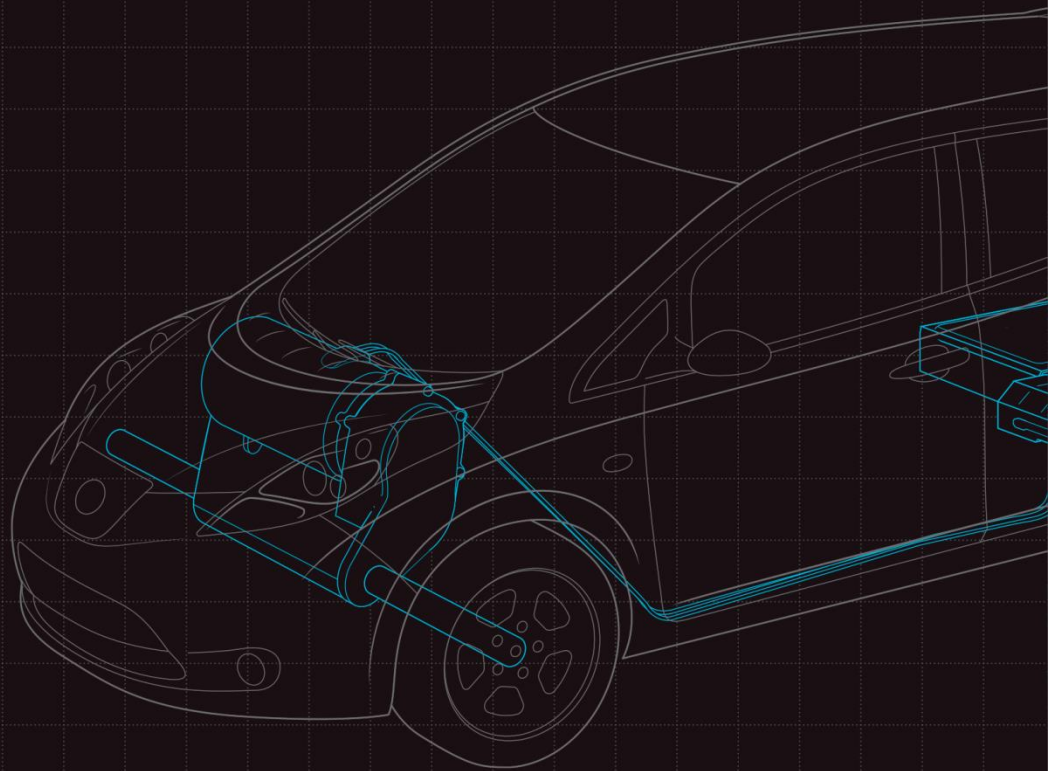


CASE STUDY

# Drive Electric Northern Colorado

*Establishing an EV Accelerator Community*



Electrification  
Coalition

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In Partnership with



Securing America's  
Future Energy

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# Electrification Coalition

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The Electrification Coalition is dedicated to reducing America's dependence on oil through the electrification of transportation. Our primary mission is to promote government action to facilitate deployment of electric vehicles on a mass scale. The Coalition serves as a dedicated rallying point for an array of electrification allies and works to disseminate informed, detailed policy research and analysis.

## Acknowledgements

Drive Electric Northern Colorado (DENC) could not have been possible without the participation and support from the cities of Fort Collins and Loveland Colorado, Colorado State University, as well as numerous funders and partners who all provided their generous support to the program success. The Electrification Coalition (EC) deeply appreciates and thanks both cities' local leaders, residents, our numerous funders, businesses and organizations for their hard work and dedication to this effort over the last 4 years.

### Special Acknowledgement to Our Principal Partners:

City of Fort Collins

City of Loveland

Colorado State University

#### Special Thanks to:

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Former Fort Collins Mayor Karen  
Weitkunat

Loveland Mayor Cecil Gutierrez  
Fort Collins City Manager Darin  
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### DENC State and Local Supporters:

Advanced Energy (Fort Collins)  
American Lung Association in  
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Boulder County  
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Brinkman Partners  
Chipper's Lanes  
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Odell Brewing Company

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The DENC team has so many people to thank that, inevitably, an organization may have been overlooked from this acknowledgements page. They are owed a huge debt of gratitude, as well.

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# Introduction

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Electric vehicles (EVs) present a critical opportunity to sever the nation's oil dependence, bolstering American economic and national security while benefitting consumers. In the view of many experts, before EVs become ubiquitous nationwide they should be deployed in targeted geographic areas where all the components necessary for success—local policy, charging infrastructure, consumer education, public-private partnerships, and more—are leveraged simultaneously.

Northern Colorado was one of the first communities to launch a comprehensive and successful effort in this model. Drive Electric Northern Colorado (DENC), a partnership between the Electrification Coalition (EC), the City of Fort Collins, the City of Loveland, and Colorado State University was established in February 2013 to create a living laboratory for the development and testing of successful strategies to accelerate the adoption EVs.

DENC promotes EV acceleration by combining traditional organizing principles with technical expertise. Since its inception, DENC has launched several innovative programs that have continued to help northern Colorado exceed expectations for EV adoption, with sales typically 2-3 times the national average. Based on this success, DENC can serve as a model for other communities seeking to accelerate the adoption of EVs.

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# Policy

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EV-friendly regulations at the city and state levels can have a dramatic positive impact on EV sales. Pragmatic city and state-level approaches can reduce the barriers to EV adoption, increase the number of public charging stations, and incentivize ownership through local policy, codes, legislation, and advocacy. In order to succeed, coordinated efforts such as DENC, referred to in this paper as “accelerator projects,” “accelerator communities,” or “EV accelerator projects” must focus on promoting these policies by mobilizing and connecting constituencies such as local businesses, automotive dealers and manufacturers, universities, and EV enthusiasts to marshal public support into actionable policy outcomes.

## Component Aspects

Accelerator communities can operate as a positive feedback loop, which begins by mobilizing a core group of early adopters and

advocates, expands to include affiliated organizations, and continuously builds on this momentum and reach to develop and implement new policies. The organization can curate spokespeople, engage business leaders, and enable advocates that push aggressively for policy changes which will rapidly accelerate EV adoption. Organizations can also push for state policies that will not only benefit the accelerator community but can boost EV promotion in other cities across the state.

Accelerator projects should begin with an exhaustive evaluation of existing codes, policies, and regulations to determine what is already in place to support EV adoption in the target community, how these policies can be leveraged, and which new ones should be implemented. Existing climate or air quality regulations and goals should be targeted in this effort. Partnering or collaborating with state energy, sustainability, or transportation offices are other effective ways to develop feedback channels for influencing policy. Understanding each office’s goals

and metrics for success can enable more effective partnerships.

### Statewide Policy Advocacy

DENC found great success by working with the Colorado Energy Office to help lead EV adoption across the state. Specific policies included working with local advocates and city governments to retain incentives such as Colorado's original refundable EV tax credit worth up to \$6,000, which switched in 2016 to a \$5,000 credit available at the time of purchase, and \$2,500 credit for a vehicle lease. DENC also worked with government and local advocates to increase charging station installation, also known as electric vehicle supply equipment (EVSE) through the state's Congestion Mitigation and Air Quality (CMAQ) funding initiatives.

### Tax Credit Policy Maintenance

When DENC was launched, Colorado offered a significant tax credit of up to \$6,000 which was slated to sunset in 2015. DENC worked with other interest groups to change the state legislature's approach to reform and extend the state tax credit. This effort was made possible through a concerted lobbying effort, which included letters of support from various advocates, a dialogue with the Colorado Energy Office, and persuasive testimony from a local advocate: An 80-year-old military veteran who drove an EV for both the energy security benefits and to protect his budget from gasoline price volatility. This spokesperson was a member of the local EV enthusiast group—a critical social component of the DENC project and described in greater depth later in this paper. This individual's testimony framed the EV tax credit as more than an environmental policy, but as part of an effort to improve the state's economic security and reduce oil dependence. DENC assisted with writing the testimony, which was delivered by a leading voice of the local community, and contributed to the unanimous passage of a bill to extend the tax credit—a move that underpinned significant EV sales in the project area. DENC also publicized the signing of the bill through an event at Loveland Water and Power to increase awareness of the project and engage stakeholders.

This \$6,000 state credit has since been changed to become a \$5,000 point-of-sale credit, applicable to any advanced fuel vehicle, or \$2,500 for an EV lease.

Vehicle financing entities can provide the \$5,000 up front to consumers in exchange for the tax credit, for which they will be compensated by the state government. Coupled with the federal credit of up to \$7,500, this means that in Colorado, a total of \$12,500 is potentially available to consumers for the purchase or lease of an EV. There was both positive local press coverage and consumer reaction to the new tax credit, which is considered to be a simpler alternative to the previous tax credit.

DENC has also found there are opportunities to work with state, local, and regional infrastructure programs and with metropolitan planning organizations (MPOs) to tap into federal or state infrastructure funds for deploying charging stations. Energy offices generally have pre-established communication channels and outreach strategies with these organizations, which helped DENC establish a broader community of supporters.

### Congestion Mitigation and Air Quality Funding (CMAQ)

Federal funds are available to improve the air quality in non-attainment areas around the country, which exceed federal standards set by the Environmental Protection Agency (EPA). Local groups are responsible for how this money is allocated. In some states, specific air quality divisions apply, and in others, the issue is addressed through MPOs. In Colorado CMAQ funds are distributed through the Charge Ahead program, a CMAQ funding initiative of the Denver Regional Council of Governments.

### Charge Ahead Program

The Charge Ahead program in Colorado was a project funded by the Colorado Energy Office and the Regional Air Quality Council, designed to help Coloradans understand the state EV tax credit and encourage EV adoption. Through Charge Ahead, CMAQ funding was allocated towards MPOs and state energy offices, which allowed cities to apply for grants. DENC worked with the cities to rethink how they were allocating these funds and succeeded in shifting a certain allocation to constructing EV infrastructure in the region. Up to \$6,200 dollars per Level 2 charging station was allocated, and the grant recipient needed to provide at least a 20 percent match per station. Since 2013, the program has provided for the installation of 12

charging stations across the DENC region. In February 2013, the program—with funding from CEO—provided four more stations in Fort Collins and six in Loveland. Additionally, CEO funded two chargers at Colorado State University in March 2015.

DENC also worked with universities, local non-profit organizations, school districts, and eventually businesses to install charging infrastructure. Charging stations constructed through CMAQ funding were required to be available for use by the public even if they were located on private property, and were listed in relevant databases to make EV drivers aware of locations.

### Non-Cash Incentives

Across the United States, non-cash state incentives have also proven to be an important motivator for expanding EV sales.<sup>1</sup> For example, zero-cost high-occupancy vehicle (HOV) lane access for EVs and reduced fees for toll roads, bridges, and tunnels can have a substantial impact on consumers' value propositions. However, Colorado issued 2,000 HOV permits for low-emission vehicles in 2008, which have long since been filled, and has no plans to issue more. New EV owners are now placed on a waitlist instead as Colorado's transport department asks for permit holders who no longer drive EVs to rescind the permits, negating much of the HOV lane access incentive for new buyers. The state can also enable energy savings performance contract (ESPC) models for municipal fleets that allow the city to lease EV systems (vehicles, electricity, charging capability) from a third party so it can take advantage of tax credits that it can't monetize independently as a public organization. Similarly, to help influence fleet adoption, the state can create mandates that require state EV fleet purchases if the incremental cost is less than 5 percent compared to an internal combustion engine (ICE).

