Alliance for Transportation Electrification

Driving Participation in Managed Charging Programs

August 2025

Table of Contents

Lead Authors

Wesley Holmes, Director of Communications & Member Engagement, ATE
Katherine Stainken, Technical Leader - Electric Transportation, EPRI
Ingrid Malmgren, Senior Policy Director, Plug in America

About ATE

The Alliance for Transportation Electrification (ATE) is North America's largest 501(c)(6) EV trade association representing over 50 member companies dedicated to expanding safe, dependable, affordable, and accessible electric transportation technology.

Attributions

This paper is a product of the ATE Education and Outreach Task Force. The Education and Outreach Task Force was established in 2020 and is managed as a joint effort of ATE, Plug in America (PIA) and Edison Electric Institute (EEI) to share best practices and information regarding how utilities can best support consumer awareness of electric vehicle (EV) models and charging station infrastructure with particular emphasis on the role of the utilities in raising consumer awareness. The task force includes members representing utilities, auto manufacturers, software developers, program implementers, researchers and industry associations.

ATE is grateful to the following contributors to this publication.

Phil Jones & Elizabeth Turnbull, ATE

Yen Le, Con Edison

Jeffrey Myrom, Consumers Energy

Keegan O'Farrell & Kiana Davila, DTE Energy

Kevin Schwain & Emilio Lopez, EnergyHub

Nicolas Sockeel, EPRI

Jared Balew & Keenan Taylor, ev.energy

Bill LeBlanc, LeBlanc Energy Innovation

Joel Levin, Plug in America

Brittany Blair & Garret Fitzgerald, Smart Electric Power Alliance

Josh Cohen & Thomas Martin, SWTCH

Amy Kight Costadone & Amy Wu, Pacific Gas & Electric

Mathias Bell & Manuel Gallardo, WeaveGrid

Shauna Arriola & Hallie Brody & Nariman Senna, Xcel Energy

Executive Summary

As electric vehicle (EV) adoption accelerates across the United States—with more than 6.8 million EVs sold to date and projections of 100–185 TWh of additional load annually by 2030—utilities face growing pressure to manage this new and flexible, yet potentially disruptive, source of electricity demand. While EVs present an opportunity to optimize grid operations, unmanaged charging could overwhelm local distribution systems where EV ownership is high and in areas that see rapid electrification of medium- and heavy-duty fleets.

Managed charging programs have emerged as a critical solution to mitigate grid impacts, reduce peak load, and integrate EVs as a flexible distributed energy resource. Managed charging has also shown to benefit owners by shifting charging to off-peak hours with lower electricity rates, improving battery health, and enabling access to additional incentives and rewards while also supporting their energy service reliability.

Managed charging programs are typically offered in two forms:

- **Passive managed charging** uses time-of-use (TOU) rates or price incentives to influence customer charging behavior without direct utility control.
- **Active managed charging** allows utilities or third-party providers to remotely start, stop, or modulate EV charging based on real-time grid needs through connected chargers or vehicle telematics.

Despite the clear need, only **24% of all EVs in the U.S. were enrolled in a managed charging program as of 2024**, leaving **76% of EVs unmanaged**. Studies from the National Renewable Energy Laboratory (NREL), Lawrence Berkely National Laboratory (LBNL), Smart Electric Power Alliance (SEPA), and the Electric Power Research Institute (EPRI) indicate that **60–80% participation** in managed charging by 2040 will be necessary to prevent costly grid upgrades and maintain the reliability of the electric grid both locally and for the system.

This paper explores managed charging programs from five utilities—**Xcel Energy (Xcel), Con Edison (ConEd), Consumers Energy (Consumers), DTE Energy (DTE), and Pacific Gas & Electric (PG&E)** —representing both residential and commercial passive and active program models. These utilities represent a cross section of different regions and distribution systems in the country in their EV program offerings. The case studies highlight a range of enrollment strategies, incentive structures, and program outcomes, with participation rates exceeding 20% in some targeted segments and off-peak charging compliance rates as high as 95%.

Drawing from these examples, the report identifies a set of best practices across three key points of the customer journey:

Reaching the Right Customers

1. **Use all available marketing channels**, including utility email campaigns, digital ads, community events, and in-app messaging.
2. **Leverage strategic partnerships** with Original Equipment Manufacturers (OEMs), Electric Vehicle Supply Equipment (EVSE) vendors, dealerships, and fleet operators to expand reach and build trust.
3. **Map EV load impacts** to identify and prioritize outreach to high-impact customers using AMI and EV registration data.
4. **Engage early in the EV ownership journey**, ideally at the point of vehicle purchase or charger purchase and installation.
5. **Cross-promote with other DER and demand response programs** to reach energy-conscious customers more likely to participate.

Compelling Customers to Enroll

1. **Communicate clearly and focus on customer value**, including cost savings, environmental benefits, and convenience.
2. **Maximize eligibility** by enabling participation through both vehicles and chargers, regardless of OEM or equipment brand.
3. **Offer meaningful incentives**, including upfront rebates, monthly bill credits, and installation support.
4. **Simplify enrollment** by removing unnecessary steps and streamlining digital interfaces to reduce friction and time commitment to enroll.

Sustaining Engagement and Participation

1. **Maintain regular, user-friendly communication** through notifications, dashboards, and summary reports to reinforce program value.
2. **Encourage year-round engagement** to build lasting behavior and avoid seasonal drop-offs.
3. **Provide ongoing incentives** tied to performance or participation to keep customers motivated.
4. **Gamify participation** with scorecards or milestone tracking to build engagement and satisfaction.
5. **Offer incentives for referrals** to mobilize enrolled customers as program ambassadors and foster peer-to-peer engagement and promotion to drive awareness and participation rates.

Managed charging programs are an essential component of a modern, resilient electric grid. To meet participation targets and unlock full system benefits, utilities must treat customer enrollment and retention as core pillars of program success. Regulators also play a key role in ensuring that programs are well-funded, accessible, and accountable. As EV adoption continues to grow, so too must the sophistication and scale of managed charging programs. The best practices detailed in this report provide a roadmap for utilities and stakeholders to expand participation, optimize grid benefits, and ensure that transportation electrification supports all ratepayers.

Introduction

Electric Vehicles Sales Continue to Grow

Electric vehicle adoption in the United States continues to grow annually. Cox Automotive sales data shows over 10% year-over-year sales growth from 2024 to 2025 with roughly 7.5% of total new-vehicle sales in the first quarter being electric vehicles.[1] Used EV sales are accelerating even more rapidly. In April 2025, used EV sales grew by 14.4% month-over-month and over 60% year-over-year, increasing market share to 2.3% of total car sales, the highest share to date.[2] Cumulatively, over 6.8 million plug-in electric vehicles have been sold in the U.S. from 2010 through the end of April 2025.[3] As the use of electric vehicles continues to grow, so does the cumulative impact on U.S. electric distribution systems.

