



Electric Vehicle Group Buy Programs: Handbook & Case Studies

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Energy Office



Electric Vehicle Group Buy Programs: Handbook & Case Studies

An evaluation of EV group buy programs and toolkit for
developing new opportunities with regional stakeholders

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I. INTRODUCTION

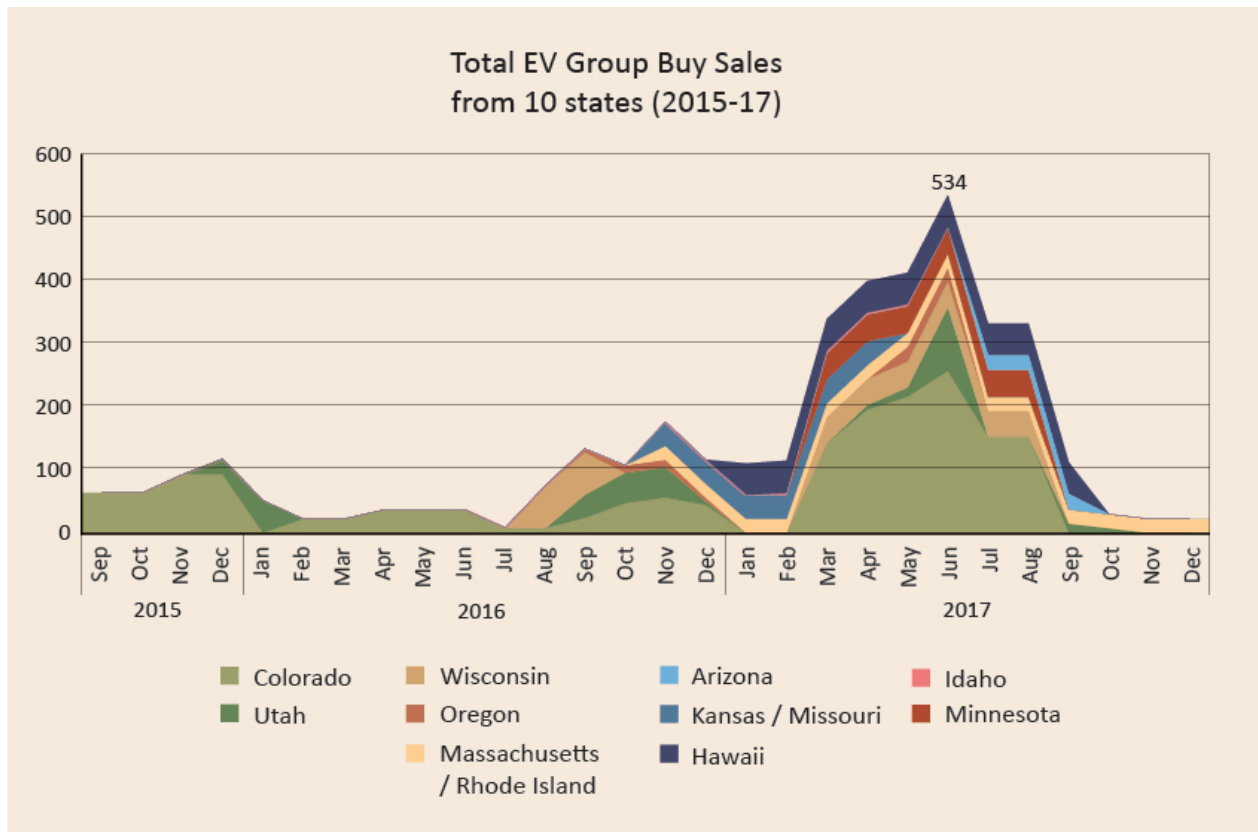
In September of 2015, Boulder County launched the nation's first electric vehicle group buy program. The County worked with a local Nissan dealership to offer an \$8,349 group discount off the 2015 Nissan LEAF. When combined with state and federal tax credits, the net price for the LEAF was \$12,130, a 62 percent discount off the retail price of the vehicle. **The EV group buy program was the first of its kind and with 248 LEAF sales in four months, Boulder Nissan quadrupled its monthly average of LEAF sales.**

After the success of the initial programs, SWEEP partnered with Boulder County, the Colorado Energy Office, and BCS, a consulting firm, to develop both a [case study](#) and a [how-to-handbook](#) to help other communities organize similar programs.

The group buy concept spread to other areas of Colorado and beyond, to Utah, Wisconsin, Oregon, and Massachusetts. In the last three years, 48 programs have launched in 20 states (See Appendix B). Almost all of these programs have been recurring, with multiple limited-time offerings renewed seasonally or annually. At least 80 different local government, nonprofit, utility, university, auto manufacturer, and employer groups have participated in EV discount programs.

These programs have demonstrated an ability to increase consumer awareness of EVs and expand the market in communities all over the country. The group buy model has evolved to fit the context, with many smaller communities adopting a more direct approach to dealership negotiation and larger cities exploring more expansive and creative outreach strategies. More recently, these programs have attracted the attention of national auto manufacturers, or original equipment manufacturers (OEMs), and electric utilities. In over a dozen states, these large corporate entities are collaborating on regional EV discount programs, broadcasting sizable vehicle discounts to large audiences of electric utility customers. By the end of 2018, over 55 million people in the United States will have been offered a deal through an EV discount program.

This document is designed as an update to SWEEP's original March 2016 case study and handbook, summarizing lessons learned from three years of experience with these programs, and providing recommendations and resources to assist local and state governments, utilities, universities, and nonprofit community organizations interested in organizing or participating in group buy programs.

Figure 1. Total EV Group Buy Sales across 10 states (2015-2017)

II. EXECUTIVE SUMMARY

The primary goal of EV group buy programs is to boost EV sales. Many communities have demonstrated a growing appetite for EVs among early adopters, technology enthusiasts, and environmentalists. Group buy programs are an important tool for building momentum and accelerating market growth from the early adoption to the majority adoption phase, beyond which EVs will transition from the fringe to the mainstream. In the short term, group buy programs use community-driven EV promotion and dealership discounts to raise consumer awareness and spur sales. In the long-term, they provide the dealership with the training and EV inventory necessary to sustain market growth after the group buy deals have expired.

At its most basic, EV group buy programs extend vehicle discounts to consumers through strategic partnerships and community-based outreach and marketing. A lead agency, such as a local government, nonprofit, or university, designs an RFP (Request-for-Proposal) and distributes the document to local car dealerships and national auto-manufacturers (OEMs). These documents should be simple and concise to encourage dealership participation, which results in greater consumer choice. For more information on program design and sample language for group buy RFPs, refer to Section 4 & 9 and Appendix A.

Since the initial programs were launched in 2015, there have been multiple derivations from the traditional RFP model, including:

- **Direct Dealership Negotiation:** the lead agency bypasses the RFP process and coordinates with dealerships and OEMs directly.
- **“Rolling” Group Buys:** the program is ongoing, with discounts updated on a monthly basis.
- **University Outreach:** EV discounts are collected by universities and offered to students, faculty, staff and retirees.
- **OEM-Utility Partnership:** An OEM uses corporate dollars and extends fleet discounts to all electric utility customers, and in exchange, the utility provides marketing and outreach services to promote EV sales through the program.

Descriptions and examples for each of these strategies are outlined in Section 4.

Group buy programs have consistently delivered sales results in communities all over the country, boosting dealership sales by up to 10 times the monthly average. In developed EV markets with pre-existing demand, the programs have built on strengths and accelerated market growth. In underdeveloped markets, they have played a pivotal role in getting EVs on the lot at local dealerships. The OEM-Utility model has proven to sell the most EVs because it offers the biggest discounts across the greatest number of dealerships, and broadcasts the deal to the largest audience.

Nissan has been the most active participant in group buy programs, with the LEAF accounting for the majority of program sales. With the exception of Nissan and BMW, the majority of OEMs have been reluctant to contribute corporate dollars for EV group buy programs. However, many local dealerships chose to join community group buy programs and support EV discounts with their own resources, in order to stay competitive in regional car markets. Refer to Section 5 for more information on EV group buy sales data, vendor selection, and model availability.

The biggest challenges for dealerships are securing sufficient EV inventory to satisfy program demand, and preparing the sales staff to answer questions about the technology. Under normal circumstances, studies suggest that auto dealers are unlikely to direct customers toward EVs because of historically low sales and inadequate training. It’s important for auto industry partners to invest in EV inventory and sales training to reverse this trend. The most successful programs have an EV “Evangelist,” a sales person or program partner who is passionate about EVs and willing to go above and beyond for the program. A more comprehensive analysis of dealership benefits and challenges can be found in Section 6.

For communities, EV group buy programs represent an opportunity to accelerate EV adoption and reduce carbon emissions and local pollution from the transportation sector. Group buy discounts are largely funded by private businesses, which makes them an extremely cost-effective way for local government and nonprofits agencies to advance their climate goals and support local

consumer choice. For local residents, group buy discounts offer substantial savings, not only through the discount, but also through federal and state tax incentives. These dollars are saved at the dealership and kept in the local economy. Refer to Section 7 to learn more about the community benefits and costs of launching an EV group buy program.

The most successful programs establish a broad coalition of trusted community partners to collaborate on marketing and outreach efforts. Survey results suggest that environmental nonprofits, air quality agencies, and local governments have more community trust than auto dealerships and OEMs (Salisbury, 2016). Group buy programs present a special opportunity for car dealers to broaden their advertising efforts and partner with trusted community organizations to market their EVs.

For OEM-Utility partnerships, program outreach is amplified by large electric utilities. While these corporations do have a much larger customer base than most community agencies, they often lack the trusted community voice to spread the word effectively. In order to increase program awareness, utilities can partner with local governments, nonprofits, universities, employers, and media agencies.

Outreach partners employ a number of marketing strategies to promote program awareness. Among the most effective are in-person events like EV workshops and Ride & Drive Events. With such a new technology, it's important for program sponsors to communicate the many benefits of EVs and explain how the tax incentives might apply to the customer purchase. Section 8 provides a detailed description of partner roles, marketing tools, and messaging strategies.

According to the Electric Power Research Institute's *U.S. Consumer Guide to Electric Vehicles* (EPRI, 2018), the number of EV models in the US is projected to increase from 40 to 53 during 2018. By 2022, there will be at least 90 EV models on the U.S. market with a diverse selection of SUVs, crossovers, and minivans. International policy and market demand is motivating a transition to electrification and a number of OEMs have announced plans to deliver electric versions of their vehicle fleets including Volvo (2019), Mercedes-Benz (2022), Nissan-Mitsubishi-Renault (2022), Volkswagen (2025), and Toyota (2025).

As a greater selection of EVs with longer ranges and lower costs are introduced to the market, EV group buy programs will continue to thrive. There is a fast-approaching window of opportunity, inside which government purchase incentives will overlap with decreasing battery costs and growing model diversity to produce greater choice at a lower cost. By offering further discounts on EVs, group buy programs can capitalize on this convergence and be the matchstick that ignites a mass adoption of EVs.

III. WHAT IS A GROUP BUY PROGRAM?

The basic idea behind an EV group buy program is that a local agency negotiates a discounted price from one or more EV dealers or OEMs. This deal is available for a limited time (usually 3 months) to members of a group, whether they are employees of a company or residents of a community. The agency agrees to take the lead in outreach and marketing for this deal. The key elements of an EV group buy program include the following:

Discounted prices on EVs

The lead agency conducts a competitive bid process to get the best possible prices on buying or leasing selected models of EVs. The selected car dealers and OEMs then provide discounts or rebates for program participants.

Limited-time offer

Having a discrete time limit motivates customers to act now while the deal is still in place. This is particularly important in the EV marketplace, where many potential buyers have a tendency to wait for newer technology to be released. The limited-time offer encourages them to act now and helps to accelerate a market transformation toward electrification.

Community-based outreach and marketing

One of the biggest barriers to EV adoption is the lack of awareness that EVs are available and affordable. Trusted voices in the community (e.g., local governments, air quality agencies, neighborhood groups, or trusted nonprofit organizations) can communicate the value of EVs. Broadcasting an affordable deal from a group buy program can move many people to action.

The basic steps for organizing and managing an EV group buy program are listed in the Project Management Guide below.

Project Initiation:	• Identify Lead Agency: Engage with potential stakeholders such as local governments, nonprofits, universities, utilities, and employers.
Project Planning:	• Define the Scope: A description of the program and its benefits for the community. • Develop a Plan: Project Schedule and Budget should include an activities list with important milestones such as the launch event, media releases, and EV workshops & events. It should also include internal weekly or biweekly stakeholder meetings. • Define Goals & Deliverables: Include targets for the number of participating dealerships, available models, and total EV sales. • Build Marketing & Outreach Partnerships: Identify partners with outreach experience in order to maximize marketing efficacy. Coordinate with other energy and EV-related programs.
Partner with EV Suppliers:	• Engage with the Auto Industry: Draft and distribute an RFP or engage directly with local dealerships & OEMs. • Review Proposals: Evaluate responses, select participating dealerships & OEMs, and establish an assigned point-of-contact (POC) to review the proposal and negotiate the terms. • Draft a Formal Written Agreement: Produce a signed written agreement to confirm the terms and conditions of the program. • Develop a Risk Management Plan: Create a contingency plan to manage risk, especially with respect to EV training and inventory.
Project Implementation:	• Schedule and Budget Management: Finalize the project scope, schedule, budget, and risk management plan. • Program Documents: Finalize the marketing materials and coordinate between partners and participating dealerships, then <u>launch the group buy program.</u>
Project Monitoring:	• Execution: Manage the project and participate in weekly meetings to monitor progress and make necessary adjustments. • Data Collection: Encourage dealerships to conduct customer surveys and organize sales data for further analysis.
Project Closure:	• Analysis & Reflection: Conduct lessons learned from the group buy program at the closure meeting and organize the results in a report.

IV. HOW HAVE GROUP BUY PROGRAMS EVOLVED OVER THE LAST 3 YEARS?

Traditional RFP (Request-For-Proposal)

Description: The elements listed in the above definition describe the Traditional RFP model for an EV group buy program. At its most fundamental, every group buy program has a lead agency to organize and advertise the program, and an auto industry representative to implement the discount and manage the EV sales. A typical RFP document outlines the lead agency's marketing commitment and the dealership requirements, including the proposed EV discount(s), an inventory plan, and a customer service strategy. Refer to Appendix A for a complete RFP sample.

The Traditional RFP process is great for building relationships between car dealerships and lead agencies, such as local governments, nonprofits, and universities. The RFP allows lead agencies to gauge interest in the local dealership community and identify those that are well equipped to participate in a group buy program. It is also a useful project management tool and is commonly referenced as a program guide for key stakeholders to follow. According to several programs, it is important to maintain a written record of the group buy terms and conditions to avoid disagreements over pricing and responsibilities later in the program.

However, the one-size-fits-all approach may exclude less experienced dealerships from participating in the program. The RFP model was most popular in the early days of the program (2015, 2016), but of the 42 programs surveyed, only 14 of them used the traditional RFP model.

The program manager is responsible for finalizing the RFP, issuing the document to dealerships and OEMs, reviewing the proposals, and then working with each dealership to make sure it is prepared to participate in the program. In cases where administrative resources are limited, the traditional RFP process may be too time-consuming for the lead agency. According to one program director, the RFP “added a lot of time and stress to manage the proposals, but didn’t add much value.”

Other program administrators suggested that the traditional RFP process made their program too complicated and potentially exclusionary. Most car dealerships do not have experience handling and responding to formal RFPs, so this approach may dissuade certain dealerships from participating and ultimately limit consumer choice. Many program organizers have refined the RFP model or bypassed it altogether in order to optimize the process.

Drive Electric Northern Colorado (DENC), a nonprofit in Fort Collins, ran four separate group buy programs in 2015 and 2016, and used the traditional RFP process to structure their process. They then developed their own simplified requirement checklist to vet dealerships and track program milestones (See Appendix D).

In addition to the alternative strategies described below, one approach may be to develop and distribute an RFI (Request-for-Information) in lieu of an RFP. An RFI is a less formal document that is designed to solicit interest from a broad base of suppliers, in this case dealerships and OEMs. The RFI might include a request for general information about dealership EV-training and inventory

without requiring a commitment to an EV discount. Such details can be negotiated directly once car dealers and OEMs have expressed interest in the program and a relationship has been established. The less onerous application may lower a key barrier to entry and encourage more dealerships to engage in group buy programs.

Traditional RFP (Request-for-Proposal):

Advantages:

- Gauges interest from dealerships & OEMs and builds new relationships.
- Provides a comprehensive guide with partner responsibilities and program milestones.
- Supports collaboration between trusted local community organizations.

Disadvantages:

- Many dealerships do not have experience processing RFPs.
- The process can be time-consuming and tedious for program administrators.
- "One-size-fits-all" approach to dealership engagement is less flexible.
- May not elicit any responses from dealerships.

Examples: Boulder County (CO), U Drive Electric (UT), City of Aurora (CO), Drive Electric Northern CO, RevUP Blaine (ID)

Direct Dealership Negotiation

Description: In this model, the lead agency works directly with local dealerships and OEMs to negotiate the discounts and terms of the program. This model is typically used for existing programs to re-negotiate deals and invite new dealerships to join the program. Program organizers that have already developed close relationships with local dealerships can save time and administrative resources by working directly with their partners to collaborate and discuss program improvements for future iterations. Programs from Oregon, California, Western Colorado, and Salt Lake City, chose to forego the traditional RFP process in favor of direct dealership negotiation.

In 2017, the Colorado Clean Energy Economy for the Region (CLEER), a community nonprofit based in western Colorado, used the traditional RFP process to connect with Nissan, BMW, Audi, and Chevy dealerships in the first round of their group buy program. They chose to skip the RFP process in the second round to save on time and costs. With the proven results of the first program, CLEER was able to re-negotiate discounts with existing partners and add Honda, Toyota, and Chrysler dealerships to the roster for their second group buy program in 2018.

Steve Mital, University of Oregon's Chief Sustainability Officer, launched Eugene's first EV group buy program in 2016. In a community of 166,000, Eugene has fewer dealerships than a larger city, so Steve was able to negotiate directly with local Nissan, Ford, and Chevy dealers and come to an

agreement on program specifics. Steve had worked on solar group buy programs in the past and his experience with vendors allowed him to personally connect with local car dealers to discuss challenges and opportunities. Rather than using an RFP to confirm the agreement, program organizers that choose this model can use a Memorandum of Understanding (MOU) to document the agreement.

This approach works well in smaller communities, where program organizers can connect with dealerships personally. Co-developing the program with dealerships partners can lead to a greater sense of commitment and program ownership among stakeholders. Direct dealership negotiation is less applicable for first-time programs and larger cities where lead agencies don't have the time or resources to build new relationships and engage with dozens of dealerships individually. In these cases, a general RFP or RFI can be used to identify potential partners before the lead agency engages with dealerships and OEMs individually.

Direct Dealership Negotiation:

Advantages:

- May save time and administrative resources.
- Personal relationships with dealerships leads to greater collaboration and dealership commitment.
- Supports collaboration between trusted local community organizations.

Disadvantages:

- Excludes dealerships that are not contacted directly.
- More difficult to apply in larger communities with many dealerships.

Examples: RevUp Eugene (OR), Bend Group Buy (OR), CLEER (CO)

The “Rolling” group buy program

Description: Rolling group buy programs are extended indefinitely, presenting an opportunity for dealerships and OEMs to continue their discounts each month. The lead agency submits an application to participating dealerships each month and lists the available discounts in a “deals table” on their public website. This way, the program remains flexible and allows dealerships to adjust their level of participation in relation to market trends.

This method was developed by Mass Energy Consumers Alliance, an energy nonprofit in Boston, Massachusetts. Mass Energy launched a ‘traditional’ EV group buy program in November of 2016 that was initially planned to go through the end of February 2017. Due to continued demand, they decided to extend the program through June. In June, Mass Energy felt that there was still sufficient

demand to continue the program, but decided to alter it. Because the dealerships were only able to guarantee pricing from month to month, Mass Energy decided to develop an ongoing program to allow consumers to take advantage of the latest deals.

As of May, 2018, the Drive Green website listed deals for 14 vehicle models from 11 different OEMs at 34 participating dealerships, representing deals with every major EV manufacturer except Tesla. The program currently lists 36 purchase and 32 leasing deals on its website. For comparison, the average limited-time EV discount program offered 4 total deals. All of the Drive Green discounts are listed on Mass Energy's website alongside the dealership name, location, original retail price of the vehicle (MSRP), tax credits, expiration date, and financing options. This transparency attracts new dealers and drives competitive pricing between dealerships.

Table 1 (shown below) is Drive Green's "deal table" for the Chevy Bolt from May of 2018. The table lists the discounts from eight Chevy dealers in Massachusetts and Rhode Island. Six of the eight discounts expired by June 4, 2018. Five of those were renewed with reassigned expiration dates and four (or 50 percent of the total) chose to change the value of their discount for the following month. These adjustments reflect a program in flux, with dealerships tweaking their discounts to stay competitive in the regional market.