### Workplace Charging

Working with local businesses to install workplace charging was a critical component to DENC's success, as consumers are six times more likely to purchase an EV if they have access to charging at the workplace,

according to a study conducted by the U.S. Department of Energy.<sup>2</sup> More than 20 local businesses, universities, and municipalities participated in workplace charging, giving charging access to over 15,000 individuals during across the DENC region. Involving local businesses and organizations in the Workplace Charging Challenge was a multi-stage process that involved businesses hosting Ride and Drive events to educate employees about EVs, as well as educational lunches to present information on the benefits of EVs, with the eventual goal of installing chargers at one or more of the company or organization's campuses. DENC also worked with these businesses and organizations to access funds from the Charge Ahead Program to facilitate installation.

### Public Parking Facilities

DENC developed partnerships with large retailers and developing companies to encourage installation of EV charging in high traffic areas such as downtown and retail shopping centers. This influenced the installation of multiple Level 2 and DC fast charge stations in covered parking garages and highly-utilized parking lots as part of DENC's charging strategy.

### Local Policy Advocacy

Coordinating with city planners can often produce high-impact EV infrastructure policies. For example, requiring that new commercial construction be wired to accommodate easy installation of charging stations can quickly produce a significant number of "EV-ready" properties. For residential buildings, the city can mandate that housing developers offer prospective buyers a standard option to pre-wire garages for EVs. When public parking lots and garages are built, the city should also require a certain percentage of these to be pre-wired for EV charging as well. This process was put in place in Denver and Boulder, near but not within DENC territory. Similar projects should seek to work with the city council to increase the number of office, apartment, and commercial buildings that incorporate EV infrastructure from the beginning.

<sup>1</sup> Source: Jin, L., et al. "Evaluation of State-Level U.S. Electric Vehicle Incentives," Washington, DC: International Council on Clean Transportation, 2014, at 29.

<sup>2</sup> Department of Energy, Office of Energy Efficiency and Renewable Energy, "Workplace Charging Mid Program Review: Employees Plug In," December 2015.

To achieve maximum impact, accelerator communities can encourage the municipality and utilities to develop an over-the-counter permitting process or simplified codes that would enable businesses and homeowners to quickly and easily install charging stations.

## Lessons Learned

### Analyze City and State Policy Restrictions

Colorado is a “home rule” state, meaning that cities can establish local policies, laws, and regulations as they see fit. Because of this, and the heightened level of local support for EV adoption, DENC has focused primarily on local policies to further its EV adoption goals. Organizations should analyze the most effective way to target policies in their state since municipal policy might not be as effective in some locations.

### Prioritize Policy Advocacy

Some policy changes will be easier to implement than others. It is important first to develop a comprehensive list of existing policies that affect EV adoption, and categorize them as follows. First, identify existing regulations that actively obstruct EV sales or impede infrastructure development and the likelihood of removing or reforming these laws. Second, identify existing policies including financial and non-financial incentives that support EV adoption, and if they can be augmented or strengthened. Finally, accelerator communities should determine the worthiness of implementing or changing certain policies through a cost-benefit analysis to weigh the impact on potential EV adoption against the time, effort, and political capital required to make that change. A relevant example from DENC’s experience, outlined in further detail below, was the decision not to press ahead with preferred parking spaces for EVs in downtown Fort Collins, given the city’s limited street parking. Political capital was instead put towards more rewarding initiatives, such as Ride and Drive events and lobbying for the state tax credit to be retained.

### Give Stakeholders Responsibility

An accelerator community organization should connect with a city’s planning committee to determine which stakeholder(s) would be in the best position to take on responsibility for policy advocacy. The Public Utilities Commission, for example, might

be the best to spearhead regulations around time of use (TOU) pricing and pricing rebates for EV drivers, while others could take a leadership role in finding innovative ways to finance the deployment of public charging stations. DENC leveraged stakeholder relationships for assistance with Ride and Drives, volunteer recruitment, creating new program ideas, building support for policy initiatives, writing grant applications, and piloting and eventually leading new strategies. These efforts are described in greater detail in later sections of this report.

### Organize People Where They Are

It is critical to understand the motivations of the relevant executive, legislative, and regulatory bodies to achieve policy changes. In DENC’s case, the northern Colorado area was already sympathetic to the concept of EVs. However, local EV advocates have had to step outside the traditional environmental argument for EVs when pushing for EV-friendly policies. These additional arguments centered on national security and economic stability, and proved persuasive when used to argue against the state’s plan to sunset its EV tax credit. This narrative may prove to be more persuasive than the environmental benefits when encouraging EV adoption elsewhere in the country.

### Expect Variation in Issue Effectiveness

Political and community realities will make some challenges more difficult than initially anticipated. In downtown Fort Collins, DENC attempted to designate preferred parking places with charging stations for EVs. Fort Collins is a university town with very limited street parking. It quickly became apparent that parking access was a challenging issue in the city and a political dead-end, despite the widespread support for DENC’s mission. DENC decided not to expend political capital on this issue after discovering the challenges it posed and instead opted to pursue support for several other EV-friendly policies.

### Utilize Existing Community Motivations

Many communities will already have existing environmental or infrastructure programs that can be leveraged, such as grid modernization programs, home solar, and distributed storage initiatives. Accelerator projects should also be on the lookout for additional motivators like climate initiatives. For example, Fort Collins recently approved an aggressive



Climate Action Plan that benefits DENC as there are EV acceleration goals integrated into the plan.

### Conclusion

In the four years since its launch, DENC has identified and leveraged great local support for policies to accelerate EV adoption. This support has come from a wide array of community advocates, including government at both state and local levels, as well as businesses and consumers.

The identification and mobilization of these advocates in the community has proved key in creating an environment conducive for EV adoption, such as point-of-sale tax credits and preferential parking and infrastructure installation. DENC's experiences to date tell us community coordination and education are critical components of EV adoption at the local level.

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# Public Infrastructure

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Appropriately located public charging stations are a key indicator of EV readiness in a community. The presence of infrastructure helps assure potential customers that charging will be available when it is needed. Installing charging infrastructure at way stations, for example, can give consumers particular comfort by linking EV-ready communities together and dramatically increasing the distance a vehicle can travel. DENC collaborates with city planners and other stakeholders to evaluate potential sites for public charging stations and advises businesses on deploying and managing workplace charging infrastructure.

## Component Aspects

Even though the vast majority of EV charging is done at home or work, consumers must feel confident that there is sufficient public charging availability in other places to alleviate range concerns. Some consumers are hesitant to buy an EV because they are not yet aware of the convenience of charging at home.

An accelerator community organization should engage traffic planners and relevant stakeholders at the start of a program to determine the best locations for public charging stations. There will often be tradeoffs, as placing a charger on municipality-owned land may be less expensive, but deploying a charger in a costlier retail area will likely have a higher utilization rate, or be more visible.

Vehicle original equipment manufacturers (OEMs), EV infrastructure vendors, and utilities should be encouraged to fund, install, and maintain a sufficient number of charging stations in the area. While chargers should be the same for drivers wherever they charge, it's possible that competing subscription services or payment models could emerge that will have to be explained to consumers. The chargers

should be tested regularly to confirm that the equipment is fully functional and that the network meets the needs of users. Reliability and predictability are critical for widespread adoption, so the importance of such efforts cannot be overstated.

### Lessons from DENC

When DENC was launched in early 2013, the only publicly accessible charger in operation was in Fort Collins. There were no public charging stations between the northern Colorado region and the nearest major metropolitan area of Denver. DENC recognized that consumers needed to be comfortable with both intracity and intercity travel before they would buy an EV, so it began working with the cities and local businesses to deploy additional chargers in the area. This effort included establishing a Regional Infrastructure Group that met monthly for the program's first two years to analyze charger utilization and identify areas that would benefit from the installation of new chargers.

Three years later, there are more than 25 publicly accessible chargers in the region. According to charging station utilization data collected by the DENC Infrastructure Group, the majority of public charging demand had been met by the third year of the program. DENC then turned its focus to deploying additional workplace charging stations to support the growing demand among regional employers.

### Changing Perceptions

Many consumers don't realize that the vast majority of their charging requirements will be met at home or at work until they actually own an EV. In addition to fighting this perception with initiatives like DENC's Drive Leadership Extended Test Drive program, which is described in greater depth later in this report, DENC promotes data showing that most EV owners follow different refueling patterns than owners of traditional gasoline vehicles. DENC has also developed a campaign to promote the availability of charging stations and provides maps to show drivers where they are located.

### Deploying Charging Stations

Shortly after its launch, DENC realized that initial efforts to deploy charging infrastructure in the region had to be focused on seeding the market. Local businesses, utilities, and cities were interested but needed to be convinced that the project would be worth the upfront costs.<sup>3</sup>

DENC established its first partnership with Nissan, which donated a direct current (DC) "fast charger" for the initiative—the first DC fast charger in the Mountain States. While the City of Fort Collins paid for the wiring and installation, the total cost was much less than it would have been because the station itself was free. Since this early success, many other partners have been willing to sponsor charging stations. Now there are six DC fast chargers in the region.

DENC was initially focused on alleviating battery range concerns of potential EV owners by deploying a significant number of charging stations as fast as possible and began discussions with the cities to evaluate potential locations almost immediately. The first stations were placed on land the city owned, where the current bandwidth was known, and in close proximity to transformers. Because the city owned the property, there were significant cost savings involved, paving the way for numerous chargers to be deployed on city property.

This charging station deployment was made easier because Fort Collins is served by a municipal utility, so the city and utility could function together seamlessly. DENC believes, however, that its model

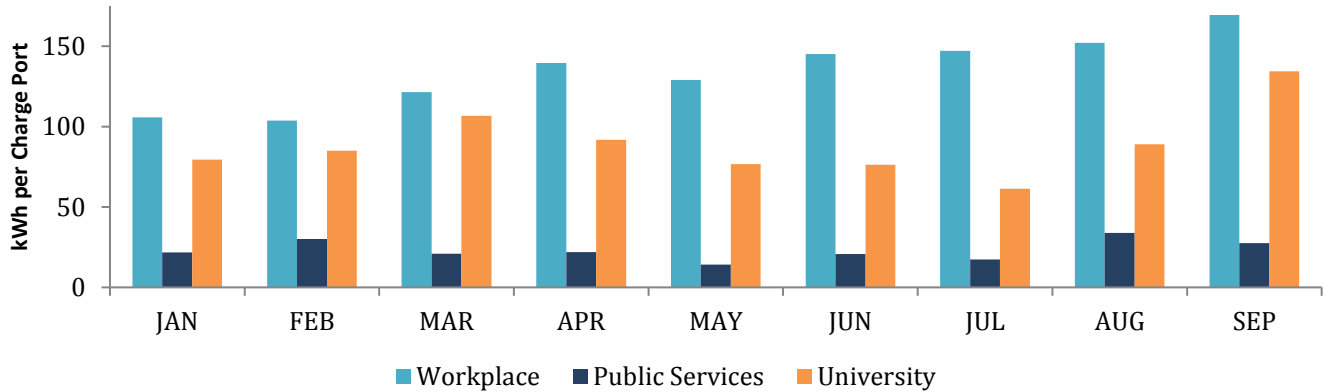
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<sup>3</sup> Note: Installation of AC level 2 chargers in a commercial garage or on a public street ranges from \$2,000 to \$8,000. Source: Transportation Research Board and National Research Council,

"Overcoming Barriers to Deployment of Plug-in Electric Vehicles," Washington, DC: The National Academies Press, 2015, at 91.

for deploying charging stations is replicable in other cities without municipal utilities as well.