EV Load Continues to Impact Distribution Grids

EVs are already having a significant impact on total US electricity consumption. Argonne National Laboratory reports that load from EVs jumped by over 50% in the first two months of 2024 compared to the same period in 2023.[4] NREL estimates additional load from EVs will be 750,000 GWh by 2050 and will increase peak hourly load by 150 GW.[5] EPRI's Low Carbon Resources Initiative (LCRI) Net-Zero 2050 report projects that across 8 different load growth scenarios, EV load will surpass data center and building electrification load growth by 2050.[6]

---

[1] Cox Automotive. (2025, April). *Q1 2025 EV sales*. https://www.coxautoinc.com/market-insights/q1-2025-ev-sales/
[2] Cox Automotive. (2025, April). *EV Market Monitor: April 2025.* https://www.coxautoinc.com/market-insights/ev-market-monitor-april-2025/
[3] Argonne National Laboratory. (2025, April). *Light-duty electric drive vehicles monthly sales updates.* U.S. Department of Energy. https://www.anl.gov/esia/light-duty-electric-drive-vehicles-monthly-sales-updates
[4] Maguire, G. (2024, May 22). *U.S. electricity demand from EVs jumps to new highs in early 2024*. Reuters. https://www.reuters.com/business/energy/us-electricity-demand-evs-jumps-new-highs-early-2024-maguire-2024-05-22/
[5] Singer, M. (2023). *Electric vehicle charging infrastructure trends from the alternative fueling station locator: First quarter 2023* (NREL/TP-5400-83916). National Renewable Energy Laboratory. https://docs.nrel.gov/docs/fy23osti/83916.pdf
[6] Electric Power Research Institute. (2024). LCRI Net-Zero 2050 report. Electric Power Research Institute. Retrieved from https://lcri-netzero.epri.com/

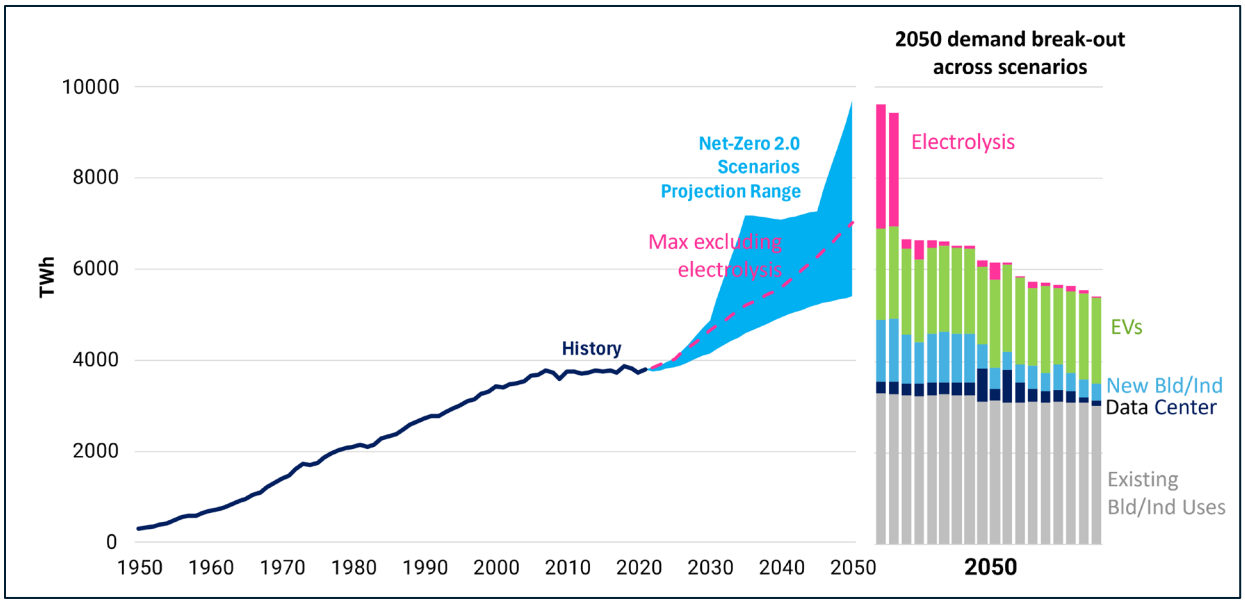


Figure 1: U.S. Total Electricity Demand, 1950-2050 (source: EPRI; LCRI Net-Zero 2050 report)

No Time to Waste

While the exact volume of EV load and the pace at which it will appear on localized distribution systems will vary, experts are aligned on three key trends:

1. EV load will continue to increase significantly year over year for the foreseeable future.
2. Additional load driven by data centers and broader technology electrification will strain energy supply and distribution systems.
3. To mitigate these impacts and limit distribution system investment needs, utilities will need to have strategies in place to capture and manage the flexibility that EV load presents.

Defining Managed Charging

Mitigating System Impacts with Flexible EV Load

EV load is uniquely flexible, in that most vehicles are parked for a significant portion of the day and can be charged at any point within that time window. EVs also move around, meaning the location of their charging can be manipulated, and they have the option to charge fast or slow so long as they are ready when their drivers need them. That flexibility—of timing, location, and speed of charging—can be leveraged as an asset to reduce system

impacts from increased load overall. *Managed charging* is the process of optimizing when, where and how EVs are charged, to benefit both the customer and the electric grid.

Managed charging benefits include limiting the on-peak impacts of EVs and reducing bulk power needs; increasing renewables utilization; and optimizing new load within existing distribution grid constraints to mitigate the need, pace, and cost of distribution system upgrades. In essence, managed charging helps integrate EVs into the electrical grid in a way that is efficient, cost-effective, and sustainable for both the driver and the utility.

Types of Managed Charging

Managed charging programs come in two types: passive and active.

Passive managed charging programs rely on rate structures and other incentives to influence when customers charge their EVs. In this model, utilities typically use TOU rates or off-peak incentive structures to encourage EV owners to charge during specific time windows that serve the utility's needs. This means charging when demand on the system is low (typically overnight), and/or shifting load away from peak demand times (typically, weekday late afternoons and early evenings). In some cases, it could mean charging during midday when low-cost solar generation is high. These programs are called *passive* because they rely on voluntary action taken by the customer based on financial incentives, with no other involvement to influence or control charging. Passive managed charging programs can include whole-home time-of-use rates, EV-specific time-of-use rates, or other approaches such as incentive payments for charging during off-peak hours.

Active managed charging refers to the utility or another third party actively managing an EV's charging on the customer's behalf. In this model, a customer plugs their vehicle into a charger, and the utility sends commands to the charger or the vehicle to start, slow or stop charging at the time of the utility's choosing. These programs are called *active* because the utility is actively controlling the vehicle's charging. This model is also known as *smart charge management* because it relies on connected "smart" devices—e.g., the charger or the vehicle—which are controlled by signals sent by the utility or a third-party aggregator. Active managed charging can include demand response events and real-time dynamic load shaping programs, optimized to deliver a variety of grid benefits.

A Note About Bidirectional Charging

There are now on the market EVs and EV charging systems that support two-way power flows known as bidirectional charging. Bidirectional charging allows for power stored in a vehicle battery to be discharged into a home (known as V2H) or a building (known as V2B) or onto the distribution grid itself (known as V2G). In the future, vehicle manufacturers, grid managers, and industry experts do expect to leverage the estimated 9 TWh of EV battery

storage capacity planned for production by 2030 as a vital distributed energy resource.[7] However, while there are V2G programs active in small pilots, these programs are still in the early stages of development with technical, policy and regulatory approaches being evaluated and refined across specific use cases. Available data on program performance is insufficient to draw conclusions on best practices for consideration in this paper. ATE is tracking the development of V2G programs with plans to address them in future papers.

