THREE-YEAR COLORADO STATEWIDE CONSUMER ENGAGEMENT STRATEGY PLAN

Produced June 2020

By Zach Henkin | Deputy Director, Forth Sam Schanfarber | Program Manager, Forth



FORTH 2035 NW Front Ave, Suite 101 Portland, OR 97209 Phone: 503.724.8670

www.forthmobility.org

Go Forth.

TABLE OF CONTENTS

03 | Table of Contents

- **04** | Executive Summary 05 | Project Development **06** | Colorado Statewide Consumer Electric Vehicle Engagement Campaign **06** | Coordinating and Leveraging Individual Efforts **06** | Strengthening Collaboration and Trust **07** | Creation of Best Practices & KPIs 07 | Identifying Potential Sources of Funding **08** | Next Steps & Fundraising Goals **10** | Adaptability and Accountability of Plan **10** | Landscape Overview **11** Stakeholders **15** | Energy Providers **16** Strategies for Consumer EV Engagement 16 | Effects of COVID-19
- 17 | Dealer Engagement and Ride & Drive Events on Front Range 18 | TNC Driver Engagement Campaign **19** | Promoting Incentives **19** | Supporting Low-Income Consumers **20** | Supporting Rural Consumers 21 | Ensuring Access to Electric Vehicle Charging 22 | Destination and Tourism 22 | Mobile EV Showcase **22** | Summary of Recommendations **23** About the Organizations 23 | Forth & Forth Mobility Fund 23 | Plug In America 25 | Appendix A 26 | Appendix B

EXECUTIVE SUMMARY

It is increasingly clear that transportation is the next frontier in meeting our climate change goals, and that reducing carbon emissions from transportation will be far harder than cleaning up electricity generation. With a suite of supportive policies now in place, and strong support from policymakers, Colorado has a tremendous opportunity to make rapid progress towards electrifying its passenger vehicle fleet.

The barriers to EV adoption fall into three primary categories: consumer awareness, upfront purchase price, and anxiety about charging. Recently adopted policies will go a long way towards addressing the second two sets of barriers. However, if consumers are unaware that electric vehicles exist - or if they are simply not available for purchase - those policies will have limited impact. This challenge cannot be underestimated. Even in California, after several years of work and millions of dollars of investment, the majority of consumers cannot name a single electric car model¹.

However, if automotive OEMs, electric utilities, and other stakeholders are prepared to make substantial, coordinated, highly leveraged investments, we believe Colorado can become a national model for accelerating electric mobility. While Colorado can draw on experience from California, Oregon, the Northeast, and even other countries, this consumer engagement work needs to be grounded in local experience and leverage local relationships. It needs to address the unique challenges of Colorado - cold winters, snow, mountains, rural communities, etc. Similarly, it needs to raise awareness of electric cars that have features that suit the lifestyle and needs of the state, like all-wheel drive and high ground clearance. The work also needs to build on the unique organizations, relationships, and opportunities Colorado presents.

A key to the success of large scale aspirations for the implementation of electric vehicles in other regions around the United States has been a multi-stakeholder body that can bring these efforts together, support a system for shared accountability, and create a context where these stakeholders representing their organization, or their industry can have a shared vision for what success looks like.

^{1.} "Awareness, knowledge, experience and attitudes towards ZEVs." https://phev.ucdavis.edu/project/awareness-knowledge-experience-andattitudes-towards-zevs/. Accessed 11 Jun. 2020.

PROJECT DEVELOPMENT

In January of 2020, Forth received \$100,000 in funding from the Energy Foundation to develop a 3-year electric vehicle consumer engagement strategy for the state of Colorado. This work included an assessment of the retail landscape for sales of electric vehicles in the Denver metro area; an electric vehicle ride & drive program; and configuration of the Plugstar website for Colorado EV owners, led by Forth partner Plug In America.

Making a rapid transition to a future in which 100% of new cars sold are electric will take intense and **coordinated** effort by a host of stakeholders, from automakers and dealers to electric utilities, employers, and local governments. No single policy or program will suffice. The need to align messaging and efforts is also identified in Colorado's Electric Vehicle Plan 2020².

Using our combined research and expertise, Forth prepared this document with a goal of identifying current stakeholders in Colorado's electric vehicle advocacy and policy spheres; outlining an organizational structure across stakeholders; developing tools for sharing a set of shared best practices and Key Performance Indicators (KPIs); and identifying funding opportunities for this work.

When examining the Colorado landscape, Forth attempted to identify the key stakeholders and decision makers already paving the way for increased EV adoption. Those findings, coupled with our expertise acquired from developing consumer EV engagement campaigns nationwide, helped us to develop the following recommendation for an organizational structure to most effectively coordinate and grow these many efforts.

In recommending an organizational structure, our goal is to compliment the organization and partnerships already in place by identifying opportunities for out of state funding, increase input from automakers and component manufacturers, and recommend tools for more effective collaboration. Finally, in light of the dramatic economic, societal and behavioral impacts from the ongoing COVID-19 pandemic, Forth embraces the need to embody and promote new, innovative approaches to increasing stakeholder and consumer engagement in order to increase the momentum towards vehicle electrification.

"NO SINGLE POLICY OR PROGRAM WILL SUFFICE."

COLORADO STATEWIDE CONSUMER ELECTRIC VEHICLE ENGAGEMENT CAMPAIGN ORGANIZATION

COORDINATING AND LEVERAGING INDIVIDUAL EFFORTS

The creation of a Colorado Statewide Consumer Electric Vehicle Engagement Campaign Organization is intended to create an enduring statewide ecosystem to rapidly accelerate electric vehicle adoption in Colorado, putting the state on a path to have 1 million registered electric cars by 2030, while creating models and lessons that will strengthen similar efforts in other states. Through partnerships with the project team members determined to advance transportation electrification in Colorado including the Colorado Energy Office, various Clean Cities Coalitions, and utilities, there is an opportunity to amplify each of the respective efforts and leverage programs and related measures to increase vehicle adoption in the near term.

In specific terms, this campaign organization will seek to build upon the initiatives already in place from the Colorado Energy Office (CEO), such as the state supported ReCharge transportation electrification program that currently hosts ride and drives, electric vehicle group buys; and other awareness measures. In addition, this campaign will seek to add surveys and metrics managed by the Pacific Northwest National Laboratory to track progress and provide additional best practices that have shown to be successful in other markets. By coordinating with energy providers, regional organizations, and partners such as Xcel Energy, CLEER, and the City and County of Denver, respectively, this organizational entity will be able to align multiple work streams and creatively find the best solution to advance electric mobility to any given urban or rural community need.

A single convening organization can leverage the perspectives of stakeholder professionals from around the country who have a role in the implementation of electric vehicles in Colorado. These conversations may lead to increased opportunity for funding, aligned messaging on otherwise competing programs, and collaborations that lead to a higher impact due to the enhanced resource support. We believe this campaign's ability to fundraise to support a FTE, as well as its singular focus on convening and bolstering existing efforts, make it complimentary to current convening efforts such as CEO's Colorado Electric Vehicle Coalition (CEVC), which serves primarily as an information sharing and networking entity.

STRENGTHENING COLLABORATION AND TRUST

Promoting electric vehicles requires a new set of relationships between many different stakeholders, with different perspectives on the work, some of whom have clashed on other issues. For example, some advocates have promoted regulatory tools that OEMs and dealers have not supported. However, these diverse stakeholders can share common ground in working together to make it easier, cheaper, and faster to help more Colorado residents choose electric vehicles. It will be much easier for diverse stakeholders to work together through a shared organization that is seen as trustworthy by all sides.

CREATION OF BEST PRACTICES & KPIS

A campaign organization has the ability to build sets of best practices from the shared knowledge of its members. It can gather the learnings and metrics from each organization's efforts, generating effective and scalable approaches to any given program with the added benefit of having a Colorado specific lens. These best practices for programs can offer KPIs as well, again generated from the shared knowledge of the group. These shared best practices not only allow managers of current programs to shore up their operations, but also lower the barrier of entry to new groups seeking to conduct consumer EV engagement to their constituents.

In addition, uncoordinated consumer engagement campaigns have the potential to create a misalignment of messaging. Generating white-labeled marketing and educational materials can help to ensure consistent talking points known to be effective, either for specific constituents or broader audiences. Similarly, this also reduces the barrier to entry and participation for organizations new to EV consumer engagement. This may be viewed as a form of quality control as well.

Utilizing technology, this campaign organization can also ensure equal, consistent access to its members to resource material, and can additionally provide a statewide calendar of ongoing efforts. A shared Google drive or Dropbox offers an organized, efficient way of storing best practices such as white labeled marketing and educational materials and relevant planning and reporting documents from municipalities and state agencies. In addition, members of this organization would be able to post upcoming events and ongoing campaigns into a shared Google calendar, granting a statewide snapshot of consumer engagement in-person events and start/end dates to outreach campaigns.

IDENTIFYING POTENTIAL SOURCES OF FUNDING

One of the appealing elements of convening a broader organizational structure for statewide EV consumer engagement is the creation of a shared funding pool, ideally managed by this entity. Pooling funds can reduce duplication of efforts and make each dollar go further. This strategy can also help leverage additional investment by demonstrating a cohesive approach to consumer EV engagement with diverse support. We believe this organizational strategy will be more likely to receive investment from stakeholders outside of Colorado than fundraising efforts from standalone organizations. These funders will recognize the diverse and encompassing channels for information distribution from member organizations, as well as place trust in the best practices and campaign strategy created by the broader organizational structure.

