Thought Leaders Speak Out 2024

ENGAGING CUSTOMERS WITH TECHNOLOGY

Key Takeaways: Driving Customer Experience and Grid Value through EV Managed Charging Programs

A Fireside Chat with Baltimore Gas and Electric, WeaveGrid and Darcy Partners
(July 2024)

The Institute for Electric Innovation's ***Thought Leaders Speak Out 2024: Engaging Customers with Technology*** series brings together electric company executives with customer responsibilities to share lessons learned and the results of successful customer engagement strategies.

This dialogue focused on how Baltimore Gas and Electric (BGE) is partnering with WeaveGrid to enhance customer experience and grid value through BGE's EVsmart portfolio and featured a discussion between Alexander Núñez of BGE and Apoorv Bhargava of WeaveGrid. Adam Cooper of IEI provided welcome remarks, and Dave Hutchens of Fortis, Inc. moderated the discussion. Phil Kantor and Jonathan Mele of Darcy Partners presented an EV managed charging landscape and shared key findings from their recent study. Key takeaways are summarized and highlighted below.

Click Here for the Agenda and Speaker Bios

Watch Fortis' Opening Remarks Here

Driving program participation with holistic customer engagement and seamless experience.

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BGE describes how its Smart Charge Management pilot program was shaped by in-depth engagement with customers, regulators, and other key stakeholders. BGE drove customer participation through a holistic and proactive approach that included customer engagement and education, incentive mechanisms and rate designs, and the installation and operation of public charging infrastructure across its territory.

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WeaveGrid emphasizes the importance of the customer experience for successful EV managed charging programs. The key is to offer seamless and personalized experiences by understanding each customer's charging behaviors and preferences.

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BGE highlights the need to address a broader customer base, including future EV owners, and equity issues to scale EV adoption and ensure all customers can benefit from programs like EVsmart.

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BGE describes the synergy between Maryland's climate policy and BGE's corporate clean energy strategy which includes EV adoption and supporting programs. The Climate Solutions Now Act set a 60% reduction in greenhouse gas emissions (from 2006 levels) by 2031 and net-zero emissions by 2045. Additionally, Maryland has a goal of having 300,000 zero-emission vehicles (ZEVs) on the road by 2025 and for all light-duty vehicle sales to be EVs by 2035.

Harnessing the grid value of EV managed charging programs.

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WeaveGrid explains why EV managed charging is a critical solution for supporting a reliable, affordable, and clean energy system as EV adoption accelerates.

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BGE shares results on the 4,500 customers enrolled in the BGE's Smart Charge Management program. The program achieved a 33% reduction in peak demand at one feeder serving 900 program participants. Additionally, BGE observed a 70% shift in charging to off-peak hours between 2 and 6 a.m. during the second phase of its managed charging demonstration, which focused on charging when hourly prices were lowest. Looking ahead, BGE aims to expand the program to 30,000 participants by 2027.

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WeaveGrid reflects on the evolution of BGE's EVsmart program portfolio from a time-of-use (TOU) rate-based model to a more sophisticated program which includes dynamically balancing and optimizing load across distribution assets. WeaveGrid's platform allows behind-the-scenes orchestration of EV charging without disruption to customers. BGE's Smart Charge Management program has a less than 1% opt out rate.

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BGE's active managed charging program has achieved a 40-60% reduction in peak load compared to its Vehicle Charging (EV) TOU based passive managed charging program. For example, BGE observed a peak reduction from 2 megawatts to 800 kilowatts on one feeder.

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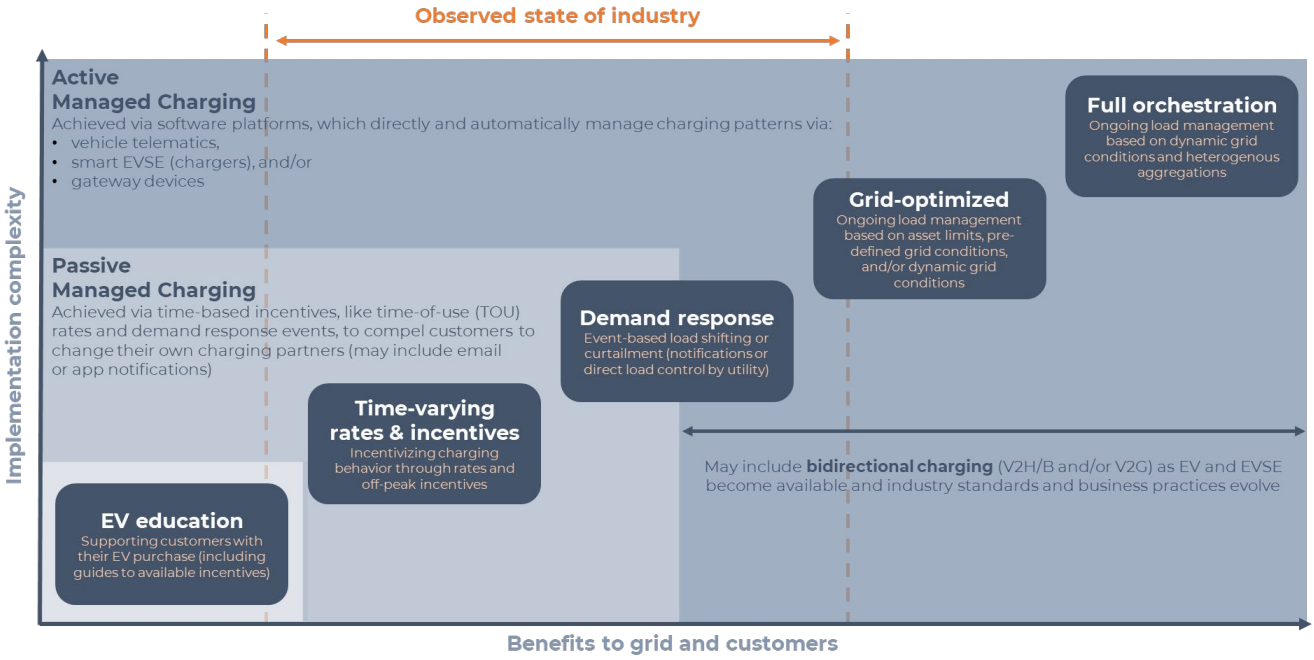
Darcy Partners explains how EV managed charging benefits both customers and grid operations. Currently, most demand response (DR) events are based on regional peak load forecasts issued by Independent System Operators (ISOs). In the future, DR events are anticipated to become more granular based on local grid conditions. This shift will help reduce grid constraints, avoid costly upgrades, and ensure energy affordability and reliability for customers.

Evolution of Managed Charing Programs



Source: Darcy Partners