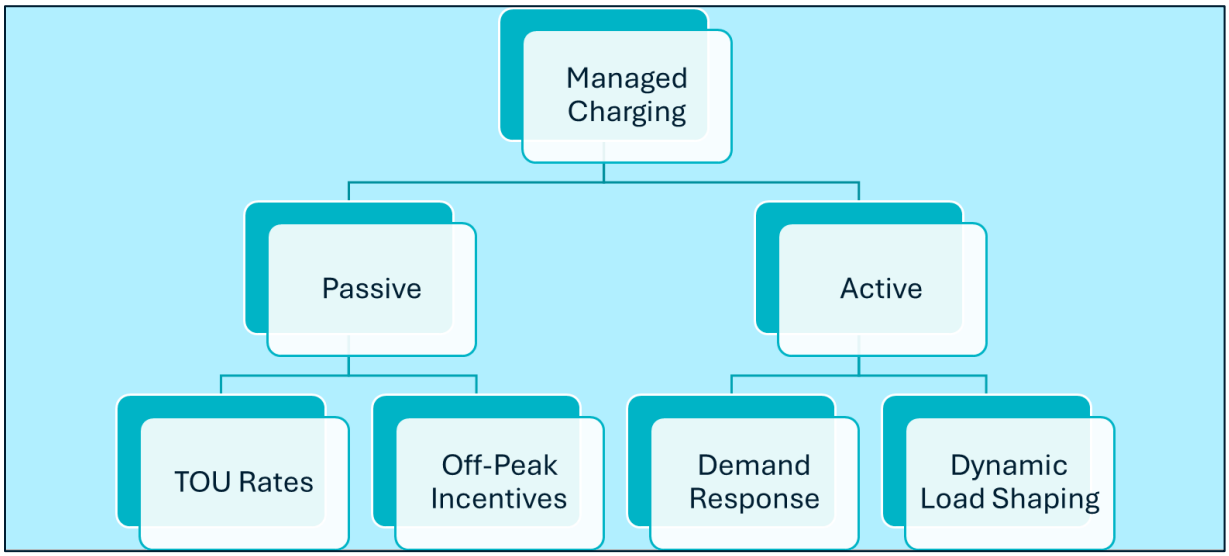


Figure 2: Variations of Managed Charging Program Models

The Current State of Managed Charging Programs

A recent report from LBNL indicates that with high rates of unmanaged charging, 30–50% of distribution transformers could be overloaded by 2040.[8] Meanwhile, NREL finds that managed charging can cut peak EV charging load by more than 50%.[9] There is no single universally agreed-upon threshold for what percentage of EVs must be managed to prevent electric distribution system disruptions. However, the findings from multiple studies including LBNL, NREL, EPRI, and Smart Electric Power Alliance (SEPA) find that by 2040 at least 60% to 80% of EVs will need to participate in some form of managed charging to mitigate grid impacts and avoid costly infrastructure upgrades.

---

[7] International Energy Agency. (2024). *Global EV Outlook 2024: Outlook for battery and energy demand*. International Energy Agency. https://www.iea.org/reports/global-ev-outlook-2024/outlook-for-battery-and-energy-demand

[8] Lawrence Berkeley National Laboratory. (n.d.). *GAP Analysis for Smart Charging Management*. Lawrence Berkeley National Laboratory. https://eta-publications.lbl.gov/sites/default/files/scm_gap_analysis_.pdf

[9] National Renewable Energy Laboratory (NREL), Lawrence Berkeley National Laboratory (LBNL), Kevala, & U.S. Department of Energy (DOE). (2024, March 18). Multi-State Transportation Electrification Impact Study: Final report.

EPRI research finds that only about 24% of the more than 5 million EVs on the road in 2024 were enrolled in a managed charging program.[10] This leaves roughly 76% of current EVs unmanaged. This is due in part to a lack of available program offerings. There are 166 investor-owned utilities (IOU) operating in the U.S. serving 75% of energy customers. Of those, SEPA finds only around twenty (12%) offered a managed charging program to EV owners in 2024.[11] However, even where programs are offered, current participation rates are below the target range to mitigate potential grid impacts as adoption grows in these areas.

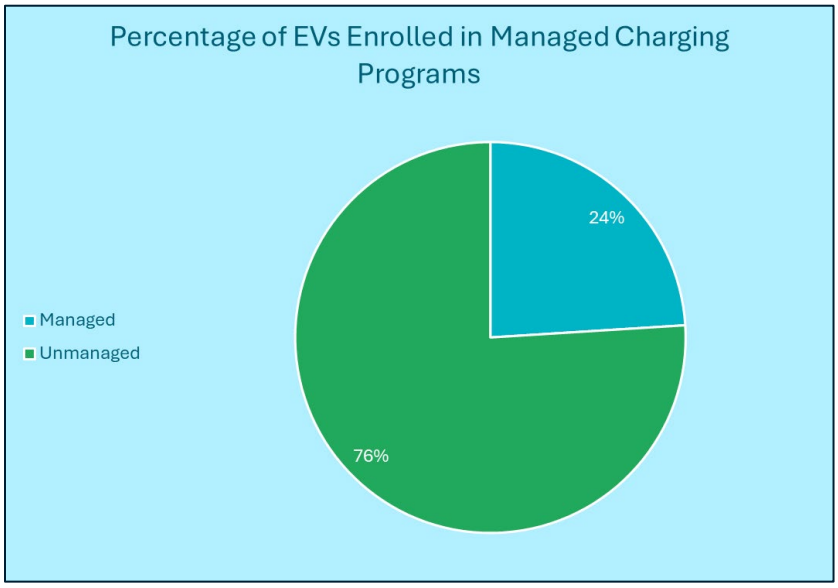


Figure 3: Managed Charging Enrollment (Data source: EPRI; Considerations to Enable Managed Charging at Scale [forthcoming])

What limits participation in managed charging programs where they are available? Many programs are subject to caps on participation per pilot or program terms and regulatory approvals. However, programs face enrollment challenges for a variety of reasons related to customer awareness, value perception, and utility engagement practices. By examining utility managed charging program experiences to date, this paper seeks to highlight best practices that can help utilities increase program participation through program design and customer engagement strategies.

[10] Electric Power Research Institute (EPRI). 2025. *Considerations to Enable Managed Charging at Scale*: 3002033287. EPRI, forthcoming 2025.
[11] Smart Electric Power Alliance. (2024). *State of managed charging in 2024*. SEPA. https://sepapower.org/resource/state-of-managed-charging-in-2024/

Managed Charging Case Studies

This section examines managed charging programs across five ATE member utilities. For each utility we examine the programs design and initial goals; consider its enrollment strategies including marketing, incentives, and program partners; and identify the lessons learned and program adaptations utilities implemented to improve program performance.

1. Con Edison: Smart Charge NY and Smart Charge Commercial
2. Consumers Energy: PowerMIDrive
3. DTE Energy: Smart Charge
4. PG&E: EV2-A Rate
5. Xcel Energy: Optimize Your Charge

Case Study: Con Edison—Smart Charge

Utility Profile	Program Profile
Con Edison (Con Ed) Territory Served: New York City and Westchester County Meters Served: 3.6 million	Start Date(s): • Residential 2017 (Relaunch in 2023) • Commercial 2024 Model: Passive; Off-Peak Incentive Customers Enrolled: 27,500+ residential; 36 commercial (70+ MW)

Overview

Con Ed has two managed charging programs. The Smart Charge NY program is targeted at residential EV owners, while Smart Charge Commercial targets public, workplace, multifamily, industrial, and light-, medium-, and heavy-duty fleet charging. Both programs are passive models.

The Smart Charge NY program has enrolled more than 27,500 EVs since its relaunch in 2023, with more than 90 vehicle models and 6 types of chargers eligible to participate. The residential program approved by the Commission runs through the end of 2025 but encouraged by program performance, Con Ed has petitioned to extend the program by one year without a pause in funding.

The Smart Charge Commercial program launched in January 2024 seeks to shape commercial EV charging habits by offering a cash incentive revenue stream for charging during off-peak periods and overnight and is the first comprehensive managed charging program for commercial customers among the states. In addition to commercial fleets, the program offers additional incentives for public transit operators and operators of public

charging stations As of July 2025, Con Ed has 36 commercial participants providing a total of more than 70 MW of commercial charging demand enrolled in the program, with two-thirds of that capacity from private sites.[12]

Smart Charge NY (Residential)

Marketing

Con Ed's outreach and marketing efforts include a mix of in-person events, strategic partnerships, and utility led email and postcard campaigns. Some examples of in-person events include booths at popular charging stations and high visibility events such as trade shows, EV station ribbon cuttings, and at auto dealerships. The utility developed partnerships with rideshare, taxi and limo companies, as well as territory auto dealers. Outreach also included partnerships with EV charge point developers and charging station site hosts to put signage in parking areas, as well as in-app marketing on vehicle OEM owner's apps.