Any funding, whether resourced locally or secured from outside of Colorado, will need to leverage other funding, and should aim to produce the largest impact possible. The Smart Columbus' experience in the US Department of Transportation's \$50M Smart City Challenge is emblematic of this type of success. This organization quickly secured in-kind commitments from a wide range of Columbus entities and showed widespread commitment for collaboration in Columbus. Similarly, in California, the non-profit organization Veloz has been instrumental in coordinating with the California Air Resources board in planning for investments in transportation electrification, and the marketing of electric vehicles. In Oregon, Forth has been able to attract over \$2 million over a three-year period for statewide consumer engagement through a combination of federal grant funds, utility funds, state Clean Fuels program funds, corporate contributions, and other sources.

NEXT STEPS & FUNDRAISING GOALS

The next step for implementing this statewide campaign organization is to create a steering committee comprised of no fewer than 5 and no more than 12 representatives from major stakeholder groups in Colorado. This plan will be used to attract members of a proposed steering committee, whose input will ensure the creation of an actionable and accurate work plan that will reflect the needs of both present and future campaign members. They will be assigned key tasks and approve all seed fundraising targets and goals.

An ideal mix of organizations represented should include:

- The Colorado Energy Office. CEO should be considered a vital member of this steering committee
- Colorado Department of Transportation
- A major Colorado municipal area, such as Denver County, Boulder County or the City of Colorado Springs
- A regional organization with in depth knowledge of rural stakeholder engagement, such as Northern Colorado Clean Cities (NCCC) or Clean Energy Economy for the Region (CLEER)
- A major auto manufacturer with strong interest in Colorado, such as Tesla, Rivian, and/or Nissan
- An Electric Vehicle Supply Equipment (EVSE) manufacturer or trade organization representing multiple EVSE manufacturers

Once the steering committee is created, efforts should be focused on 1) creating a more detailed workplan with "SMART" goals tied to fundraising goals; 2) calendaring of member meetings; 3) implementing tools for document sharing; 4) obtaining \$500,000 in seed funding; and 5) seeking membership from municipal leadership, Colorado-based grassroots nonprofit organizations, dealerships, and any other organization(s) directly committed to the continued adoption of consumer electric cars in Colorado.

The steering committee should be staffed by a mission-driven nonprofit organization with experience convening diverse stakeholders to advance transportation electrification. Forth is happy to continue to play this role, but ultimately this organization should be chosen by organizations making core funding commitments to the work.

Having a mission-driven nonprofit staffing this effort will help ensure that the work moves forward, while enabling the pursuit and pooling of diverse revenue sources. This work will be conducted in coordination with the timeline laid out by the steering committee and will seek to raise \$500,000 in runway funds by November of 2020. We believe an annual budget of at least \$500,000 is the minimum viable level of support to make a statewide consumer engagement campaign worthwhile.

Over the longer term, we believe funding sources for this work should include:

- Utility funding
- Membership/sponsorship funds from OEMs and charging companies
- Philanthropic grant funding
- Federal grant funding for specific projects
- Nominal dues from participating organizations

Below is an overview of use cases for the initial seed funding.

AMOUNT	PURPOSE	DESCRIPTION
\$50,000	Core Convening & Campaign Operations	Organize in-person or virtual meetings & venue space as needed; manage members, including recruitment & communication; development of best practices; develop & manage set of digital tools for sharing information; fundraising; financial management
\$50,000	Digital Platform	Fund digital campaign marketing/promotion efforts related to following line items
\$50,000	Transportation Network Company Engagement	Organize webinars and/or in person meetings convening members & TNC companies; Facilitate f TNC regional pilots
\$100,000	Promoting Incentives	Create shared tools and materials for partner consumer outreach & education campaigns; municipal fleet conversion education material
\$100,000	Rural Engagement	Promote programs specific to rural consumer outreach & education
\$50,000	Workplace Charging	Create outreach materials for workplace charging programs; Support workplace ride & drive/lunch and learn events
\$50,000	Dealer Engagement	Outreach & convening of CO auto dealers; Member support services for dealer engagement
\$50,000	Tourism	Support municipal members promoting EV tourism to region(s)

ADAPTABILITY AND ACCOUNTABILITY OF PLAN

This plan is intended to be a living, collaborative document designed to spark conversation at a statewide level about collaboration and formal convening in consumer electric vehicle engagement. Its stated objectives may be altered by the campaign organization's steering committee upon its creation.

Part of the steering committee's charter should include establishing goals and metrics for the broader campaign to compliment this plan. Further, bylaws should be set in place that ensure delivery and adaptability should elements of this plan be rendered obsolete. Given the nature of consumer electric vehicle engagement and the EV industry overall, it is assumed that marketing tactics and fundraising methods utilized today may be ineffective years, and in some cases even months, from this plan's writing. As such, the ability to regularly update and add on to this plan is integral to the success of the campaign organization.

LANDSCAPE OVERVIEW

"ACCORDING TO EVADOPTION, COLORADO HAS THE 8TH HIGHEST MARKET SHARE OF EV SALES NATIONALLY AS OF 2018." Due to a mix of social and political factors, Colorado at a glance is well positioned for growth in electric vehicle adoption. The majority of stakeholders mentioned in this plan are working towards registering 940,000 electric vehicles in Colorado by 2030, a goal established by Governor Jared Polis in January 2019.

According to EVAdoption, Colorado has the 8th highest market share of EV sales nationally as of 2018. A state tax credit program offering up to \$5,000 for an EV purchase has proven an effective method of increasing sales. Further, the Front Range (Denver, Boulder, Fort Collins) region has a growing population of high-skill labor, specifically in the technology industry, and is an ideal target demographic for EV sales.

Yet there are challenges unique to the state that a comprehensive 3-year consumer engagement plan must take into account. Colorado's rural populations largely do not share in the growth of GDP and job market development on the Front Range. Many communities across Colorado are showing signs of shrinking GDP, job availability, and even population.

In addition, the state's geography presents a unique set of challenges. Many regions of the state are separated by mountain passes with substantial distances between population centers. Further, there are stark differences between rural resort destinations, such as Aspen and Vail, and true rural areas comprising much of the state's Northeast and Southeast corridors. These differences have huge implications for the types of messaging effective outreach campaigns utilize. The state is additionally challenged by severe winter weather and extreme heat in dry months.

STAKEHOLDERS

Forth conducted over 30 interviews with individual stakeholders to examine the current state of EV consumer engagement campaigns in Colorado. The goal of these interviews was twofold; one, to assess interest and concerns over Forth's three-year campaign strategy; and two, to identify existing campaigns across the state to ensure alignment and avoid duplicity.

The stakeholders listed here represent only a portion of the organizations, municipalities and utility providers currently leading EV engagement work in Colorado. Our goal is to provide a snapshot of programmatic offerings in Colorado, identifying examples of organizations we believe would be interested in participating in the organizational structure discussed. We recognize that there are initiatives taking place beyond the scope of this plan.

COLORADO ENERGY OFFICE

The leading institution in increasing EV adoption rates in Colorado is the Colorado Energy Office (CEO). Its aggressive set of strategies include engagement at the municipal, regional, and private sector level. CEO has also led collaborative projects across the state, partnering with advocacy groups to deliver programs and drive innovative conversations across stakeholder groups. Highlights of CEO's strategy include the ReCharge program, Charge Ahead program, and the preparation of an EV Readiness Plan.

Charge Ahead Program

The Colorado Energy Office has jointly administered the Charge Ahead program with the RAQC since 2013³. Applicants can apply for up to \$6,000 for a fleet vehicle charging station; up to \$9,000 for a dual port Level 2 charging station; or \$30,000 for a DC Fast Charging station. Three grant rounds are open per year.

Past awardees range from ski resorts to regional airports and municipalities. This program has assisted with over 930 EV charging stations statewide since its inception and is widely considered a success. Funding originates from the VW Settlement⁴, state EV registration fees, and federal Congestion Mitigation and Air Quality program.

EV Fast-Charging Corridors

In 2018, ChargePoint was awarded \$10.3 million in grants from CEO & Governor Hickenlooper to construct 33 fast-charging stations located along major highways across the state⁵. The purpose of this program is to increase EV adoption by making interstate charging more accessible. These 33 fast-charging stations are intended to be completed by mid-2020.

Administration of Alternative Fuel Tax Credits

Since January of 2017, CEO has administered the Alternative Fuel Tax Credits program⁶, which gives a \$5,000 tax credit to buyers of new electric cars in Colorado. This program, tethered to federal tax credits up to \$7,500⁷, is the most valuable and effective tool for encouraging EV adoption. Between 2017 and 2018, over 11,000 electric cars were sold in CO⁸ utilizing this credit, contributing to the 25,000+ electric vehicles registered in CO.

³ "Charge Ahead Colorado | Colorado Energy Office." https://energyoffice.colorado.gov/zero-emission-vehicles/charge-ahead-colorado. Accessed 13 May. 2020.

^{4. &}quot;Huge VW Settlement Can "Electrify" Transportation || SWEEP." 14 Oct. 2016, http://www.swenergy.org/huge-vw-settlement-can-electrify-transportation. Accessed 13 May. 2020.

Colorado Electric Vehicle Coalition

Since 2015, the Colorado Electric Vehicle Coalition (CEVC) has convened meetings once per two months with stakeholders statewide on EV outreach, including auto manufacturers, regional nonprofits, educators, and state & local agencies. With six subgroups, the goal of CEVC is to provide a space for information sharing and networking amongst stakeholder groups. These subgroups also provide input for Colorado's statewide EV plans (2018 & 2020).

Preparation of EV Readiness Plan

The Colorado Energy Office has created two statewide plans for transportation electrification, first released in 2018 with a second in April of 2020⁹. These plans both provide a snapshot of ongoing EV efforts and a series of programs and policies state agencies will adopt to reach Colorado's long-term goal of zero emission light, medium, and heavy duty vehicles on its roadways. Programs include the creation of EV friendly policy; fleet electrification; and vast infrastructure improvements statewide. These plans help to provide a roadmap for both state agencies and regional stakeholders, and well demonstrate the state's commitment to transportation electrification.

