

# Advancing EV Adoption in Maryland Electric Vehicle Charging Infrastructure Opportunities

*Maryland Commission on Climate Change  
September 26, 2016*



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reliability

innovation

diversity

safety

efficiency



# Discussion Items

- Advancing Electric Vehicle Adoption
- BGE EV Rate Pilot
- Potential role of the utility
- Why involve the utility
- Conclusion



# BGE and EV's

BGE has been very active in understanding and advancing Electric Vehicles in Maryland for a number of years:

- Active in the Maryland PSC EV Working Group, and 2010 PSC Technical Conference on EV Issues
- Participated in the Maryland EV “Pilot” with an EV rate to incent residential off-peak charging
- Active member of the Maryland EV Infrastructure Council
- Supported the implementation of MEA EV charging infrastructure deployment programs and ARRA grants for Maryland’s “first 100” public chargers
- Supporter of EV adoption from “the beginning”
  - Converted a number of BGE Fleet vehicles to plug-in capability in 2010 to evaluate use and charging requirements, added charging stations at a number of BGE facilities
  - Sponsored employee PHEV take home program to raise awareness and understand consumer reactions
  - Incorporating medium duty and plug-in vehicles into the BGE Fleet
- Supporter of several EEI initiatives to advance awareness and adoption of EV's, particularly on Fleet adoption, Employee EV awareness and education and Workplace Charging
- Active in Electric Power Research Institute programs to understand and support advances in EV technology and in incorporating EV load and opportunities into grid operations.

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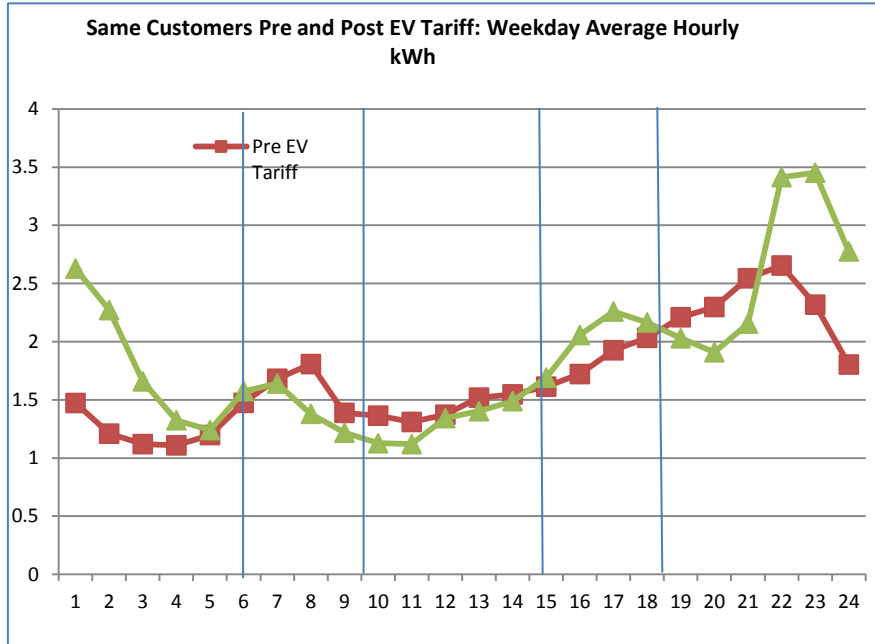