Con Ed monitors where EV adoption is occurring in their service territory based on monthly registration data and shifts their targeted outreach to those areas. Campaign collateral included an email and postcard campaign targeting owners of specific EV makes; regular customer e-blast and mailer campaigns; limited-time survey promotions; and postcard mailers to the top 10 ZIP codes with high EV registrations and low managed charging participation. They also placed ads at charging stations to engage consumers when they are thinking about their EV charging needs. The utility translated its marketing materials to deliver multi-language messaging to customers and NYC rideshare drivers.

Incentives

Smart Charge NY offers an off-peak charging incentive of $0.10 per kWh between 12am – 8am. During the summer months (Jun-Sep), customers can earn $35 each month by avoiding on-peak charging (weekdays between 2-6pm). As a bonus, customers can also earn an additional $35 if they avoid all on-peak charging throughout the entire summer. Incentives are paid to the participants through Venmo or PayPal.

Smart Charge Commercial

Marketing

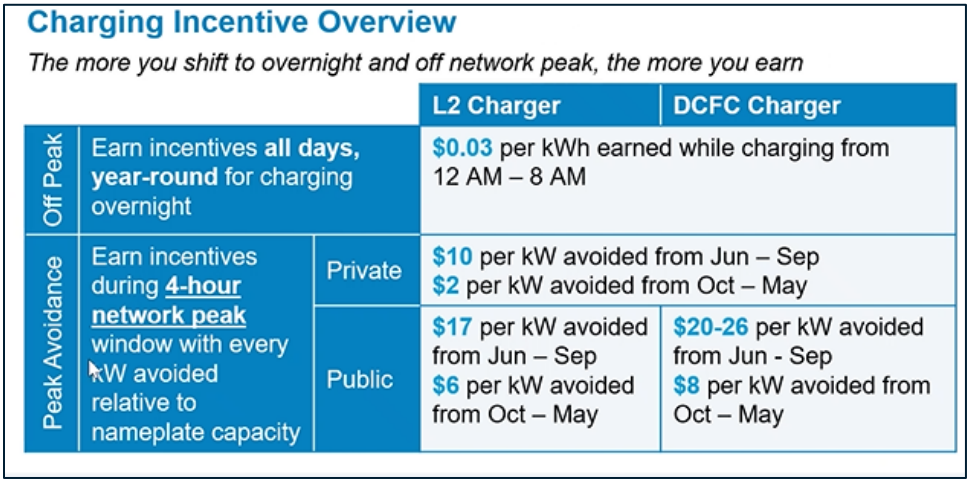
Con Ed took a similar broad reach approach to marketing the commercial program. Efforts included an EVSE developer forum presentation, an e-mobility awards presentation, hosting booths and speaking at various fleet related events, and giving monthly

[12] Consolidated Edison Company of New York, Inc., & Orange and Rockland Utilities, Inc. (2025, April 18). *Immediate Solutions semi-annual and annual report* (Cover letter and report filing). New York State Department of Public Service. Retrieved July 25, 2025, from https://documents.dps.ny.gov/public/MatterManagement/MatterFilingItem.aspx?FilingSeq=359692&MatterSe=

presentations to local EVSE installers. Con Ed also reached out to more than 40 key account managers, engaged high visibility fleet organizations, hosted webinars, and held monthly office hours allowing fleet managers to call and ask questions about the program. Collateral for the program includes social media posts, paid ads, one-pagers explaining the eligibility and incentives, new customer-facing webpages, webinar video recordings, a press release with Revel, and enhancements to their online EV charging cost calculator to include the program incentives.

Incentives

The program offers commercial customers $0.03 per kWh earned while charging from 12am-8am for both L2 and DCFC charging systems. An additional incentive is earned by avoiding the 4-hour network peak window for every kW avoided relative to nameplate capacity. The incentives vary based on public or private sites, and for L2 or DCFC charging. The figure below summarizes the available incentives.



Charging Incentive Overview

The more you shift to overnight and off network peak, the more you earn

			L2 Charger	DCFC Charger
Off Peak	Earn incentives **all days, year-round** for charging overnight		$0.03 per kWh earned while charging from 12 AM – 8 AM	
Peak Avoidance	Earn incentives during **4-hour network peak** window with every kW avoided relative to nameplate capacity	Private	$10 per kW avoided from Jun – Sep $2 per kW avoided from Oct – May	
		Public	$17 per kW avoided from Jun – Sep $6 per kW avoided from Oct – May	$20-26 per kW avoided from Jun - Sep $8 per kW avoided from Oct – May

Figure 4: ConEd Smart Charge Commercial Incentive Overview (source: ConEd)

Program Partners

- **ev.energy**: Con Ed partnered with ev.energy, a smart charging software platform provider, as the program vendor to implement the residential Smart Charge NY program and provide customer support. Participants can use the ev.energy web platform and mobile app to manage their EV charging and track performance and incentives.[13]

Lessons Learned

[13] ev.energy. SmartCharge New York. Retrieved July 25, 2025, from https://scny.ev.energy/

SmartCharge NY

1. Clear and Sustained Communication: Con Edison found email blasts were low-cost and effective, allowing for testing different messaging strategies across audiences. Email marketing also supported continuing education to amplify messaging and keep engagement strong during summer peak season.
2. Navigating Industry Transitions: Telematics data continues to vary in format and price depending upon the OEMs, which can limit eligibility among EV customers. Con Ed continues to work with OEMs to enable even greater participation in the Smart Charge NY programs through vehicle telematics.
3. Maximizing Eligibility: Recognizing a growing segment of plug-in hybrids (PHEV) in their territory, Con Ed expanded the program's compatible hardware list to include PHEVs with the largest market shares in the service area.

SmartCharge Commercial

1. Streamlining Enrollment: Regularly scheduled application workshops were effective in educating new participants about SmartCharge Commercial and resulted in a higher number of applications before the summer peak season.
2. Maximizing Eligibility: EVSE data continues to vary in format and content depending on the network service providers (NSP). Con Edison developed an in-house charging data aggregation tool designed to accept data from various NSPs, allowing for greater participation in SmartCharge Commercial.

Case Study: Consumers Energy—PowerMIDrive

Utility Profile	Program Profile
Consumers Energy Territory Served: Michigan Lower Peninsula Meters Served: 1.87 million	Start Date: 2023 (Pilot est. 2019) Customer Segment: Residential & Commercial Model: Passive; Off-Peak Incentive Customers Enrolled: 7,933

Overview

Consumers Energy (Consumers) launched its PowerMIDrive pilot in June of 2019, with a goal of at least 70% off-peak load management for residential EV customers, and to provide early learnings regarding public charging infrastructure. Consumers sought to develop a cost-effective and sustainable passive managed charging program that would instill lasting home charging behavior in EV owners. Between 2020 and 2024, the number of EVs in Consumers' territory grew by over 450%, from approximately 8,800 EVs to nearly 40,000. The program has enrolled nearly 8,000 EV owners representing 41% of the target audience of high impact EV owners and 22% of all EV owners in their territory. Overall,

Consumers is seeing 97.9% of participating residential customers and just under 91.1% of commercial customers charging off-peak, averaging 95.9% off-peak charging across all permanent customer programs.