ReCharge Program

The ReCharge program utilizes five regional leaders, or ReCharge Coaches, to assist with focused infrastructure development and consumer EV engagement statewide¹⁰. Each ReCharge Coach is tasked with assisting local leadership and organizations with finding sources of funding, partners, and support for increased EV infrastructure, as well as supporting Charge Ahead grants submissions, organizing ride & drive events, hosting workshops & facilitating regional group buys. The five ReCharge coaches around the state work for regional organizations, and are composed of: Clean Energy Economy for the Region (CLEER); Four Corners Office for Resource Efficiency (4Core), American Lung Association (ALA), Northern Colorado Clean Cities Coalition (NCCC), and the Denver Metro Clean Cities Coalition (DMCC).

REGIONAL AIR QUALITY COUNCIL

The Regional Air Quality Council (RAQC) is a Denver-based organization tasked with developing initiatives to improve air quality. Together with partner organizations and input from stakeholders, the RAQC implements both programmatic solutions and conducts educational outreach to the general public. Part of their strategy is rooted in increasing consumer engagement of electric vehicles.

Charge Ahead Program

The RAQC is responsible for the administration & awarding of Charge Ahead grants for the Denver Metro area, while the rest of the state, including rural regions, are administered by CEO. Grant applications are roughly split between Denver Metro and the rest of the state. The RAQC also allocates up to \$8,260 in grants to nonprofit and government agency applications towards the purchase of fleet EVs.

⁵. "Electric Vehicle Fast-Charging Corridors | Colorado Energy" https://energyoffice.colorado.gov/zero-emission-vehicles/electricvehicle-fast-chargingcorridors. Accessed 13 May. 2020.

⁶ "Alternative Fuel Vehicle Tax Credits | Colorado Energy Office." https://energyoffice.colorado.gov/zero-emission-vehicles/alternative-fuel-vehicle-taxcredits. Accessed 13 May. 2020.

⁷ "Tax Credits - Drive Electric Northern Colorado." http://driveelectricnoco.org/tax-credits/. Accessed 13 May. 2020.

⁸ "EV Market Share by State - EVAdoption." https://evadoption.com/ev-market-share/ev-market-share-state/. Accessed 13 May. 2020

^{9. &}quot;Colorado EV Plan 2020 - FINAL.pdf - Google Drive." https://drive.google.com/file/d/1z-INQMU0pymcTQEH8OvnemgTbwQnFhq/view. Accessed 13 May. 2020.

^{10 &}quot;ReCharge Colorado | Colorado Energy Office." https://energyoffice.colorado.gov/zero-emission-vehicles/recharge-colorado. Accessed 13 May. 2020.



DENVER, COLORADO

CLEAN CITIES COALITIONS

Colorado is home to three Clean Cities Coalitions: Denver Metro (DMCC), Northern Colorado (NCCC), and Southern Colorado (SoCO CC). Each has a series of programs and initiatives unique to their territory relating to electric vehicle consumer engagement, such as those outlined by DMCC below.

The Denver Metro Clean Cities Coalition (DMCC) is a regional authority in education and outreach for electric vehicles. For the past eight years, DMCC has conducted hundreds of Ride & Drive events across the region, and had dozens planned for Spring 2020 prior to cancellations related to COVID-19. These events have either been rescheduled for Fall or have been moved to interactive online activities. DMCC delivers Ride & Drives and EV Workshops to the general public, municipalities and cities, major employers, and schools, among others. A key learning from DMCC's outreach is that EV events at workplaces are effective due to small engaged peer-groups that positively influence each other, combined with the Charge Ahead Colorado grant incentivizing chargers for workplaces. DMCC is additionally involved in EV education for TNCs, and medium- and heavy-duty fleet electrification, funded through Federal grants.

Similar programs are run out of the SoCC CC and NCCC. NCCC touts a series of EV websites, as well as partnering with local municipalities on grant writing initiatives related to clean fuels¹¹. They also produce an annual Petroleum Displacement report on electrification in the region. The Southern Colorado Clean Cities Coalition is run in partnership with the American Lung Association in Colorado Springs, and helps to promote EV charging infrastructure and adoption in the region¹².

"Projects - NORTHERN COLORADO CLEAN CITIES." https://northerncocleancities.org/projects.html. Accessed 13 May. 2020.
 "Electric Vehicles - Southern Colorado Clean Cities." https://southerncoloradocleancitiesblog.com/electric/. Accessed 13 May. 2020.

MUNICIPALITIES

Colorado's municipal leadership have helped pave the way for consumer EV engagement at a local level. Highlights include work conducted in the cities and counties of Boulder, Denver, and Aspen (Pitkin County).

Denver

As the largest metropolitan area in the state, participation in EV readiness from the City and County of Denver is vital to the state's EV readiness goals. Fortunately, the City's leadership is enthusiastic and supportive of EV programs, as demonstrated by its creation of its 2020 Electric Vehicle Action Plan¹³.

The plan identifies two major hurdles: one, that consumer EV adoption rates in the county remain too low to achieve current goals; and two, that city charging infrastructure is not yet mature enough to accommodate a growing population of EV owners. In order to meet its upcoming internal goal of EVs making up 15% of registered vehicles by 2025, City leadership plans to expand charging infrastructure; create more community awareness programs; pass EV-friendly policy; and support innovative EV services & pilots.

Boulder

2

3

According to a report produced by SWEEP for Boulder County¹⁴, the region is already an EV enthusiast hotbed, and has the most registered electric cars per capita in the state of Colorado. Boulder County plans to continue to capitalize on this interest to help reduce greenhouse gas emissions. The regional approach outlined in its innovative 2015 report includes: developing DC Fast Charging stations across the county; generating a workforce charging program; and altering local building codes to make newly constructed residential and commercial buildings more EV-friendly.

Aspen

The City of Aspen has committed to using transportation electrification as part of a broader plan to reduce greenhouse gas emissions in the region¹⁵. Current programs include offering free parking permits to EV drivers; public charging stations & hotel charging; and all-electric downtown transit shuttles. Aspen plans to grow its city charging infrastructure, create and expand consumer engagement programs, and support multi-unit housing charging, among other initiatives, over the next three years.

SOUTHWEST ENERGY EFFICIENCY PROJECT

The Southwest Energy Efficiency Project (SWEEP), works to promote energy efficiency across the Southwest region of the United States, including Colorado. Through their work leading and co-authoring a series of reports for the state and municipalities, SWEEP became an authority on electrification planning in Colorado, and should be considered a valuable partner in development of municipal plans for transportation electrification. Their work includes GoEV City Colorado, a set of policies local leadership can implement to further EV adoption¹⁶; Electrifying Transportation: Boulder County's Clean Future; and Opportunities for Vehicle Electrification in the Denver Metro Area and Across Colorado¹⁷.

- ^{14.} "Boulder Electric Vehicle Infrastructure and Adoption Assessment." https://www.swenergy.org/data/sites/1/media/documents/publications/ documents/Boulder_Electric_Vehicle_Infrastructure_and_Adoption_Assessment_April-2015.pdf. Accessed 13 May. 2020.
- ¹⁵ "Aspen Community Electric Vehicle Readiness Plan City of" 17 Jan. 2017, https://www.cityofaspen.com/DocumentCenter/View/977/Aspen-Electric-Vehicle-Readiness-Plan-PDF. Accessed 13 May. 2020.

¹³ "Denver Electric Vehicle (EV) Action Plan - AWS." https://wp-denverite.s3.amazonaws.com/wp-content/uploads/sites/4/2020/04/ DenverVehicleElectrificationActionPlan.pdf. Accessed 13 May. 2020.

^{16.} "GoEVCity Colorado - Southwest Energy Efficiency." http://www.swenergy.org/data/sites/1/media/documents/publications/documents/GoEV%20 City%20Policy%20Toolkit_08.27.18.pdf. Accessed 13 May. 2020.

^{17.} "Opportunities for Vehicle Electrification in the Denver Metro" http://www.swenergy.org/data/sites/1/media/documents/publications/ documents/CORRECTED_Denver_Electric_Vehicle_Report1.pdf. Accessed 13 May. 2020.

ENERGY PROVIDERS

TRI-STATE GENERATION & TRANSMISSION

Tri-State Generation & Transmission (Tri-State) is a nonprofit cooperative power supplier that serves 18 utility providers in Colorado, including Delta-Montrose Electric Association and La Plata Electric Association, and collectively serves the largest geographic region of Colorado. They have a broad plan for reducing emissions, including several initiatives focused on transportation electrification¹⁸. The provider plans to invest \$2,000,000 into EVSE across its serviceable territories, including Colorado; engage with the Beneficial Electrification League of Colorado to study demand-side management and promote battery electric (BE) cars; and study reductions in emissions related to BE adoption in Colorado.

XCEL ENERGY & BLACK HILLS ENERGY

As the two independently owned utility companies in Colorado, Xcel Energy (which provides 53% of state's energy) and Black Hills Energy (which provides 4% of state's energy in and around Pueblo) are tasked by the Colorado Public Utilities Commission (PUC) to investigate transportation electrification and generate an EV plan¹⁹. Their current plans were released in May 2020. This level of accountability will further move the needle on available programs and incentives for current and future EV owners.

HOLY CROSS ENERGY

Widely considered a state leader in utility electric vehicle engagement, Holy Cross Energy (HCE), a utility cooperative in the Roaring Fork Valley region of Colorado, has pioneered a series of innovative programs. Beginning in 2017, HCE rolled out a range of residential, commercial and community EV adoption initiatives to a varying degree of success. These programs compliment the utility's goal of 70% renewable energy average over the next 3-4 years.