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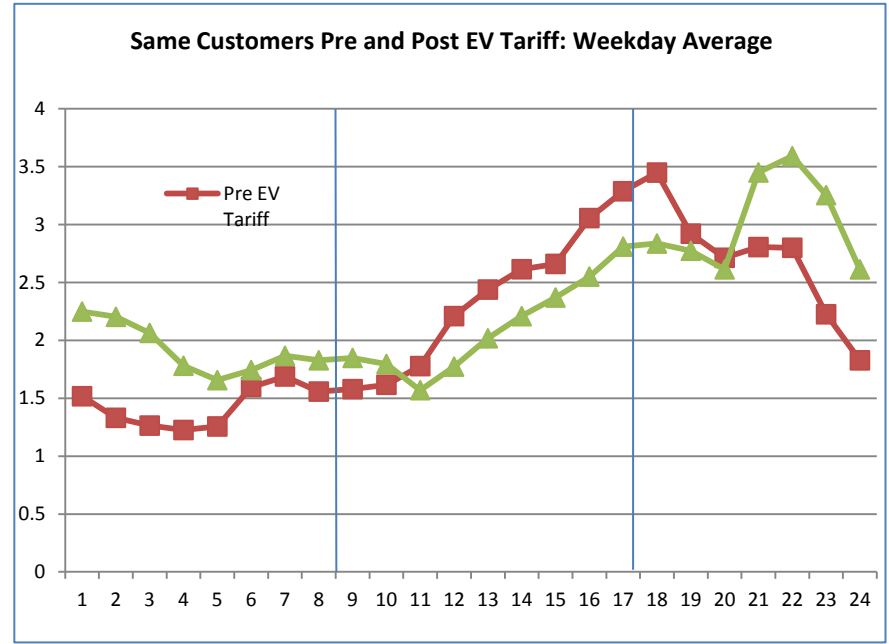
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# BGE EV Rate Pilot – Demonstrated Energy Use Shift