2015 Charging Station Monthly Energy Usage:  
Northern Colorado



## Lessons Learned

### Engage City Employees Knowledgeable about Traffic Patterns

Accelerator projects should engage city stakeholders in conversations about traffic patterns as early as possible. While there may be a sense of urgency to immediately deploy large numbers of public chargers to mitigate potential concerns over EV range, there is value in conducting a region-wide study to find strategic locations where stations will be highly utilized before installing.

Early in the program, DENC placed a number of chargers on municipally owned land due to the cost savings relative to placing the chargers in retail areas. Because a traffic study was not considered before securing these locations, some of the municipally owned stations do not see maximum utilization. Conducting a traffic study early in the process would likely have resulted in a decision to install these stations at more expensive—but also more heavily trafficked locations that drivers would visit regularly and where they would be more willing to wait for their vehicle to recharge.

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# Workplace Charging

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The existence of workplace charging infrastructure helps promote EV readiness in a community by making EVs a viable option for a larger number of car buyers. DENC has found that there is a link between increased workplace charging access and the number of employees at these organizations that purchase or lease EVs. The more people in a workplace who drive EVs, the more feasible the option appears to others, leading to an ongoing circle of higher EV sales.

DENC works alongside local businesses, advising them on the most appropriate infrastructure options and installation protocols. Employers have different reasons for getting involved with EV adoption and DENC, including local networking

opportunities, positive public relations, and increasing employee retention, so accelerator programs should ensure that each company is recognized for their efforts and commitment to EV adoption.

## Component Aspects

Evidence shows that employees are six times more likely to purchase or lease an EV if they have access to charging at the workplace.<sup>4</sup> In addition, while the majority of charging happens at home, DENC has found that access to workplace charging can be a determining factor for employees who live in multi-unit housing where convenient home charging may be limited. Accelerator community projects can act as a central coordinator to promote EV charging in multiple locations.

Though there are national programs like the U.S. Department of Energy's Workplace Charging Challenge and statewide programs such as the EV

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<sup>4</sup> Department of Energy, Office of Energy Efficiency and Renewable Energy, "Workplace Charging Mid-Program Review: Employees Plug In," December 2015. .

Wired Workplaces effort through the Colorado Energy Office, localized workplace charging programs are important for several reasons. They can facilitate healthy competition among local employers to encourage EV adoption in their workplaces. These programs can host local seminars, webinars, and conferences that encourage businesses to offer charging for their employees. Local companies can also then also receive recognition for their charging efforts, which is particularly important if they are working to establish a marketing presence in the community.

### DENC's Approach

In order to encourage the deployment of workplace charging stations, DENC initiated the northern Colorado Workplace Charging Challenge (WCC) in the first quarter of 2015. A few local businesses were already engaged in the national workplace charging program but expressed a desire to be a part of a local group with networking opportunities focused around workplace charging. DENC launched this effort with fifteen local businesses and recruited five more partners before the end of its first year.

### Recruiting Participants

Companies may have different reasons for participating in a workplace charging initiative, and it is important to understand their motivations in order to recruit them effectively. A large technology firm, for example, may be interested in creating a reputation for itself as a top innovator, while others may be marketing their sustainability efforts. Still, others may use workplace charging as an employee benefit for recruitment and employee retention purposes.

An important initial aspect of DENC's WCC planning process was establishing a goal for the number of workplace charging partners to recruit in the first year. DENC started by focusing on businesses that had already installed charging stations but were not yet actively promoting them, and on businesses that were in final stages of considering installation. This gave DENC a strong base of committed partners with which to promote the program to other local companies. Four of DENC's core stakeholders (described in greater depth later in this report) were among those that joined the WCC at its launch or in the first few months of the program.

As a way to increase the sense of urgency around the challenge, DENC created a co-branded pledge form with the local Clean Cities Coalition and the U.S. Department of Energy. If the participating companies did not yet have charging stations installed, they were asked to commit to installing infrastructure within six months of signing the pledge. Companies also committed to undertaking a communications campaign to encourage their employees to use the stations.

DENC encourages participating employers to offer EV charging for free when possible and advises employers on other fee structures if free charging is not an option. To create consistency for EV drivers DENC advised partners to adopt a regional standard for EV charging cost, which is \$1 per hour for Level 1 and 2, and \$3 per charge for DC fast charge.

Tools exist from the U.S. Department of Energy for employers to survey their workers to determine workforce charging demand. Before launching its program, DENC worked with the Department of Energy to customize this survey for northern Colorado companies, to increase the likelihood of completion. In addition, the 2015 Colorado EV Market Implementation Study from the Colorado Energy Office provides sample survey templates and questions.

### Media Outreach & Press Conferences

To create a sense of urgency, excitement, and community-wide collaboration, DENC launched its WCC with a press conference that immediately preceded a workshop for businesses considering workplace charging. DENC also created media outreach materials that were released to local and national media outlets in the week leading up to the press conference.



## Northern Colorado Workplace Charging Challenge Pledge

This agreement states that \_\_\_\_\_ (Company Name) has joined the Northern Colorado Workplace Charging Challenge on \_\_\_/\_\_\_/\_\_\_ (Date) in an effort to advance the adoption of plug in electric vehicles (PEVs) in the Northern Colorado region.

As a Workplace Charging Challenge partner, \_\_\_\_\_ (Company Name) commits to install charging station(s) available for use by company employees within six months of signing this agreement, and provide the workplace charging representative with a plan that describes the organization's strategy to deploy charging infrastructure within two months of signing this agreement. In order to provide the best possible service to its employees, the participating company also agrees to assess the following before installation:

**Installation location**

- Explore opportunities to install stations at preferential parking locations
- Consider future, additional build-outs and where those could be installed

**Payment strategy**

- Determine if the stations will be free or will need to have a cost
- Explore how this might be part of an employee benefit package

**Charging station equipment**

- Determine appropriate type of charging infrastructure
- Install Level I or Level II charging stations

**Identify Contacts:**

- Identify one primary contact, identify one public relations contact; and provide senior-level commitment to workplace charging

**Promote and Share**

- Connect Workplace Charging representative with one public relations contact
- Explore and establish internal messaging tactic to reach out to employee base
- Publicly announce partnership in the Challenge and a plan for workplace charging within six months of signing the pledge. Highlight new and existing workplace charging installations on an ongoing basis
- Work with DENC to host an employee Ride and Drive, and/or participate in the Leadership Drive program to further promote charging availability
- Work with DENC to publish a blog featuring \_\_\_\_\_ (Company Name) and the planned availability of charging stations
- Report progress and plans to U.S. Department of Energy (DOE) and DENC on an annual basis

Check here if you do not consent to participate in the DOE Workplace Charging Challenge

**Senior Executive Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

**Primary Point of Contact Information**

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

**Public Relations Point of Contact Information**

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

### Engaging Current Partners

DENC makes monthly calls and emails to each participating company to maintain an open channel of communication, check in on their progress, and to see if they need any assistance in meeting their commitments. This ongoing communication creates a high level of engagement with the partners, allowing DENC to utilize their motivation as workplace charging advocates, speakers for workplace charging press events, and other programmatic needs.

### Ongoing Recruitment of Partners

After the WCC's successful launch in early 2015, DENC set a goal of increasing the number of participants from 15 to 20. To achieve this, DENC developed a list of the most likely potential partners based on the number of employees at their workplace, their existing interest, and whether they had an existing sustainability program or similar marketing campaign. DENC staff worked with these companies to sign the WCC pledge. As new partners joined, DENC organized social media, blogs, and newsletter content to recognize their commitment to participating in the challenge publicly.

DENC also established an Ambassador Program comprised of employees from workplace charging partners who are willing to assist DENC with outreach and act as a public face of workplace charging. These ambassadors are typically individuals who are interested in being leaders at their workplaces or with DENC. DENC trains them on effective strategies to help accelerate EV adoption. Ambassadors commit to activities that include advocacy within their company, writing letters to the editor, answering questions from journalists or reaching out to other businesses and organizations to encourage them to offer EV charging. These ambassadors increase the credibility of DENC and the WCC, particularly as many of them are trusted members of the community or associated with well-known and respected businesses.

### Lessons Learned

#### Overcome Objections

Some companies will have objections to participating in the WCC. It is important to anticipate and overcome these objections when possible. For example, national companies that have a local campus generally exhibit the most hesitation due to

internal bureaucracy. There may also be legal hurdles at the national level that might make it more difficult for the local affiliate to get approval from headquarters.

Another objection might include concerns that an employer is favoring some employees over others by providing those who drive electric vehicles with an extra benefit that is not available to drivers of gasoline-powered vehicles. To overcome this argument, DENC supplies the companies with resources to survey employees about workplace charging interest level, so the company will have strong data to counteract this argument if it arises. DENC also encourages employers to connect workplace charging to a broader company strategy such as employee benefits or sustainability goals, which helps to counteract any internal questions that are posed. DENC has found that once workplace charging is launched there is generally very little employee hesitation, but these questions tend to arise among an employee base before or in the early stages of offering workplace charging.

#### Invitation to One of DENC's Workplace Charging Seminars

Another potential apprehension is cost. After working one year to develop an internal workplace charging strategy, the City of Loveland found that providing one day of Level 1 EV charging for a city employee



costs less than providing one cup of coffee. DENC encourages companies to compare the benefits already being provided to employees, with the cost for workplace charging (resources for this can be found on the U.S. Department of Energy Workplace Charging Challenge website). Because of the low cost of electricity, the ongoing costs of providing workplace charging tends to be a very low.

#### Encourage Other DENC Programs as a Gateway

If a company is not able to install workplace charging infrastructure because the up-front investment is too high, DENC suggests they host a workplace Ride and Drive instead, where company employees can have the opportunity to test drive EVs. DENC also refers these companies to the grant programs such as the Charge Ahead grant, to help fund EV charging installations (more information mentioned in the “Policy” section of this report).

Hosting a Ride and Drive enables DENC to begin building a relationship with the company that can lead it to consider other EV programs or better understand the level of employee interest for EVs. If employees buy EVs as a result of the Ride and Drive, it is more likely that the company will install charging stations in the future because of the increase in employee demand.

#### Engage Current Employees

DENC volunteers who work at participating workplace charging partner companies have helped increase the number of employee purchases at their companies. These employees often act as advocates and internal resources for EV adoption. They also have a pivotal role in helping to relay internal feedback from other employees to company executives that can encourage the company to undertake future EV initiatives.

#### Implement Preferred Pricing Program

DENC has seen a high level of EV sales success when combining preferred pricing programs with its workplace initiatives. This is especially effective for workplaces that have had charging stations installed for more than three months due to the already heightened EV awareness among employees. DENC implemented such an initiative as part of its EV Group Buy program starting in 2015. The Group Buy is a

program that offers a pre-negotiated price for EVs and a simple EV purchasing experience.

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# Creating an Ecosystem

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

These stakeholders should form the basis of a steering committee that can support the program by offering ideas, providing demonstration vehicles, making introductions within the community, and monitoring progress. To maximize engagement, stakeholders must be identified, understood and organized in the context of their own organizational goals.

## Component Aspects

One of the first steps in building this ecosystem is establishing a steering committee with representatives from the various groups mentioned above. In addition to giving each stakeholder a clear role on the steering committee, it may also be effective to assign titles or positions based on leadership potential, as this often results in an increased level of motivation and participation.

Through the steering committee, an EV accelerator organization should establish an annual plan with metrics and general goals for each stakeholder. This plan should be broken into quarterly segments to allow progress toward these goals to be tracked and resources to be allocated.