- Charge at Home: HCE considers its Charge at Home initiative to be one of its greatest successes in the EV adoption space. Homeowners in its serviceable territory are given up to 2 Level 2 home charging stations free of charge. HCE will cover the full upfront installation cost and spread the bill over 3 years of billing. At the time of writing, the utility has installed about 120 home chargers in 18 months, representing roughly 20% of all registered EVs in the territory.
- Charge at Work: Similar to the Charge at Home program, HCE offers a discounted Level 2 charger to workplaces, as well as a 3-year payment plan on installation costs. Adoption rates for this program remain low, however, due largely to cost. At roughly \$10,000, the price of installation remains a difficult hurdle for small business owners to overcome when encouraging their commercial landlords to purchase a charging station. HCE notes a similar difficulty with installations in residential areas with HOA's. It is estimated that fewer than 1% of workplaces in Holy Cross territory have Electric Vehicle Supply Equipment (EVSE).
- Community Charging: Seizing on opportunity from the EV Fast-Charging Corridors initiative, HCE is engaged with Pitkin, Garfield and Eagle counties to develop DCFC infrastructure. In 2019, HCE completed two DCFC installations, and aims to complete an additional 5-10 in 2020.

LPEA

La Plata Electric Association (LPEA), located in Durango, Colorado, serves La Plata and Archuleta, with segments of Hinsdale, Mineral and San Juan counties. The utility is roughly a year into a pilot program offering free ChargePoint Level 2 EVSE to its customers, and has installed roughly 2 dozen at the time of this report's writing. They are eager to continue to grow EV engagement in their territories, and are exploring further incentives and solutions to both futureproof the region and encourage EV adoption in Southwest Colorado.

STRATEGIES FOR CONSUMER EV ENGAGEMENT

After surveying current consumer EV engagement efforts in Colorado, Forth generated a series of recommendations for complimenting and expanding upon this work. With these recommendations, we aim to identify areas of opportunity currently under addressed in Colorado, as well as highlight best practices we have seen utilized effectively in other states with effective consumer EV engagement campaigns.

EFFECTS OF COVID-19

Because consumer engagement historically is highly dependent on in-person events like Ride & Drives and demonstrations, the chilling effect on public gatherings from the COVID-19 pandemic must be taken into account when developing campaigns for the near future. During this time, Forth offers a series of suggested program alterations, which affect many of the following strategic campaign elements.

Digital Education Platforms

Large public events like Ride & Drives are already cancelled into the foreseeable future, and Forth anticipates that gathering in public spaces will be limited for many months. As a result, focus should be placed on developing a statewide, Colorado specific digital educational campaign for the adoption of EVs, to be conducted through 2022. Elements should include the promotion of Greenlight Labs (or a similar white-labeled software), an app that informs users of which EV would best suit their lifestyle by learning their driving habits; hosting webinars that target specific workplaces; hosting consumer facing webinars open to the public; and an online tool that allows users to understand which financial incentives are available for any select EV.

Lower Car Sales

Automakers are anticipating a downturn in sales through the end of 2020²⁰. Coupled with the current recession, we expect car sales to be 30-50% lower in 2020 and to take several years to return to 2019 levels. This will make it more challenging for the state to meet numerical targets for EV adoption, and will make it even more important that of the vehicles that are sold, the largest possible percentage are electric vehicles. We also expect to see more used car transactions, which suggests that the state consider using EV incentive projects or policies as outlined below.

18. "Responsible Energy Plan | Tri-State Generation and" https://www.tristategt.org/responsible-energy-plan. Accessed 13 May. 2020.

^{19.} "Colorado PUC Electric Vehicle Working Group Report." https://evcharging.enelx.com/images/azura-pages/utilities/2019-01_CoPUC_Electric_ Vehicle_Report.pdf. Accessed 13 May. 2020.

²⁰ "Expect U.S. Car Sales and Production to Decline Dramatically." 23 Mar. 2020, https://www.caranddriver.com/news/a31901914/us-sales-productionhuge-declines-estimates/. Accessed 13 May. 2020.

DEALER ENGAGEMENT AND RIDE & DRIVE EVENTS ON FRONT RANGE

Robust dealer engagement is integral to the success of EV initiatives. Based on the observations collected by Plug In America during their research into the Colorado EV retail landscape, as well as their knowledge on emerging best practices from around the country, we recommend that the state of Colorado strengthen and deepen efforts to integrate dealers into its strategic plans for electrification of transportation.

Partnering with dealers in the Denver metro area, the largest and most populous EV market in Colorado, offers the opportunity to reach and influence car shoppers at a key touchpoint in the buying process. An initial pilot phase duration of one year is suggested. Follow-on phases of work could then incorporate other metro areas in Colorado, with an eventual expansion of these best practices into rural areas. Rural outreach efforts should begin with a training on dealer engagement from Plug In America staff to ReCharge coaches, who have existing relationships and knowledge of regional dealerships.

Below is a list of suggested scope statements for this initial dealer pilot. Note that these activities should be tightly integrated with the experiential events, like Ride & Drives, and marketing activities. Here, the focus is on the dealer-facing elements.

1. Recruitment of around 12 Denver metro area dealers.

2. Outreach to like-minded community partners to include universities, government entities and large area employers, among others, to contribute to the program financially or in-kind.

3. A dealer certification component based on a combination of EV training, experience, history of collaboration with EV stakeholders and compliance with program policies.

4. A centralized online resource for consumers that includes available EV inventory from area dealerships.

5. Printed, in-dealer and online training aids for dealer sales staff.

6. Help line support for participating dealers and their EV customers.

7. Pre-arranged special pricing encompassing the vehicle, charging and installation for customers.

8. A coordinated marketing campaign with a strong digital component that includes retargeting ads to reach in-market buyers (those already in the process of buying a car).

9. A series of ride and drive events to expose consumers to the technology and generate leads.

10. An EV incentive for various key employee groups (e.g. public sector, utility employee etc.) with internal marketing to drive leads.

11. Work with utilities to develop seamless hand-off of EV customers to their local utility for home charger installation and rate plans.

In a post COVID-19 recovery period, accompanied by a recession, we believe that both vehicle OEMs and Dealerships will have a renewed focus on sales of higher margin, easier-to-sell traditional Internal Combustion Engine vehicles. To recover from the unprecedented demand destruction and financial pressures caused by the pandemic, we expect OEMs and dealerships to continue to downplay the benefits of electric vehicles while promoting the sale of what will likely be deeply discounted traditional SUV's. Also given the extremely low gasoline prices seen nationally, many consumers may default to the purchase of more traditional vehicles.

Forth is currently engaged with its automotive software partners in the development of an end-to-end digital marketing platform. The marketing strategy would involve the use of data analytics for the early identification of likely EV buyers, guiding them through the brand, model and trim selection process, offering attractive financing options and facilitating the entire purchase process to allow them to have their EV delivered without entering a dealership.

TNC DRIVER ENGAGEMENT CAMPAIGN

"THE TNC PROVIDER HAS AN IMPORTANT ROLE IN COMMUNICATING, AND POSSIBLY INCENTIVIZING A PROGRAM PROGRAMMATICALLY."

Transportation services provided by rideshare organizations have become an increasingly important part of the transportation system. As the popularity of these transportation options increases, deliberate efforts to support drivers to increase the use of plug-in vehicles on these platforms can lead to a larger impact when coordinated amongst stakeholder groups. In this case, while the audience for any charging or vehicle promotion effort may be the rideshare driver, the TNC provider has an important role in communicating, and possibly incentivizing a program programmatically.

The City of Denver has previously capitalized on the growing importance of TNC companies. In 2019, the city partnered with Lyft to provide 200 long-range EVs to drivers in a pilot program²¹. By focusing on further convening of municipal and state partners with TNC providers, a campaign organization can continue to launch innovative pilots replacing traditional internal combustion engine rideshare vehicles with electric cars. In addition, the campaign organization can additionally be responsible for gauging the success of these pilots and establishing metrics, KPls, and best practices replicable in both Colorado and other states.

Convening efforts to advance the use of plug-in vehicles on rideshare platforms have been successful in Los Angeles, the largest ride-hailing market in the US, due in part to the influential stakeholders who are participating in defining how ZEV goals are met (i.e. energy providers, charging providers, TNC providers, rideshare driver representation). We suggest launching a similar effort in Colorado by 2021.

PROMOTING INCENTIVES

Even in states with great financial incentives and programs in place, mainstream consumer awareness remains a major hurdle. California, the state with the highest number of electric cars on the road, has seen little change in consumer awareness in electric vehicle availability over the past five years, despite an extensive outreach campaign led by state agencies²².

An effective use of the recommended campaign organization is to convene existing campaigns to ensure cohesive messaging, share best practices, and broaden outreach channels overall to ensure greater awareness. State agencies, grassroots organizations, municipalities, and even select utility providers are already conducting outreach across the state of Colorado to demographics of consumers most likely to adopt EVs. Coordination of these public and private efforts by one centralized body allows for both dissemination of statewide best practices and multiple channels of outreach, increasing the effectiveness of incentive promotion campaigns. Coordinating efforts that increase awareness about financial incentives for both EVSE and new EVs avoids duplication and inconsistent messaging. This may include the campaign organization assisting in creating formal partnerships between municipalities, utilities, the state, and EVSE providers and raising awareness to constituents, as well as improving frequency and volume of outreach on incentives for purchasing new EVs.

In addition, a campaign organization should pursue further incentive programs through utility providers on behalf of their members. This may include the creation of white-labeled leaflets on available utility EV incentives; sharing of best practices; and convening of members and utility providers to provide insights and recommendations from both parties.