Table 1. Drive Green with Mass Energy: 2018 Chevy Bolt Deals Table (May 2017) - table adapted from [Drive Green's website](#)

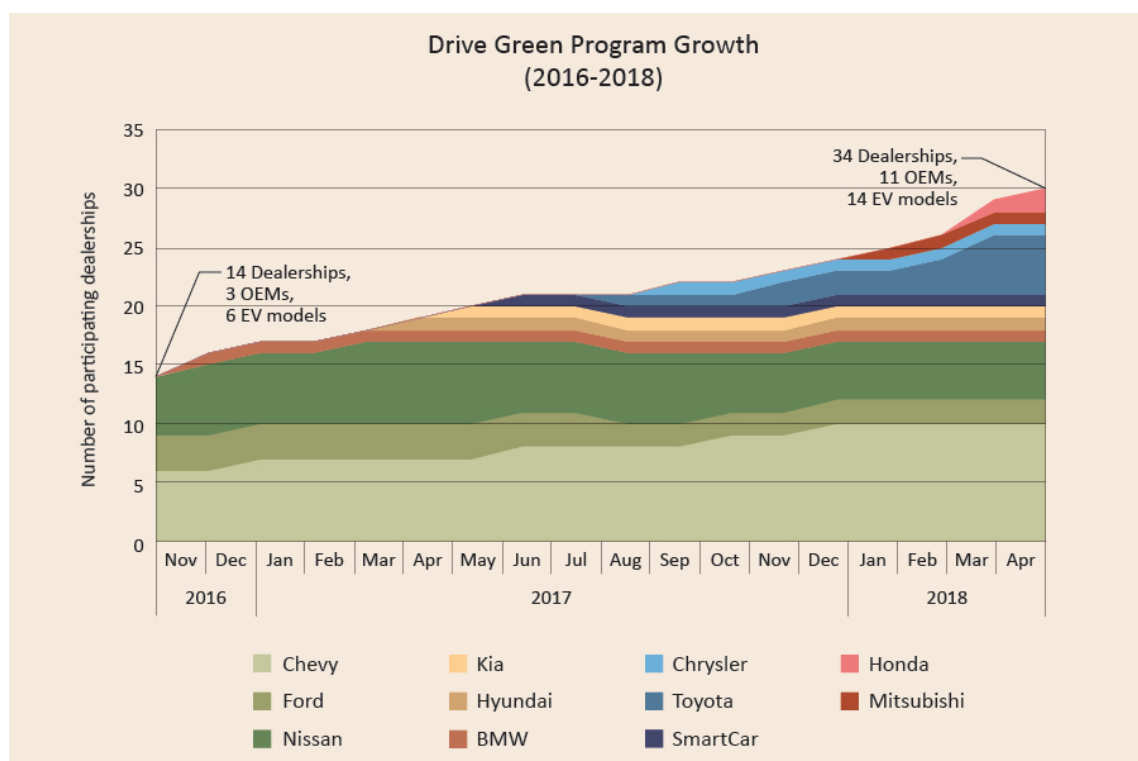
Dealer	Location	Model Year	MSRP	Drive Green Discount	Dealer Price After Discount	MOR-EV State Rebate	Federal Tax Credit Eligibility	Final Drive Green Price	Expiration Date of Offer
Quirk Chevrolet	Braintree, MA	2018	\$37,495	\$6,000	\$31,495	\$2,500	\$7,500	\$21,495	6/4/18
Herb Connolly Chevrolet	Framingham, MA	2018	\$37,495	\$5,517	\$31,978	\$2,500	\$7,500	\$21,978	5/31/18
Muzi Chevrolet	Needham, MA	2018	\$39,600	\$6,613	\$32,987	\$2,500	\$7,500	\$22,987	7/2/18
Burke Chevrolet	Northampton, MA	2018	\$38,900	\$5,000	\$33,900	\$2,500	\$7,500	\$23,900	5/31/18
Mirak Chevrolet	Arlington, MA	2018	\$37,495	\$3,498	\$33,997	\$2,500	\$7,500	\$23,997	6/4/18
Colonial Chevrolet	Acton, MA	2018	\$38,640	\$4,641	\$33,999	\$2,500	\$7,500	\$23,999	6/30/18
Paul Masse Chevrolet	East Providence, RI	2018	\$38,605	\$3,617	\$34,988	\$2,500	\$7,500	\$24,988	5/31/18
Lannan Chevrolet of Lowell	Lowell, MA	2018	\$39,600	\$4,000	\$35,600	\$1,500	\$4,001	\$30,099	5/31/18

Unlike the corporate Fleettail discounts (see description below), dealership discounts allow more localized control of purchasing incentives, which affords dealers the flexibility to respond to the local market conditions like inventory, staffing, and competition. This is especially true for the region's Chevy dealerships. In May of 2018, there were eight different Massachusetts and Rhode Island Chevy dealerships offering discounts on the Bolt of up to \$6,000 through the Drive Green program. This pricing competition drives sales, a trend that is reflected in the program sales data. As of May of 2018, 80 percent of the Drive Green's total 354 vehicle sales and leases have come from Chevy dealerships.

With a large number of participating dealerships and a varied model selection, the Drive Green program more than any other has helped to educate local dealerships and promote statewide EV availability in Massachusetts and Rhode Island. These are the key factors in the long-term success of a sustainable EV market, with or without the assistance of a group buy program.

The Drive Green program launched in November 2016 with 14 participating dealerships and three OEMs: Chevy, Ford, and Nissan. In the 18 months since, 24 dealerships have joined the program and only four have withdrawn their offers. Awareness spread by word of mouth and there are multiple accounts of shoppers showing a printout of the Drive Green deals table to non-participating dealerships and inquiring about comparable discounts on other EV models. As shown in Figure 2, Drive Green dealership participation has grown steadily over time and the number of EV models has increased from six at the start of the program to 14 in April of 2018. This trajectory indicates a positive correlation between program length and model selection.

Figure 2. Number of participating dealerships in the Drive Green program (2015-17)



The Drive Green program sold or leased the second most vehicles of any program surveyed with a total of 354 total vehicles. However, their monthly sales were 28 EVs, which is 25 percent below the average. There appears to be a trade-off for rolling group buy programs where ongoing deals provide greater consumer choice at the expense of short-term sales growth. Without the pressure of a limited-time offer, consumers are more likely to delay their purchase and wait for future models that more closely fit their driving needs. Limited-time offers create a sense of novelty, with program partners concentrating outreach efforts and building temporary excitement and buzz around EVs. Rolling group buy programs can look for ways to keep the program fresh and innovative, perhaps by bringing new strategic partners on-board or offering additional temporary incentives around Ride and Drive events.

Rolling Group Buy:

Advantages:

- Allows the program to grow over time.
- Supports healthy competition: more participating dealerships, competitive monthly pricing, and greater model selection for consumers.
- Higher and sustained EV sales over a long period of time.

Disadvantages:

- Without a limited-time offer, consumers are less motivated to buy in the short-term.
- Requires long-term administrative resources.

Examples: Drive Green with Mass Energy (MA/RI)

University Outreach

Description: A university promotes the dealership discounts to students, faculty, staff, and retirees. In 2017, the University of California-San Diego pioneered an Electric Vehicle Leasing & Sales Program for UCSD students, faculty, and staff. The initiative was inspired by the University of California's Carbon Neutrality Initiative, a pledge by nine college campuses to become carbon neutral by 2025. UCSD's EV Sales program was designed to achieve two main goals: provide a diverse selection of EV models to the UCSD community, and produce a scalable program that could be replicated at the eight other UC campuses.

The university is active in working with OEMs and connecting with local dealerships for their program. Mercedes-Benz was the first OEM to join with deals on the Smart Car and Nissan quickly followed. The program has since added local Ford and BMW dealerships to the roster. With minimal overhead costs, the program is eager to promote any and every EV deal through its website. As

Byron Washom, UC-San Diego strategic energy initiatives director said, “Our approach is to roll out the red carpet and shampoo it every day.”

In March 2018, the program added 51 new EV drivers to its 38,000-person campus, representing the highest rate of monthly adoption per capita of any program surveyed. The success of UC-San Diego’s program has led to its implementation at eight other UC campuses. They hope to add 23 California State campuses, at which point the program would reach over 1,000,000 students and university employees. In 2017, the program was praised by the University of California’s President, Janet Napolitano, and presented the award for Best Practice in Sustainable Transportation.

Figure 3. UC San Diego Electric Vehicle Leasing/Sales Program ([May, 2018](#))

   
Students, faculty, staff and retirees:
• BMW: See offer details (PDF) for various models valid through June 30, 2018. • Ford: See offer details (PDF) for various models valid through April 30, 2018. ◦ Guaranteed credit approval for 2018 graduates (PDF) • Mercedes-Benz: Lease a new 2018 smart fortwo electric drive for \$119/month plus tax. See offer details (PDF). Valid through June 30, 2018. • Nissan: Receive a \$3,000 rebate off MSRP on the 100% electric, 2018 Nissan LEAF®. ◦ See offer details (PDF). Valid through June 30, 2018. ◦ SDG&E incentive (PDF)
Discount offers change based on dealer inventory. You must show a valid university ID at participating dealers to take advantage of these offers. Check dealer offers for eligibility requirement.

The main disadvantage of this approach is its exclusivity as the deals are only available for university students, faculty, and staff. Universities might consider extending these discounts to alumni and the surrounding community. In 2016, the University of Utah partnered with Utah Clean Energy, a local energy nonprofit, to introduce their own group buy program. The program was initially reserved for the university community, but additional partnerships with Salt Lake City extended the offering to the general public. Utah Clean Energy provided the main technical expertise for program design and implementation, while the city and university used their marketing channels to promote the program and organize local events. The model was quickly

adopted by Utah State University and Weber State University as well as other public organizations like the Intermountain Medical Center and Hogle Zoo in Salt Lake City.

University outreach programs prove that universities and other public organizations can leverage their community influence to increase regional EV sales. The United States has 25 to 30 million students, faculty, and staff at its universities, representing almost 10 percent of the population. If scaled successfully, this EV discount model has the potential to galvanize the EV market in academic communities across the country.

University Outreach:

Advantages:

- Utilizes a robust university communication network.
- Universities are trusted organizations and a source of community pride.
- Replicability and scalability across campuses.

Disadvantages:

- Legal constraints in dealership negotiations and marketing materials & branding.
- Students have limited income and are less likely to purchase a new vehicle while in school.
- Difficulties engaging with the larger community outside the university.

Examples: UC-San Diego (CA), University of Utah (UT), Weber State (UT), Utah State University (UT), University of Oregon (OR)

OEM-Utility partnership

Description: An electric utility partners with an OEM and offers discounts to all energy customers within their service territory. This model evolved in select markets out of the Nissan Fleetail program and has since expanded across the country and been adopted by BMW's corporate office.

The initial EV group buy programs in 2015 and 2016 demonstrated the proof of concept: that significant EV discounts combined with community-based marketing can result in substantial increases in EV sales. Following the early success of these programs, Nissan's corporate office took an interest in EV group buy programs and began exploring ways to scale them up to the regional level.

Nissan's model is based on their Fleetail program, which offers discounts on LEAFs to customers with fleets, usually corporations and municipalities. Rather than developing a new program, Nissan worked with these large customers (initially universities, but then almost entirely electric utilities) to extend the Fleetail discount to utility employees, and eventually, to all utility customers. The utilities serve as a communications resource for the program. They do outreach to their customers via social media, websites, flyers, bill inserts and public events. These Fleetail deals ran in late 2016 with a \$10,000 discount on the 2016 Nissan LEAF and were organized in partnerships with Xcel Energy, Kansas City Power & Light, and Austin Energy. Since then, more than 20 OEM-Utility partnerships have emerged in 14 states across the country.

Mutual Benefits for OEMs and Utilities:

While partnerships between car companies and electric utilities may seem peculiar, the electrification of the transportation sector presents an abundance of opportunities for these two industries to collaborate.

OEMs are always looking for new ways to advertise their products and electric utilities provide a marketing megaphone for OEMs and dealerships. Many OEMs, like Nissan and BMW, have announced plans to transition their fleets to all-electric models in the coming decades. These Fleetail programs function as a catalyst for getting EVs on the road and building nationwide market demand.

As large global corporations, OEMs are well-positioned to deliver this future. They have the resources and organizational standards to provide EV training, funding, and inventory to their regional dealership networks. OEMs like Nissan and BMW have specialized EV-certification programs for sales staff and require all participating Fleetail dealerships to secure the certification. This support encourages dealers to educate their sales teams and stock their lots with EVs.

Electric utilities are also eager to get more EVs on the grid. EV charging presents an opportunity for them to increase their market share and provide greater grid efficiency through managed charging. EVs also provide a flexible load to soak up excess renewable generation and flatten the demand curve, potentially reducing electricity prices for ratepayers. The program is also popular with utility

customers, some of whom believe (however inaccurately) that the utility is the entity providing the discount.

Partnering with electric utilities certainly has its advantages. Not only are the utilities experienced with energy program marketing, but they also have access to a much larger customer base than most traditional group buy sponsors. For the 42 programs surveyed, the average Fleetail discount is broadcast to 4 times more people than the average community group buy program, reaching 2.7 million utility customers.

Three Examples:

In Kansas City, the local utility was interested in starting an EV group buy program, but couldn't find any local dealerships that carried EVs on their lots. They approached Nissan North America and the two organizations decided to launch a Fleetail discount program for Kansas City Power & Light customers. Nissan coordinated with its Kansas City dealerships and redistributed its inventory to supply LEAFs for the new program. Once the EVs were on the lot, dealership staff became more familiar with the car's features, available tax incentives, and charging requirements. The program was a big success, selling over 200 Nissan LEAFs in five months, and proving to local dealerships that there is demand for EVs in Kansas City. The benefits were long-lasting and after the program ended, every Kansas City Nissan dealership had at least four LEAFs on their lot.

Another progressive utility that has embraced EV discount programs is San Diego Gas & Electric (SDG&E). The utility has worked with both Nissan North America and BMW Group, but also established relationships with local dealerships. With little interest from the major OEMs besides Nissan and BMW, SDG&E reached out to the California New Dealers Association to build relationships with local car dealerships. Through collaborations with the Association's network, SDG&E was able to add Kia and Chevy EV deals on their website. New partnerships forged through industry organizations present new opportunities for programs to expand their offerings and diversify model selection for consumers.

In a similar move, Xcel Energy, a utility that has partnered on Nissan Fleetail programs in Colorado, Minnesota, and Wisconsin, recently decided to organize an Auto-Dealer Initiative: a network designed to bridge the gap between utilities and car dealers with the goal of developing more robust EV discount programs. This collaborative network will include industry experts and trade allies such as dealers and electricians to provide additional perspective and smooth out the customer experience. These types of networks encourage multi-disciplinary strategic partnerships between like-minded stakeholders from which future iterations of EV incentive programs are likely to emerge.

OEM-Utility Partnership:**Advantages:**

- Access to an expansive dealership network spreads EV sales training & inventory.
- Electric utilities have access to a large marketing audience.
- Easily replicable and scalable across the country.
- Program funding and EV sales training resources are provided by large corporations.

Disadvantages:

- Lack of a trusted community voice for program outreach.
- Harder to connect with local dealerships and the lack of interest from major OEMs can limit consumer choice.

Examples: Kansas City P&L (KS/MO), Xcel Energy (CO, MN, WI), Salt River Project (AZ), Southern California Edison, San Diego Gas & Electric, Pacific Gas & Electric (CA)

Figure 4. Xcel Energy Colorado's Nissan Fleetail Flyer (2017)

Drive away with an affordable electric vehicle

Car shows are right around the corner, and so are car manufacturer deals. If a Nissan LEAF is on your wish list, the month of March is the time to act.

1. **Xcel Energy customers can purchase a Nissan LEAF by March 31, 2017 and receive a \$10,000 incentive*.** Read below to find out about eligibility and what you need to do to take advantage of this offer from Nissan, and then start shopping at local Nissan dealerships.
2. **Earn Plug-In Electric Vehicle Tax Credit up to \$7,500 for federal tax credits, and \$5,000 for Colorado tax credits.** Consult a tax specialist to learn more about eligibility and how to receive this tax credit.
3. **Receive 24 months of complimentary public charging at select DC fast charge stations.** By participating in this limited-time special offer from Nissan LEAF, you may qualify for free charging the first two years at 20+ public fast charging stations in the Denver Metro area. Ask your Nissan dealer for more details.
4. **Charge your EV at home for as low as \$1 per gasoline gallon equivalent.** As an Xcel Energy customer, you may select from a few pricing plan choices including the General Plan, Time of Use Pricing, or Peak Demand Pricing to suit your lifestyle and budget.



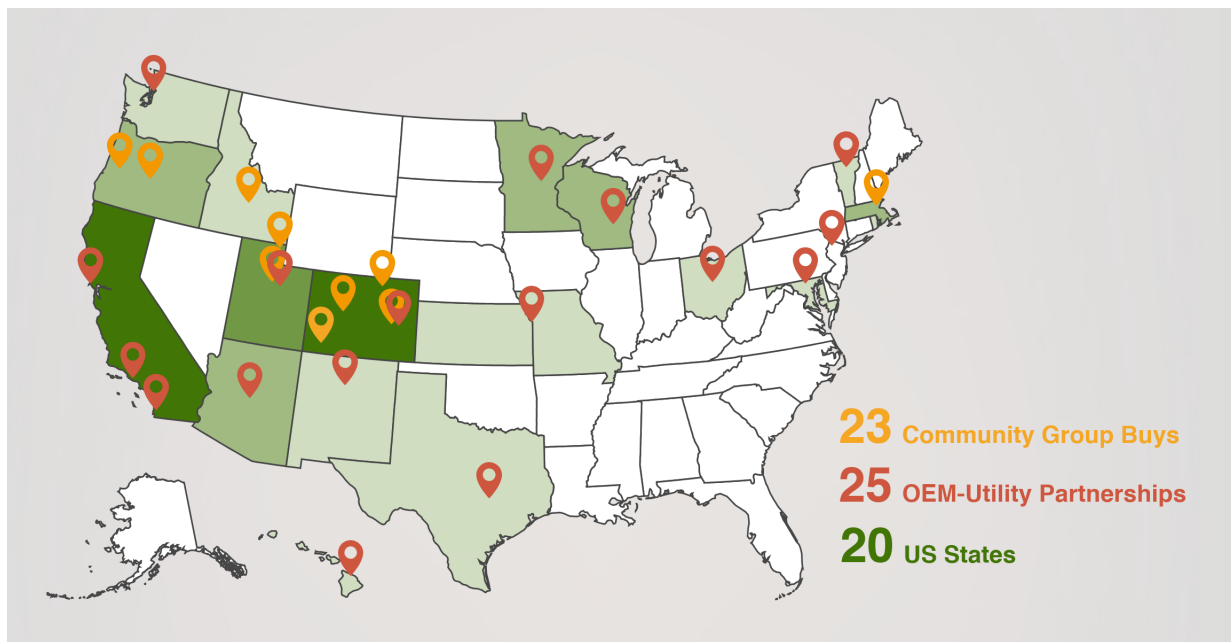
Geographic Trends and the Limits of OEM-Utility Partnerships

While the OEM-Utility approach has proven to sell the highest number of EVs compared to other group buy models, it may only be available for certain markets depending on market size, geography, and politics. The Fleetail approach to EV discount programs tends to lead OEMs like Nissan and BMW toward the “big fish”, which are typically large investor-owned utilities in metropolitan areas. This can leave more isolated, medium-sized communities in the dark.

Additionally, clean energy policies like Renewable Portfolio Standards (RPS) and state EV tax credits appear to drive program distribution toward some states and away from others. Seventeen of the 18 states with EV discount programs have an RPS and 15 have state, local, or utility incentives for EVs. This means that customers in any of the 21 states without a Renewable Portfolio Standard are less likely to have access to an EV discount program, which increases the EV adoption disparity across U.S. markets.

Partnering with electric utilities can also be problematic in metropolitan areas that are served by more than one utility. In Phoenix, Salt River Project, the electricity provider for 40 percent of the metro population, chose to participate in the 2017 Nissan Fleetail program, while Arizona Public Service Electric Company, the provider for the other 60 percent, did not. As a result, some neighbors had access to a \$10,000 Nissan LEAF discount while others did not. This fragmentation limits the potential benefit of the program, but can be avoided by forging additional partnerships with municipalities, nonprofits, universities, or other local groups.

Figure 5. Map of 48 EV Discount Programs (2015-2017)



V. DO THESE PROGRAMS ACTUALLY SPUR THE SALE OF NEW EVS?

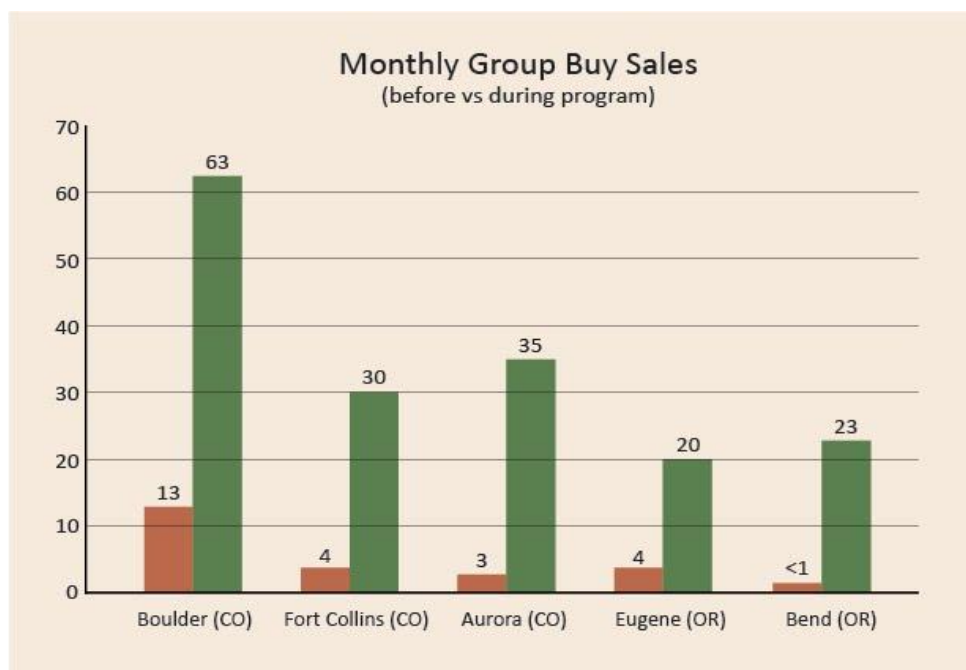
Sales data from small-scale programs

All of the early pilots had significant success in growing EV sales, in both developed and undeveloped EV markets. In Boulder County, the EV adoption rate was above-average prior to the launch of its group buy program in 2015. Before the group buy program, early EV adopters in Boulder County bought 52 LEAFs in the last four months of 2014 – impressive LEAF sales for the average Nissan dealership, even in 2018. The 2015 group buy program accelerated this trend, with 248 LEAF sales in the last four months of 2015, which is almost five times as many sales.