## Engaging the Ecosystem

DENC began by analyzing the entire value chain of an electrified transportation system to determine how the various stakeholders could help drive EV adoption in northern Colorado. After creating the steering committee, it tasked this group with developing an annual plan that outlined goals and timelines, as well as the resources that would be required. Several

technical components of DENC's plan, such as charging infrastructure and marketing, required the creation of task forces comprised of individuals with specific expertise, and these task forces acted as subcommittees to the larger steering committee.

In order to create an effective and motivated committee atmosphere, DENC recruited members with strong organizing personalities and those with backgrounds in engaging their organizations to achieve challenging goals. The committee's structure included bi-weekly, quarterly and industry-specific meetings that fostered a sense of ownership and commitment among committee members. This forum also enabled the partners to propose their own ideas, which often became part of DENC's overall program.

### Stakeholders in the Ecosystem

DENC has identified several categories of stakeholders that are important to have on an EV accelerator community's steering committee.

#### Utilities

Utilities were an early and important DENC stakeholder because of their experience developing charging infrastructure, their role in establishing time-of-use electricity rates and EV incentive programs, and their understanding of how utility rates are impacted as more EVs are placed on the grid. Utilities also have strong relationships with local businesses, often referred to as "utility key accounts," which provides a direct connection for DENC to engage and educate these businesses about EVs. Consumers also respect the utility as an authority on the electric power resource mix, which is a major concern for northern Colorado residents and often impacts EV purchase decisions.

#### Dealerships and OEMs

Dealerships benefit from increased vehicle sales, and accelerated EV adoption provides them with an opportunity to both grow revenue and gain market share. Aside from providing vehicles for Ride and Drive events, dealerships can support the organization's mission by sharing data on current and past EV sales, and can help track the effectiveness of various marketing activities. As dealerships became more engaged they can become active members of the steering committee, host volunteer events,

sponsor EV owner events, sponsor marketing, and other innovative ways to help the program.

OEMs supply vehicles to the dealerships and in many cases determine the monthly incentives dealerships receive for selling EVs. It is consequently very important to have strong partnerships with OEMs which will ensure there is sufficient EV inventory available and will help dealerships understand the incentives they have available from their corresponding OEM to sell EVs.

OEMs can also help with specific marketing and corporate initiatives like workplace Ride and Drives and/or offer special EV pricing for partners that install workplace chargers on their premises. When DENC organized its first Group Buy in 2015, one of DENC's partner OEMs donated a Level 2 charging station to the northern Colorado employer that had the most employee EV purchases through the Group Buy. This was seen as a benefit for the dealerships representing that OEM and also to the OEM because they received marketing exposure. It also benefited local businesses, which had a strong incentive to market and promote the Group Buy to their employees.

#### EV Enthusiasts (EVes)

DENC recognized the importance of integrating existing EV owners and advocates into their efforts very early in the program. EVes have often done substantial independent research in the course of purchasing their own vehicles and can, therefore, be especially persuasive to potential buyers, many times even encouraging their friends and colleagues to purchase EVs. This group has been instrumental to DENC's success in activities like advocating for

charging stations at their workplaces and volunteering at Ride and Drive events. EVEs account for about 85 percent of DENC's Ride and Drive volunteers, and their participation enables DENC to offer a much larger number of test drives than would otherwise be possible because they often require little to no training on the technology. DENC holds a monthly meeting to organize and train new and existing EVEs, and to recognize their support. EVEs can also provide the same type of support offered by program ambassadors, as mentioned above in the Workplace Charging section of this report.

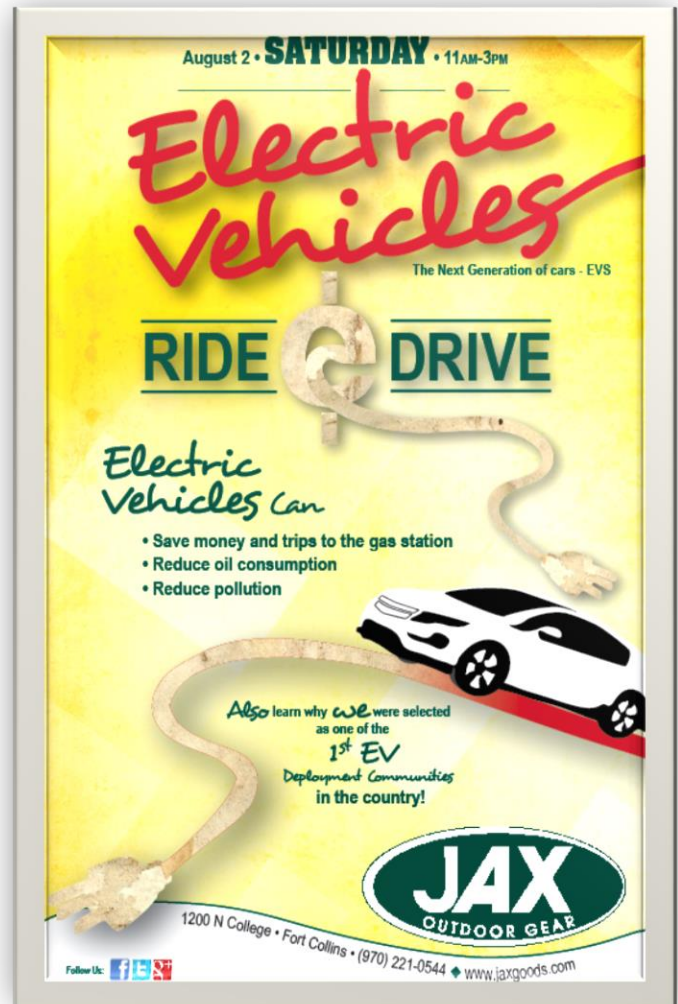
### Cities or Municipalities

DENC works closely with its two partner cities, Fort Collins and Loveland, Colorado. DENC and the city representatives on the steering committee quickly established the importance of bringing together existing local industry-specific expertise. Engaging the city fleet manager, for example, provides visible leadership to private sector businesses by demonstrating the viability of switching to EVs. City engineers also provide valuable insights around charging station installation protocols and help establish a regional consistency for the consumer charging experience. The cities also share best practices around grant writing for EV charging stations with local businesses, and once a grant has been successful, the other entities in the cities are able to use it as a template to increase overall funding for the region.

It is also important to engage mayors and city council leadership, as they can influence city council policy and are prominent advocates for engaging local businesses. DENC also established a relationship with the city manager in Fort Collins, who plays a role similar to the mayor.

### Colorado Energy Office

Engaging with the Colorado Energy Office has given DENC a voice in state policy, influence in the deployment of EV charging infrastructure, and the ability to develop business partnerships outside of northern Colorado. Colorado has an existing Colorado Energy Office that helps develop and promote statewide EV policies and incentives.



Example of Ride and Drive Poster

### Infrastructure Providers

DENC's partnerships with charging infrastructure providers have been important for several reasons, including determining the level of public infrastructure needed to mitigate concerns over battery range, understanding the cost of infrastructure development, and identifying potential funding sources. Infrastructure providers have also provided recommendations for locating strategic charging station installation locations. One charging station manufacturer, for instance, led an initiative to install two DC fast chargers in Fort Collins and Loveland, and collaboratively hosted a public launch event with DENC.

### Institutes of Higher Learning

Educational institutions have also been helpful program partners. Colorado State University (CSU), for example, provides DENC with considerable

analytical and technical support. As a large and distinguished employer in the region, CSU has also utilized DENC workplace programs such as Ride and Drives, extended test drives and workplace charging. CSU also provides much of the volunteer and intern support that plays an increasingly important role in assisting DENC with developing case studies, writing grants and conducting programmatic research.

CSU has established DENC as a central part of its aggressive environmental sustainability goals, and long-term Climate Action Plan, and has thus been a committed partner in the project. As part of this involvement, CSU has undertaken several EV research and development initiatives including engineering programs where students design and build plug-in electric vehicles through the national EcoCar competition. CSU has also established a fleet electrification goal and has already integrated a small fleet of GemCars—low speed, energy efficient street certified vehicles, —several Nissan LEAF EVs for campus use, and a Chevrolet Volt. CSU has also installed more than 18 charging stations on campus—free for students and staff—and has played a central role in educating the community about the benefits of workplace charging.

### Business Community

Local businesses are vital to DENC efforts as they provide the most effective way to reach a large number of people with EV education, Ride and Drives, extended test drives and workplace charging infrastructure. Some initial DENC business supporters included New Belgium Brewing Company, Odell Brewing Company, and Hewlett-Packard, all of whom helped validate the DENC program in its early stages and have continued to do so throughout the program.

DENC's business partners vary in their level of engagement with the program, so DENC invests significant time in ongoing partnership development with each company. When DENC encounters companies that are difficult to solidify partnerships with, it emphasizes the benefits of EV partnerships and programs including:

- Providing a strong employee benefit because EVs save employees money, especially when free workplace charging is offered;
- Creating positive press for the company; and

- Recruiting and retaining staff by demonstrating that the company adopts cutting-edge technologies and embraces environmental sustainability.

## Lessons Learned

### Organizing the Steering Committee

While the initial intention to organize DENC around a yearly plan proved effective, DENC soon learned that it was important to also break this plan down into monthly and quarterly segments to encourage stakeholders to meet milestone deadlines and chart progress toward the overall goal.

DENC also learned that scheduling bi-weekly 'all-hands' meetings helped both committee members and DENC staff execute their commitments. DENC established separate meetings to focus on specific program areas that required expertise and/or a disproportionate time commitment, like charging infrastructure deployment and marketing.

In addition, DENC established a quarterly in-person meeting with stakeholders to track the progress of the various initiatives and to re-align priorities for the approaching quarter when necessary. These meetings are often followed by a networking component because stakeholders see this as a benefit of participating in the meetings.

### Understanding Utility Type before Developing Partnership

There are several types of electrical utilities around the country including investor-owned, municipal, and electricity cooperatives. DENC cities have two municipal utilities that obtain their power from Platte River Power Authority, which also supplies power to several other cities. One benefit DENC has encountered in working with a municipal utility is the ability to directly integrate the utility's expertise into the stakeholder group, which provides the opportunity to link other city services and/or leadership and direction.

### Engaging Industry-Specific Businesses

Perhaps not surprisingly, technology businesses have been the fastest to recognize the benefits of participation in EV programs like Fleet Transition, Ride and Drives, and deploying workplace charging

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

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# Ride and Drives

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A Ride and Drive is a planned test drive event, in which potential consumers can experience multiple EVs at one location and learn about specific vehicles from current owners. These events play an important role in seeding the local market for EV adoption and, ultimately, can increase EV sales. DENC has found that after people get behind the wheel of an EV, they often share their experience with friends and serve as third-party validators for EV adoption. DENC's first-hand experience with consumer engagement reinforces a growing body of national marketing data that shows Ride and Drives are among the most effective methods for selling EVs.

DENC uses four different types of Ride and Drives to promote EV adoption, with each event type targeting a different group of participants:

- Public Ride and Drives in conjunction with major public events like festivals, fairs and community days
- Workplace Ride and Drives hosted by a local employer
- Neighborhood Ride and Drives hosted at an EV owner's home
- Drive Leadership extended test drives for community leaders and business executives.

## Component Aspects

Accelerator projects should develop standard policies and procedures for the identification and execution of Ride and Drive events. It is important to maintain a steady flow of Ride and Drives over time, so the organization should start scheduling these events well in advance. It should set a goal for the number of Ride and Drives it wants to hold each year and then identify upcoming public fairs and festivals, talk with EV Enthusiasts, and meet with local company executives to determine host locations. These should then be ranked from most to least desirable based on test drive participation potential, and the events should be prioritized in that order.