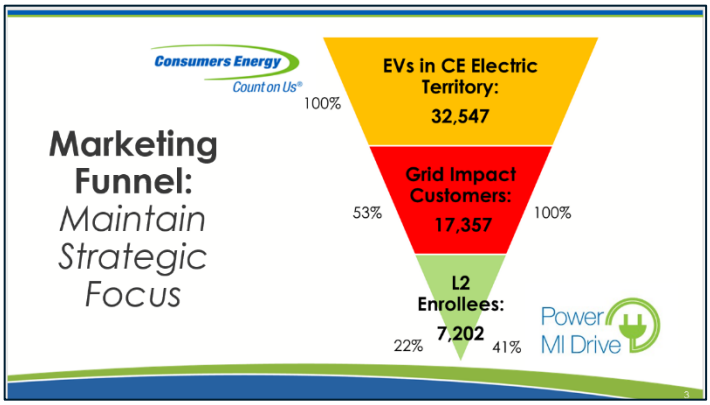


Figure 5: Consumers PowerMIDrive Marketing Funnel (source: Consumers Energy)

Marketing

Consumers used AMI data to determine which EV customers were having the biggest impact on the grid, showing a 5 kW or greater jump in energy use during peak demand windows. Consumers used this data to strategically target marketing to these EV owners and set a target to enroll over 40% of them in the program.

Program marketing included a mix of digital promotion, direct customer engagement, and events-based outreach. Digital outreach included targeted email campaigns supplemented with postcards in the mail to customers not clicking on the email. CE also ran ads on social media and the EV driver app PlugShare with a focus on holiday ad saturation to reach drivers charging during holiday travels. Direct customer engagement efforts included ride-and-drive events and inbound customer inquiries and email communications. Consumers also developed a referral program to encourage participants to promote the program among their social networks for an additional incentive.

EV Customer Program Category	On-Peak 2PM-7PM	Off-Peak 7AM-2PM 7PM-11PM	Super Off-Peak 11PM-7AM & Weekends	Total Off-Peak by Category	Total kWh by Category	YOY Load Growth
Residential Single Family	*2.1%*	*6.6%*	*91.3%*	*97.9%*	*53.8%*	*8.7%*
Community Charging	*21.6%*	*33.8%*	*44.6%*	*78.4%*	*1.3%*	*26258.6%*
Multifamily	*18.3%*	*35.2%*	*46.5%*	*81.7%*	*0.3%*	*162.9%*
Total Residential	***2.6%***	***7.4%***	***90.0%***	***97.4%***	***55.3%***	***11.6%***
Destination L2+L1	*20.6%*	*36.3%*	*43.1%*	*79.4%*	*1.4%*	*69.8%*
Fleet & Workplace	*8.9%*	*40.8%*	*50.3%*	*91.1%*	*12.1%*	*64.5%*
DCFC Pilot	*24.5%*	*35.2%*	*40.3%*	*75.5%*	*31.1%*	*154.7%*
Total Commercial	***20.1%***	***36.8%***	***43.1%***	***79.9%***	***44.7%***	***118.7%***
TEP Programs	**4.1%**	**13.9%**	**82.0%**	**95.9%**	**68.9%**	**19.1%**
TEP Programs & DCFC Pilot	***10.4%***	***20.5%***	***69.0%***	***89.6%***	***100.0%***	***42.8%***

Figure 6: Consumers PowerMIDrive EV Charging per Category and Time Block, April 2024-March 2025 (source: Consumers Energy; 2025 TE Plan Progress Report)

Incentives

- Up to a $500 rebate for installing a NEMA 14-50 outlet for a Level 2 EV charging station (up to $1,000 for income-qualified customers)
- Up to a $500 rebate for installing a dual-cord L2 or splitter if adding an additional EV to the household
- Quarterly payments of up to $30 for every month maintained off-peak charging for behavioral reinforcement over the course of a year ($10/month).

Program Partners

- **Sagewell:** Sagewell is a company specializing in leveraging advanced metering infrastructure (AMI) data to assist utilities in managing electric vehicle (EV) loads and optimizing grid operations. Sagewell provides periodic AMI analysis to identify new EV load on the system.

Lessons Learned

1. Incentivize Participation: In the spring of 2025, Consumers' AMI data analysis showed just 497 (1.2%) of the 39,950 EVs in the Company's electric territory enrolled in available TOU rates without rebate and incentive engagement, finding that relying on TOU rates alone is not sufficient to incentivize residential EV load management.[14]
2. Engage Early: CE structured the program website to channel customers frustrated by the unknowns of charger installation costs and specifications to a support team, who use this as an opportunity to provide technical assistance to EV owners and reduce their upfront costs. This helped to build trust and create an opportunity to market the managed charging programs.
3. Map Load Impact: AMI data was a valuable tool for identifying potential EV customers and helped CE target outreach materials to customers whose participation would yield the highest value for the customer and the utility.
4. Offer Meaningful Incentives: Year-round incentives encouraged and reinforced permanent off-peak home charging behavior through seasonal changes.
5. Leverage All Available Marketing Channels: CE reports between 2024 and 2025, the program team made over 33,000 direct communications with EV customer contacts, averaging about 127 customer contacts per workday. In that same period,

[14] Consumers Energy Company. (2025). *Consumers Energy Company's transportation electrification plan annual progress report 2025*. Retrieved June 30, 2025, from https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/068cs00000wdxbWAAQ

CE hosted or attended 67 EV engagement events as presenter, panelist, or exhibitor reaching close to 4,000 people.

Case Study: DTE Energy—Smart Charge

Utility Profile	Program Profile
DTE Energy Territory Served: SE Michigan Meters Served: 2.3 million	Start Date: July 2023 Customer Segment: Residential & Commercial Model: Active; Demand Response Customers Enrolled: 2,700+

Overview

The DTE Energy Smart Charge is an active managed charging program. The program incentivizes customers to allow the utility or vehicle manufacturer to take control daily and automatically shift their charging to off-peak times. DTE also has the ability to pause customers' charging (i.e. demand response events) and can call up to 5 of these events annually. Smart Charge uses ChargeScape and WeaveGrid to manage charging via vehicle telemetry, depending on vehicle make, and WeaveGrid also manages vehicle chargers for vehicles that are not connected through telemetry. DTE had an initial goal and approved budget for 2,000 EV customers, half each through ChargeScape and WeaveGrid. Enrollments surpassed these caps, and in 2024 DTE sought and received regulatory approval for an 18-month program extension through 2026 and allowing double the amount of enrollment through each platform. As of July 2025, DTE has 1,400 customers enrolled through ChargeScape, and over 1,300 enrolled through WeaveGrid.

Marketing

DTE developed a brochure[15] to promote the program to customers and worked with their forecasting team to locate potential EV drivers in their service territory for targeted email marketing. When targeting likely EV owners using AMI data, DTE's email communication achieved a 48.3% open rate, and a 9.3% click through rate, its best performing communication. Email campaigns directed customers to the Smart Charge landing page where they could directly enroll.

[15] DTE Energy. (n.d.). *Smart Charge brochure: Plug-in electric vehicles (PEV)*. Retrieved July 17, 2025, from https://www.dteenergy.com/content/dam/dteenergy/deg/website/residential/Service-Request/pev/plug-in-electric-vehicles-pev/SmartChargeBrochure.pdf

ChargeScape partners BMW[16] and Ford[17] direct EV customers to the Smart Charge program via their respective customer apps and websites. Customers input their desired charging preferences into their OEM's app to optimize the customer's EV charging, ensuring charging begins only during each customer's off-peak time period. ChargeScape features the Smart Charge program as a case study on its website.[18]

Program partner WeaveGrid also hosted a microsite to enroll customers in the Smart Charge program page.[19] First, a customer would enter their home address to verify if they were in DTE's electric service territory. Next, the customer had four steps to enroll in the program, starting with creating a WeaveGrid profile, connecting the vehicle, completing the profile, and selecting their utilities program.

