Animating the Electric Vehicle Market in New York State

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Animating the Electric Vehicle Market in New York State

Final Report

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Abstract

Energetics, A Division of Akimeka, LLC (Energetics) deployed charging infrastructure and stimulated electric vehicle (EV) sales with outreach and education, supported by the New York State Energy Research and Development Authority (NYSERDA) through this project, Animating the Electric Vehicle Market in New York State. Five new EV charging stations were installed in each of the five regions along the Interstate 90 corridor with about 85% at key locations identified in the previously developed Electric Vehicle Charging Station Plans. To leverage the momentum of each new charging station installation, promotional activities were held for 18 of the deployment locations. A coordinated outreach effort in the Greater Rochester area, branded as ROC EV, focused on promoting EVs by mobilizing and connecting constituencies such as local businesses, automotive dealers and manufacturers, universities, and EV enthusiasts. Launched in June 2017, ROC EV hosted 35 ride and drive events, recorded 1,036 test drives, and signed up 13 companies for the Workplace Charging Challenge over 16 months. Similarly, EVTompkins aimed to accelerate the adoption of EVs in Tompkins County by installing 22 new charging ports at 11 locations, discussing EV-friendly policies with municipalities, and engaging the public. An EV Tourism Pilot in the Hudson Valley deployed 10 EV charging stations and developed a phone application to encourage EV drivers to visit featured locations. The project also led nearly 50 additional outreach activities and educational presentations that promoted EV adoption and charging stations.

Keywords

electric vehicle, charging station, education and outreach

Acronyms and Abbreviations

AC	alternating current
CDCC	Capital District Clean Communities
CDTA	Capital District Transportation Authority
CCCNY	Clean Communities of Central New York
CCWNY	Clean Communities of Western New York
CNY	Central New York
CNYRPB	Central New York Regional Planning Board
EV	electric vehicle
GPS	global positioning system
GRCC	Genesee Region Clean Communities
I-90	Interstate 90 (east-west highway between Albany and Buffalo)
NDEW	National Drive Electric Week
NYS	New York State
NYSERDA	New York State Energy Research and Development Authority
PISO	PlugIn Stations Online
PMA	primary marketing application
ROC EV	Rochester EV Accelerator Community Program

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Executive Summary

In January 2017, at the start of this program, the New York State electric vehicle market was at a turning point. The initial wave of early adopters had purchased electric vehicles (EV) and forward-thinking organizations, businesses, and municipalities had invested in some limited charging infrastructure for their communities. While trends indicated that EV sales would continue to climb, a more coordinated effort to support the larger EV Eco system through infrastructure and outreach was necessary to reduce the technology deployment discrepancy between the EV early adopters and the mass market. Energetics, A Division of Akimeka, LLC (Energetics) proposed a project for Animating the Electric Vehicle Market in New York State, which with New York State Energy Research and Development Authority (NYSERDA) support would deploy more charging infrastructure and stimulate EV sales with outreach and education.

Energetics previously worked with four Clean Cities Coalitions in New York State to identify gaps in charging infrastructure within the five regions along the Interstate 90 corridor. The resulting Electric Vehicle Charging Station Plans assessed the current state of the region's EV infrastructure and recommended new potential charging station locations to establish a more comprehensive network. Five new EV charging stations were installed in each of the five regions along the I-90 corridor with about 85% of these at key locations identified in the Electric Vehicle Charging Station Plans. Most deployments are hosted by municipalities and several of these installations represented the first public charging station in that town. To leverage the momentum of each new charging station installation, Energetics and the Clean Cities Coalition project partners completed promotional activities for 18 of the deployment locations, often calling on local officials to promote the new technology to the public through ribbon cutting media events. Some events included EVs from local dealerships on display and available for test drives.

To accelerate the adoption of EVs, an EV community would deploy and leverage simultaneously all the components necessary for success—local policy, charging infrastructure, consumer education, public-private partnerships, and more.. Such a coordinated effort was initiated by this project in the Greater Rochester area, branded as ROC EV, and focused on promoting EVs by mobilizing and connecting constituencies such as local businesses, automotive dealers and manufacturers, universities, and EV enthusiasts. Launched in June 2017 and led by the Electrification Coalition, ROC EV hosted 35 ride and drive events and recorded 1,036 test drives over 16 months. Thirteen pioneering companies

in greater Rochester joined the Workplace Charging Challenge, educating their workforce about the benefits of driving electric. According to analysis based on data from the Rochester Automobile Dealers Association, the market penetration rate during the ROC EV program timeline surpassed the initial goal of 1 percent, and by the end of October 2018, EV sales made up 1.79 percent of all vehicles sold in Monroe County.

Drawing on lessons learned and leveraging the momentum of the EV community in Rochester, Energetics led EVTompkins, an initiative aimed to accelerate the adoption of EVs in Tompkins County. The EVTompkins team and project partners facilitated the installation of 22 new charging ports at 11 locations. These installations significantly increased the availability of charging for EV drivers. While not all municipalities were able to meet with EVTompkins, several learned a great amount during meaningful engagements and were considering action to better support EVs. The EVTompkins team facilitated a large effort to reach Tompkins County community members through many opportunities. The program made use of events, social media marketing, online and print media, and advertisements. Through these efforts, the team facilitated 25 events, engaged an estimated 2,000 people, and encouraged about 100 EV ride and drives. EVTompkins was also able to grab the attention of about 50,000 people through Facebook, parades, advertisements, and newsletters.

WXY + Architecture + Urban Design and Energetics developed an EV Tourism Pilot in the Hudson Valley. This focused on expanding EV charging infrastructure in a region that is often visited by New York City and Westchester County residents (two areas with high EV ownership) for weekend or day trips, and thus provided an opportunity to promote EVs in this tourism hotspot. The program deployed 10 EV charging stations and developed a phone application for drivers to plan their trip around featured locations that also host charging stations.

In tandem with the focused deployment and outreach efforts in target regions of the State, the project team led activities to support the Charge NY initiative led by NYSERDA. Support included the facilitation of outreach activities and educational presentations that promoted EV adoption and charging station deployments throughout the State. Under this task, the project team led nearly 50 events, ranging from day-long National Drive Electric Week events to conference and classroom presentations, in addition to the outreach directly related to other project tasks.

Over the course of this three-year project, Energetics and project partners installed 108 new charging ports, directly supported the acquisition of eight EVs in municipal fleets to showcase their use, coordinated 141 EV promotional outreach events, and facilitated numerous additional activities to further promote EV adoption. With continued support from New York State Leadership and NYSERDA through incentives and rebates, the EV market has continued to grow with higher than average adoption in areas targeted by this project.

1 Introduction

In 2017 the New York State Energy Research and Development Authority (NYSERDA) awarded Energetics, A Division of Akimeka, LLC (Energetics) a project to support electric vehicle (EV) market deployment. The focus of this project includes plug-in models such as plug-in hybrid electric vehicles and battery electric vehicles (i.e., all-electric vehicles). The project uses innovative solutions to stimulate and expand the market for EV purchases in New York State, including the installation of charging station infrastructure and extensive outreach efforts. This project leveraged community engagement and aggregation strategies to accelerate statewide demand for EVs. While achieving the program goals, it incorporated elements of the Charge NY initiative (NYS's initiative to get more electric cars and trucks on the road) into the educational efforts to help further the Charge NY branding, thus complementing various NYSERDA sponsored projects and EV initiatives.

The program used three elements to stimulate and expand the market for EV purchases:

1. Implementation of EV Charging Station Plans in the five regions along the Interstate 90 (I-90) corridor. The project team coordinated the installation of charging stations to promote EV readiness and spur vehicle purchases in each of the following five regions: Capital District, Mohawk Valley, Central New York, Genesee Valley/Finger Lakes, and Western New York.
2. Launching EV Deployment Communities. The project team assisted the City of Rochester in purchasing EVs and charging stations for the City's fleet, along with additional charging stations in public parking garages, before embarking on a year-long outreach and educational campaign. The project team also identified an additional EV Deployment community, Tompkins County NY where staff worked with community stakeholders to promote an EV ecosystem.
3. Promoting EV tourism in the Hudson Valley and Catskills regions. The project team installed charging stations at key tourist destination sites in the Mid-Hudson Valley Region and encouraged EV tourism along key travel routes.

To help achieve the program goals and support related activity, Energetics worked with several partners on these initiatives. PlugIn Stations Online (PISO) completed the charging station installations in each of the five regions along the I-90 corridor, by working with site owners to identify optimal installation locations, supplying the hardware, and provisioning the station. Energetics also enlisted the help of the Clean Cities Coalitions along the I-90 corridor—Capital District Clean Communities (CDCC), Clean Communities of Central New York (CCCNY), Clean Communities of Western NY (CCWNY), and the Genesee Region Clean Communities (GRCC)—to help coordinate with the site hosts for the installation and subsequent outreach events.

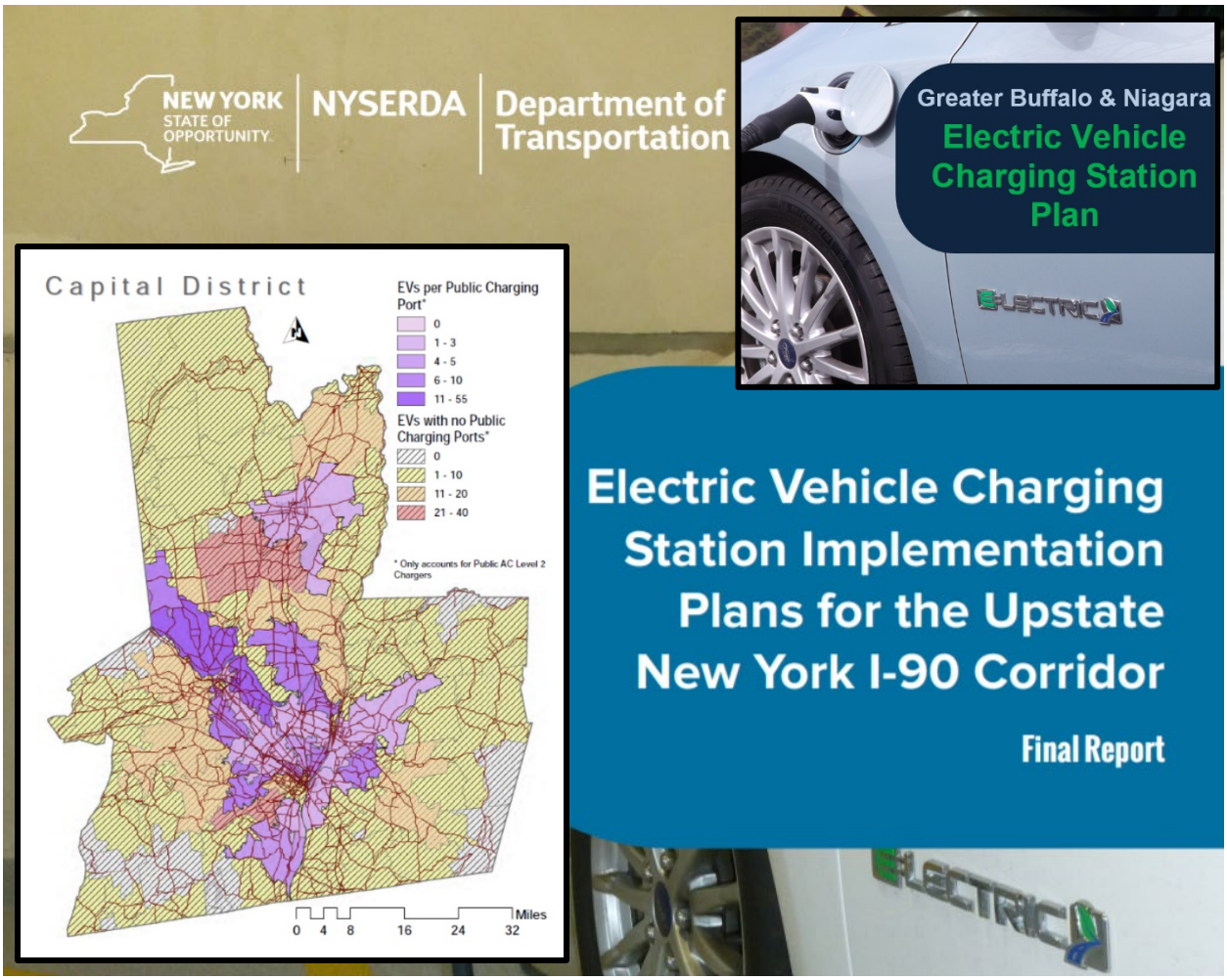
The Electrification Coalition led the City of Rochester EV Deployment Community outreach efforts with support from GRCC, while EV Charge Solutions completed the charging station installations associated with that initiative. Energetics led the outreach efforts in Tompkins County with support from several stakeholders in that EV Deployment Community while PISO completed the charging station installations in and around Ithaca. The WXY studio (along with their partners MassIdeation and Barretto Bay Strategies) completed outreach, site coordination, and app development for the EV Tourism Pilot in the Hudson Valley, while PISO completed the charging stations at target tourism destinations.

2 I-90 Charging Station Installations

2.1 Site Selection and Pre-installation Review

Energetics and the four New York State Clean Cities Coalitions along the I-90 corridor developed Electric Vehicle Charging Station Plans for five regions of the State: Western New York, the Genesee Region, Central New York, the Mohawk Valley, and the Capital District. These plans assessed current support for EVs, or "EV readiness." Each plan also recommended locations for installing charging stations to better support local and regional EV drivers. The objective of this project task was to begin implementing these plans by providing support for five new charging stations in each region.

Figure 1. EV Charging Station Implementation Plans for the Upstate New York I-90 Corridor



Outreach was conducted in each region by the Clean Cities Coalition coordinator in four of the regions while Energetics covered the Mohawk Valley, beginning with the recommended sites identified in the plans. The municipality in the targeted areas were given priority as they likely had sites that were public, highly visible, and popular places for visitors and residents to park. In areas where the municipality chose not to install the charging station on public property, the city assisted in selecting an alternative location. Proximity to major travel routes or other high-traffic areas was also a consideration when selecting a site. Each site host completed paperwork developed by Energetics in the sequence listed below, which ensured each site was property vetted and received proper approvals by the local municipal authority.

- Before Installation
  - Notice of interest
  - Site visit by PISO
  - Authority having jurisdiction (AHJ) approval of design plan
  - Host site agreement completed with site design and quote attached
- After Installation
  - Confirmation of training
  - Infrastructure data sheet
  - AHJ approval of installation

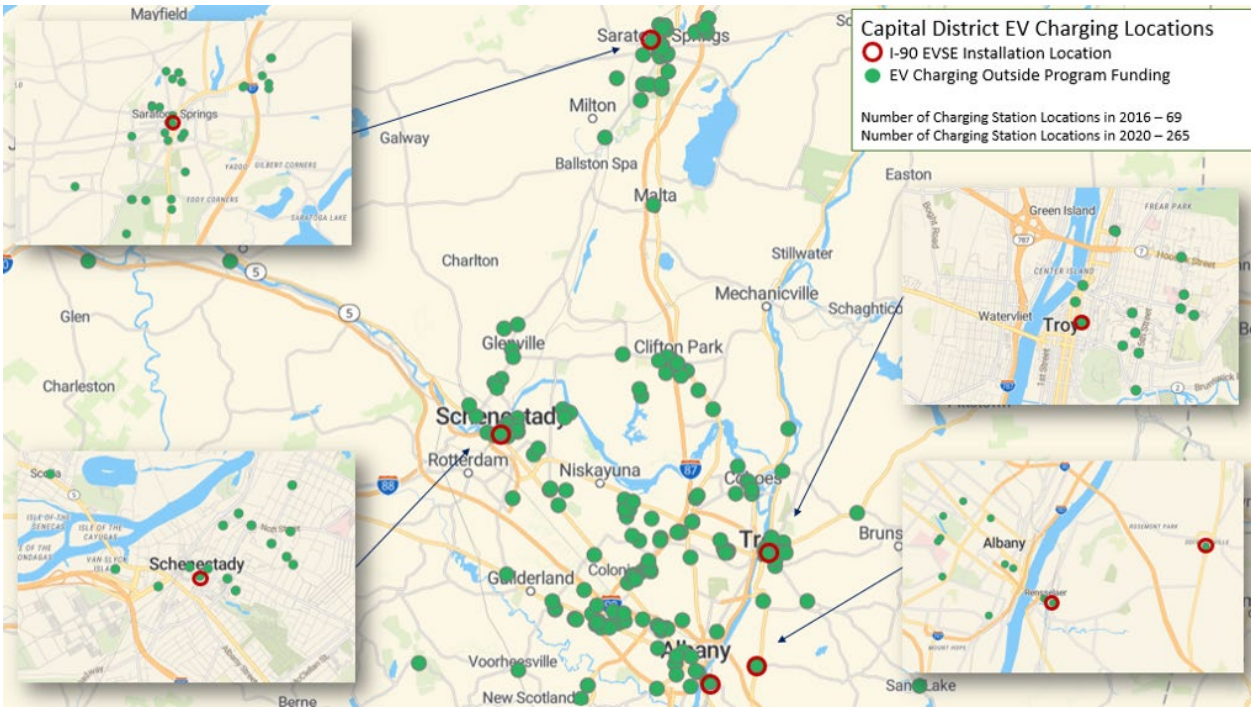
The host site agreement was developed to clearly define rights and responsibilities of the installation and tasks associated. The agreement delegated and identified which party was responsible for installation, operation and maintenance of the charging station, access rights, maintenance, insurance, publicity, and payments and costs.

2.2 Installation and Provisioning

After completing the pre-installation paperwork and receiving approval to proceed from the NYSERDA Project Manager, Energetics and the Clean Cities Coalition coordinators worked with PISO to install 25 charging stations throughout the five regions. To participate in this project, each site had the option to complete preparation work on the site with internal staff or work with a contractor. The site prep work included any trenching, laying conduit or electrical wire, and installing the supplied concrete pier. After verifying the site prep was properly completed, PISO installed and provisioned the charging station. The following lists and figures are the final sites that completed installation.

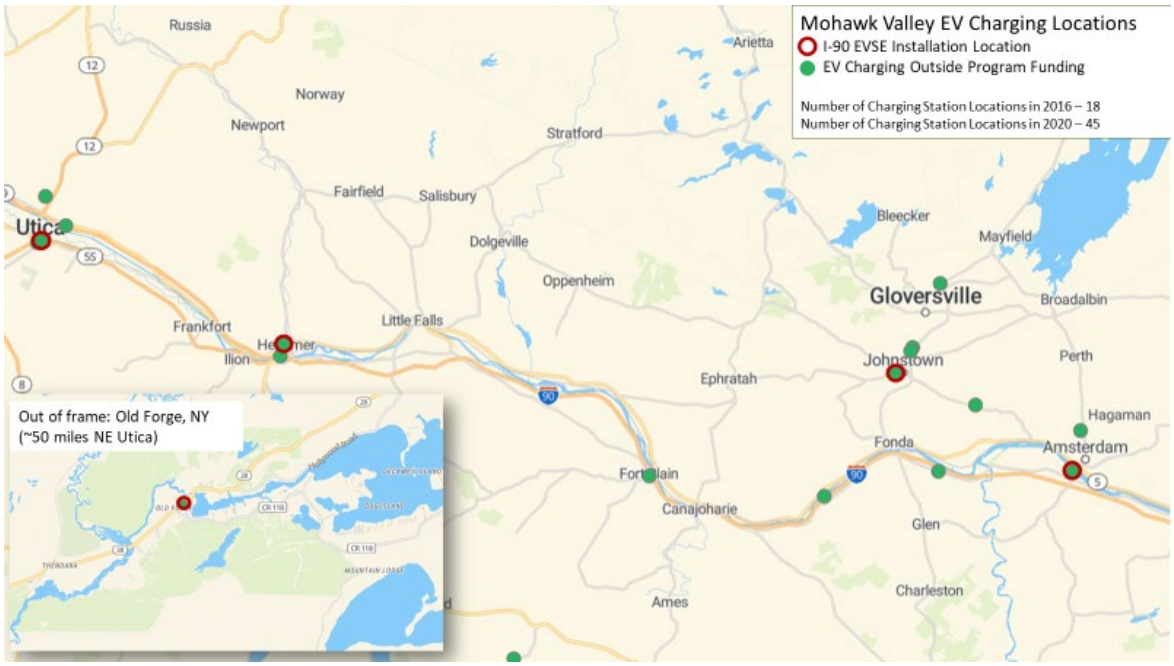
- Capital District Region
    - Schenectady: County Public Library
    - Capital District Transportation Authority (CDTA) Rensselear: Amtrak Rail Station
    - Saratoga Springs: Woodlawn Avenue Municipal Lot
    - Troy: Fifth Avenue Parking Garage
    - CDTA East Greenbush Park-n-Ride Lot

Figure 2. Map of Capital District Charging Station Installations



- Mohawk Valley Region
    - Amsterdam: Municipal Lot
    - Herkimer: Frank J Basloe Library
    - Johnstown: Motor Vehicle Building
    - Utica: City Hall
    - Old Forge: The Strand Theatre

Figure 3. Map of Mohawk Valley Charging Station Installations

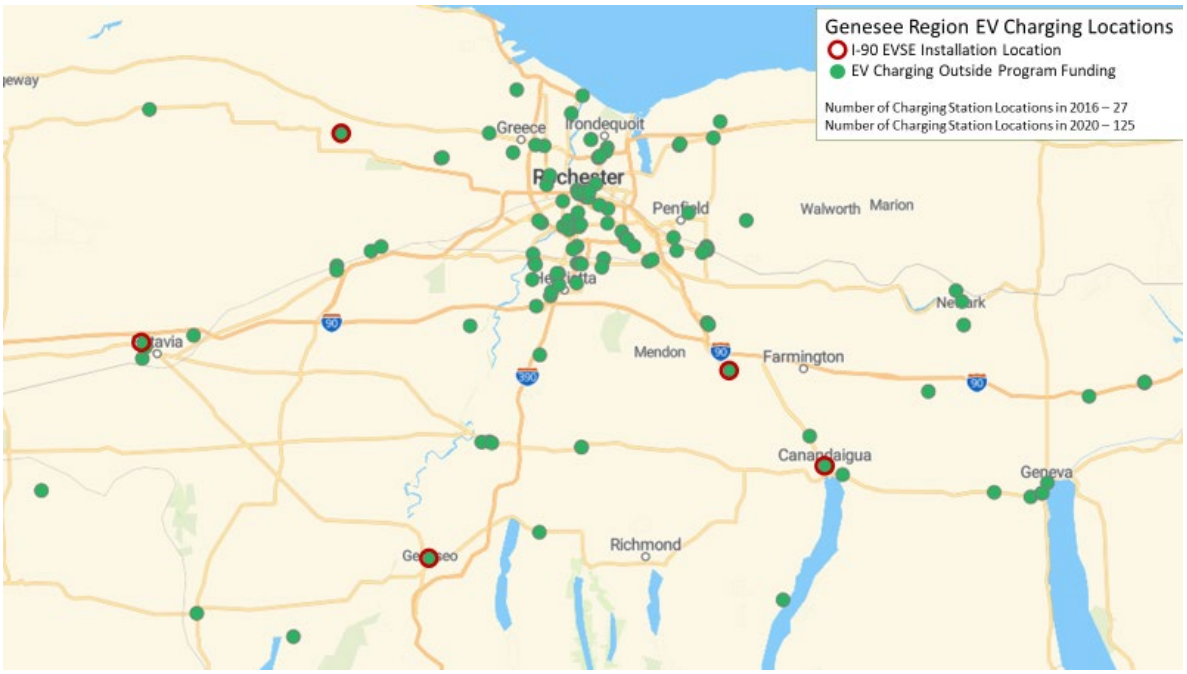


- Central NY Region
    - Dewitt: Town Court
    - Fayetteville: Municipal Lot
    - Syracuse: Center of Excellence
    - Clay: Municipal Parking Lot
    - Auburn: City of Auburn Parking Garage

Figure 4. Map of Central NY Charging Station Installations

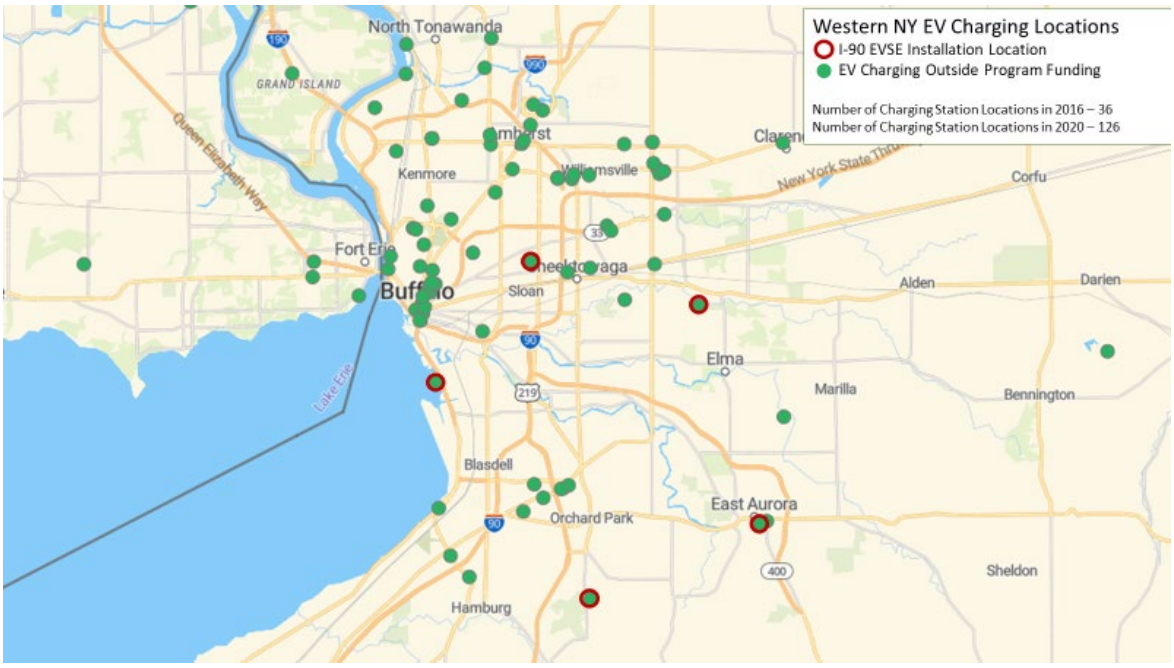
- Genesee/Finger Lakes Region
    - Brockport: Welcome Center
    - Canandaigua: Municipal Lot
    - Geneseo: Town and Village Courts
    - Victor: Victor Village Hall
    - Batavia: Batavia Downs

Figure 5. Map of Genesee Region Charging Station Installations



- Western NY Region
    - Erie County: Chestnut Ridge Park
    - Cheektowaga: Town Pool and Park
    - Aurora: Town Hall
    - Erie County: Como Lake Park
    - NYS Parks: Buffalo Harbor State Park

Figure 6. Map of Western NY Charging Station Installations



2.3 Charging Station Installation Promotional Events

Following each installation, the local Clean Cities Coalition coordinator worked with the site host to hold a promotional event. These events were meant to publicize the new station, recognize the host sites' commitment to providing infrastructure to EV drivers, and highlight other New York State initiatives relating to electrified transportation. As often as possible, these events invited local dealerships to attend with any plug-in EVs in their local inventory for display and to offer ride-and-drives. Some events were also scheduled with other existing events to maximize attendance. Leading up to each event, the local coordinator worked with each host site and local press to send a media advisory and press release. Local media was also notified and invited to attend each event, often resulting in local new coverage. In instances where hosting a promotional event was not possible, local coordinators worked to promote each installation with local press.

2.3.1 Capital District Region

The Capital District Clean Cites Coalition had difficulty getting station hosts to commit to the promotional events for each location. The station hosts felt that the region already had high enough exposure to charging station installations, making it difficult to gain interest and encourage attendance at events. As such, a press release was developed and distributed to local media about each of the station installations. The press release was picked up by a couple local media sources.[1,2]

The region held one event centered around the installation in Troy. The event was hosted by the City of Troy and Capital District Clean Cities (CDCC) on April 23, 2018 as a ribbon cutting event and celebration of Earth Day. CDCC staff met Mayor Patrick Madden, his Communications Director John Salka, the Troy Business Improvement District's Katie Hammon and Planning & Economic Development Director Steve Strichman at the 5th Avenue Garage for a ribbon cutting and press event. CDCC had prepared remarks about the program, current rebates available for new EV purchases, and other ongoing local and statewide EV initiatives. Those in attendance discussed opportunities for Troy to support and expand EV charging in the city and how it coordinates with their ongoing sustainability initiatives.[3]

Figure 7. Ribbon Cutting Event in Troy, NY

2.3.2 Mohawk Valley Region

There were four events held in the Mohawk Valley to promote the new charging station installations. Given the time of year and schedules of municipal officials, the City of Amsterdam decided to only issue a press release without any event. The press release was distributed to local print and radio stations in late November 2018.

2.3.2.1 Herkimer

Local village and county staff joined Energetics for a ribbon cutting event on November 17, 2017 outside the Frank J. Basloe Library. Energetics, Herkimer Mayor Tony Brindisi, and local Clean Energy Coordinator Dan Sullivan, each spoke about the station installation and potential benefits for local media and the Village's Facebook live stream. The local Chevy dealership supplied a Bolt and Volt for the event which was available for ride and drives. The event was covered by two local news sources: Times Telegram Newspaper and WKTV news.[4, 5]

2.3.2.2 Johnstown

Elected officials from Fulton County gathered to unveil the first county-owned charging station on October 24th, 2018. A Prius Prime from Steet Toyota and a Chevy Volt from James Chevrolet were on display during the event.[6]

2.3.2.3 Utica

The City of Utica and Energetics held an event on September 15, 2018 to promote the new EV charging station in Utica. Municipal staff and Energetics worked together to plan this event in conjunction with National Drive Electric Week (NDEW) and a festival at the site of the EV charging station. By registering the event through NDEW, local EV drivers were encouraged to attend, and holding the event on the same day as another in the same area increased exposure. There were about a dozen EV drivers in attendance and the local news station included footage from the event in their nightly broadcast.[7]

2.3.2.4 Old Forge

A ribbon cutting event was held on May 15, 2018. The event had vehicles from Rome Mitsubishi available for demonstration and test drives. Local officials attended and were excited about the installation. This event also had two local news organizations present conducting interviews. Each ran stories in their print media (The Weekly Adirondack and Adirondack Express).

2.3.3 Central NY Region

Clean Communities of Central New York (CNY) held an event for each installation in the region.

2.3.3.1 Dewitt

The Town of Dewitt and Clean Communities of CNY held an event on September 10, 2018. The event included a presentation led by the local Clean Cities Coalition coordinator Barry Carr and featured representatives from the Town of Dewitt Town Supervisor Ed Michalenko and Director of Planning Sam Gordon, who also spoke in support of the program and electric transportation. There were multiple media outlets present, including local affiliated from NBC, ABC, and CBS; along with the local NPR station, WAER. All three participants were interviewed by media representatives and there was a question and answer session with the assembled crowd.[8, 9]

2.3.3.2 Fayetteville

On November 11, 2017, the Town of Fayetteville municipal officials, Clean Communities of CNY, and members of the CNY Regional Planning and Development Board gathered to unveil the town's new charging station. The event included speeches from Fayetteville Mayor Olson, CNY Regional Planning and Development Board, Clean Cities of CNY, and a local EV driver. The event served as a ribbon cutting, vehicle and charging station demo, and included expanded interviews with the media.[10]

2.3.3.3 Syracuse

Clean Communities of CNY and Center of Excellence staff held a public event to unveil the new public access charging station on June 21, 2018. The event was held in conjunction with the REACH Ride-n-Drive and Greening USA Lunch and Learn program. This event had good attendance compared to others, which could have been due to a variety of factors including fair weather, several EVs available for test drives and viewing, and a handful of display booths.[11]

2.3.3.4 Clay

This promotional event was held in late fall and unfortunately the weather was not ideal for an outdoor event, resulting in lower attendance. Clean Communities of CNY members, including the United States Department of Energy (DOE) intern Mark Finlay were in attendance. A local dealership provided a vehicle for display and demonstration. A local college news station[12] covered the event.

2.3.3.5 Auburn

The City of Auburn held their ribbon cutting event on November 11, 2018. The event included speeches from the City Mayor, CNY Regional Planning and Development Board, Clean Communities of CNY, and a local EV driver. It was noted that having EV drivers present to share experiences is effective in promoting EVs. The event had low attendance, which may have been due to the cold weather. Several city and county staff stayed to learn about the charging station and other EV programs.[13]

2.3.4 Genesee (Finger Lakes) Region

Genesee Region Clean Communities held five events throughout the region that included ribbon cutting ceremonies for the new charging stations and participation in larger community events.

2.3.4.1 Brockport

On December 2, 2017, the City of Brockport and Genesee Region Clean Communities held a ribbon cutting for their new charging station. The event was held before the annual Holiday of Lights Parade to help boost attendance. Unfortunately, the weather played a larger role in detracting people from attending this event. The event included a ribbon cutting, speeches, and two EVs on display (Bolt, Leaf). Local news outlets were also present and published a story on the installation.[14]

2.3.4.2 Canandaigua

The City of Canandaigua held their ribbon cutting and station unveiling on November 4, 2017. The event included speeches from Clean Cities Coordinator, Canandaigua Mayor Ellen Polimeni, and State Assemblyman Brian Kold. Along with the ceremony and speeches a table was displayed that included information and materials on EVs. Multiple press outlets attended and published articles.[15, 16, 17]

2.3.4.3 Geneseo

The Village of Geneseo held their ribbon cutting event on December 2, 2017 during their local community event, Christmas in the Village @ Geneseo Main Street District, to increase public attendance. Along with the ribbon cutting, the event included, EV displays, presentations, and media coverage. Despite planning this event with a coinciding event, the public stayed on Main Street to shop and were not drawn in by this charging station ribbon cutting event.[18]

2.3.4.4 Victor

The Village of Victor ribbon cutting and station dedication included an overview of the charging station regional plan and Cleaner Greener Communities program. A Nissan Leaf and Chevy Volt demonstrated how to use the charging station. There was good online press coverage by a reporter from the local paper–Genesee Sun.[19] Prior to the event, the station had seen high use with 37 charge events in 2.5 months.

2.3.4.5 Batavia

On August 1, 2018, the Town of Batavia held an event that included a ribbon cutting, speeches from municipal officials and the Clean Cities Coordinator, and had EVs on display. There was good press coverage from this event and attendees were excited.[20]

2.3.5 Western NY Region

Clean Communities of Western NY worked with station hosts to coordinate promotional events. Erie County installed two stations and held one event to promote both. The New York State Parks and Cheektowaga did not host events due to scheduling conflicts that pushed it back into the winter season when it would not have been ideal to hold an event.