The accelerator community organization should communicate regularly with its dealership partners to make sure they know about upcoming Ride and Drives and secure the number of vehicles that will be needed. It should then follow up a 3-4 days before each event to coordinate on whether the cars will be picked up by program volunteers or delivered by dealership staff. It is often easier for DENC if dealerships to have dealership staff bring them to the event. It is also important to ensure the dealerships have the appropriate license plates on the vehicles before they leave the dealership lot.

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

Volunteers are essential to the success of Ride and Drives and oftentimes come from three main sources: EV Enthusiasts, university students, and dealership staff. Dealership staff can be expected to spend most of their time near their vehicles, enabling the EVEs or university students to staff the sign-in booth or escort guests to vehicles. EVEs should be paired with the vehicles they own whenever possible, as they are in the best position to answer questions about that vehicle model. EVEs should be provided

with message training and a fact sheet about their specific vehicle and EV ownership in general.

### Public Ride and Drives

Public Ride and Drives give prospective EV owners an opportunity to test drive multiple EVs in conjunction with local events, like fairs, festivals, or community days. Event staff are often eager to coordinate these Ride and Drives with the accelerator community, as the opportunity to test drive EVs is seen as contributing to the overall festival or fair experience for the attendees. Some of the most successful Ride and Drives for DENC have been at environment-themed events like Earth Day or sustainability fairs, which attract large numbers of engaged citizens who are already looking for ways to make environmentally friendly lifestyle choices.

Public Ride and Drive events also promote the visibility of the accelerator project to the community at large and provide a unique opportunity for dealerships to gather important information about consumer attitudes and behaviors towards EVs.

Northern Colorado's annual Sustainable Living Fair is a good example of how DENC leveraged a successful partnership between a major festival and a Public Ride and Drive event. More than 10,000 people attend this event every year, and for the last three years, DENC has been chosen to provide EV transportation for the mile-long journey between the parking lot and the fairground. Ride and Drive advertisements are integrated into event materials, and DENC gives presentations to guests on the benefits of EV ownership at two highly visible DENC tents.

### Workplace Ride and Drives

Workplace Ride and Drives provide opportunities for employees of local companies to test drive EVs where they work, in a convenient time such as a lunch break. These events are uniquely impactful because they can offer the organization the chance to talk with company executives and fleet managers about other priorities like installing workplace charging stations and transitioning their fleet to EVs. Dealership staff are also usually eager to participate because these events provide access to captive corporate audiences that they might not be able to



partner with on their own. Employers often treat these events as a way to support employee recruitment and retention, as well as to demonstrate their leadership as an innovative employer.

DENC has found high-tech companies and utility key accounts to be the most receptive to hosting workplace Ride and Drives. If an accelerator organization finds it difficult to partner with companies, EVEs that work at these locations and can be very helpful in making introductions and helping to schedule the events. Workplaces should be encouraged to provide lunch at events, as this incentive offers an opportunity for the organization to give a short educational seminar about EV ownership to everyone attending.

Prior to the Ride and Drive, the organization should recruit a company executive to take an extended test drive (explained in more detail below). Parking the vehicle in front of the office for a few days before the event builds interest and encourages participation in the upcoming Ride and Drive.

Workplace Ride and Drives are easier to market than other types of events because companies already have an effective system in place for connecting with their employees. When necessary, DENC works with individual companies to develop their marketing plans for the events, which can include hanging posters throughout the office and sending direct email advertisements to every staff member.

### Neighborhood Ride and Drives

Neighborhood Ride and Drive events are generally hosted at the home of an EV Enthusiast, enabling a more relaxed and informal event atmosphere. The host is responsible for promoting the event within their network and organizing a fun, neighborhood event by providing refreshments, barbeque, or other elements to attract friends, family and neighbors.

DENC organizes the Ride and Drive aspects of the event by providing the vehicles, volunteers, and staff, as with the other types of Ride and Drives.

These events are very effective due to their small size and intimate atmosphere. Attendees generally stay much longer at these events than at other Ride and Drives and are more likely to test drive all of the vehicles, rather than just a few. To increase the number of attendees the host and DENC work together to send direct mail invitations (an example of which is included above) that also helps build brand identity for the program and the vehicles. Costs for direct mail advertisements vary, but generally a \$200 investment can reach as many as 1,000 people.



**GREETINGS FRIENDS  
AND NEIGHBORS !!**

Interested in learning about and experience driving an electric vehicle? Join us at a neighborhood party and learn about how your neighbors are saving money, reducing harmful tailpipe emissions, and decreasing dependence on oil by driving electric!

**Please join us at**  
1219 Mathews St. (Liz's House)  
MAY 21 - THURSDAY -  
5:30 pm-7:30 pm

**DRIVE  
electric**  
NORTHERN COLORADO

Neighborhood Ride and Drive invitation

***DENC Event Selection Criteria*****Tier One (100+ Ride and Drive participants)**

- > Lead time of 3+ months for planning purposes
- > Built-in audience of 600+
- > Confirmations for event: 150-200 confirmations
- > Pre-established promotion plan with partner organization including but not limited to:
  - Reach of 20,000+ people (public events, or entire employee base for workplace Ride and Drives)
  - Drive Leadership agreement with marketing department and/or executives
  - Direct-to-consumer marketing (mail out, email marketing, announcing at staff meetings, etc.)
  - Promotion begins 3 months prior
- > High profile location
  - Front of building
  - Large visible parking lot
  - Ability to line up cars in plain view of target audience

**Tier Two (50-100 Ride and Drive participants)**

- > Lead-time of 2+ months for planning purposes
- > Built-in audience of 100+
  - Employee base of 200+ (workplace-specific)
- > Confirmations: 50-100
- > Pre-established promotion plan with partner organization including but not limited to:
  - Reach of 5,000+ people
  - Drive Leadership agreement with marketing department and/or executives
  - Direct-to-consumer marketing (mail out, email marketing, etc.)
- > High profile location
  - Front of building
  - Large visible parking lot
  - Ability to line up cars in plain view of target audience

**Tier Three (20-50 Ride and Drive participants)**

- > Lead-time of 3+ weeks for planning purposes
- > Built-in audience of 20-50
- > Pre-established promotion plan with partner organization including but not limited to:
  - Reach of 800-1,000 people
  - Direct-to-consumer marketing (mail out, email marketing, etc.)
- > High profile location
  - Front of building
  - Large visible parking lot
  - Ability to line up cars in plain view of target audience

### Drive Leadership Extended Test Drives

Drive Leadership extended test drives provide local leaders and business executives with an opportunity to experience “owning” an EV for several days. These test drives are an effective way to promote upcoming public, workplace or neighborhood Ride and Drives, and to turn trusted community leaders into third-party validators of the technology.

### DENC’s Approach

DENC has found that the number of test drive participants that indicate they are “likely” or “very likely” to purchase an EV increases by 17 percent after test driving an EV. Since 85 percent of DENC test drive participants have never driven an EV before visiting a Ride and Drive, these experiences present unique opportunities for DENC to shape general impressions about EV technology.

### Organizing and Scheduling a Standard Ride and Drive

DENC has developed a detailed process for identifying and scheduling events. Each month, DENC staff compiles a list of fairs, festivals and community days occurring in northern Colorado and researches potential workplace and neighborhood events. These opportunities are then ranked in three tiers based on which events will result in the largest number of potential test drives (event selection criteria included at the left). This prioritization is important, given DENC’s limited time and resources.

DENC’s goal is to hold roughly 18 Ride and Drive events per year, which includes five Tier 1 events with 100-200 expected test drives each. These large engagements are then used to benchmark attendance goals for Tier 2 and Tier 3 events.

### Planning and Marketing

DENC relies on co-marketing agreements with partners to increase Ride and Drive attendance. These arrangements amplify DENC’s reach beyond its limited advertising budget. DENC generally engages these marketing partners before an event date is finalized in order to confirm their ability to assist with proportion.

### Others

Marketing efforts for Drive Leadership events or others are less intensive than for standard Ride and

Drive events but generally require more press and media promotion to be effective. When the mayor of Fort Collins completed an extended EV test drive through DENC’s Drive Leadership Initiative, for example, he wrote an article in the local business magazine to describe his experience. Similarly, the Fort Collins city manager sent an email to 2,000 city employees about his experience, which included a short video. Non-test-drives such as educational tabling events at public festivals will typically piggyback on the marketing campaigns of those events.

### Event Execution Process

#### Ride and Drives

DENC works closely with the local dealerships when planning and executing Ride and Drives, and sends each dealership partner a monthly email to remind them of upcoming events and the number of EVs that will be required. Dealerships are generally eager to provide these vehicles because of the marketing value that they receive from participating in the events.

Dealerships that consistently provide staff to Ride and Drive events convert event leads into sales at a higher rate than dealerships that participate less frequently. Nissan and BMW, for example, have even integrated DENC events into their overall marketing efforts, and Loveland’s BMW dealership, Co’s BMW, estimated that nearly 30 percent of its 2015 i3 sales resulted from leads generated through participation in DENC Ride and Drive events.

#### Day-of Event Procedure

Trained volunteers are critical to the success of Ride and Drives, and DENC uses two approaches for training them. The first is an annual volunteer orientation dinner, where DENC reviews the important aspects of Ride and Drives. The second of training is provided to new volunteers during a pre-event orientation one hour before the event. In all cases, DENC provides fact sheets to the volunteers about the vehicles to prepare them to answer questions from attendees.

A streamlined, digital sign-in process is important for Ride and Drives because it helps create a professional

first impression, is an easy process for volunteers to manage, and takes less time for attendees to register, which maximizes the number of test drives. There are several pieces of information that DENC collects from Ride and Drive participants on the sign-in form including their name, e-mail address, phone number, driver's license number, insurance carrier, and signature on a waiver form. DENC has also created a ten question survey that drivers are asked to complete before and after the test drive to measure changes in their perceptions of EVs. To streamline the sign-in process, DENC uses an application called "iCapture," which is a digital survey software that enables information to be entered and compiled without a wireless Internet connection.

## Lessons Learned

### Participant Follow-Up

Ride and Drives are most effective in promoting EV adoption when there is a systematic process in place to follow up with the participants, as these events are important lead generators for potential customers. DENC has developed a way to follow up with attendees while protecting their privacy and is currently developing a system to track the sales that result from these leads. This system should ensure that attendees provide enough information about themselves at the events. For example, nearly 20 percent of DENC Ride and Drive participants do not provide email addresses unless they are required to do so.

### Engage Dealerships

Because DENC has a small staff, time and resources are often limited. DENC has learned to effectively leverage the efforts of dealerships who are eager to support Ride and Drives. This has saved DENC a substantial amount of time in recruiting additional volunteers and transporting vehicles to and from events.

### Plan for Increased Event Demand

As DENC has become more established in the community, there has been an increased demand to host Ride and Drive events. This has the potential to increase pressure on an accelerator community's limited resources, particularly if staff time needs to be divided between administering multiple events. Priority should, therefore, be given to Ride and Drive events that maximize the number of test drives, even

if this sometimes means declining opportunities to organize more intimate gatherings. DENC's event selection criteria, included in this report on page 25, will help organizations select high attendance events.

### Optimize Host Locations

DENC has found that events at locations like shopping centers and health food stores are not as effective as other locations such as festivals, schools, employers, or neighborhood events. While there are generally significant built-in audiences at shopping centers, these consumers are not aware of the test drive before arriving at the location and as a result, are less likely to take the time to test drive when they had planned alternative activities for their time. DENC's most successful events are in a location where attendees are either aware of the Ride and Drive before arriving at the event, are in a position to spend time on an activity they had not planned, or need to test drive the EVs as part of a shuttle system for an event.

