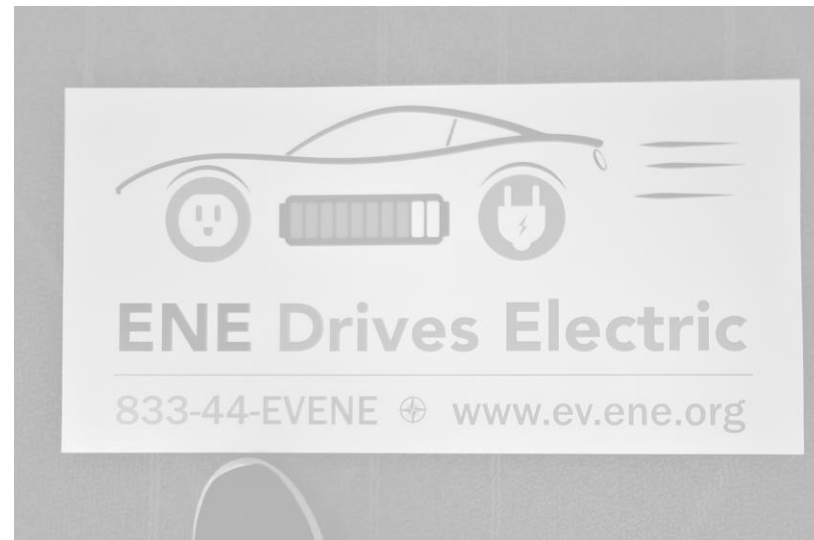


Electric Vehicle Program Innovation for Municipal and Public Utilities



Mark Scribner

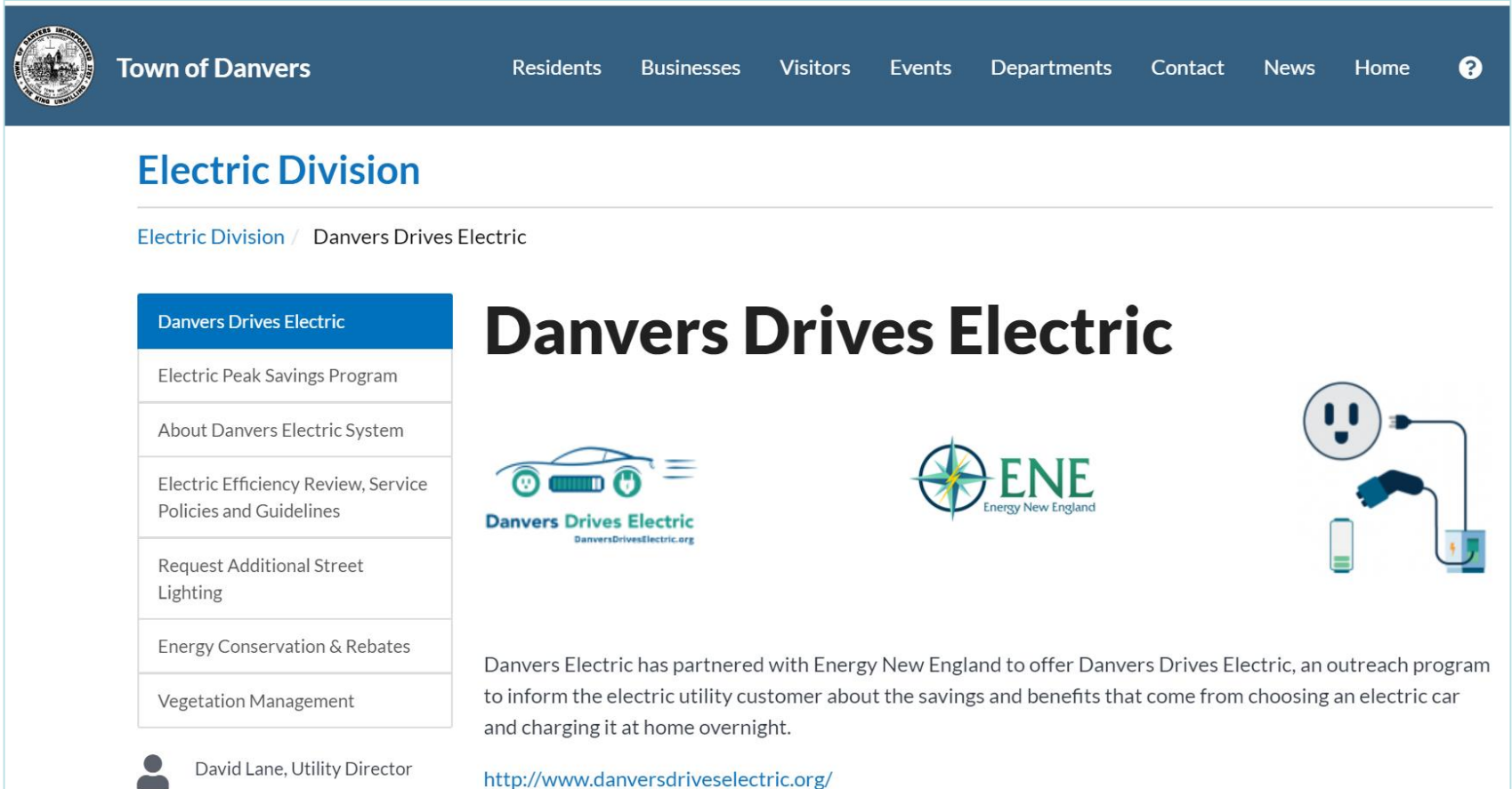
Program Manager, Electric Vehicles

Energy New England (ENE)