Incentives

During the initial phase of the pilot program, customers were incentivized with $50 gift cards upfront and an additional $50 at the end of the year. During a minimal extension period that took place from January 1-June 30, 2025, DTE offered an additional $25 gift card. As a part of the current program extension, DTE has moved to a monthly incentive of $5 per month. As the program is still in its pilot phase, DTE is unable to provide the incentive payments as monthly bill credits based on internal and regulatory policy. ChargeScape delivers customer incentives via Venmo or PayPal. WeaveGrid provides the incentive via gift cards.

Program Partners

- **WeaveGrid**: WeaveGrid is a software company that builds data products to support managed charging using vehicle telematics. WeaveGrid partners directly with vehicle OEMs to integrate their vehicles into utility managed charging programs.
- **ChargeScape**: The Open Vehicle-Grid Integration Platform (OVGIP) was established in 2012 by EPRI which initially developed the software platform and concept in collaboration with OEMs. In 2024, BMW, Ford, and Honda officially launched ChargeScape, a new company built off the OVGIP platform with modifications. Nissan announced an agreement to join ChargeScape as an equal 25% investor in October 2024.

---

[16] BMW Group. (n.d.). *ChargeForward*. Retrieved July 17, 2025, from https://www.bmwchargeforward.com/
[17] Ford Motor Company. (n.d.). *Ford Energy Rewards*. Retrieved July 17, 2025, from https://www.ford.com/support/category/electric-vehicle/ford-energy-rewards/
[18] ChargeScape LLC. (n.d.). *Case studies*. Retrieved July 17, 2025, from https://chargescape.com/#case-studies
[19] WeaveGrid. (n.d.). *DTE Smart Charge program*. Retrieved 6/20/25, from https://www.weavegrid.com/dte/smart-charge-program

Lessons Learned

1. Consumer Awareness on Data Management: DTE found that customers had confusion and uncertainty regarding the management of their vehicle data creating privacy concerns. Customers want clarity on who has access to their vehicle data.
2. Unclear Value Proposition: Customers were unclear how the program and charging schedules might impact their mobility. Customers also expressed confusion about the difference between demand response events and regular off-peak charging times.
3. Navigating Industry Transitions: The transition from OVGIP to ChargeScape was a market development outside the control of DTE that impacted customers enrolled in Smart Charge. DTE needed to re-engage with BMW, Ford, and the leadership at ChargeScape to figure out the technical side of the transition, while minimizing customer disruption. DTE is working with ChargeScape to reengage participating customers and navigate them through this transition while keeping them active with the program and protecting consumer data.
4. Map Load Impact: DTE found that the system benefits of an active managed charging program did not meet their targets relative to program costs and value propositions when compared to EV owners who are not on Smart Charge but instead use a TOU rate. To see if they can extract more grid value, DTE is introducing a load balancing component that targets customers at a circuit level to examine system upgrade cost impacts and grid overload prevention with this more targeted approach.

Case Study: Pacific Gas & Electric—EV2-A Rate

Utility Profile	Program Profile
Pacific Gas & Electric (PG&E) Territory: Northern & Central California Meters Served: 5.5 million	Start Date: July 2019 Customer Segment: Residential Model: Passive; TOU Rate Customers Enrolled:141,152

Overview

Pacific Gas and Electric's (PG&E) EV2-A rate is a whole-home EV TOU rate with three pricing periods: Peak, Part-Peak, and Off-Peak. Just under 83% of PG&E residential EV customers are on the EV2-A rate with 65% of charging occurring off-peak. The program continues to grow with a reported 9% increase in enrollments between January and December in 2024. At its current pace, PG&E projects enrollments in EV2-A to reach 883,000 by 2035. In a recent Joint IOU Electric Vehicle Load Research and Charging Infrastructure Cost Report,

PG&E reports EV2-A customers show the highest percentage load impacts compared to other TOU rates.[20]

Marketing

PG&E's promotion of the EV2-A TOU rate plan combines digital education, strategic partnerships, and personalized online tools. PG&E utilizes its website to inform customers about the benefits of the EV2-A rate plan.[21] The EV Savings Calculator guides customers through a six-step process to compare different rate plans and determine potential savings tailored to their vehicle model and current electric bills. The site highlights the cost savings associated with off-peak charging and seasonal charts are provided to illustrate optimal charging times and potential savings.

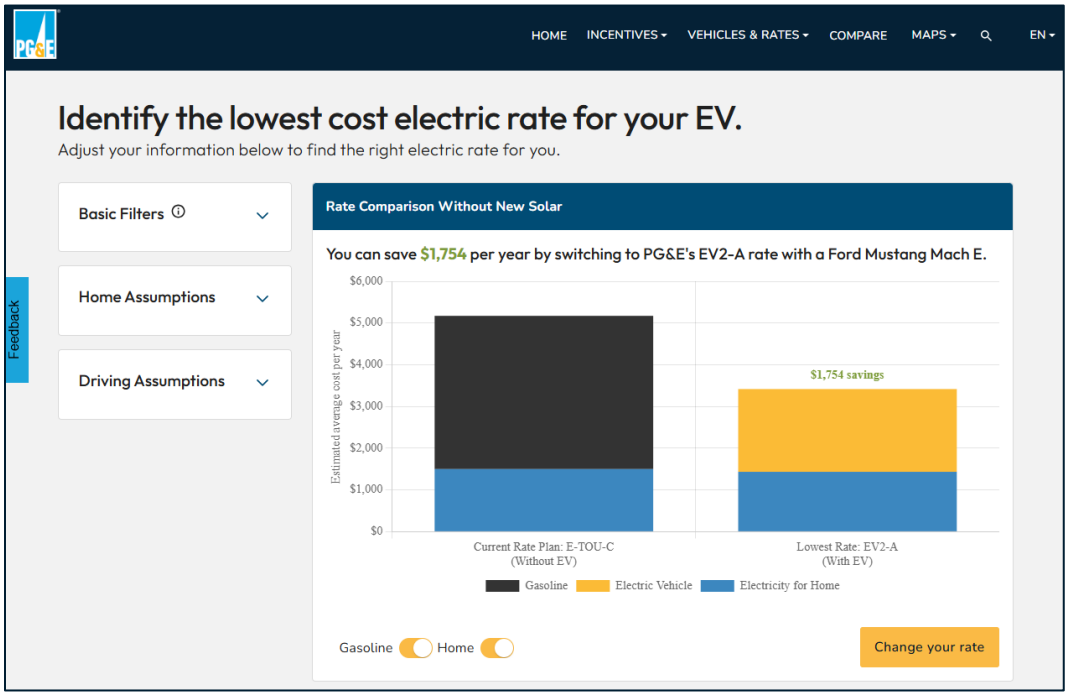


Figure 7: PG&E EV Savings Calculator (source: Pacific Gas and Electric Company)

Incentives

- Empower EV Program: As a companion to the EV2-A rate, the Empower EV Program officially launched on June 29, 2023. This pilot initiative aimed to support income-eligible customers in adopting EVs by providing financial assistance for home

[20] California Public Utilities Commission. (2025). *Pacific Gas and Electric Company's Joint IOU Electric Vehicle Load Research and Charging Infrastructure Report and EV Infrastructure Rule Data Report*. Retrieved July 25, 2025, from https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M560/K829/560829341.PDF

[21] Pacific Gas and Electric Company. (n.d.). *Time-of-use (TOU) rates for electric vehicles*. Retrieved from https://www.pge.com/en/account/rate-plans/electric-vehicles.html

charging infrastructure. The program offered up to $2,500 in incentives, including a free Level 2 charger valued at $500 and up to $2,000 for electrical panel upgrades if needed. Participants were also automatically enrolled in PG&E's EV2-A rate plan. The Empower EV Program concluded on December 31, 2024. [22]

Lessons Learned

1. Emphasize Customer Benefits: PG&E found that the top 3 motivators for participating in the program were insights into costs, incentives and savings. The EV savings calculator provides customers a clear understanding of the economic benefits of the program. PG&E found a direct correlation between customers who followed the recommended charging schedule and reported customer satisfaction in consumer surveys.