One of DENC's most successful annual events features an EV test drive as the shuttle system to a local sustainability festival from the parking lot. Attendees are overwhelmingly excited about driving themselves in a private shuttle to the festival, and from DENC's perspective, this provides a captive audience that already demonstrates an interest in EVs due to their attendance at an environmental sustainability festival. DENC has since replicated this shuttle concept for Comic-Con festivals and technology festivals.

### Streamline Sign-in Processes

DENC has learned that an integrated digital sign-in process is much more efficient, and registration tables are now equipped with three tablet devices that let participants complete the entire process on one, seamless form. This process now takes attendees less than five minutes to complete, and has contributed to significantly higher test drive numbers versus DENC's prior paper-based system

### Understand Local Regulations

DENC learned about local and state regulations regarding the use of dealership vehicles in order to be successful with its events. For example, Colorado dealership license plates, those used on EVs supplied by DENC's dealership partners, are not valid on

Sundays, so Ride and Drive events are generally restricted on these days.

#### Enforce PMAs, or Vehicle Marketing Districts

When coordinating with multiple cities, it is important to be aware of the marketing boundaries, or Primary Marketing Areas (PMAs) that are assigned to each dealership. PMAs are geographic boundaries where each OEM's dealerships can legally market their vehicles. They are designed to minimize conflict between dealerships regarding marketing territories. Early in the program DENC learned each OEM's PMAs in order to minimize potential conflict with other area dealerships. Once DENC understood the specific PMA boundaries, the organization became very careful not to invite dealerships outside its PMA to attend events.

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# Communications and Outreach

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A consistent communications strategy is important for accelerator community organizations to achieve public awareness. Salient messages that show how EVs save money, are fun to drive, reduce oil dependence, and lessen environmental impacts should be amplified and reflected in all marketing materials and activities. Accelerator community organizations should actively seek out new opportunities to project positive themes about EV use and ownership.

## Component Aspects

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

Outreach education and marketing should utilize a wide range of media to reach as many consumers as possible. These can include events like Ride and Drives, earned and paid radio, print, television, and online advertising, blogs, websites, newsletters, direct mail, and social media. The organization should work with its partners and stakeholders to maximize these efforts. Cities, utilities, OEMs, and dealerships, for example, have large distribution lists that can be very helpful in connecting with the broader community.

In addition to establishing an internally consistent marketing strategy, accelerator communities should also develop a system for organizing its partners. This could include sending a monthly email to these stakeholders and choosing quarterly themes around which they can coordinate their marketing efforts.

The organization should also develop ways to systematically track outreach, education, and

marketing data and metrics to measure the scale and effectiveness of its marketing campaigns on an individual and aggregate level. This will help generate data that can be used to convince potential partners to join or existing partners to become more engaged in the mission.

## DENC's Approach

### Develop Consistent Messages

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

### Develop Program-Specific Outreach Channels

In order to increase brand recognition, DENC has developed a system for community and stakeholder outreach that includes a bi-weekly public newsletter, a regularly updated blog, and daily social media postings. The newsletter and blog posts are sent on alternating weeks and include information on dealership pricing, upcoming events, EV news and information on recent business partnerships and engagements.



An Example of a DENC Quarterly Campaign

This is a useful way for DENC to engage its growing number of Ride and Drive participants, and to

reinforce its core messages, among other priorities. It also provides opportunities to give recognition to business partners, volunteers and other stakeholders.

DENC has found that different media connect well with different demographics. For example, the demographic of DENC's Facebook followers is largely males ages 25-50, while blog followers tend to be more diverse. Analyzing the audience for each medium has enabled DENC to extend and target its reach within the community.

### Develop Program Components

DENC began with fleet education and advocacy, workplace education, Ride and Drive events, and broad consumer education. DENC developed additional program elements like the Workplace Charging Challenge and the Drive Leadership extended test drives in the second year to connect with additional audiences. DENC also has created one-page outreach materials and web pages for each program element to explain these initiatives and educate the public and potential partners.

### Work with Partners

DENC has focused on engaging and maintaining a wide array of program partners. They are invited to monthly meetings, are given opportunities for local networking, and their EV adoption accomplishments are highlighted in the community. These partners help DENC amplify its message, and the organization regularly engages them about their priorities and how to best coordinate marketing plans when applicable.

Radio stations, for example, will often provide DENC with discounts, as it is a non-profit organization working closely with some of the station's biggest customers such as car dealerships. Dealerships budgets can also be leveraged to promote Ride and Drive events. While DENC is the prime promotor for the event, the extra mention in dealership radio spots helps reach more potential participants.

DENC's partners also send out direct mail on its behalf. The City of Loveland, for example, sent out a brochure highlighting the organization to 36,000 people, while a local sanitation company sent out a DENC video to their list of 40,000 customers.

DENC works with co-marketers whenever possible. When DENC hosted an event with the Fort Collins Downtown Business Association (DBA), for example, the DBA invited clients, customers, and community members to the event by releasing a press release and promoting through its website and social media. The EV Enthusiasts also write letters to the editor in local papers promoting events and other positive EV messages.

One way that DENC encourages its partners to become more committed to the program is to make sure they are recognized for their EV efforts. DENC has also found that the more its partners are recognized, the more other organizations wanted to participate.

#### Communicate with Core Partners

DENC regularly communicates with partners and stakeholders in order to maximize its effectiveness. Because many of these groups are large organizations with limited time, DENC condenses all of its program updates and requests into a single monthly email. These updates are graphically rich and can include sample social media posts as well as information on any quarterly campaigns DENC might be organizing.

#### Quarterly Campaigns

In the third year of the program DENC began narrowing its outreach and education program to focus on one EV education topic per quarter. This was an effort to focus partner and stakeholder energies, as partners found it more effective to collectively promote one message over the course of several months, through as many channels as possible. Once a partner agrees to participate in a quarterly campaign, DENC obtains a written commitment of their activities and follows up regularly to check progress.

DENC creates a custom toolkit to support each quarterly campaign because specific messaging and collateral is crucial for success. This toolkit includes visual aids like posters and digital image files, sample social media posts, sample email and newsletter content and sample letters to the editor.

#### Track Outreach, Education, and Marketing

DENC has developed a system to track the effectiveness of its outreach, education and

marketing initiatives on both an individual and aggregate levels. DENC tracks the number of ads and direct mail pieces that have been purchased and matches these against the number of people who attend Ride and Drives and the number of EVs that are ultimately purchased or leased in the region. DENC also has a question on its consumer perception surveys to identify where attendees learned about the event. This tracking enables DENC to understand which marketing programs are working and which are not, allowing it to better deploy its limited resources.

#### Lessons Learned

##### Understand the Audience and Tailor Messaging

Depending on the demographic makeup of an event, DENC will tailor the messaging for how EVs benefit the attendees. For example, some audiences may connect more with the message that EVs reduce U.S. dependence on oil and enhance national security. In contrast, for Earth Day events or sustainability festivals, DENC emphasizes the environmental benefits of EVs instead.



An Example Social Media Post for Partner Outreach

DENC provides its partners with message training including hand-outs so that they can effectively market DENC activities to multiple audiences. When discussing the proliferation of charging stations, for example, partners are trained to talk less about battery range and perceived range anxiety, and more about how EV drivers are never farther than six miles away from a charging station in northern Colorado.



**Collateral and Educational Materials are Important**

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

**HOW CAN INDIVIDUALS GET INVOLVED?**



- ▣ Find out how much you can save driving electric by visiting [DriveElectricNoco.Org/Drive-Electric-Cost-Comparison](http://DriveElectricNoco.Org/Drive-Electric-Cost-Comparison).
- ▣ Visit a DENC Ride and Drive event; more details at [DriveElectricNoco.org/Upcoming-Events](http://DriveElectricNoco.org/Upcoming-Events).
- ▣ Volunteer with the DENC team.
- ▣ Spread the word—find DENC on Facebook, Twitter, and LinkedIn.

**HOW CAN BUSINESSES GET INVOLVED?**

- ▣ Host a Ride and Drive event at your workplace for your colleagues and employees.
- ▣ Join the Northern Colorado Workplace Charging Challenge, in which dozens of companies across Northern Colorado are offering EV charging at the workplace.
- ▣ Participate in Drive Leadership, an extended test drive experience for community leaders.
- ▣ Share your experience through your company's Facebook, Twitter, and LinkedIn.
- ▣ Have another idea? Give us a call so we can find an EV event that works for you.

**CONTACT DENC**

DriveElectricNoco.org  
[info@driveelectricnoco.org](mailto:info@driveelectricnoco.org) or (970) 987-3055.

 @DriveElectricNoCo  
 [facebook.com/DriveElectricNoCo](https://www.facebook.com/DriveElectricNoCo)

**WHERE DO PEV DRIVERS CHARGE?**

Studies show that as much as 90% of charging takes place at home or at work. However, with more than 24 chargers in the region and even more planned, Northern Coloradoans are never more than 6 miles from a public charging station, meeting and exceeding the average EV owner's charging needs.

Below is a map of the region that shows the increasing number of chargers available



**DENC CORE PARTNERS AND SUPPORTERS**



**PARTICIPATING DEALERSHIPS**



AN INITIATIVE OF THE  Electrification Coalition

DENC's Program Brochure

**Utilize EV Enthusiasts (EVEs) Effectively**

EVEs are great assets but sometimes know so much about the vehicles that they focus too heavily on technical aspects rather than messages designed to persuade potential customers to drive electric. DENC has learned to provide EVEs with training on its four main messages, listed above under "Develop Consistent Messages," to optimize their effectiveness.

# Engaging Dealerships

EV customers at dealerships often report lower levels of satisfaction with their salespeople than those purchasing conventional vehicles. One reason for this is that EVs are a new product for many dealerships, and their salespeople may not yet be knowledgeable about them. It is also possible that the salesperson is not as motivated to sell EVs, as the vehicles may have lower gross margins and require less ongoing maintenance—areas in which dealerships have traditionally made most of their profits.

DENC offers EV sales training for dealership staff and provides educational materials to customers on site. Dealerships are also the primary source of vehicles for Ride and Drive events, where potential consumers can test drive these vehicles in an EV-focused environment.

## Component Aspects

EV accelerator organizations must establish strong

**LET'S CHARGE OUR COMMUNITY!**

**WHY PLUG-IN ELECTRIC VEHICLES?**  
Today, oil holds a 92% share of U.S. transportation fuel. This heavy dependence on a globally-traded commodity exposes the country to volatile prices and the risk of economic instability, in addition to national security risks.

**ELECTRICIFYING OUR LIGHT-DUTY AND PASSENGER VEHICLE TRANSPORTATION WILL:**

- Save consumers and businesses money.
- Strengthen U.S. energy security.
- Reduce our exposure to volatile energy prices.
- Increase transportation sector fuel diversity.
- Decrease vehicle emissions.

**ECONOMIC BENEFITS**  
Driving electric can save individuals, families, and businesses thousands of dollars every year. With up to \$13,000 in state and federal tax credits available, buying an electric vehicle (EV) is a smart financial bet. Using electricity to power an EV typically costs 70% less than fuel for a gas-powered vehicle. In addition, EVs have substantially lower maintenance costs than gas-powered vehicles.

**FIVE YEAR TOTAL COST OF OWNERSHIP**  
Below shows the economic savings of owning an EV over five years, including fuel and its related savings, and tax credits.