Agenda

- Why EV consumer engagement programs and MLPs (Municipal Light & Power) are a great fit
- The state of the Southern New England MLP and EV markets
- Lessons learned from existing EV programs and incentives
- ENE's competitive advantage and current EV program offerings
- The future of MLP EV programs: 2020 and beyond

Why EV consumer engagement programs and MLPs are a great fit



The screenshot shows the Town of Danvers website. The top navigation bar includes links for Residents, Businesses, Visitors, Events, Departments, Contact, News, and Home. The main content area features a sidebar with a menu for 'Danvers Drives Electric' containing items like 'Electric Peak Savings Program', 'About Danvers Electric System', 'Electric Efficiency Review, Service Policies and Guidelines', 'Request Additional Street Lighting', 'Energy Conservation & Rebates', and 'Vegetation Management'. The main content area has a large heading 'Danvers Drives Electric' and a paragraph explaining the partnership with Energy New England (ENE) to offer an outreach program for electric vehicles. The URL <http://www.danversdriveselectric.org/> is provided at the bottom of the main content area. A utility director, David Lane, is listed at the bottom left of the page.

Town of Danvers

Residents Businesses Visitors Events Departments Contact News Home ?




Electric Division

Electric Division / Danvers Drives Electric

Danvers Drives Electric


- Electric Peak Savings Program
- About Danvers Electric System
- Electric Efficiency Review, Service Policies and Guidelines
- Request Additional Street Lighting
- Energy Conservation & Rebates
- Vegetation Management

Danvers Drives Electric



Danvers Electric has partnered with Energy New England to offer Danvers Drives Electric, an outreach program to inform the electric utility customer about the savings and benefits that come from choosing an electric car and charging it at home overnight.

<http://www.danversdriveselectric.org/>

 David Lane, Utility Director

Why EV consumer engagement programs and MLPs are a great fit

Some reasons:

- Lower rates mean greater \$ benefit
- Less red tape = agile program innovation
- Support of local government & other orgs
- MLP is often already trusted / well liked
- Some with cleaner power / emissions goals
 - Concord, MA: Carbon-free electricity by 2030

The state of the Southern New England EV market – a brief overview



The state of the Southern New England EV market – a brief overview

- MA is largest market, followed by CT & RI
- All ZEV states (2013 MOU, 3.3M by 2025)
- EV model availability above US average
- MA & CT have vehicle rebates (RI depleted)
- MA rebate was restructured for 2019
 - PHEV lost the up to \$1,500 rebate
 - BEV rebate dropped from \$2,500 to \$1,500
- Tesla Model 3 & large battery BEVs trending

The state of the Southern New England EV market – biggest barriers?



*Many of the same barriers as other parts of the country, **plus a couple others more specific to the region...***

The state of the Southern New England EV market – biggest barriers??

- Lack of Charging Infrastructure
- Range Concerns
- Price / Cost
- Long Charging Time
- **Cold weather performance**
- **Access to residential charging**

The state of the Southern New England EV market – biggest barriers??

- Lack of Charging Infrastructure
- Range Concerns
- Price / Cost
- Long Charging Time
- Cold weather performance
- Access to residential charging

...or are they???

The state of the Southern New England EV market – biggest barriers???



The state of the Southern New England EV market – biggest barriers???



Mark's Soapbox 

 EUCI

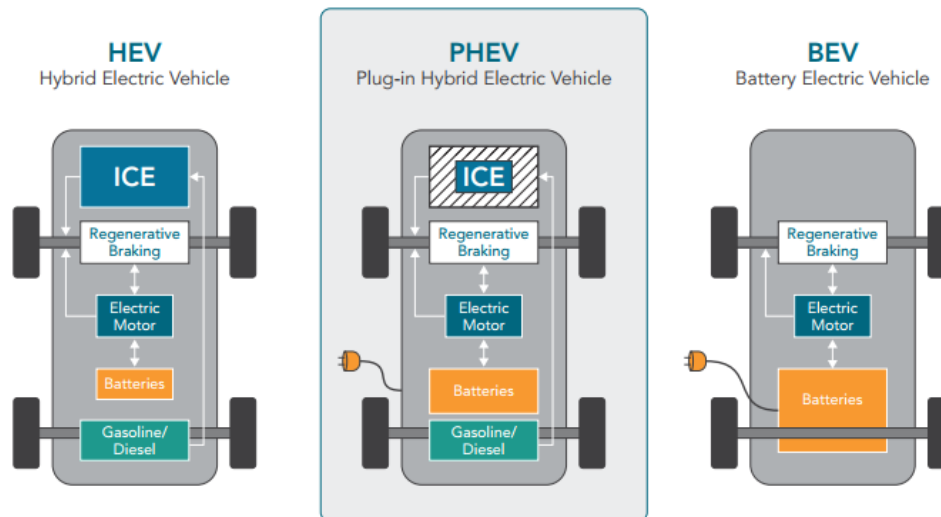
The state of the Southern New England EV market – biggest barriers

- ~~Lack of Charging Infrastructure~~
- ~~Range Concerns~~
- ~~Price / Cost~~
- ~~Long Charging Time~~
- ~~Cold weather performance~~
- ~~Access to residential charging~~
- Lack of Compelling models offered
- Lack of Availability / Enthusiasm at Dealerships

Biggest barriers (cont.):

- Lack of compelling models offered (**esp. PHEVs**)
- Lack of availability / enthusiasm at dealerships

Barrier Removal: Technology



Source: Image courtesy of Gary Kendall, PhD.

Biggest barriers (cont.):

- Lack of compelling models offered (**esp. PHEVs**)
- Lack of availability / enthusiasm at dealerships

Steve Kosowski, Kia Motors America, EUCI

Anaheim, Dec. 2018: “Extremely few are willing to surrender driving functionality.” (PHEVs solve this.)