2. Provide Meaningful Incentives/Maximize Eligibility: Pairing the EV2-A rate with a free charger and panel upgrades for income-qualified customers offers significant value and helps maximize the reach of program dollars and expand access to more customers.

3. Managing New Peaks: PG&E had such success with this program that a secondary peak was created by EV load between 12-6am. In response, PG&E has developed an active managed charging program that utilizes vendor software to manage residential customers' EV charging at the time of lowest electricity cost throughout the day while reducing the strain on distribution assets. PG&E began marketing this pilot to EV2-A customers in Q3 2024.

Case Study: Xcel Energy—Optimize Your Charge

Utility Profile	Program Profile
Xcel Energy Territory Served: Colorado, Minnesota, Wisconsin, Michigan, North Dakota, South Dakota, Texas, and New Mexico Meters Served: 3.7 million	Start Date: 2021 Customer Segment: Residential Model: Passive; Off-Peak Incentives Customers Enrolled: 12,950+

[22] Pacific Gas and Electric Company. (2025). *Residential charging solutions rebate*. Retrieved from https://www.pge.com/en/clean-energy/electric-vehicles/getting-started-with-electric-vehicles/residential-charging-solutions-rebate.html

Overview

Xcel Energy launched its passive managed charging program in 2021 in its Colorado territory, following a pilot of the program initiated in 2018. The program was expanded to territories in Minnesota and New Mexico in 2022. Under this program, Xcel Energy used a static optimization model to identify optimal windows for EV owners to charge their vehicles off-peak and provided customers with a choice of off-peak charging windows. Since the launch of the program, more than 6,700 customers have enrolled, including just under 10,400 customers in Colorado, more than 2,500 in Minnesota and 24 in New Mexico where the utility has a much smaller electric service area with many fewer EVs.

Marketing

The Optimize Your Charge program has dedicated web pages hosted by Xcel Energy [23] and its third-party implementation vendors WeaveGrid[24] and ChargePoint. Digital promotion also includes social media posts through company accounts, customer email campaigns, and YouTube videos. Xcel Energy also supports customer engagement through other local market actors, providing education and promotional materials through local car dealerships as well as local electrician networks.

Incentives

- Participating customers receive an annual bill credit as an incentive for program participation. In Colorado and Minnesota participants receive $50, while participants in New Mexico receive $35.
- The incentive amounts were determined based on Xcel's cost-benefit analysis of the local distribution system upgrade needs and schedules relative to the volume of EVs within the area and the margins realized through each customer participating in the program.

Program Partners

Xcel Energy contracts with WeaveGrid to help manage the program supporting eligible EVs models from Lexus, Tesla, and Toyota. If the customer drives a different brand of EV, that customer can still participate in the managed charging program by using an eligible ChargePoint charger. Eligible customers must enroll with WeaveGrid or connect to the ChargePoint program code to participate in the program.

---

[23] Xcel Energy. (n.d.). *Optimize Your Charge*. Retrieved July 23, 2025, from https://ev.xcelenergy.com/optimize-your-charge
[24] WeaveGrid. (n.d.). *Optimize Your Charge (Xcel Energy)*. Retrieved July 23, 2025, from https://www.weavegrid.com/xcelenergy/optimize-your-charge

Lessons Learned

1. Maximize Eligibility: When Excel Energy's first iteration of managed charging (an EV-only TOU rate called Time of Day Separate Meter) was launched in Minnesota, it required a separate meter for the EVSE. This created an additional customer expense of $2,000-$3,000. The cost and complexity of this requirement inhibited enrollment. Xcel Energy switched to an off-peak incentive model, using the EVSE to track participation. Now, Xcel Energy receives the EV charging data from WeaveGrid (via vehicle telematics) or ChargePoint (via the EVSE) and evaluates the customer's charging data with their selected off-peak timeslot to determine if the customer meets eligibility for their annual incentive.

2. Clarity on Enrollment Process: As the utility advertised the program through its own channels, as well as through their program vendors, WeaveGrid and ChargePoint, along with local car dealerships, customers became aware of the program through different messengers creating confusion about the point of entry to enroll in the program. To increase clarity, the utility works with program vendors to help customers navigate enrollment and customers are notified via email during the application process with next steps to finalize their enrollment and properly connect their systems to the program code.

3. Consolidating DER Services: Xcel Energy recognized a crossover between customers interested in participating in managed charging programs and those interested in participating in other distributed energy and demand side management programs. They are working to consolidate managed charging and other DER services under one team to support greater program coordination and create more streamlined and cost-effective cross promotional opportunities and a more holistic energy services experience for customers.

Best Practices

In examining the case studies detailed in this paper, several best practices emerge for getting customers to enroll and engage with managed charging programs. In this section we examine the best practices with respect to three key stages of engagement: Reaching your target market; Compelling your customers to enroll; and Keeping customers enrolled and active in the program.

Reaching the Right Customers

Five best practices for program marketing can be gleaned from utility case studies.

1. Use All Marketing Channels Available

Utilities should experiment and use a wide variety of marketing approaches to engage prospective customers. Leveraging utility-owned marketing channels such as email campaigns and digital ads have shown to be the most cost-effective marketing resources. Utilities in this study have had success using AMI data to conduct hyper-focused campaigns on high impact EV owners with email and digital ad campaigns. Broad all-customer digital campaigns with dedicated websites, brochures, print and out-of-home ads have also proven effective at reaching a wider audience. More interpersonal strategies such as tabling at community events and storefronts, ride and drive events, and webinars to focused groups of customers have also increased enrollment. While there is no one-size-fits-all marketing channel, utilities must remember that the average consumer needs multiple touchpoints before they engage with a product or service. Utilities need to be entrepreneurial and multifaceted in their outreach to create these touchpoints and capture customer attention and interest.

2. Map EV Load Data to Identify and Prioritize Your Customer Targets

Not all EV loads are equal. Utilities need to clearly understand the localized impacts of existing and prospective EV load on their distribution system and incorporate that into their system planning. Understanding where risks of system disruption are highest can help utilities strategically target these customer clusters. AMI data has been successfully used by utilities to identify and engage EV customers strategically where customer and utility benefits are highest. This can help utilities to maximize return on investment.

3. Leverage Partnerships Across the Customer EV Experience

Customers are not in the habit of considering their utility when purchasing an EV or charging equipment. Utilities that leverage partnerships with other service providers in the EV purchaser experience have shown to improve customer awareness of available managed charging programs. Partnering with OEMs, vehicle dealerships, fleet operators, EVSE installers, managed charging vendors, electricians and more can all help to identify EV customers. Every partnership creates a new avenue of engagement with customers and utilities can leverage their partners relationship with a customer to help build awareness and trust in the utilities service offering. The more partnerships are created, the greater the chance a customer will receive marketing and messaging from trusted source on a managed charging program. Be sure to co-brand any channel partner marketing materials to make sure customers clearly associate the program with the utility when receiving marketing from a program partner.

4. Engage Customers as Early as Possible in the EV Ownership Experience

To ensure the optimal customer and system benefits utilities should proactively promote awareness of managed charging services before a customer has purchased a vehicle. Where charging equipment and installation incentives are available, awareness of these incentives can help ensure that charging equipment meets the needs of the program model and can build customer trust by helping to reduce upfront costs. Additionally, utility experience demonstrates that it is easier to shape customer behavior early in their ownership experience rather than trying to shift a habitual charging behavior later.

5. Cross-Promote with Other DER Programs

Customers enrolled in other utility distributed energy, energy efficiency, or demand response programs are more likely to engage in other utility service offerings. The established relationships and energy consciousness of these customers make them prime candidates to enroll in managed charging as EV owners. Utilities have found that cross promoting managed charging offerings to these audiences yields a higher response rate relative to the broader customer population.