The Drive Electric Northern Colorado (DENC) group buy campaign in Fort Collins, CO, wasn't far behind, launching its first program just two months after Boulder in 2015. In a less-developed EV market, the Nissan dealership sold only four LEAFs per month before the program. With the group buy program, sales ramped up to thirty LEAFs per month, an almost 8-fold increase.

Inspired by the results of these early pilot programs, dealerships in other parts of Colorado, Utah, Oregon, Wisconsin, Kansas, Massachusetts, and Idaho launched their own group buy programs in 2016 and 2017. At Tynan's Nissan in Aurora, CO, the dealership sold three LEAFs per month before the program started, but then averaged 35 LEAFs per month during the two-month program, an almost 12-fold increase. In Eugene, OR, Nissan Lithia sold 30 LEAFs in six weeks, which was five times more than a normal sales month. And in Bend, OR, annual LEAF sales increased from six in 2016 to 50 in 2017 with the help of a group buy program organized through the Bend Environmental Center. (See Appendix B & C for a complete list of program sales data)

Figure 6. Comparison of monthly sales from before vs during the programs



With LEAF sales momentum brewing at local Nissan dealerships, word eventually reached the corporate office of Nissan North America and inspired the expansion of the Fleetail program in partnership with electric utilities across the country.

On average, corporate Fleetail programs sold almost four times more EVs than traditional group buy programs. This is statistically significant, but we must also consider sales in relation to the size of the market. Smaller programs managed by local governments, nonprofits, and universities tend to have a higher ratio of car sales per capita.

Community-driven group buy programs in Bend, OR; Eugene, OR; Blaine County, ID; Durango, CO; and Boulder, CO stood out because of their impact relative to their market size. Bend, which has a population of 91,122 had a market share of 1 EV sold per 2,040 residents, which is about twice the average ratio across all programs. Durango's population of 54,688 had a ratio of 1:1,052 (the highest of any surveyed program).

These two programs have much in common. As mid-size mountain communities, both of these markets are isolated from large metropolitan areas, Durango by the San Juan Mountains and Bend by the Cascades. Bend doesn't have a large electric utility to attract the attention of a major OEM, for whom a smaller program might not be worth the investment. But what these cities lack in scale, they make up for in community engagement, a strength that is reflected in the relative impact of their group buy programs.

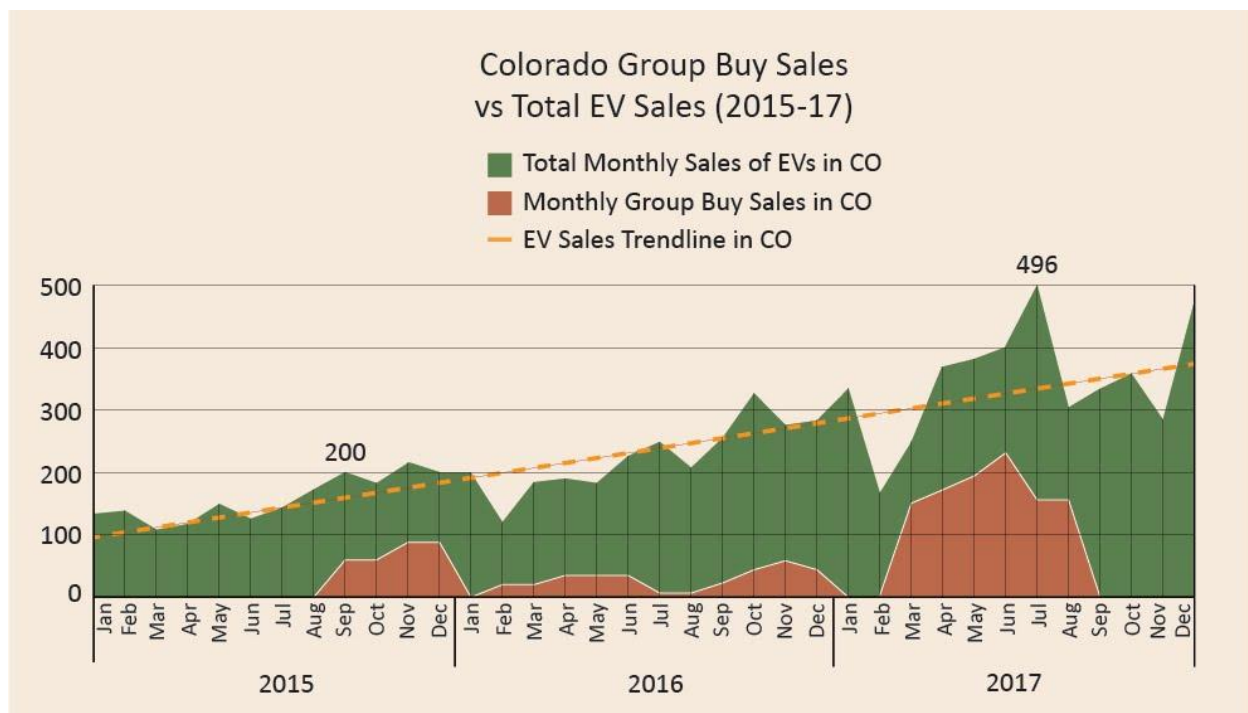
Sales data from large-scale programs

When it comes to EV sales, the most successful program by far was Xcel Energy's Nissan Fleetail program in the Summer of 2017. The program offered a \$10,000 discount off the 2017 Nissan LEAF and was implemented at 15 Nissan dealerships in Xcel's Colorado service territory. The result was 849 vehicles sold over a six-month period or about 140 vehicles per month, almost four times greater than the program average. Despite offering only one vehicle model, the program's LEAF sales accounted for 63 percent of all battery-electric vehicle (BEV) sales in Colorado over those six months. Group buy program administrators describe a "perfect storm" of strategic partnerships, purchasing incentives, and dealership enthusiasm. Similar results were recorded for Xcel's Wisconsin and Minnesota territories, and Rocky Mountain Power's program in Utah.

One concern might be that these programs simply draw customers who would have purchased another EV whether or not the program existed. Group buy programs, however, encourage people who were not planning to purchase an EV to reconsider. Results from the Boulder County group buy survey found that 72 percent of the respondents were not originally planning to buy an EV (Salisbury, 2016). The survey also shows that more than 90 percent of people who entered the process and did not actually buy a vehicle are now interested in buying an EV in the future. These trends were echoed by a similar survey administered through the City of Aurora's group buy program in 2017. The results suggest that the combination of EV discounts, dealership sales training, and community-driven marketing largely succeeded in persuading customers to purchase an EV instead of a conventional gas-powered vehicle.

Since the introduction of EV group buy programs in Colorado in September 2015, there have been 7,671 PEV (Plug-in Electric Vehicle) sales in Colorado, which has the 7th largest market share in the country (Alliance of Automobile Manufacturers, 2018). During those 28 months, 11 EV discount programs sold at least 1,760 EVs, with the vast majority of those vehicles being Nissan LEAFs. If we define the “expanded market” by the 72 percent of survey participants who were not considering an EV purchase before hearing about the program, as many as 1,270 additional EV sales expanded the Colorado EV market by 20 percent over the last 2½ years. A 20 percent EV sales growth goes a long way in demonstrating EV market viability, advancing transportation electrification policies, and influencing OEM business plans. These are the incremental changes that will ultimately lead to the electrification of the transportation sector.

Figure 7. Colorado total EV sales vs Group Buy sales (2015-2017)



While these sales figures are convincing, the long-lasting impact of group buy programs is hard to quantify. In the case of the Drive Electric Northern Colorado Group Buy program, 60 percent of people who registered for the program did not end up purchasing an EV for a number of reasons that include a lack of EV options, range anxiety, timing, and cost, but 90 percent of those registrants expressed an interest in purchasing an EV in the future. Many of these participants went on to lease or purchase an EV at a non-participating dealership, like Tesla, Chevy, or Toyota.

Additionally, many OEMs and dealerships maintain confidentiality with monthly sales reports. This makes it difficult to draw decisive conclusions about the impact of group buy programs. However, the general trends clearly demonstrate the group buy’s ability to accelerate sales in developed markets and spark entirely new EV markets in undeveloped ones.

Vendor Selection & Model Availability

Collectively, EV discount programs reported participation from 12 different OEMs. However, Nissan has been the most active by far with participation in almost 100 percent of the programs. BMW, Chevy, and Ford dealerships have also been active with a 20 to 35 percent rate of participation (See Figure 8).

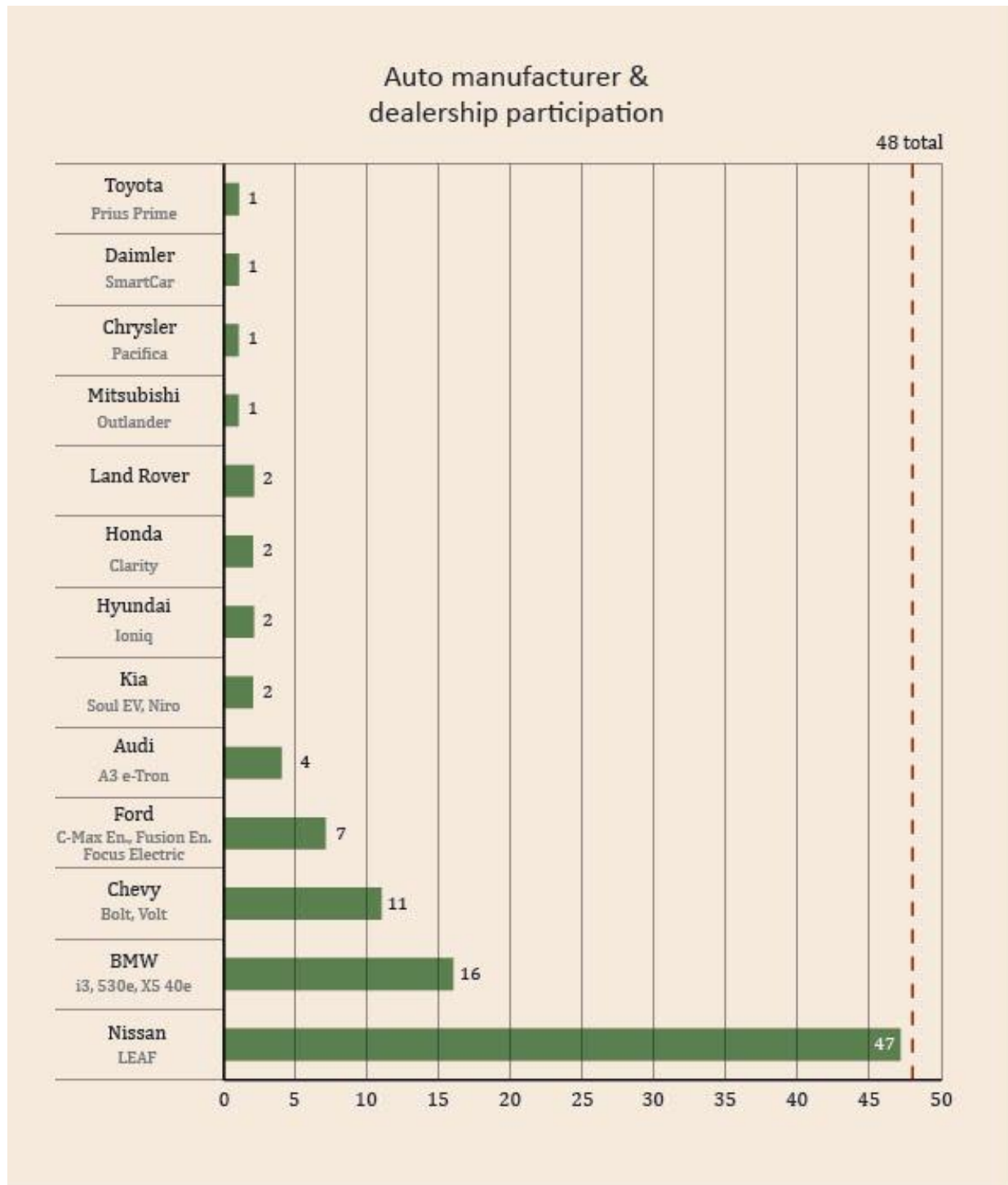
OEMs have responded to EV discount programs with mixed emotions. Nissan North America and BMW Group have both embraced the concept and view these partnerships as promising opportunities to take advantage of existing tax incentives and increase market share in a competitive and emerging marketplace. While most global OEMs have announced some level of commitment to an electric future, Carlos Ghosn, the CEO of Renault-Nissan, has been predicting the EV transition since 2008. With almost 10 years of manufacturing and marketing experience, Nissan was one of the first major OEMs to dedicate significant resources to EVs. This corporate commitment has spread to the rest of the organization, attracting a network of “EV Evangelists.” Multiple EV group buy programs were initiated by Nissan dealers themselves, including one started by Jason Bradley, a car salesman at Smolich Nissan in Bend, Oregon.

Nissan is also the only OEM to take advantage of the assignability of Colorado’s state tax credit. While most state incentive programs offer a refundable tax credit at the tax return filing deadline in April, Colorado’s program allows dealerships to shift the savings to the point of sale, offering the opportunity for an “instant rebate.” This gives consumers access to immediate savings rather than waiting up to 16 months for the \$5,000 tax credit. In 2017, Coloradans could purchase a 2017 Nissan LEAF for as little as \$9,000 through multiple group buy programs, with 67 percent of those savings, or \$15,000 of the \$22,500 total, applied at the point of sale.

BMW Group has followed in Nissan’s footsteps, offering sizable limited-time discounts through partnerships with electric utilities in California and New Jersey. In the last two years, the company announced discount programs with SDG&E, SCE, PG&E, and PSE&G, with a combined customer base of 25 million people. The corporate office is funding a \$10,000 discount for each 2018 BMW i3 sold through the program.

While Nissan and BMW have expanded their participation in EV discount programs, most of the other OEMs have abstained. Many seem fundamentally opposed to the concept of vehicle discounts, citing concerns about long-term market sustainability and unfavorable pricing signals around their products. According to GM, group buy programs promote market volatility by encouraging consumers to hold off on an EV purchase and wait for the next big discount. There are also concerns that EV discount programs send a message to customers that EV technology is not as valuable as its gas-powered counterpart. This perception can hurt the residual values of EVs and make it hard to price them competitively in the future. While GM contends that EV group buy programs have a negative overall effect on the EV market, they do maintain neutrality when it comes to dealership participation. Despite the lack of corporate support for EV group buy programs, many local Chevy, Ford, Kia, and Audi dealerships have chosen to join group buy programs in order to compete with other participating dealerships in the regional market.

Figure 8. Number of programs that each vender participated in (max = 48)



VI. DEALERSHIP BENEFITS, COSTS & CHALLENGES

How do auto manufacturers and dealerships benefit?

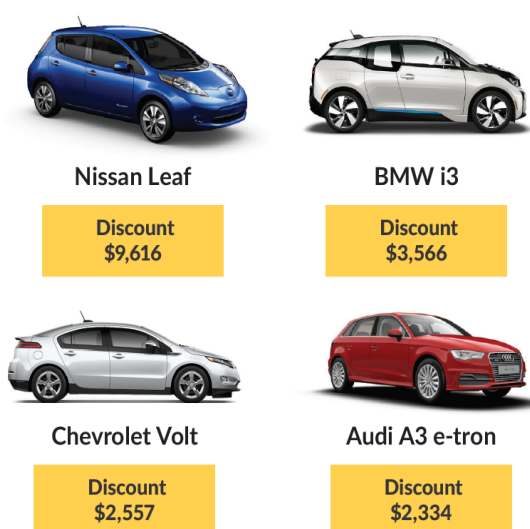
Group buy partnerships can be a win-win scenario for both the community and the auto industry. First, group buy programs supplement the typical car advertising campaigns with additional marketing efforts from trusted community organizations like local governments, nonprofits, and universities. Consumers are more likely to listen to organizations that they trust and these endorsements from local community groups can break the monotony of common car commercials. With community support, dealerships have the opportunity to reduce the ratio of marketing dollars per vehicle sale.

They also save on time. For the University of Oregon's program in Eugene, registrants must attend an EV 101 workshop in order to access the full vehicle discount at the dealership. According to the program coordinator, "half of the sale is already made" at the workshop. With such new and developing technology, EV customers tend to be very curious when shopping for their next car, asking many questions and returning for multiple visits, which can be challenging for an inexperienced dealership. Program outreach events like EV workshops and Ride & Drives not only bring more EV customers to the dealership, but they also simplify and expedite the sales process for the staff. There is a reason that dealerships from Colorado to Oregon are eager to continue these programs after the first and second offerings.

How much are the EV discounts?

The most basic requirement for dealership participation is the EV discount. These discounts vary depending on vehicle model, profit margins, and degree of financial support from the corporate office. For the 2016 Nissan LEAF, the corporate office set the Fleetail discount at \$10,000, or 32 percent off the manufacturer suggested retail price (MSRP). When combined with federal and state tax incentives in Colorado, the 2017 Fleetail discount made the LEAF up to 25 percent less expensive than Nissan's gas-powered equivalent model, the \$12,110 Nissan Versa. Once EVs and gas cars are on a level playing field, low fuel and maintenance costs, along with environmental benefits, tend to tip the scale in favor of EVs.

After the \$10,000 Fleetail discount, the \$7,500 federal tax credit, and the \$5,000 Colorado state tax credit, consumers were able to purchase a 2016 Nissan LEAF for as low as \$9,000, representing a 71 percent discount on the \$31,700 MSRP. These discounts for a brand-new vehicle are unprecedented and, according to surveys, were the main reason that many consumers chose to buy an EV through the group buy program. A 2018 survey of car buyers found that 96 percent of respondents cited financial savings as one of their main reasons for wanting an EV (Green Car Reports, 2018). In 2018, the \$10,000 Fleetail discount was reduced to \$3,000 (10 percent off MSRP), but the MSRP of the new model also came down by \$3,000, resulting in a final price (after discounts and Colorado tax incentives) of up to \$14,490 through Nissan's Fleetail program.

Figure 9. Rev Up Blaine EV program flyer

BMW's corporate office is currently funding a \$10,000 discount off the 2018 BMW i3 through Southern California Edison's 'Electrifying Southern California' program and a \$12,000 discount through UC-San Diego's EV Sales Program. When combined with state and federal tax incentives, these discounts bring the price of a BMW down to \$24,450 and \$22,250, which are extraordinary deals for a luxury vehicle.

Where dealerships are not supported by corporate funding, the discounts tend to be lower - in the 6 to 9 percent or \$3,000 to 4,000 range (before tax incentives). The RevUp Blaine program in Idaho featured a mix of independent dealership and Nissan Fleetail discounts, as shown in Figure 9. In

Massachusetts, Drive Green's rolling discount program has stimulated competition between 26 local dealerships and, in many cases, driven the discount values up over the life of the program. In May of 2018, the most competitive Chevy dealership offered the Chevy Bolt and Volt with dealership discounts of 18 percent and 22 percent respectively. While there is a correlation between high discounts and sales growth, some dealerships choose to offer lower discounts of less than \$1,000. These dealerships may not attract as many consumers, but they enjoy the same marketing and outreach benefits as other participating dealerships while minimizing profit losses.

Dealership preparation costs & additional program incentives

For dealerships that do not have much experience with EVs, there are preparation costs to meet the program requirements. In their RFPs, Utah Clean Energy, Mass Energy, and Drive Electric Northern Colorado all require program applicants to demonstrate a certain level of EV sales readiness. Such requirements include EV sales qualifications and dedicated staff (Appendix A). Both Nissan and BMW have EV sales certification programs designed to train sales staff on EV technology, charging, and tax credit eligibility.

Many dealerships offered additional incentives to "sweeten the deal" for consumers. For the City of Aurora's group buy program, Tynan Nissan's included 0% APR financing for the first 6 years, free charging at select public charging stations for the first two years, and complimentary inspections and tire rotations for the first 7,500 miles. Boulder County's program threw in a free Level 2 home charging stations alongside the Nissan LEAF. Other dealerships offered free car washes, rentals, and roadside maintenance.

In the case of Drive Green with Mass Energy, the nonprofit gets a \$100 commission from every EV sale as compensation for program marketing and outreach. For their program in Northern Colorado, DENC launched the "EV Owner Challenge," which rewarded program referrals with \$200 in cash. The referral incentive helped to spread awareness of the program through word of mouth.

EV inventory challenges & contingency plans

The main challenges with the OEM-Utility model stem from communication and coordination between the corporate office and the manufacturers' network of dealerships. The most common critique of the Fleetail program has been a lack of sufficient inventory, which can frustrate customers who are eager to take advantage of a limited-time discount offer. If the goal of these programs is to sell as many EVs as possible, then the first step is to secure a reliable supply.