However: “**Customers whose functional and emotional needs can be met by an EV find them VERY appealing.**”

Biggest barriers (cont.):

- **Lack of availability / enthusiasm at dealerships**

Important challenge for municipalities to actively address, as it has a direct impact on any utility EV program's ability to achieve its goals

"You catch more flies with honey than you do with vinegar."

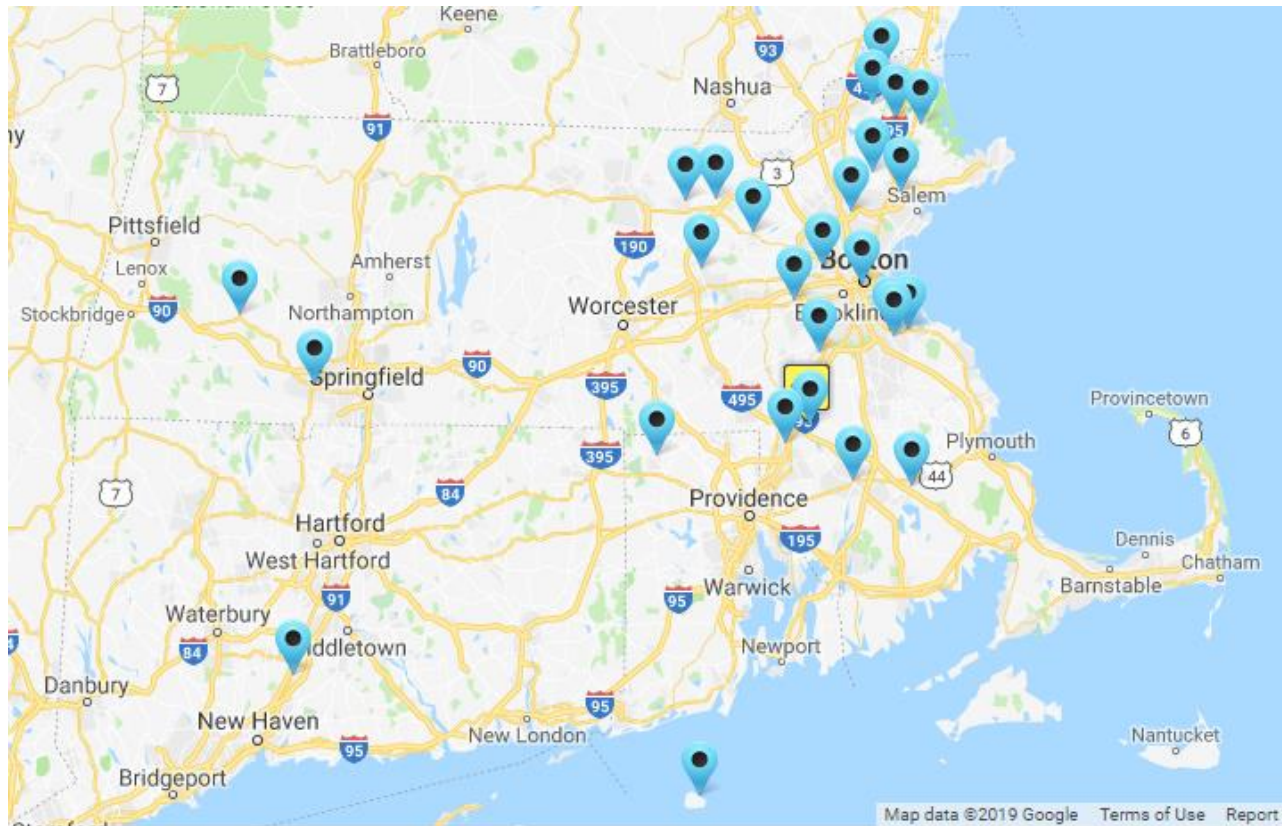
– EV Advocate Chelsea Sexton



Biggest barriers (cont.):



New England Municipal Light & Power (MLP) background



New England Municipal Light & Power (MLP) – all EV program clients



BRAINTREE ELECTRIC LIGHT DEPARTMENT



CONCORD MUNICIPAL
LIGHT PLANT

ELECTRIC | BROADBAND | ENERGY MANAGEMENT



New England Municipal Light & Power (MLP) background

Town light departments / light(ing) “plants”:

- 41 MA municipal-owned public power utilities
- Not obligated to make a profit for investors
- Under the direction of the General Manager or
- Governed by elected board of commissioners
- Vary in relationships with town government
- Often are human resourced constrained

Lessons learned from existing EV programs and incentives – circa 2016

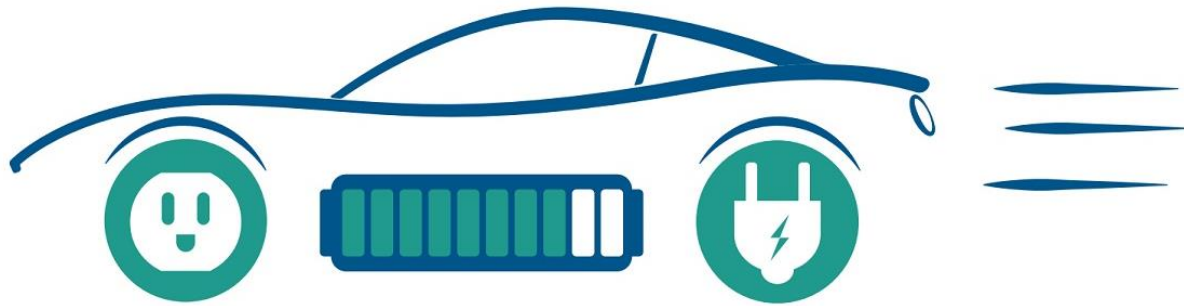


- Sponsored by BELD and run by Sagewell (2016-2018)
- More extensive media, marketing and events
 - ✓ \$8 off peak charging incentive
 - ✓ \$250 rebate for wifi-enabled level 2 charging equipment
 - ✓ Analytics of charging data for off peak verification
- By 2018, adoption increased significantly vs similar town
- Over 80% of identified number EVs on off-peak program

2019: ENE takes over management of Braintree Drives Electric – REFRESH!