2.3.5.1 Erie County

Erie County held an event to promote their new charging stations at Chestnut Ridge Park and Como Lake Park. The event was a very effective media outreach event with five different media outlets present who were recording and live streaming the press release event. Several members of the public also saw the media release prior to the event and came to observe the ribbon cutting for the new charging station. A constituent of Erie County also brought a personal Tesla Model 3 to have on display for the event. The Tesla Model 3 car drew media attention and the owner provided a compelling personal testimony on the benefits of EV's and the joy of driving it daily. To help promote these installations, Erie County issued a press release.[21]

2.3.5.2 Aurora

On December 9, 2018, Clean Communities of Western NY set up a table by the main entry to the senior center to promote and engage with stakeholders on the new charging station installed there. Staff also

highlighted the availability of new EV's on market and tax incentives from New York State and the United States Government. The event was covered by the local news outlet, Buffalo News.[22]

2.4 Lessons Learned

The installation of the 25 charging stations throughout the I-90 region was successful with each region securing five sites, the majority of which were high-priority locations as identified by the Charging Station Infrastructure Plans. These installations will continue to serve local and regional EV drivers, while also acting as a catalyst for future charging station and EV deployment. It is difficult to quantify the direct effects of each station but increasing the number of local stations in a community will certainly have a lasting effect on the overall EV market penetration.

Offering a discount to station hosts was useful in encouraging them to consider an installation as many of these areas had yet to hear of demand or interest for EV charging. However, even with a significant discount on the total cost of installation, cost was still a concern for many entities. As charging stations are a relatively new technology, many potential host sites were apprehensive on the up-front "soft costs" that were more difficult to quantify. For successful implementation of charging stations, properly siting and preparing sites as early as possible will be paramount to keep initial costs down. Despite some apprehension, most sites approached with this funding opportunity took advantage of the offer.

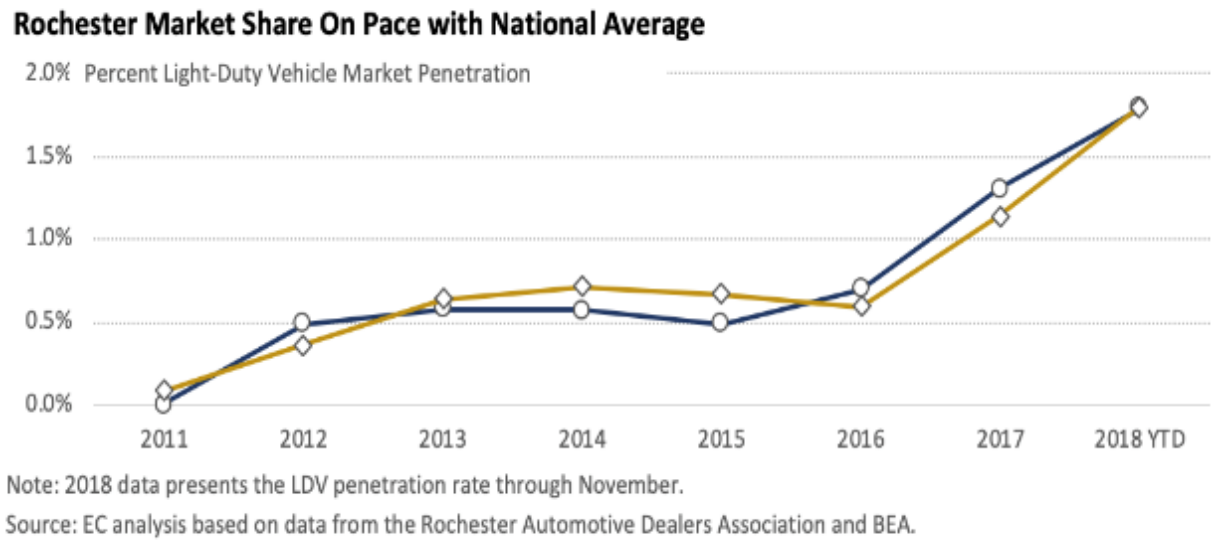
Holding promotional events was not always effective in attracting the public, but the associated media coverage helped increase exposure. Events that were held in warm months alongside other events were most successful in drawing a larger crowd. Even so, the physical location of the charging station, often located in areas away from the main event area, limited attendance. EV and EV charging awareness is still low enough that continuing to promote EVs through education is necessary. A host site that was excited and cooperative in planning was also vital to the success of the event. Some events were difficult to coordinate with hosts, possibly resulting in low attendance.

Inviting dealerships to attend with their plug-in EV inventory was useful in boosting public interest, but it was not always easy securing dealership participation. The attendance of the ribbon cutting events were low and did not always offer dealerships enough exposure, although press coverage of their participation in the event was helpful. Dealership inventory was consistently a hurdle, as many local dealerships did not have plug-in EV inventory to contribute. When a relationship could be developed and the dealership understood our objectives, the dealership sometimes loaned an EV to a staff member who would bring the vehicle to the event for display.

3 Rochester EV Accelerator

Prior to the start of the Rochester Accelerator Program (ROC EV), the first two EVs in greater Rochester were registered in 2011. At the time, there were less than a dozen charging ports (plugs) in the area, and almost all of them were located at car dealerships. Seven years later in 2018, greater Rochester is home to more than 2,500 electric vehicles and 100 charging ports. A combination of State and federal policy, local advocacy, and the efforts of ROC EV led to an increase of more than 1,000 percent in charging ports and overall EV growth from 0 percent to 1.79 percent of new vehicle sales in just seven years.

Figure 8. EV Market Penetration of New Car Sales from 2011–2018

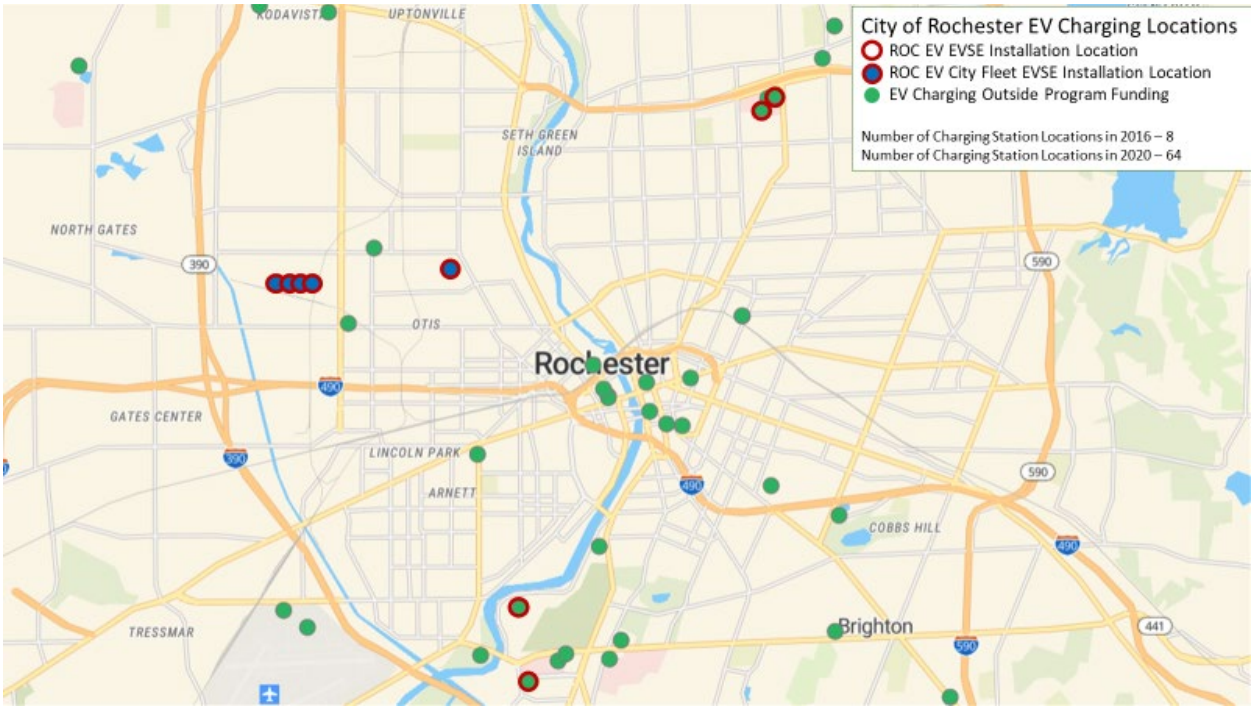


Note: 2018 data presents the LDV penetration rate through November.

Source: EC analysis based on data from the Rochester Automotive Dealers Association and BEA.

EVs present a critical opportunity to reduce oil dependency in the United States, bolstering American economic and national security while benefiting consumers. To accelerate the adoption of EVs nationwide, they should be deployed in targeted geographic areas where all the components necessary for success are leveraged simultaneously, that is, local policy, charging infrastructure, consumer education, public-private partnerships, and more. Coordinated efforts such as ROC EV, also referred to as an “accelerator project” or “accelerator community,” focus on promoting EVs by mobilizing and connecting constituencies such as local businesses, automotive dealers and manufacturers, universities, and EV enthusiasts.

Figure 9. Map of Charging Station Installations in the Greater Rochester Region



3.1 Summary of Events

From August 2017 to December 2018, ROC EV hosted a total of 35 public and private ride and drives and exhibited at 13 tabling events. These events led to ROC EV surpassing original internal program goals, including 1,035 test drives and rides, the addition of 12 workplace charging partners, cultivating a distribution list of over 760 people, and realizing a regional EV market penetration of 1.3%. The combination of community events, social media outreach, and professional relationships have educated thousands of people in greater Rochester about the benefits of EVs and played a role in expanding EV ownership and charging infrastructure.

Table 1. ROC EV Metric Goals and Accomplishments

Metric	Goal*	Actual
Ride and drive events	N/A	35
Tabling opportunities	N/A	13
Test drives	1,000	1,035
Workplace charging partners (stretch goal)	10 (20)	12
EV market penetration	1%	1.79%

* Internal goals set by the Electrification Coalition

Ride and drive events proved to be the most effective tactic to catalyze EV ownership in the community. Event attendees who arrived at the event unfamiliar or skeptical of EVs were offered in-depth information about the technology and the opportunity to experience driving for themselves. Forty-two percent of respondents indicated they were “very likely” to purchase an EV as their next car after test driving at a ROC EV event, compared to 34% of respondents before test driving. Additionally, 51% of respondents selected “unlikely” or “somewhat likely” before test driving, while only 42% of respondents chose the same answer after completing a test drive.

3.1.1 ROC EV Events Held in the Fourth Quarter of 2017

On October 7, 2017, ROC EV attended and facilitated ride and drives at the Eco District Launch Event. There was lower attendance than typical due to bad weather, and the venue was not easily discoverable to those who were not previously aware.

ROC EV hosted a display table at the Rochester Rhinos Go Green Night on October 14. The Rochester Rhinos are a local Hockey team. ROC EVs presence included an EV display and informational booth. The event was not the best for engagement, because people did not arrive early enough to test drive the vehicles and there were too many families with children that could not give the EVs enough attention.

ROC EV attended the Brighton's Farmers Market on October 15 with a table and vehicle display. The event was meant to generate leads and volunteer participation.

On October 21, SunCommon, a solar company, and ROC EV hosted a fall sustainability fair that provided opportunity for sustainably minded organizations to display information and interact with the public. The event included ride and drives, music, and food trucks.

The Canandaigua Wine Walk on November 4 included a table display with EV test drives available. The location was central and easy to access (downtown Canandaigua), but cold weather and nearby indoor attractions caused people to move on quickly.

On December 2, the ROC EV team attended the South Wedge Holiday Festival. The event had good attendance and location was alongside a busy, highly visible street. People were excited about the program and EVs but generally reluctant to test drive while out with their family. Getting a test drive was most successful when first initiating a conversation about electric vehicles and the program in general— then asking if they were interested in test driving.

On December 6, ROC EV attended the Rochester Young Professionals Volunteer & Board Expo event and had success in recruiting volunteers.

3.1.2 ROC EV Events Held in the First Quarter of 2018

On January 21, ROC EV facilitated a Rochester Institute of Technology EV Night Hockey Game Shuttle Service. The event offered shuttles from parking lot to hockey arena, informational booth with questions and answers, and a program announcement at intermission with a t-shirt give away. The audience was most attracted by the convenience of the shuttle service offered (effective way to engage people who otherwise would not participate in a ride and drive).

ROC EV hosted a second EV enthusiast meeting on January 26. Attendance was lighter than the first meeting in November, perhaps due to the holiday season and breaks from college.

ROC EV hosted a third EV enthusiast meeting on February 22. The meeting had lower attendance, partly because regulars were deterred by advertising an EV enthusiast group picture. Gatherings need be viewed as an event hosted by ROC EV for the purpose of creating a fun and friendly atmosphere for our enthusiasts.

The Rochester Auto Show held on March 1 included a table display and Trivia Wheel—attendees spun the prize wheel, were asked a trivia question relating to EVs, and received a prize for correct answers. The prize wheel was integral to getting people's attention. Something bright, colorful, and interactive, drew attention from people who would otherwise have walked past the table without looking. Asking a question was effective at getting people to think and talk about EVs.

On March 6, ROC EV partnered with the Chamber of Commerce to host a Passport to Workplace Charging & EV Showcase. The partnership with Chamber of Commerce was critical to reach a new business audience that was not previously engaged. Picking a trendy location drew people who were interested but may not have gone to a lecture or typical presentation elsewhere.

On March 15, ROC EV attended the RocWorthy Earth Series: Transportation & Sustainability event. The informational display attracted environmentally conscious and politically engaged individuals interested in progressive projects such as ROC EV and attracted significant interest in the program from attendees.

ROC EV hosted an EV enthusiast meeting on March 22.

3.1.3 ROC EV Events Held in the Second Quarter of 2018

On April 4 ROC EV attended the Nazareth College Public Health Week and gave a presentation along with ride and drives. Attendance was low but those who attended were very interested and engaged.

On April 21, ROC EV hosted the Penfield EV Car Show. The event location was great for attracting non-EV drivers. The Penfield Community Center is also home to the library and many sports fields so many families passed through the event and stopped to talk and learn about the cars.

On April 24 ROC EV attended and presented at the Association of Energy Engineers Rochester Energy Symposium. Attendees of the symposium had six to seven presentations to choose from per hour, and the ROC EV presentation had very high attendance compared to other events happening at the same.

An EV enthusiast meeting held on April 26 had less than average attendance because most attendees met at the Penfield EV Car Show earlier in the month. Following an agenda at the beginning of the meeting allowed ROC EV to make requests and guide topics of conversation.

Rochester Gas & Electric held a workplace ride and drive event on May 2. Rochester Gas & Electric's Carl Taylor (Chief Executive Officer) and Scott Bochenek (EV Programs Manager) spoke about the utility's commitment to EVs and let employees know the five Bolts are available for company use.

ROC EV hosted an informational display at the Lilac Festival on May 12. Attendance was slow during mornings but picked up around mid-afternoon. There was a high volume of people passing by, but a low percentage stopped to engage.

On May 18, the Regional Local Government Workshop included a presentation from ROC EV. This annual event is hosted by the Genesee-Finger Lakes Regional Planning Council and draws attendees from the nine-county region.

The May EV enthusiast meeting was held on May 24. Less than average attendance was attributed to many enthusiasts volunteering and reuniting at the Lilac Festival. A new meeting style that includes an article discussion was implemented last month and proven successful.

A local design firm, SWBR, held a workplace ride and drive event on May 24. Pre-registration suggested greater attendance than actual attendees on the day of the event but was helpful in efficiently coordinating the test drives.

On June 17, ROC EV attended the Brighton Eco-Fair at the Brighton Farmer's Market. The event included a table display. Attendance varied based on temperature (the highest attendance was between 10:00 a.m. and 11:00 a.m.), but there was significant interest in the table and display vehicle.

ROC EV and local charging station installer, EV Charge Solutions, hosted a ride and drive for the company's grand opening. Lower than anticipated turn out led to a low number of test drives; however, a high percentage of attendees did complete a test drive.

ROC EV attended the Rochester People's Climate Coalition Roc the Walk fundraiser held on June 30. The audience was very receptive and a large percentage of people attending the event test drove. This was a family-friendly event and many kids in attendance came along on the rides.

3.1.4 ROC EV Events Held in the Third Quarter of 2018

ROC EV facilitated the T.Y. Lin workplace ride and drive event on July 18. Pre-registration for the event contributed to higher attendance, as well as several posters and internal email distributions notifying staff about the event. Attendance was highest at beginning of the event, with several people having to wait for their chance to drive or ride. Overall, there was very good participation from the workplace.

On July 16, ROC EV hosted a ride and drive event at Henrietta Public Library. The event had higher than expected turnout. The presentation was well attended, the ride and drive was busy throughout the duration of the event, and the car show lot was full with a variety of models. The EV enthusiast owners who were present at the car show to speak with people new to EVs effectively engaged attendees.

ROC EV attended the Brighton Farmer's Market on August 5. Attendance at the event was high and staff had several conversations with interested marketgoers. The staff were able to add six newsletter subscribers and many people were interested in the display vehicles.

A workplace ride and drive event at Archival Methods was held on August 16 which also doubled as a ribbon cutting ceremony celebrating the installation of two charging stations won by Archival Methods at the workplace charging event in March. Despite excitement, there was low turnout—employees were not eager to test drive vehicles.

On August 23, ROC EV hosted a Ride and Drive at Fifth Frame Brewing. It was a great showing from the EV enthusiast group because the event was scheduled on the night of the monthly meet-up. Good number of test drives, but most were by existing EV owners trying out different vehicles.

On September 6, ROC EV co-hosted a ride and drive event at Dixon Schwabl. Leveraging existing relationships with workplaces (especially large ones) results in better communication, more successful promotion, and higher levels of participation. Attendees, especially those with no previous knowledge of EVs, benefited greatly from seeing that there are lots of models available.

On September 13, ROC EV, Digital Rochester, and Rochester Young Professionals held a ride and drive event. Although the event was meant to attract more people as a co-hosted project with the Rochester Young Professionals, the participation was low. It proved difficult to compete with the Rochester Young Professionals event for several assumed factors. One was that people were there to network professionally and seemed preoccupied with getting inside the event immediately. The other was that we were outside the building, so people in the event were very isolated from our display outside.

On September 15, ROC EV helped host the 2018 National Drive Electric Week with ride and drives and many EVs on display. There was very high attendance, an estimated 200 people, and the event had over 70 EVs displayed in the show, providing 160 test drives.

On September 17, ROC EV presented at the American Society of Heating, Refrigerating and Air-Conditioning Engineers as well as the Association of Energy Engineers Clambake and facilitated ride and drives. There was a consistent flow of participation in the ride and drive activity.

ROC EV attended the Nazareth College Farmer's Market on September 27. Ride and drives were available, but it was not a busy event.

3.1.5 ROC EV Events Held in the Fourth Quarter of 2018

On October 13, ROC EV held a ride and drive event at Broccolo Tree & Lawn Care. Attendance at the event was moderate, but with consistent turnover. All attendees participated in the ride and drive, with many taking multiple test drives. Encouraging event attendees to bring a friend or a spouse resulted in a drastic increase in attendance and test drive count.

ROC EV and Green Spark held a ride and drive event on October 17. Participation at the event was low. The location of the event was somewhat rural, and there was a surprise hailstorm. It got dark very early which reinforced the idea that ride and drives are most successful in warmer weather and during the day. Some attendees did hear about the EV test drives through Facebook and attended regardless of the poor weather conditions.

ROC EV held a ride and drive event with Hoselton on October 24. Attendance was light but consistent. Staffing the long event was a commitment but relatively simple work since the dealership staff was conducting the test drives.

On October 26, ROC EV and Monroe Community College held a ride and drive event. Monroe Community College was a venue difficult for scheduling a ride and drive because of numerous regulations and rules, but with the large number students and staff it has the potential to be a valuable resource. Unfortunately, participation was limited by poor weather. A ride and drive at a university would have likely been more successful if there was an additional draw for participation (i.e., food, music, etc.)

3.2 Rochester EV and Charging Station Infrastructure

ROC EV and Energetics with project partner, EV Charge Solutions, installed 14 charging ports in Rochester across five locations. Two public locations had dual port Level 2 stations installed. The remaining charging ports were installed to provide charging for the City of Rochester's growing EV fleet. Below is a list of the locations for each station:

- Rochester Bureau of Water (One Level 2 port)
- Rochester Bureau of Operations (Four Level 2 ports)
- Rochester Mt. Hope Cemetery (One NEMA 5–15r Receptacle)
- Rochester Regional Health (Two Level 2 ports)
- University of Rochester (Two Level 2 ports)

Along with the installation of EV charging stations, the City of Rochester purchased six plug-in EVs with support of the project to be used by the city operations to demonstrate the viability of the technology. The city purchased three 2016 Chevy Volts, two 2016 Chevy Bolts, and one Moto Electric Electro Transit Buddy II Passenger Shuttle.

3.3 Lessons Learned

Since ROC EV launched in June 2017, the program has hosted 35 ride and drive events and recorded 1,036 test drives. Thirteen pioneering companies in greater Rochester joined the Workplace Charging Challenge, educating their workforce about the benefits of driving electric. According to analysis based on data from the Rochester Automobile Dealers Association, the market penetration rate during the ROC EV program timeline surpassed the initial goal of 1 percent and by the end of October 2018, EV sales made up 1.79 percent of all vehicles sold in Monroe County. Although one group-buy purchasing program was organized, accelerators should consider the length of time their utility or other partners will need to gain approval when planning for a group-buy purchasing program.

The Electrification Coalition compiled a case study for the Rochester Electric Vehicle Accelerator in January 2019 which is included as an appendix to this report and provides further details on the initiative. The following lessons learned were extracted from that report.

3.3.1 Establishing the Advisory Committee

ROC EV suggests that committee members receive explicit support from their organization's leadership. For example, if a committee member is personally invested in accelerating the adoption of EVs but their organization has competing priorities, it may prove to be challenging for that committee member to dedicate time and energy to the program. Future accelerator communities should establish the level of commitment expected early on. One way this could be realized is by sharing a set of expectations with each partner and requiring signatures from their organization's leadership to ensure the committee members have internal support for their involvement.

3.3.2 Organizing the Advisory Committee

ROC EV began by organizing monthly subcommittee meetings based on five program areas: workplace charging, policy, fleet, education/outreach/marketing, and dealership/original equipment manufacturers (OEM). The subcommittee's topics often overlapped, resulting in duplicated efforts, so future accelerators may want to reorganize the subcommittee structure based on needs of their community and stakeholder priorities.

In addition, ROC EV established an every-other-month meeting with all stakeholders to track the progress of the various initiatives and to re-align priorities for the approaching quarter when necessary. Some advisory committee members were also helping to encourage their own companies and communities towards EVs and charging. Because the committee was so small (regular attendance between 10–17 people), one monthly all-hands meeting, instead of monthly subcommittee meetings, would have sufficed.

3.3.3 Workplace Charging: Overcome Objections

Some companies will have objections to participating in the Workplace Charging Challenge. It is important to anticipate and overcome these objections when possible. For example, larger companies generally exhibit the most hesitation due to internal bureaucracy. ROC EV overcame this obstacle by meeting with high-level decision makers who could make commitments and expedite action.

Another objection might include concerns that an employer is favoring some employees over others by providing those who drive EVs with an extra benefit that is not available to drivers of gasoline-powered vehicles. To overcome this argument, ROC EV supplies the companies with resources to survey employees about workplace charging interest level, so the company will have strong data to counteract this argument if it arises. For example, one possible question is, "What is the most you would be willing to pay for use of the charging station?" with multiple choice answers ranging from $0 to $6 per charging session, or "N/A because I will not use the charging stations." ROC EV also encourages employers to connect workplace charging to a broader company strategy such as employee benefits or sustainability goals, which helps to counteract any internal questions that are posed. ROC EV has found that once workplace charging is launched there is generally very little employee hesitation, but these questions tend to arise among an employee base before or in the early stages of offering workplace charging.

Another potential apprehension is cost. ROC EV determined that providing one day of EV charging for an employee costs about the same as providing an employee with one cup of coffee, based on calculations provided by the National Renewable Energy Laboratory and local energy pricing. ROC EV encourages companies to compare the benefits already being provided to employees with the cost for workplace charging. Because of the low cost of electricity, the ongoing costs of providing workplace charging tends to be very low. It is also important to stay abreast of any funding opportunities, and to bring that information to initial meetings.

3.3.4 Workplace Charging: Engaging Current Partners

An accelerator program should recruit stakeholders and employers on the advisory committee to become Workplace Charging Challenge partners early on. Future accelerator programs may want to require that any organization represented on the advisory committee be a Workplace Charging Challenge partner. Accelerators should prioritize hosting workplace ride and drives with current partners first, since they are likely more eager to participate and act. They might then encourage others to join once they experience the fun of a ride and drive and see the value in educating their employees about driving electric.

3.3.5 Ride and Drives: Optimize Host Locations

ROC EV's most successful events are in a location where attendees are either aware of the ride and drive before arriving at the event, have downtime during their time at the event (such as a day-long festival), or can test drive the EVs as part of a convenient shuttle system for an event. One of ROC EV's most successful events featured an EV test ride as the shuttle to a men's hockey game at Rochester Institute of Technology from the parking lot to the arena. The convenience of the EV test ride on a very cold night resulted in an extremely high level of participation. The arena staff advertised the opportunity at the game leading up to the one ROC EV would be attending, which prepared many season ticket holders. People are more likely to participate if they are expecting the ride and drive.

3.3.6 Ride and Drives: Be Cognizant Of Vehicle Marketing Districts

When coordinating with multiple dealerships, it is important to be aware of the marketing boundaries or primary marketing areas (PMAs) that are assigned to each dealership. PMAs are geographic boundaries where each OEM's dealerships can legally market their vehicles. They are designed to minimize conflict between dealerships regarding marketing territories. Early in the program, ROC EV determined each dealership's PMA to minimize potential conflict with other area dealerships. Once ROC EV understood

the specific PMA boundaries, the organization became very careful not to invite dealerships outside its PMA to attend events. It is not uncommon to have some dealerships more engaged with the program than others. Events held in PMAs with engaged dealerships make it easier to secure test drive vehicles and can have a large influence on the success of events.

3.3.7 Ride and Drives: Requesting Insurance Documents

Many event hosts, especially larger institutions like universities, required Certificates of Insurance from participating dealerships at ride and drive events. Because these documents can take up to a week to obtain, ROC EV found that an important step in the event planning process was to ask the dealerships for Certificates of Insurance well in advance, leaving time for legal departments to make additional requests if necessary, before the event. Accelerator communities should prioritize this as a first step, in case the insurance requirements are so extensive as to prevent dealership participation.

3.3.8 Dealership Engagement: Operating on Dealership Timelines

Dealerships operate according to monthly sales goals, which means that both the first and last weeks of the month are often busy. ROC EV found that ride and drive events scheduled for the middle of the month were the easiest for dealership staff to attend. Because salespeople work on commission, and Saturdays are a busy day for dealerships, it was often difficult to get dealership staff to attend events on weekends. To work around this, ROC EV made sure to schedule enough volunteer assistants on days when dealership staff would not be able to attend events.

On the flip side, dealerships were more willing to provide staff for events held during the week, in the middle of the workday. This worked in the program's favor for workplace ride and drive events, which were held during the lunch hour on weekdays.

3.3.9 Dealership Engagement: Leverage Dealership Marketing

Hoselton Auto Mall, a local dealership that sells GM, Toyota, and Nissan brands, invited ROC EV to partner on an Electric Vehicle Day featuring test drives and a panel of EV experts and dealership representatives to answer questions about everything from current lease incentives to charging options. To remain impartial and fair to all dealerships in the area, ROC EV gave other dealerships the opportunity to host similar educational events and ride and drives.

Leveraging dealerships' existing budget is a great way to reach new consumers. With their large audience, dealerships have access to many more customers, specifically potential buyers who are in the market for a new vehicle, than ROC EV would otherwise have on its own. To market the event, a sponsored content piece was placed in the local paper and Hoselton paid for digital and social ads. The event drew a small but attentive crowd and three EVs were sold that day.

3.3.10 Communications and Outreach: Utilize Marketing Professionals

ROC EV hired a local advertising agency, Dixon Schwabl, to work on two marketing campaigns dedicated to ride and drives and the group buy program. The campaigns used digital banner ads, key-word searches, radio buys, and social media ads. In the first month of the ride and drive campaign, the ROC EV website saw a 400 percent increase in visits. If budget allows, hiring a local agency who knows the market well and can further refine the campaign message is highly recommended.

3.3.11 Communications and Outreach: Initiate Paid Advertising Early

In the first year, ROC EV relied exclusively on grassroots marketing to establish the brand as a known entity. ROC EV suggests initiating paid advertising to establish brand awareness early in the project, which would have helped reach more consumers faster.

3.3.12 Communications and Outreach: Collateral and Educational Materials are Important

Relevant and consistent collateral was important to ROC EV's success. It is also critical to ensure that there are always enough available materials for events and outreach opportunities. Vehicles are by far ROC EV's most effective marketing elements because they provide an interactive way to educate potential consumers about EVs and showcase the viability of the technology.

3.3.13 Public Infrastructure: Changing Perception

It is common for people who do not own EVs to be unaware of the charging infrastructure in their community. This is an issue that can prevent people from becoming comfortable with the idea of purchasing EVs. An accelerator community should update their stakeholders on infrastructure advancements and inform them on how to monitor for themselves, using resources such as the Alternative Fuels Data Center Station Locator web site or PlugShare web site and application, among others.

In most cases, the majority of EV charging can take place at home using a Level 1 (120 volt) charger. Accelerator programs should stress the ease of home charging and its capability to serve the majority of an EV owner's charging needs.

3.3.14 Policy: Don't Reinvent the Wheel

Policy was a program area that proved challenging for ROC EV since New York State is one of several states pledging to meet a zero-emission vehicle goal with some existing EV-readiness initiatives already underway. Many steps that the Electrification Coalition took in Northern Colorado to advance EV adoption were unnecessary in Rochester because policies were already in place to support EV growth by the time ROC EV launched in 2017.

One example of this is encouraging the municipality and utilities to develop an over-the-counter permitting process or simplified codes that would enable businesses and homeowners to quickly and easily install charging stations. In the City of Rochester, a standard electrical permit is the only requirement to install home charging equipment. The process is straightforward and consistent with other electrical projects. Requiring a separate permit specifically for EV charging stations would create an unnecessary barrier.

3.3.15 Policy: Clearly Define the Scope

In Northern Colorado, the accelerator program began with an exhaustive evaluation of existing codes, policies, and regulations to determine what was already in place to support EV adoption in the target community, how those policies could be leveraged, and which new ones should be implemented. That strategy proved to be an ambitious undertaking for ROC EV due to the program's large geographic region, Monroe County, which includes more than 19 municipalities. Accelerator communities should limit their policy efforts to one or two municipalities, especially if staff and resources are limited.

If an accelerator community is partnered with one or two municipalities, a full review of existing policies would be a great starting point. For accelerators with a larger geographic footprint, that is an unrealistic undertaking without dedicated staff. Accelerator communities should take direction from the advisory committee and EV enthusiasts about which policies are important to advocate for, or which municipalities in a program territory need the most leadership.

3.3.16 Fleet: Prioritize Fleet Outreach First

Fleet replacement cycles vary from organization to organization but often last many years. With this knowledge, it is best to prioritize fleet outreach as one of the first actions for an accelerator community. If an accelerator community plans to employ telematics data analysis as a tactic to encourage fleets to electrify, 30–90 days will be required to collect data. If the analysis from telematics data recommends that fleet electrification would lead to energy and economic savings, the municipality or company may then wish to acquire or replace traditional vehicles with electric, which can take many months.

3.3.17 Fleet: Share Recent Information

ROC EV found that many fleet managers had done initial research about electrifying their fleets when the technology was still very new, and therefore out of reach for most municipal budgets. Because of that, it had been 3–5 years since options were explored. It is important that the most recent information about battery range, vehicle cost, charging infrastructure, and any grant funding is readily available to help fleets make educated decisions.

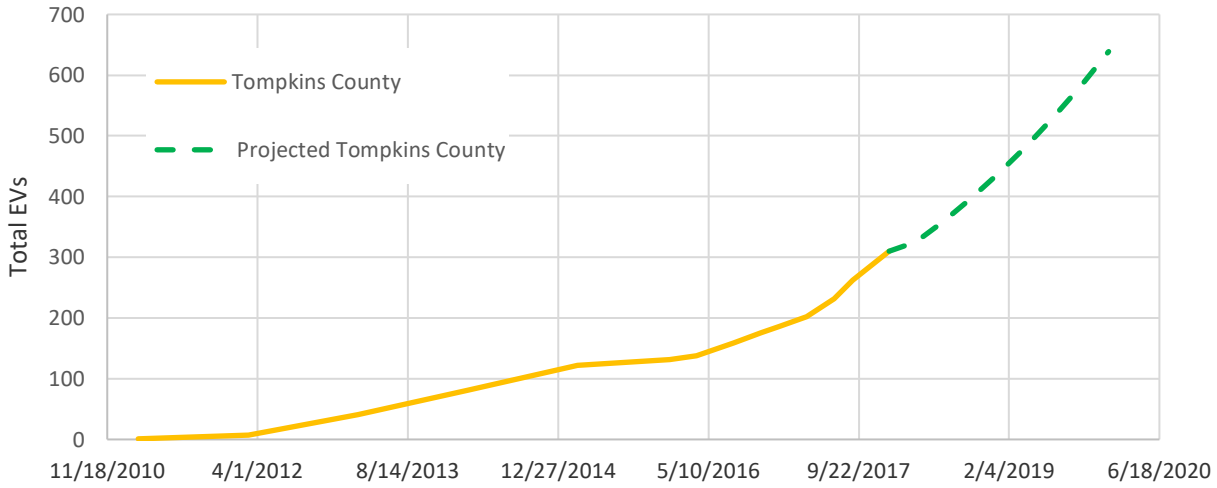
4 EV Model Community—Tompkins County

Drawing on lessons learned and leveraging the momentum of the EV Deployment Community in Rochester, Energetics outlined and performed similar activities in Tompkins County. The model community program named EVTompkins aimed to accelerate the adoption of EVs in Tompkins County. It brought together key stakeholders (government, businesses, nonprofits, educational institutes, EV drivers, and others) to collaborate and conjoin the necessary elements of an electrified transportation system. This created an EV-friendly environment in which EVs are be adopted at higher rates than baseline and national averages, providing a critical first step in moving electrification beyond a niche product into a dominant and ubiquitous concept.

Tompkins County was chosen for several reasons, including Energetics' prior EV planning work with the county and city government which demonstrated their interest and commitment to expanding the use of this technology. Prior to the EVTompkins program start, Energetics laid the groundwork for developing this ecosystem through a series of reports and tools.[23]

- Existing Conditions and Best Practices summarizes the status of EVs in Tompkins County at that time.
- An EV charging station Site Suitability Criteria Tool was developed to help compare the viability for installing AC Level 2 EV charging stations at various locations in Tompkins County.
- EV Charging Station Site Suitability identifies a set of optimal locations for EV charging stations in Tompkins County using the Site Suitability Criteria Tool.
- Preliminary Engineering and Cost Analysis for EV Charging Stations documents the recommended strategy for installing new EV charging stations at seven locations in Tompkins County that represent a range of site characteristics.
- Charging Station Implementation Strategies summarizes opportunities to expand the EV charging station network.