In general, the U.S. car market is relatively predictable, with minor fluctuations in sales throughout the year and two to three percent growth in the fourth quarter of each year. EV sales tend to be more volatile, especially when Fleetail discounts are applied (See the EV sales curve in Figure 19). OEMs have a difficult time adjusting to these short-term fluctuations; a problem that is exacerbated when 15 dealerships are simultaneously offering short-term EV discounts, as was the case in Xcel Energy's Colorado territory in 2017.

In many cases, participating dealerships had negligible EV sales in the months leading up to the group buy program. It is understandable that these dealerships would be hesitant to commit valuable real estate to a product that has not been selling. It can be difficult to anticipate exactly how much interest the program will generate from the local community, so it's important to manage expectations and create a contingency plan.

In Bend, the local Nissan dealership was averaging one LEAF sale per month in the six months leading up to the program. The dealer then sold 13 LEAFs in the first week of the group buy program, over 50 times more than average. To replenish the stock, the dealership quickly reached out to regional partners and secured an additional 10 LEAFs from other dealerships. Fortunately, the Bend dealership prepared for such a scenario and had built relationships with nearby dealers. To avoid significant program delays, participating dealerships can establish correspondence with other regional dealerships and develop vehicle-trading terms to be used in case of inventory depletion.

Programs in other parts of the country were less fortunate. In 2017, local Nissan dealerships in Utah, Arizona, Colorado, and Idaho ran out of LEAFs during their group buy programs. According to Katie Bray, Director of the RevUp Blaine program in Idaho, "we could've sold five to ten more LEAFs if they were in stock." OEMs tend to distribute vehicle models according to regional demand. As a result, less-developed EV markets, like those in Idaho, may have trouble securing EVs. In Arizona, the City of Phoenix anticipated an inventory shortage and responded by limiting the pool of participants and offering the discount to employees only.

To better prepare for inventory pressure, dealerships can look at sales data from previous programs in similar markets to inform their own vehicle supply strategies. For the 27 EV discount programs that reported sales data, the average number of total EV sales was 124 and the average per month was 37. However, monthly sales vary by market size. For small cities with a population of less than 100,000, the average monthly sales were 12 EVs. For medium-size cities (with populations of 100,000 to 1,000,000), average monthly sales were 36 EVs. And for large cities (with more than 1,000,000 people), monthly sales were 49. The numbers can be applied to new programs

and divided across participating dealerships, although it's important to realize that the vast majority of vehicle sales in the past were Nissan LEAFs. As new EV models are introduced to the market and more auto dealers and manufacturers become involved in group buy programs, we can expect to see a more evenly distributed sales mix.

The biggest challenges for dealerships are securing sufficient EV inventory to satisfy program demand and preparing the staff to answer questions about the technology.

Improving dealership awareness & the customer experience

Even if OEM or dealership management has secured an adequate supply of EVs for the program, it is not guaranteed that the sales team will be able or willing to sell them. For their Colorado Fleetail program in 2017, Nissan offered LEAF discounts through 15 dealerships in Xcel Energy's service territory. This distributed model presented a significant communications challenge for the OEM. While the sales numbers were excellent, they were disproportionately distributed toward the Nissan dealerships that had previous experience with EV sales. At other dealerships, many sales people were unprepared and there were accounts of dealers being completely unaware of the discount when customers asked about it.

These issues may result from differences in company culture. In some cases, dealerships in weaker EV markets do not see the value in these programs, and therefore are less willing to invest time and resources in EV training and sales. When Salt River Project, an electric utility in Phoenix, AZ, announced its Nissan Fleetail program in 2017, certain local dealerships elected not to participate. Even with a \$10,000 LEAF discount funded by Nissan North America, dealership personalities, politics, and business practices can hinder participation in a group buy program.

Multiple studies published over the last five years have found that car dealerships present significant barriers to EV adoption (Rubens, 2018). Statistically, EV buyers are more likely to report lower satisfaction with their purchase experience than conventional vehicle buyers. In one study, undercover 'mystery shoppers' found that the majority of car salespeople "misinformed shoppers on EV specifications, omitted EVs from the sales conversation, and strongly oriented customers towards [conventional] vehicle options." There is a perception among car dealers that EV customers are more time-consuming, but according to Sales Satisfaction Data, EV customers actually require less time than conventional vehicle buyers (Davies, 2013). Other dealers describe EV buyers as more "challenging," an understandable sentiment when considering the gaps in EV training at most dealerships.

Early EV adopters tend to arrive at the dealership with a strong interest and pre-existing knowledge of EV technology. This persistence has driven modest EV adoption, but for the average customer, education barriers at the dealership level may squander an opportunity to introduce new audiences to a new vehicle technology. These studies typically prescribe economic incentives and innovative dealership programs like group buy programs, which encourage dealers to educate themselves and present EVs to customers as viable alternatives to conventional vehicles.

Survey results from group buy programs found the opposite trend among participating dealerships. Shoppers reported a 90 percent satisfaction rate with customer service, regardless of whether or not they ended up buying a vehicle. This feedback indicates that the programs significantly improve EV customer satisfaction at the dealership.

In Southern California, utilities go one step further, offering dealership rewards of up to \$500 for every EV sold. In San Diego, half of this money goes to the salesperson responsible for making the deal. Connecticut's CHEAPR program also includes a \$300 dealership reward for each EV sale. These midstream incentive programs motivate car salespeople to be aware and forthcoming about the benefits of EVs. When possible, dealership rewards should be introduced alongside EV discount programs to build interest and excitement around EVs at the dealership.

Recruit the enthusiastic dealer. Mobilize the EV Evangelist.

The most successful dealerships all had at least one 'EV champion,' that is, a salesperson who is both passionate and knowledgeable about EVs and can get people excited about them. Enthusiastic dealers are a huge asset for any program administrator and they are more likely to promote the program, stay on top of dealership inventory, report sales data, and attend outreach and media events.

For the City of Aurora's 2016 group buy program, Tynan's Nissan had the entire staff certified to sell EVs. The staff was involved in "grassroots EV marketing," by attending local Ride & Drive events in the Denver area in the months before the program launch. This enthusiasm demonstrated a company-wide commitment to the group buy program. Tynan Nissan's enthusiasm and preparation translated into program success and the dealership sold over 60 EVs per month during the program.

In 2016, the community of Bend, OR, found its EV champion in Jason Bradley, a salesman at the local Nissan dealership. Before relocating to Bend, Jason worked at Boulder Nissan in Colorado on the nation's first EV group buy program in 2015. As Jason put it, "I wasn't a car guy until I found EVs." Once he settled into Bend, Jason started organizing meetings with local nonprofits and utilities to gauge interest in a potential group buy program. The local Nissan dealership hadn't sold a single LEAF before Jason arrived in 2016. Sales started to trickle in slowly during his first months at the dealership before taking off during the 2017 group buy program. Although Jason works exclusively for the Nissan dealership, he approached the local Chevy, BMW, and Kia dealerships and asked them to participate in the group buy to grow the program. As an EV enthusiast, Jason believes that greater access to all EVs is good for everyone in the Bend community. With help from a diverse group of community stakeholders, the Bend Environmental Center ran the first program in 2017 and launched a 2nd round of the group buy program in the Spring of 2018.

The most successful programs have an EV Evangelist, a sales person or program partner who is passionate about EVs and willing to go above and beyond for the program.

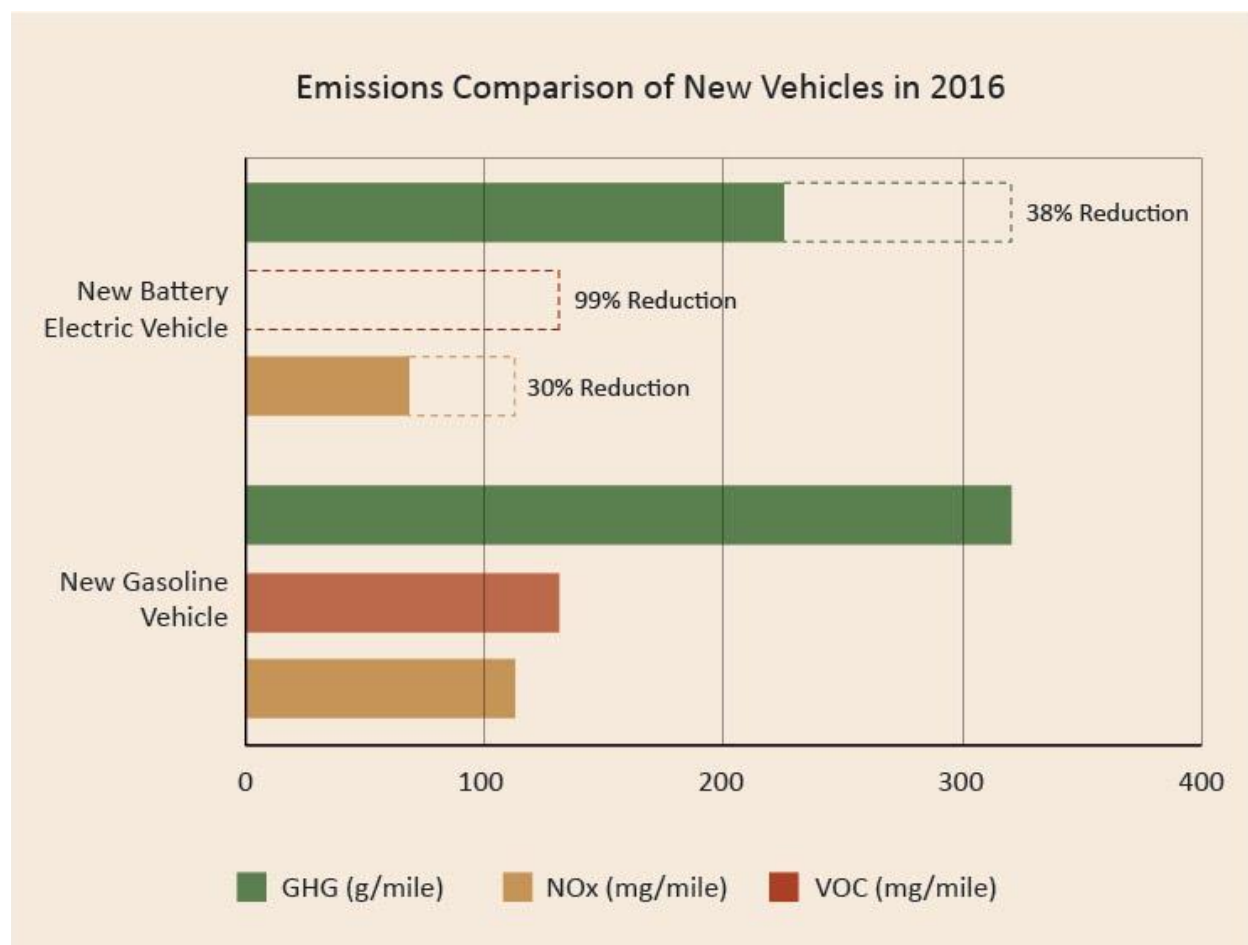
VII. COMMUNITY BENEFITS & COSTS

Meeting Climate Goals

For communities with climate goals or climate action plans, EV adoption is an important strategy for reducing GHG emissions from the transportation sector. Salt Lake City's *Climate Positive Plan* pledges an 80 percent reduction in carbon emissions by 2040. In 2018, the city published the [*Electrified Transportation Roadmap*](#) with guidelines for best practices and clean air solutions for local governments in Utah (Utah Clean Energy, 2018). The report includes 25 best practices for transportation electrification including public engagement and outreach, Ride & Drive events, bulk purchase programs, state and federal tax credits, and dealership offerings and programming, all five of which are integral to the EV group buy process.

In Colorado, Governor John Hickenlooper introduced the Colorado Electric Vehicle Plan, which sets an ambitious target of 940,000 EVs in the state by 2030. The plan describes the significant climate benefits of electric vehicles. In 2016, EVs in the Denver metro area were found to reduce GHG emissions by 43 percent compared to a gasoline vehicle (City & County of Denver, 2017). This figure is expected to increase as big utilities like Xcel Energy continue to transition their fuel mix from coal generation to renewables. Like Salt Lake City, the Colorado Energy Office recognizes EV group buy programs as a useful tool for increasing EV adoption.

Because EVs have no tailpipe emissions, they can also greatly improve air quality and public health. In the Denver metropolitan and North Front Range areas, where Colorado is struggling to meet federal ozone standards, the emissions of ozone precursors from EVs are much lower than those from gasoline vehicles. The chart below illustrates the degree to which the combination of an EV and the cleaner mix of electrical generation in this part of Colorado (compared to a gasoline vehicle) can reduce output of the two major ozone precursors (volatile organic compounds (VOCs) and nitrogen oxides (NOx)), and for greenhouse gases (GHGs).

Figure 10. Emissions Comparison of New Vehicle in 2016 (City & County of Denver, 2017)

And, of course, for customers who power their cars through solar electricity, the vehicles are closer to zero emissions.

To help contextualize the environmental benefits of the EVs sold through discount programs, Salt Lake City produced a series of emissions equivalence metrics. For example, avoided carbon emissions from the 200 EVs sold through Utah's U Drive Electric program represent the emissions equivalent of not using 200,000 gallons of gasoline over the next five years (SLcGreen Blog, 2017 and refer to Appendix I). Other group buy metrics are listed by state in the table below:

Table 2. The cumulative benefits of group buy programs (2015-2017): CO2 emissions avoided after 5 years of EV driving. Conversions were adapted from Utah Clean Energy's U Drive Electric program (Appendix I).

State	Cars Sold	Equivalent pounds of Coal not burned	Homes powered for 1 year	Gallons of gasoline burned	Incandescent bulbs switched to LEDs	Carbon sequestration by forest acreage in 1 year
Colorado	1763	8,631,354	1,131	863,135	271,888	7,337
Utah	359	3,590,000	470	359,000	113,085	3,052
Wisconsin	384	1,520,000	199	152,000	47,880	1,292
Oregon	80	800,000	105	80,000	25,200	680
Massachusetts	354	3,761,250	493	376,125	118,479	3,197
Kansas/ Missouri	229	1,097,292	144	109,729	34,565	933
Minnesota	250	1,328,125	174	132,813	41,836	1,129
Arizona	72	442,500	58	44,250	13,939	376
Idaho	14	140,000	18	14,000	4,410	119
Total	3505	21,310,521	2,792	2,131,052	671,281	18,114

Keeping money in the local economy

In addition, EVs bring some real economic advantages to local communities. In Colorado, state and federal tax credits for EVs can add up to \$12,500 in vehicle savings. Increased EV sales mean that more of these tax credits will come to community residents, dollars that consumers are likely to spend in the local economy. If we combine the federal tax credit incentives with the group buy discounts for all the EVs sold in Colorado in 2017, the programs freed up more than \$24 million in consumer spending money. Furthermore, much of the money spent on gasoline in Colorado goes to out-of-state petroleum producers, while most of the dollars spent on electricity stays in the Colorado economy. In the Denver metro area, about $\frac{1}{3}$ of the gasoline comes from the local refinery while the rest is imported from out of state (EIA, 2017).

Group buy programs are completely voluntary and very inexpensive for the public sector to operate since the discounts come from private-sector partners. As a result, these programs build goodwill in the community. They also provide an exciting forum for community engagement and collaboration around environmental issues. Durango, a small mountain community in the southwestern corner of Colorado, had a fairly undeveloped EV market before launching its group buy program in 2017. The program was a big success and inspired a group of community members to organize the Durango Electric Vehicle Enthusiasts, a group of EV ambassadors who “promote, educate, and advocate” on behalf of EVs in the region. Groups like these carry the torch of EV enthusiasm long after the discounts have ended.

Building Consumer Choice

A final benefit of EV group buy programs is greater consumer choice. Residents from Kansas City to Bend to Blaine County, Idaho had little to no access to EVs before local nonprofits and electric utilities introduced EV discount programs. Growing EV sales in California and other international markets suggest a strong correlation between vehicle model availability and higher sales. Without the model availability, EV consumers have no option but to either travel to a dealership in an EV-friendly region or take a chance and order an EV online. Neither option is ideal. Evidence from programs in undeveloped EV markets throughout the country demonstrates their positive impact on availability and improved consumer choice.

In the case of Blaine County, ID, a local nonprofit called Sun Valley Institute (SVI) adapted its EV group buy program from its existing solar program. None of the local dealerships had any EVs on their lot, so the program manager had to get creative. In order to source the EVs, she traveled 140 miles away to Boise, ID. Boise didn't have a strong EV selection either, but with persistence, SVI convince four dealerships to participate in the program. With limited range and charging infrastructure, dealerships had to ship their EVs to Sun Valley on trailers, an operations tactic that did little to alleviate range anxiety among prospective buyers. In the end, poor inventory planning and sales training hindered the success of the program, but the more important effects were long-term. After the program ended, residents began to notice more EVs "trickling into the valley" – especially the Nissan LEAFs, whose unique design really stands out in rural Idaho. Efforts like these encourage more traditional dealerships in undeveloped EV markets to become more familiar with EV technology and increase their EV inventory to support a growing demand.

The programs have also, in some cases, helped bring greater investment to support charging infrastructure. For example, the original Boulder County program led to multiple local and state officials buying EVs, and gaining firsthand experience with the challenges of adequate EV charging infrastructure. This led these officials to create programs such as a local funding match to leverage state grant funds for local businesses who want to install EV chargers.

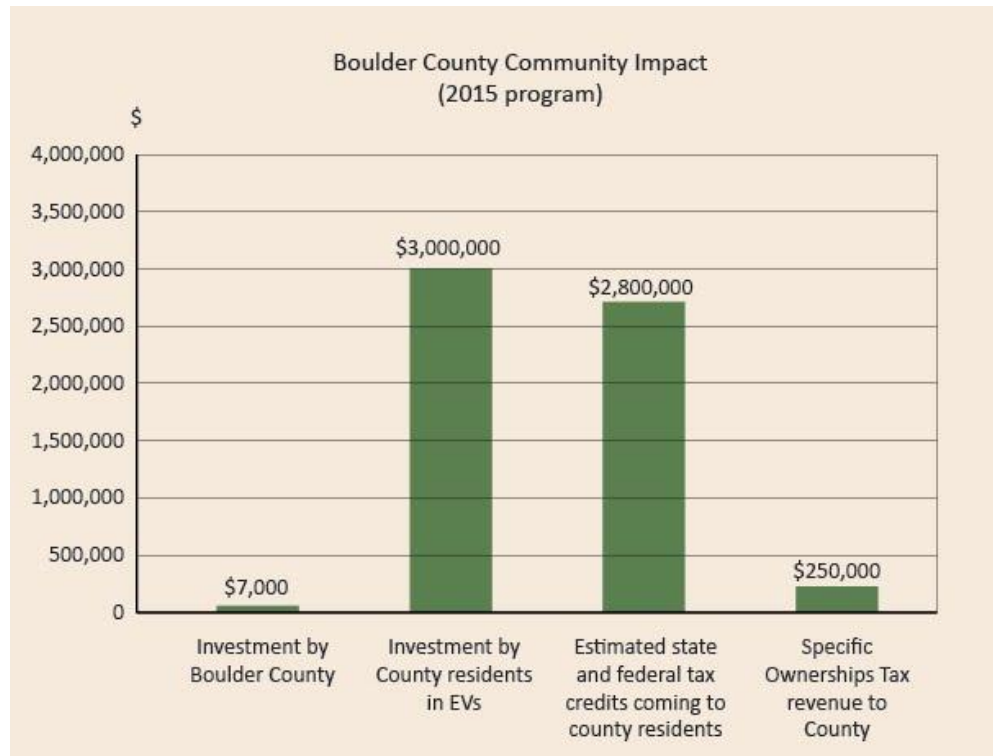
Group buy discounts are largely funded by private businesses, which makes them an extremely cost-effective way for local government and nonprofits agencies to advance their climate goals and support local consumer choice.

How expensive is it to run a program?

One of the great advantages of a group buy program is that it very inexpensive for a local agency to run, but it still produces large benefits. The lead agency's role is harnessing the collective buying power of the community to negotiate a discount from private sector providers (car dealers and auto companies), and then using access to the community to get the word out. Existing state and federal tax credits improve the deals. For a very small outlay of staff time and money, lead agencies can

create a big improvement in the community. For example, the chart below shows how Boulder County invested only \$7,000 in staff time and advertising costs, but leveraged its dollars by a factor of 750. The specific ownership tax on vehicle sales alone is nearly 35 times greater than the county's initial investment. Boulder County reported a total of only 165 hours of staff time used for this effort.

Figure 11. Boulder County's Return-On-Investment for their 2015 program



Drive Electric Northern Colorado spent approximately 40 hours of staff time, primarily on outreach and web portal setup, and reported spending about five minutes each workday sharing information with the participating dealers. The group had no out-of-pocket expenses.

For their 2017 group buy program in Colorado, CLEER partnered with Refuel Colorado and Garfield Clean Energy to manage the RFP process and market the program. The three organizations spent a total of \$10,300 and spent 130 hours on program management and development. A coalition of CORE Community Grant sponsors and municipal contributions from local cities, counties, and electric utilities covered \$9,100 in paid advertising for the program. In the end, the CLEER program spent a total of \$19,400 (or \$461 for each of the 42 EVs) that were sold through the program. (Refer to Appendix F for total program costs).

For OEM-Utility partnerships, program costs tend to be even lower. According to one electric utility, Nissan North America develops the majority of the marketing materials, and then the utility revises the standard flyer to fit their brand standards. The communications team posts the details on a designated webpage and promotes the program through social media channels.