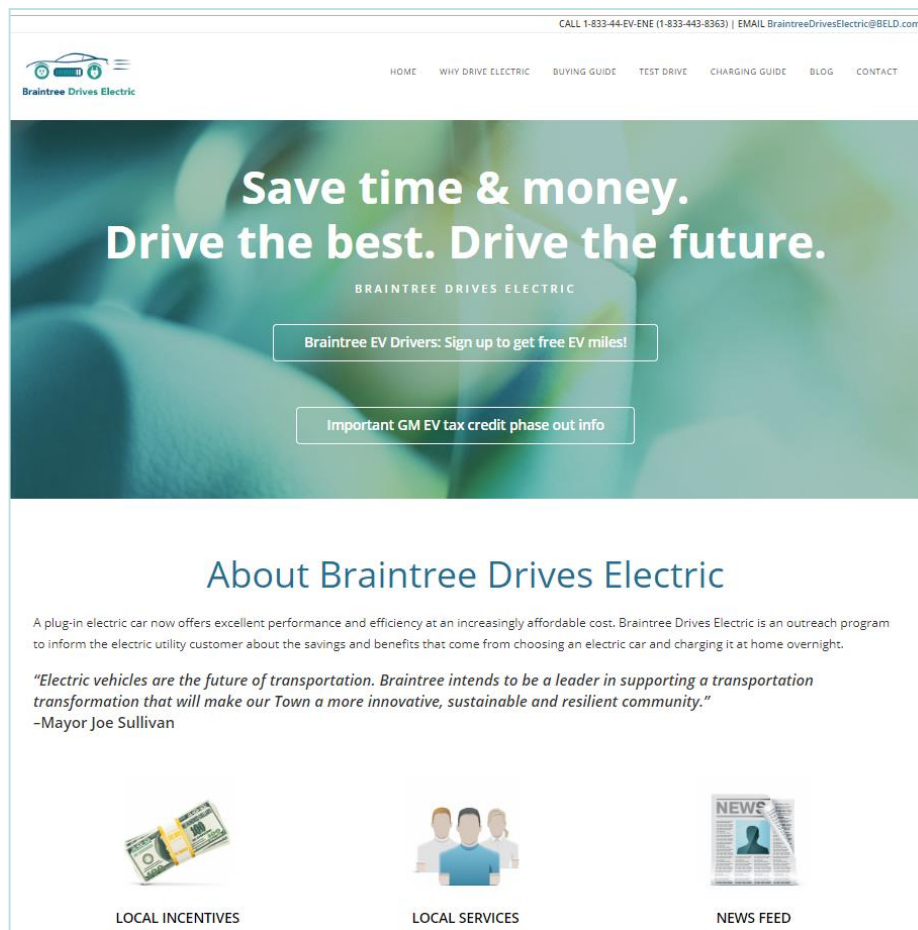
2019: ENE takes over management of Braintree Drives Electric – new logo



Braintree Drives Electric

BraintreeDrivesElectric.com

Updated website



Branded wrapped utility vehicle



Marketing Plan, Schedule, Timelines

Braintree Drives Electric

I. Executive Summary

a. Brief Description of Services
ENE will implement a comprehensive and marketing strategy to support the effectiveness of the Braintree Drives Electric Awareness and Education program services and offerings.

b. Town Demographics and Insights:

- Total Population: 37,156
- Households: 13,837
- Households in Braintree, MA have a median annual income of \$102,229 which is similar to Belmont where EV outreach also significantly accelerated adoption.

c. State of the Braintree EV Market:

EV Drivers & Vehicles:

- At least 84 MOR-EV rebates given since 2014 and a total of 118 EVs (as of April 2018)
- Approximately 64% of transactions were leases
- At least 38 were PHEVs (57%); At least 29 were BEVs
- Approximately 30% of the market are Tesla vehicles

Charging Infrastructure:

- There are currently 8 public charging station locations in the town
 - 21 Level 2 connectors; 4 DC Fast charge
 - 2 are also workplace charging locations

Dealerships:

- There are 16 nearby new auto dealers.
- One of the town's auto dealers is already a Drive Green discount program participant.

MOR-EV Rebates for Braintree, MA (02184)

Year	Number of Rebates
2014	4
2015	4
2016	11
2017	25
2018	35

Braintree Drives Electric

2018 EV Sales Breakdown for Braintree

MOR-EV Rebates by Month

Vehicle Category: BEV (Cyan), PHEV+ (Green), PHEV (Light Green)

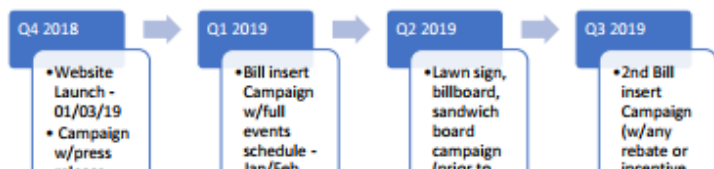
Observations and analysis in the shifting EV market in Braintree:

