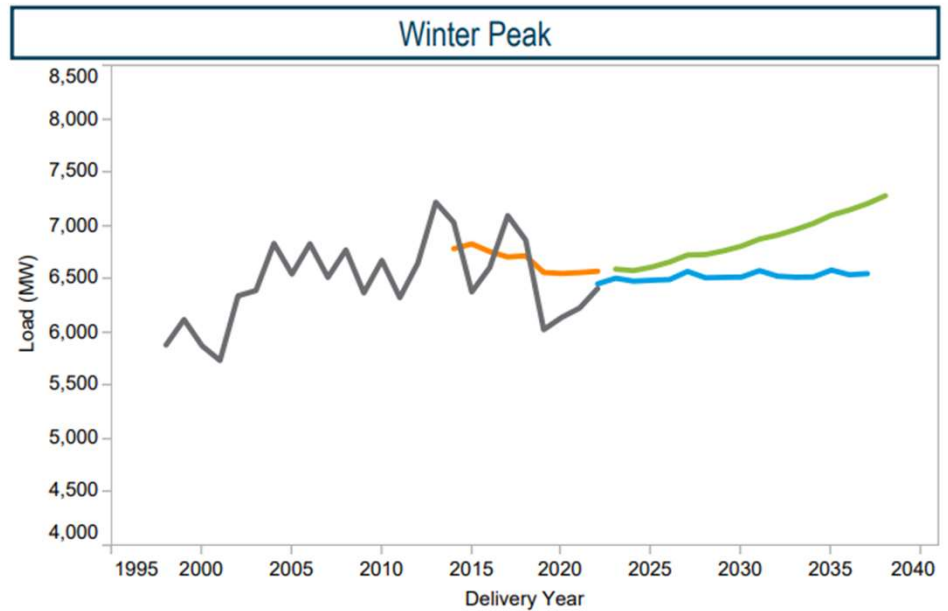
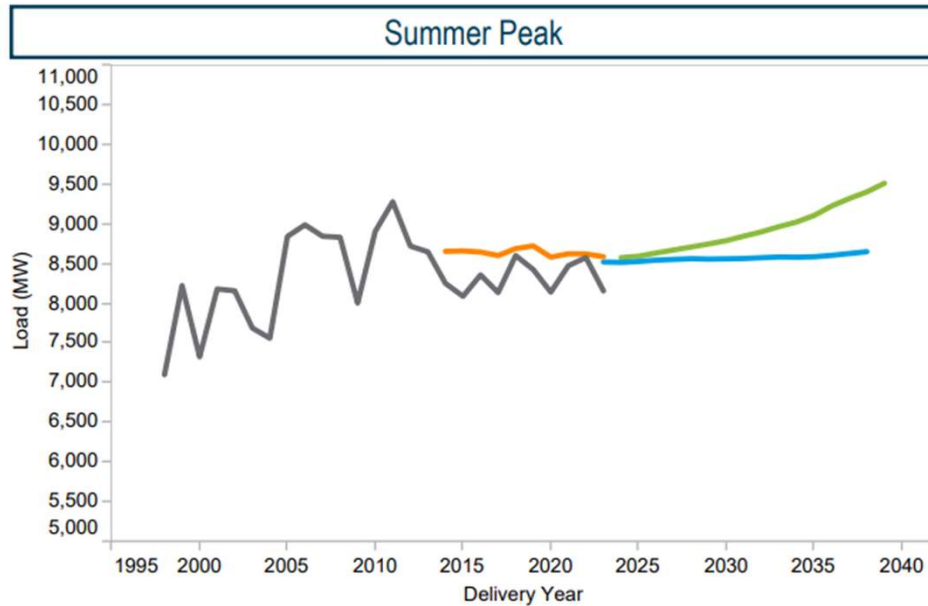


Utility systems are built to meet system peaks, leaving available capacity at almost all times for EV load

Through tools like Time-of-Use Rates and Demand Management programs, utilities and their customers can make more efficient use of the grid and avoid the need for capacity increases