VIII. STAKEHOLDER MARKETING & OUTREACH

Leveraging strategic partnerships to spread the word

Table 3. Stakeholder Benefits and Expertise

Stakeholder	Example	Why participate?	What do they have to offer?
Local Government	Boulder County, City of Aurora, Salt Lake City, City of Eugene	• Advance climate goals • Promote clean transportation alternatives • Consumer choice for local residents • Keep money in local economy	• Trusted voice in the community • Marketing & outreach channels • Experienced program administrators
Environmental Nonprofit	SWEEP, DENC, Mass Energy Consumers Alliance Utah Clean Energy, Sun Valley Institute	• Advance climate goals, • Promote clean transportation alternatives	• Trusted voice in the community • Leveraging the network • Subject matter expertise and communications experience
University	UC-San Diego, University of Utah, Utah State, Weber State, U. of Oregon	• Advance climate goals • Promote clean transportation alternatives	• Cohesive community of students, faculty, and staff with established marketing channels • Position as "laboratory" for innovative programs • Experienced program administrators
Electric Utility	Xcel Energy, Salt River Project, SDG&E, SCE, PG&E, PSE&G,	• Grow electricity market share • Increase grid reliability and energy affordability	• Established energy program marketing • Large customer base
Car Dealership or OEM	Boulder Nissan, Gerhardt BMW, Nissan North America, BMW Group	• Advertise their product and expand EV market through trusted local organizations	• Provide the EV discount • Product expertise and support • Distributed network of dealerships with EVs on lot

One of the keys to success is a vigorous community-based outreach effort. After all, an individual car dealer could simply offer a deep discount on its own, but, what makes these programs different is the ability of trusted messengers—such as local government, environmental groups, utilities, community-based nonprofits, or employers—to reach their constituents. Awareness drives success and, with so many media options and community groups, it's impossible for one method or stakeholder to reach 100 percent of the community. In order to expand program awareness across a greater percentage of the community, lead agencies should explore as many outreach avenues as possible.

Figure 12. CLEER's program flyer with vehicle selection, dealerships, and list of strategic partners (lower-right)

Electric Vehicle Sales Event
GARFIELD PITKIN EAGLE
APRIL 1 to JUNE 30

Rev up your ride!

EV SALES EVENT QUALIFIED DEALERS:

- Audi** Glenwood Springs 970-945-5200
- Co's BMW Center** 970-292-5200
- Mountain Chevrolet** 970-928-9777
- BOULDER NISSAN** BOULDER, CO 303-443-8110

State and federal tax credits plus dealer discounts make NOW the right time to buy an electric vehicle!

Discount details, tax credit info, contacts at GarfieldCleanEnergy.org

In Boulder County, program administrators worked with the region's largest and most influential organizations to reach the public ear. The network included local governments in Boulder, Lafayette, Louisville and Nederland; schools such as Boulder Valley School District and the University of Colorado; and local research labs such as NCAR and UCAR, among others.

Program managers in similar mid-size cities all acknowledge the benefits of working in a close-knit community. With fewer dealerships and media outlets to coordinate, marketing dollars tend to stretch further and program awareness spreads by word-of-mouth. EV Workshops and Ride & Drive events on Main Street have great visibility so, when the program starts to gain traction, the town takes notice. Bend, Oregon's 2017 group buy program sold 45 Nissan LEAFs from the local dealership in two months. For a mid-size community like Bend, program sales could represent over 50 percent of total new vehicle sales during that time period. The best marketing tactic is product adoption and as one Bend resident put it after the program, "I see LEAFs everywhere!"

Many of the OEM-Utility programs choose to keep it simple with only two or three partners in the outreach process. In general, utility programs lack the resources, experience, and networks to build partnerships with energy nonprofits, governments, and universities. These represent another example of uncharted terrain for traditionally independent organizations. EV group buys offer an

opportunity to dissolve these barriers and build fruitful alliances around clean energy technologies. The large investor-owned utilities that have participated in group buy and Fleetail programs are regional, so have access to the largest customer base of any outreach agency. However, studies suggest a large gap between customers who are eligible for these programs and those who are aware that the opportunities exist.

In 2018, Southern California Edison (SCE) published findings from their [Customer Attitude Tracking](#) survey, which measures awareness of program marketing messages among SCE customers (Southern California Edison, 2017). In regard to its Charge Ready Pilot, an EV charger rebate program, the survey asked, “In the past three months, do you recall seeing, hearing, or reading any ads about SCE and the benefits of electric vehicles?” Despite over nine months of program marketing, only 15 percent of customers responded “yes”. These findings reveal an enormous opportunity for improvement in utility program marketing.

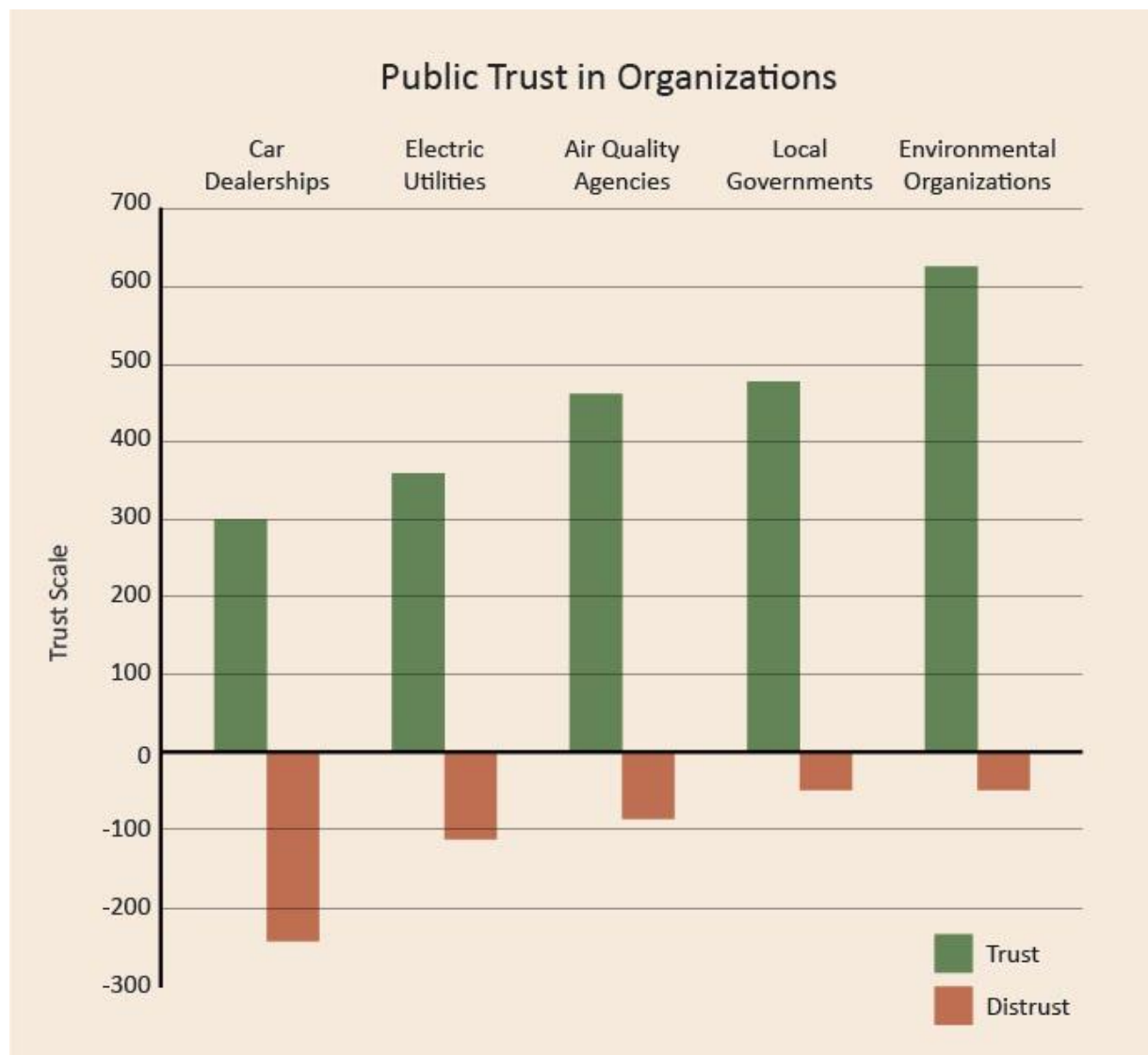
Perhaps one explanation for this inefficiency is legal constraints. As publicly-regulated entities, electric utilities are constrained in how far they can go to promote one particular product. In many cases, universities are subject to similar legal restrictions, limiting their ability to negotiate with auto dealers and manufacturers. These constraints restrict marketing efforts and in more extreme cases, can cancel the partnership entirely.

Following the success of SDG&E’s discount program in 2017, SCE was interested in launching a program of their own. The company worked with Nissan North America to develop a Fleetail program, but ultimately, couldn’t agree on the appropriate language for their Fleetail program. SCE has since launched a program with BMW Group.

Group buy programs provide an opportunity for diverse community stakeholders to work together toward a common goal. The most effective marketing campaigns keep the focus local and engage with community EV and clean energy advocates. In order to increase program awareness, utilities can partner with local governments, nonprofits, universities, employers, and media agencies. With collaboration, partners can play to each other’s strengths and share the workload on marketing material design and circulation. Local organizations bring strategic connections and community trust, while utilities offer media and communication expertise. Electric utilities like SDG&E and Xcel Energy have both expressed an interest in working with local communities to promote their Fleetail programs, but they don’t have the relationships or networks in place to facilitate such partnerships. As utilities branch out and engage with local stakeholders, opportunities to collaborate on program marketing and outreach should be explored further.

The most successful programs establish a broad coalition of trusted community partners to collaborate on marketing and outreach efforts.

Figure 13. Public Trust in Organizations. Results taken from Boulder County and City of Aurora surveys (2016 & 2017).



Marketing Tools & Techniques

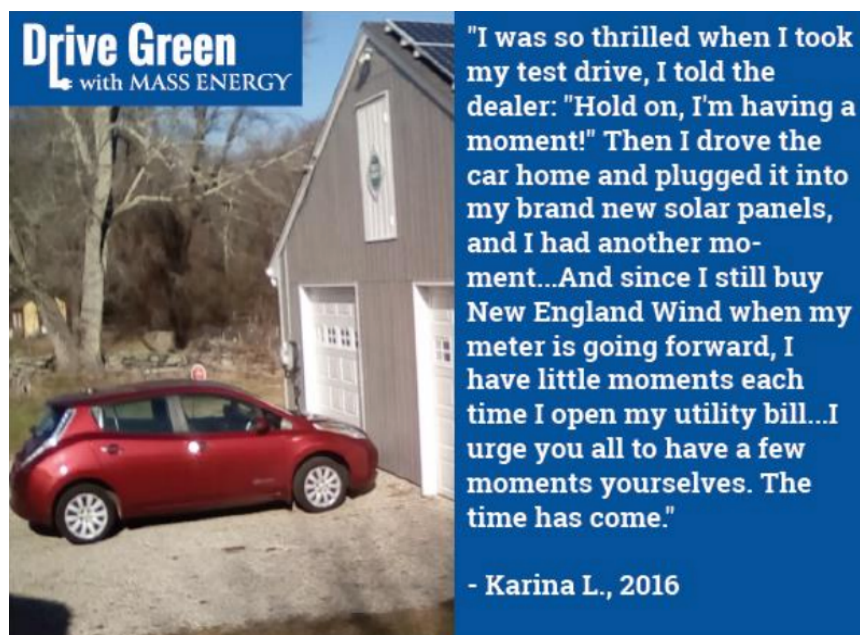
Generally, each program has developed a website that functions both as a source of information and as the portal to sign up for the program and complete a follow-up survey.

While the website can give people important details, other tools are needed to inform people about the program and guide them to the website. In the Boulder program, for example, approximately half of the participants who purchased an EV heard about the program from other sources and went directly to the dealer without even signing up on the website.

For reaching the general public, existing programs have used some of the following strategies:

- Press releases or other newspaper outreach;
- Flyers and direct mailers;
- Blog posts;
- Webinars;
- Social media: Facebook, Twitter, Instagram, Nextdoor;
- Newsletters;
- Leverage existing services (utility companies, business chambers, recreation centers, special interest groups, open space or energy, schools);
- Public workshops: EV Workshop 101;
- Ride & Drive Events;
- Cars.com retargeting ads identify those who are already in the process of buying a car
- Testimonials from EV owners;

Figure 14. Testimonial from Mass Energy's program

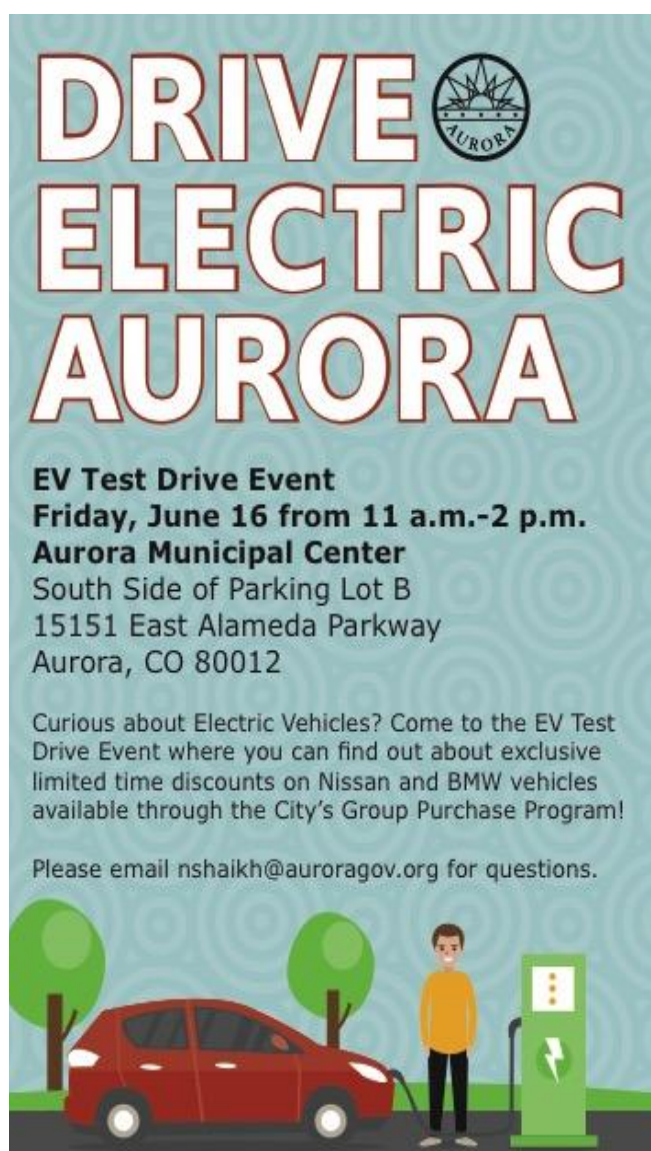


In several programs, agencies and employers communicated the deal to their employees directly, using strategies such as:

- Staff leads sharing information;
- Email (department, personal, or organization wide);
- Internal newsletters;
- Internal workshops highlighting the program and educating employees;
- Internal organizations' websites;
- Employee ambassadors or champions;

Surveys of program participants from Boulder County, Drive Electric Northern Colorado, and City of Aurora found that newspaper coverage, word of mouth, employer outreach, and social media were the most common ways that participants learned about the program (See Appendix D for DENC's Group Buy Marketing Toolkit). Boulder County particularly benefited from a front-page story featured in the local newspaper at the outset of the program. In general, program organizers noticed a shift away from traditional advertising and toward social media, especially through the Nextdoor app, a community-based networking service that connects neighbors around local issues and opportunities.

Figure 15. Ride and Drive flyer from the City of Aurora group buy program in 2016.

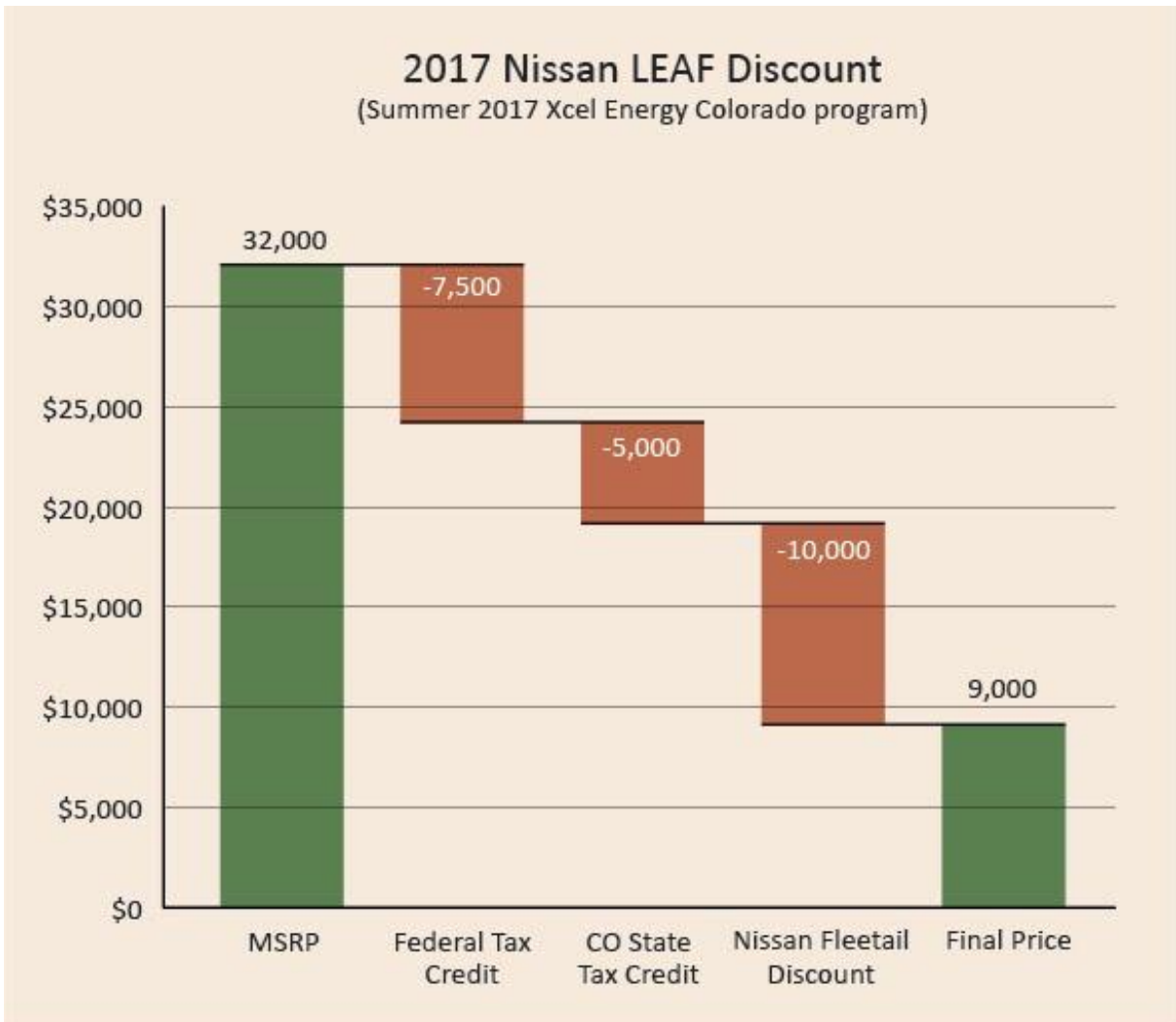


Other programs relied more heavily on in-person outreach events such as Ride & Drive and EV 101 Workshops. In Bend, Oregon the local Environmental Center schedules six to ten EV workshops every time they offer the group buy program. The center works with the City of Bend to host the workshops in civic spaces such as the public library and the elementary school. For their 2016 program, Utah Clean Energy worked with Salt Lake City to organize a launch event with the mayor.

Electric utilities use many of the same marketing tactics including flyers, social media, monthly newsletters, and, occasionally, bill stuffers. Utilities have the advantage of existing relationships and customer data, so they can use website analytics tools to target their marketing efforts by focusing on customers who have already expressed an interest in energy efficiency and EV-related programs. Like community group buy organizers, electric utilities have noticed a shift away from traditional advertising. A growing number of electricity customers are choosing to “go paperless” with their bills and as one program manager put it, “no one watches TV commercials anymore.” As a result, Xcel Energy’s marketing team stresses the importance of “thinking digital first” in their approach to Fleetail outreach.

What's the best way to communicate the deal and explain the incentives?

Figure 16. Cost breakdown for the 2017 Nissan LEAF during Xcel Energy Colorado's Nissan Fleetail program in 2017.



For the 27 group buy programs that reported sales data, the average Nissan LEAF S was purchased for about \$12,000, which is a 60% discount off the average MSRP of \$31,250.