Figure 10. EV Market Projection in Tompkins County



The primary EVTompkins goal was to double the total number of EVs registered in Tompkins County from 310 (at the start of 2018) to 620, prior to November 2019, when that number of EV registrations was expected based on the adoption rate at that time. To meet this ambitious goal, the program identified targets to facilitate increased EV sales in the county.

- **Increase the number of EV charging stations to more than 40 locations.** The program aimed to help facilitate 13 or more EV charging station or outlet installations at new locations or as an expansion of charging options at existing infrastructure locations. These installations may be public or private at local workplaces, businesses, multi-dwelling units, and elsewhere.
- **Double EV inventory at dealerships and educate industry partners**. The program leadership worked with local dealerships with a target to have them offer at least 10 different EV models and increase their stock of new and used EVs to 100 or more. The program team also worked with local electricians to prepare for the increase in EV charging station installations.
- **Support and implement 10 new EV-ready measures in Tompkins County**. EV-ready measures could include better permitting processes, fines for conventional cars parking in EV charging spaces, including EVs in comprehensive plans and zoning, or EV purchasing requirements for their own fleet.
- **Increase public awareness and EV knowledge**. The program's target was to facilitate 500 EV ride and drives and share EV information (physically at any activity, printed in newsletters or local papers, or electronically through website visits and social media engagements) with 2,500 people.
- **Double the number of EVs in local fleets**. At the start of 2018, there were 10 fleet-operated EVs in the county. Increasing the number of fleet-operated EVs should also boost EV adoption through broader exposure of the technology.

4.1 EVTompkins Stakeholders

The involvement of numerous community stakeholders was one of EVTompkins' accomplishments. Each member offered invaluable support to the program and program activities. The stakeholders included members that represented local government, planning organizations, universities, utilities, and many others throughout the local public and private sectors. The diversity of organizations enhanced the program by offering unique perspectives on the EV ecosystem. The input from each member of the group produced a well-rounded approach to creating an EV accelerator program. The public and private sector leaders provided the necessary infrastructure, educational outreach, coordination, and commitment from local businesses to reach the EVTompkins program goals.

Table 2. EVTompkins Stakeholders and Supporters

Organization	Name(s)
Ithaca-Tompkins County Transportation Council	Fernando de Aragon
Tompkins County Planning Department	Katie Borgella, Scott Doyle
Town of Ithaca / City of Ithaca	Nick Goldsmith, Mike Thorne, Brian Carman
Cornell University	Gary Cremeens, Bartt Smith
Cornell Cooperative Extension Tompkins County / Way2Go	Megan Pulver, Sharron Anderson, Lee Yoke Lee, Guillermo Metz, Terry Carroll
Ithaca 2030 District	Peter Bardaglio
Ithaca College	Greg Lischke
Avangrid / New York State Electric & Gas	Scott Brochenek, Charleen Heidt, Keith Lorenzetti, Drury Mackenzie
Tompkins County Chamber of Commerce	Jennifer Tavares
Clean Communities of Central New York	Barry Carr
Get Your GreenBack Tompkins	Karim Beers
Ithaca Neighborhood Housing Services	Lynn Truame, Joseph Bowes
EcoVillage	Stuart Friedman
Three Hills Properties LLC	James Klafehn
Maguire Automotive	Lester Sowell, Ashley Greenlee, Adam Rogers, Marcus Crandall, Kyle Ferguson
Town of Caroline	Mark Witmer
Town of Ulysses	Elizabeth Thomas
NYS Office of Parks, Recreation and Historic Preservation	Jeff McDonald
Tompkins County Area Transit	Matt Yarrow
Taitem Engineering	Briana Amoroso, Michael Ludgate
TST BOCES	Alwyn John, Mauricio Medina
Downtown Ithaca Alliance	Gary Ferguson
Sustainable Tompkins	Gay Nicholson
Local First Ithaca	Jan Norman
Fossil Free Tompkins	Sara Hess
Park Foundation	Amy Panek, Jon Jensen
Weaver Wind Energy	Suzanne McMannis, Elliott Ryan

4.2 EVTompkins Charging Station Infrastructure Deployment

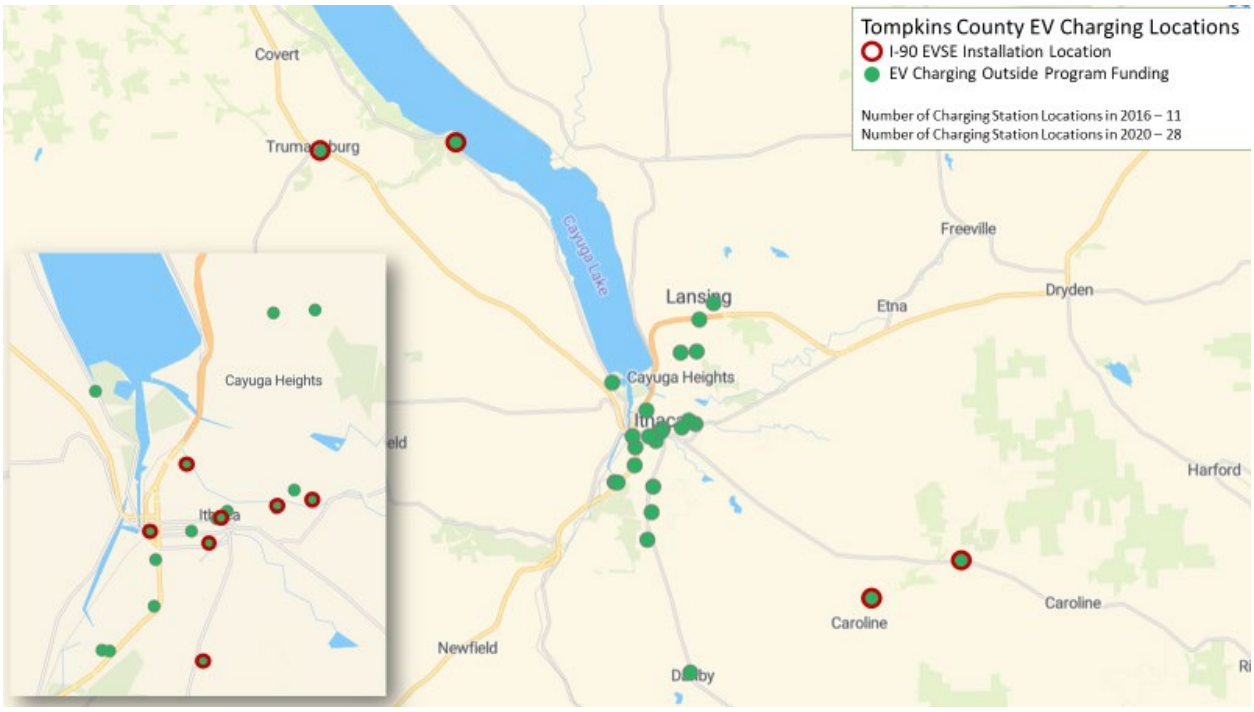
Energetics worked with stakeholders and project partners to identify and facilitate 11 dual port Level 2 charging stations across Tompkins County. Installations followed the same process as those under the I-90 region deployments. Following site identification, Energetics worked with PISO, the site host, and the local municipality to execute all paperwork required before and after installation.

- Before Installation
  - Notice of Interest
  - Site visit by PISO
  - Authority having jurisdiction (AHJ) approval of design plan
  - Host Site Agreement with site design and quote attached
- After Installation
  - Confirmation of training
  - Infrastructure data sheet
  - AHJ approval of installation

Several of these installations were centered in the downtown Ithaca area in multiuse parking garages. In addition, the project supported several charging station installations in the surrounding communities to raise awareness of EVs and serve EV drivers traveling in those areas.

- Caroline Town Court, 2670 Slaterville Rd, Slaterville Springs
- Ulysses Town Hall, 10 Elm Street, Trumansburg
- Ithaca College Visitors Lot, 953, Danby Road, Ithaca
- Cayuga Street Garage (Allpro Garage), 235 S Cayuga Street, Ithaca
- Cornell University—Forest Home Garage, 37 Forest Home Drive, Ithaca
- Seneca Street Garage, 202 E Seneca Street, Ithaca
- Dryden Road Garage, 114 Dryden Road, Ithaca
- Taughannock Falls State Park, 2221 Taughannock Park Road, Trumansburg
- Sciencenter, 601 First Street, Ithaca
- Brooktondale Community Center, 522-526 Valley Road, Brooktondale
- HOLT Architects, 619 W State Street, Ithaca

Figure 11. Map of Tompkins County Charging Station Installations



4.3 EVTompkins Marketing and Outreach Materials

To achieve the EVTompkins goals, the project team worked to develop several marketing and educational resources to compliment face-to-face interaction at outreach events. To effectively engage each of the target audiences, the type of material varied based on the needs of the that audience. The team leveraged existing promotional materials, including those from the Department of Energy Clean Cities Program and New York State's Charge NY initiative, along with successful outreach strategies to create targeted marketing campaigns for Tompkins County. These marketing efforts included a simple and effective message, informational flyers and brochures, and branded marketing supplies for mass distribution.

All marketing and outreach materials, where appropriate, were styled with look and feel consistent with NYSERDA-published materials. Marketing materials included brochures, websites, and other public-facing documents.

4.3.1 *Logo and Branding*

Consistent branding and use of the EVTompkins logo helped to increase awareness and recognition of the program. Wherever appropriate, the final logo and branding style was used on all new materials. The selected branding communicated graphically the goal of transportation electrification of Tompkins County.

Figure 12. EVTompkins Logo

4.3.2 Promotional Materials for Events

At each outreach event, it was important to have a display that included consistent branding and was effective in drawing attention to the EVTompkins program. To do so, the team developed and produced materials that were used to generate interest and excitement around the EVTompkins program. A large part of the outreach activity centered around the consumer audience, so materials were developed with this group in mind. EVTompkins stickers, pens, and t-shirts were used at all public events to entice attendees to engage with EVTompkins and have something to take from the display. Event displays also included EVTompkins rack cards, business cards, and a large branded banner. Displays leveraged already existing materials developed by NYSERDA Charge NY, the Department of Energy, and local Tompkins County project partners. To further draw attention to displays, EVTompkins worked with local dealerships to have EVs at as many events as possible.

Figure 13. EVTompkins Event Photos

4.3.3 Fleet and Municipality Specific Materials

To reach other audiences identified, the team was able to leverage existing materials previously developed by Energetics, NYSERDA, the Department of Energy, and others. These materials included white papers, reports, case studies, and other educational resources for fleet owners and municipalities. During outreach activities to these audiences, these materials were often packaged and presented. In addition to the previously developed materials, Energetics used PowerPoint presentations for municipalities and fleet owners to guide meetings and review pertinent information.

4.3.4 Media Articles

Energetics used digital and print media to promote program goals. Media articles were used to advertise events, highlight charging station installations, and as an opportunity to provide more information on EVs in Tompkins County. Energetics worked with several local organizations to write and publish the articles. Organizations included municipalities, community groups, and local newspapers.

4.3.5 EVTompkins Video Campaign

Energetics worked with partners to collect relevant video footage during select events that were used to promote EVs and EVTompkins on social media. The footage ranged from informational segments to interviews with EV owners. For individuals not able to attend one of the EVTompkins events, the videos were valuable in providing key information in a more engaging manner.

4.3.6 Social Media

Energetics used social media platforms to foster the EVTompkins community. These platforms helped increase public awareness on EV and EV charging technology, as well as develop a network of local EV enthusiasts. Social media platforms included Facebook and Instagram. Facebook proved to be most successful in engaging a large audience. In addition to the EVTompkins-specific social media accounts, Energetics and partners posted information on other existing social media networks to increase online exposure.

4.3.7 EVTompkins Listserv eNewsletter

Throughout program events staff collected contact information from Tompkins County community members interested in EVs to add to the EVTompkins eNewsletter listserv. This list continued to grow throughout the program, reaching almost 25,000 individuals by the conclusion. A monthly eNewsletter was developed and published through the listserv to update readers on the EVTompkins program and provide information and news on the local, regional, and national EV market. The listserv was also used to publicize major EVTompkins events.

4.4 EVTompkins Outreach

Energetics worked with local stakeholders to develop and execute an outreach plan that identified target audiences and established strategies to engage them. Along with the group of stakeholders, Energetics assembled a team of volunteers to help with local outreach efforts. The outreach plan outlined a broad-based consumer education program using existing networks to create significant EV recognition, interest, and demand. This included leveraging the participation of the volunteers and EV enthusiasts in a coordinated event programming and developing an outreach strategy with supporting organizations that have significant reach in the community as well as a comprehensive social media strategy. In addition, Energetics developed materials and an outreach strategy for municipalities, fleets, and workplaces to further engage these members of the EV ecosystem. The outreach plan detailed the following:

- Community outreach goals and strategies to expand municipal, State, and private industry participation in the EVTompkins program.
- Technical assistance strategies and tactics to help inform and educate prospective charging station site owners and EV owners.
- Potential community outreach activities.
- Public events related to the expanded use of EVs.
- Private meetings with key stakeholders to enlist their support in marketing the program.
- Strategies to communicate the program impacts to local community members.

4.4.1 Consumers

EVTompkins prioritized reaching consumers in meaningful and effective ways to overcome awareness and education barriers. The EVTompkins team was able to leverage an already established robust public event schedule in Tompkins County to reach a broad base of consumers, even those that might not be considering an EV.

Each EVTompkins exhibit contributed to the overall goal of the program to increase public awareness around EVs. Engagements at these events were valuable opportunities to promote the program and establish EVTompkins as an ongoing initiative for the Tompkins County community. Leveraging the already extensive list of well-attended events and festivals through the year reached a broad audience and exposed many people to EVs. Participation in parades provided high exposure and excitement for EVs. With the help of local dealerships and local EV enthusiasts, EVTompkins showed off a variety of EV options to hundreds of parade attendees.

EVTompkins team and project partners helped plan and coordinate several ride and drive events that leveraged local partners to increase outreach. These events were useful for interested community members to view and test the various EV options while engaging with local experts on the technology. Ride and drive attendees tended to attract members of the community already interested in EVs as an option for their next vehicle, so these events were particularly valuable in assisting with attendees' final decision and often resulted in an EV purchase.

4.4.2 Fleets

Team members facilitated meetings with local businesses, schools, and other organizations that operate a fleet of vehicles and may benefit from using EVs. EVTompkins developed educational materials relevant to fleet managers and owners including information on the various models available, EV charging options, and the available discounts and incentives for the technology. Materials were presented at a facilitated fleet workshop in June 2018 and then shared with other interested stakeholders at any follow-up meetings. Presentation topics included an introduction to EV technology, applications best suited for EVs, technical considerations for vehicles and charging infrastructure, driver education and outreach, and procurement/financing of EVs and infrastructure. Industry experts presented case studies and provided insight on local and national trends. Attendees were provided information on the application of analytics to accelerate the adoption of EVs and change driver behavior as well as on how to comply with regulations and policies.

The EVTompkins program team worked with each organization on identifying opportunities to incorporate EVs. Tompkins County had already purchased 10 Chevrolet Volts for its fleet, so EVTompkins staff met with Tompkins County staff to gather lessons learned and leveraged this local fleet experience to help encourage others. In reviewing how Tompkins County was using its EVs, several recommendations were made to better optimize electric use to accommodate their job functions. EVTompkins had discussions about EV adoption with several municipal and university fleets, but with long budgeting and procurement cycles, no immediate purchases were made. However, the Town of Ithaca and City of Ithaca have started the process to procure their first EVs. Fleet engagements included:

- Tompkins County
- Town of Ithaca
- City of Ithaca
- Cornell
- Ithaca College
- Cornell Cooperative Extension of Tompkins County
- Tompkins County Community College

4.4.3 Workplace and Other Potential Charging Station Locations

The EVTompkins team facilitated targeted outreach to major employers in the county to promote workplace charging. Staff identified businesses, workplaces, municipalities, and other potential EV charging site hosts. Outreach included presentations and sharing of information, consultations on charging options, and employee events. Site assessments for new EV charging stations were conducted for five interested parties. The provided reports had background information on the charging options and installation best practices. In addition, schematics of the proposed placement for a charging station at these sites were included, along with estimated installation costs based on the site characteristics and available electrical capacity.

- The Park Foundation is a tenant at a recently renovated facility and wanted information on EV charging infrastructure to present to its landlord. Staff felt the stations could serve employees and visitors, while bolstering its green image.
- The Town of Ithaca has plans to procure an EV (most likely a plug-in hybrid) for their codes department, which would need EV charging infrastructure. The Town was also looking into whether the stations could be used by employees during work hours, or potentially even the public.
- TST BOCES is interested in adding EV charging infrastructure for students and staff to use at its facility. More importantly, the school's leadership supports energy initiatives for many of the schools throughout the county and want to establish a precedent for others to follow once they can demonstrate the feasibility and reasonable expense for such an installation.

- An EV charging site plan was completed for Commonland after a resident there raised charging questions pertaining to an EV that was recently purchased. Members of this development are interested in adding the public charging capabilities to enable residents without parking garages and community guests to charge their EVs.
- EcoVillage is interested in adding publicly accessible EV charging infrastructure for community visitors (there are several bed and breakfast establishments in the community) or residents without access to parking structures. Some charging stations have already been installed, and additional electrical infrastructure is being installed to accommodate future charging stations in the resident parking facility.
- A workplace charging expo event, co-hosted by Weaver Wind Energy, showcased a workplace that provides free EV charging for employees who drive EVs. This event brought together employers and employees from Tompkins County organizations to discuss the potential for workplace charging installations and the factors to be considered for installation. Several EV drivers also attended, which gave participants the opportunity to check out current EV models and ask the owners about the real-world performance and experiences.

4.4.4 Municipalities

The EVTompkins program team provided example policy and planning practices that municipalities can undertake to encourage EV adoption and EV charging deployment. Staff facilitated meetings with area Tompkins County municipalities to increase their understanding of EVs and then help them implement action items to create EV-ready communities. Meetings with each municipality included sharing of information on resources available to them and consultation on their next steps. Many were very interested in providing EV charging for their visitors. The following municipal groups scheduled meetings with EVTompkins to discuss the role municipalities have in expanding EV adoption:

- Tompkins County Council of Government (TCCOG)
- City of Ithaca
- Tompkins County
- Danby Town Board
- Enfield
- Town of Dryden
- Village of Dryden

4.5 EVTompkins Event Summaries

Through public engagement—one of EVTompkins' key elements—the team facilitated and participated in several events in Tompkins County during 2018.

In March 2018, Tompkins County Council of Government gathered at the Tompkins County Library to receive an introduction to the EVTompkins project and municipality EV-readiness actions which spurred interest in engaging with municipal leaders.

Energetics held the first EVTompkins Stakeholder Meeting on March 28 at the Tompkins County Library to provide feedback and guidance on the outreach plan for the proposed EV Accelerator program.

Ithaca College hosted an EV Car Show with a handful of models from local EV drivers and Maguire Cadillac Chevrolet on Earth Day Weekend. The EV Car Show engaged the public before or after they attended the Sugar Bush Open House event.

The 2018 Earth Day Sustainability Fair at GreenStar provided an opportunity to host an informational display at the front entrance to the event. The fair was well attended, but the outdoor placement of the table did not get much attention as people hurried to get to the indoor displays. However, the people that did engage with the booth were extremely interested and signed up for the newsletter.

In late April, the Ithaca Streets Alive! Festival provided another opportunity to present information for EVTompkins. Poor weather conditions resulted in fewer participants and many exhibits did not show or left early. However, some people did stop to discuss EV technology and were very interested in obtaining an EV as their next vehicle.

On June 1, EVTompkins participated in the Ithaca Festival and Parade. This two-day event included hosting an informational display at the popular and busy Ithaca Festival. Many attendees stopped by to ask questions and take materials home. Friday saw less attendance and engagement which could be due to the day/time and that there was not a vehicle on site during the Friday hours. The parade that evening had the support of several local EV drivers and the Maguire dealership(s). The parade was very well attended and seemed to have gotten many attendees excited about EVs. Saturday was successful in engaging people that were walking by and having an EV on site helped to engage attendees.

Also, in early June, EVTompkins participated in Dryden Dairy Day, a day-long family friendly event focused on fun, educational, and affordable dairy-themed activities. This event brings together local organizations and farmers to engage the community and increase local involvement. The day starts with a parade through town and ends in the Town Park were vendors are set up.

In early July, EVTompkins hosted an informational display at the Brooktondale Community Center Farmers Market in Slaterville Springs. The table display was next to the EV charging station installed under this program and provided a way to educate regular market attendees on the new technology.

On July 15, EVTompkins set up a table at the popular Ithaca Farmers Market. The display was positioned at the primary entrance to the market, which gave it good exposure. However, only approximately 20 attendees engaged in discussions on the EV information provided and took materials.

In late July, EVTompkins tabled two days at the Grassroots Music Festival in Trumansburg. EVTompkins was setup in the Grassroots Sustainability Fair, which was a nice spot as it was grouped with other vendors of similar fields/interests. The festival was well attended, but traffic through the fair tent was less than expected.

On July 28, EVTompkins tabled at the Newfield Old Home Days. The booth display was positioned in front of the event and directly facing the parade. Over 100 people attended the parade, and many were interested in the vehicle on display and asked questions about the technology.

In early August, EVTompkins and Maguire Auto Group hosted an EV Ride and Drive at the Shops at Ithaca Mall on a Thursday afternoon since weekdays are better for the dealerships. More than a dozen EVs were on display and several participants took test drives. The event gave them a chance to compare several models and ask dealership and EVTompkins staff questions on each model. It was helpful to have EV owners on site to display their vehicles (many were not available from the dealerships), and to have additional insight on owning an EV locally.

EVTompkins hosted an informational display at the Cayuga Lake Triathlon on August 5. The Triathlon was one of the most successful events of the program. Many people stopped by to ask questions and were genuinely interested in their options. The weather was great and the location of EVTompkins booth was along the main street following the finish line of the race, so there were people stopping by throughout the day. The event success is an example of several influences coming together: good weather, interested demographic, and high-traffic location for the display.

Groton Olde Home Days on August 24 provided an opportunity to host an informational display for EVTompkins. The event was effective in reaching new members of the Tompkins County community not normally found at previous events. Many attendees were excited to hear about the EV options and incentives available, but most expressed that they were not yet comfortable with the new technology.

EVTompkins set up a table display at the Trumansburg Fair and worked with a new Chevy Dealership in Tompkins County to display a Volt at the fair. When EVTompkins did not staff the exhibit, the vehicle was on site with informational materials available.

In collaboration with local EV drivers, the Ithaca EV Car Show during National Drive Electric Week drew a good crowd on a Saturday in early September where more than a dozen EV owners brought their cars and shared insight with the attendees. Several rides were also offered to those interested.

On September 16, EVTompkins hosted an informational display at the second Streets Alive! which had low engagement. The event included many vendors, but most were spread out, some more than half a block away from each other which seemed to discourage event attendees from stopping at each booth. When there was a vehicle on site, attendees to stop more frequently than when there was no vehicle available.

An EV Ride and Drive was coordinated with Cornell Cooperative Extension's Energy Extravaganza, which was put on for employees to learn about various energy programs they support. Maguire Auto Group brought four different EV models with dealerships staff and provided many test drives to the interested participants.

In late September, EVTompkins participated at Porch Fest. The informational display was placed in a prime location near a main performance stage and food trucks which helped to attract people near the EVTompkins table. Additionally, Taitem Engineering, a local solar contractor was placed next to the table which also helped to attract interested people to the EVTompkins exhibit.

The Ithaca Apple Harvest Festival was very busy, but the assigned location for EVTompkins was not ideal. There were no other booths near EVTompkins which caused most people to walk by without stopping by. However, due to the amount of people at this event, there was still a high level of exposure.

Cornell's annual Fall Employee Celebration had over 1,000 Cornell employees attend the dinner, but the Tompkins' table was off to the side where only about 50 people stopped by. Most were attracted by the free t-shirts when signing up for our newsletter. Staff tried an online survey that gave prizes for participants, but that did not generate much interest.

EVTompkins attended the Cornell University Transportation EV meetings and gave a presentation on EVs. Presenters discussed the demand for charging spaces on campus. Attendees had different ranges of knowledge regarding charging and the EV market and future.

In late October, the Apple Harvest Festival at the Brooktondale Community Center, was a great way to engage with people in the Slaterville Springs community, a community that had not regularly attend events in Ithaca. The event also provided a good opportunity to answer local resident questions on the charging station at the community center and at the Caroline Town Hall.

A ride and drive event was organized for City of Ithaca, Town of Ithaca, and Tompkins County employees to see current EV options and discuss factors for future ownership. Five EVs were on display from Maguire Auto Group and personal owners, with several test drives taken by many that had not driven an EV previously.

4.6 Achievements and Lessons Learned

4.6.1 Achievements

The EVTompkins team and project partners facilitated the installation of 22 new AC Level 2 J1772 charging ports at 11 locations by leveraging through project funding specifically allocated for infrastructure expansion in Tompkins County. These installations significantly increased the availability of charging for EV drivers. In December 2018, there were seven different EV models available (two more than January 2018) with a stock of 78 new (31 more than January 2018) and five used (one less than January 2018) EVs in Tompkins County. While customers can go outside of Tompkins County to buy an EV, maintaining a local inventory is key to exposing all vehicle buyers to this option. While not all municipalities were able to meet with EVTompkins, several learned a lot during meaningful engagements and were considering action to better support EVs. The EVTompkins program team facilitated a large effort to reach Tompkins County community members through many opportunities. The program made use of events, social media marketing, online and print media, and advertisements. Through these efforts, the team facilitated 25 events, EVTompkins engaged an estimated ~2,000 people

(500 less than program goal) and encouraged ~100 EV ride or drives (150 less than program goal). Although the participation at these events was lower than the goals set, EVTompkins was able to reach ~50,000 people through Facebook, parades, advertisements, and newsletters, which started to introduce them to the option of driving electric. Outreach to Tompkins County Fleet managers and owners was more challenging due to purchase cycles and a limited number of fleets, but there were six new EV purchases by fleets at the end of 2018 with more planned in 2019 by Tompkins County, Town of Ithaca, and City of Ithaca.

4.6.2 Lessons Learned

In establishing Tompkins County as a model EV community through this project, EVTompkins collected several insights and lessons learned. While the EVTompkins outreach campaigns started in 2018, the project established the groundwork for this EV model community before that with the EV Infrastructure Study. In addition, the EV charging installations were a helpful way to jumpstart this initiative, which generated excitement and interest for EVs in several communities. Charging station deployments play a key role in encouraging local community members to adopt EVs because they see places where they can charge and have a visual reminder that electric technology is emerging in the transportation sector. This alleviates range anxiety even if most charging will occur at home or work. Starting with expanding infrastructure is helpful to launch an EV model community where public charging is limited, but it may not be necessary for future programs as charging infrastructure continues to expand.

A key element of the initiative that contributed to the success was having a large, engaged stakeholder group. The group represented a broad spectrum of organizations that are part of the EV ecosystem, which provided valuable insights. The stakeholders also provided valuable information, contacts, and access to established networks and distribution lists needed to effectively establish the program based on their community's needs in a short period of time. Supportive local dealerships were incredibly helpful to the success of the project as they supplied the EVs used to market the technology and are ultimately the source for most new EV sales in the county. Dealership support is essential to a successful EV model community and must be established early on, which may require a coordinated effort to educate dealerships on the technology and possibly providing resources or funding to help them market EVs.

Exhibiting in well-established events and festivals leveraged existing marketing efforts by event organizers and helped boost outreach to large crowds in attendance. The events often provided high levels of exposure (with many people passing by the exhibit), but lower than expected engagement, with only a limited number of people that came up to the booth to collect information or discuss EVs.

The most successful events were parades, which drew large crowds that focused on the cars as they passed by and generated comments by the viewers about how quiet they were or surprise about the various models being shown. At exhibits, having an EV on display boosted engagement significantly by making the EVTompkins booth standout. Other useful features were (1) an EVTompkins corn hole game that helped attract families with kids, (2) a map of the charging stations, which helped attendees to realize how prevalent the infrastructure is in the area, and (3) giveaways like the t-shirts, (with a sign to advertising "Free T-Shirt" that helped attract more to the exhibit). The placement of the exhibit and weather were large factors in attendance and engagement, though these factors are more difficult to control. The exhibit tent helped deal with less than favorable conditions.

EVTompkins facilitated or supported a few stand-a-lone events to specifically promote EVs, while offering test drives. These took more effort to coordinate and advertise but were the only opportunities to offer ride and drives outside of a dealership. Attendance from non-EV drivers was lower than expected for the three events at neutral locations (EV Car Show at Ithaca College, EV ride and drive at the mall, and the National Drive Electric Week Event downtown), but the engagement from those that did attend was fantastic and resulted in several new EV purchases or leases. Having prospective EV owners talk with current owners made a strong impression and helped convince them that driving electric is advantageous.

Outreach to municipalities, prospective charging station hosts, and fleets provided high-value information to these organizations that helped them on the path to electrification. By gathering a little insight prior to a meeting about the organization's intentions and questions, the presented information could be tailored to their needs. These discussions often resulted in follow-on actions by the organizations to get a quote for a charging station installation or further investigate EV options with the local dealership.

Social media marketing can be a great tool for increasing EV awareness in local community members and EVTompkins was able to cultivate a large Facebook following. Using Facebook's "boosted posts" function allowed the team to increase followers throughout the project. Local stories and short videos received the most views and comments. EVTompkins' Facebook page certainly helped increase public awareness for EVs, but it is unclear if it resulted in any local EV purchases during 2018.

The EVTompkins eNewsletter had good engagement with people on its distribution list and was a great way to keep stakeholders updated on project process (as many subscribers were the project stakeholders). It takes several years to build up newsletter subscribers, so projects with a shorter timeframe might have more success adding an EV section to an existing newsletter on related environmental topics to be more effective. A few times during the year, EVTompkins wrote an article or op-ed piece that was shared with the print media. These were occasionally picked up by a local paper or even a few municipality-printed newsletters which helped create more EV awareness for those not as active online.

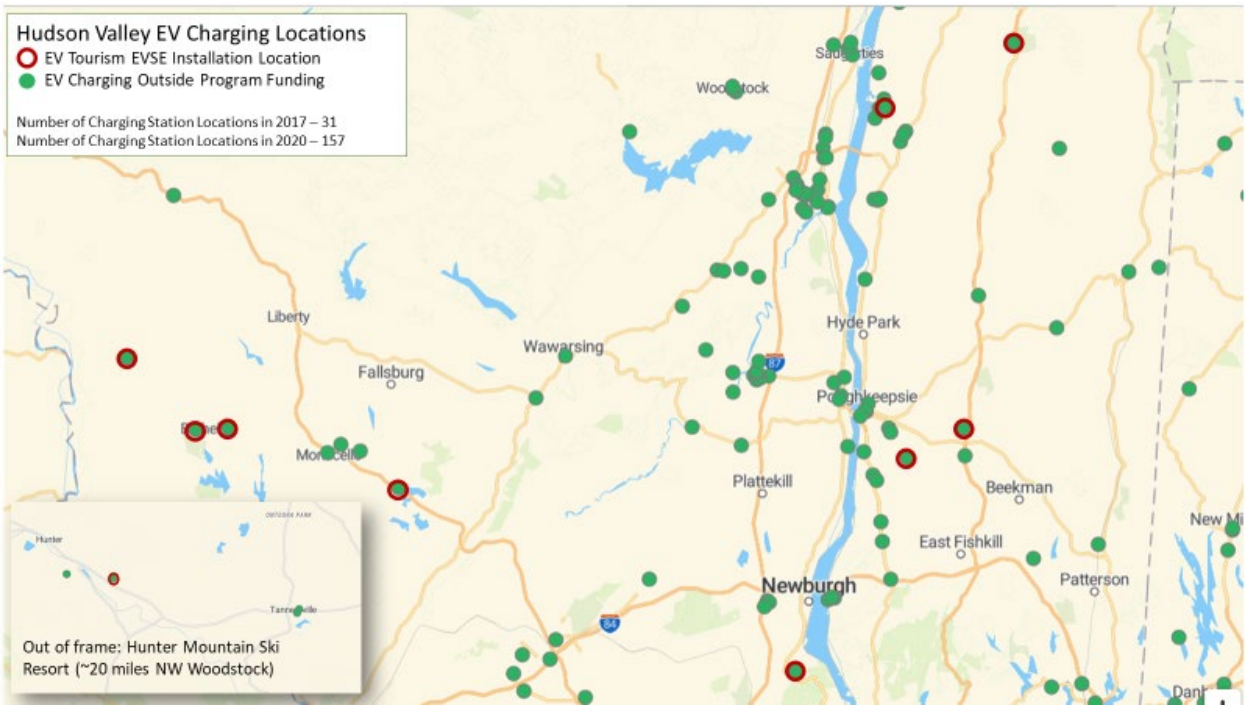
5 EV Tourism Promotion

5.1 EV Charging Station Installations

New EV charging installation efforts in the Hudson Valley centered around popular tourism destinations in support of promoting EV tourism. Locations in this region needed to be available to the public and at sites that would attract weekend EV drivers from the New York City Metro and Westchester areas where EV ownership is higher.

The program identified approximately twenty locations in the greater Hudson Valley Region of the station that would serve as stops on possible tourism travel routes. They were grouped in Sullivan County and the Hudson River around Ulster and Dutchess counties. Below is a list of the ten sites that installed a public EV charging station using the same process outlined previously for the I-90 region and Tompkins County deployments.

Figure 14. Map of Hudson Valley Charging Station Installations



Installation sites were selected based on the availability of charging nearby and if it could serve as an attraction for those traveling to the Mid-Hudson Region. Below is the list of installation locations, and a draft description to be included in the EV Tourism mobile application.

Town of Bethel Municipal Parking, Kauneonga Lake, NY 12749: The town of Bethel is located near the Kauneonga and White Lakes and is well known for its fishing and boating activities. Enjoy the many downtown restaurants or take a short drive to the seasonal flea market. The Fat Lady Café, Local Table & Tap, Sorella, Barrio Kitchen and are all in walking distance of the charger.

Ramada at the Sullivan Event Center, Rockhill, NY 12775: Set in 55 acres of woods, this elegant and peaceful event center hosts a contemporary hotel, two event venues, and three restaurants. The family and pet-friendly facilities feature a gym, indoor pool, and free parking.

NYS Parks: Lake Taghkanic State Park, Ancram, NY 12505: Plan a lakeside getaway nestled amidst lush, rolling hills at the park's campsites, cottages, or cabins. Spend the day relaxing on one of the park's two beaches, kayaking, or hiking along eight miles of trails. Seasonal activities include deer and turkey hunting, ice fishing, and cross-country skiing.

NYS Parks: James Baird State Park, Pleasant Valley, NY 12569: A prime stop for active visitors: the 590-acre park has a golf course, driving range, clubhouse, and a restaurant. Kid friendly activities are available at the sports complex, playground, and nature center. There are also picnic areas and reservable picnic pavilions.