Vehicle	Five Year Total Cost of Ownership
BMW i	\$35,618
Chery Volt	\$25,407
Ford C-Max Energi	\$29,456
Ford Focus Electric	\$19,312
Ford Fusion Energi	\$11,214
Nissan LEAF	\$19,343
Nissan LEAF S	\$19,045
Tesla Model S	\$59,168
Ford F-150	\$39,193
Honda Accord	\$29,286
Subaru Forester	\$35,095

**ABOUT DENC**  
Drive Electric Northern Colorado (DENC) is a first-of-its-kind, community-wide initiative designed to achieve widespread deployment of plug-in electric vehicles (PEVs) in the Northern Colorado region. By developing innovative public-private partnerships, a comprehensive electric vehicle ecosystem, and most importantly, strong community participation and involvement, DENC is supporting widespread PEV ownership for individuals, families, businesses, and commercial vehicle fleets in Northern Colorado. DENC is a partnership of the Electric In. Our In.™ C & G (C) LLC, the City of Loveland, and Colorado State University.

**ENVIRONMENTAL AND PUBLIC HEALTH BENEFITS**  
Plug-in EVs can help improve air quality in Northern Colorado because they have zero (or very limited) harmful tailpipe emissions—carbon monoxide, sulfur dioxide, and nitrogen oxides. EVs will get cleaner over time, as electricity continues to come from more renewable resources (solar, wind, etc.).

**OIL DEPENDENCE AND ENERGY SECURITY**  
Each day, the U.S. consumes approximately 19 million barrels of oil to power its cars, trucks, ships, and aircraft. Consumers and businesses are at risk when prices jump and change, with negative consequences that affect spending patterns and spread through the economy. Oil is priced globally, supply originates from many unstable countries with whom we rarely share interests or values, and the market is manipulated by a cartel. OPEC, U.S. oil dependence can therefore also undermine foreign policy goals and sometimes strain defense resources.

**BREAKDOWN OF OIL USAGE IN THE U.S.**

Category	Percentage
Transportation	24%
Electricity	1%
Manufacturing	2%
Buildings	71%

Example of Materials for Dealerships

relationships with regional dealerships to be successful. The general manager or owner of a dealership is the most effective first point of contact, as this person will have direct authority over partnership development and will best understand the benefits of new partnerships.

While most OEMs require dealership staff to have a basic level of training about EVs in order to sell the

feedback on the vehicles and build relationships with potential customers.

Vehicle Model	Type	MSRP-2014 Models-As low as**	Federal Credit	Estimated State Credit*	Estimated Cost After Credits
Mitsubishi i-MiEV	BEV	\$22,995	\$7,500	<b>\$2,479</b>	<b>\$13,016</b>
Nissan LEAF	BEV	\$28,980	\$7,500	<b>\$5,155</b>	<b>\$16,325</b>
Ford Focus Electric	PHEV	\$29,170	\$7,500	<b>\$4,984</b>	<b>\$16,686</b>
Ford C-max Energi	PHEV	\$24,170	\$4,007	<b>\$1,532</b>	<b>\$18,631</b>
Ford Fusion Energi	PHEV	\$26,270	\$4,007	<b>\$1,692</b>	<b>\$20,571</b>
Chevy Volt	PHEV	\$34,185	\$7,500	<b>\$4,270</b>	<b>\$22,415</b>
Toyota Prius Plug in	PHEV	\$29,990	\$2,500	<b>\$1,210</b>	<b>\$26,280</b>
BMW i3	BEV	\$41,350	\$7,500	<b>\$6,000</b>	<b>\$27,850</b>
Tesla Model S	BEV	\$69,000	\$7,500	<b>\$6,000</b>	<b>\$55,500</b>
Cadillac ELR	PHEV	\$75,000	\$7,500	<b>\$6,000</b>	<b>\$61,500</b>

Sample overview of tax benefits for Colorado EV purchases: an educational resource provided to dealerships by DENC to increase effectiveness at EV sales.

vehicles, salespeople will probably have limited knowledge about the EV ownership experience beyond vehicle functionality. Accelerator programs can offer valuable training to help sales staff fill this knowledge gap by providing them with information about topics like historical consumer charging patterns, the location of regional charging infrastructure and available tax incentives. Dealerships should also be encouraged to have their staff participate in DENC Ride and Drives, as this is a uniquely effective way for them to be trained on EVs while interacting with current owners and developing sales leads. Providing sales benefit to the dealerships through Ride and Drive leads and Group Buy sales programs is the most effective way to continue building the partnerships, as dealerships will see the strong financial benefit of engaging with a program like DENC.

Ride and Drives can also be useful branding opportunities for dealerships and can provide a forum to introduce their vehicles and expand their customer base. Accelerator projects should explain these benefits to the OEMs and encourage them to incentivize their dealerships and salespeople to participate.

Regular meetings should be held with dealerships to enlist their advice and expertise in both planning and executing the program. This will keep the dealerships informed and involved and will enhance their level of commitment to the effort. Dealership representatives should also be invited to monthly EV Enthusiast meetings to give them an opportunity to solicit

### DENC's Approach Recruiting Dealerships

DENC has found that an effective way to engage dealerships is to explain how the organization helps increase EV sales. By enabling dealerships to understand the financial benefits of increasing EV sales, DENC is able to establish partnerships with a wide variety of dealerships so that consumers have a diverse selection of EV models to choose from in their area. Partnerships have also been developed with dealerships that do not stock EVs so that these relationships are in place when the vehicles eventually arrive. Some partnerships move faster than others, so DENC promotes the successes of dealerships already in the program to encourage others to participate.

If a dealership's OEM has not already required it to have charging infrastructure as a precondition for selling EVs, DENC will encourage the dealership to install a station as a means to regularly interact with EV owners about their cars and to take a leadership role in the community. DENC also leverages dealerships for introductions to local business leaders and reciprocates where possible by inviting dealerships to stakeholder meetings.



Invitation to Workplace Charging Seminar

### Why Do Dealerships Get Involved?

Most dealerships are excited to partner with DENC because the program brings sales leads from its events and other promotional tactics, and potential EV buyers are often first-time customers. Brand and dealership loyalty is very important in the automobile industry, so getting new buyers in the door is crucial to the business model.<sup>5</sup>

Dealerships who partner with DENC can also provide input on the program's initiatives like Ride and Drives, policy and incentive proposals, and public infrastructure strategies. They also receive positive public relations from their involvement, as DENC aggressively promotes its initiatives and events over both social media and traditional media like radio and television. DENC also publicizes the latest OEM and dealership incentives and price changes over these channels on a monthly basis.

<sup>5</sup> Source: Source: IHS Global Research, Country and Industry Forecasting "IHS Automotive Analyses Loyalty Trends in US Market," The National Academies Press,

### DENC Provides Collateral to the Dealerships to Increase Sales

EVs are still a relatively small portion of inventory at most dealerships, so salespeople are often focused on selling non-EV models. The more EVs a dealership sells, the more inventory space will be allocated to them, and the higher priority staff will place on selling them.

One way that DENC is helping to drive this circle is by creating materials about EVs the dealerships can provide to customers. DENC has developed several pieces of collateral for this purpose, including information on EV tax credits, maps of regional charging stations, information about EV Enthusiast groups and general DENC program brochures. Information on tax credits is especially important because dealerships are often hesitant to provide tax details themselves for liability reasons, and a third party provides an easy way to give this data to potential customers. Because these materials have the DENC brand and logo, they also provide outside validation of the dealer's interaction with customers.

### Dealership Assistance with Ride and Drives

Dealership participation is critical to the success of Ride and Drives, because they provide demonstration vehicles and often provide sales staff to act as co-pilots for the test drives. It is typically easy for dealerships to provide vehicles, as most already have a system to facilitate test drives that include insurance and license plates for test drives.

### Dealership Assistance in Marketing

Dealerships also provide assistance with marketing, primarily through co-branding opportunities at DENC's Ride and Drive events featuring their vehicles. Dealerships may also be title sponsors and third-party validators at specific events where DENC may not have a pre-existing connection.

One of the strongest examples of this collaboration has been the donation of a co-branded EV to DENC by a local dealership. This vehicle is used for extended test drives and business meetings, displayed at high-traffic points around northern

2014.  
<http://www.ihsglobalinsight.com/SDA/SDADetail23311.htm>

Colorado and showcased at Ride and Drive events. It has become a recognized billboard for both DENC and the dealership throughout the region.

### Dealerships and the Local Business Community

Dealerships can provide introductions to members of the local business community, as several dealerships have fleet programs that target large employers. These connections have helped DENC prioritize which companies to target for workplace Ride and Drives and potential charging installations.

### Dealerships and Workplace Charging

Dealerships can take a leadership role by offering workplace charging at their own locations. This encourages employees to buy EVs themselves and can make the dealership a regular stop for commuters. Many OEMs require that dealerships install charging stations on premises before they begin selling EVs, so in these cases, the infrastructure is already available. Besides creating excellent public relations, this can be a way for dealerships to demonstrate their interest in and commitment to EVs.

### Dealerships and Creative Marketing

DENC has earned a high level of confidence and trust from OEMs and dealerships regarding program's impact on brand marketing and sales. Consequently, DENC has had the opportunity to work with these groups on several creative marketing campaigns to test the effectiveness of various messages and tactics. One example was the 2015 Group Buy initiative, in which DENC worked with Nissan North America and the local Nissan dealership to pre-negotiate a price for the LEAF EV.

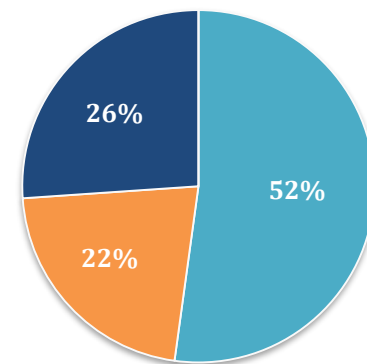
DENC took the lead in marketing the LEAF to the general public at a price that reflected all of the available tax credits and OEM/dealership incentives. This tactic was very effective at driving sales of not only the LEAF, but of other EV models, and resulted in EV sales eight times higher than normal EV sales in the region during the program. The success of the LEAF Group Buy attracted the interest of other dealerships, and BMW also launched a Group Buy for the i3 shortly after Nissan's program.

## Challenges

### Inventory Levels and the OEMs

In order to increase EV adoption in an area, local dealerships have to carry a sufficient number and variety of vehicles. Dealerships only have limited space on their lots, and because they operate in a volume-based, low-margin business, the cars that sell most quickly are the ones that occupy the largest portion of that space.

■ Excellent ■ Good ■ Average ■ Negative



**74% of participants in the DENC Group Buy rated their experience with the dealership as "Excellent" or "Good." No respondents rated a "Negative" experience.**

OEMs are responsible for allocating EV inventory to various dealerships across the country, and DENC has established relationships with these OEMs to ensure that northern Colorado is a priority for receiving this inventory. This kind of advocacy is necessary because OEMs are required to sell a minimum number of EVs in states like California that have approved a Zero Emission Vehicle (ZEV) mandate. Colorado does not have a ZEV mandate, so without advocacy like DENC's Colorado would not normally be among the first states to receive EV inventory.

The OEMs can also provide incentives for dealerships to sell or donate vehicles. They can do this directly through cash back or financing offers, or by creating incentives that make it economical for dealerships to provide demonstration vehicles to organizations like DENC. This latter option is important, as a vehicle's value depreciates each time it is used at a Ride and

Drive, thus disincentivizing dealerships to loan vehicles to DENC for EV Ride and Drives and other test drive events.