Graph source: PJM Learning Center - How Energy Use Varies with the Seasons

PJM 2024 Load Forecast (PECO)



Peak
 WN peak
 Forecast 2023
 Forecast 2024

- Electrification continues to provide opportunity for PECO in terms of efficient use of system capacity
- The impact of transportation electrification on reliability is primarily a generation capacity issue

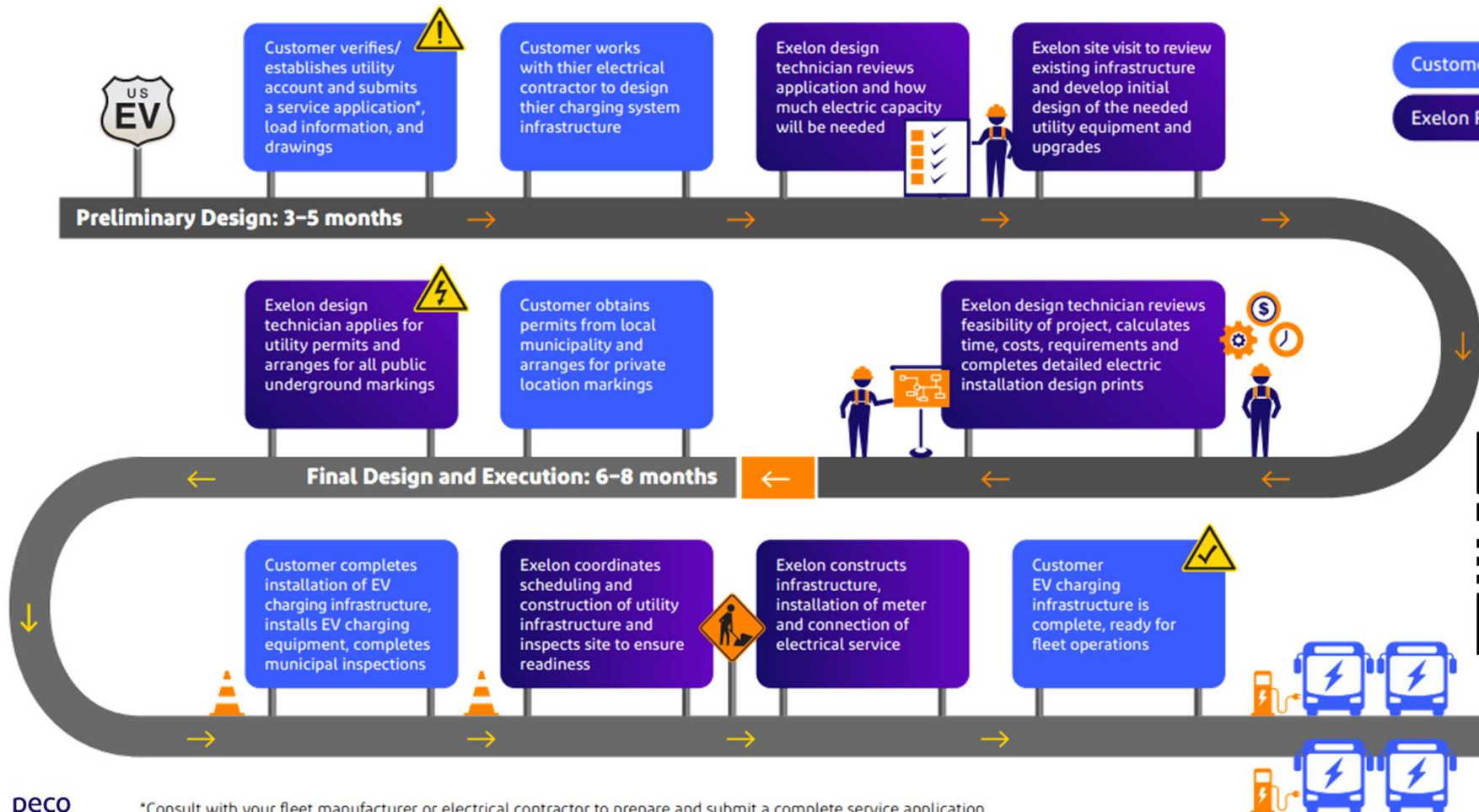
NEVI Implementation

- ✓ Immediately upon passage of the IIJA, PECO began developing a comprehensive strategy to support customers and communities seeking to bring funding to Pennsylvania and our region
- ✓ We met with state and local governments, as well as other key regional stakeholders (transportation, schools, planning organizations, hydrogen hub) to identify opportunities and collaboration strategies
- ✓ As part of our discussions with PennDOT, we identified a number of priorities:
 - Collaborate on outreach and education to raise awareness of the NEVI opportunity
 - Develop EV Roadmap for customers proposing projects
 - Create an expedited procedure to provide customers submitting project applications and PennDOT with preliminary “red light/green light” analysis of proposed locations
 - Implement an internal tracking system for NEVI project Service and Meter applications
- ✓ In September 2023, PECO also received approval from the PA PUC to extend its Demand Charge Rider for DCFC projects to align with NEVI implementation

Capacity Planning Strategy

- ✓ PECO uses information from EV registration incentive, pilot commercial EV charging incentive, and data obtained from industry (EPRI) and governmental sources (PA DMV and DVRPC data) to support analysis of customer EV adoption and usage patterns
- ✓ To date, the company has not identified constraints at the circuit or feeder level driven by EV adoption, but market forecasts and distribution system analysis suggest that initial system constraints may occur in 2026-2027 time frame
- ✓ While transportation electrification generally puts downward pressure on distribution rates for customers through improved capacity utilization, PECO offers time-of-use rates and is studying demand management approaches in preparation for future constraints and optimization strategies