SUPPORTING LOW-INCOME CONSUMERS

Colorado won't meet its aggressive EV adoption goals if these vehicles are seen as toys for the wealthy. Furthermore, overcoming barriers to EV adoption in low-income communities will also help make them more accessible to all Colorado residents. Therefore, the campaign needs to pursue strategies that make electric cars more accessible and affordable to low income drivers, while also changing the narrative to clarify that this technology is affordable and available. Both the City of Denver and the Colorado Energy Office have conducted initial conversations with low-income stakeholders in the Front Range urban area, and Forth has worked extensively with frontline communities in other regions of the country. Based on this work, we recommend the following approaches.

First, the campaign should build partnerships with low income communities and community-based organizations that serve them to promote the availability and benefits of electric vehicles, as well as information about available rebates and tax credits. The campaign should provide funding to grassroots organizations, building their capacity to use their knowledge of effective and culturally appropriate messaging and communication channels. This work will be particularly challenging in the short to medium term, as low income residents are dealing with economic recession and job loss. In the short term, this work should focus more on identifying potential partners, building relationships, promoting available used vehicles, and reaching low income residents who must drive for their work.

Second, the campaign should pursue a series of focused demonstration projects to show how this technology can be made more accessible. Examples could include small projects to provide funding for electric cars and charging infrastructure for community-based organizations to use in their own work, such as medical transport; a vehicle financing pilot; or demonstration projects with shared electric vehicles in low income communities²³.

Third, the campaign should work with partners, building on the first two areas of work, to pursue funding for broader statewide measures such as incentives for used electric vehicles, or a "cash for clunkers" vehicle trade-in program.

SUPPORTING RURAL CONSUMERS -

Colorado's current efforts in EV consumer engagement encompass the geography of the state. The ReCharge & Charge Ahead programs; innovative programs offered by select regional utility providers like Holy Cross Energy & La Plata Electric Association; and presence of engaged advocacy organizations statewide make up a network of programmatic and educational providers in the state's less populated rural regions. However, the unique challenges to rural areas, such as limited vehicle form factors, specific vehicle equipment needs; a lower number of dealerships carrying or capable of servicing electric vehicles; and range anxiety due to the dispersed nature of many of Colorado's rural towns have made adoption slow in these portions of the state.

Forth encourages a three-pronged approach for rural consumer EV engagement: (1) a heavy focus on education; (2) engagement with energy providers to build out EVSE infrastructure to future-proof communities in anticipation of more electric cars, and provide services for early adopting residents; and (3) intensive dealer engagement to advance availability.

- In rural consumer engagement, instead of focusing on costly in-person events like Ride & Drives, stakeholder groups engaged in rural outreach should focus on creating accessible, distributable tools for educating constituents on EV technology and its benefits, focusing on range and cost of ownership. An educational campaign specific to rural constituents should also include recreational EVs, such as electric-assist dirt bikes.
- Rural utility providers have already demonstrated success in discounted or free athome charging stations; a set of best practices for this program should be created and distributed to all interested utility providers, with support of implementation made available from current practitioners and partnered EVSE companies.
- When planning an engagement strategy with dealerships in rural regions of the state, a similar set of best practices should be developed that allows any organization to share metrics of growing interest, available financial incentives, and appealing vehicle models that can help motivate a dealer to adopt EVs. We suggest implementing best practices learned from the 1-year pilot Denver Metro area dealer engagement program.

Given the number and diversity of organizations conducting rural outreach, collaboration and digital sharing of best practices will substantially increase the effectiveness of these programs. The creation of a shared schedule of events; white-labeled educational material for rural consumer engagement; shared recommendations and points of contact with dealers; and regular rural stakeholder convenings to establish accountability and host digital workshops are recommended.

²³ "Equitable E-Mobility - Forth Mobility." 19 May. 2019, https://forthmobility.org/storage/app/media/Documents/EVS32%20Equitable%20 EMobility%20FINAL.pdf. Accessed 14 May. 2020.

²⁴ "Workplace Charging Challenge - Energy.gov." https://www.energy.gov/sites/prod/files/2017/01/f34/WPCC_2016%20Annual%20Progress%20 Report.pdf. Accessed 11 Jun. 2020.

ENSURING ACCESS TO ELECTRIC VEHICLE CHARGING

ENCOURAGING WORKPLACE CHARGING

An employer taking an active role in supporting their employees' commute choice plays an important role in their decision making when buying an electric car. USDOE research has found that employees who can charge at work are six times more likely to own and drive an electric vehicle²⁴. Many Colorado households do not have access to home charging, and for many of these drivers their workplaces become the most reliable venues for charging. Employers supporting charging at work by providing EVSE, and by developing workplace charging programs can play an important role in the implementation of plug-in vehicles. Despite its importance, many barriers impede employers from installing workplace charging infrastructure. Forth recommends this initiative include a coordinated campaign to encourage employers to provide charging and support their EV-driving employees. This effort should be coordinated with funding and incentives to help cover the costs of workplace charging infrastructure.

ENCOURAGING ACCESS TO CHARGING IN APARTMENTS AND CONDOMINIUMS

Having access to electric vehicle charging is becoming increasingly important as more and more drivers are making the choice to drive a vehicle that plugs in. A campaign engaging apartment managers, condo associations, and other stakeholders needs to be clear on the options available to retrofit properties to support EV charging, while educating on the importance of providing this access for future and current residents. As cities increasingly urbanize, the opportunity cost of providing charging and connecting these properties to resources will also be important to look at through an equity lens. The campaign should include distribution of tools and best practices to make it easier for apartment managers to provide charging to their residents, and tools for residents to request charging.

PUBLIC & RIGHT OF WAY (ROW) CHARGING

The visibility and accessibility to public charging stations is important both psychologically and practically as communities try to meet the growing demand for charging infrastructure. Psychologically, as more drivers consider making a plug-in purchase, the visibility of public charging stations reinforces the sense that electric fuel will be available when they need it, and consequently dampens range anxiety. These chargers are also seen and utilized by drivers who may rely entirely upon public accessible EVSE. Additionally, rideshare and carshare drivers with electric cars are increasingly dependent on public charging stations. As more charging stations come online, coordinated communication about when a charging station becomes available to the public can help ensure that the station is used and support an increase in charger utilization.

A set of best practices will be compiled from learnings around Colorado and observed nationwide for members of the campaign organization. We will seek to leverage successful programming to spur additional ROW charging initiatives statewide.

BUILDING CODES

Adopting building codes that include language for EV Readiness or EV Capable within building design is one of the lowest cost efforts that can support a long-term electrification of transportation. While costs to retrofit existing apartment buildings or condominiums can be large due to necessary electrical upgrades, and associated infrastructure, the costs to include specifications for charging stations while a building is being designed represent an especially small percentage of the total project cost especially when considered in comparison to a retrofit estimate.

This campaign seeks to distribute model building codes for members representing local government. In addition, the campaign organization can convene workshops and webinars with experts on building code to help bolster changes across the state.

DESTINATION AND TOURISM

Colorado's EV Corridor Fast Charging initiative is a fantastic and innovative initiative to promote consumer transportation electrification. It has the additional benefit of acting as an economic development driver, as it encourages EV drivers from out of state to view Colorado as a tourist destination they can confidently find charging stations in while exploring. This program lends itself well to continued expansion led by CEO, as well as a coordinated advertising campaign led in partnership with participating municipalities across the state.

The campaign organization may lend itself to seeking out of state funding for the program on behalf of CEO. More closely aligned with this effort is the convening of municipal partners and marketing agency(s) to create in state campaigns for constituents within the region raising awareness about improved EV infrastructure, instilling purchase confidence; and out of state to encourage EV tourism.

MOBILE EV SHOWCASE

One of the issues identified with rural consumer EV engagement is a lack of availability of models. This creates challenges for hosting regional Ride & Drive events. Similarly, coordinating educational events in destination areas can present logistical hurdles.

We recommend the creation of a mobile EV showcase, housed in a trailer or similar vehicle, that will serve as a tangible focal point for this effort when parked but can travel to regional events. This mobile showcase will help to offset costs for individual organizations seeking to host in-person outreach to complement and eliminate issues of model availability from rural dealers. The showcase will include educational displays, dummy chargers, and other elements that leverage Forth's Oregon showcase and lessons learned in that work. The campaign organization will assist in scheduling coordination, as well as maintenance and upkeep on the mobile showcase and associated vehicles.

SUMMARY OF RECOMMENDATIONS

Colorado is at an opportune moment to become a national leader in effective consumer electric vehicle engagement leading to increased adoption. The unique intersection of rising consumer interest in electric cars with a growing target demographic of early adopters leading to an early majority; a diverse spread of organizations, active municipal and state leadership, and utility engagement; and availability of funding partners at a national scale leave the state a ripe canvas for generating a massive increase in EV adoption rates. Further, successful coordination of stakeholders in Colorado could become a roadmap for other states to follow.

It should be noted that the goal of 940,000 electric vehicles on the roads of Colorado by 2030 is bold and would be challenging, even in the best of circumstances. This goal can be enabled by ensuring that the wide breadth of resources, and plans underway are aligned and coordinated. Additionally in cases where there may be knowledge that can be applied from outside the region, these best practices should be taken into account and inform future strategy and campaign design.

ABOUT THE ORGANIZATIONS



FORTH & FORTH MOBILITY FUND

The Forth Mobility Fund is a 501c3 nonprofit closely affiliated with Forth, a 501c6 trade association with a long track record of bringing diverse interests together to find common ground. With nearly 200 member companies and organizations, from global automakers to local governments, electric utilities, and NGOs, Forth is able to represent the full diversity of the electric mobility ecosystem. We will draw on these relationships and our broad experience as we convene key stakeholders to develop and refine a three-year plan to dramatically accelerate electric car sales in Colorado, putting the state on a path to have 1 million registered electric cars by 2030.