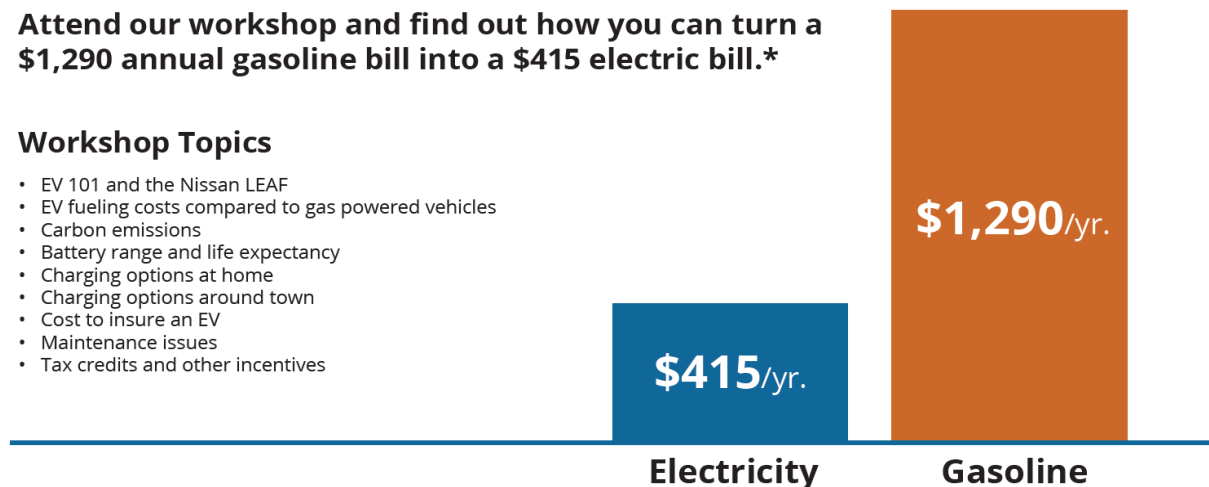
In addition to purchasing incentives, there are significant fuel cost savings. As of May of 2018, the average gas price in Colorado was \$2.89. The average American traveling 12,000 miles per year in a 25-mpg vehicle spends a total of \$1,387 per year on fuel. A 2018 Nissan LEAF owner (with access to a home charger) pays \$0.12 per kilowatt-hour (kWh) for electricity to charge a 40 kWh battery with 151 miles of range, spending a total of \$381 – and saving over \$1,000 per year on fuel. The average lifespan of a Colorado car is 12.4 years, which amounts to \$12,400 in fuel savings over the lifetime of an EV.

Figure 17. Rev Up Eugene Nissan LEAF discount program flyer (2016).

Attend our workshop and find out how you can turn a \$1,290 annual gasoline bill into a \$415 electric bill.*

Workshop Topics

- EV 101 and the Nissan LEAF
- EV fueling costs compared to gas powered vehicles
- Carbon emissions
- Battery range and life expectancy
- Charging options at home
- Charging options around town
- Cost to insure an EV
- Maintenance issues
- Tax credits and other incentives



One feature that several programs included was a savings calculator [linked](#) to the program website, which allows customers to see what their likely annual fuel cost savings would be compared to their existing vehicle.

Perhaps the most common constructive criticism from program administrators is the need for better training on EV tax incentives. In Colorado, the EV state tax credit is refundable, meaning that the entire sum can be collected or deducted from the total tax liability on tax day, which is typically around April 15. The Colorado tax credit is also assignable, which gives OEMs the opportunity to offer the discount at the point-of-sale, making the discount effective immediately upon purchase of the vehicle.

The federal tax credit is less straightforward because it is non-refundable, meaning that the \$7,500 credit is subtracted from the individual's total income tax liability. As a result, the full federal tax credit is only available for individuals whose tax liability is greater than \$7,500. If an EV buyer's total tax liability is just \$6,000, then they can only collect up to that amount with the federal non-refundable tax credit. For those of us who aren't CPA's, these details can feel complicated and overwhelming as we try to calculate the net price of our new car in the long-term.

In order to simplify this explanation, RevUp Eugene Director, Steve Mital, put together a sample tax filing for his EV 101 Workshop (See Table 4). According to his calculations, an individual with no dependents would have to earn \$68,000 per year to claim the full \$7,500 federal tax credit in Oregon. Individuals with less income would claim a portion up to a maximum as defined by their income tax. Steve also likes to point out that the federal tax credit only applies to the first 200,000 vehicles before it starts phasing out. According to some experts, Tesla, GM, and Nissan will each hit the 200,000-vehicle milestone in the next year. Like the limited-time offer, these statistics can help to motivate buyers to purchase their EVs in the short-term through the group buy program.

One important point here is to understand how state and federal tax credits play into the lease process. For federal tax credits, the tax credits typically go to the lessor, not the lessee; that is, the tax credits will go to the car company and should be reflected in lower lease payments by the individual or business leasing the vehicle. Colorado tax credits, by contrast, go to the lessee, so they should not be factored into the lease rate offered by the company.

This esoteric tax jargon can be unfamiliar ground for car salesman, but a simple graphic can go a long way in communicating the available savings to consumers. According to feedback collected during CLEER's 2017 group buy program, many dealers demonstrated an incomplete understanding of the Colorado state tax credit. In response, the program's organizers scheduled an EV tax credit training session to educate dealers on the details of tax credit eligibility and assignability. Unfortunately, the session was cancelled due to lack of interest, but such efforts should be encouraged when possible.

In another case, Tynan's Nissan dealership in Aurora trained its entire sales staff on EV sales and the tax incentive details, so that everyone on the sales floor would be prepared to answer customer questions. For their 2016 program in Aurora, the dealership designed a flyer with a "math stack" of tax incentives and group buy discounts to simplify the message for dealers and consumers. (See Appendix E)

Table 4. Rev Up Eugene Sample Tax Filing adapted from the program's EV 101 Workshop

Filing Status	Single	Single
Dependent	0	1
Adjusted Gross Income	\$60,400	\$74,800
Standard Deduction	\$12,000	\$18,000
Itemized Deduction	\$0	\$0
Personal Exemption	\$0	\$0
Child Credit	\$0	\$2,000
Federal Tax Estimate	\$6,588	\$6,436
Can I take full advantage of \$7,500 EV tax credit?	No - partial	No - partial

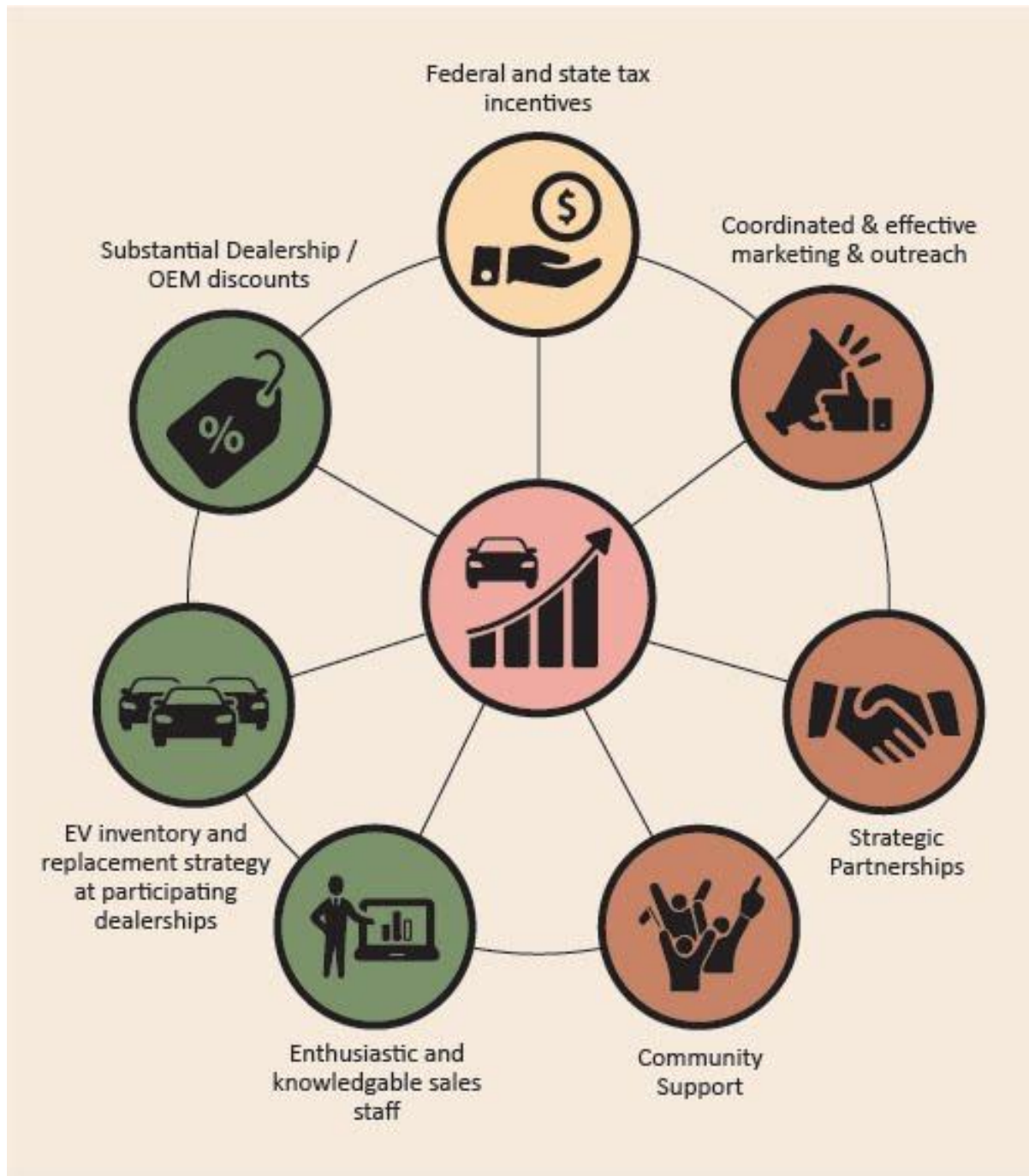


Figure 18. The EV group buy “Perfect Storm” of tax incentives, discounts, dealership preparation, and community support

IX. PROGRAM DESIGN

What is the RFP process for program administrators?

As described above, almost all of the early programs used the RFP (Request-for-Proposal) process to choose dealer and/or OEM partners. Most recent programs have not used the RFP process. If you do choose to use the RFP process, this section describes some of the considerations. See Appendix A to reference a sample RFP.

Typically, a program administrator will use a competitive bid process to select the participating dealerships and OEMs. The idea is to identify companies that will offer the best combination of discounted pricing, good financing options, superior customer service, and largest availability of inventory.

An important lesson learned from previous programs is to keep it simple. Program administrators can encourage participation and reduce headaches by simplifying the RFP process and keeping barriers to entry low for dealerships and OEMs. For their 2016 group buy, Drive Electric Northern Colorado produced a program checklist to clarify partner obligations, outline milestones, and streamline the process. (See Appendix D)

Note that this will likely be a non-exclusive selection; that is, you may choose multiple OEM/dealer combinations. The number one reason that registered customers didn't buy an EV was lack of model availability, so increasing the number of participating vendors is crucial to the success of the program. By including multiple vendors, a program promotes competitive pricing and long-term market resilience. Drive Green with Mass Energy's rolling EV group buy program provides competitive discounts for 12 EV models, from 10 different OEMs, at 26 participating dealerships in Massachusetts and Rhode Island. As a result, they've achieved the second highest sales of any group buy program.

Customer service is hard to rank and evaluate, but it is critical. In the majority of programs offered to date, the ones that have been most successful have featured an "EV Evangelist:" a passionate dealer who focuses on making the program work for EV customers. On the other side of the spectrum, the less successful programs are ones where customers read about the program, signed up online, and arrived at the dealership to find salespeople who did not even know there was an EV group buy program in the first place. This kind of dealer experience can make or break the program. This leads to an important question about what plans the dealership has for staff training to ensure that there are enough salespeople with knowledge about EVs to respond to customer demand.

The DENC program RFP requires two to three trained and dedicated staff for the program. According to one program manager, it's important to identify multiple points of contact at the dealership because there tends to be a high rate of turnover. Programs in Northern Colorado and Idaho reported losing their "EV person" midway through the program, which can precede a stark decrease in EV sales.

Participating dealerships must also commit to having a certain number of EVs on their lot during the program, and provide a written strategy to replenish the inventory at a satisfactory rate. The vast majority of program challenges that were reported through sponsor interview and surveys stem from lack of EV sales knowledge and/or EV inventory at participating dealerships. Therefore, it is crucial that program sponsors work with these dealerships to meet such requirements.

It's also important to articulate the mission and set program goals. The purpose of EV group buy programs is to increase electric vehicle sales in both the short-term and the long-term.

Short-term goals might include:

- Boost EV sales during the length of the program to demonstrate market potential;
- Manage a successful marketing and outreach campaign;
- Facilitate collaboration in the local community;

Long-term goals might include:

- Equip dealerships with training and inventory necessary to sustain EV sales;
- Educate the community on the benefits of EVs and encourage local advocacy;
- Help to grow the electric vehicle industry;

For their 2017 group buy program in Colorado, [CLEER](#) developed a series of specific program goals to monitor their performance in quantifiable terms.

1. **Dealership Participation Goal:** At least three auto dealerships submit qualified responses to the RFP and participate in the program.

Outcome: 4 dealerships

2. **Vehicle Sales Goal:** Generate purchases or leases of at least 50 EVs.

Outcome: 42 vehicles leased or purchased.

3. **Public EV Charging Goal:** A 25 percent increase in charging stations in the three counties, from the current 34 stations with 61 plugs to a new total of 42 stations with 77 plugs, by Dec. 31, 2017.

Outcome: 20 new stations with 40 plugs installed as of July 31, 2017, with another 9 stations and 18 plugs anticipated by Dec. 31, for a regional increase of 85%.

How long should we offer the program?

There are several reasons to offer a time-limited program. A time limit creates a sense of urgency—motivating customers to participate now rather than later. In addition, dealers or installers who are not chosen through the RFP process are less likely to be upset with the program if the timeline is relatively short. A series of recurring limited-time programs is likely to introduce volatility into the EV market as some consumers hold off on an EV purchase until the discount becomes available, but this is to be expected. EV group buy programs are intended to spark short bursts of activity in the market in order to push the population toward the critical mass required to sustain continued growth.

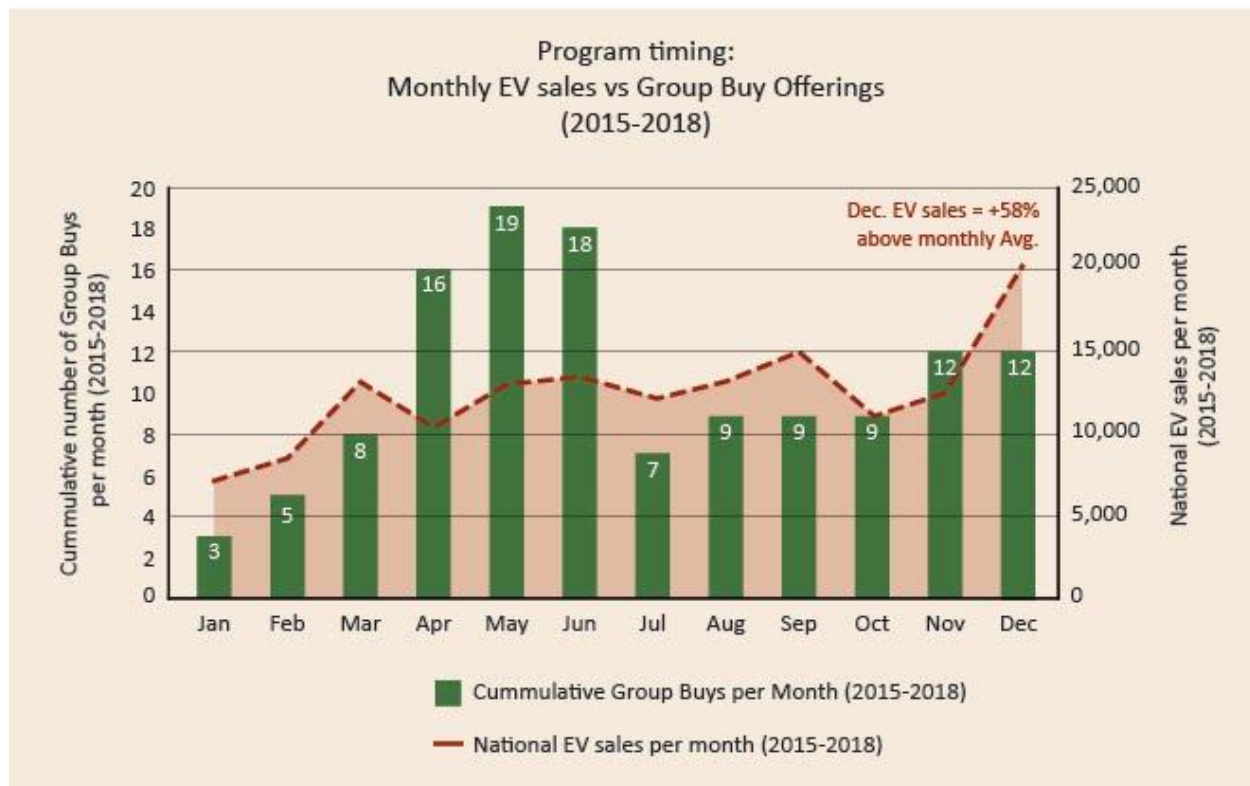
Many programs have returned for a second or third season due to continued dealership and consumer interest. The sales data confirm that running multiple programs does not lead to a dramatic fall in sales over time and that there is still public demand for EVs even after multiple group buy programs. Such market vitality was demonstrated by DENC, which offered four separate, two-month group buy programs over a 15-month period in 2015-16. The fourth program sold the most EVs, which suggests a low risk of market saturation over the series of recurring programs.

Limited-time EV group buy programs have time lines ranging from one to six months, with an average program length of three months. For the initial pilot programs, the plan was to offer a shorter program, typically one month, but the programs were all extended due to customer demand. According to program managers in Bend and Eugene, customers need time to learn about the program, attend the workshops, decide whether an EV fits into their budget plan, and then make a purchase. Dealerships and program sponsors can get a head start by getting the word out early. Bend's group buy program in 2016 initiated their marketing and outreach campaign before the program launched and, as a result, sold 13 LEAFs, or 25 percent of their total sales, in the first week of the program.

Does it matter what time of year we run the program?

The early pilot programs were all implemented relatively late in the year. Boulder County's program started at the end of August and ran through the end of December. The Northern Colorado program launched on Black Friday and also ran through the end of December. The Utah program ran in December and then extended into January.

Typically, car sales are lower in the first few months of the year, then pick up to a fairly steady rate, and peak late in the year. For EVs, tax credits play a large role in determining when car sales peak since customers can't claim federal tax credits on purchased goods until the following year. So, if a customer buys an EV in January, he or she will have to wait approximately 16 months until the tax filing deadline in the follow year to claim the federal EV tax credit. On the other hand, if a customer purchases an EV in December, he or she will be able to claim his or her tax credits in just a few months. Thus, customers may be more motivated to participate later in the year. Despite these findings, our research shows that the vast majority of EV group buy programs have been offered in April, May and June (See Figure 19).

Figure 19. Programs offered per month vs. National EV sales trends

Lastly, it's important to pay attention to context. Lead agencies should look to coordinate group buy programs with other EV programs and renewable energy deals in the community. An oversaturation of discounts and deals can overwhelm both program administrators and consumers, and mute the impact of an EV group buy program.

There may also be opportunities to collaborate with other programs in the EV space. In Durango, 4CORE, a local energy nonprofit, took advantage of the fact that three major employers in the area (Mercy Regional Medical Center, La Plata Electric Association, and the Smiley Building) were installing workplace charging. Each employer received funding through the Charge Ahead Colorado grants offered by the Colorado Energy Office, which offset part of the charging station cost. Each of these workplaces also applied to get recognition from the Wired Workplaces program. 4CORE worked with these employers and advertised their group buy program directly to employees in order to put the new charging stations to good use. Coordinating a group buy program with the National Drive Electric Week, which runs from September 8-16, 2018, is another opportunity to combine education and awareness efforts across the EV community to increase EV sales through the program.

What are the likely demographics of program participants?

For both the Boulder and Aurora programs in 2016, the majority of survey participants lived in two-car households. This makes sense given some of the challenges associated with EVs. “Range anxiety” is still a significant barrier to mass adoption, so customers are less likely to choose EVs as their only vehicle if their households occasionally make longer trips.

The survey results found that most participants (80-90 percent) lived in single-family homes. This finding makes sense since most owners charge their EVs at home, and it is easier to install a charging station in the garage of a single-family home than it is to install one in multifamily housing parking lot.

However, the introduction of longer-range EVs, combined with new government and utility investments in EV charging infrastructure, has begun to alleviate these concerns. When the first EV group buy program was launched in 2015, the Nissan LEAF had 84 miles of range. With higher efficiencies and lower battery assembly costs, the 2018 Nissan LEAF boasts a 151-mile range and the upcoming 2019 LEAF is expected to provide over 225 miles of range. The average American drives 37 miles per day and hypothetically, would only have to charge once every six days with the 2019 LEAF. Range extension is an industry-wide trend among EV manufacturers; other EVs like the 2018 Chevy Bolt have a battery range of 238 miles.

In 2017, a coalition of state governors in the West announced plans to construct a regional network of DC-Fast Chargers along highway corridors. In Colorado, the average spacing between these planned EV charging stations is 70-80 miles. With a dense network of high-speed charging stations coming by 2020, Colorado EV owners can feel confident that they won’t be stranded with a dead battery on longer road trips.

Additionally, many electric utilities have developed EV charging programs that provide rebates and make-ready infrastructure for multifamily, workplace, and commercial applications. For residents in multi-family housing, these investments represent a critical opportunity for them to access charging stations. The installation of workplace or multifamily EV charging stations greatly increases the likelihood that residents and employees will purchase an EV. Group buy program coordinators can look to collaborate with charging station site hosts, as 4CORE did with their program in Durango, in order to increase adoption and charging station utilization.

Despite these developments, range anxiety may continue to persist in the short-term. Group buy programs can address range anxiety concerns by offering a greater selection of plug-in hybrids (PHEVs). These vehicles have both an electric and a gasoline engine, so have the ability to refuel even in the absence of EV charging stations.