### Long-Term Profitability of EVs

One potential concern that could arise for a program like DENC is that long-term margins for dealerships may be lower for EVs than for traditional internal combustion engine (ICE) vehicles. Dealerships have traditionally made the vast majority of their income from parts and servicing, and EVs do not need the same level of ongoing maintenance as conventional vehicles because they have fewer moving parts. Though DENC has not yet seen this emerge as a deterrent, organizations should stay vigilant to ensure the reliance on parts and servicing sales do not become a reason for dealerships to forego EV sales. DENC has found that programs such as the Group Buy, which provide a strong upfront financial benefit to the dealership, will minimize concerns related to long-term profitability.

### Keeping up with Price Changes

Prices, OEM incentives, and available deals can change on a monthly basis for EVs, as they do for all vehicles. This can be especially confusing because while the manufacturer's suggested retail price (MSRP) may stay roughly the same, changes in financing costs and other incentives can have a big impact on the overall price consumers pay for the vehicle. DENC holds monthly meetings with each local dealership in order to get the latest information on deals and inventory, and then promotes this pricing through the website and social media. While dealerships are generally forthcoming with this information, they are often inconsistent about providing it without reminders from DENC.

### Obtaining Data

DENC must take a proactive role in obtaining other kinds of regular information, like sales data, from dealerships. As EVs often only account for a small portion of dealer inventory, managers may not make providing this data a high priority. In response, DENC is developing a simple online mechanism where dealerships can provide these updates effortlessly.

DENC is also working to establish a system with OEMs to improve the transfer of information about the various EV sales strategies they are employing

throughout the country, and which ones are effective. This is information that can be leveraged in northern Colorado and in future accelerator communities to increase sales.

### Lessons Learned

#### Enabling Dealership Branding at Events

DENC was initially hesitant to allow dealerships to showcase their branding at Ride and Drives because of concerns that DENC would not appear impartial. It was quickly realized, however, that allowing sales staff to display signs and hand out collateral at these events does not compromise DENC's neutrality and provides dealerships with a feeling that these events are valuable. DENC has continued to evaluate the best ways to help motivate dealerships to participate in Ride and Drives while retaining its vendor-agnostic mission.

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# Conclusion

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The EV Accelerator Community approach to EV adoption addresses the understanding that in order to make EV adoption ubiquitous, EVs must first be deployed in large numbers in select geographic areas. Northern Colorado was the first Accelerator Community of the Electrification Coalition, and the program saw immense success. The region now has EV sales consistently three times higher than the U.S. national average, with many additional long-term benefits. The DENC model has also addressed many of the challenges that are still experienced in other cities and regions across the U.S. regarding the sale of EVs, such as how to create motivated EV sales staff at dealerships.

By merging all components necessary for an EV ecosystem including local policy, charging infrastructure, consumer education, public-

private partnerships, and others, DENC has created a model that can be replicated and scaled to other cities across the U.S. and internationally that are seeking to accelerate EV adoption.

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# Appendix



## Case Study: Municipal Employee Education City of Loveland, Colorado

As a core partner of DENC, the City of Loveland developed a year-long educational program to help city employees learn about and experience electric vehicles (EVs). In an effort to continue making DENC a replicable model for other communities, Loveland has compiled the following review of their employee education efforts.

For the City of Loveland, EVs are just one of the many ways we can be proactive, progressive, and innovative. This action has made the city a symbol of innovation for cities across North America. Loveland is proud to be a part of DENC, a partnership that continues to improve and influence the Loveland community.

In order for the City of Loveland to enhance its partnership in DENC, it is essential that the city offer opportunities for city staff to get involved with EV adoption. A primary consideration during the planning process of this dynamic effort was to consider the value of staff's time, prioritizing convenience and making the experience meaningful and impactful. Overall, this initiative involved multiple components that have helped create a successful and evolving employee engagement strategy as described below.

### Ride-and-Drive Events

Throughout 2015, the City of Loveland organized several opportunities for city staff and residents to get behind the wheel of an EV. Hands-on experience with an EV is an important step in learning about the technology. Moreover, DENC's consumer perception research indicates that completing a test drive increases consumer consideration to purchase an EV.



In Loveland, getting behind the wheel has proven to be a valuable teaching tool that has led to increased EV adoption within our community and the City of Loveland workplace.

The marketing, outreach, and events team at the City of Loveland has organized Ride and Drives at each public and internal event where it was possible. Using the event selection criteria developed by DENC, the city assessed several factors to determine which events would be suitable for a Ride and Drive. These factors included anticipated attendance, projected target audience, estimated community involvement, proximity to a parking lot or private roadway to park vehicles, overall location, integration in relative existing events, as well as several other factors.

The city has hosted Ride and Drives at events including their annual Business Appreciation Breakfast, annual Earth Day Festival, annual Passport to Water and Power Open House, a local business grand opening, and many more.

#### Employee 10,000 Mile Challenge

In 2012 the City of Loveland began adding EVs to its fleet for a variety of applications. Currently, there are two Nissan LEAFs used as employee administrative pool cars. In an effort to continue educating employees about EVs, in 2015 the City instituted a challenge to achieve 10,000 miles driven in each of the Nissan LEAF pool cars. The challenge sets out to encourage employees to choose an EV before choosing an internal combustion engine vehicle. As a result, we saw increased EV usage that has tallied more than 2,000 additional miles driven in the first few months of the challenge.

To date, the total number of miles driven in the EV pool cars is 16,497 (9,948 miles in one LEAF and 6,549 miles driven in the other). The cost of driving EV pool cars can be estimated at just \$395.93 spent in fuel costs for the lifetime of the vehicles or .02 cents per mile versus 14.6 cents per mile for a gasoline-powered vehicle that achieves fuel economy of 24 miles per gallon (at \$3.50 per gallon). Using the current mileage total of the EV pool cars, Loveland is happy to report that we have saved more than \$2,078.60 in fuel costs by choosing to drive electric.

#### EV Ambassadors

In 2015, Loveland selected 38 city employees from a variety of departments including Water and Power, the City Manager's Office, Public Works, Parks and Recreation, and the Library to fulfill the role of an EV ambassador. The ambassadors were selected based on a list that was created from our outlook calendar, which is the mechanism we use to "check out" the EVs. We have the ability to know who, where and how the vehicles were used and the destination of each vehicle. EV ambassadors are trained to be a resource for city employees, offering tips and suggestions on how to reserve and operate EV pool cars. Ambassadors were chosen for their influence and interest in using the EV pool cars.

Once selected, ambassadors received an orientation letter summarizing what it means to be an EV ambassador at the city and their role. The ambassadors also receive a sticker to put on their office door or cubicle to notify other employees that they were available to answer questions about EVs. These ambassadors were not only able to help extend the knowledge of EVs throughout the city employee-base, but were also empowered as individuals within the city to become a leader with the DENC initiative. We have used the ambassador list several times to communicate messages such as adding EV charging station activation cards to the key chains once accounts were created. Therefore, people would know that they could use these when they are traveling to other cities with charging stations. Also, it is a great way to get the "buzz" going in the office. Once the stickers were applied to ambassadors' office windows or cube walls, others that didn't have the sticker were asking how they could get one!

#### Drive Electric Challenge

The primary goal of this marketing effort was to provide city employees with an opportunity to learn about electric vehicles, encourage staff to use the plug-in fleet vehicles and attend a Ride and Drive or lunch-and-learn.

During this nine week outreach campaign, Loveland Water and Power (LWP) sent weekly e-mails to City of Loveland employees which contained different promotional material and educational opportunities. Throughout the weekly emails there were several

ways in which employees chose to participate and earn entries into a variety of prize drawings. Some of the entries were earned by doing things such as downloading the PlugShare App, completing a myth-buster survey, using the cost comparison calculator on the DENC webpage, attending events, driving the electric pool cars and even watching a how to use the charging station video that was made internally (with some help from our EV enthusiast leaders within the city). It was important to make participation easily accessible, timely, educational, and engaging.

This information was communicated to city employees via e-mail, the city intranet and print flyers. Each learning opportunity corresponded with a specific number of entries into the prize. The prize drawings included a five day free trial with the BMW i3, a variety of gift cards to help support local businesses, and a give-away basket from Loveland Water and Power and DENC. The city had more than 80 participants and approximately 350 total entries into the prize drawings. Overall, this effort was very successful in creating an environment for healthy competition and most importantly educating and encouraging city employees to become leaders in EV adoption.

### EV Safety Training

In order to make the employee engagement strategy a holistic approach, the City of Loveland also decided to target new employees and begin to set the stage that Loveland is proactive, progressive, innovative and a leader in EV adoption. The goal of this outreach effort is to provide new City of Loveland employees with the information they need to integrate EVs into the daily work routine as soon as possible, and encourage them to use the pool EVs whenever and wherever they drive. After working with the City of Loveland Safety Coordinator and developing a PowerPoint presentation and one page hand-out, EVs are now integrated into the Safe Driving Course for all new employees. The Safe Driving Course is offered by Human Resources and teaches new employees how to properly use the pool cars, check them out and stay safe behind the wheel.

### EV Driver of the Quarter

Coinciding with the 2015 Drive Electric Challenge, Loveland also created an award for city employees. City employees that take action, promote, and/or

endorse the quarterly EV campaign have the opportunity to win an award and recognition. In 2016, an employee made it a point to participate in our drive electric challenge. This employee drove a significant amount of miles in the EV pool cars during the drive electric quarterly campaign and served as an EV advocate across the city. The city recognized this employee throughout all city departments and awarded them with a prize. The following year Loveland began awarding employees during each of the quarterly campaigns. Upcoming DENC quarterly campaigns will be shared with city employees along with ways for them to participate, so employees can compete to win the EV Driver of the Quarter.

### Opportunities for Improvement

During 2015 the DENC steering committee within the City of Loveland asked itself, “who are we missing, and why do some people not want to get involved?” Since then, Loveland has been making a large effort to reach out to gather feedback from employees that are not involved with EVs to get suggestions for improvement. This has strictly been a word-of-mouth effort. By taking the time to meet with those employees and gather feedback it has opened the door to assess additional opportunities in the employee engagement strategy and make plans for improvements in the following years. For example, we asked employees who have never driven an EV to take the EV for a drive. We wanted to know what was clear and what was unclear in operating the vehicle, if they felt comfortable using it, and if they able to understand how the EV worked without a tutorial. In addition, we sought feedback on the ease (or lackthereof) of charging the EVs. This has helped the city increase the effectiveness of its education by providing each vehicle with simple print instructions for operating and charging.

### Conclusion

The employee education campaign has demonstrated the value of EV education and engagement to the city. The City of Loveland is proud of our efforts to increase electric vehicle awareness and to get people behind the wheel of an EV. With the help of Drive Electric Northern Colorado, Loveland is excited to continue to build our partnership and make a difference in our community. For more information regarding the City of Loveland Employee Education

initiatives, please check out the toolkit provided below, which includes supplemental materials.

### Toolkit Contents (Appendix)

- Ride-and-Drives
  - Sample Event Flyer
  - Link to Passport to Water and Power Promotional Video
- <https://www.youtube.com/watch?v=WC9LfcjX1sE>
- 10,000 Mile Challenge
  - Initial E-mail
  - Email Update
- EV ambassadors
  - EV Ambassador Welcome Handout
  - EV Ambassador badge
- Drive Electric Challenge
  - Drive Electric Challenge Flyer
  - Sample Email – Example 1
  - Sample Email- Example 2
  - How to Use Charging Station video
  - Myth Buster Survey
  - Challenge Results
- EV Safety Training
  - EV Safe Driving Presentation
  - EV Safety Training Handout