In addition to our direct consumer experience, Forth has deep experience with several high-impact approaches to leverage increased consumer engagement and electric vehicle sales. Forth was the leading recruiter of workplaces to the USDOE Workplace Charging Challenge for all three years of its operation and has continued to be a leader in promoting the value of workplace charging. We are currently working with Denver, Seattle, and New York City through a USDOE-funded project to further accelerate electrification of Uber and Lyft. Forth has implemented several notable pilot projects to bring the benefits of electric mobility to traditionally underserved communities, including partnering on three different community- based needs assessments, pioneering a shared electric car program at affordable housing, and completing an e-bike project for undocumented/unlicensed residents.



PLUG IN AMERICA

Plug In America is the leading American voice promoting the use of electric vehicles. It is a coalition of EV drivers led by leading experts in transportation electrification. Plug In America represents the world's deepest pool of experience of actually driving and living with EVs. Because of our history and our network of supporters with real EV experience, Plug In America is uniquely qualified to conduct public outreach and education on these vehicles. In fact, that is what the organization is focused on--especially ride and drive events that allow potential drivers to directly experience the vehicles. National Drive Electric Week is our largest annual event. 2018 was the eight year since it was founded by Plug In America in 2011. Last year, it reached over 100,000 people in 321 events in all 50 states. Since 2016, Plug In America has implemented dealer engagement programs in Boston, San Diego, Sacramento, Los Angeles, St. Louis, and the state of New Jersey. With these programs, Plug In America has the world's deepest experience in understanding and improving the EV customer experience. Since PlugStar's inception, Plug In America has delivered training and support to more than 1,000 vehicle sales professionals from nearly 200 dealerships and manufacturer support teams coast-to-coast, representing more than a dozen different automakers.

Address:
 FORTH
 2035 NW Front Ave, Suite 101

Portland, OR 97209

Phone: 503.724.8670





APPENDIX

APPENDIX A: DEFINITIONS

- BE: Battery Electric
- EVSE: Electric Vehicle Supply Equipment
- R&D: Ride & Drive
- TNC: Transportation Network Company
- KPI: Key Performance Indicator
- CEO: Colorado Energy Office
- DMCC: Denver Metro Clean Cities Coalition
- NCCC: Northern Colorado Clean Cities (Coalition)
- SoCO CC: Southern Colorado Clean Cities (Coalition)
- CLEER: Clean Energy Economy for the Region
- CEVC: Colorado Electric Vehicle Coalition
- 4CORE: Four Corners Office for Resource Efficiency
- ALA: American Lung Association
- RAQC: Regional Air Quality Council
- SWEEP: Southwest Energy Efficiency Project
- Tri-State: Tri-State Generation and Transmission Association
- PUC: (Colorado) Public Utilities Commission
- HCE: Holy Cross Energy
- LPEA: La Plata Electric Association
- ROW: Right-of-Way

APPENDIX B: PLUG IN AMERICA COLORADO DEALER ENGAGEMENT STRATEGY

EVs and Auto Dealer Engagement: What Role for Colorado?

An evaluation of the automotive retail landscape and opportunities for engaging auto dealers

April 2020 Plug In America PlugStar Program

TABLE OF CONTENTS

- 28 | Executive Summary
- 28 | Objectives
- 29 | Background
- 30 | Methods
- 32 | Findings
- 35 | Ride and Drive Best Practices
- **36** | Opportunities for Colorado
- 37 | A Glossary of Terms & Abbreviations
- **38** | B Evaluator Qualifications

EXECUTIVE SUMMARY

At the direction of the state of Colorado, Plug In America conducted an assessment of the retail landscape for sales of electric vehicles (EVs) by dealerships in the Denver metro area. Based on the findings reported here, it concludes that the state of Colorado should continue, and even expand, its efforts to engage auto dealerships in the state.

Many manufacturers such as VW, Ford, GM and BMW have moved aggressively to grow their lineup of plugin electric offerings. In the months ahead, 27 new or refreshed EV models from 18 different brands and subbrands are expected to arrive in 2020. Many more still will follow between 2021 to 2023. Franchise laws in all 50 states require that all new vehicles, plug-ins included, produced by manufacturers with dealer networks must be sold by independently owned franchised dealerships. With the exception of Tesla, Rivian and other new entrants with no pre-existing dealer network, dealers represent an essential touchpoint with car buyers.

A study released by Cox Automotive in 2019 revealed 74% of customers view the dealership and/or salesperson as having a strong influence over their purchase decision.²⁵ Given this, Colorado has a significant opportunity to deliver key information to customers vis-à-vis dealerships that ultimately influence the customer's buying decision. Further, the ability of emergent and disruptive technologies such as EVs to displace the dominant paradigm of conventional gas and diesel powered passenger vehicles rides in part on the spread of positive word-of-mouth. As such, Colorado is in a unique position to positively impact the customer's end-to-end experience with EVs. Due to the nature of dealership operations, trusted relationships with auto dealerships are not easy to initiate. They also take many months to develop. Colorado has achieved initial inroads through multiple initiatives and partners in the state. In 2020, Plug In America conducted in-dealer interviews in the Denver metro area. The dealers interviewed as part of this study reflected positively on increasing EV sales at their dealership. They welcomed support from partners, citing its value in facilitating a positive customer experience. Denver metro area dealers overwhelmingly welcome a closer association with local utilities and the state. They see such a relationship as fundamental to contending with anticipated demand for EVs in the coming months. This presents an opportunity for Colorado to invest further to cultivate these relationships and expand to encompass a broader set of dealers and EV manufacturers.

Additional themes heard across interviews was that local utilities and state partners should partner with local dealers to create special pricing programs for the entities' employees and customers. This should be combined with a sustained EV marketing/outreach campaign to drive traffic to participating dealers. Equally important elements involve proper training, tools and support for partner dealers and a commitment by the state to deploying reliable and highly visible charging infrastructure, especially fast charging stations at key locations and corridors to address concerns about charging on the go.

OBJECTIVES

The objective of this report is to assess the potential for Colorado to engage with local auto dealerships to promote and sell a growing number of light-duty electric vehicles (EVs) in the state. This report provides a high-level evaluation of the market potential for EVs in the Denver metro area and offers a practical blueprint for engaging and enlisting auto dealerships to grow EV sales and improve the customer's purchase and ownership experience. This report also provides a recommendation to conduct more ride and drive (RAD) events in Colorado and shares some RAD best practices based on Plug In America's experience.

²⁵ 2019 Evolution of Mobility Study. Cox Automotive. August 2019. Available at https://d2n8sg27e5659d.cloudfront.net/wp-content/ uploads/2019/08/2019-COX-AUTOMOTIVE-EVOLUTION-OF-MOBILITY-THE-PATH-TO-ELECTRIC-VEHICLE-ADOPTION-STUDY.pdf

BACKGROUND

EVs are not yet a profitable business line for global automakers, though public pronouncements by GM and VW suggest confidence achieving profitability in the 2022-2025 time frame. As a result, manufacturers have carefully managed roll out of EV offerings so as to strike a balance between establishing and protecting market share from competitors and managing investment losses.

Manufacturers have historically focused the shipment of EVs to California and states that have adopted California's Zero Emission Vehicle (ZEV) mandate. Manufacturers also favor deployment of EVs to markets with relatively more developed charging infrastructure. Exceptions to this have included Georgia - and in particular the Atlanta metro region - which, up until the state rescinded a \$5,000 state rebate in the summer of 2016, had become the nation's fastest growing EV market.

It is well-established that dealerships are the gateway to the car buying public. Automakers produce and market new vehicles, but the only path through which these vehicles end up in a customer's hands is through independently owned dealerships. With few exceptions (namely Tesla), EVs are no different.

The recently released 2019 Cox Automotive "Evolution of Mobility" Study documented ongoing concerns by dealers regarding the level of support for EV marketing and sales they receive from the manufacturer. Two-thirds of dealers receive some or no support for EV marketing and sales. Of those that do, just 32% reported it is "very helpful." Moreover, only 9% of dealers state their manufacturer exerts high pressure on them to sell EVs. Most do not feel any pressure to sell EVs at all. Also concerning is the perception by dealers that EVs will yield a lower Return on Investment (ROI) than sales of gas cars and trucks. Multiple studies from Consumer Reports²⁶, Sierra Club²⁷ and Ipsos RDA²⁸ support much of the anecdotal evidence that retailers fall short in delivering pre- and post-sale support to EV customers. In response, the UK launched the Electric Vehicle Approved (EVA) accreditation program to support consumers in their buying choices by verifying electric vehicle (EV) retailers and providing clear certification to reliable dealers.

In the U.S., regional organizations have introduced similar dealer training or "certification" styled efforts to work with a subset of local dealers willing to engage in such a program. The Smart Columbus program in Ohio and Drive Clean program in Colorado are two such examples. Plug In America was the first to develop a national model with a regional focus, with the ability to build on and support the work of local organizations. The PlugStar program combines core curricula in EV sales with locally tailored training and support that together confer certification in EV sales. The stated goal of the program is to offer local government, utility and other area employers and EV stakeholders a ready pool of qualified auto dealers able and willing to incorporate local EV incentive programs into their sales processes, thereby enabling dealers to more effectively convey the EV value proposition and related messages to customers. Participating dealers benefit from training, tools and support, plus monetary incentives and customer leads generated from the marketing activities of program partners.