X. THE FUTURE OF GROUP BUY PROGRAMS

What is the future of EV group buy programs? Are they sustainable for long-term EV sales? How do we see this strategy evolving?

The first three communities to launch group buy programs were Boulder County, Fort Collins, and Salt Lake City. All three of these communities were successful in building a coalition of diverse partnerships and boosting EV sales in their region. In each case, the lead agency managed three to six cycles of the program over a two-year period before shifting their focus to other programs, like electric-bike (eBike) group buy programs. As of 2017, ebike programs managed by Boulder County and the University of Utah had sold 250 and 60 eBikes respectively. As Brad Smith from Boulder County put it, “it’s our job to pilot these types of innovative programs and our involvement is no longer necessary once they take off and scale up to a regional level.” Now those first EV group buy programs have evolved and expanded into OEM-Utility partnership programs like Nissan’s Fleetail program.

The initial group buy programs can be credited with raising awareness and developing a critical mass of market demand required to nudge regional policy into action on transportation electrification. Increasingly, electric utilities are stepping out in support of EV adoption. Not only are they working with OEMs to promote EVs, but they’re also proposing sizable charging infrastructure plans and developing innovative rate structures for EV charging. These giant corporate enterprises already have the marketing experience and customer base to spread the word to millions of potential EV owners. Utilities like SDG&E and Xcel Energy are actively looking for new ways to engage with OEMs and local dealerships to diversify the EV selection for group buy programs. However, there are still opportunities for utilities to take advantage of local knowledge and collaborate with trusted community organizations.

According to group buy surveys, the most common reasons that participants did not buy an EV were lack of EV options and affordability. As a greater selection of EVs with longer ranges and lower costs are introduced to the market, these obstacles will begin to disappear. Communities can capitalize on the perfect storm of decreasing battery costs, growing model availability, expanding charging infrastructure, and federal and states tax incentives by introducing further purchasing incentives through EV group buy programs and accelerating the trajectory toward transportation electrification.

XI. APPENDIX

Appendix A: Sample language for an EV group purchase RFP

This section is intended to give a sample of the types of questions to ask of potential providers for an EV group purchase program. It is not intended to be a full RFP, as RFP requirements will vary based upon each agency's procurement policies. The language in this RFP is largely drawn from an RFP used by the University of Utah and Utah Clean Energy; however, it has been modified both to remove specific references, and based on lessons learned from the Boulder County and Northern Colorado programs. We would like to thank the University of Utah and Utah Clean Energy for sharing their RFP language.

SECTION 1 – PURPOSE OF RFP

1.1 Purpose of RFP

The purpose of this Request for Proposals ("RFP") is to facilitate a manufacturer/dealer discount for purchases of battery-electric and/or plug-in hybrid electric vehicles (hereafter referred to as "EVs") by members of the community. The agency is using an RFP process to facilitate the implementation of this manufacturer/dealer discount for affiliated individuals, but individuals interested in taking advantage of this discount, and not the agency, will be purchasing and paying for the EVs. For this reason, this process is not governed by the agency's procurement policies and is not subject to protest or appeal. The agency intends to select up to one or more manufacturers/dealers offering EVs for participation in this discount program. Each selected entity will be required to enter into an agreement with the agency (referred to below as the "Contract"), wherein the selected company agrees to participate in the discount program. The companies submitting proposals in response to this RFP will hereafter be referred to as "supplier(s)". The agency is examining several alternatives of providing this program and may decide, after reviewing proposals submitted, not to enter into any agreement.

1.2 Background

The agency desires to provide members of the community with the opportunity to purchase an EV at a discounted price. The objective is to help buyers purchase an electric vehicle at a lower cost, which in turn will reduce local and regional air emissions. The agency intends to promote the discount program and the services of selected suppliers(s) as part of the discount program.

SECTION 2 – RFP DETAILS

2.1 Important Dates

The following dates are significant for this RFP:

- RFP Dated and Issued
- RFP Inquiry Questions
- Proposal Due Date

- Potential Applicant Interviews
- Selected Dealership(s) notified
- Program Launch
- Informational Workshop(s)
- Program Ends

SECTION 3 – SCOPE OF WORK

3.1 Scope of Work Overview

The purpose of agency EVs program is to facilitate a manufacturer/dealer discount for members of the community that is more favorable than other discounts and pricing available to participants during the program period. The selected supplier(s) will provide a discounted pricing on selected makes and models of EVs. The selected supplier(s) will generate price quotes and offer financing services for both purchases and leases of EVs in accordance with the scope of work outlined below.

Individuals who wish to participate in the discount program will sign a contract with the selected supplier(s) for the purchase of an EV. The agency will not be party to this contract and will have no responsibility or liability under this contract.

The program is outlined in terms of the following key phases, described further below:

- Participant Enrollment & Education
- Participant Engagement
- Program Completion & Assessment
- Anticipated Program Timeline

3.2 Participant Enrollment & Education

It is currently anticipated that between the public launch of this discount program and the close of it, the agency will:

- Provide ongoing content management for a website customized for the purpose of promoting the discount program and maintain a social media presence;
- Conduct significant outreach including press releases, workshops, use of social media, and communication with its own employees;
- Maintain a database of customers who sign up on the website, and provide daily updates to the selected suppliers with names and contact information;
- Serve as the point of contact for inquiries about the discount program and field questions about the program.

The selected supplier(s) will:

- Receive contact information from the online signup database
- For interested customers who directly approach the supplier without first registering online, the supplier will collect all of the information needed for an online registration

- Attend workshops and present technical information about EVs.
- Attend other outreach events as requested.
- Participate in media events and interviews as requested.
- Assist with development of collateral materials or presentations.
- Assist with development of survey questions.
- Participate in semi-weekly phone calls with the agency to provide status updates and pertinent information, including: number of inquiries, number of final quotes, number of contracts signed, and any relevant issues, challenges, and/or delays.
- Coordinate with the agency to track participant progress, including those who went directly to the supplier, using a cloud-based database, and update the database at minimum three times per week
- Ask each participant to fill out an online survey developed by the agency
- Communicate regularly with the agency until all purchases are finalized.
- Participate in an Exit Interview and provide feedback on the program

3.3 Participant Engagement

The participant engagement phase is concurrent with participant enrollment and education phase. As eligible participants are referred to the selected supplier(s) or directly approach the supplier(s), the selected supplier(s) will communicate with participants directly to provide each with purchase information and a quote. Purchases can begin as early as the date of the official public launch of the discount program, and will continue until the end of the discount program.

A. Individual Program Quotes

The selected supplier(s) will prepare an individual quote for each assigned participant that is based on the discounted price and takes into consideration the preferences of the assigned participant.

B. Individual EV Contracts

Upon receipt of their individualized quote, each participant who decides to purchase an EV must sign a contract with the supplier that reflects the pricing and other provisions applicable to the discount program. This contract is strictly between the supplier and the participant. The agency will not be a party to these contracts or be responsible for any financial or other obligations related to the individual contracts between participants and the selected suppliers.

C. Enrollment Period Communication

The agency and the selected supplier(s) will coordinate regularly to track assigned participant status throughout the enrollment and education period. The agency will field calls from participants about the program and answer questions or refer individuals to the selected suppliers for more information, as appropriate.

3.4 Program Completion and Assessment

After the end of the program, the selected suppliers will report on all purchases made through the program, including name, address, email address, phone number, make and model sold or leased, and price. The suppliers shall also provide a list of all customers who entered the program but did not complete a lease or sale.

3.5 Proposal Requirements

This section outlines the minimum requirements for a proposal to be considered complete. Interested applicants should complete Exhibits A, B and C to respond to each of the following requirements:

A. Qualifications and Expertise of Staff (see Exhibit A)

Please provide the names, titles, and years of relevant experience of key staff that will be assigned to the program. (As outlined in Exhibit A.) Selected dealership(s) shall notify the agency of any changes to key personnel during the program timeline.

B. Minimum Inventory Requirements (see Exhibit A)

All applicants must adhere to the following minimum qualifications; any applicants not meeting minimum qualifications will not be considered. The applicant's submission should address the following components:

- Applicants must have at least one of each EV model available for test drive at the dealership for the duration of the program. Please confirm that you will have an EV available for test drive.
- Applicants must have at least five of each EV model available at the dealership during the program. Please specify the minimum number of proposed vehicles you expect to be available at the dealership during the program.
- If inventory is not available onsite and additional vehicles need to be ordered from outside of your dealership, please describe the timeline for procuring additional inventory (both locally and out-of-state), and any additional costs associated with placing an order.

C. Demonstrated Ability to Meet Scope of Work (See Exhibits B & C)

The dealership(s) submission should address the following components:

- Proposed vehicle(s), including year(s), make(s), and model(s) to be included in the program, including total number of each type of vehicle that is expected to be available during the program. See Exhibits B and C.
- Designated point of contact for EV sales at the dealership. See Exhibit B.
- Detailed response to Customer Service Flowchart. See Exhibit B.

D. Cost (see Exhibits B & C)

Please complete Exhibits B with information about the vehicle discounts you are offering. Provide information about the current base model cost (lease and purchase) for all EVs you propose to include in the program, and the discount amount, as a percentage or as a total dollar amount, that the dealership will offer to participants in the program for both purchases and leases. The discount amount *should not* include any federal tax credits for which the customer may qualify in the case of a sale. However, any dealer or manufacturer tax credits *should* be taken into account as part of the lease pricing. Please also indicate the time period that the discount will be available; preference will be given to respondents able to offer a consistent discount over the entire program period.

Program discounts must be made available to all eligible program participants.

For Exhibit B please indicate any type of financing or leasing you will make available to eligible participants. List any financing options that you have available for participants, as well as the criteria for accessing those financing options. Please be specific about ALL terms, including, but not limited to, interest rates, lease terms, credit qualifications, down payment requirements, etc.

Please also provide any additional incentives or benefits you are willing to make available to the program or to participants in the program.

3.6 Proposal Evaluation Criteria

Utah Clean Energy intends to select one or more dealerships by utilizing the criteria listed below with their relative weights in points to evaluate proposals.

- A. Qualifications and Expertise of Staff: 20 Points
- B. Minimum Inventory Requirements: 20 Points
- C. Demonstrated Ability to Meet Scope of Work: 20 Points
- D. Cost: 40 Points

3.7 Evaluation Process

All proposals in response to this Request for Proposals will be evaluated as follows:

- The Agency will review all proposals received on time. Proposals that do not meet the minimum RFP requirements will be eliminated. The Agency reserves the right to disqualify any proposal that includes significant deviations or exceptions to the terms, conditions, and/or specifications in this RFP.
- At the conclusion of this initial evaluation phase, the Agency may request interviews with the highest scored applicant(s). The Agency will be the sole judge as to the overall acceptability of any proposal or to judge the individual merits of specific provisions within competing offers.

Exhibit A – Information about Applicant

Dealership Name:

Today's Date:

Primary Contact Name:

Primary Contact Phone:

Primary Contact Email:

Please describe:

- a) Your ability to serve the needs of the community. For purposes of this Request for Proposals, "program area" shall include Salt Lake County, Davis County, Summit County, Utah County, Weber County and Tooele County. Please explain your experience working with residents of the geographic area of the program area and your available inventory for the program.
- b) Your plan for implementation of the Program, including sales agents made available to work with those in the program, anticipated inventory of vehicles, and expected delivery schedules for vehicles (if not available onsite).
- c) Your proposed approach to maintain high quality customer service throughout the program.
- d) Identify any possible challenges you may encounter during this process and how you plan to address them.
- e) Provide names, titles, and relevant years of experience of key staff that will be assigned to the program.

Exhibit B – Cost Proposal Form, Discount Pricing Structure, and Project Schedule

Applicant Firm(s):

Today's Date: Primary Contact Name:

Primary Contact Phone: Primary Contact Email:

Part 1: Please provide pricing for each EV included in this proposal. Include additional lines as necessary:

Electric Vehicle <i>Purchase</i> Information			Sticker Price	Discount (% or \$ amount)	Final discounted price[1]
Model Name	Model Year	Specific configuration(s), trim, or packages (if applicable)			

[1] Dealers providing discounted pricing agree to offer this discounted price to all participants.

Purchase price should not include any available federal tax credits.

Electric Vehicle <i>Lease</i> Information			Sticker Price	Total out of pocket including tax, title, and licensing	Monthly Lease Payment [1]	Lease Term [2]	Mileage /year	Residual Value
Model Name	Model Year	Specific configuration(s), trim, or packages (if applicable)						

[1] Dealers providing discounted pricing agree to offer this discounted price to all participants.

Lease price should specify the customer's annual lease payment amounts, accounting for applicable Federal tax incentives.

[2] Please include a three year lease with option to purchase vehicle at the end of the lease.

Part 2: Additional benefits or discounts. Be as specific as possible and include any additional options that were not addressed above. Add additional rows as necessary. For example: Level II home charger, cashback, special financing interest rate, public charging subscription, etc.

Option	Description
Example: Level II Charger	Example: Free Level II Home Charger included with the purchase or lease of a vehicle

Part 3: Please modify this Customer Service Flowchart as needed. Dealer(s) will be responsible for following up with all program participants in addition to providing regular information to Utah Clean Energy regarding customer and project status.

Step	Expectation	Dealer Response
Initial Customer Contact	<i>Communicate with participating customer within ___ days upon receiving contact referral information</i>	
Customer Visit to Dealership	<i>Specify average time to meet with a salesperson trained in BEV/PHEV vehicles, specify if appointments will be required</i>	
Presentation of Purchase Options	<i>Provide information on the estimated number of models and trim levels available for customers to test drive, how will information on options be presented, etc.</i>	
Financing Process	<i>Provide information on what financing options will be available to customers, outline lease options, requirements, etc. Describe process for financing through third party banks and credit unions.</i>	
Trade-In Protocol	<i>Provide information on how vehicle trade-ins will be handled</i>	
Purchase & Delivery	<i>Outline process for purchasing and delivery. Will vehicles be available on site, if not, estimated wait time and additional cost factor(s).</i>	

Total Number of Vehicles Purchased	Estimated vehicle availability and/or wait time
0 – 25	<i>Same day availability or estimated 1 week wait time for delivery</i>
26 – 50	
51 – 100	
100+	

Sample Program Timeline:

[Title of Program] Schedule	
Milestones	Timeline*
PHASE I: Request for Proposals	
Distribute Request for Proposals (RFP) to EV Dealers	
Due Date for RFP questions for Agency	
Agency responses to RFP questions	
Due date for Dealers to submit proposals	
Hold for potential interview(s) with applicant(s)	
Selection of Dealer(s)	
Negotiations with Dealer(s) and project details finalized through Memorandum of Understanding (MOU)	
PHASE II: Program Launch & Recruitment of Participants	
Pre-launch of Drive Electric Program website	
Formal launch of Drive Electric Program: Full website is published and open enrollment begins	
Informational Workshop 1	
Informational Workshop 2	
Open enrollment closes and program ends	

*All dates are subject to change at Agency's discretion. In the event that the timeline is adapted, Agency will inform the dealer(s) of any changes to the timeline, and where necessary collaborate with the dealer(s) in adapting the timeline.

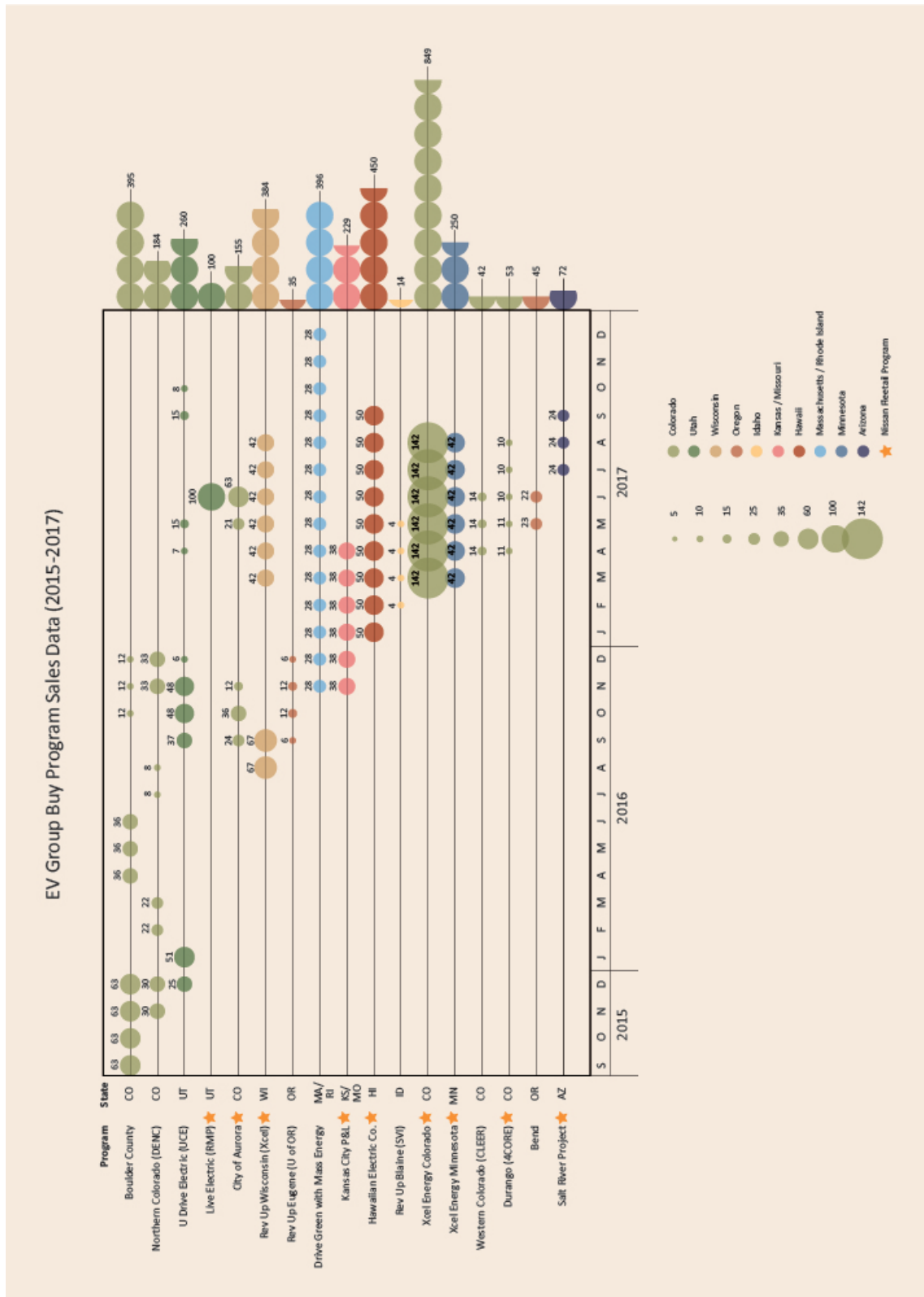
Appendix B: List of all EV Discount programs from September, 2015 to May, 2018

List of EV Group Buy Programs	State	Lead Organization	Start Date	End Date	Vehicles Sold	Vehicles Sold/ Month
Boulder County: Fall 2015	CO	Boulder County	9/1/2015	12/31/2015	248	63
Boulder County: Spring 2016	CO	Boulder County	4/1/2016	7/1/2016	108	36
Boulder County: Fall 2016	CO	Boulder County	10/1/2016	12/31/2016	36	12
DENC: Winter 2015	CO	DENC	11/1/2015	12/31/2015	59	30
DENC: Spring 2016	CO	DENC	2/1/2016	3/31/2016	42	22
DENC: Summer 2016	CO	DENC	7/1/2016	8/31/2016	16	8
DENC: Winter 2016	CO	DENC	11/1/2016	12/31/2016	64	33
U Drive Electric (Winter 2015)	UT	University of Utah, UCE	12/14/2015	1/31/2016	76	48
U Drive Electric 2 (Fall 2016)	UT	University of Utah, UCE, SLC	9/1/2016	11/30/2016	108	37
Drive Electric Northern Utah (Fall 2016)	UT	Weber State University, Utah State University, UCE	10/3/2016	12/17/2016	28	11
ZOOm Go Electric	UT	Hogle Zoo, UCE	4/22/2017	6/3/2017	22	16
Live Electric	UT	Rocky Mountain Power, UCE	6/1/2017	7/1/2017	100	100
Intermountain Drive Electric	UT	Intermountain Healthcare, UCE	9/1/2017	10/14/2017	23	16
Aurora: Fall 2016	CO	City of Aurora	9/10/2016	11/10/2016	71	36
Aurora: Spring 2017*	CO	City of Aurora, Xcel Energy	5/19/2017	6/30/2017	84	61
Madison, Rev Up Wisconsin/Xcel	WI	Wisconsin Clean Cities	8/2/2016	9/30/2016	130	67
Eugene: Summer 2016	OR	Forth/University of Oregon	9/19/2016	12/15/2016	35	12
Clean Texas	TX	CleanTX	11/1/2016	12/31/2016	---	---
Drive Green with Mass Energy	MA/RI	Mass Energy, People's Power & Light(RI)	11/2/2016	3/15/2018	354	28
Kansas City	KS/MO	KCP&L, Metro Energy Center	11/21/2016	4/30/2017	200	38
RevUp Blaine: Spring 2017	ID	Sun Valley Institute	2/1/2017	5/31/2017	14	4
Xcel: Colorado Summer 2017	CO	Xcel Energy	3/1/2017	8/31/2017	849	142
Xcel: Minnesota Summer 2017	MN	Xcel Energy	3/1/2017	8/31/2017	250	42
Xcel: Wisconsin Summer 2017	WI	Xcel Energy, Wisconsin Clean Cities	3/1/2017	8/31/2017	250	42

EV Group Buy Programs: Handbook & Case Studies

CLEER	CO	CLEER	4/1/2017	6/30/2017	11	42
List of EV Group Buy Programs	State	Lead Organization	Start Date	End Date	Vehicles Sold	Vehicles Sold/ Month
Durango: Summer 2017	CO	4 CORE	4/1/2017	8/31/2017	52	10
Bend: Summer 2017	OR	Forth/The Environmental Center/dealership	5/1/2017	6/30/2017	45	23
Salt River Project: Summer 2017	AZ	Salt River Project	7/1/2017	9/30/2017	72	24
SDG&E	CA	SDG&E	8/1/2017	1/2/2018	---	---
Southern California Edison	CA	SCE	2/1/2018	4/30/2018	---	---
Bend: Spring 2018	OR	Environmental Center	4/21/2018	6/30/2018	---	---
Eugene: Spring 2018	OR	University of Oregon, EWEB	4/18/2018	6/15/2018	---	---
Xcel Energy Colorado	CO	Xcel Energy	4/3/2018	6/30/2018	---	---
Salt River Project: Spring 2018	AZ	SRP	4/3/2018	6/30/2018	---	---
4CORE, Durango: Spring 2018	CO	4CORE	4/15/2018	6/15/2018	---	---
Public Service Company of New Mexico: Summer 2018	NM	PNM	5/1/2018	7/2/2018	---	---
Eversource	MA	Eversource	5/1/2018	7/2/2018	---	---
Baltimore BGE	MD	BGE	5/1/2018	7/2/2018	---	---
PG&E	CA	PG&E	---	---	---	---
AEP Ohio	OH	AEP Ohio	---	---	---	---
Green Mountain Power	VT	Green Mountain Power	---	---	---	---
CLEER: 2018	CO	CLEER	---	---	---	---
UC-San Diego (UC system, CalState system)	CA	UCSD	---	---	---	---
MIN					11	4
MAX					849	142
AVG					124	37
TOTAL					3347	---

Appendix C: EV Group Buy Sales Data by Program (2015-2017)



Appendix D: Drive Electric Northern Colorado (DENC) – 2016 Group Buy Requirements

GROUP BUY 2016 DEALERSHIP PARTICIPATION REQUIREMENTS

Through the 2015 group buy program we executed an effective increase in LEAF and BMW i3 sales. There were also several lessons learned from the program, which are represented in this document as a method to continue improving the program.