Encouraging Customers to Enroll

Encouraging customers to enroll in a managed charging program requires more than just informing them, it demands a clear and persuasive value proposition. Customers need to have access to the program, understand what's in it for them, have clarity on the offer, trust that their utility is a reliable partner, and feel confident that their participation will not negatively impact them. The program experiences detailed in this paper illustrate several strategies to compel customers to enroll in managed charging programs.

1. Messaging Should Be Clear and Focused on Customer Benefits

Clear messaging is critical to both enrolling and retaining customers in managed charging programs. Many EV owners are unfamiliar with how managed charging programs work or why they matter, so utilities must communicate the purpose, benefits, and expectations in simple, clear terms. Ambiguity or overly technical language can create confusion and mistrust, leading to lower participation or early drop-off. Several utilities reported that customer uncertainty about data privacy led prospective participants to decline to enroll. Effective messaging builds confidence by clearly explaining how the program supports grid reliability, reduces costs, and aligns with customer values such as convenience, savings, and privacy. Ongoing communication using positive language centered around customer choice, control, and benefits helps maintain engagement and ensures long-term program success.

2. Maximize Eligibility for Program Participation

The technology to manage vehicle charging is evolving rapidly. OEMs are increasingly equipping their vehicles with telematics capabilities to facilitate managed charging and other data sharing and management capabilities. However, cross-platform capability is not standardized across all new EV models and was not available in most older models. These limitations can be overcome using charging system technologies that can serve as the communications medium for managed charging signals. Utilities need to engage with OEMs and EVSE vendors to identify strategies and technology solutions that allow for maximum participation in managed charging programs.

3. Incentivize Participation

All the program models detailed in this paper leverage incentives to encourage enrollment. These incentives included modest financial compensation to enrollees for grid services ranging from $10-$50 over a service period and annual gift cards. They also include rebates and other incentives that helped customers reduce upfront cost for EV chargers, panel upgrades, and installation services and make-ready support. These cost reduction incentives have shown both to help ensure that EV owners have compatible technology that serves the program goals and supports more equitable access to customers who could not otherwise afford the necessary technology. The utilities report that customers prefer upfront incentives versus those that pay out over time. To help identify the right incentive level, utilities should consider an initial incentive offer at 50% of the maximum allowable amount and then test other amounts to assess enrollment impacts and calibrate the right incentive level.

4. Keep the Enrollment Process Simple

Across all customer categories complexity of enrollment emerges as one of the most common barriers to participation. Limited enrollment windows, cumbersome paperwork, excessive information requests for qualifying, or dense websites with multiple pages to navigate can easily dissuade a prospective customer. The utilities in this study have all worked to streamline and simplify enrollment processes and found increased participation as a result. Utilities should work to make program enrollment as smooth and as quick as possible for customers.

Keeping Customers Engaged

To keep customers enrolled and active in managed charging programs, utilities should focus on providing sustained value and a good experience for the customer. Long-term retention depends on making the program feel worthwhile, seamless, and responsive to customer needs. Customers need to see ongoing benefits such as consistent bill savings,

reliable charging performance, and minimal disruption to their routines. Utility experience to date demonstrates several strategies to keep managed charging customers enrolled and engaged.

1. Sustained Customer Focused Communication

Recognition for how their participation contributes to grid reliability and environmental goals can strengthen their sense of purpose and satisfaction. Regular, easy-to-understand updates and feedback help reinforce program value and build trust. If customers encounter technical issues or feel disconnected from the program's impact, they are more likely to disengage. Ongoing push notifications about savings achieved, current or pending incentive opportunities, and demand response events can be an effective way for customers to feel engaged, informed, and confident in the program.

2. Encourage Year-round Participation

Some active managed charging programs only offer incentives during the summer, when grid peaks are high. However, utility experience has found that shaping long-term customer charging habits requires more sustained engagement throughout the year. Additionally, the lapse in engagement can increase the effort needed to reactivate a customer for the next summer peak. Utilities should encourage year-round participation to build and maintain a responsive managed charging community.

3. Ongoing Benefits for Grid Contributions

Ongoing incentives play a vital role in sustaining participation in managed charging programs. While initial enrollment may be driven by curiosity or one-time promotions, continued engagement often hinges on consistent, tangible rewards. Monthly bill credits, performance-based bonuses, or loyalty perks can reinforce the value of participation and keep customers motivated over time. These incentives help offset any perceived inconvenience and remind participants that their contribution is recognized and worthwhile.

4. "Gamify" Participation

Customers like to see how much they are saving and what impact they are having on the grid too. Utilities reported customer motivation to contribute to reducing grid stress as one of the key drivers of participation. Utilities can recognize and reinforce this motivation by tracking and reporting savings and grid impacts along with setting targets and goals for the customer to achieve. This information can be shared via an app or on customer bill statements.

5. Offer a Referral Programs with Incentives

Referral programs can provide another means to engage customers in managed charging programs. Utility experience has shown that word of mouth promotion and customer to customer testimonial is a highly effective strategy to increase customer enrollment. By offering an incentive to participating customers who refer another qualified candidate that enrolls in the program the utility can create community champions with self-motivation to advertise the program to their community. This can be a particularly effective strategy when targeting specific zones and neighborhoods for managed charging.

Summary Takeaways and Key Considerations for Program Success

1. Understand your marketplace and load management goals when planning your marketing strategy. This will help to target the right EV owner segment and calibrate your marketing and enrollment strategies for maximum effect.
2. Be sure there is ample funding for program marketing, education and outreach in program proposals. It will take broad reach and experimentation to find the right mix of marketing and communications to identify and enroll customers in managed charging programs, as well as ongoing communications investment to keep them engaged and achieve program goals.
3. Prioritize the customer experience and outcomes in program design and messaging. Managed charging can be described as a partnership between the utility and its customers. Make sure customers feel they are getting value and being fairly compensated for making a meaningful contribution to the grid and their local community.
4. Be prepared to be flexible and adapt to the evolving market and changing technologies. Work with program partners and technology solutions that allow for maximum participation and interoperability with evolving EV technologies. EV technology continues to develop rapidly, impacting EV and EVSE charging capacity, speed, and communications abilities year after year resulting in a diverse technology mix. The ability to adapt will be critical to long-term success.

Conclusion

As EV adoption continues to grow, managed charging programs are an increasingly important and expected service for residential and commercial utility customers. Both passive and active managing charging programs are vital tools for utilities to mitigate

growing demand for electricity and the pace and cost of grid investments. Understanding and instilling best practices to market, enroll and maintain participation in managed charging programs is vital to realizing program benefits at scale. Continuous improvement in these areas is needed to achieve the minimum 60-85% participation rates necessary to avoid system impacts.

Utilities and regulators share responsibility in ensuring these initiatives deliver their intended grid and ratepayer benefits. Utilities must design and promote programs that are accessible, attractive, and easy to understand, using targeted outreach, customer education, and ongoing engagement. Regulators, in turn, play a key role in setting expectations, approving budgets, and evaluating program performance to ensure public accountability and equitable outcomes. Without coordinated efforts to drive participation, managed charging programs risk falling short of their potential and missed opportunities to benefit all ratepayers. Achieving meaningful scale and long-term success will depend on treating customer enrollment and retention as central pillars of program design and regulatory oversight.

As illustrated in these case studies, several best practices are emerging for how to find EV customers to participate in managed charging programs, secure their enrollment, and keep participation rates high. Innovations in battery chemistry, charging technology, vehicle telematics, and management platforms are moving quickly, creating new opportunities to improve and expand managed charging programs. ATE and its members will continue to examine and promote program innovations as the technology and consumer behaviors in EV charging continue to change.

Alliance for Transportation Electrification
1326 Fifth Avenue, Suite 621
Seattle, WA, 98101
206.453.4157