Navigating the Roadmap



Customer Responsibility

Exelon Responsibility

View the Roadmap here

Typical Power Requirement Timelines



Power (MWs)	Equipment	Description	Timeline
125 kW	Switching/cap bank	Minimal on/off property work is needed to accommodate the capacity requirement	2-4 months
500 kW	Install new transformer or extend feeder	Minor on/off property work is needed to accommodate the capacity request	3-6 months
2 MW	New medium voltage feeder	New feeder extension is required to accommodate additional capacity	9-12 months
6 MW	Two new feeders (medium or high voltage)	Construct or extend multiple feeders to customer site	12-15 months
12.5 MW	Multiple new feeders (medium or high voltage)	Depending on load, may build or extend feeders to customer site	12-18 months
25 MW	Multiple new high voltage feeders	Load will likely warrant multiple high voltage feeders and potential substation work	24+ months

Please contact your PECO Large Customer Service representative that is noted on your invoice, or email EVBusiness@peco.com for more information if your organization doesn't have an LCS manager



Early engagement with PECO is critical to your project's success



Interconnection Analysis Form

Utility Company Name:

DESCRIPTION	TOTAL COST & TIMELINE
<p>High-level Engineering & Construction Cost & Time Estimate</p> <p>(This high-level cost* and time estimate** includes Power Transformer, terminator pole, if applicable, Service Lateral or conductor and Metering.)</p> <p>*Cost estimate to be covered by Site Applicant.</p> <p>**Time estimate is from the time of official service request and subject to change.</p>	<p>\$</p> <p>Timeline:</p>
<p>Additional Engineering & Construction Costs/Time Estimates</p> <p>(These estimates include additional time and costs for primary line extension to customers' location and upgrades required to accommodate new load.)</p>	<p>\$</p> <p>Timeline:</p>
<p>Site Applicant construction responsibilities for electric distribution service</p>	<p>\$</p>
<p>Electric Distribution Company (EDC) construction responsibilities for electric distribution service</p>	<p>-\$</p>
<p>Total Estimated Timeline for Site Applicant:</p>	
<p>Total Estimated Cost to Site Applicant:</p>	<p>\$</p>