Requirement	Initial Agreement From Dealership Executive
Proof of Inventory: In order to maximize the number of group buy applicants that are qualified, the dealership must provide official documentation of the number of EV vehicles currently in stock (on the lot), and those in transit (already ordered). They must also provide a pre-established, written plan for taking orders on overflow interest.	_____
Customer Response Time Strategy: To provide rapid response time to those who have registered, the dealership must have 2-3 trained and appointed sales people prepared to respond to those who register for the group buy and to deliver vehicles.	_____
Post-Purchase Follow Up: The dealership must agree to follow up with each purchase customer within two to three days following vehicle purchase. There must be a second follow up from the dealership three to four weeks after purchase, and once more in 2016 to continue supporting the customer's adjustment to driving electric (3+ instances of follow up total).	_____
Restriction on Pricing Changes: The dealership agrees to provide the exact pricing, which will not change before the pre-specified end-date of the program. If inventory sells out, customers will be able to order vehicles at the originally established price within the specified time frame.	_____
Dealership Marketing Strategy: The participating dealership must provide a specified plan for marketing the group buy separate of the marketing plan provided by DENC, including ideas such as, but not limited to, newspaper, radio, online, social media, events, etc.	_____
Tracking: Solidify a system for dealership staff to report on a daily basis, the turnout of the leads provided by DENC including; when the leads were contacted and by whom, if the lead came to the dealership, if they purchased an EV, if they did not purchase, etc. This is important for establishing a quantitative and qualitative assessment of the effectiveness of the program. <u>Sales staffs agree to update this document on a daily basis.</u>	_____
Process for dividing up sales leads: The dealership staff will inform DENC of the process for dividing up sales leads. This process must be established before the program launch.	_____

Marketing Commitment	Lead Partner	Reach	Deadline for Execution	Initial Agreement From DENC
Workplace Charging partner outreach direct to employees (emails, posters, social media, newsletters)	DENC	30,000	Outreach to begin November	_____
Media outreach to Reporter Herald, Coloradoan, local radio stations for one or more earned media pieces	DENC	TBD	Outreach to begin November	_____
Statewide media outreach through Colorado Energy Office organized in partnership with DENC • Feature on Re-Fuel Colorado website • Feature in statewide press release (in progress)	DENC	TBD	November (Pending approval from the State)	_____
Ad posted on front page of DENC website	DENC	TBD	Outreach to begin November	_____
Blog posted on DENC website	DENC	TBD	November	_____
Three social media posts (Facebook and Twitter) per week	DENC	TBD	Beginning November	_____
Ongoing posts from DENC partners	City of Fort Collins, City of Loveland, PRPA, CSU	TBD	Beginning November	_____
Church community (6 partners) promotion directly to staff and congregation	Various churches	Estimated 30,000	Beginning November	_____

Appendix E: Tynan's Nissan of Aurora, CO – Program Flyer



NISSAN
Innovation that excites



FAMILY OWNED AND OPERATED SINCE 1963

TYNAN'S

Tynan's Nissan presents an exclusive EV Group Buy opportunity in partnership with the City of Aurora and in conjunction with Xcel Energy.

Members get a \$ 23,838 discount off MSRP



- NO GAS...EVER!
- NO OIL CHANGES!
- NO EMISSIONS!
- 3 YEARS ROADSIDE ASSISTANCE!
- 8 YEAR/ 100,000 MILE WARRANTY!



2017 NISSAN LEAF S⁺	MSRP: \$33,705 Tynan's Group Buy Discount \$1,338 Nissan Xcel Energy Fleetail Customer Cash Rebate \$10,000 ^o Colorado Instant Tax Credit \$5,000* Federal Income Tax Credit (up to) \$7,500**
---------------------------------------	--

SPECIAL GROUP BUY PRICE \$9,867
 AS LOW AS (OR UP TO 70% OFF MSRP!)

Or get 0% APR financing for 72 months^{oo} **OR** Lease for only \$129/mo with \$1,900 due at signing^o

Plus members also get:

- An EZ Charge card good for 2 years of unlimited 30-minute complimentary DC fast charges and 60-minute level 2 charges at participating No Charge to Charge stations.
- 5 days of complimentary non-LEAF vehicle rentals from Tynan's Nissan Aurora.
- Complimentary multi-point inspection and tire rotation at 7,500 miles at Tynan's Nissan Aurora.

^o 2017 Nissan LEAF S 30kWh, model code 17017, MSRP of \$33,705. Stk# 170679/170731, VIN: 1N4BZ0CPHC301867, 1N4BZ0CPHC306695 2 or more available. *Colorado Instant Tax Credit requires financing through NMAC (WAC) either at standard or the incentivized 0% APR programs and for the consumer to assign their State of Colorado Innovative Motor Vehicle Tax Credit to NMAC who then passes it back to the consumer in the form of an instant rebate at the time of sale (\$2,500 on lease, \$5,000). **Based on \$7,500 federal income tax credit of zero to \$7,500 for the purchase of a qualifying plug-in electric motor vehicle. ^{oo} This \$10,000 Nissan customer cash rebate is available only to Colorado residents who are customers of Xcel Energy with qualifying proof (copy of current utility bill) and cannot be combined with any special lease or financing offer. ^{oo} 0% APR for 72 months offer equals monthly payments of \$13.88 per \$1,000 financed. Must finance through NMAC with approved credit. APR offer available in lieu of customer cash rebates. ^o 24 month lease through NMAC. \$1,900 due at signing. Plus tax, title & license. \$0 security deposit. 12,000 annual mileage allowance with \$0.15 charge per mile thereafter. Includes dealer handling fee of \$549 & lease acquisition fee of \$595. With approved credit. \$12,350 NMAC lease customer cash rebate, \$2,000 Nissan customer bonus cash rebate & \$2,500

Appendix F: CLEER 2017 EV Sales Event Report: Program Expenses

The table below was adapted from [CLEER's Electric Vehicle Sales Event Final Report](#) (August 7, 2017)

EV Sales Event media buy schedule and costs

Media outlet	Type of ad	Frequency	Start and end dates	Cost
Glenwood Springs Post Independent	1/6 page print ad	Every Thursday	April 6 to June 29	\$1,822.56
Vail Daily (pick-up rate)	1/6 page print ad	Every Thursday	April 6 to June 29	\$1,275.84
Aspen Times (pick-up rate)	1/6 page print ad	Every Thursday	April 6 to June 29	\$1,275.84
Glenwood Springs Post Independent	Headliner website ad	27,800 impressions	April 1 to May 14	\$400.00
Vail Daily	Headliner website ad	27,800 impressions	April 1 to May 14	\$400.00
Aspen Times	Headliner website ad	27,800 impressions	April 1 to May 14	\$400.00
KZYR FM	30-second spot	3 per day, Wed-Sat	April 5 to June 30	\$700.02
KSNO FM	30-second spot	3 per day, Wed-Sat	April 5 to June 30	\$700.02
KMTS FM	30-second spot	3 per day, Wed-Sat	April 5 to June 30	\$468.00
Advertising subtotal				\$7,442.28
Related costs				
Sjoberg Designs	Logo, flyer and print ad design	---	---	\$467.00
CLEER	Invoices to partners, monthly payments to advertisers	---	---	400
Kelley Cox	Professional photos of March 15 press conference	---	---	175
CLEER	Advance planning March 15 press conference	---	---	600
Related costs subtotal				\$1,642.00
Total cost				\$9,084.28

Appendix G: DENC Group Buy Media Toolkit

Social Media:

Twitter

*Please be sure to tag us so we can monitor activity

**Include image of poster whenever possible. Tweets and posts with images get more attention.

Handles

@DriveElectricNC – Drive Electric Northern Colorado

@TynansFoCo – Tynan's Nissan

@natlcarcharging – National Car Charging

Hashtags

#GroupBuy

#GetCharged

#EV or #EVs

#DriveElectric

#LEAF

Sample Pre-Launch Post (before Nov. 15th)

- @DriveElectricNC has some exciting plans in the works! #GetCharged for their big announcement Nov 15th!

Sample Posts (on or after Nov. 15th)

- DENC has launched another #GroupBuy! Sign up at the link then stop into @TynansFoCo for 65% savings on a #LEAF <http://driveelectricnoco.org/group-buy/>
- You don't have to wait for #BlackFriday to get deals on #EVs! Sign up here for up to 65% off a #LEAF before Dec 31st <http://driveelectricnoco.org/group-buy/>
- The workplace with the most #GroupBuy signups wins a free #ChargingStation from @natlcarcharging, so sign up today! http://driveelectricnoco.org/group-buy
- Any person who buys a #LEAF during @DriveElectricNC's #GroupBuy gets a free Level 2 #Charger from @TynansFoCo! #GetCharged

Facebook

*Please be sure to tag us in posts so we can monitor activity

**Posts in this category can also be used on other platforms, Google+, LinkedIn, etc. if you choose to reach your audience through those mediums

Pages

Drive Electric Northern Colorado – <https://www.facebook.com/DriveElectricNoCo/>

Tynan's Nissan – <https://www.facebook.com/TynansFortCollinsNissan/>

National Car Charging –

<https://www.facebook.com/NationalCarCharging/>

Sample Pre-Launch Post (before Nov. 15th)

- Drive Electric Northern Colorado has some exciting plans in the works! #GetCharged for their big announcement Nov 15th!

Sample Posts (on or after Nov. 15th)

- Drive Electric Northern Colorado has launched another group buy to round out the year! Get a LEAF from Tynan's Nissan Fort Collins for \$11,840 (a 65% savings) before Dec 31st! Sign up here to register, obligation-free: <http://driveelectricnoco.org/group-buy/> (Include poster image)
- You don't have to wait until Black Friday to get mind-blowing deals on EVs! Sign up at the link below to access up to \$21,870 of savings off a LEAF! <http://driveelectricnoco.org/group-buy/> (Include poster image)
- Win a free charging station for your workplace! The business that has the most employees purchase a LEAF during Drive Electric Northern Colorado's group buy gets the prize! Sign up today: <http://driveelectricnoco.org/group-buy/>
- Each group buy purchase comes with a Level 2 home charger (\$500 value) while supplies last, so get yours today! <http://driveelectricnoco.org/group-buy/>

Email / Newsletter

Drive Electric Northern Colorado's (DENC) successful group buy program is back! Beginning November 15th, Colorado residents can purchase a new 2016 Nissan LEAF for as low as \$11,840, a 65 percent discount from MSRP.

This offer is a pre-negotiated group buy discount, offering Coloradoans a hassle-free opportunity to drive electric and never pay for gas again. This latest group buy program from DENC is set to improve on the success of the previous two programs, which brought electric vehicle (EV) adoption up to two to three times the national average.

Betty Dall, who was the first to purchase a LEAF in DENC's March group buy, described the process as pressure-free and easy. "It was simple," she said. "Having it all pre-negotiated made it very easy."

This group buy is the latest effort by DENC to make driving electric accessible and affordable to community members. In this round of group buy pricing, consumers can **purchase a Nissan LEAF S for as low as \$11,840**, or a **Nissan LEAF SV for as low as \$13,575**.

A regional partnership between Colorado State University, the cities of Fort Collins and Loveland and the Electrification Coalition, DENC has constantly strived to deliver affordable options for driving electric and has consistently advocated for improved EV infrastructure. It has acted as a third party through which consumers have comfortably and confidently made the decision to drive electric, and has spurred a community of EV owners and advocates, making Northern Colorado an early leader in EV adoption.

Supplies of models are limited, and the deal ends on December 31st, so interested parties should act quickly.

Perks and Incentives

Those who purchase a LEAF have access to great perks. For starters, Tynan's Nissan offers a No Charge to Charge program, in which its customers receive 24 months of complimentary EV charging. Customers also have access to six free days of a gasoline-powered rental car for long-distance traveling, three years of roadside assistance, and the inherent benefits in owning an EV such as savings on fuel and maintenance, lower vehicle emissions, and decreased oil dependence.

Specific to this group buy deal, customers will receive a Level 2 home charger, which is the fastest home charging solution available, and has a value equivalent to \$500. Additionally, the workplace that has the highest employee participation in this group buy will receive a free charging station and installation at their office, compliments of National Car Charging.

Another component in this specific group buy is that existing EV owners can earn money and prizes for spreading the word! Any current LEAF owner who refers an individual to make a purchase receives \$200 for each referral. Additionally, any EV owner—LEAF or other—who refers somebody to make a purchase will get their name entered in a prize drawing for each time they refer someone. The winner will be announced January 1, 2017. See [the EV Owner Challenge](#) page for more information.

To learn more about the 2016 group buy and to register, visit [DENC's webpage](#). Please note, registration is required to receive this pricing, so please [register online](#).

Appendix H: Rev Up Blaine Program Flyer



SAVE THE DATE

RevUp Blaine Test Drive Days May 12 – 13

Friday, May 12
 2pm – 6pm
 Ore Wagon Museum
 500 East Ave, Ketchum, ID

Saturday, May 13
 9am – 2pm
 CSI Community Campus
 1050 Fox Acres Rd, Hailey, ID



All four RevUp Blaine vehicles are available to test drive and dealership representatives will be present to answer your EV questions. This event is cohosted with generous help from the Community School. Community School students will display their Chevy S10 converted electric vehicle to provide additional EV education. Blaine County School students are encouraged to attend the event.

RevUp Blaine is a limited-time program offering Blaine County residents and businesses significant discounts on four of the most popular electric vehicles. **Act now - this offer ends May 31, 2017!**



"I love that I don't have to go to the gas station very often. Some days I use so little electricity that I won't even plug in. I haven't been to a gas station in at least a month."

Ann Christensen
 Chevrolet Volt Owner
 Plug-in Electric Hybrid



Nissan Leaf

Discount
\$9,616



BMW i3

Discount
\$3,566



Chevrolet Volt

Discount
\$2,557



Audi A3 e-tron

Discount
\$2,334



For more information on RevUp Blaine, visit RevUpBlaine.org and click the enroll button. Enrollment ensures you have all the information you need to purchase an EV. You are not required to purchase by enrolling.

Air Quality | Fuel Savings | Comfort | Ease | Affordability

Appendix I: Salt Lake City Group Buy Climate Report Card



Appendix J: Program Survey Sample Questions

Dealership sales staff can direct program participants to an online program survey. Surveys should be conducted for all group participants, regardless of whether they purchased an EV through the program. Responses from both EV buyers and non-buyers presents a more holistic picture of program successes and shortcomings.

Boulder County's 2016 group buy program sold 248 Nissan LEAFs. They online survey collected 124 responses from participants who purchased a Nissan LEAF, or 50% of the total buyers, and 59 responses from participants who did not buy a LEAF. The list below combined the questions from Boulder County's survey as well as survey questions from Drive Electric Northern Colorado's 2016 program and the City of Aurora's 2016 program.

- 1) How did you hear about the EV discount purchase program?
- 2) Were you considering purchasing/leasing a new car or an EV prior to hearing about this program?
- 3) How easy was the program from sign up to purchase/lease?
- 4) Please rank the reasons why you purchased/leased an electric vehicle? (1-most important: 5-least important).
 - a. Environmental Benefits
 - b. Reduced Fuel & Maintenance Costs
 - c. New & Exciting Technology
 - d. Superior Performance
 - e. Reduced Oil Consumption
- 5) The most influential incentives for participants are (respondents were allowed to select more than one option; listed from selected by most to least)
 - a. Federal tax credit
 - b. State tax credit
 - c. Dealership incentives
 - d. Free of inexpensive charging availability at work
- 6) Please rank which of the following types of EV charging are most important to you. (1-most important: 4-least important)
 - a. Ability to charge at home
 - b. Charging at your workplace
 - c. Fast charging along major highways
 - d. Charging at major recreational destinations (ski areas, parks, trailheads)

- 7) If you purchased a solar PV system in conjunction with this program, did you size the system to power your car in addition to your home?
- 8) Do you have charging available at your workplace?
- 9) Please rate your experience at the auto dealer from 1-5
- 10) Please rate each of the following from 1-5, as to how much trust you have in each of these as sources of information on EVs and their benefits.
 - a. Car Dealerships
 - b. Local Governments
 - c. Air Quality Agencies
 - d. Electric Utilities
 - e. Environmental Organizations
- 11) Demographic Questions:
 - a. What is your annual household income?
 - b. Does your household own another vehicle?
 - c. How many miles is your average daily commute (one-way) and do you plan to commute using your EV?
 - d. Do you live in single or multi-family housing?
- 12) What are the biggest barriers to EV adoption?
- 13) How could this group buy program be improved in the future?
- 14) Are you interested in being contacted about EV programs and policies?
- 15) Have you registered for any previous EV group buys?
- 16) Would you be interested in learning more about our DENC EV Enthusiast group? EV owners group gets together once a month over drinks and food to discuss EVs and increasing adoption. Additionally some group members help support DENC programs by volunteering.

XII. RESOURCES

Documents

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<http://massenergywebservices.com/drivegreen/table-all.php> - bolt.
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9. Toor, Will, Mike Salisbury, and Tyler Svitak. *Opportunities for Vehicle Electrification in the Denver Metro Area and Across Colorado*. Technical paper. City & County of Denver, Department of Environmental Health, 2017.
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11. *Charge Ready Pilot Program Q3/2017 Report*. Report. Southern California Edison. 9-10, 2017.
12. Salisbury, Mike, and Will Toor. *Evaluation of Colorado Electric Vehicle Group Purchase Programs*. Southwest Energy Efficiency Project (SWEET), 2016, www.swenergy.org/data/sites/1/media/documents/publications/documents/Colorado_EV_Group_Purchase_Programs_Mar-2016.pdf.
13. Eia.gov. (2018). *Colorado - State Energy Profile Analysis - U.S. Energy Information Administration (EIA)*. [online] <https://www.eia.gov/state/analysis.php?sid=CO#38> [Accessed 27 Jun. 2018].

Interviews:

Nonprofit:

1. Anna Vanderspek – Mass Energy Consumers Alliance
2. Annie Freyschlag – Drive Electric Northern Colorado
3. Laurie Dickson – 4CORE
4. Lorrie Lisek – Wisconsin Clean Cities
5. Kate Bowman – Utah Clean Energy
6. Zach Henkin – Forth Mobility
7. Matt Shmigelsky – Clean Energy Economy for the Region (CLEER)
8. Dwain Rogers – CleanTX
9. Katie Bray – Sun Valley Institute

University:

1. Liz Ivkovitch – University of Utah
2. Steve Mital – University of Oregon
3. Byron Washom – UC-San Diego

Local gov't:

1. Brad Smith – Boulder County
2. Noor Shaikh – City of Aurora
3. Tyler Paulson – Salt Lake City

OEM:

1. Valerie Kornahrens – Nissan North America
2. Nick Baderschneider – BMW Group
3. Jamie Hall – General Motors

Dealership:

1. Nigel Zied – Boulder Nissan
2. Markus Kamm – Tynan's Nissan or Aurora
3. Jason Bradley – Smolich Nissan

Utility:

1. Eric van Orden – Xcel Energy
2. Neal Callinan – Xcel Energy
3. Jeffrey Beeson – Kansas City Power & Light
4. Megan Rigby – San Diego Gas & Electric
5. Kathy Knoop – Salt River Power
6. David Kaintz – Southern California Edison



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