Catskill Distilling Company, Bethel, NY 12720: Located in a state-of-the-art brewing barn, this brewery uses local ingredients and strives to maintain sustainable practices. Stop by to learn about award-winning craft while enjoying tasty snacks and live music. Don't forget to check out the summer event schedule.

Best Western Plus: The Inn at the Falls, Poughkeepsie, NY 12603: This modern hotel sits along the beautiful Wappingers Creek. The facilities are pet friendly, include spacious rooms, free parking, a gym, business center, bar, garden terrace overlooking the creek, and a fireplace where guests can enjoy cocktails during the evening reception.

Montgomery Place Historic Site, Red hook, NY 12571: Set amid rolling lawns, woodlands, and against the backdrop of the Catskill Mountains is a 380-acre estate with prime examples of federal-style architecture. Explore the grounds through trails, free and open daily. Architecture buffs can tour the mansion Saturdays, June through October.

Hunter Mountain Ski Resort, Hunter, NY 12442: Located in the heart of the Catskills, Hunter Mountain offers year-round activities for all. Enjoy breathtaking views on the Scenic Skyride to the summit or take an off-road excursion for a rugged adventure. The month-long Oktoberfest held amidst lush fall foliage is not to be missed.

Villa Roma Resort, Callicoon, NY 12723: This Roman-themed, all-inclusive resort in the Catskill mountains is a popular destination for both business and leisure travelers. Guests can enjoy the resort's many recreational activities, dining options, and seasonal events.

Village of Highland Falls Municipal Parking, Highland Falls, NY 10928: This historic village is surrounded by the Storm King Mountains with views of the Hudson River and rich with United States Revolutionary history. While charging, take a guided tour of West Point Military Academy, visit the West Point History Museum, or grab a bite at the eateries on Main Street.

5.2 Mobile Application

The EV Tourism mobile application was designed to fuel sustainable economic development in Upstate New York by connecting passionate EV owners with curated tours of local tourism destinations and highlighting available EV charging infrastructure and optimal travel routes to create a simple and streamlined travel and tourism experience.

A mobile application, with the capability of managing a multistep process that allows users to select destinations, plan itineraries, and map out EV friendly routes, is better suited for the goal of promoting an integrated travel program for EV tourists. Having a mobile application, rather than a website, offers the benefit of plotting EV routes and using global positioning system (GPS) to safely direct users to their chosen destinations. It also allows for streamlined incorporation of discounts and special offers in the destination clusters. Laying the framework for the EV Tourism program through a mobile application will set the groundwork for potential program expansions that may include the capability to book rail and EV car rentals.

WXY developed a mobile application that fuels sustainable economic development in Upstate New York by connecting passionate EV owners with curated tours of local attractions where public charging infrastructure is available, creating a delightful and streamlined EV travel experience. Through the mobile application, travelers can discover new tourism destinations, plan destination-based charging routes, track their vehicle charge, and enjoy discounts at EV-friendly locations.

The process for developing the mobile application included:

- Conducted user research and end user interviews to refine the mobile application capabilities
- Researched additional destinations and refined routes with key destinations
- Completed three rounds of draft mobile application content reviews
- Complete visual wireframe and visual mockup
- Developed a "Featured Destination" element to the mobile application
- Completed mobile application beta development, testing, and two rounds of review
- Submitted the final mobile application for public use at the primary sites (Apple Store and Google Play)

5.3 Lessons Learned

EV drivers will change their driving behaviors and patterns to seek out destinations with a charger. This is a great way to spur more travel and tourism statewide.

Developing an effective routing feature that also integrates vehicle charge was an ambitious and complex undertaking. There are many variables to user behavior influencing battery usage, making designing a mobile application that allows a choice in destinations (specifying a length of charge and that destination), and estimates the remaining battery state of charge was difficult to design without robust user testing. In the future, the process should be created in smaller components that build up to the more complicated features such as navigation. For example, a first component could have been simple A to B destination navigation to key destinations with a charger. That could be followed up with user testing to ensure that the feature worked correctly and was valuable. More complicated features could be added as the mobile application updates through a similar process of design-publish-test-refine. Mobile application development is a user centered experience and therefore would be valuable to incorporate in the future.

Mobile application development is best completed in design stages, however approvals to proceed at every stage slows the design process. Since there is high-developer turnover, it is best to condense development time in as short a time as possible to ensure consistency. In retrospect, it was also necessary to set clear parameters during the contracting process regarding the platform for the mobile application development, beta testing, and expectations for submitting and incorporating feedback. There was a lot of confusion and delays in the different stages of the mobile application reviews due to access restrictions to prototype platforms (adobe UX) and the beta mobile application platform (TestFlight), along with delays in getting feedback incorporated into the mobile application development. With every delay, there was also developer turnover resulting in historical development knowledge being lost.

6 Charge NY Outreach

The Energetics team supported the NYSERDA Charge NY program with outreach activities throughout New York State, specifically in aspects of the EV market addressed by this project—charging infrastructure and EV education. The additional outreach activity under this task went beyond the scope of individual initiatives in the prior tasks and targeted stakeholders from other market sectors that included consumers, workplaces, multi-dwelling units, and others. Outreach activity included tabling events, EV car shows, meetings and workshops, and other activities. Many of these efforts were scheduled with stakeholders to encourage the adoption of EVs or to install charging stations, often sharing information on Charge NY rebate and incentive programs.

In addition to attending and participating in outreach activities, educational and marketing materials were used to supplement efforts. The type of materials varied based on the needs of each event and included brochures, presentations, flyers, and other public facing documents for the web and print.

6.1 Event Summaries

In March 2017, Energetics participated in Genesee Finger Lakes Regional Planning Commission Clean Fleets Webinar. Energetics presented on Clean Fleets and included information on fleet electrification.

On June 9, 2017 Energetics attended the Clean Energy Community Announcement in Rochester, NY. Energetics supported the press event by attending and sharing information on the benefits of EVs.

Energetics supported the New York State Parks' Alternative Fuel Ride and Drive Event in Bear Mountain, NY with an exhibit on EVs and provided educational materials to attendees.

On October 26, 2017 Energetics presented on Establishing an EV Ecosystem at the Adirondack North Country Association Clean Energy Conference. The presentation shared information on how the varying sectors of a community can support electrification.

In January 2018, Energetics presented at the Southern Tier Energy Networking Meeting in Endicott, NY. The presentation focused on EVs, EV ecosystem elements, incentives, NYSERDA EV programs.

On August 16, 2018 Energetics exhibited with information on EVs and EV charging with a vehicle on display at the Western NY Alternative Fuel Expo.

On August 17, 2018 Energetics and Genesee Region Clean Communities held a demonstration and exhibit on charging station installations at the Rochester Homearama in Penfield, NY. Staff worked with a local Chevy Dealership to secure their participation in the event.

The Chemung County Environmental Management Council invited Energetics to present information on EVs, charging stations, and the available incentives. The meeting held on January 16, 2019 in Elmira, NY was attended by members of the Environmental Council.

Genesee Region Clean Communities exhibited at the Rochester Auto Show held in early March of 2019. The exhibit provided information about EV vehicles and EV charging while answering attendee questions.

Energetics exhibited at the CNY Home and Garden Show, a busy home show that allowed for high engagement. There were numerous question and answer opportunities at this extremely busy show, and the vehicle and charging station drew people.

The Rochester Home and Garden Show on March 24, 2019 was another busy home show that drew in many people. The visitors were very interested in the EV programs, asked questions, and were attracted to the Chevy Bolt on display. Attendees were provided handouts and staff answered numerous questions about EVs.

Clean Communities of Western NY attended an EV Outreach Event in Cheektowaga on March 24, 2019. The exhibit was located at an ice rink near a new charging station, which provided good exposure and interest.

In late March, Central New York Regional Planning and Development Board (CNYRPDB) participated in EV Outreach at the Go Net Zero event with HeatSmart CNY. Staff gave a presentation, shared information on EVs, and invited two Chevy Bolt drivers to engage with attendees and answer questions.

In early April, CNYRPDB joined HeatSmart CNY for another Go Net Zero event in Lafayette. Staff gave a presentation and had an EV exhibit. Local EV owners helped answer questions and two different town officials have interest in installing charging stations.

On April 21, 2019, Energetics and Clean Communities of Central NY held a ride and drive event at the Energy 21 Symposium in Syracuse, NY. All 400 participants walked through the EV display, but only about 50 stopped and no one took a test drive.

On April 17, 2019, CNYRPDB attended another Go Net Zero with HeatSmart CNY event in Cicero, NY. Staff held a presentation at Northern Onondaga Public Library and had three attendees participate in the ride and drive.

Clean Communities of Central NY attended the 2019 Drive Electric Earth Week in Skaneateles, NY. The event included an exhibit and EV ride and drive. At the village hall there was a question and answer session with EV drivers and seven vehicles available for the ride and drive. A total of 15 rides were given.

The Go Net Zero with HeatSmart CNY held on April 24 in Pompey included a presentation and EV exhibit. The presentation discussed electric vehicles as a strategy to achieve net zero status at home or work. The Pompey Supervisor was interest in installing charging stations at the town office/highway garage.

Energetics supported a ride and drive at the 2019 Drive Electric Earth Day in Ithaca. The event was hosted by dealership and had kid-friendly activities, which resulted in 12 test drives and three EV sales.

The 2019 Drive Electric Earth Day in Penfield included an EV exhibit and Car Show. There were 25 EVs on display with an exhibit, but attendance was limited because of the cold weather.

The 2019 SUNY Broome Earth Fest in Binghamton included an exhibit with an EV by the entrance which ensured participants saw it, but few stopped to get information.

In May 2019, Energetics attended the Party for the Planet at the Utica Zoo. The exhibit had EVs on display and provided good exposure to a crowd that was not familiar with EVs. Many passed by the display and several asked questions.

On May 19, 2019 Genesee Region Clean Communities held a presentation and EV display at the India Community Center Sustainability Forum in Penfield. The presentation allowed for good discussion about EVs and handed out a substantial amount of literature.

The Finger Lakes Spring 2019 Regional Local Government Workshop included a presentation from Energetics. The event allowed for almost three hours of presentation and discussion on EVs with good engagement from the attendees.

On June 5, 2019, CNYRPDB continued to support the Go Net Zero with HeatSmart CNY events in Homer, NY. The village has a Level 2 charging station across the street which helped build a connection with the EVs used for the ride and drive.

On June 6, 2019 Energetics coordinated with local dealerships to exhibit an EV at the Green Tech Conference in Newburgh, NY. The dealership displayed an EV at the entrance to the conference, which provided good exposure, but attendance was limited.

On June 23, 2019, the Clean Power Expo Stone Ridge included a ride and drive event and an EV informational session was given to attendees during the half-day exposition.

In June 2019, Energetics held a ride and drive, press event, and exhibit at the Music in the Park in Utica. In conjunction with the Office of General Services and NYSERDA, the event publicized EVs during a 10:00 a.m. to 2:00 p.m. market. Only a few ride and drives were taken, but several people passed through.

On July 26, Energetics participated again at the Music in the Park with EVs. There was a similar turnout and engagement as the previous month, with a few more EV rides.

CanalFest in Rome included an exhibit from Energetics to engage attendees on EVs and related rebates. There was good exposure to the large crowd that attended, but limited engagements.

Energetics participated in the August Music in the Park with EVs. There was limited turnout and engagement despite the nice weather, with no EV rides requested.

Genesee Region Clean Communities presented on the forum on The Latest about Buying an EV in Brighton. Attendees were very interested in EV programs and actively discussed questions. Staff provided handouts and showed off EVs.

The 2019 National Drive Electric Week (NDEW) Event in Cooperstown included an exhibit and had a steady crowd during the day. The exhibit was held by the Farmer's Market and Double Day Baseball Field had a total of nine EVs on display with owners.

On September 19, Energetics exhibited at the Touch a Truck event organized by local Telsa owner with support from NDEW and Energetics. There were EVs at the event for attendees to see and sit in.

The Ithaca EV Car Show as part of NDEW was a well-managed event by local EV drivers with parade and show. Several dealerships had vehicles and many ride and drives were given. Also, in attendance was a BAE hybrid bus and e-bikes.

The NDEW at Rochester Institute of Technology included a ride and drive and exhibit. The event organizers, which included Genesee Region Clean Communities, continued to build on prior years with 70 EVs, food trucks, and music. Over 100 ride and drives were given.

The 2019 NDEW event in Syracuse included test drives and an exhibit. There was good representation from key stakeholders (National Grid, Syracuse Mayor), but smaller turnout because of a Sunday (17 personal EVs and one dealership EV).

The New York State Department of Transportation (NYSDOT) Fleet Electrification ride and drive in Colonie included an EV testing and exhibit. The event followed a Fleet Electrification Workshop at NYSDOT. People stopped and took information but limited on-site test drives took place during the lunch hour and some planned to visit the dealership later.

On September 19, there was a workplace EV ride and drive in Amherst, NY facilitated by Clean Communities of Western New York. Mainstreet has 130 employees and helped advertise the event. Light refreshments helped attract people to the booth and EVs.

The workplace EV ride and drive for Larkin Development Group was held in September 2019. Larkin Development Group manages this large business park with several companies and some charging stations. Clean Communities of Western NY’s exhibit booth by their café exposed many to EV information.

The Rogers Environmental Center held a NDEW Event in Sherburne. The event included a ride and drive and an exhibit. There were 18 EVs brought by personal owners along with the town's Volt.

The NDEW at Delmar Farmers Market in Bethlehem included a ride and drive and exhibit. Led by the Capital District EV Drivers Group this event has built up from being held consistently each year and found this ideal location.

In October, Energetics participated in the EV Night at Rough Bar and Books in Kingston. The event was a round table discussion of people from the local county government, clean energy developers, and others to discuss how to create an EV Model Community in the Hudson Valley.

On October 10, Energetics coordinated with local dealerships to expo vehicles and hold a ride and drive event at the Clean Power Expo in Beacon. Along with test drives, staff shared EV specific information with the attendees.

At the Southern Tier Technology Symposium held on October 17, Energetics presented and exhibited. The event included technical discussions on energy storage, clean transportation, power systems, industrial control systems and avionics.

The Rochester Auto Show included an exhibit by Genesee Region Clean Communities and had great engagement. The EV exhibit was in a great location, and there was a 33% increase in participants over prior year.

In April 2020, Energetics presented to the Cornell Transportation Engineering Class. The virtual presentation was on EV technology, market trends, and EV deployment in communities.

Throughout 2020, GRCC has been part of a broad coalition of organizations working on a Go All Electric campaign. This group is seeking to develop plans and strategies for promoting the adoption of beneficial electric in the transportation sector. GRCC advised on how marketing messages can be created to influence local decision makers to adopt electrification strategies.

7 Conclusions

Animating the Electric Vehicle Market in New York State set an example of how to facilitate localized initiatives to encourage EV adoption. For each project element, staff paid attention to the varying needs of local communities and tailored the charging station deployments and outreach based on these needs.

Using the EV Charging Station Plans for the five regions of the upstate I-90 corridor helped establish the basis of future deployment. Energetics used these plans to coordinate the installation of charging stations, promote EV-readiness, and encourage vehicle purchases in each of those five regions (Capital District, Mohawk Valley, Central New York, Genesee Valley/Finger Lakes, and Western New York). Supporting each installation with an accompanying promotional effort helped to grow momentum and excitement around this technology. In each of these regions, there has been significant growth in public charging station infrastructure and EV adoption. While it is difficult to directly link these to the project installations, these efforts deployed charging stations and raised EV awareness in several areas where this had not been done previously.

Deployment of charging stations and an increase in EV adoption were also encouraged through the two model EV communities. The EV model communities were selected based on the current state of EV market and trends, and the project team's ability to use existing partnerships and relationships to encourage adoption. The project used the momentum of recently purchased EVs and charging stations to launch year-long outreach and educational campaigns. This model was successful in two very different communities, including more rural Tompkins County, where the project deployed eleven charging stations to help build momentum before working with community stakeholders to promote EV adoption and grow their EV ecosystem over the following year. In both Rochester and Tompkins County, the project team found that EV adoption increased faster than what was projected, and the infrastructure continued to expand following the program completion.

In the Mid-Hudson region, the project team worked with local stakeholders to identify gaps in charging station infrastructure around popular tourist destinations. The deployment of charging stations in these tourist destinations, along with the mobile application will encourage EV tourism along key travel routes, while also promoting EVs in the local community.

Education and outreach were at the core of most project activity, supporting both public and targeted outreach throughout the State. Outreach efforts included attending large festivals, hosting program organized ride and drives, and one-on-one meetings with municipal officials, fleet owners, and other stakeholders. Each type of outreach was important, especially in the early stages of building out a community's EV ecosystem.

Over the course of this three-year project, the project met its goal to install 108 new charging ports, directly support the acquisition of eight EVs in municipal fleets to showcase their use, coordinate 141 EV promotional outreach events, and facilitate numerous additional activities to further promote EV adoption. With continued support from New York State leadership and NYSERDA through incentives and rebates, the EV market has continued to grow with higher than average adoption in areas targeted by this project.

Throughout all project activities, there were people who needed to be informed about the EV basics and did not realize the extent of EV models and charging stations available. The public continues to be more aware of EVs in general over time because of these projects and initiatives by NYS, but it cannot be assumed that everyone has an up-to-date understanding of EVs. Not every town has a charging station, many dealerships still do not stock EVs, and mainstream marketing has been limited (the few EV advertisements that received prime-time airtime were often aired once or very few times to showcase a new vehicle as opposed to a mainstream product that they are continually advertising for). Any new EV project will still need to include basic education about EVs to be applicable to the general public and the value of continuous exposure to EVs should not be discounted.

There are many factors that influence EV adoption and it is nearly impossible for one project to cover everything. While this project demonstrated the successful influence of establishing an EV ecosystem to promote adoption, this was just the foundational work needed to facilitate growth under favorable market conditions. By far, the biggest influential component of an EV ecosystem is the availability of desirable EVs at the right price for consumers. These projects aligned with new offerings from Chevrolet (Bolt) and Tesla (Model 3) and a NYS rebate that invigorated a surge in EV sales. As evidenced by the higher rate of adoption surrounding the project's targeted areas, the work undertaken resulted in higher sales than elsewhere in the State where those same favorable market conditions were available. However, had the above market factors not occurred, this project's success would have been more limited. The availability of the State Rebate on EVs and charging stations certainly helped grab the attention which allowed this project to then provide valuable knowledge and experience.

Appendix A: Rochester EV Accelerator Case Study

ROCHESTER ELECTRIC VEHICLE ACCELERATOR

Electrification Coalition

CASE STUDY

JANUARY 2019

WWW.ELECTRIFICATIONCOALITION.ORG

The Rochester Electric Vehicle Accelerator is supported by the New York State Energy Research and Development Authority (NYSERDA) as party of the Charge NY initiative.

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EXECUTIVE SUMMARY

In June 2017, the New York State Energy Research and Development Authority (NYSERDA), Electrification Coalition (EC), Energetics Incorporated, the City of Rochester, and the Greater Rochester Clean Cities (GRCC) launched the Rochester EV Accelerator (ROC EV). ROC EV began with the ambitious goal of accelerating the adoption of plug-in electric vehicles (EVs) in greater Rochester to 1 percent of all new vehicle sales. ROC EV promotes EV adoption by combining traditional community organizing principles with technical expertise related to EVs, infrastructure, and fleets. Since its inception, ROC EV has launched several community-wide efforts that have helped the greater Rochester region lead the way in EV adoption for upstate New York, with sales increasing by 22 percent between June 2017 and June 2018. Based on this success, ROC EV can serve as a model for other communities seeking to accelerate the adoption of EVs.

Greater Rochester was one of the first communities in New York to launch a comprehensive and successful effort to promote EV adoption. ROC EV was led by the Electrification Coalition (EC), through a NYSERDA contract issued to Energetics Incorporated. The mission of the Electrification Coalition is to accelerate the mass adoption of EVs to enhance the nation's energy and economic security. The EC pioneered the concept of the accelerator community model in the 2009 Electrification Roadmap document, which was first deployed through Drive Electric in Northern Colorado (DENC) in 2013.

With prior efforts by the City of Rochester and GRCC laying the foundation for accelerated EV adoption at the municipal level, EC, Energetics, and NYSERDA selected Rochester as a pilot city for the accelerator community model in New York. Building off local relationships, the team worked with community partners like the New York State Electric Auto Association to provide a network of enthusiastic program volunteers. Before launching ROC EV, the greater Rochester region was already a leader in upstate New York for EV sales. This provided fertile ground to achieve the project's goals: complete 1,000 test drives, achieve 1 percent market penetration rate, and recruit 10 workplace charging partners (when this goal was met early in 2018, the program set a new reach goal to double the number of workplace charging partners to 20). Between the first Ride and Drive event in August 2017 and the last in December 2018, ROC EV recorded 1,036 test drives, achieved 1.79 percent market penetration, and worked with 13 area employers to accelerate the adoption of EVs.

Additionally, ROC EV coordinated the launch of a group buy purchase program in partnership with Nissan North America and Rochester Gas & Electric, which resulted in a 700 percent increase in Nissan LEAF sales at one local dealership in one month.

The program's overall success can be attributed to the identification of key areas of focus at the start of the program, around which ROC EV prioritized the planning and execution of marketing campaigns and major events that would have the greatest positive impact on EV adoption rates:

- **Workplace Charging**: To expand EV charging infrastructure, ROC EV hosted a workplace charging event in March 2018 in partnership with Greater Rochester Chamber of Commerce to educate local business leaders about the importance of workplace charging and encourage them to install charging stations at their workplaces. Relationships with the business community were made through word of mouth and with the help of the Chamber's outreach. Based on survey data collected from 35 ROC EV events, the number of participants who indicated that workplace charging would make them more likely to buy an EV increased by 5 percent after participating in a test drive.

- **Ride and Drives**: A Ride and Drive is a planned test drive event, in which potential consumers can experience driving multiple EVs at one location. Participants learn about specific vehicles from current and local owners, as well as dealership representatives. ROC EV found that Ride and Drive events present unique opportunities to shape general impressions about EV technology. Based on ROC EV Ride and Drive survey data, the percentage of test drive participants who indicate they are either "likely" or "very likely" to purchase an EV increased by 12 percent after test driving an EV. Additionally, perceived impact of financial incentives on the likelihood to consider purchasing an EV also rose after test driving an EV and learning about available incentives. Those stating that the availability or rebates and tax credit would "very much" impact their decision to buy an EV rose from 69 percent to 75 percent. These results support the idea that Ride and Drives are most effective when first-hand EV experience is paired with education and discussion about the benefits and incentives surrounding EV ownership.

- **Communications and Outreach:** Employing tactics to expand the program audience was central to ROC EV's success. Along with traditional online and printed promotions, ROC EV orchestrated large scale efforts to promote local EV adoption. A notable example of this was the Nissan LEAF group buy promotion through radio ad campaigns on a local public radio station.

- **Fleets:** Catalyzing the electrification of fleets can result in great quantities of traditional combustion engines being replaced with EVs. ROC EV hosted a Fleet Electrification Workshop in June of 2018, an event at which regional fleet managers learned about the benefits of incorporating EVs into their fleets, as well as methods for EV procurement.

Over the course of the program, several best practices emerged to maximize the success of one or more of the above areas of focus. Dealership engagement was crucial to the execution of public and workplace Ride and Drives, as well as the success of the Group Buy purchasing program. Cultivating a committed group of EV Enthusiasts led to a reliable volunteer base for Ride and Drive events and also created new leads for workplace charging partners based on existing relationships EV Enthusiasts had with their employers.

1. INTRODUCTION

The first two electric vehicles (EVs) in greater Rochester were registered in 2011. At the time, there were less than a dozen charging ports (plugs) in the area, and almost all of them were located at car dealerships. Seven years later, greater Rochester is home to more than 2,500 electric vehicles and 100 charging ports. A combination of state and federal policy, local advocacy, and the efforts of the Rochester Electric Vehicle Accelerator (ROC EV) led to an increase of more than 1,000 percent in charging ports and overall EV growth from 0 percent to 1.79 percent of new vehicle sales in just seven years.

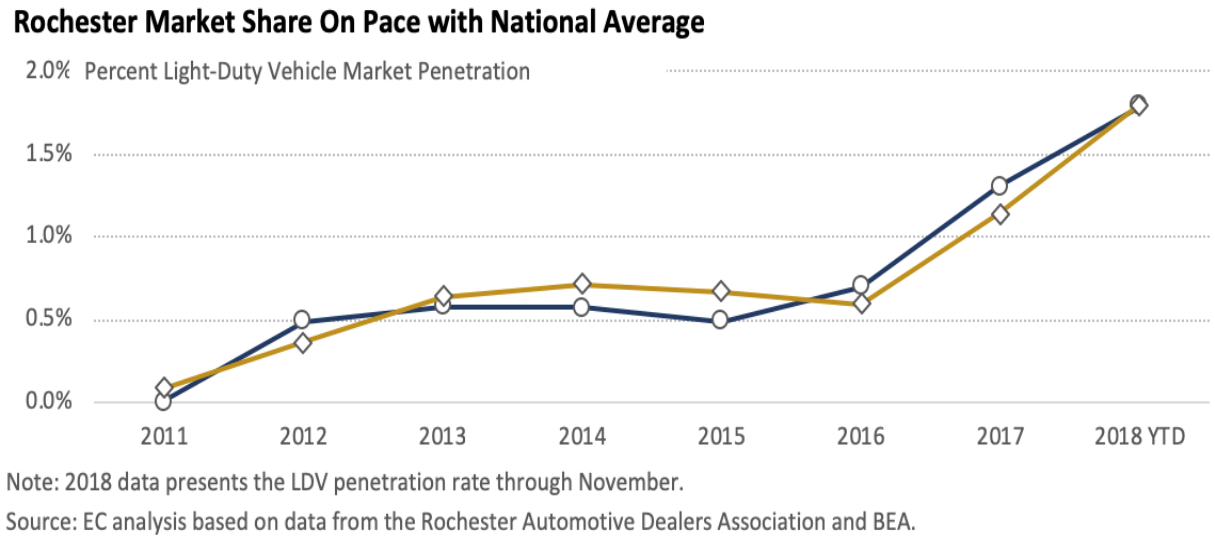


Figure 1. EV market penetration of new car sales from 2011-2018

EVs present a critical opportunity to reduce U.S. oil dependence, bolstering American economic and national security while benefiting consumers. To accelerate the adoption of EVs nationwide, they should be deployed in targeted geographic areas where all the components necessary for success—local policy, charging infrastructure, consumer education, public-private partnerships, and more—are leveraged simultaneously. Coordinated efforts such as ROC EV, referred to in this paper as "accelerator projects" or "accelerator communities", focus on promoting EVs by mobilizing and connecting constituencies such as local businesses, automotive dealers and manufacturers, universities, and EV Enthusiasts.

2. CREATING AN ECOSYSTEM

A. OVERVIEW

A successful EV accelerator community requires participation from stakeholders, including: city administrators, local car dealerships, business leaders, utilities, infrastructure providers, current EV owners, nonprofit organizations, and educational institutions. Communication and coordination among these groups are essential, as the EV adoption effort will only succeed if it is accompanied by changes in multiple products, systems, and industries simultaneously.

Figure 2. Building relationships is key to building an EV-friendly ecosystem.

One of the first steps in building this ecosystem is establishing an advisory committee with representatives from the various groups mentioned above that can support the program by lending credibility through testimonials, offering ideas, providing demonstration vehicles, volunteering at events, making introductions within the community, and monitoring progress. Through the advisory committee, an EV accelerator organization should establish an annual plan with metrics and general goals for each stakeholder. This plan should be broken into quarterly segments which increases the ability to monitor and track progress and dedicate in-kind resources from partners toward each segment of the plan.

Broad community participation leads to a more successful program, so it is important to demonstrate commitment from a variety of stakeholders at the onset, as opposed to seeking out a group of stakeholders after starting an EV accelerator. This will ensure buy-in from each partner's organizational leadership.

B. ENGAGING THE ECOSYSTEM

The first step to launching an accelerator community is to analyze the entire transportation electrification value chain to determine how the various stakeholders could help drive EV adoption. An effective stakeholder committee should be comprised of local stakeholders who exhibit expertise in a variety of areas directly and peripherally related to EV adoption, detailed in Section 2C.

The lead implementation partner can further engage stakeholders by involving them in the creation of an annual plan, which can either be determined as part of the stakeholder kickoff meetings or established through the funder and lead implementation partner. This way, stakeholders will be invested in achieving program goals that they helped create. Several technical components of ROC EV's plan, such as charging infrastructure and marketing,

required the creation of working groups, comprised of individuals with specific expertise, and these groups acted as subcommittees to the larger stakeholder committee.

ROC EV created an advisory committee comprised of all stakeholders that met every other month. Additionally, the advisory committee split into smaller working groups or subcommittees based on the five main program areas: workplace charging, fleets, OEMs/dealerships, education/outreach/marketing, and policy. These subcommittees met monthly.

C. STAKEHOLDERS IN THE ECOSYSTEM

ROC EV identified several categories of stakeholders that are important to engage in the EV accelerator community's advisory committee.

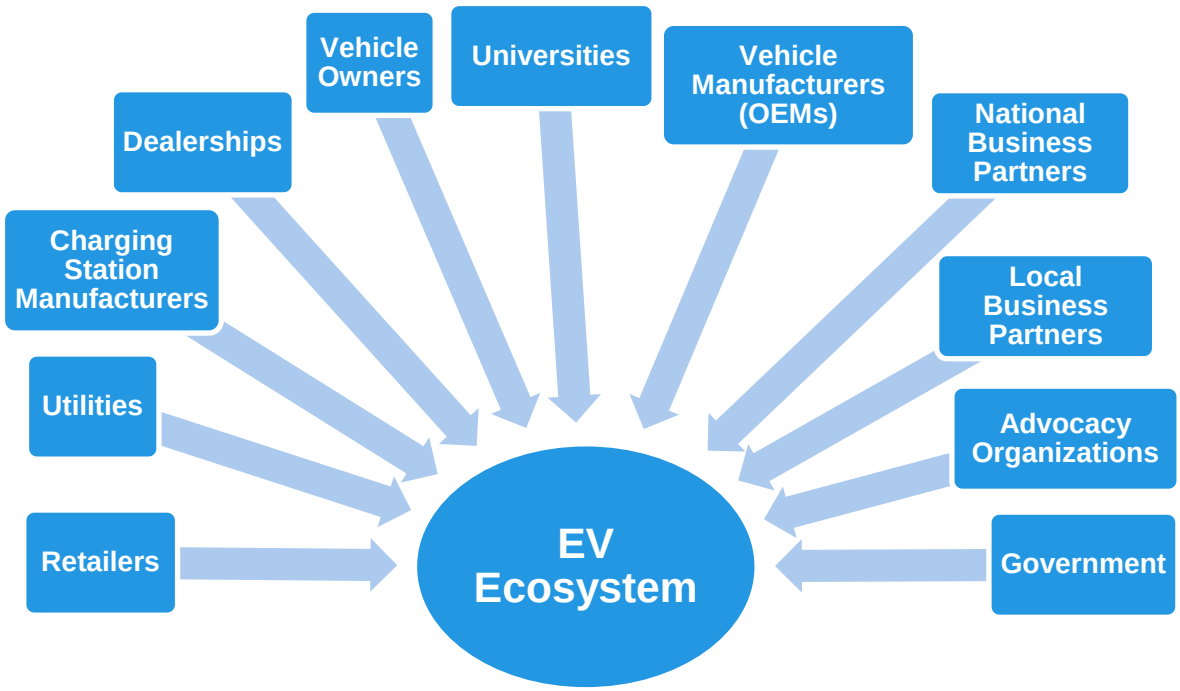


Figure 3. The EV ecosystem

CITIES OR MUNICIPALITIES

ROC EV worked closely with its partner city, Rochester, and assisted several of the surrounding towns, including Henrietta and Irondequoit. ROC EV and city representatives on the advisory committee quickly established the importance of bringing together industry-specific expertise. Engaging the city fleet manager, for example, provides visible leadership to other municipalities by demonstrating the viability of switching to EVs. It may be important to engage multiple offices in municipal government, including sustainability, procurement, fleet, and communications, depending on the current program goals.

UTILITIES

Because of their role in establishing electricity rates that might include EV incentive programs, and their understanding of how utility rates are impacted as more EVs are placed on the grid, utilities are an important stakeholder. Rochester Gas & Electric (RG&E), the local utility, played a key role in the group purchasing program launched in November 2018, as detailed in the Group Buy section of this report.

DEALERSHIPS AND OEMS

Dealerships benefit from EV-specific marketing and education in the community which leads to increased vehicle sales. Accelerated EV adoption provides them with an opportunity to both grow revenue and gain market share. Aside from providing EVs for Ride and Drive events, which will be covered in detail in the Dealership Engagement and Ride and Drive sections of this report, dealerships can support the organization's mission by sharing data on current and past EV sales, while helping to track the effectiveness of various marketing activities. As dealerships become more engaged, they can host or sponsor events and sponsor marketing initiatives to help the program. ROC EV found success in partnering with the Rochester Automobile Dealers Association, especially when it came to making introductions to dealership leadership.

Original Equipment Manufacturers (OEMs), such as Nissan, BMW, GM and Toyota, supply vehicles to the dealerships and in many cases determine the monthly incentives dealerships receive for selling EVs. It is consequently very important to have strong partnerships with OEMs to ensure there is sufficient EV inventory available. ROC EV helped dealerships understand the incentives available from their corresponding OEM to sell EVs. OEMs can also help with specific marketing and initiatives like group buys and/or offer special EV pricing which can enable partners to electrify fleets.

EV ENTHUSIASTS

ROC EV recognized the importance of integrating existing EV owners and advocates into the program efforts. EV Enthusiasts have often done substantial independent research when purchasing their own vehicles and can therefore be especially persuasive to potential buyers, many times even encouraging their friends and colleagues to purchase EVs. They also provide powerful testimony to what EV ownership is really like as daily drivers. An independent group of EV Enthusiasts that had been advocating for EVs since the mid-90s, known as the New York State Electric Auto Association, provided a foundation for ROC EV to grow a significant volunteer base.

The EV Enthusiast group was instrumental to ROC EV's success by advocating for charging stations at their workplaces and volunteering at Ride and Drive events. EV Enthusiasts account for most of ROC EV's Ride and Drive volunteers, and their participation enables ROC EV to offer a much larger number of test drives than would otherwise be possible. It is very helpful that they require little to-no-training on the technology. ROC EV found that Ride and Drive events became self-directed in less than a year thanks to consistent volunteer participation. This allows the accelerator community staff to direct their energy during events towards building relationships with participants and host organizations. This is an important piece of partnership development which can lead to fleet electrification, infrastructure development, and workplace charging installation.

ROC EV held monthly EV Enthusiast meetings, which are mostly social in nature but also provide the opportunity to share program updates and train new volunteers. The meetings create a sense of camaraderie and community surrounding EVs, further increasing the likelihood that EV Enthusiasts will attend in the future and bring friends or family.