- 28 MOR-EV rebates issued as of October 2018, a projected 40% increase over 2017.
- 11 PHEV (green columns) rebates issued vs 17 BEV rebates, a shift to 60% BEVs.
- 25% of rebates were for Tesla vehicles, up significantly from the historical 10% share
- Shift to majority BEVs sold in Braintree likely due specifically to Model 3 sales (MOR-EV does not provide info model, only brand)
- Only 5 were for Chevrolet, a significant decline to less than half of the 12 rebates in 2017.
- 4 were Nissan, up significantly over 2017 when there was only 1.
- Ford has had no rebates in 2018, in part due to limited plug-in model availability.
- 61 Active accounts getting bill credits; 63 Vehicles

Including:

- Marketing Program Goals
- Anticipated Results
- Traditional Marketing Strategy
- Online Marketing Strategy
- Events Marketing
- Auto Dealership Strategy
- Follow-up/Reporting

Marketing Timeline Overview:



Check us out on social media!



Innovate with EVents & Marketing

Presented by Braintree Drives Electric and Energy New England

2019 ELECTRIC CAR SHOWCASE

Save time and money. Drive the best. Drive the future.

DECEMBER 26, 2018 – MARCH 31, 2019
South Shore Plaza (Center Court), Braintree, MA

Check out the affordable electric vehicles on display, featuring both all-electric and Plug-in Hybrid EVs

Discover the many benefits of driving electric—get your questions answered by an onsite EV Specialist*

Learn about rebates and incentives that lower the cost to purchase or lease

Schedule a private test drive with an EV Ambassador or local EV Champion auto dealer**

Sign up for off-peak charging incentives and charger rebates available to Braintree residents!

Partners:



*EV Specialists are brand-neutral, trained and knowledgeable, not automotive salespersons. Visit BraintreeDrivesElectric.com to get the showcase staffing schedule.
 **Test drives may be scheduled in advance by contacting Braintree Drives Electric via website form, by an email to braintreedriveselectric@beld.com, or by phone: 1.833.443.8363



Innovate with EVents & Marketing



BRAINTREE DRIVES ELECTRIC

Powered by Braintree Electric Light Department, Braintree Drives Electric is a local initiative designed to share the benefits of electric vehicles with Braintree residents, and facilitate access to rebates and incentives.

- ✓ Learn the benefits of driving electric
- ✓ Find answers to all your questions about electric vehicles
- ✓ Discover and compare the different types of EVs
- ✓ Get the latest info on rebates and other incentives that lower the cost to purchase or lease
- ✓ Take a test drive or attend an upcoming EEvent
- ✓ Check out info about EV charging, including equipment and installation
- ✓ Save even more money each month with additional charging rebates and incentives

“Electric vehicles are the future of transportation. Braintree intends to be a leader in supporting a transportation transition that will make our town a more innovative, sustainable, and resilient community.”

-Mayor Joe Sullivan



BELD  Braintree Drives Electric

1.833.443.8363
BraintreeDrivesElectric.com
BraintreeDrivesElectric@BELD.com



BRAINTREE DRIVES ELECTRIC

Save time and money.
Drive the best. Drive the future.

Innovate with EVents & Marketing



Fast. Fun. Affordable.

Which electric vehicle is right for you? There are two types of electric cars, also called electric vehicles (EVs): battery-only electrics (BEVs) that run on electricity alone, and plug-in hybrid electric (PHEVs) that first run on electricity from the battery for a shorter range, then seamlessly switch to a tank of gasoline if the battery gets low. PHEVs can be charged, driven and fueled just like the car you drive now. Today's BEVs all have more range than 90% of drivers travel daily.

There's an EV that's right for almost anyone. Which EV you'll want depends on your daily driving distance needs and space requirements. Check out the interactive Compare Cars tool on our website to find your perfect EV!

Want to test drive an electric car in a no-sales-pressure environment? Our EV Ambassador Ride & Drive program will connect you with a nearby EV Ambassador, an experienced EV owner who lives in your community.

From incentives available to just Braintree residents to all up-to-date info on state, and federal incentives, and which discount programs and dealerships are EV Champions (saving you the most on your first EV).

Benefits to drivers

PERFORMANCE. Electric motors have more of something called torque, that tire-turning rotational force right off the line. Inherently better handling due to superior weight distribution and a low center of gravity. It's a driving experience that hugs the corners!

RELIABILITY. Fewer moving parts and lower maintenance requirement result in lower upkeep costs and higher long-term reliability.

CONVENIENCE. An electric car is usually charged like a cell phone—overnight, while you sleep. The car even comes with all you need to get started, as the overnight charging can be done with the included adapter and a standard accessible outlet.

SAVINGS. Electric cars offer long-term cost savings that often can't be beat. The savings mean EVs cost less to own over five years than a comparable gasoline only vehicle. Sign up for the Braintree Drives Electric Bring Your Own Charger* Program by BELD and save even more money each month on your electric bill.

In addition, using electricity as your transportation "fuel" provides benefits to everyone in terms of better economic prospects, cleaner air, and increased energy security. Learn more about these benefits to all on our website at BraintreeDrivesElectric.com.

The car that "refuels" while you sleep!

Simply plug in your car when you get home and it's typically re-charged back to full even before you wake up the next morning. And there are three levels of charging speed available to meet your needs and lifestyle.

Want help installing faster (Level 2) charging at your home? We are here to help! Braintree Drives Electric connects you to licensed electricians that have been vetted and background-checked to ensure you receive a great home installation experience.

Enroll in the Bring Your Own Charger* Program by BELD and get the equivalent of about 175 FREE MILES* of charging per month for charging your EV overnight. (Earn \$8 per month off your electric bill by simply setting your car to charge between 9 p.m. and midnight on weekdays, and anytime on weekends.)