May 2014 compared to May 2015



August 2014 compared to August 2015

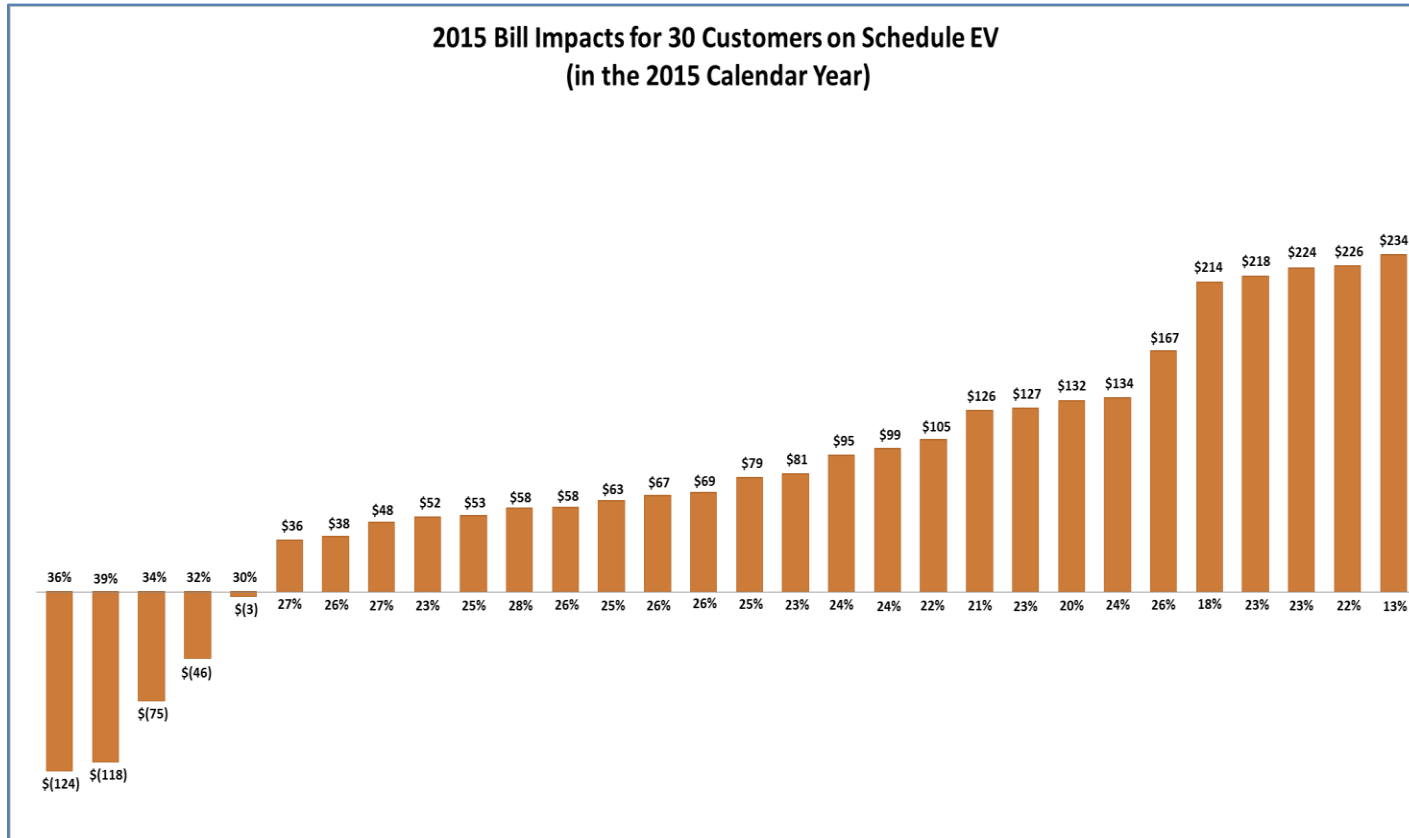


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# BGE EV Rate Pilot - Participant Bill Impacts



Average participants savings was \$81 for the year, with one customers saving \$234  
“Savers” had about 22% on peak use vs. 33% or more for those that did not save.



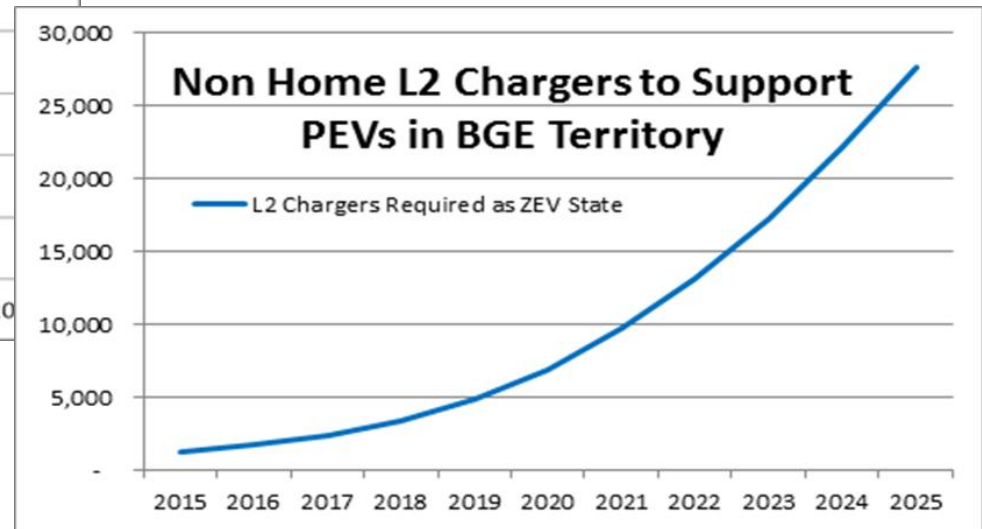
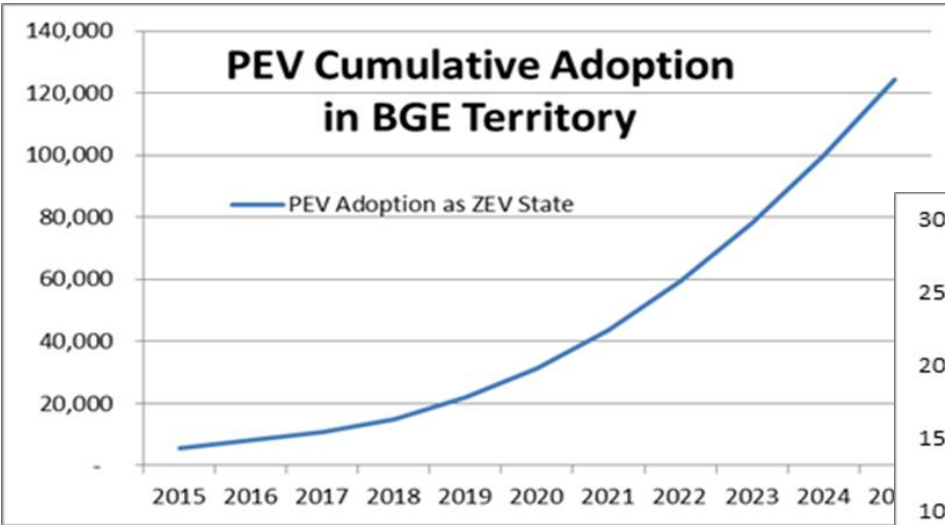
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# Projected PEV Adoption in BGE Territory