INFRASTRUCTURE PARTNERS

ROC EV's partnerships with charging infrastructure, also known as electric vehicle supply equipment (EVSE), distributors and installers are important for several reasons—understanding the cost of infrastructure development, identifying potential funding sources, and recommending strategic locations for charging station installations. They are a particularly helpful resource to utilize during the workplace charging planning process. It is also useful to have a running list of EVSE installers available when consumers and businesses ask for resources.

Infrastructure providers can also act as experts at events, including Ride and Drives. One Rochester-area charging station distributor, EV Charge Solutions, often brought a model charging station to events which provided the opportunity for consumers to learn how to plug in and charge vehicles. This type of hands-on experience is essential to easing consumer fears of new technology.

INSTITUTES OF HIGHER LEARNING

As large and distinguished employers in the region, educational institutions like Rochester Institute of Technology (RIT) helped validate the ROC EV program in its early stages before the brand was established. RIT and another local university, Nazareth College, utilized ROC EV workplace programs such as Ride and Drives and lunch and learns. Local college and graduate students also provided extensive volunteer support. Partnering with student groups like Engineers for a Sustainable World at RIT, led to increased volunteer and on-campus event participation. Future accelerator communities should prioritize engaging with students to help promote on-campus events and recruit volunteers.

ROC EV's university partners installed more than 25 charging stations on their campuses—free for students and staff—and played a central role in educating the community about the benefits of workplace charging.

BUSINESS COMMUNITY

Local businesses provide the most effective way to reach many people with EV education, Ride and Drives, and workplace charging infrastructure. Some initial ROC EV business supporters included Green Spark Solar (formerly SunCommon NY) and Dixon Schwabl, both of whom made helpful connections within the business community.

Partnership with Greater Rochester Chamber of Commerce was essential to the success of a workplace charging event in early 2018. Being associated with the Chamber, a well-respected organization in the business community, gave ROC EV credibility and provided a network ROC EV was able to tap into, which was helpful for connecting with and recruiting additional workplace charging partners. Future accelerator communities may consider official membership in the local chamber, or similar organization, to access benefits such as marketing to fellow members and invitations to special events.

COMMUNITY PARTNERS

Non-profit and community groups that focus on sustainability such as Rochester People's Climate Coalition and Color Brighton Green, are already respected in the community and have established networks. They also have dedicated members and volunteers who often fit into one of two categories: existing EV owner and potential volunteer, or sustainably-minded individual open to learning about EV ownership. These community partners often have large listservs and were enthusiastic to share ROC EV's messaging to their subscribers. ROC EV found that creating marketing tool kits (Appendix 1) with sample wording for newsletter or social media content with program images was an effective strategy for reaching new audiences. Similar to ROC EV's partnership with the Chamber of Commerce, working with well-known community groups provided credibility to the ROC EV brand.

D. LESSONS LEARNED

ESTABLISHING THE ADVISORY COMMITTEE

ROC EV suggests that committee members receive explicit support from their organization's leadership. For example, if a committee member is personally invested in accelerating the adoption of EVs but their organization has competing priorities, it may prove to be challenging for that committee member to dedicate time and energy to the program. Future accelerator communities should establish the level of commitment expected early on. One way this could be realized is by sharing a set of expectations with each partner and requiring signatures from their organization's leadership to ensure the committee members have internal support for their involvement.

ORGANIZING THE ADVISORY COMMITTEE

ROC EV began by organizing monthly subcommittee meetings based on five program areas: workplace charging, policy, fleet, education/outreach/marketing, and dealership/OEMs. The subcommittee's topics often overlapped, resulting in duplicated efforts, so future accelerators may want to reorganize the subcommittee structure based on needs of their community and stakeholder priorities.

In addition, ROC EV established an every-other-month meeting with all stakeholders to track the progress of the various initiatives and to re-align priorities for the approaching quarter when necessary. Some advisory committee members were also helping encourage their own companies and communities towards EVs and charging. Because the committee was so small (regular attendance between 10-17 people), one monthly all-hands meeting, instead of monthly subcommittee meetings, would have sufficed.

3. WORKPLACE CHARGING

A. OVERVIEW

Workplace charging infrastructure helps promote EV readiness in a community by creating an environment that supports current EV owners and catalyzes further EV adoption. A study conducted by the Department of Energy Office of Energy Efficiency and Renewable Energy found that employees with access to workplace charging are six times more likely to drive an EV than the average worker.[1] When people notice their peers and co-workers driving EVs, owning one themselves becomes a more feasible option.

Other than a person's home, the workplace is the most common place for someone to charge EVs (Figure 4).[2] EV drivers can park their EV at workplace chargers the majority of their waking day, which gives EV owners the convenience of having access to charging around the clock (when combined with home charging).

Source: Argonne National Laboratory, 2012

Figure 4. Charging at home is the most common for EV owners

Workplace charging can also double employee EV range, giving them the capability to commute from further distances using only electric power. Employees with plug-in hybrid vehicles can save money by optimizing their distance traveled on electric power, while employees who drive fully electric vehicles can extend their total range capacity.

By engaging local companies in the workplace charging program, ROC EV effectively targeted large groups of professionals and provided them with EV education and first-hand experience driving EVs. Employers were also provided a clear step-by-step process to install charging stations and expand local EV infrastructure.

[1] Department of Energy, Office of Energy Efficiency and Renewable Energy. "Workplace Charging Mid Program Review: Employees Plug In." December 2015.

[2] Department of Energy, Office of Energy Efficiency and Renewable Energy. "A Guide to the Lessons Learned from the Clean Cities Community Electric Vehicle Readiness Projects." January 2014.

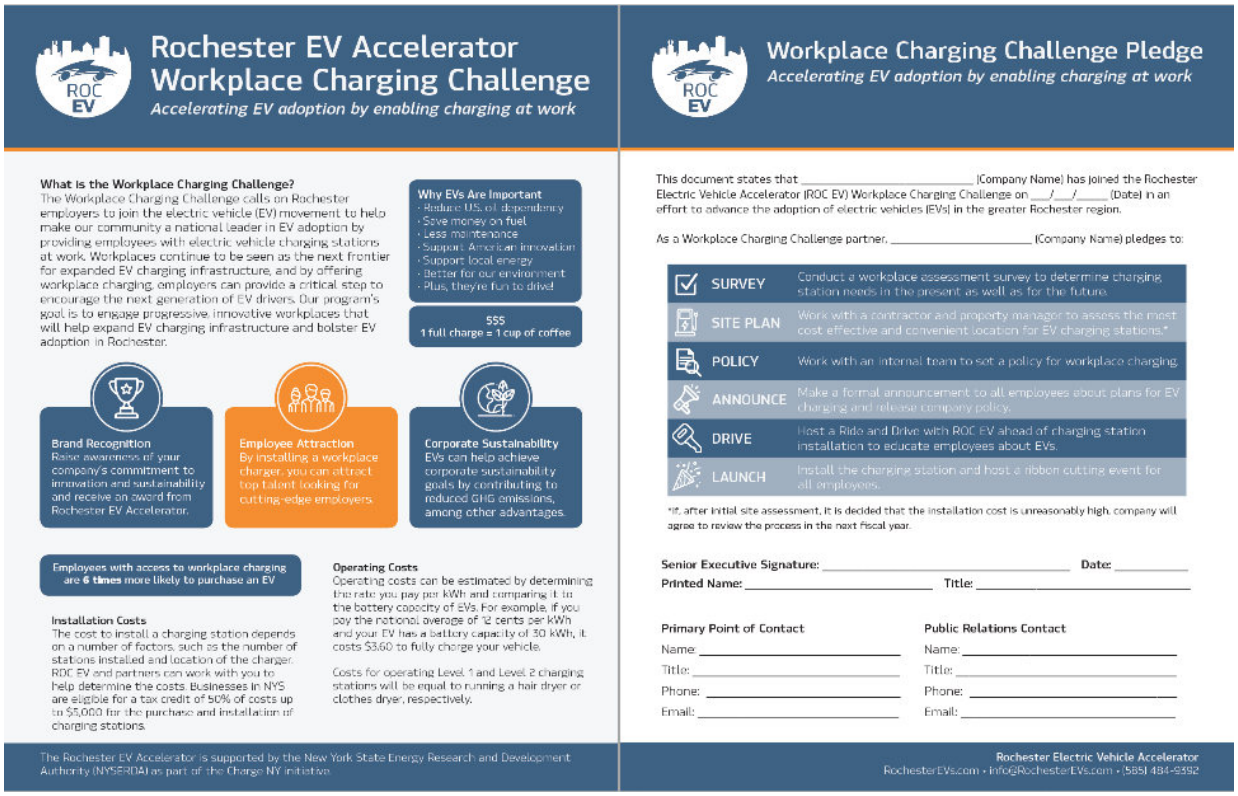
B. ROC EV APPROACH

ROC EV launched a Workplace Charging Challenge in early 2018 to encourage local employers to promote EV readiness by providing their employees access to charging at work. A pledge form (Figure 6, Appendix 10) outlining the workplace charging challenge process, was available to interested employers online. The pledge required participating workplaces to conduct an employee survey (Appendix 2) to determine current charging station needs and assess future needs, while also working with a contractor and/or property manager to assess the most cost-effective and convenient location for EV charging stations. If the site assessment was deemed too costly by the workplace, they would agree to review the process again in the upcoming fiscal year. This was an important distinction, as employers were hesitant to commit to something before knowing the final cost.

The Workplace Charging Challenge launched with seven companies who were closely involved with the program, many of whom had already installed charging stations. This strategy served to showcase participation in the program from recognized and respected local employers. Organizations that already had charging stations on site were still eligible to participate in the Workplace Charging Challenge because an important component of the initiative is employee education in the form of a presentation and/or Ride and Drive. The presence of workplace charging alone may not be enough to convince someone with little knowledge about EVs to make the switch.

Figure 5. Representatives from Workplace Charging Challenge partners with their recognition plaques at the "Passport to Workplace Charging" event

> *"**Our sustainability efforts at Dixon Schwabl have been electrified over the past year, in no small part to the extraordinary efforts of our local ROC EV team.** When we completed renovations to our building two years ago, including the addition of three charging stations, my EV was the sole occupant of the designated charging spots. After ROC EV held a test drive event at our agency, we now have a total of six employees with EVs that charge during assigned morning and afternoon shifts! Even more employees are considering the advantages of going electric and the buzz has enhanced our overall agency sustainability efforts from recycling to eliminating water bottles. The impact ROC EV has had on our company is immeasurable."*
>
> *- **Mike Schwabl, President, Dixon Schwabl***



Rochester EV Accelerator
Workplace Charging Challenge
Accelerating EV adoption by enabling charging at work

What is the Workplace Charging Challenge?
The Workplace Charging Challenge calls on Rochester employers to join the electric vehicle (EV) movement to help make our community a national leader in EV adoption by providing employees with electric vehicle charging stations at work. Workplaces continue to be seen as the next frontier for expanded EV charging infrastructure, and by offering workplace charging, employers can provide a critical step to encourage the next generation of EV drivers. Our program's goal is to engage progressive, innovative workplaces that will help expand EV charging infrastructure and bolster EV adoption in Rochester.

Why EVs Are Important
- Reduce U.S. oil dependency
- Save money on fuel
- Less maintenance
- Support American innovation
- Support local energy
- Better for our environment
- Plus, they're fun to drive!

555
1 full charge = 1 cup of coffee

Brand Recognition
Raise awareness of your company's commitment to innovation and sustainability and receive an award from Rochester EV Accelerator.

Employee Attraction
By installing a workplace charger, you can attract top talent looking for cutting-edge employers.

Corporate Sustainability
EVs can help achieve corporate sustainability goals by contributing to reduced GHG emissions, among other advantages.

Employees with access to workplace charging are 6 times more likely to purchase an EV

Installation Costs
The cost to install a charging station depends on a number of factors, such as the number of stations installed and location of the charger. ROC EV and partners can work with you to help determine the costs. Businesses in NYS are eligible for a tax credit of 50% of costs up to $5,000 for the purchase and installation of charging stations.

Operating Costs
Operating costs can be estimated by determining the rate you pay per kWh and comparing it to the battery capacity of EVs. For example, if you pay the national average of 12 cents per kWh and your EV has a battery capacity of 30 kWh, it costs $3.60 to fully charge your vehicle.

Costs for operating Level 1 and Level 2 charging stations will be equal to running a hair dryer or clothes dryer, respectively.

The Rochester EV Accelerator is supported by the New York State Energy Research and Development Authority (NYSERDA) as part of the Charge NY initiative.

Workplace Charging Challenge Pledge
Accelerating EV adoption by enabling charging at work

This document states that _____ (Company Name) has joined the Rochester Electric Vehicle Accelerator (ROC EV) Workplace Charging Challenge on ___/___/_____ (Date) in an effort to advance the adoption of electric vehicles (EVs) in the greater Rochester region.

As a Workplace Charging Challenge partner, _____ (Company Name) pledges to:

SURVEY	Conduct a workplace assessment survey to determine charging station needs in the present as well as for the future.
SITE PLAN	Work with a contractor and property manager to assess the most cost effective and convenient location for EV charging stations.*
POLICY	Work with an internal team to set a policy for workplace charging.
ANNOUNCE	Make a formal announcement to all employees about plans for EV charging and release company policy.
DRIVE	Host a Ride and Drive with ROC EV ahead of charging station installation to educate employees about EVs.
LAUNCH	Install the charging station and host a ribbon cutting event for all employees.

*If, after initial site assessment, it is decided that the installation cost is unreasonably high, company will agree to review the process in the next fiscal year.

Senior Executive Signature: _____ **Date:** _____
Printed Name: _____ **Title:** _____

Primary Point of Contact
Name: _____
Title: _____
Phone: _____
Email: _____

Public Relations Contact
Name: _____
Title: _____
Phone: _____
Email: _____

Rochester Electric Vehicle Accelerator
RochesterEVs.com • info@RochesterEVs.com • (585) 484-9392

Figure 6. Workplace Charging Challenge information sheet and pledge form. Also available in Appendix.

RECRUITING PARTNERS

Word of mouth was the most successful strategy for connecting with employers. The business community in Rochester is small, which means that many executives know each other well and were willing to make helpful introductions. For example, David Beinetti, a Principal at the architecture firm SWBR, which was one of the first Workplace Charging Challenge partners, made the initial introduction to Mike Schwabl, President of Dixon Schwabl advertising agency, knowing that Mike was a long-time EV owner and advocate. Dixon Schwabl quickly joined the Workplace Charging Challenge and became a highly engaged partner throughout the program, eventually hosting one of the most successful Ride and Drives.

Initial meetings with businesses should gauge a workplace's interest in workplace charging, provide information on why they should consider it, discuss available funding, and ask them to conduct an initial employee survey for them to gauge employee interest. Future accelerators should not discount the value of word of mouth; don't be afraid to ask current partners for referrals to businesses that they think would be interested.

ENGAGING INDUSTRY-SPECIFIC BUSINESSES

Accelerator communities can target early EV adopter demographics by focusing on sectors like technology, architecture, and engineering. ROC EV found that many architects and engineers fit the demographics of EV early adopters: employees with four-year or graduate-level degrees that have disposable income and an interest in technology. ROC EV also found success in engaging companies that employed and/or are led by people with personal interest in EVs. These relationships were often established through connections from EV Enthusiasts.

Mid-sized and non-high-tech businesses have taken more time to develop EV partnerships, as they generally have lengthier approval processes. A hospital, for example, might see value in participating in EV programs because the effectiveness of the organization depends on the health of the environment, but because the hospital board may have several more pressing priorities, integrating EV programs might take longer to get approved.

MEDIA AND OUTREACH

ROC EV announced the participation of each new workplace partner on the program website, social media channels, and in the monthly newsletter. Workplaces were encouraged to share their involvement on their own digital platforms. By doing so, these workplaces can showcase their involvement in promoting clean transportation locally to their followers and spread ROC EV's message to a wider audience. See "Employer Newsletter Content" and "Partner Media Posts" in Appendix.

Figure 7. Examples of tweets from workplace charging partners

C. "PASSPORT TO WORKPLACE CHARGING" EVENT

ROC EV worked with the Greater Rochester Chamber of Commerce to host the "Passport to Workplace Charging" event in March 2018. The event served as an official launch of the Workplace Charging Challenge and an opportunity to recognize the first employers to join the challenge, who were presented with a plaque. With their large membership and credibility amongst local businesses, the Chamber provided ROC EV the opportunity to reach the larger business community.

EVENT FORMAT

Figure 9. ROC EV stakeholders speaking with event attendees at different passport stations

The "Passport to Workplace Charging" event was designed as an interactive experience where representatives from local businesses were invited to learn about the benefits of workplace charging and the process for getting EV charging stations installed and operating at their workplace. Invitations targeted company leadership, as they were more likely to have signing power to officially join the Workplace Charging Challenge. Attendees were given a "passport" that broke down the Workplace Charging Challenge into six simple steps. Attendees visited six stations where they spoke with a ROC EV stakeholder or volunteer about each step in the challenge, receiving a stamp in their passport before moving on to the next table.

Attendees who visited each station and collected all six stamps were invited to submit their completed passport (with contact information), for entry into a raffle to win an EV charging station for their workplace. The charging station was donated by EV Charge Solutions, a corporate partner and member on the ROC EV advisory committee. The raffle entries also had the added benefit of providing contact information of businesses that were highly likely to have an interest in adding workplace charging or signing the pledge to be a Workplace Charging Challenge partner. Direct outreach occurred to these individuals afterwards and they were also added to ROC EV mailing and distribution lists.

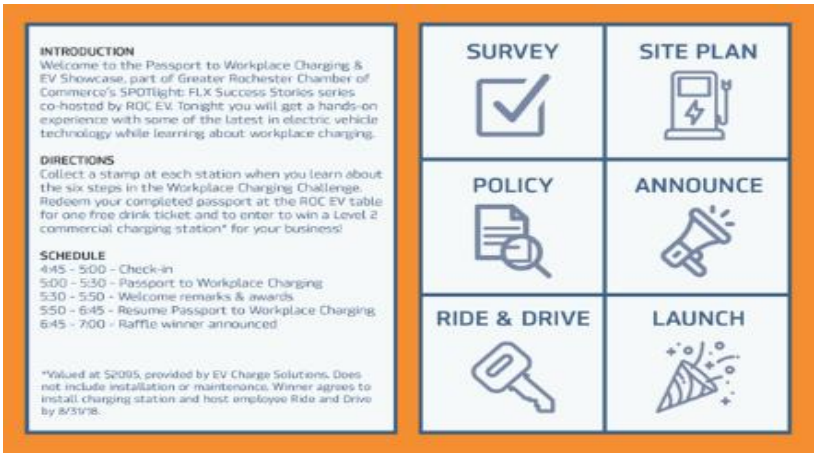


Figure 8. Inside of event "passport", which attendees used as a guide to learn about the steps in the Workplace Charging Challenge. See Appendix 6 for full-size version

D. LESSONS LEARNED

OVERCOME OBJECTIONS

Some companies will have objections to participating in the Workplace Charging Challenge. It is important to anticipate and overcome these objections when possible. For example, larger companies generally exhibit the most hesitation due to internal bureaucracy. ROC EV overcame this obstacle by meeting with high-level decision makers who could make commitments and expedite action.

Another objection might include concerns that an employer is favoring some employees over others by providing those who drive EVs with an extra benefit that is not available to drivers of gasoline-powered vehicles. To overcome this argument, ROC EV supplies the companies with resources to survey employees about workplace charging interest level, so the company will have strong data to counteract this argument if it arises. For example, one possible question is, "What is the most you would be willing to pay for use of the charging station?" with multiple choice answers ranging from $0 to $6 per charging session, or "N/A because I will not use the charging stations." ROC EV also encourages employers to connect workplace charging to a broader company strategy such as employee benefits or sustainability goals, which helps to counteract any internal questions that are posed. ROC EV has found that once workplace charging is launched there is generally very little employee hesitation, but these questions tend to arise among an employee base before or in the early stages of offering workplace charging.

Another potential apprehension is cost. ROC EV determined that providing one day of EV charging for an employee costs about the same as providing an employee with one cup of coffee, based on calculations provided by the National Renewable Energy Laboratory and local energy pricing.[3] ROC EV encourages companies to compare the benefits already being provided to employees with the cost for workplace charging. Because of the low cost of electricity, the ongoing costs of providing workplace charging tends to be very low. It's also important to stay abreast of any funding opportunities, and to bring that information to initial meetings.

Figure 10. This sign was displayed at the Passport to Workplace Charging event to encourage conversation.

ENGAGING CURRENT PARTNERS

An accelerator program should recruit stakeholders and employers on the advisory committee to become Workplace Charging Challenge partners early on. Future accelerator programs may want to require that any organization represented on the advisory committee be a Workplace Charging Challenge partner. Accelerators should prioritize hosting workplace Ride and Drives with current partners first, since they are likely more eager to participate and take action. They might then encourage others to join once they experience the fun of a Ride and Drive and see the value in educating their employees about driving electric.

[3] National Renewable Energy Laboratory, *Algeria: Energy Resources | Open Energy Information*, "View Rate." May 2017.

4. RIDE AND DRIVES

A Ride and Drive is a planned test drive event, in which potential consumers can experience driving multiple EVs at one location and learn about specific vehicles from current and local owners, as well as dealership representatives. These events play an important role in priming the local market for EV adoption, and ultimately, can increase EV sales. ROC EV found that Ride and Drive events present unique opportunities for ROC EV to shape general impressions about EV technology. Based on ROC EV Ride and Drive survey data, the percentage of test drive participants who indicate they are either "likely" or "very likely" to purchase and EV increased by 12 percent after test driving an EV.

Furthermore, perceived impact of financial incentives on the likelihood to consider purchasing an EV also rose. Those stating that the availability of rebates and tax credits would "very much" impact their decision to buy an EV rose from 69 percent to 75 percent while those stating that the availability of charging at work would make them more likely to buy an EV rose from 82 percent to 87 percent. These results support the idea that Ride and Drives operate most effectively when first-hand EV experience is paired with education and discussion about the benefits and incentives surrounding EV ownership.

Figure 11. A ROC EV Ride and Drive participant experiencing the thrill of driving electric.

ROC EV also found that after people get behind the wheel of an EV, they often share their experience with friends and serve as a third-party validator for EV adoption. For example, several Ride and Drive participants who were introduced to the program at a public event, not only returned for the next event, but also brought a friend.

ROC EV's first-hand experience with consumer engagement confirms that Ride and Drives are among the most effective methods for selling EVs. ROC EV employed two primary types of Ride and Drives to promote EV adoption, with each event type targeting a different group of participants:

- Public Ride and Drives held in conjunction with national celebrations and community events, such as National Drive Electric Week, local festivals, and sustainability fairs.
- Workplace Ride and Drives hosted by local employers for their employees.

A. OVERVIEW

Deciding on a vehicle to purchase is a decision dictated by both logic and emotion. By offering people the opportunity to test drive a variety of EVs and answering their questions, people can gain a holistic experience with a variety of EVs and develop confidence, comfort, and excitement surrounding making the transition to driving electric.

The direct aim of Ride and Drive events is to provide community members with information and first-hand experience with EVs in a fun, low-pressure setting. The goal at these events is not to sell vehicles, but instead to educate and foster interest and excitement about EVs. By removing the pressure of making sales, information can be disseminated and absorbed matter-of-factly.

Accelerator projects should develop standard policies and procedures for the identification and execution of Ride and Drive events. For ROC EV, it was understood at the inception of the program that harsh winters would confine most Ride and Drive events to take place between late spring and early fall. This resulted in a high frequency of events in a short window of time. The organization should start scheduling these events well in advance, especially if the event is popular and/or has limited space. Future accelerator communities should start with setting a goal for the total number of test drives to be conducted, then estimate the number of Ride and Drive events needed to achieve this per year, and then distribute these events appropriately month by month.

It is crucial to keep a pulse on community events, such as upcoming public fairs and festivals, talk with EV Enthusiasts, and meet with local company executives to determine host locations. Potential events should then be ranked from the most to least desirable based on likely test drive numbers and the events should be prioritized in that order.

Marketing partners should also be identified, especially with public Ride and Drives, as these partners will help spread the word about the event. In pre-event promotion and on the day of the event, the organization should strive to market all EV brands consistently, which will give each OEM and dealership maximum exposure, and provide an unbiased, brand-neutral experience for event attendees. Attendees should be encouraged to test drive as many EVs as possible at the event to ensure the user experience is varied and not based on a single EV type.

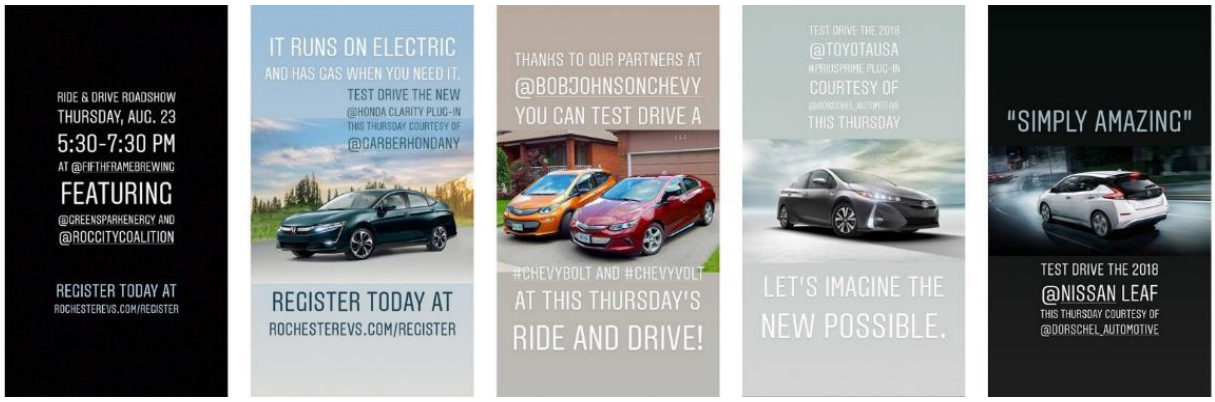


Figure 12. When promoting a Ride and Drive event on ROC EV's Instagram story, each dealership was tagged and every model that would be available was highlighted.

PUBLIC RIDE AND DRIVES

Public Ride and Drives give prospective EV owners an opportunity to test drive multiple EVs in conjunction with local events, like fairs, festivals, sporting events, or public markets. Event staff are often eager to coordinate these Ride and Drives with the accelerator community, as the opportunity to test drive EVs is seen as contributing to the overall festival or fair experience for the attendees.

Public Ride and Drive events also promote the visibility of the accelerator project to the community at large and provide a unique opportunity to reach a diverse demographic of people, some of whom were unfamiliar with EVs or otherwise wouldn't have test driven one at a dealership.

WORKPLACE RIDE AND DRIVES

Workplace Ride and Drives provide opportunities for employees of local companies to test drive EVs where they work, at a convenient time such as a lunch break. These events were uniquely impactful because they offered ROC EV the opportunity to speak with company executives and fleet managers about other priorities like installing workplace charging stations and transitioning their fleet to EVs. Workplace Ride and Drives also add the convenience of bringing the event to the prospective consumer. Dealership staff are usually eager to participate because these events provide access to captive corporate audiences that they might not be able to partner with on their own. Workplace Ride and Drives are also easier for dealerships to staff since they take place during hours of the day that are typically slower for dealerships. Employers often treat these events as a way to support employee recruitment and retention, as well as to demonstrate their leadership as an innovative employer.

Figure 13. City of Rochester employees smile after test driving the BMW i3 at a workplace Ride and Drive event.

ROC EV found that the most successful Ride and Drives were the product of several different factors; a workplace with a large workforce, EV Enthusiast involvement, and well-coordinated promotion from both the accelerator program and the workplace. Events should be promoted internally with enough advance notice that employees can plan to attend. An initial announcement two to three weeks out, with weekly reminders and a day-of notice, should be sufficient. Providing an incentive such as free food also positively impacts attendance.

B. ROC EV APPROACH

EVENT SELECTION CRITERIA

ROC EV identified local festivals, sporting events, and other community events with large audiences and reached out to the event organizers to coordinate Ride and Drives. Ride and Drives that were predicted to yield the largest number of potential test drives were prioritized. Important factors for predicting high levels of participation included the expected attendance of the events, location and weather (ideally outdoors in nice weather with test drive vehicles parked in clear view of attendees), and the audience demographic. ROC EV found events drawing environmentally conscious audiences yielded higher participation in Ride and Drives.

EVENT PROMOTION

Once the details of an event are discussed and determined, the accelerator program should begin promoting the event. This includes adding the event to online program and community (for public events) calendars, creating social media posts, and including event details in the monthly newsletter and other electronic distributions to stakeholders. It is important to engage the organizations you are working with to co-promote the event, as it will

expand the reach of online promotions to a wider audience. ROC EV supplied co-hosts with marketing tool kits containing sample text and graphics to promote on their social channels, newsletters, and website.

Asking volunteers, EV Enthusiasts, and friends to promote the event on their own personal social media platforms, or by word-of-mouth, proved to be very effective. Not only did they have the ability to widen the program's audience, but they were able to establish a sense of familiarity and approachableness to events by promoting them voluntary to their friends, family, and general social media community. ROC EV also encouraged attendees to "bring a friend" in marketing materials (Figure 14) for one event that resulted in 70 test drives. Because almost every person that came brought a spouse, friend, or family member, the number of recorded test drives nearly doubled.

Figure 14. Sample email advertising upcoming events

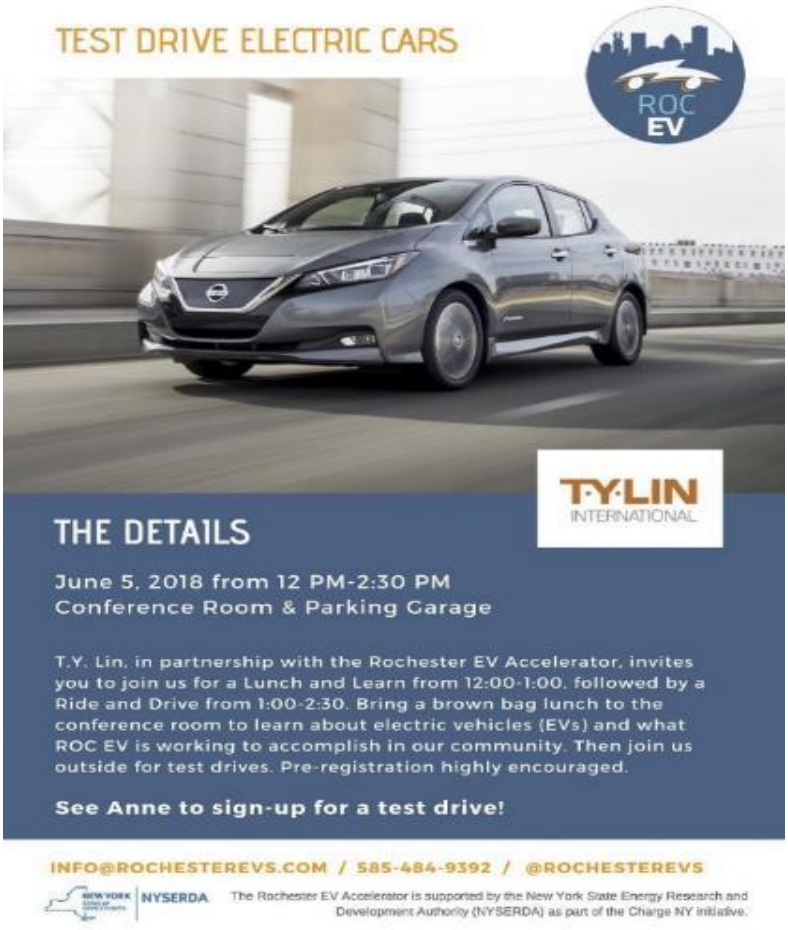


Figure 15. Example workplace Ride and Drive flyer which was posted in common employee areas

DEALERSHIP ENGAGEMENT

Figure 16. BMW loaned an i3 to ROC EV, which was used for test drives and as an effective marketing tool at events where the vehicle was stationary.

ROC EV worked closely with local dealerships when planning and executing Ride and Drives. Meeting in-person frequently to strengthen relationships is highly recommended. An accelerator community organization should communicate regularly with its dealership partners to make sure they know about upcoming Ride and Drives and can secure the number of vehicles that will be needed. Around mid-month, the organization should send participating dealerships an overview of the next month's events, including the event details and the request of the dealership. Staff should then follow up at least one week before each event to remind dealerships, and 2-3 days prior to the event to coordinate on whether the cars will be picked up by program staff/volunteers or be delivered by dealership staff. It was much easier for ROC EV if dealership staff were able to bring vehicles to the event.

It is also important to ensure the dealerships have the appropriate license plate on the vehicles before they leave the lot and any insurance documents required by the venue or event host have been obtained. At events, dealership staff can be expected to conduct test drives and spend most of their time in and near the vehicles.

VOLUNTEER RECRUITMENT

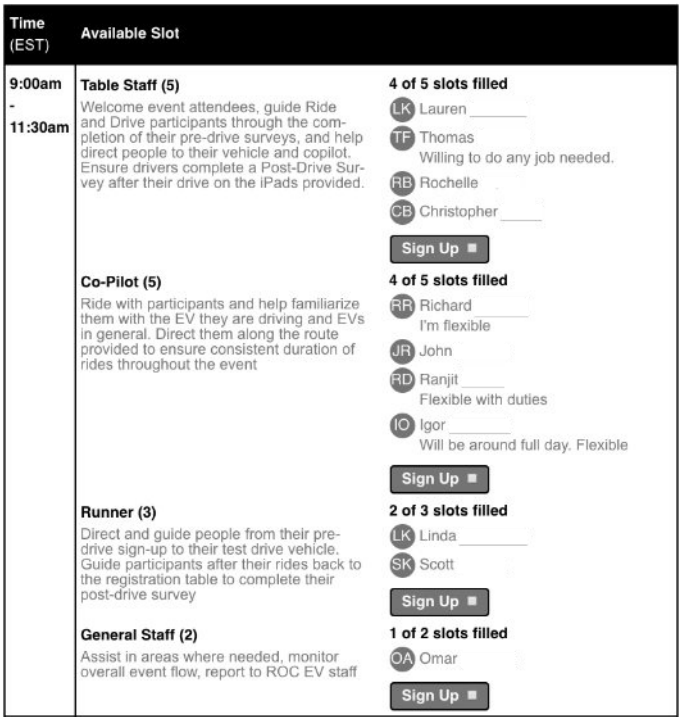


Figure 17. Example of online volunteer sign-up page, SignUpGenius.

Volunteers are essential to the success of Ride and Drives, and oftentimes come from three main sources: EV Enthusiasts, past event participants, and dealership staff. Informing stakeholders about volunteer opportunities in the program newsletter, event follow-up emails, and hosting volunteer recruitment events at libraries, which are perceived as neutral and welcoming spaces, are all tactics that ROC EV employed to increase volunteer involvement.

ROC EV created an online volunteer sign-up page using a subscription-based web program called SignUpGenius that was easily linked to in electronic distributions. The volunteer sign-up page (Figure 17) outlined all of ROC EV's scheduled upcoming events, the general event details, role details, and the number of volunteers needed per time slot and role type. This page was easily accessible and was linked in social media posts, on website pages, and in most electronic distributions to stakeholders.