*175 free miles by way of an \$8 monthly credit



1.833.443.8363
BraintreeDrivesElectric.com
BraintreeDrivesElectric@BELD.com

First 6 mos. of business development, ENE increased EV programs from 3 to 8!

About ENE Drives Electric

A plug-in electric car now offers excellent performance and efficiency at an increasingly affordable cost. ENE Drives Electric is an outreach program to inform electric utility customers about the savings and benefits that come from choosing an electric car and charging it at home overnight.

Municipal EV Programs supported by ENE include:

[Braintree Drives Electric](#)

[Concord Drives Electric](#)

[Danvers Drives Electric](#)

[MGED Drives Electric](#)

[Middleton Drives Electric](#)

[Rowley Drives Electric](#)

[TMLP Drives Electric](#)

ENE's competitive advantage and current EV program offerings



About Energy New England (ENE)

- Largest risk management & energy trading organization serving NE MLPs
- Manages the power supplies of over twenty municipal electric systems
- Promotes the principles of conservation, efficiency, and environmental stewardship

The 4 C's of sustainability: Conservation, Carbon Mitigation, Commodity Services, and Clean Technologies.

How ENE engages MLPs on EVs

Utility Goals:

Trusted Advisor

Source of Information

Local Resource

Electricity as a Fuel

Load Growth

Increased revenue

Decreased rate

Off Peak Charging

Reduce risk

Control expenses

How ENE engages MLPs on EVs

The Utility as the ‘Trusted Advisor’

- Utility = “fuel source” for transportation
- Branding: Keep it local = Trusted
- Raise awareness
- Provide factual, relevant and local information
- Provide convenience
- Relay opportunity to save money (even more with MLP rates)
- Build community

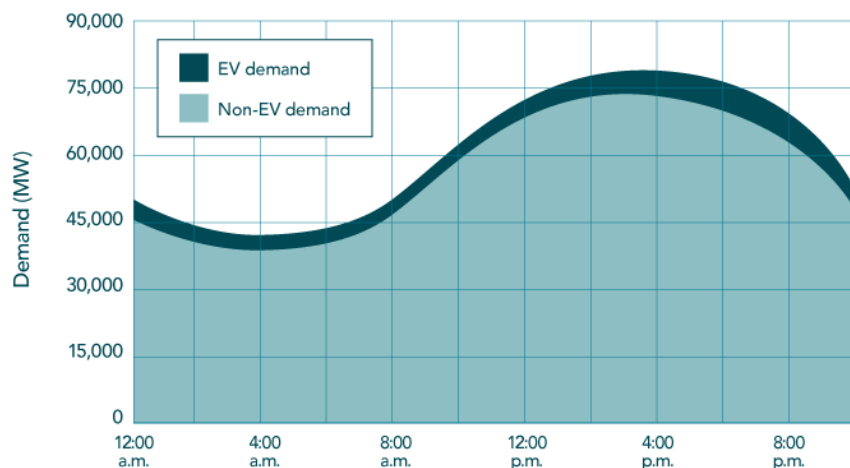
How ENE engages MLPs on EVs



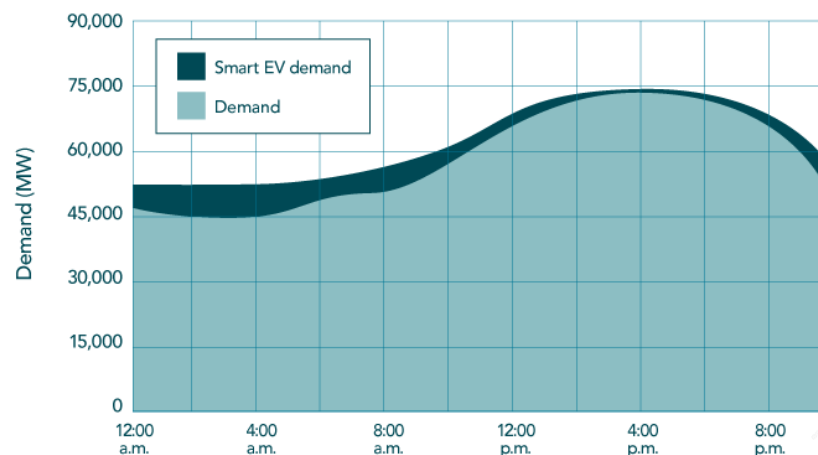
Reduce On-peak charging

- Enables better grid management
- Saves consumers and utilities \$
- Reduces GHG impact
- Shifting system load to off-peak lowers the total cost to procure power
- Increased load factors will lead to lower transmission & distribution costs

Projected ERCOT demand with 23% EV penetration and uncontrolled EV charging



Projected ERCOT demand with 23% EV penetration and optimized charging



➤ **Solution: Educate and train customers; Market & incentivize off-peak charging now!**



Electric Vehicle Awareness & Incentive Programs – Key Elements

- Education and active outreach
- EV Specialist support services
- Auto dealership engagement
- EVents – beyond the EV show/ride & drive
- Marketing – materials and promotions
- Incentives – charging, equipment, vehicles
- Partnerships – state, local, business, OEM
- Innovation – new services and offerings

Education and active outreach

- Comprehensive and user-friendly web portal
- Landing page integrated with MLP sites
- Content for newsletters, blasts, & blogs
- Creation of program educational materials



Example: EV feature monthly in Bright Ideas, a monthly newsletter for BELD customers

Braintree Celebrates Drive Electric Earth Day

Braintree hosted an electric vehicle Event Saturday, April 27, as part of the first ever national "Drive Electric Earth Day" campaign. Plug In America, Sierra Club, and the Electric Auto Association served as the national team supporting events throughout the country, which were designed to share information about electric vehicles during Earth Month.