- Currently ~6,000 PEVs and ~850 Chargers in the State of Maryland
- Maryland is signatory to Zero Emission Vehicle (ZEV) MOU that could require about 125,000 PEVs and 27,000 non-home Chargers just in the BGE service territory by 2025



- Industry experts continue to state the case that 1 non-home charger is required for every 4 to 5 PEVs

BGE believes significant action is needed to move the effort forward to advance the adoption of EV's to meet the state goals and support the environmental and policy benefits EV's can offer.

Source(s): IHS Data; Accenture Analysis



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# Advancing EV Adoption

Transformation is at a “chicken and egg” juncture with EV adoption hindered by consumer concern with availability of charging and EV charging investments challenged due to uncertainty with lack of EV’s and near term utilization.

Suggest a three prong strategy to address the challenge.

- 1. Establish a Core Public Charging Network** base to address access to charging concerns
  - Utility owned and operated Infrastructure for Public Charging with a limited number of L2 and Fast Chargers
  - Work with local jurisdictions and key stakeholders for siting to address regional interests and opportunity to include typically underserved areas
  - Charging fees would provide cost recovery stream to reduce impact on rates, particularly as user base grows.
- 2. Incent charging infrastructure in critical applications** to support the transformation to Electric Transportation
  - Provide rebates for L2 and DC Fast Chargers installed for fleets, workplace charging, retail, public and other applications. Rebates would complement existing state and federal incentives (not overlap) and could be varied (through cost share proportions) to incent more challenging applications.
- 3. Reduce hurdles in purchase decisions** with rebates for home and small business charging and enable easy access to L2 charging
  - Provide rebates for L2 at homes and (small) business charging, could be a fixed rebate amount or a percent of cost with a cap. Rebates would be net of other incentives.



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# Why Engage Utility Involvement in Maryland's EV Efforts

- Utility involvement would help address critical and fundamental barriers to consumer and business decisions to adopt EVs, specifically, initiate the start of building out a robust charging infrastructure to support EV adoption and thereby addressing concerns with availability and access to charging.
- Utilities are well poised to provide long-term support for Maryland's EV initiatives with proven track records of making significant investments and managing cost recovery over long-term. Utilities can manage an efficient build-out of a significant network.
- Opportunity to leverage the utility/customer communication channels for education and outreach, critical to advancing EV awareness, understanding and adoption.
- Utility involvement can also address certain critical needs including:
  - ✓ Help facilitate growth of EV adoption in the region, easing concerns and raising customer awareness, interest and, ultimately, the increased adoption of EV's, enabling increased business opportunities for equipment and service providers across the EV market.
  - ✓ Working with state and local stakeholders to assure access for all communities, including those currently lacking access to EV resources.
  - ✓ Targeting support for additional investment decisions in critical applications
  - ✓ Easing EV purchase decision hurdles.





# Key Takeaway Points

- Utilities are well poised for long-term support of Maryland’s EV initiatives due to capabilities, interest and proven track records of making investments and managing cost recovery over long-term.
- Utility involvement can address critical needs that currently create barriers to robust EV adoption in Maryland.
- Utility involvement can jump-start the EVSE market and allow it to grow, creating greater market opportunities for a range of stakeholders including users, installers, equipment and service providers.
- Utilities can set forth executable plans to build-out the desired number of EV charging stations in the electric service territory, including areas that may more typically be underserved.
- Utilities can provide customer education/programs through existing relationship, thereby encouraging and promoting EV adoption.
- As regulated entities, State can ensure that infrastructure build-out will complement State’s EV plans (through PSC processes) and community goals.