If securing volunteers proved difficult, additional outreach was conducted via individual emails or phone calls to past volunteers and EV Enthusiasts who were closely involved with the program. The number of volunteers needed can fluctuate dramatically based on whether dealerships are sending sales representatives to co-pilot vehicles during test drives.

Volunteer opportunities should be posted immediately after events are confirmed, and should be promoted regularly on social media, in monthly newsletters, and in other electronic distributions to program stakeholders.

C. DAY-OF EVENT PROCEDURE

VOLUNTEER TRAINING

Figure 18. Volunteers enjoy a test drive before an event (left). A ROC EV volunteer assists Ride and Drive participants (right).

Properly trained volunteers are critical to the success of Ride and Drives. ROC EV ensured that volunteers were adequately prepared for events by conducting a 15-minute volunteer orientation prior to each event. During this time, volunteer roles were explained, individual assignments were confirmed, volunteer t-shirts were distributed as needed, and volunteers had the opportunity to ask questions. Volunteer co-pilots should be assigned to the same EV model they own whenever possible, as they are in the best position to answer questions about it. A successful tactic employed by ROC EV was assigning volunteer co-pilots a specific vehicle ahead of time so they would have time to research the vehicle before the event. This made volunteers feel more comfortable when speaking with Ride and Drive participants.

PRE-REGISTRATION

Initially, ROC EV did not have a pre-registration system and attendees were asked to complete a pre-drive survey and sign a waiver right before their test drive. This process takes less than two minutes but was discouraging for many attendees who were eager to get in the cars.

Using the online form builder, JotForm, ROC EV began utilizing an online pre-registration system that had a positive impact on predicting participation and streamlining the Ride and Drive sign-in process. By encouraging pre-registration for a Ride and Drive, people can commit to taking a test drive at a specific time during the event and complete their pre-drive survey online, so they get right to driving at the event. This helped reduce wait times at busy events and allowed for a greater number of test drives. Enhancing the capability to predict event participation was helpful in securing the proper amount of dealership vehicles for the event.

Another positive effect of early registrations was establishing more time between when the pre-drive and post-drive surveys were completed. Before the online registration, attendees answered the same questions with less than 20 minutes between the "before" and "after." This was frustrating and confusing for people who did not understand why they were being asked the same questions they had answered just before their test drive.

One issue that arose from pre-registration was difficulty in abiding to people's pre-registered time slots, especially at busy events like the National Drive Electric Week events. This proved difficult because test drive vehicles were often limited, and there would be a balancing act between reserving vehicles for people who were expecting to show up and participants who were present and waiting for a test drive but didn't pre-register. Because it was common for people to not show up at their pre-registered timeslot, ROC EV usually opted to not hold a vehicle for a pre-registered driver if others were present and ready to take a test drive.

Figure 19. Volunteers talking with a Ride and Drive participant during check-in.

Figure 20. Ride and Drive participants use program iPads to sign-up for test drives.

A possible solution to this issue would be to incentivize pre-registration for the event in general rather than using it to reserve a specific time. This way, the number of attendees can still be estimated, an adequate number of test drive vehicles can be secured, and the worry of delaying participation from people with reserved timeslots vanishes. A suggested incentive could be a free program t-shirt for every pre-registered attendee.

A streamlined, digital sign-in process is important for Ride and Drives because it helps create a professional first impression, is an easy process for volunteers to manage, and does not rely on the legibility of a participant's handwriting. Pre-registration form and waiver sample can be viewed in the Appendix. This maximizes the number of sign-ups that can be collected and the quality of data. The sign-in process requires attendees to input their name, email address, zip code, and signature on the waiver form. The zip code helps when analyzing sales data, as it helps to track geographical increases in EV adoption. The sign-in process also includes a brief survey in which drivers are asked to complete before and after the test drive to measure changes in their perceptions on EVs. ROC EV used an application called "iCapture", a digital survey software that enables information to be entered and compiled without a wireless Internet connection, for attendees who did not already pre-register using the JotForm sign up.

EVENT FOLLOW UP

Ride and Drives are most effective in promoting EV adoption when there is a systematic process in place to follow up with the participants, as these events are important lead generators for potential customers. To ensure that the positive event experience was fresh in participants minds, ROC EV prioritized email follow-ups within two business days of each event.

These emails provided participants with information about the EV(s) that they test drove and contact information for the dealers that provided the vehicles for the event. There was also a list of upcoming events with the option to sign up to volunteer or pre-register for another test drive. Information about nearby charging stations was included in each follow-up email to emphasize the prevalence of charging infrastructure in the region, thus preventing worries about range anxiety (Figure 21).

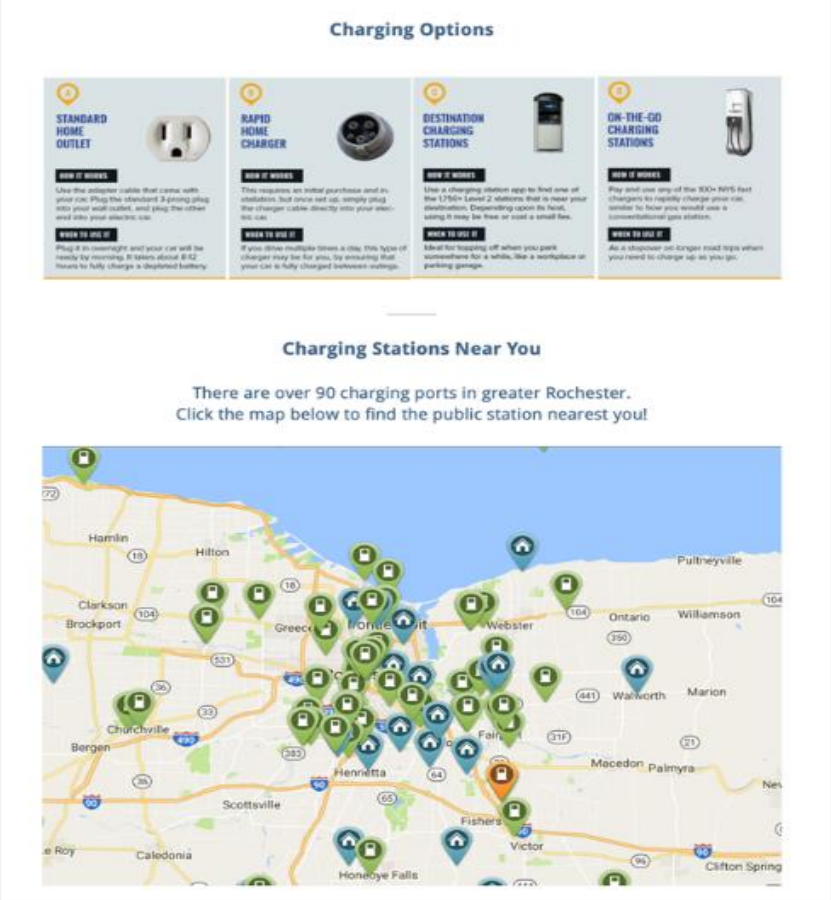


Figure 21. Information about how and where to charge was included in Ride and Drive follow-up emails to reinforce the availability of public charging and the convenience of at-home charging.

D. LESSONS LEARNED

OPTIMIZE HOST LOCATIONS

ROC EV's most successful events are in a location where attendees are either aware of the Ride and Drive before arriving at the event, have down-time during their time at the event (such as a day-long festival), or can test drive the EVs as part of a convenient shuttle system for an event. One of ROC EV's most successful events featured an EV test ride as the shuttle to a men's hockey game at Rochester Institute of Technology (RIT) from the parking lot to the arena. The convenience of the EV test ride on a very cold night resulted in an extremely high level of participation. The arena staff advertised the opportunity at the game leading up to the one ROC EV would be attending, which prepared many season ticket holders. People are more likely to participate in a Ride and Drive if they are expecting it.

EV SHUTTLE SERVICE AT A RIT HOCKEY GAME

Event Identification

The potential success for this event was recognized by having a built-in attendance of the hockey game and the half-mile walk people usually made between event parking and the hockey arena. A shuttle service to stay out of the cold would likely be a welcomed amenity to event attendees.

Leveraging Partnerships

The strong relationship with RIT's Sustainability department made it easy to connect with arena staff to coordinate the event.

PLANNING AND PROMOTION

ROC EV and RIT staff created an "EV Night" themed game. ROC EV provided the shuttle service, an info booth in the arena entrance, a program promotional video screened during intermissions, and a branded EV drove on the ice during intermission, paired with a t-shirt toss.

The event was promoted across both ROC EV and RIT's social media platforms and newsletters. Promotion at the previous game was important so regular attendees would know what to expect. Signage was placed at parking lot entrances and at the entrance of the arena on game day. Volunteers encouraged event attendees to take advantage of a warm shuttle ride to the arena at the parking lot entrance.

EXECUTION AND RECAP

The convenience of the shuttle resulted in extremely high levels of participation. In just 105 minutes, 150 people rode in an EV to the arena—the most efficient Ride and Drive of the program. The informational booth inside was not successful at gathering newsletter subscribers or getting people to sign up for test drives during intermission. However, the EV on the ice and t-shirt toss during intermission attracted a lot of attention.

Thanks to the cold and dark, the free EV shuttle service provided a value to hockey game attendees. Accelerator communities should seek creative opportunities to attract participants who may not otherwise seek out an EV Ride or Drive event.

BE COGNISENT OF VEHICLE MARKETING DISTRICTS

When coordinating with multiple dealerships, it is important to be aware of the marketing boundaries, or primary marketing areas (PMAs) that are assigned to each dealership. PMAs are geographic boundaries where each OEM's dealerships can legally market their vehicles. They are designed to minimize conflict between dealerships regarding marketing territories. Early in the program, ROC EV determined each dealership's PMA to minimize potential conflict with other area dealerships. Once ROC EV understood the specific PMA boundaries, the organization became very careful not to invite dealerships outside its PMA to attend events. It is not uncommon to have some dealerships be more engaged with the program than others. Events held in PMAs with engaged dealerships make it easier to secure test drive vehicles and can have a large influence on the success of events.

REQUESTING INSURANCE DOCUMENTS

Many event hosts, especially larger institutions like universities, required Certificates of Insurance from participating dealerships at Ride and Drive events. Because these documents can take up to a week to obtain, ROC EV found that an important step in the event planning process was to ask the dealerships for Certificates of Insurance well in advance, leaving time for legal departments to make additional requests if necessary, before the event. Accelerator communities should prioritize this as a first step, in case the insurance requirements are so extensive as to prevent dealership participation.

5. DEALERSHIP ENGAGEMENT

A. OVERVIEW

Because all EVs are purchased through dealerships, with the exception of Tesla, dealers are a central player in the EV ecosystem. Dealerships are the primary source of EVs for Ride and Drive events, where consumers can test drive these vehicles in an EV-focused environment. As EVs are still a relatively new technology, salespeople often receive less specialized training. Without proper training and knowledge, salespeople may be less likely to sell EVs versus traditional internal combustion engine vehicles, which they are more comfortable speaking about. Accelerator programs can offer valuable training to help sales staff fill this knowledge gap by providing them with information on topics like consumer charging behavior, the location of regional charging infrastructure, and the impact of winter weather on battery performance, which was especially helpful in an Upstate New York city like Rochester.

EV accelerator organizations must establish strong relationships with regional dealerships to be successful. The general manager or sales manager is the most effective first point of contact, as this person will have direct authority over partnership development and will best understand the benefits of new partnerships.

ROC EV found that dealerships often had one or two people on staff with a personal passion for EVs, which often led to them seeking out more specialized training provided by the OEM. Working closely with these EV-friendly salespeople and developing relationships with them was key to securing participation in Ride and Drive events, as they were most likely to attend the events on behalf of their dealership. Because many salespeople work strictly on commission, it is important they feel ROC EV events are valuable and create sales leads.

Figure 22. Dealership staff and a ROC EV volunteer talk with consumers at a public event.

Dealerships should also be encouraged to have their staff participate in ROC EV Ride and Drives, as this is a uniquely effective way for them to better understand customer's questions about EVs while interacting with current owners and developing sales leads. For example, a salesperson from a local dealership was reluctantly sent to the very first ROC EV Ride and Drive by his supervisor. Three Ride and Drive events later, the same salesperson proudly identified himself as an EV convert and was one of our most active and passionate partners. He became the lead EV salesperson at his dealership thanks to the knowledge he gained at ROC EV events.

Regular meetings should be held with dealerships to enlist their advice and expertise in both planning and executing the program. This will keep the dealerships involved and will enhance their level of commitment to the effort.

B. ROC EV APPROACH

BUILDING RELATIONSHIPS

Figure 23. Building relationships is key to a successful accelerator community

ROC EV has found that an effective way to engage dealerships is to explain how the organization helps increase EV sales. Because the accelerator community model is new to most dealerships, they may be hesitant to participate, especially if their EV sales are historically low. ROC EV established a relationship early on with the president of the Rochester Automobile Dealers Association, who proved to be a very helpful partner. As a respected leader in the local dealership community, he made introductions to get ROC EV in the door at many dealerships who initially were unresponsive. He also donated a table at the Rochester International Auto Show to ROC EV, which provided the program with a huge audience of car enthusiasts who were less familiar with EV technology.

WHY DO DEALERSHIPS GET INVOLVED?

Figure 24. Dealership staff and City of Rochester employees gather around test drive vehicles before a workplace Ride and Drive event.

Many dealerships are excited to partner with ROC EV because the program brings sales leads from its events and other promotional tactics, and potential EV buyers are often first-time customers to a particular OEM. Brand and dealership loyalty are very important in the automobile industry, so getting new buyers in the door is crucial to the business model.[4] Dealerships who partner with ROC EV receive positive public relations from their involvement, as ROC EV aggressively promotes its initiatives and events through social media and traditional media like radio. Ride and Drive participants are provided with dealership contact information following test drives to encourage follow-up with the dealers that supplied EVs for that event.

DEALERSHIP ASSISTANCE WITH RIDE AND DRIVES

Dealership participation is critical to the success of Ride and Drives, because they provide demonstration vehicles and often provide sales staff as co-pilots for the test drives. It is typically easy for dealerships to provide vehicles, as most already have an established process for temporarily loaning vehicles that includes insurance and license plates for test drives.

[4] IHS Global Research, Country and Industry Forecasting. "IHS Automotive Analyses Loyalty Trends in US Market," The National Academies Press, 2014. http://www.ihsglobalinsight.com/SDA/SDADetail23311.htm

Figure 25. Dealership contact information from sample follow-up email

C. CHALLENGES

OBTAINING DATA

Analyzing EV sales compared to national trends is important to understand the success of the program. To obtain EV registration and sales data, ROC EV partnered with NYSERDA and Rochester Auto Dealers Association to get a comprehensive look at EV rebates issued and EV sales. Dealerships in New York State need to be registered with NYSERDA to offer the Drive Clean Rebate. Most, but not all dealerships are registered, and it's possible, though unlikely that a salesperson may not know about the state rebate which can result is discrepancies between the number of EVs sold (Rochester Auto Dealers Association data) and the number of EV rebates issued (NYSERDA). For these reasons, it was important to receive both data sets to ensure an inclusive understanding of the market.

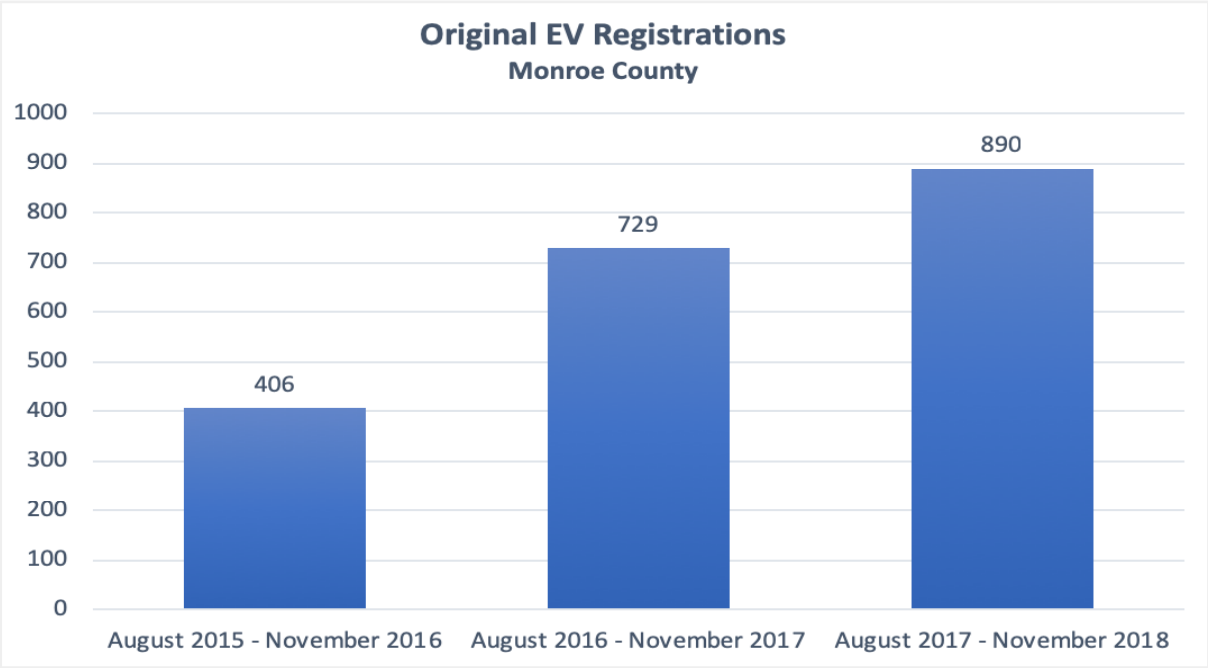


Figure 26. EV registration data via NYSERDA Evaluate NY data

Without access to regional data from an organization like Rochester Auto Dealers Association, an accelerator program would need access to Polk data, which is costly, or ask for it directly from the dealerships. This is a reasonable request if a positive relationship has been established but could mean compiling and analyzing data from many dealerships depending on the size of the local market.

D. LESSONS LEARNED

OPERATING ON DEALERSHIP TIMELINES

Dealerships operate around monthly sales goals, which means that both the first and last weeks of the month are often very busy. ROC EV found that Ride and Drive events scheduled for the middle of the month were the easiest for dealership staff to attend. Because salespeople work on commission, and Saturdays are a busy day for dealerships, it was often difficult to get dealership staff to attend events on weekends. To work around this, ROC EV made sure to schedule enough volunteer co-pilots on days when dealership staff would not be able to attend events.

On the flip side, dealerships were more willing to provide staff for events held during the week, in the middle of the work day. This worked in the program's favor for workplace Ride and Drive events, which were held during the lunch hour on weekdays.

LEVERAGE DEALERSHIP MARKETING

Hoselton Auto Mall, a local dealership that sells GM, Toyota, and Nissan brands, invited ROC EV to partner on an "Electric Vehicle Day" featuring test drives and a panel of EV experts and dealership representatives to answer questions about everything from current lease incentives to charging options. To remain impartial and fair to all dealerships in the area, ROC EV gave other dealerships the opportunity to host similar educational events and Ride and Drives.

Leveraging dealerships' existing budget is a great way to reach new consumers. With their large audience, dealerships reach many more customers, specifically potential buyers who are in the market for a new vehicle, than ROC EV would otherwise reach on its own. To market the event, a sponsored content piece was placed in the local paper and Hoselton paid for digital and social ads. The event drew a small but attentive crowd and three EVs were sold that day.

6. COMMUNICATIONS AND OUTREACH

A. OVERVIEW

A consistent communications strategy is important for accelerator community organizations to create public awareness. Messages that show how EVs save money, are fun to drive, reduce oil dependence, and lessen environmental impacts should be amplified and reflected in all marketing materials and activities. Local input may help determine which messages resonate best and should be used more. Accelerator communities should actively seek out new opportunities to project positive themes about EV use and ownership. One example of this is the sponsored content that Hoselton placed in the local paper to advertise their EV event. ROC EV authored a piece titled "Three Facts about EV Ownership". Every effort should be made to focus on the positive attributes of EV ownership.

B. ROC EV APPROACH

To create a robust community-wide understanding of EVs, accelerator communities must develop an outreach, education, and marketing strategy that is underpinned by a consistent set of messages. People have different reasons for driving EVs, and accelerator projects should promote all of them.

Outreach, education, and marketing should utilize a wide range of media to reach as many consumers as possible. These can include events like Ride and Drives, earned and paid radio, print, and online advertising, blogs, websites, newsletters, and social media.

DEVELOP CONSISTENT MESSAGES

ROC EV focused on four basic themes that flow through all its marketing and communications efforts: (i) EVs are fun to drive—they are quiet, handle well, and have exceptional performance; (ii) EVs save drivers money; (iii) EVs reduce environmental impacts; and (iv) EVs help reduce oil dependence and strengthen U.S. national security.

WORK WITH LIKE-MINDED PARTNERS

In addition to establishing an internally consistent marketing strategy, accelerator communities should work with partners and stakeholders to maximize outreach efforts. ROC EV non-profit partners were especially helpful in connecting to the broader community thanks to their large distribution lists. Organizations with a focus on sustainability or technology, like Color Brighton Green and Digital Rochester, make good partners because they have an audience who is receptive to many of the messages in ROC EV marketing. To take the guesswork out of it, ROC EV shared regular

Figure 27. ROC EV partner, Color Brighton Green, shared an upcoming event on their Facebook page, helping ROC EV reach a larger audience.

marketing toolkits (Appendix 1) with sample copy and images that partners could easily copy and paste into their newsletter, website, or social media accounts.

ROC EV worked with co-marketers whenever possible. These partners help ROC EV amplify its message, and the organization regularly engages them about their priorities and how to best coordinate marketing plans when applicable. When ROC EV hosted an event with Greater Rochester Chamber of Commerce, for example, the Chamber invited its members via email, and promoted the event through the Chamber's website, newsletter, and social media accounts. Green Spark Solar also submitted an op-ed, ghost-written by ROC EV, to the local paper promoting workplace charging and the event. Green Spark is a respected member of the business community, so their opinion may have carried more weight for people who were not as familiar with ROC EV, which was still a new program at the time of the event.

Figure 28. Example of co-branding an event. This graphic was shared by all event hosts on social media.

C. GROUP BUY

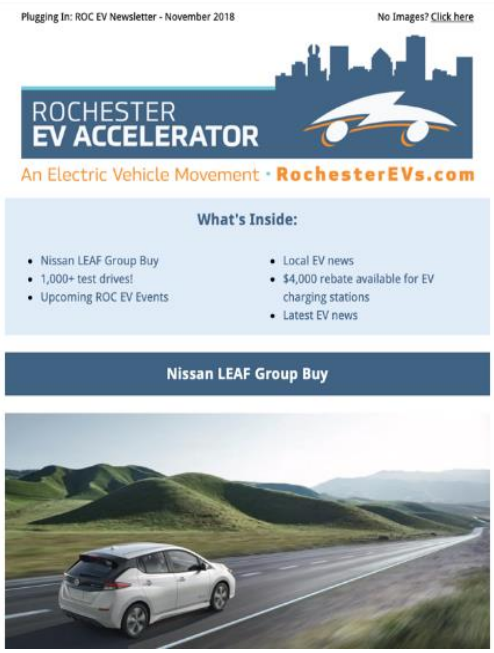


Figure 29. Sample portion of ROC EV newsletter promoting Group Buy purchasing program.

ROC EV and Nissan North America brought a group buy purchase program to Rochester in November 2018. Due to the success of similar programs around the country, ROC EV was able to leverage relationships with the local utility, Rochester Gas & Electric (RG&E), to co-brand and promote the program, which offered a $5,000 rebate to RG&E customers on an all-new Nissan LEAF.

Considerable resources went into advertising the program including in-kind support from RG&E such as being featured on the home page of their website, along with notices in monthly bills and newsletters. ROC EV ran a successful ad campaign promoting the program on local radio as well as paid digital and social ads. Community partners and workplace charging partners were provided with a marketing tool kit (Appendix 8) to help spread the word about the program to their members and employees.

At the time of this report, the group buy purchasing program had resulted in a 700 percent increase in LEAF sales for one participating dealership. Both participating dealerships are on track to have record LEAF sales in December.

D. LESSONS LEARNED

UTILIZE MARKETING PROFESSIONALS

ROC EV hired a local advertising agency, Dixon Schwabl, to work on two marketing campaigns dedicated to Ride and Drives and the Group Buy program. The campaigns used digital banner ads, key-word searches, radio buys, and social media ads. In the first month of the Ride and Drive campaign, the ROC EV website saw a 400 percent increase in visits. If budget allows, hiring a local agency who knows the market well and can further refine the campaign message is highly recommended.

INITIATE PAID ADVERTISING EARLY

In the first year, ROC EV relied exclusively on grassroots marketing to establish the brand as a known entity. ROC EV suggests initiating paid advertising to establish brand awareness early in the project, which would have helped reach more consumers faster.

COLLATERAL AND EDUCATIONAL MATERIALS ARE IMPORTANT

Relevant and consistent collateral was important to ROC EV's success. It is also critical to ensure that there are always enough available materials for events and outreach opportunities. Vehicles are by far ROC EV's most effective marketing elements because they provide an interactive way to educate potential consumers about EVs and showcase the viability of the technology.

7. PUBLIC INFRASTRUCTURE

Appropriately located public charging stations are a key indicator of EV readiness in a community. The presence of infrastructure helps assure potential EV drivers that charging will be available when it is needed. Installing charging infrastructure can give consumers comfort by linking EV-ready communities together and dramatically increasing the distance an EV can travel. ROC EV collaborated with municipalities and other stakeholders to evaluate potential sites for public charging stations and advised businesses on deploying and managing workplace charging infrastructure.

A. OVERVIEW

Even though the majority of EV charging is done at home or work, consumers must feel confident that there is sufficient public charging available in other places to alleviate range anxiety. Often, this is as simple as showing consumers a map of the available charging stations in the region and explaining that most charging is done at home if they have access to a dedicated circuit in their garage. Some consumers are hesitant to buy an EV because they are not yet aware of the convenience of charging at home.

An accelerator community organization should engage relevant stakeholders at the start of a program to determine the best locations for public charging stations. ROC EV regularly highlighted the dramatic expansion of infrastructure in social media posts and electronic distributions to stakeholders (Figure 30).

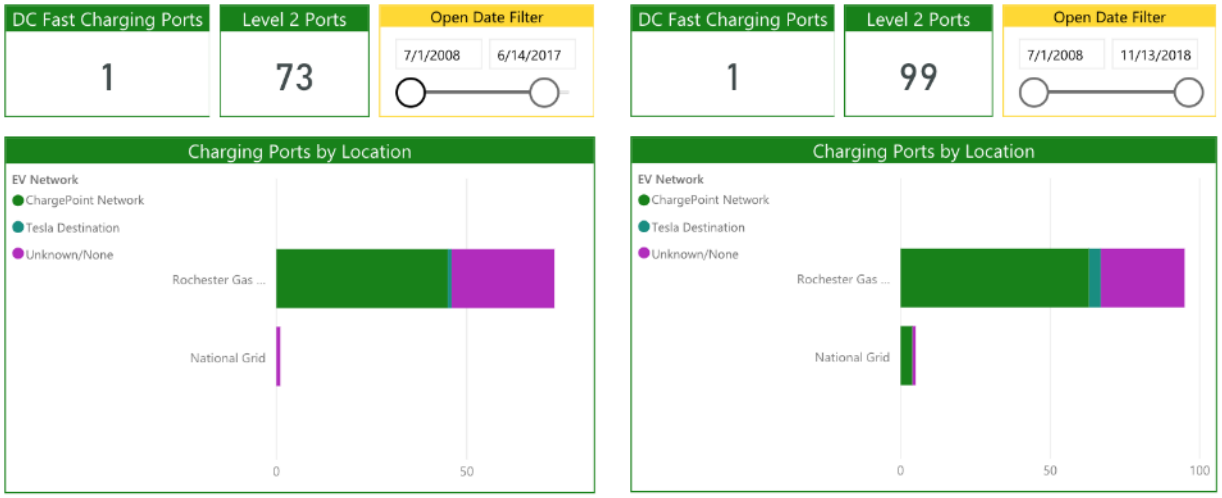


Figure 30. NYSERDA data showing increase in charging station between June 2017 and November 2018

CHARGING STATION INSTALLATIONS

Core stakeholders such as the City of Rochester Office of Sustainability and Greater Rochester Clean Cities (GRCC), played a key role in the expansion of charging infrastructure in the greater Rochester area before and during the ROC EV project timeframe. The City of Rochester's Climate Action Plan, which aims to reduce GHG emissions by 40 percent from 2010 levels by 2030, is responsible for installing more than 24 public EV charging stations since 2014.[5] The City is also leveraging funding from their Clean Energy Communities designation from NYSERDA and Climate Smart Communities designation from the New York State Department of Conservation to install more charging stations in City garages in the near future.

As part of the ROC EV program, funding for four dual-port charging stations was reserved to help accelerate public charging opportunities for the community with key organizations that could address the charging needs of EV drivers. Following discussions with several potential sites, two charging stations were installed with Rochester General Hospital and two were installed with the University of Rochester (one of which is by Strong Memorial Hospital, run by the University).

Additionally, GRCC worked with several municipalities in the Rochester metropolitan area to install charging infrastructure. These municipalities were identified in the Genesee Region charging station plan as ideal locations for EV charging stations.[6] The project was funded by NYSERDA as part of Energetics Incorporated's proposed and awarded Cleaner Greener Communities project that included support for ROC EV. GRCC hosted ribbon cutting ceremonies for each of the stations and had press cover the events. ROC EV marketing materials, such as a branded pop-up tent and flyers, were displayed at these events to create a unified brand for all the efforts of disparate funding sources to advance the EV ecosystem in greater Rochester.

Figure 31. GRCC ribbon cutting in Canandaigua, NY.

ROC EV promoted these charging station installations on the program website and across the program's social media platforms. Over the course of the program, the number of EV charging ports in Monroe County increased by 36 percent.

[5] City of Rochester Office of Energy and Sustainability. "Climate Action Plan." May 2017. http://www.cityofrochester.gov/climateactionplan/

[6] New York State Energy Research and Development Authority. "Electric Vehicle Charging Station Implementation Plan for the Upstate New York I-90 Corridor." August 2016. https://www.nyserda.ny.gov/-/media/Files/Publications/Research/Transportation/16-28-ev-charging-station-implementation.pdf

PROMOTE AVAILABLE FUNDING

Figure 32. Charge NY marketing material

It's important to be aware of the funding available for installing EV charging stations as this information can greatly impact a business or municipality's decision to install infrastructure. For example, the Charge Ready NY Rebate from NYSERDA offers public and private entities $4,000 off per EV charging port and New York State offers a tax credit of up to $5,000 for installing commercial or workplace charging stations.[7,8] Private businesses are less likely than municipalities to be aware of available state funding.

B. LESSONS LEARNED

CHANGING PERCEPTION

It is common for people who do not own EVs to be unaware of the charging infrastructure in their community. This is an issue that can prevent people from becoming comfortable with the idea of purchasing EVs. An accelerator community should update their stakeholders on infrastructure advancements and inform them on how to monitor for themselves, using resources such as the Alternative Fuels Data Center Station Locator website or PlugShare website/app, among others.

In most cases, the majority of EV charging can take place at home using a Level 1 (120 volt) charger. Accelerator programs should stress the ease of home charging and its capability to serve the majority of an EV owner's charging needs.

[7] New York State Energy Research and Development Authority. "Charging Station Programs." https://www.nyserda.ny.gov/All-Programs/Programs/ChargeNY/Charge-Electric/Charging-Station-Programs

[8] New York State Department of Taxation and Finance. "Alternative fuels and electric vehicle recharging property credit (for tax years beginning on or after January 1, 2013)." https://www.tax.ny.gov/pit/credits/alt_fuels_elec_vehicles.htm

8. POLICY

A. OVERVIEW

EV-friendly regulations at the city and state levels can have a dramatic positive impact on EV sales. Pragmatic city and state-level approaches can reduce the barriers to EV adoption, increase the number of public charging stations, and incentivize ownership through local policy, codes, legislation, and advocacy.

B. STATE POLICY

Charge NY is New York State's initiative to get more electric cars and trucks on the road and is a collaboration between NYSERDA, the New York Power Authority, and the New York State Department of Environmental Conservation. ROC EV promoted Charge NY initiatives such as the Drive Clean Rebate, a point-of-sale rebate for up to $2,000 on an EV, and Charge Ready NY, a rebate of up to $4,000 per charging port for public charging stations. Because these programs are new (Charge NY launched in April 2017 and Charge Ready NY was announced in September 2018), many New Yorkers are unaware of the rebates available to them. Educating consumers about available incentives was one of the first steps in helping them see the benefits in driving electric.

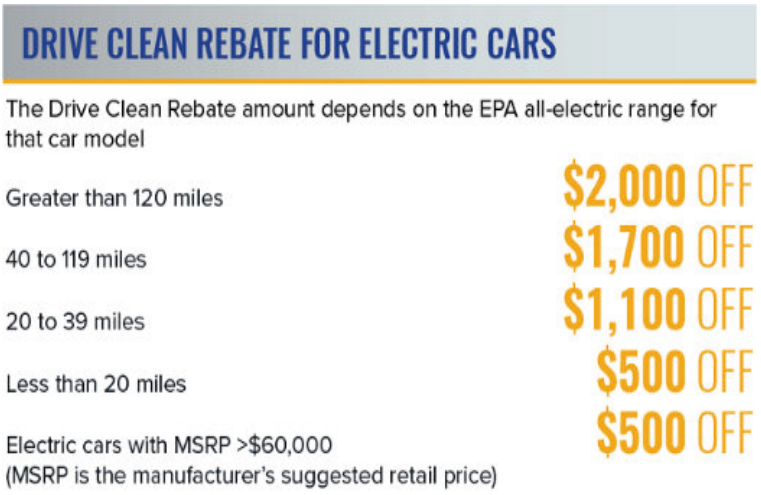


Figure 33. Drive Clean Rebate postcard easily illustrates the amount of rebate based on electric range.

C. LESSONS LEARNED

DON'T REINVENT THE WHEEL

Policy was a program area that proved challenging for ROC EV since New York is one of several states pledging to meet a zero-emission vehicle goal with some existing EV-readiness initiatives already underway. Many steps that EC took in Northern Colorado to advance EV adoption were unnecessary in Rochester because policies were already in place to support EV growth by the time ROC EV launched in 2017.

One example of this is encouraging the municipality and utilities to develop an over-the-counter permitting process or simplified codes that would enable businesses and homeowners to quickly and easily install charging stations. In the city of Rochester, a standard electrical permit is all that's required to install home charging equipment. The process is straightforward and consistent with other electrical projects. Requiring a separate permit specifically for EV charging stations would create an unnecessary barrier.