EV owners shared their experiences with EVs and charging, and Braintree Drives Electric (BDE) EV Specialists provided information on BELD's incentives for off-peak charging and for installing Level 2 charging at home.

Many attendees were interested in learning not only how driving an EV can help the environment, but also how it can help them save money on their daily drive. Driving an electric vehicle in Braintree is like paying the equivalent of just around a dollar a gallon for gasoline. Some of the owner's vehicles had more than 100,000 electric miles with the battery still going strong.

If you missed this Event and want to know more about upcoming EV happenings in

Braintree's Event at the Town Hall parking lot was an opportunity learn from real electric vehicle drivers about the many advantages of driving electric. Local EV owners showed off their affordable plug-in electric vehicles including an all-electric Volkswagen e-Golf and the plug-in hybrid Toyota Prius Prime, Chevy

Education and active outreach

Create materials to use across multiple programs, cut through noise or hype

Example:

ENE's "An Informed Consumer's Guide to Electric Cars":
EV Benefits & Facts



**AN INFORMED CONSUMER'S
GUIDE TO ELECTRIC CARS:**

The Benefits of and Facts about
Electric Vehicles (EVs)

EV Specialist support services

 *The EV interested want help & reassurance*

- EV specialists, qualified via assessment
- Answer questions about vehicles, charging, and incentives
- Paid staff (salary, hourly, paid internships)
- Website contact form
- Email – ev@ene.org
- Toll free number – 1.833.443.8363
(1.833.44-EV-ENE)
- Use of CRM to track & engage EV leads

EV Specialist support – branding

Customers value local, trusted, and personal service

YOU HAVE QUESTIONS ABOUT ELECTRIC CARS. TMLP Drives Electric Vehicle Support has all the answers!



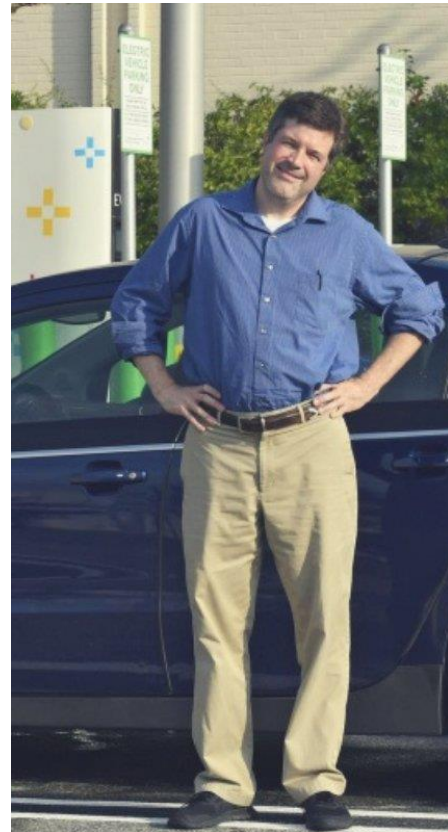
A team of local, knowledgeable and friendly professionals who specialize in all things EV.

FIND OUT:

- What models are available and affordable?
- How and where can I charge my EV?
- How much will I save on fuel, energy and emissions by driving electric?
- And more...



TMLP Drives Electric support connects current and potential EV drivers with our experts to answer questions about vehicles, charging, incentives and more. This service is a free benefit for TMLP customers.



ELECTRIC VEHICLE SUPPORT

*Meet Mark!
Concord's EV expert*

*Have questions about driving electric?
What models are available?
How to charge?
How much can I save?*

Contact Mark today for FREE 1:1 support and coaching.



833-443-8363



EV@ENE.ORG



833.443-8363



EV@ENE.ORG

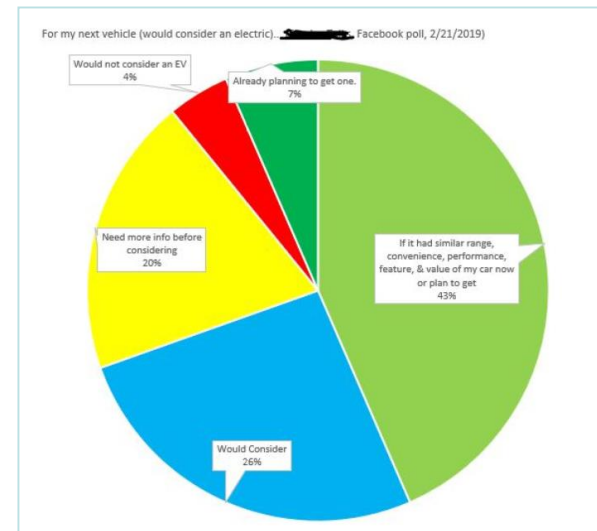
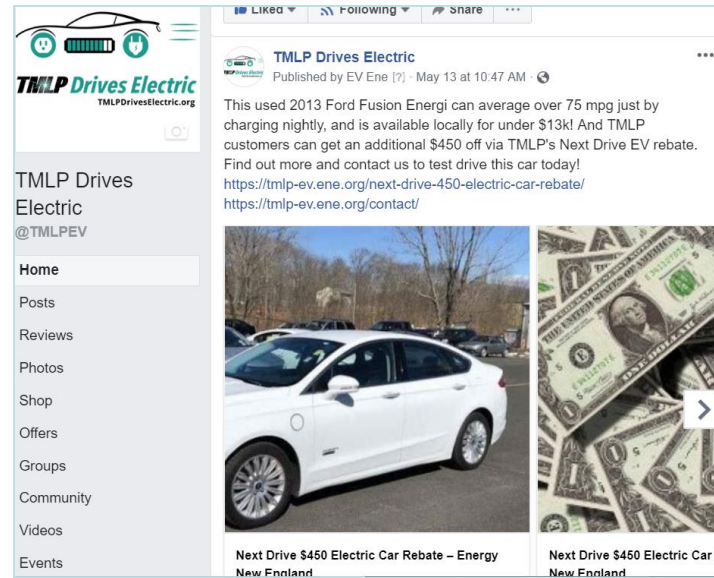