^{26.} Evarts, Eric. 2014. Dealers not always plugged in about electric cars. ConsumerReports.org

²⁷ Rev Up EVs: A Multistate Study of the Electric Vehicle Shopping Experience. 2016. Sierra Club. Available at https://content.sierraclub.org/ creative-archive/sites/content.sierraclub.org.creative-archive/files/pdfs/1371%20Rev%20Up%20EVs%20Report_09_web.pdf

²⁸ Alexov, Ellen. Ipsos RDA Study Finds U.S. Dealerships Not Prepared for the EV Invasion. Ipsos RDA. 2017. Available at https://www.ipsos.com/ en-us/news-polls/rda-finds-us-dealerships-not-prepared-ev-invasion

METHODS

The evaluation targeted new car dealers with and without EV inventory in the Denver metro area. This entailed tallying EV inventory at 80 new car dealerships in Denver and its surrounding area. This is what we found in February of 2020:





The assessment involved a trip to the Denver metro area, by Plug In America staff, to conduct secret shopping visits and to meet with and interview dealer managers and sales staff. Plug In America's corporate contacts at Nissan, Audi and BMW assisted with facilitating introductions to dealer GMs and GSMs. The Colorado State Auto Dealers Association was also contacted but did not prove fruitful in facilitating introductions or meetings.

The dealers visited included:

- Phil Long Ford
- Tynan's Volkswagen
- Tynan's Nissan
- Boulder Nissan
- Emich Volkswagen
- Century Chevrolet
- Mountain States Toyota
- BMW of Denver Downtown
- i25 Kia

A semi-formal interview protocol was used to question dealer managers during interview visits. A sampling of the questions asked are listed below. These questions were used to initiate and guide the conversation. Each conversation was unique, however, typically covering a subset of these topics based on the individual experiences of the respondent and the dealership.

How long have you been selling cars (at any dealership)?

How long have you been selling electric cars?

How does your sales staff currently handle questions from customers interested in purchasing an EV?

What did the OEM require of you to sell EVs?

Do you think you are getting the support you need on EVs from the factory?

What kind of support has the factory provided you (tools, support line, collateral, etc.)?

What additional support do you think you need?

How open are you to having other parties (other than factory) helping you with support on EVs?

Does your dealership have any history working with the local utility? Do you want help selling EVs from the utility? What would that help look like?

Are you open to getting leads from different partners?

Would you be willing to share collateral about charging and incentives with customers as part of your sales process? (i.e. utility charging, station availability, equipment choices, etc.)

FINDINGS

This section discusses observations from interviews in light of emerging best practice and historical data. Dealers were posed the question, What more could local utilities and the state do to help stores sell more EVs in Colorado? Their responses to this question included the following:

- Conduct substantially more consumer education and outreach for EVs
- Deploy more charging infrastructure at key locations and along Colorado's highways
- Training on EVs, including incentives, charging and how to convince customers to complete any required forms for dealers and sales staff ("we can never get enough training")
- Steps that make it easier for customers to prepare their homes for EV charging
- A tight utility partnership with clear and direct benefits to the dealership
- An EV rebate to partnering state and utility employees honored by partner dealers
- In-home evaluations of the customer's electrical supply and cost estimate for required upgrades
- A simple process that does not add work for dealers

To this, our experience adds:

- More prominent service station styled signage for EV charging infrastructure, especially DC fast charge stations, along Interstate and highway corridors
- Visibility to EV incentives, programs and charging costs at home and on the go

Dealers shared their preference to hand off all the parts of a sale that involve charging to the utility in a streamlined and seamless way. However, in light of the potential for erosion of key dealer profit centers such as service and maintenance with greater EV uptake, it is important that dealers retain the ability to earn revenue for adding value to an EV buyer's experience.

If the goal is to increase the adoption of EVs in Colorado, two key conditions must be met. First, dealers in the target market(s) must be willing to work with local utilities and partners. Second, enough dealers must be willing and able to sell EVs.

Are dealers in the target market willing to work with local utilities and state partners?

Based on interviews with dealer managers and manufacturer representatives, the answer is unequivocally yes. Those dealers that have a history of working with various groups welcome continued involvement. However, they prefer that the many various organizations working in the state would have a more unified approach and voice. Those with no history in the pilot nevertheless welcome utility engagement. The dealers interviewed recommend several avenues for doing so. These include:

- Partnering with area dealerships individually or with dealer groups composed of multiple brands and rooftops.
- Developing a streamlined process for dealers to facilitate hand-off of customers to the utility for all things charging related.
- 3. Establishing special pricing for utility employees and its customers.
- 4. Educating sales staff to have informed conversations with EV customers about incentives and charging.
- Marketing the program, through multi-channel education and outreach, to the utility's customers and the greater community.

Are there enough dealers willing and able to sell EVs?

This question is best addressed in two parts. The first is, Are area dealers willing to sell EVs? The second question is, Are dealers able to sell EVs? The first address whether they would sell EVs given the opportunity. The latter concerns whether they could get them if they wanted to and if they did, whether they would know how to sell them. This section discusses each in turn.

Despite historical indifference, more manufacturers are revealing product pipelines to dealers that feature a growing number and breadth of EV options and dedicated EV nameplates. This is particularly true among premium makes that include Audi, BMW and Jaguar (Land Rover). For example, Audi's roll out of the 200-mile e-tron all-electric SUV earlier last year was accompanied by a push from the manufacturer to ready its dealer network. Much of this can be attributed to new entrant Tesla, a formidable competitor that has challenged their reputation for technological leadership and eroded their market share in key premium segments. But even mass market brands such as Ford, GM and VW have disclosed publicly - and revealed to their dealer networks - forthcoming electrified platforms.²⁹ Every dealer interviewed, expressed a willingness to sell EVs.

The second part of the question relates to the ability of area dealerships to obtain EVs for retail sale. A lack of EV inventory can frustrate many would-be EV buyers.

EV inventory challenges are common, especially for places outside California. Manufacturers allocate EVs to dealers based on historical demand (as expressed by dealer orders), charging infrastructure and prevalence of supportive EV policies and incentives in the State. Some dealers in Colorado have very limited EV inventory or even none at all. For example, Volkswagen currently does not have any inventory in Colorado. Given the uncertainty around the degree to which an utility-OEM initiative will increase consumer interest in EVs, dealers will exercise caution in stocking a greater number of EVs in advance. Once increased demand is observed, dealers will naturally seek to replenish EV inventory through manufacturer orders.

Even if initial efforts prove fruitful in spurring demand, manufacturers may find it difficult to adjust to short-term fluctuations. SWEEP's 2018 retrospective study observed this dynamic in Xcel Energy's Colorado territory in 2017. There, limited-time discounts were marketed as part of their program. Dealers that had taken steps in advance to develop vehicle trade agreements with other regional dealers were best able to adjust, drawing upon EV inventory from its partners.³⁰

The SWEEP study analyzed 27 EV discount programs that reported sales data and found that average monthly EV sales varied by market size. For medium size markets - defined as having between 100,000 and 1,000,000 residents - the average monthly sales rate was 36 EVs.³¹ An average per dealer sales rate can be estimated by dividing among the number of participating dealers and adjusted to reflect relative differences in sales figures among vehicle brands. Program organizers can then share this information with participating dealers and OEMs in advance of launch to better plan their inventories.

Irrespective of whether dealers have sufficient EV inventory they may struggle to sell the units they do have. Multiple studies published over the last half dozen years have found that car dealerships contend with multiple barriers to EV adoption.³² Among these are lack of familiarity with the technology, inadequate manufacturer support³³ and challenging customers that contribute to perceived longer sales cycles and lower or uncertain profitability around EVs.³⁴ Multiple 'mystery shopper' studies have revealed that some dealers knew little about the EVs on their lot or steered customers toward conventional models. Perhaps unsurprisingly, Plug-in buyers are more likely to rate their purchase experience significantly lower than buyers of conventional cars.³⁵

Innovative dealer engagement programs have demonstrated ways to successfully surmount these challenges. The 2019 SWEEP study, for example, reported a 90 percent satisfaction rate with customer service where dealers were required to receive EV training, regardless of whether they ended up buying a vehicle.³⁶ Multiple programs have previously employed dealer education programs, in some cases combined with a certification regime contingent upon EV training. Columbus, Ohio's Electrified Dealer program is one example. Another is the PlugStar EV Certification program run by the national nonprofit EV advocacy group Plug In America. Several large utilities such as SDG&E (San Diego), SMUD (Sacramento) and Ameren Missouri have leveraged PlugStar's turn-key platform to recruit, train and certify dealers and their sales staff in EV sales best practices. The San Diego and Sacramento programs go further, rewarding dealers with up to a \$500 bonus ("spiff") for every EV sold.

Midstream incentive programs such as those in San Diego and Sacramento have been shown to motivate dealers to sell EVs and to encourage sales staff to get trained. Plug In America reported trained sales staff in their programs sold 3.7 times more EVs than their untrained counterparts. Moreover, training uptake by sales staff at dealers accelerated from around 20 percent to upwards of 80 percent when the amount of the bonus was halved for untrained sales staff.

Midstream incentives confer other advantages as well. Dealers are more likely to be receptive to the program offering and willing to accept the requirements associated with participation. Examples include periodic EV training and willingness to facilitate the passing of informative EV collateral to customers. Buy-in at the general manager level is an essential component of success that enables and unlocks these benefits.