CLEARLY DEFINE THE SCOPE

In Northern Colorado, EC began with an exhaustive evaluation of existing codes, policies, and regulations to determine what was already in place to support EV adoption in the target community, how those policies could be leveraged, and which new ones should be implemented. That strategy proved to be an ambitious undertaking for ROC EV due to the program's large geographic region, Monroe County, which includes more than 19 municipalities. Accelerator communities should limit their policy efforts to one or two municipalities, especially if staff and resources are limited.

If an accelerator community is partnered with one or two municipalities, a full review of existing policies would be a great starting point. For accelerators with a larger geographic footprint, that is an unrealistic undertaking without dedicated staff. Accelerator communities should take direction from the advisory committee and EV Enthusiasts about which policies are important to advocate for, or which municipalities in a program territory need the most leadership.

9. FLEET

A. OVERVIEW

Public and private fleets often purchase multiple vehicles at once, so they have the opportunity to create a greater impact than a single consumer's personal EV purchase. Fleet EVs can also contribute to corporate or municipal sustainability initiatives such as lower greenhouse gas emissions and pollution reduction. ROC EV set out to educate local fleet and procurement personnel about the benefits of fleet electrification, such as lower fuel and maintenance costs.

Due to lower fuel and maintenance costs, EVs have a lower total cost of ownership than traditional vehicles, which makes them an attractive option to commercial and municipal fleets. Higher initial purchase costs are offset over time by lower operating costs. Depending on the number of miles driven, the ownership period, and other variables, these vehicles could generate impressive savings.

The cost to operate an EV on electricity is substantially lower than the cost of fuel for a gasoline or diesel vehicle. For example, at a price of $3 per gallon, a gasoline-powered vehicle getting 30 miles per gallon costs about 10 cents per mile to fuel. By comparison, at the national average electricity price of 10 cents per kilowatt hour, a typical electric vehicle costs about 3 cents per mile to fuel.[9]

An electric drivetrain is functionally simpler than a conventional drivetrain. For example, a fully electric vehicle has only one moving part: the electric motor. EVs also feature simpler transmissions, and they do not require fluid replacement. Features like regenerative braking reduce wear and tear on basic vehicle components. Cost savings for plug-in hybrid electric vehicles, which still have a gasoline-powered internal combustion engine for when the battery is depleted are slightly less because they will still have some engine maintenance and gasoline use.

LEAD BY EXAMPLE

The City of Rochester is a local leader in fleet electrification. Prior to the ROC EV program they were operating four Chevrolet Volts. Through their partnership on this effort and support from NYSERDA, the City acquired four more Chevrolet Volts, two Chevrolet Bolts, and one Moto Electric tram shuttle. The vehicles, which are used across the city by the Rochester Police Department and the Water and Parking Bureaus, are branded as part of the City's "Sustainable Rochester" initiative. A fleet charging solution was also developed and installed to accommodate their requirements.

As a leader in the region, Rochester demonstrated to other municipalities that fleet electrification is an affordable and sustainable option. They created positive press coverage and are sharing their experience with others. At the Fleet Electrification Workshop in June 2018, Anne Spaulding, Manager of Energy and Sustainability for the City of Rochester, gave a presentation on the city's efforts to electrify and City Fleet Manager, Joe LaDelfa shared experience from the perspective of equipment services. This encourages an attitude of, "if they can do it, so can

[9] Electrification Coalition. "The City of Loveland: Marrying Functionality and Economics." http://fleetanswers.com/sites/default/files/Loveland_Case_Study_092613.pdf

we," which should give neighboring municipalities or local companies the encouragement they need to pursue fleet electrification.

Figure 34. City of Rochester fleet EV

FLEET ELECTRIFICATION WORKSHOP

In June 2018, ROC EV and GRCC co-hosted a Fleet Electrification Workshop to educate local fleet managers about the benefits of electrification.

ROC EV prioritized recruitment leading up to the workshop to ensure decision-makers would attend. That way, if participants were interested in taking action after learning about the program opportunities, they would have the authority to make that decision. Thanks to a partnership with GRCC, who provided a list of contacts in the fleet industry that they have worked with over the last 25 years, ROC EV conducted individual outreach via email and phone to ensure decision-makers would be in the room.

While many workshop attendees had some knowledge about fleet electrification, it was helpful to establish a shared level of knowledge by reviewing the basics of EVs and charging infrastructure. Introductions and background about the partnership between GRCC and ROC EV helped to contextualize the event. Dealerships were invited to bring test drive vehicles, which was a great way for attendees to ask questions about the technical aspects of specific vehicles and get hands-on experience behind the wheel.

B. CASE STUDY: TOWN OF IRONDEQUOIT

Representatives from the Town of Irondequoit, a suburb just outside Rochester, learned of ROC EV's fleet electrification efforts at the workshop in June and reached out for more information about how to apply the information presented in the workshop to their fleet. Sawatch Labs offered to implement telematics and other technology to enable data-driven fleet management and explore opportunities to deploy EVs into the town's fleet. These analytics are designed to do two things: (1) identify fleet vehicles that could be well-suited for the transition to EVs, and (2) manage electricity consumption, charging events, and utilization of EVs once they are incorporated into the fleet.

Sawatch and town representatives reviewed data collected over almost three months that showed all four vehicles studied were candidates for electrification and optimization based on their current utilization. For example, if one

Chevrolet Cruze was replaced with a Nissan LEAF, the town would see an estimated $10,831 in operational savings over eight years. The net savings, which is calculated based solely on vehicle MSRP, becomes positive when you factor in the Drive Clean Rebate and government fleet pricing. (Figure 35). Town representatives will bring the findings from Sawatch's analysis to their board to make recommendations for the 2019 budget to include costs for vehicle replacement.

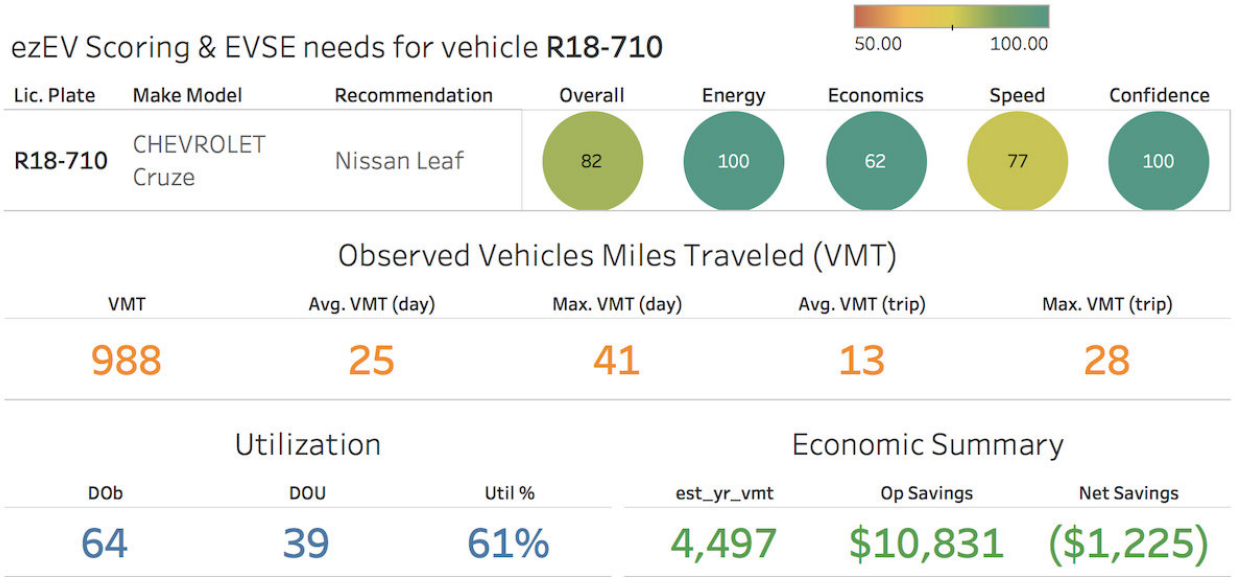


Figure 35. Town of Irondequoit Telematics Pilot & EV Suitability Analysis via Sawatch Labs

C. LESSONS LEARNED

PRIORITIZE FLEET OUTREACH FIRST

Fleet replacement cycles vary from organization to organization but often last many years. With this knowledge, it is best to prioritize fleet outreach as one of the first actions for an accelerator community. If an accelerator community plans to employ telematics data analysis as a tactic to encourage fleets to electrify, 30-90 days will be required to collect data. If the analysis from telematics data recommends that fleet electrification would lead to energy and economic savings, the municipality or company may then wish to acquire or replace traditional vehicles with electric, which can take many months.

SHARE RECENT INFORMATION

ROC EV found that many fleet managers had done initial research about electrifying their fleets when the technology was still very new, and therefore out of reach for most municipal budgets. Because of that, it had been 3-5 years since options were explored. It is important that the most recent information about battery range, vehicle cost, charging infrastructure, and any grant funding is readily available to help fleets make educated decisions.

10. CONCLUSION

Since ROC EV launched in June 2017, the program has hosted 35 Ride and Drive events and recorded 1,036 test drives. Thirteen pioneering companies in greater Rochester joined the Workplace Charging Challenge, educating their workforce about the benefits of driving electric. According to EC analysis based on data from the Rochester Automobile Dealers Association, the market penetration rate during the ROC EV program timeline surpassed the initial goal of 1 percent and by the end of October, EV sales made up 1.79 percent of all vehicles sold in Monroe County. One group buy purchasing program was organized, while the program's ambitious goal was four separate programs. Accelerators should consider the length of time their utility or other partners will need to gain approval when planning for a group buy purchasing program.

COMMUNITY ORGANIZING PRINCIPLES

Accelerator communities should prioritize strong community organizing principles to be successful. Due to the variety of stakeholders with various levels of engagement, it's important to effectively manage relationships and communicate regularly with partners. ROC EV found that individual outreach over the phone yielded the best response, with follow up via email to ensure a written record was available and could be easily referenced. A communications strategy such as this is often necessary to get responses and is a recommended approach for other accelerator communities to use.

TRANSITION PLAN

ROC EV was designed to be a self-sustaining community initiative upon the expiration of the original grant on December 31, 2018. With this in mind, efforts were made beginning in mid-2018 to discuss the transition of program leadership. The City of Rochester and GRCC, both stakeholders since the launch of the program, pledged to continue the initiative together with funding from both organizations and project management by GRCC.

Support from NYSERDA allowed ROC EV to have a full-time program manager, which was critical to launch this program. Even with most strategies and efforts established, GRCC and the City don't have the resources to dedicate the equivalent of a full-time manager, so they will focus on supporting program areas with the most impact. After many meetings with core stakeholders and EV Enthusiasts, it was decided that semi-annual Ride and Drive events combined with monthly EV Enthusiast meetups, will continue in 2019. GRCC will manage the ROC EV social media channels and distribute a regular newsletter to keep the community engaged and informed. GRCC and the City will promote the program by branding all future EV-related initiatives as ROC EV, using the logo, colors, and fonts of ROC EV (Appendix 9).

Additionally, the EV Enthusiast group will be self-led and continue to do outreach in the community under the ROC EV brand. Thanks to extensive efforts by ROC EV to recruit, train, and retain volunteers and partners, several program elements should be self-sustaining with minimal oversight, as long as communication stays consistent among the partners.

EV MARKET TRENDS

A recent study by the American Automobile Association found that 20 percent or 50 million Americans, will likely go electric for their next vehicle purchase, up from 15 percent in 2017.[10] With battery costs declining, electric range increasing, and more models coming on the market every year, more Americans will be making the switch.

Analysis by the EC in October 2018 showed that EV sales were exceptionally strong for the U.S. market.[11] Automakers sold more than 110,000 EVs since October 2017, up by 95 percent from the same period last year, which means that it is likely that the one millionth EV will be sold in the US this year. In the past 6.5 years, automakers have sold more than 992,600 EVs. Fully electric vehicle sales improved 114 percent between the third quarter in 2017 and the third quarter in 2018, boosted dramatically by Tesla which posted a 163 percent increase between those time periods. Tesla met its Model 3 production goals in the third quarter of 2018 and outstripped its competitors by a long shot.[12] Sales of the Model 3 sedan reached roughly 22,250 units in September, representing almost two-thirds of sales in the fully electric vehicle segment.[13]

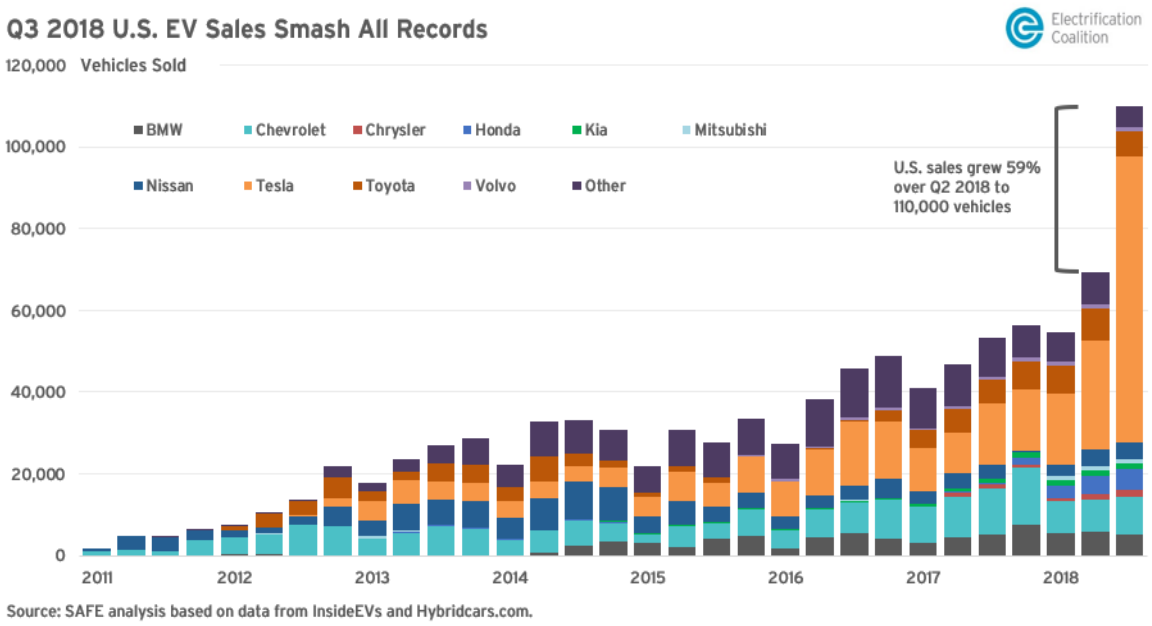


Figure 36. Electrification Coalition analysis of EV sales per quarter 2011-2018

[10] American Automobile Association. "1-in-5 U.S. Drivers Want an Electric Vehicle," May 2018. https://newsroom.aaa.com/2018/05/1-in-5-us-drivers-want-electric-vehicle/

[11] Paul Ruiz, Electrification Coalition. "U.S. Reaches 1 Million Electric Vehicle Sales," October 2018. http://energyfuse.org/u-s-reaches-1-million-electric-vehicle-sales/

[12] Inside EVs. "Tesla Model 3 Sales Beyond Expectations: New Record In September," October 2018. https://insideevs.com/tesla-model-3-sales-record-september/

[13] Bloomberg L.P. "Tesla Model 3 Tracker" https://www.bloomberg.com/graphics/2018-tesla-tracker/

In New York State, many efforts are contributing to an increasingly electrified transportation sector such as the development of 200 DC fast chargers along major traffic corridors, and aggressive goals from Governor Andrew Cuomo to see at least 10,000 charging stations in the state by the end of 2021 as part of the state's Charge NY 2.0 initiative.[14]

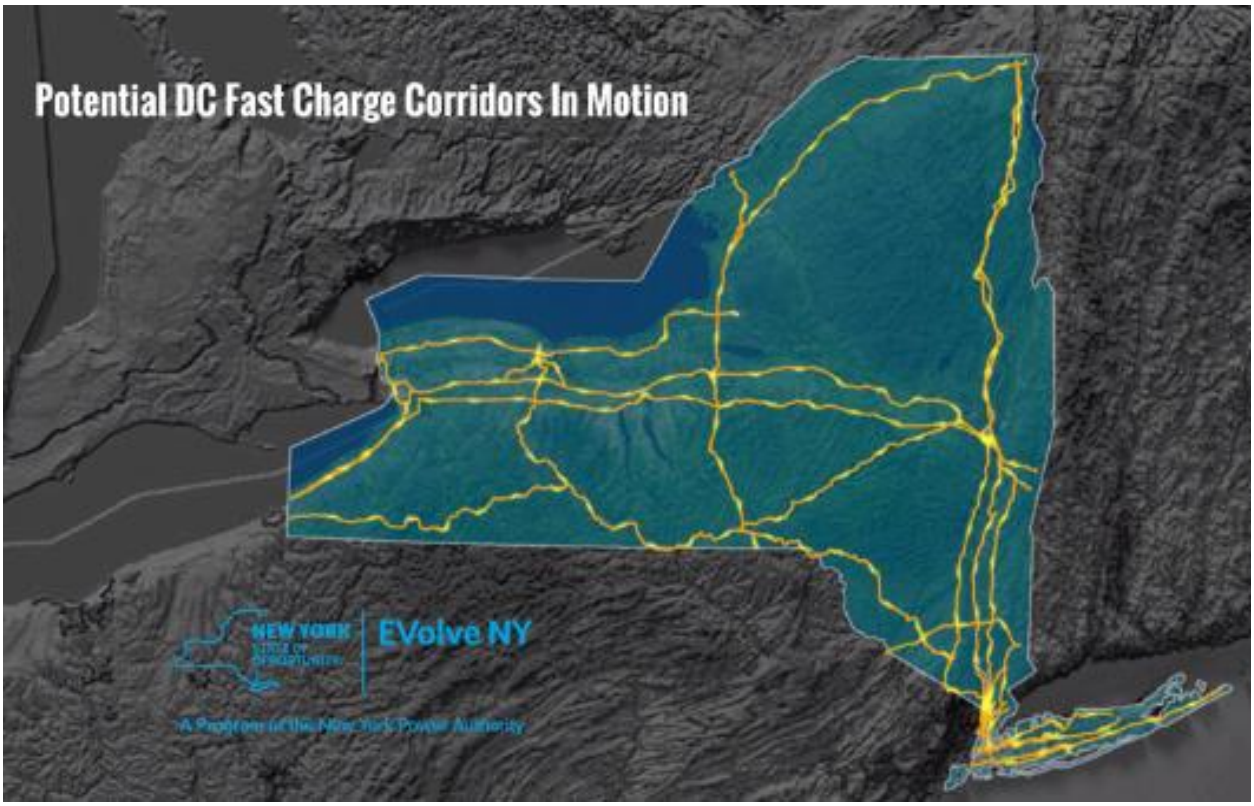


Figure 37. Potential DC Fast Charge Corridors via New York Power Authority

[14] New York Power Authority (NYPA). "New Statewide Initiatives to Spur Widespread Adoption of Electric Vehicles and Increase Charging Infrastructure." News release, November 19, 2018. https://www.nypa.gov/news/press-releases/2018/20181119-evolve.

APPENDIX

APPENDIX 1. PARTNER MARKETING TOOLKIT – RIDE AND DRIVE PROMOTION

Assets

Logos [link to logo files]

Colors

Left to Right: Orange: #F9Bb25, Light Grey: #F6F7F9, Light Blue: #5AC7DA, Dark Blue: #3F6184, Dark Grey: #778899, Navy Blue: #323A45

Websites: Ride & Drive registration: https://www.rochesterevs.com/register/

Photos: Promotional Images

Twitter	Facebook	Instagram
#DriveClean #EV #RideAndDrive #rocEV	#DriveClean #EV #rocEV	#DriveClean #EV #rocEV
@RochesterEVs @NYSERDA @ChargeNY	@ROCEVs @NYSERDA @ChargeNY	@ROCEV @NYSERDA

Communication Templates

Promotional Social Example (downloadable file here - click "Download" button on top right and select PNG)

Do not delete ROC EV logo

Example Newsletter Copy:

SPOT cowork will be hosting a presentation by the Rochester Electric Vehicle Accelerator (ROC EV) on December 11th from 12:00 p.m. to 1:30 p.m. Join us to learn about the benefits of electric vehicles and find out why you should make the switch to driving electric! Register to take an EV test drive after the presentation by visiting https://www.rochesterevs.com/register
IMAGES: test-drive-stock.jpg, high-tech EV.jpg and/or include ROC EV logo

Example Social Posts: Please tag anything in [brackets] with @

Post 1 (Facebook, Instagram): SPOT cowork is partnering with [ROC EV] to make Rochester a cleaner, healthier, and more sustainable community by hosting an educational event about electric vehicles. Sign up today! https://www.rochesterevs.com/register
IMAGES: test-drive-stock.jpg, high-tech EV.jpg and/or include ROC EV logo

Post 2 (Facebook, Twitter, Instagram): SPOT cowork knows that electric vehicles make driving more fun. On 12/11, attend an exciting presentation to learn about the many benefits of #EVs and experience the thrill of driving electric! Visit https://www.rochesterevs.com/register to register for an #EV test drive.
IMAGES: test-drive-stock.jpg, high-tech EV.jpg

APPENDIX 2. WORKPLACE CHARGING CHALLENGE – EMPLOYEE SURVEY

SAMPLE EMPLOYEE SURVEY

For Workplace Charging Planning

Plug-in electric vehicles (EVs) use electricity as either their primary fuel or to improve fuel efficiency. Today, nearly 40 EV models are available, expanding driver options. We are considering the installation of charging infrastructure to assist employees who drive EVs to work. Your responses to this survey will be used to determine employee interest in this benefit. Participation in this survey is voluntary and you do not need to respond to any of the questions that you do not wish to answer.

1. If you drive to work, approximately how far is your trip (one-way)?
a. Less than 10 miles
b. 10-25 miles
c. 26-50 miles
d. More than 50 miles

2. Throughout the workday, what is your usual travel pattern?
a. I stay at the worksite and do not move my vehicle
b. I leave the worksite and move my vehicle once per day
c. I leave the worksite and move my vehicle more than once per day

3. Do you own or are you considering purchasing or leasing an electric or plug-in hybrid electric vehicle?
a. Yes, I already own one
b. Yes, I'm considering purchasing in the next 6 months
c. Yes, I'm considering purchasing in 12-24 months
d. Yes, I'm considering purchasing but I'm not sure when
e. No

4. If yes, what type of vehicle are you most interested in?
a. Plug-in hybrid electric vehicle (ex. Chevy Volt, Ford C-MAX energi, etc.)
b. Electric vehicle (ex. Nissan Leaf, BMW i3, etc.)

5. Do you or would you have the ability to install a charging station at your residence?
a. Yes
b. No
c. I don't know

6. Should [Workplace] install electric vehicle charging stations at your employee parking garage/lot?
a. Yes
b. No

7. If [Workplace] installs electric vehicle charging stations at your facility, would you use them?
a. Yes
b. No

8. What is the most you would be willing to pay for use of the charging stations?
a. $0 per charging session
b. $0-$2 per charging session
c. $2-$4 per charging session
d. $4-$6 per charging session
e. More than $6 per charging session
f. N/A because I will not ever use the charging stations

9. Would having access to an electric vehicle charging station at work increase the probability that you would purchase an electric or plug-in hybrid electric vehicle in the future?
a. Yes
b. No

10. Are you interested in offering continued feedback as part of a designated task force on workplace charging?
*Note: Optional question, only for employers interested in forming a workplace charging committee
a. Yes
b. No

Source: U.S. Department of Energy

APPENDIX 3. EMPLOYER NEWSLETTER CONTENT

Long newsletter/intranet/email content:

***Highlighted text requires editing for each partner** All content shared as a courtesy and can be customized for your unique needs.*

SUBJECT: Why XXX joined the ROC EV Workplace Charging Partnership

The Rochester Electric Vehicle (EV) Accelerator, or ROC EV, is an innovative, community-wide initiative aimed at achieving widespread deployment of plug-in EVs. ROC EV is promoting EVs by developing innovative public-private partnerships, a comprehensive EV ecosystem, and cultivating strong community involvement. XXX is proud to stand with ROC EV as we have recently signed on to pledge our support as a Workplace Charging Partner.

You might wonder, why EVs and workplace charging? And why does XXX support it? What actions will we be taking with this program?

At XXX, we want to provide a supportive environment for our employees, including one that takes away a big hesitation to an ultimately cost-saving purchase decision. Statistics show that EV drivers conduct 90 percent or more of their charging at home or at work. By expanding the availability of workplace charging infrastructure, it can play a significant role in accelerating the number of EVs on the road and helping to put money back into your pockets.

The U.S. Department of Energy surveyed employers offering workplace charging, and findings showed their employees were six times more likely to drive a plug-in electric vehicle than employees that did not have access to charging at work. Survey also found 80 percent of these employers offered EV charging as a benefit to retain and attract a more talented modern workforce… and daily EV charging can cost as little as the equivalent of a morning cup of coffee. We want to bring these benefits home – or to work – for the employees of XXX.

Our commitment to ROC EV's Workplace Charging Partnership means that we're going to work towards expanding access to EV charging. This may include surveying the workforce to determine present and future charging needs, conducting a site plan to find the right location, developing a policy to guide charging protocols, and outreach activities such as making an announcement and educating our team. Together we can make a difference for our employees and serve as an example for others across the region.

We encourage you to ask us questions about this partnership, engage in dialogue directly with ROC EV, and consider driving electric in the near future!

External Website Content:

Highlighted text requires editing for each partner

HEADING: XXX Joins Rochester Electric Vehicle Accelerator (ROC EV) as a Workplace Charging Partner

The Rochester Electric Vehicle (EV) Accelerator, or ROC EV, is an innovative, community-wide initiative aimed at achieving widespread deployment of plug-in EVs. ROC EV is promoting EVs by developing innovative public-private partnerships, a comprehensive EV ecosystem, and cultivating strong community involvement. XXX is proud to stand with ROC EV as we have recently signed on to pledge our support as a Workplace Charging Partner.

Statistics show that EV drivers conduct 90 percent or more of their charging at home or at work. By expanding the availability of workplace charging infrastructure, it can play a significant role in accelerating the number of EVs on the road and helping to put money back into our employees' pockets.

The U.S. Department of Energy surveyed employers offering workplace charging, and findings showed their employees were six times more likely to drive a plug-in electric vehicle than employees that did not have access to charging at work. The survey also found 80 percent of these employers offered EV charging as a benefit to retain and attract a more talented modern workforce… and daily EV charging can cost as little as the equivalent of a morning cup of coffee. We want to bring these benefits home – or to work – for the employees of XXX.

ROC EV is supported by the New York State Energy Research and Development Authority (NYSERDA) and is being led by the Electrification Coalition in collaboration with the City of Rochester, Greater Rochester Clean Cities, and Energetics Incorporated. For more information, visit www.RochesterEVs.com.

Bullet Points to Announce at Staff Meeting (Internal Company Announcement):

- XXX is partnering with the Rochester Electric Vehicle Accelerator (ROC EV) and is being designated as an official Workplace Charging Partner.
- We are doing this because offering workplace charging will establish us as an innovative employer, offer an employee perk that has comparable costs to a daily cup of coffee, and give us an opportunity to actively contribute to sustainability goals.
- The actions that we will be taking may include:
    - anonymously surveying the workforce to determine present and future charging needs,
    - conducting a site plan to find the right location for future charging stations,
    - developing a policy to guide charging protocols,
    - and outreach activities such as making an announcement and educating our team.
        - Lunch and learn presentation from ROC EV staff
        - Exclusive onsite Ride and Drive for our employees

APPENDIX 4. PARTNER MEDIA POSTS

ROC EV Workplace Charging Challenge – Partner Media Posts

Sample Tweet: Through @RochesterEVs we offer Workplace Charging as an employee benefit. Visit http://www.rochesterevs.com/workplace-charging/ to learn more and join in #LeadingtheCharge in NY!

Sample Tweet: Did you know we provide free coffee AND free electric vehicle charging for our staff? They cost about the same to provide. Visit http://www.rochesterevs.com/workplace-charging/ to learn how your workplace can get involved!

Sample Facebook/LinkedIn: By offering EV charging at our workplace, we are facilitating our employees' ability to participate in environmentally-friendly transportation. ~~insert company name~~ is proud to participate in the @ROCEV Workplace Charging Challenge and help in #LeadingtheCharge. Visit http://www.rochesterevs.com/workplace-charging/ to learn how your workplace can get involved!

Sample Facebook/LinkedIn: Did you know that in New York State, approximately one-third of all the electricity generated comes from #renewable sources, and coal accounts for less than 1%? Driving an #EV is making an environmentally-friendly decision, and we want to support our employees in doing so. That's why we joined the #ROCEV Workplace Charging Challenge! Check it out here: http://www.rochesterevs.com/workplace-charging/

Sample Facebook/LinkedIn: Employee satisfaction is important to us, and offering electric vehicle (EV) workplace charging has also become more important in attracting and retaining top talent. Our employees drive #EVs for a multitude of reasons, such as fuel savings, lowering their carbon footprint, and reducing our national dependence on foreign oil— so they asked for workplace charging. And we delivered. Visit http://www.rochesterevs.com/workplace-charging/ to learn how you can provide EV charging at your workplace.

APPENDIX 5. WORKPLACE CHARGING CHALLENGE – EVENT PROGRAM

Spotlight Tour – March 6, Radio Social (4:45 to 7pm)
PROGRAM FLOW

4:45 to 5:30 p.m. **Registration, Receive passport, Mingle, Cash bar and Light Snacks**

- Inform guests to visit each station to collect up to 6 Stamps on their passport
- Attendees begin visiting each station to get informed and get their passport stamped
- At each station, guests informed about step in Workplace Charging Challenge process
- Instruct attendees that getting 6 stamps will get them a free drink AFTER test drive and serve as their entry to raffle for charging station
- Pause test drives at 5:25 to ensure attendance for speaking portion

5:30 to 5:36 p.m. **Host and Sponsor Remarks** ***(6 Minutes)***

- **Rochester Chamber - Bob Duffy** ***(2 Minutes)***
  - Welcome Remarks
  - Thank all for coming
  - Spotlight tour brought to you by **Rochester EV Accelerator and Rochester Automobile Dealers Association (RADA)** - *Refer to talking points attached*
  - **Thank additional Spotlight Supporting sponsors:**
    - **EV Charge Solutions** for donating charging station that will be given away in raffle drawing at end, and **Greater Rochester Clean Cities**
  - Welcome **Electrification Coalition VP, Ben Prochazka** to say a few words

- **Electrification Coalition - Ben Prochazka** ***(2 Minutes)***
  - Thank Rochester Chamber for hosting, partners, supporters and sponsors
  - Electrification Coalition and ROC EV intro
  - Why workplace charging is so important to EV adoption
  - Significance of ROC EV workplace charging partners and their commitments
  - A call to action for others to join and make Rochester a workplace leader
  - Welcome NYSERDA, Adam Ruder in attendance

- **NYSERDA – Adam Ruder** ***(2 Minutes)***

5:36 to 5:42pm **Plaque Presentation – Carolyn Levine** ***(6 Minutes)***

1. City of Rochester
2. Dixon Schwabl
3. SunCommon
4. Larsen Engineers
5. Nazareth College
6. Rochester Institute of Technology

5:45 to 6:45pm **Invite Attendees to continue collecting stamps and taking test drives – Carolyn Levine**

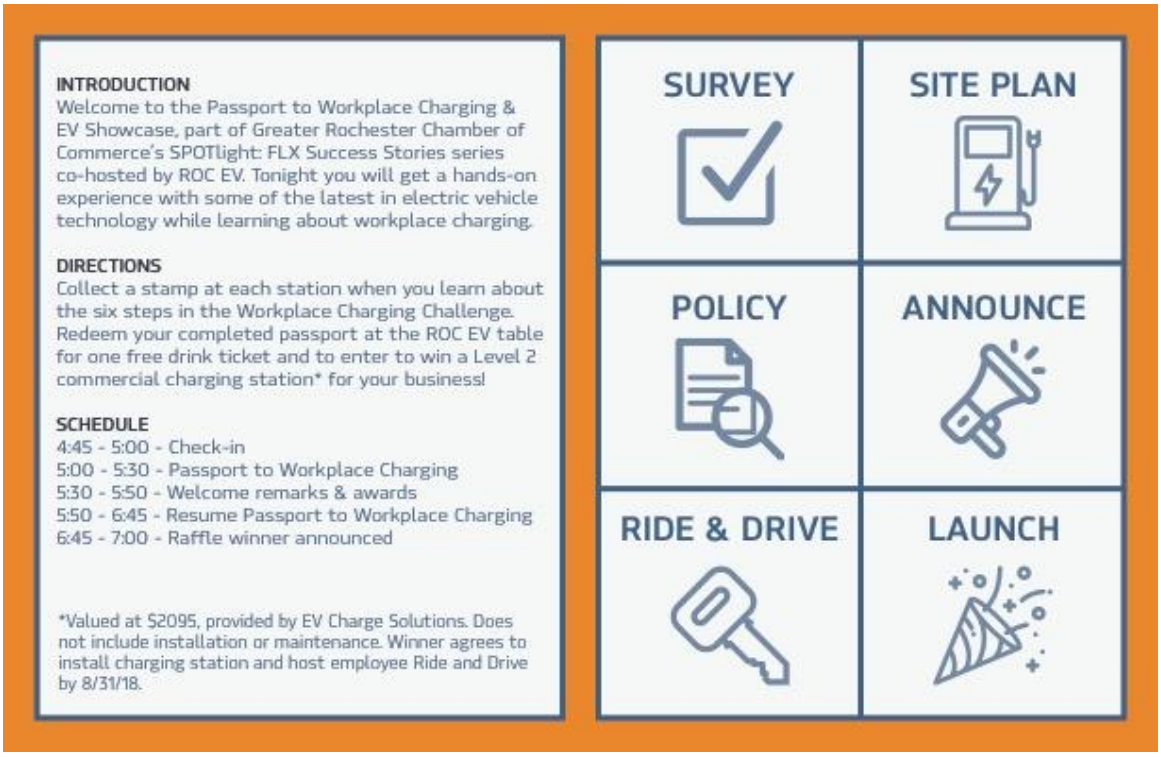
6:45 to 6:50pm **Raffle drawing for charging station – Travis Buholtz** ***(1-2 Minutes)***

- Drawing takes place after max attendee cards are collected
- OK to pick winner's card without having to gather the attendees back again for the drawing
- Raffle winner does not need to be present to win the Charging Station

7:00 pm **Program Ends**

###

APPENDIX 6. WORKPLACE CHARGING CHALLENGE - PASSPORT



(inside)

(cover)

APPENDIX 7. RIDE AND DRIVE PRE-REGISTRATION FORM & WAIVER

0% 0 / 10 Fields Completed.