@TMLPEV



Marketing

- Develop annual marketing strategy
- Provide a marketing plan
- Coordinate with & leverage client's marketing team
- Develop and design materials for outreach campaigns
- Create and implement social media & engagement strategies; Market rebates and charging incentives



Marketing – importance of branding

- Business cards
- Yard Signs
- Branded attire
- Select branded giveaways/prizes



The Town of Concord has its own EV Working Group comprised of utility and town employees, volunteers, and ENE EV Specialists. They meet bi-weekly.

Events – engagement beyond the (stand alone) EV show / ride & drive

- Display & tabling at existing public events
- Engaging games, trivia, contests, swag
- Coordinating Lunch & Learns at employers
- Partnering with conferences and shows



EV Ambassador Programs

- Develop and manage a team of trained local EV Ambassadors
- Connect interested customers with matched Ambassador
- Follow up with customer and Ambassador on adoption status
- Utilize Ambassadors for display vehicles & support at Events




Auto dealership engagement

- Target and engage local dealers; build relationships
- Provide education on local EV programs & incentives
- Engage with group purchase and incentive programs
- Develop new & used EV dealer and customer support
- Provide EV showcase and display opportunities
- Celebrate and incentivize champions; develop new ones
- Report to client on engagement, performance and inventory




Incentives

- Rebate development & branding guidance
 - Off peak charging
 - Level 2 charging (EVSE)
 - Vehicle incentives
- Evaluate rebate requests
- Provide monthly reporting
- Check cutting services
- Rebate guidance




GO GREEN! TMLP helps you save some green\$ while driving greener.

Electric Vehicle Rebates and Incentives



Next Drive Rebate

\$450 customer rebate for the purchase of a new or used Electric Vehicle, either a battery electric vehicle (BEV) or a plug-in hybrid electric vehicle (PHEV).



Level 2 Charging Rebate

Get a rebate of up to \$300 to help offset the cost of the purchase and installation of a Level 2 system.

90 Cents a "Gallon" Club
(off-peak charging)

Earn a \$50 sign-up bonus (limited time only) and an ongoing \$10/month bill credit. How? By signing up to charge your electric vehicle only between 9 p.m. to 9 a.m. weekdays and any time on weekends. You'll only pay around the equivalent of 90 cents a "gallon" for your electric driving!

Join the Electric REVolution today!

To contact an EV specialist about program eligibility requirements, call **833.443.8363**, email ev@ene.org or visit TMLPDrivesElectric.org.

Partnerships – state, local, business

- Existing state government programs
 - MassEVolves, a new employers pledge & recognition program
 - Mass Drive Clean EV test drive campaign
- Local sustainability groups & coalitions
- Chapters of the Sierra Club and Electric Auto Association
- Engage OEMs on discounts, loaners, etc.

Mass*EVolves*



Innovation – new services, offerings, support & recognition

- EV Showcases and experiential marketing
- WattPlan EV Advisor – compare cost tool
- Virtual Peaker – active smart charge mgmt.
- Grants for incentives – used EV rebate
- Workplace Charging Programs & EVents
- Develop state/regional EV Dealer Awards
 - Partner with the state Auto Dealers Assoc.
 - Hold awards ceremony at Auto show (?)



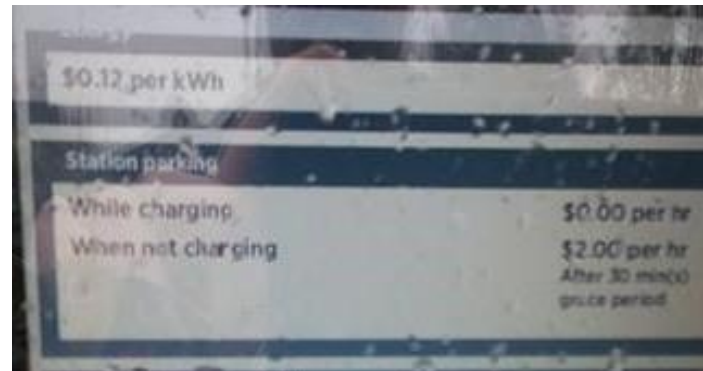
Clean Power Research®

Virtual Peaker 

 EUCI

Unique EV driver engagement tool: Littleton, MA “Green Rewards” for EVs

- Utility owned public charging stations
- Resident EV drivers sign up to charge for free
- Utility gets driver info for future off-peak program
- Custom splash screen to market program
- Non-member rate still cheaper (\$0.12/kWh) than IOUs
- Best practices for rate, idle fee (\$2/hr), signage



The future of MLP EV programs: 2020 and beyond



The future of MLP EV programs: 2020 and beyond – piloting now!

- MLPs aligning EV goals with state/IOUs
- Shift toward Time of Use Rate incentives (?)
- Incentives to ensure 24/7 EV charging optimized
- Merging of solar, efficiency & EV initiatives
- Increased MLP charging station ownership
- Infrastructure investment in MUD & workplace
- Smart grid management utilizing EVs (V2G?)
- Advanced partnerships with dealers & OEMs

Q & A