^{29.} St. John, Alexa. The Era of Electrification. Automotive News. October 7, 2019. Available at https://www.autonews.com/future-product/eraelectrification

³⁰ EV Group Buy Programs: Handbook & Case Studies. SWEEP July 2018. Available at https://drive.google.com/file/d/1rNInMle518d_ W0pZ6qdq4pUNm7RSDALf/view

^{31.} Ibid. p26

³² Rubens, Gerardo Zarazua De, et al. "Dismissive and Deceptive Car Dealerships Create Barriers to Electric Vehicle Adoption at the Point of Sale." Nature Energy, vol. 3, no. 6, 2018, pp. 501-507., doi:10.1038/s41560--18-0152-x

³³ 2019 Evolution of Mobility Study. Cox Automotive. August 2019. Available at https://d2n8sg27e5659d.cloudfront.net/wp-content/ uploads/2019/08/2019-COX-AUTOMOTIVE-EVOLUTION-OF-MOBILITY-THE-PATH-TO-ELECTRIC-VEHICLE-ADOPTION-STUDY.pdf

³⁴ Cahill, E.C. (2015). Distribution Strategy and Retail Performance in the U.S. Market for Plug-in Electric Vehicles: Implications for Product Innovation and Policy [Doctoral dissertation]. University of California, Davis, CA

^{35.} Cahill, E.C., Davies, J., Turrentine, T., and Sperling, D. (2015). New Car Dealers and Retail Innovation in California's Plug-in Electric Vehicle Market. Compendium of Papers of the 94th Annual Meeting of the Transportation Research Board, Transportation Research Board of the National Academies, Washington, D.C.

³⁶ EV Group Buy Programs: Handbook & Case Studies. SWEEP. July 2018. Available at https://drive.google.com/file/d/1rNInMle518d_ W0pZ6qdq4pUNm7RSDALf/view

RIDE AND DRIVE BEST PRACTICES

Based on conversations with dealers and other Colorado stakeholders, increased opportunities for ride and drive events (RADs) would be welcome in Colorado. Plug In America has deep experience in the RAD space and has summarized some best practices:

- To ensure the highest level of engagement and participation from dealerships, it is best to have events during an extended lunch time (works especially well if food is available), generally running from 10 AM to 2 or 3 PM.
- Community events are best held on Saturdays to ensure foot traffic while weekday events should be held Tuesday through Thursday to accommodate dealerships.
- Key factors when locating potential site hosts include the site being no further than 15 miles from participating dealerships, EV charger availability, easily accessible test drive route, and area providing high traffic to draw participants.
- The site host agreement should outline liability, planning, and production.
- Exposure consists of the amount of people who will be exposed to the events through social and local media, email blasts, stakeholder/partner promotion, and event attendance.
- It is important to develop a thought out event footprint considering safety, launch point for test drives, the movement of the cars, and location of registration and vendor tents.
- Safety considerations must remain at the forefront of all event planning.
- Once host location is confirmed, you should begin dealer research and may contact Plug In America to see whether any dealerships in the area are active participants in its dealership engagement and training program as these dealers are specially qualified and trained to support ride and drive events.
- Registration form creates an agreement between your organization and the dealership and should include: all
 event details, liability requirements, participation requirements, dealership contact on day-of, list of materials
 supplied for or by the dealer, dealership waiver, instructions on how to obtain certificate of liability insurance(COI),
 and deadline for submitting.
- Before the event, finalize footprint, materials to bring, test drive route, pre- and post test drive surveys, staffing plan, staff and dealership arrival times.
- On the day of the event, physically walk through the footprint and make adjustments as necessary, setup
 registration, direct dealerships and vendors upon arrival, and host an all-hands meeting 30 minutes prior to cover
 registration process, waiver, wristband (all drivers must have a wristband to signify proper registration), pre- and
 post test drive surveys, test route, and restrooms, food, etc.
- After the event, an event report is a great way to share information both with partners and the host. Report
 components might include brief event description, dealership and vendor description, test drive breakdown,
 exposure, event insights, survey highlights, photos, links to social media, press releases, etc., and list of
 promotional activities.

OPPORTUNITIES FOR COLORADO

Robust dealer engagement is integral to the success of EV initiatives. Based on the observations collected here and on emerging best practices from around the country, we recommend that the state of Colorado integrate dealers into its strategic plans for electrification of transportation.

Partnering with dealers in the Denver metro area, the largest and most populous EV market in Colorado, offers the opportunity to reach and influence car shoppers at a key touchpoint in the buying process. An initial pilot phase duration of one year is suggested. Follow-on phases of work could then incorporate other metro areas in Colorado.

Below is a list of suggested scope statements for this initial dealer pilot. Note that these activities should be tightly integrated with the experiential event and marketing activities. Here, the focus is on the dealer-facing elements.

- 1. Recruitment of around 12 Denver metro area dealers.
- 2. Outreach to like-minded community partners to include universities, government entities and large area employers, among others, to contribute to the program financially or in-kind.
- 3. A dealer certification component based on a combination of EV training, experience, history of collaboration with EV stakeholders and compliance with program policies.
- 4. A centralized online resource for consumers that includes available EV inventory from area dealerships.
- 5. Printed, in-dealer and online training aids for dealer sales staff.
- 6. Help line support for participating dealers and their EV customers.
- 7. Pre-arranged special pricing encompassing the vehicle, charging and installation for customers.
- 8. A coordinated marketing campaign with a strong digital component that includes retargeting ads to reach inmarket buyers (those already in the process of buying a car).
- 9. A series of ride and drive events to expose consumers to the technology and generate leads.
- 10. An EV incentive for various state and utility employees with internal marketing to drive leads.
- 11. Work with utilities to develop seamless hand-off of EV customers to their local utility for home charger installation and rate plans.

We would also urge the inclusion of a per EV sold monetary incentive to dealers (and sales staff) in this initial pilot phase. This element facilitates dealer participation and compliance with program terms and conditions.

The objective of the program outlined above would be to increase EV sales by the end of the performance period.

Key Performance Indicators on which to gauge the success of the pilot should include the following:

- Incremental EV sales (subject to additional fees for data acquisition from third party aggregators)
- Customer satisfaction with the purchase experience
- Dealer satisfaction with the program
- User traffic

Dealer Training and Engagement Pricing (Programmatic Pricing)

Conclusions

We observe promising opportunities for the state of Colorado to engage with auto dealers in the Denver area, with broader expansion to other locales possible in the 2022 time frame.

The next year will see a significant uptick in electrified model introductions across a variety of brands and vehicle categories that will see broader deployment than in previous years. The overwhelming evidence indicates auto dealers will need robust training and support that few automakers are willing or able to provide in the near to medium term. These developments increase the likelihood that the fullmarket potential for embrace of EVs by dealers - and the customers they serve - will go unrealized without additional support from stakeholders in the state. The customer's purchase experience is also likely to be compromised, increasing the likelihood of a poor ownership experience that could further limit the pace of EV adoption in Colorado.

A sufficient pool of dealers interviewed as part of this investigation expressed a positive opinion of receiving more training, tools and resources to sell more EVs. Dealer management sees the value of knowledgeable salespeople, as it leads to a more positive customer experience. A EV training and certification program is responsive to dealer needs, and the quality of the work that they perform. They readily see the value of partnering with local utilities and state partners as a benefit to their customers and to their sales staff. We recommend a new phase of engagement for 2021 involving the certification of around 12 dealers at an attractive price point. This should be combined with a per EV sold monetary bonus to reward participating dealers that invest in EV inventory and in growing EV expertise. Doing so further facilitates data acquisition. Recruitment of program partners to co-market with state partners and drive traffic to participating dealers would further reward dealers with leads. In addition, we recommend increasing EV ride and drive events with participation from EV trained dealerships.

A - GLOSSARY OF TERMS & ABBREVIATIONS

The automotive retail sector is replete with industry terms, acronyms and jargon. Though the report minimizes use of such terms, it makes use of some for brevity. The most common are defined below for reference.

GM = General Manager GSM = General Sales Manager SM = Sales Manager OEM = Original Equipment Manufacturer BDM = Business Development Manager ISM = Internet Sales Manager FM/FSM = Fleet Manager or Fleet Sales Manager NCSM = New Car Sales Manager CRM = Customer Relationship Manager

B - EVALUATOR QUALIFICATIONS

Plug In America brings more than three years of experience developing and delivering training, tools and support to EV dealerships. Through its PlugStar program, Plug In America brokers regionally oriented community partnerships to create value for auto dealers, program partners and stakeholders. PlugStar's design was informed by the extensive research of the program's advisor, whose PhD dissertation examined the role of auto dealers in EV adoption. Analysis of JD Power customer survey data revealed EV buyers rated dealers substantially lower in satisfaction with the dealer purchase experience. The research also involved in-depth interviews with dealer management and sales staff, manufacturers, utilities and other stakeholders. The findings of this work and the insights shared became the foundation of the PlugStar program.

Since October of 2016, PIA has successfully piloted PlugStar in San Diego, Boston and Los Angeles. Plug In America currently manages one Missouri-based program with utility partner Ameren and three California-based programs. Programs in San Diego and Sacramento include administration of monetary incentives to dealers and sales staff for sales of EVs. A fifth program to launch PlugStar in New Jersey in partnership with the state auto dealer association is already under contract.

Plug In America's material was honed by feedback from manufacturers and dealer association representatives who have attended the courses, as well as the dealers themselves. To date, we've trained over 1,000 dealer sales and manufacturer sales support staff coast to coast, including Audi of America's four U.S. regional sales support teams. Close to 100% of trainees recommend the program to other sales staff.

PlugStar produces real-world results, engaging more EV dealers and driving EV sales incrementally higher. Our very first pilot, funded by SDG&E in San Diego and consisting of training alone, saw participating dealerships deliver 6.5% more EVs than a control group of similar area dealers. In the two years since, the program has grown to encompass an array of resources for dealers. These include training and sales collateral, a mobile-friendly EV dealer portal, and help-line support for salespersons and customers.

Pilots that included a dealer monetary incentive in San Diego and Sacramento have shown that PlugStar trained and supported dealers sell three to four times more EVs than their untrained counterparts, even when both groups receive the same monetary incentive. The program works because it fits neatly within the dealer's business model, providing a turn-key, yet flexible, platform to accommodate a diversity of dealer profiles, geographies and needs.