Ride & Drive Registration

Greece Baptist Church | Sunday, December 9th | Presentation from 11:00 - 11:30 AM, test drives from 11:30 - 12:00 PM **All drivers must present a valid license at the time of your drive**

Name *
First Name Last Name

E-mail *
ex: myname@example.com

Phone Number
\-
Area Code Phone Number

Next

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Pre-drive Survey

On a scale of 1-5, how interested are you in electric vehicles (EVs)? *

- 1 (Not Interested)
- 2
- 3
- 4
- 5 (Very Interested)

Have you ever driven an EV before? *

- Yes
- No

Please select the top reason why you would consider buying or leasing an electric car. (Select one) *

- Lower operating costs (decreased spending on gas & maintenance)
- Driving characteristics (instant acceleration, quiet ride, etc)
- Environmental benefits
- Interest in reducing U.S. dependence on oil
- Convenience of fueling/charging at home
- I would not consider purchasing or leasing an electric car

If you were able to charge your car at work, would you be more likely to consider purchasing an EV? *

- Yes
- No

How does the availability of up to $9,500 in state rebates and federal tax credits impact your interest in purchasing or leasing an electric car? *

- Very much
- A little
- Not at all

How likely are you to purchase an electric vehicle as your next car? *

- Very likely
- Somewhat likely
- Unlikely

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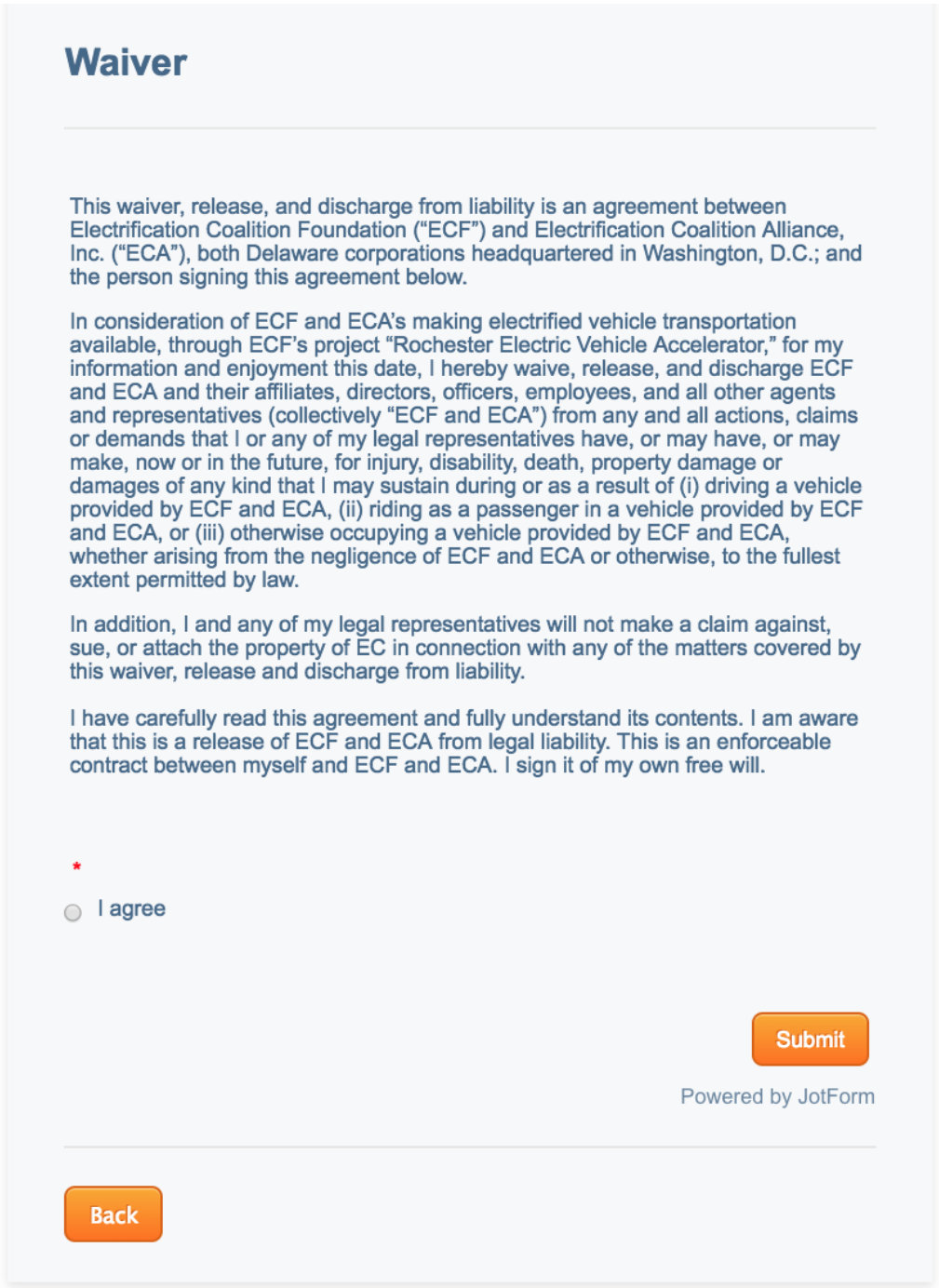

Waiver

This waiver, release, and discharge from liability is an agreement between Electrification Coalition Foundation ("ECF") and Electrification Coalition Alliance, Inc. ("ECA"), both Delaware corporations headquartered in Washington, D.C.; and the person signing this agreement below.

In consideration of ECF and ECA's making electrified vehicle transportation available, through ECF's project "Rochester Electric Vehicle Accelerator," for my information and enjoyment this date, I hereby waive, release, and discharge ECF and ECA and their affiliates, directors, officers, employees, and all other agents and representatives (collectively "ECF and ECA") from any and all actions, claims or demands that I or any of my legal representatives have, or may have, or may make, now or in the future, for injury, disability, death, property damage or damages of any kind that I may sustain during or as a result of (i) driving a vehicle provided by ECF and ECA, (ii) riding as a passenger in a vehicle provided by ECF and ECA, or (iii) otherwise occupying a vehicle provided by ECF and ECA, whether arising from the negligence of ECF and ECA or otherwise, to the fullest extent permitted by law.

In addition, I and any of my legal representatives will not make a claim against, sue, or attach the property of EC in connection with any of the matters covered by this waiver, release and discharge from liability.

I have carefully read this agreement and fully understand its contents. I am aware that this is a release of ECF and ECA from legal liability. This is an enforceable contract between myself and ECF and ECA. I sign it of my own free will.

*

I agree

Submit

Powered by JotForm

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APPENDIX 8. GROUP BUY MARKETING TOOLKIT- DECEMBER 2018

Social Media

Twitter

* Please be sure to tag us so we can monitor activity.
** Include image whenever possible. Tweets and posts with images get more attention.

Handles

@RochesterEVs – ROC EV
@dorschel - Dorschel Automotive Group
@Hoselton - Hoselton Auto Mall
@NissanElectric – Nissan Electric (North America)

Hashtags

#GroupBuy
#ROCEV
#EV or #EVs
#DriveElectric
#LEAF

Sample Posts

- Have you heard about the @RochesterEVs #GroupBuy? Print out the official flyer at the link below, then stop into @Hoselton or @dorschel by January 2nd for $5,000 off a brand new Nissan #LEAF. https://www.rochesterevs.com/discount (Include GroupBuy_940x788.png)

- Between now and January 2nd, RG&E customers and @RochesterEVs workplace charging partners can get $5,000 off a new Nissan LEAF! Find out how you can save big. https://www.rochesterevs.com/discount

- The end of the year is a great time to purchase an #EV because you can quickly claim your tax credit. Find out how you can access even more savings on a Nissan LEAF https://www.rochesterevs.com/discount

Facebook

* Please be sure to tag us in posts so we can monitor activity
** Posts in this category can also be used on other platforms (Google+, LinkedIn, etc.) if you choose to reach your audience through those mediums

Pages

Rochester Electric Vehicle Accelerator: LINK
Hoselton Auto Mall: LINK
Dorschel Automotive: LINK

Sample Posts

- Want a a $5,000 rebate on a Nissan LEAF? No gas, no oil changes, and up to a 150-mile range. Click for details then stop into @Hoselton or @dorschel by January 2nd for a brand new #LEAF!
  https://www.rochesterevs.com/discount
  (Include GroupBuy_940x788.png)

- Now through January 2nd, @ROCEVs workplace charging partners and RG&E customers can receive $5,000 off a brand-new Nissan LEAF! Find out how you can save big.
  https://www.rochesterevs.com/discount
  (Include GroupBuy_940x788.png)


ROCHESTER
EV ACCELERATOR
An Electric Vehicle Movement · RochesterEVs.com
2018 ROC EV
Group Buy
Nissan LEAF MSRP $29,990
NYS Drive Clean Rebate - $2,000
Federal Tax Credit (up to) - $7,500
Group Buy Discount - $5,000
FINAL PRICE $15,490

8.2 – Group Buy Flyer

RG&E

All-New Nissan LEAF®

World's Best-Selling Electric Car[1]
100% Electric

NISSAN
Innovation that excites

$5,000 Special Rebate[3]

for eligible customers in select states.
Proof of eligibility required.

Eligible customers can receive:

$5,000 rebate[3] off MSRPI

+ up to **$7,500** potentia Federal tax incentive[4]

Up to $12,500 in Total Savings!

Additional state incentives may also be available![4]

Fleet Certification Code: B76113

Simply Amazing Nissan LEAF

More Range at an affordable price!

Up to 151 mile range[5] at a MSRP starting at $29,990

Nissan Intelligent Mobility

Available ProPILOT Assist can make highway driving less stressful[7]
Allows you to pace with the car in front of you, maintaining a set distance, while helping keep you centered in your lane. Even through slight curves. Can come to a stop automatically, and resume, without driver intervention.

e-Pedal Mode, a more natural way to manage traffic.[6]
Accelerate or brake in traffic, using a single pedal, easing traffic congestion. Come to a complete stop and hold, even on steep hills, without the brake pedal.

Advanced Safety Features

Standard Automatic Emergency Braking[8]
It can apply the brakes automatically to help you avoid frontal collision, or if unavoidable, help reduce the severity.

Join us in making a difference.

As part of our effort to accelerate electric vehicle transportation alternatives throughout the United States, Nissan North America, Inc. is offering eligible Rochester Gas & Electric employees and customers a special opportunity to purchase the all-new, 100% electric, Nissan LEAF®. With each qualified purchase, eligible customers can receive a $5,000 Fleetail Rebate off MSRP[3], plus a potential Federal tax incentive of up to $7,500.[4] State incentives may also be available![4]

How to get this great incentive:

Simply bring a copy of this flyer, both the front and back pages, along with your monthly electric bill or proof of employment to your participating Nissan dealership (**must be presented at the time of purchase**). This limited time offer expires 1/2/2019 and cannot be combined with other Nissan special incentives. Residency restrictions apply.[3]

See your local participating Nissan Dealer for complete details: NissanUSA.com/nissandealers

(front)

1 Based on cumulative sales data from Dec 2010 - April 2018.

2 2018/2019 LEAF starts at $29,990. S trim shown. Price is Manufacturer's Suggested Retail Price excluding destination charge, tax, title, license and options. Dealer sets actual price.

3 **ELIGIBILITY REQUIREMENTS AND OTHER RESTRICTIONS APPLY. PROOF OF ELIGIBILITY REQUIRED.** The $5,000 Nissan Fleetail Rebate off MSRP is available to eligible employees and customers of Rochester Gas & Electric who reside in one of the following states: **Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont**. Must present to the participating Nissan dealer the following proofs of eligibility: (1) proof of current employment at Rochester Gas & Electric or a copy of your current utility bill from Rochester Gas & Electric; and, (2) a copy of both sides of this flyer. Available on purchase from new dealer stock. Down payment may be required. This incentive cannot be combined with any other Nissan special incentives. See dealer for details. Ends 1/2/19.

4 The incentives referenced are for informational purposes only. This information does not constitute tax or legal advice. All persons considering use of available incentives and additional perks should consult with their own tax or legal professional to determine eligibility, specific amount of incentives available, if any, and further details. The incentives and additional perks are not within Nissan's control and are subject to change without notice. Interested parties should confirm the accuracy of the information before relying on it to make a purchase. Residency restrictions may apply.

5 MY18 EPA range of 151 miles. Actual range may vary based on driving conditions. Use for comparison only.

6 e-Pedal: Monitor traffic conditions and use conventional brake as needed to prevent collisions. See Owner's Manual for safety information.

7 ProPILOT Assist cannot prevent collisions. Always monitor traffic conditions and keep both hands on the steering wheel. See Owner's Manual for safety information.

8 Automatic Emergency Braking cannot prevent all collisions and may not provide warning or braking in all conditions. Driver should monitor traffic conditions and brake as needed to prevent collisions. See Owner's Manual for safety information.

(Back)

8.3 – Group Buy Graphic Example: Website Header

APPENDIX 9. ROC EV BRANDING GUIDE

ROCHESTER
EV ACCELERATOR
BRAND GUIDELINES

The Rochester EV (Electric Vehicle) Accelerator, administered by the Electrification Coalition (EC) in partnership with the Genesee Region Clean Communities, Energetics Incorporated, and the City of Rochester Office of Energy and Sustainability is an innovative, community-wide initiative aimed at achieving widespread deployment of electric vehicles (EVs) . This project is supported by the New York State Energy Research and Development Authority (NYSERDA) as part of the ChargeNY initiative. Overall key players in the Rochester EV Accelerator include state and local government, regulators, utilities, large employers, and civic groups.

The EV Accelerator will help build support for and increase market penetration of EVs by focusing on:

- Community Readiness
- Consumer Education
- Consumer Experience
- Fleet Transition
- Acceleration

MISSION STATEMENT

The Rochester EV Accelerator, (or "ROC EV" for short) is an innovative, community-wide initiative aimed at achieving the widespread deployment of plug-in electric vehicles (EVs).

Supported by NYSERDA as part of the ChargeNY initiative, we're making EV's mainstream by educating consumers and tackling the common myths that consumers have about EV's. We believe that Electric Vehicles are a critical component to achieving a cleaner and more sustainable future, especially as electrical power generation is rapidly shifting away from fossil fuels to renewable sources.

Key Personality Traits

Across the EV value chain, there are a large number of stakeholders including public/private sectors and consumers, and in all our communications we strike a tone and style that is friendly, hip, and technologically approachable. After all, EV's are fun, so we are too!

1) Hip and trendy
2) Urban
3) Friendly tech

VERBAL IDENTITY

The Rochester EV Accelerator, (or "ROC EV" for short) is an innovative, community-wide initiative aimed at achieving the widespread deployment of plug-in electric vehicles (EVs).

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1) Hip and trendy

2) Urban

3) Friendly tech

VERBAL IDENTITY

The Rochester EV Accelerator logo represents the organization in a clear, concise, and modern mark. This can be used for all print and web collateral. The minimum size printed or used for web is 1 inch in width.

PRIMARY LOGO

When width is limited, use the ROC EV abbreviated logo.

ABBREVIATED LOGOS

When minimal color must be used, use one of the 5 single color logos. Do not use 2 of these in the same piece of collateral or project. Do not alter the full color Rochester EV Accelerator logo.

ONE COLOR LOGOS

To maintain brand consistency and clear legibility, the black and white Rochester EV Accelerator logo should be used for printed collateral. Do not print the full color Rochester Ev logo for collateral as greyscale.

BLACK AND WHITE LOGOS

For campaigns or when additional information is necessary, use one of the 3 styles for a tag line. If using a tag line with a single color logo, use the same color for the tag line.

LOGO USE WITH TAGLINE

For more formal applications or when space is limited, the type only logo can be used.

ROCHESTER
EV ACCELERATOR

ROCHESTER
EV ACCELERATOR

ROCHESTER
EV ACCELERATOR

ROCHESTER
EV ACCELERATOR

ROCHESTER
EV ACCELERATOR

TYPE ONLY LOGO

This is an example of how the Rochester EV logo and colors can be applied to a marketing context.

This is an example of how the Rochester EV logo and colors can be applied to a marketing context.

EXAMPLE

APPENDIX 10. WORKPLACE CHARGING PLEDGE FORM

Rochester EV Accelerator Workplace Charging Challenge

Accelerating EV adoption by enabling charging at work

What is the Workplace Charging Challenge?
The Workplace Charging Challenge calls on Rochester employers to join the electric vehicle (EV) movement to help make our community a national leader in EV adoption by providing employees with electric vehicle charging stations at work. Workplaces continue to be seen as the next frontier for expanded EV charging infrastructure, and by of ering workplace charging, employers can provide a critical step to encourage the next generation of EV drivers. Our program's goal is to engage progressive, innovative workplaces that will help expand EV charging infrastructure and bolster EV adoption in Rochester.

Why EVs Are Important
- Reduce U.S. oil dependency
- Save money on fuel
- Less maintenance
- Support American innovation
- Support local energy
- Better for our environment
- Plus, they're fun to drive!

$$$
1 full charge = 1 cup of cof ee

Brand Recognition
Raise awareness of your company's commitment to innovation and sustainability and receive an award from Rochester EV Accelerator.

Employee Attraction
By installing a workplace charger, you can attract top talent looking for cutting-edge employers.

Corporate Sustainability
EVs can help achieve corporate sustainability goals by contributing to reduced GHG emissions, among other advantages.

Employees with access to workplace charging are 6 times more likely to purchase an EV

Installation Costs
The cost to install a charging station depends on a number of factors, such as the number of stations installed and location of the charger. ROC EV and partners can work with you to help determine the costs. Businesses in NYS are eligible for a tax credit of 50% of costs up to $5,000 for the purchase and installation of charging stations.

Operating Costs
Operating costs can be estimated by determining the rate you pay per kWh and comparing it to the battery capacity of EVs. For example, if you pay the national average of 12 cents per kWh and your EV has a battery capacity of 30 kWh, it costs $3.60 to fully charge your vehicle.

Costs for operating Level 1 and Level 2 charging stations will be equal to running a hair dryer or clothes dryer, respectively.

Rochester Electric Vehicle Accelerator
RochesterEVs.com • info@RochesterEVs.com • (585) 484-9392

(Front)

Workplace Charging Challenge Pledge

Accelerating EV adoption by enabling charging at work

This document states that _____ (Company Name) has joined the Rochester Electric Vehicle Accelerator (ROC EV) Workplace Charging Challenge on ___/___/_____ (Date) in an effort to advance the adoption of electric vehicles (EVs) in the greater Rochester region.

As a Workplace Charging Challenge partner, _____ (Company Name) pledges to:

SURVEY	Conduct a workplace assessment survey to determine charging station needs in the present as well as for the future.
SITE PLAN	Work with a contractor and property manager to assess the most cost effective and convenient location for EV charging stations.*
POLICY	Work with an internal team to set a policy for workplace charging.
ANNOUNCE	Make a formal announcement to all employees about plans for EV charging and release company policy.
DRIVE	Host a Ride and Drive with ROC EV ahead of charging station installation to educate employees about EVs.
LAUNCH	Install the charging station and host a ribbon cutting event for all employees.

*If, after initial site assessment, it is decided that the install ation cost is unreasonably high, company will agree to review the process in the next fiscal year.

Senior Executive Signature: _____ **Date:** _____

Printed Name: _____ **Title:** _____

Primary Point of Contact

Name: _____

Title: _____

Phone: _____

Email: _____

Public Relations Contact

Name: _____

Title: _____

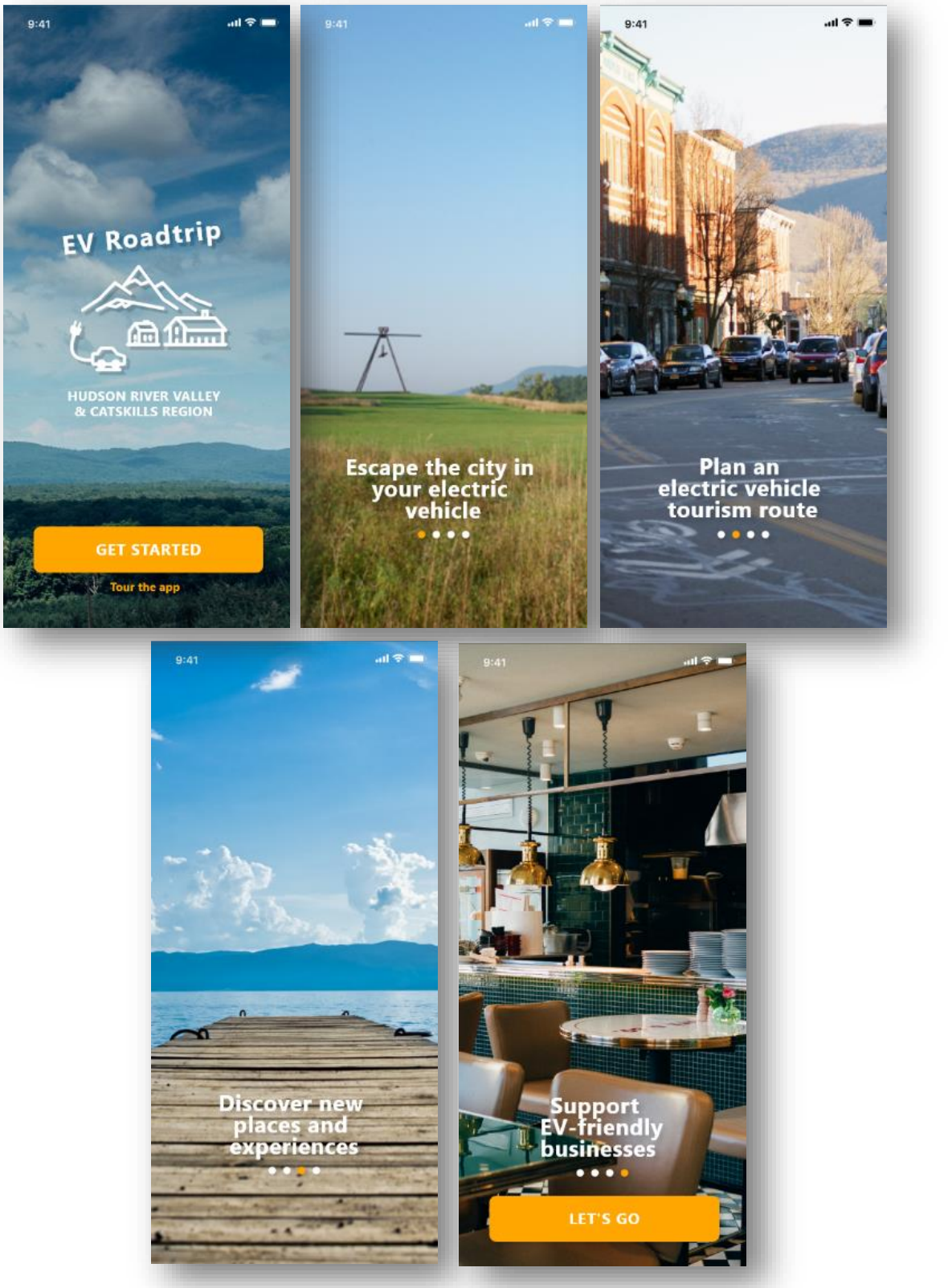
Phone: _____

Email: _____

Rochester Electric Vehicle Accelerator
RochesterEVs.com • info@RochesterEVs.com • (585) 484-9392

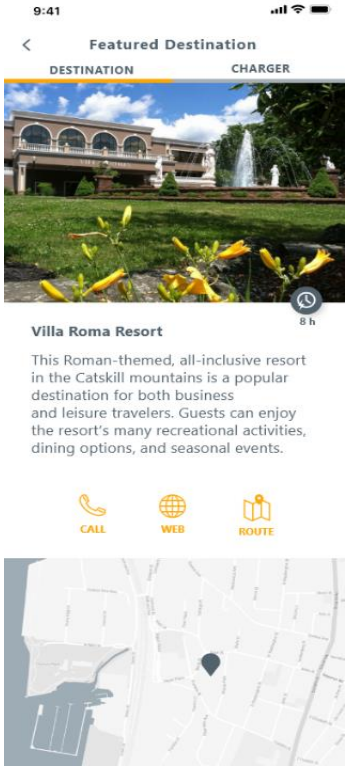
Appendix B: Mid-Hudson EV Tourism Mobile Application Screenshots

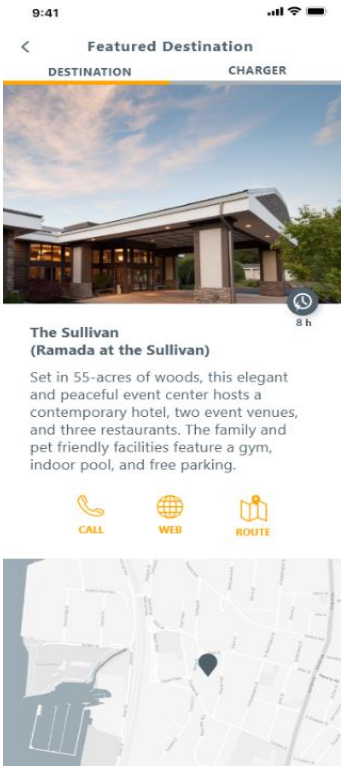
Landing Page and Splash Pages

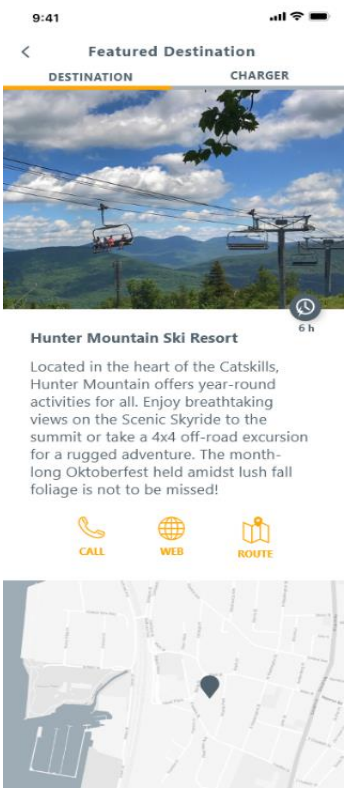


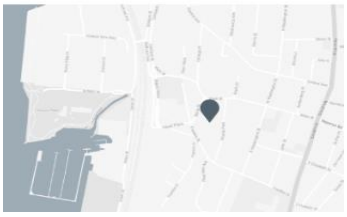
Region Map Pages

Featured Destination Pages

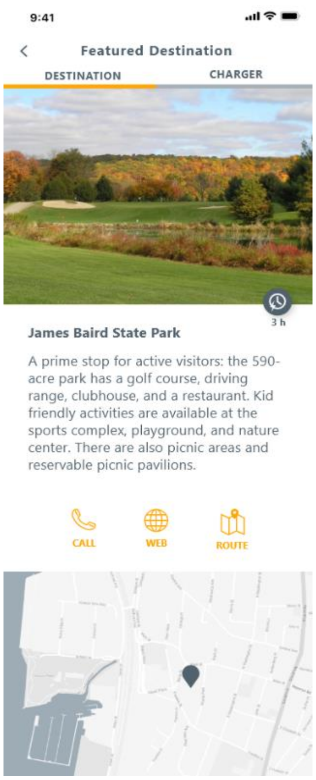


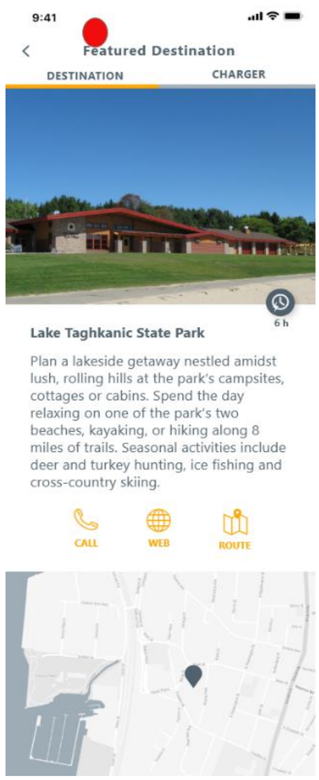


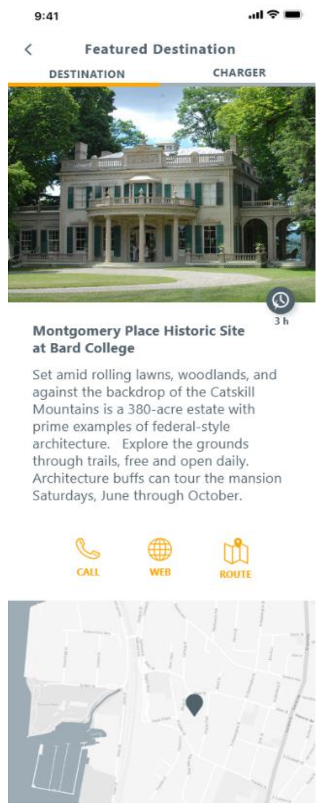


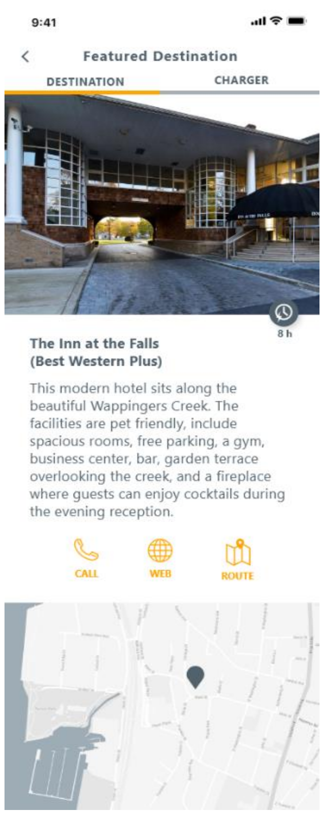


Featured Destination Pages (con't)

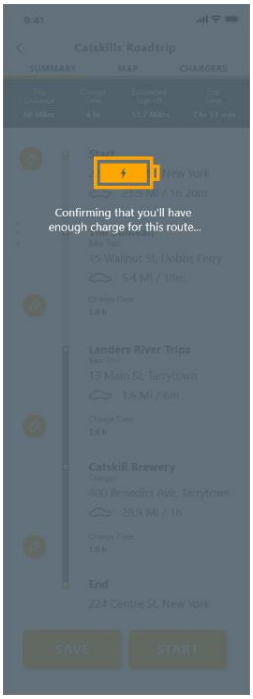


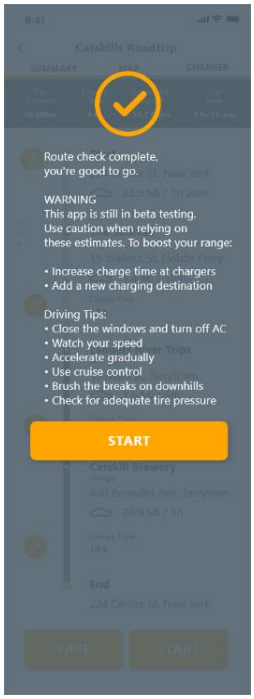


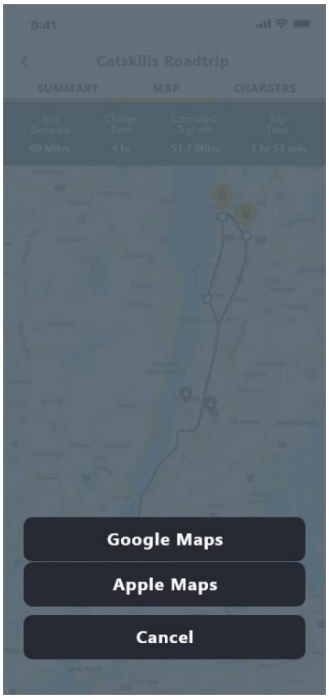


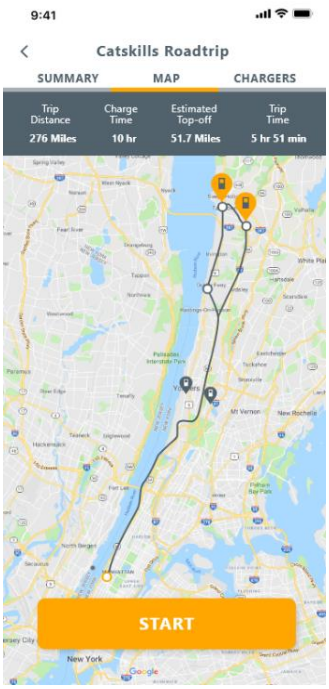


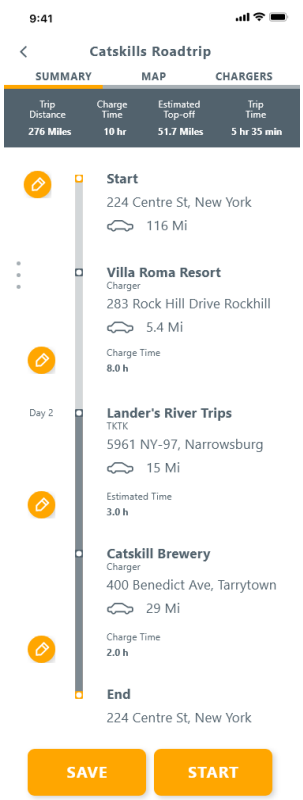
Itinerary Planning Pages

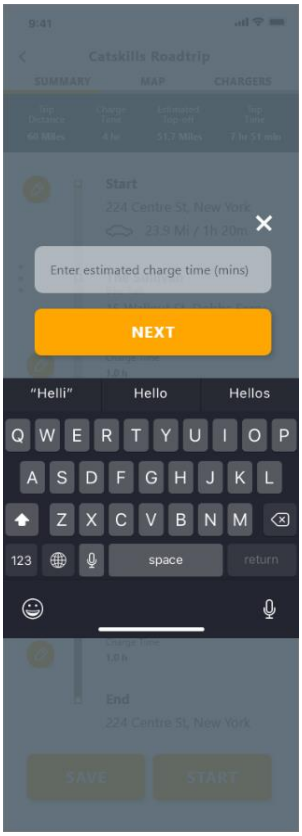


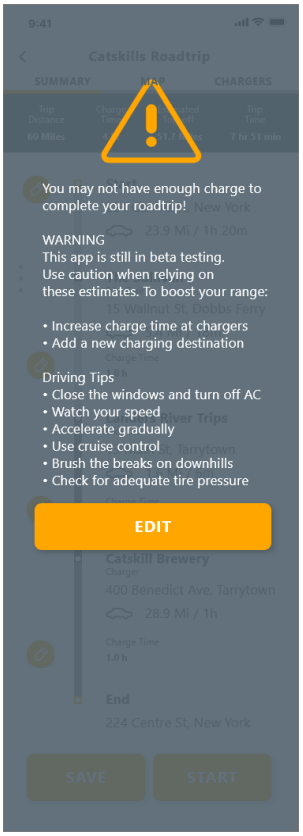












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NYSERDA, a public benefit corporation, offers objective information and analysis, innovative programs, technical expertise, and support to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce reliance on fossil fuels. NYSERDA professionals work to protect the environment and create clean-energy jobs. NYSERDA has been developing partnerships to advance innovative energy solutions in New York State since 1975.

To learn more about NYSERDA's programs and funding opportunities, visit nyserda.ny.gov or follow us on Twitter, Facebook, YouTube, or Instagram.

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nyserda.ny.gov

State of New York
Andrew M. Cuomo, Governor

New York State Energy Research and Development Authority
Richard L. Kauffman, Chair | Doreen M. Harris, Acting President and CEO