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DURANGO ELECTRIC VEHICLE READINESS PLAN
June 2021

The transportation sector is the largest source of greenhouse gas (GHG) emissions, both in Colorado and worldwide. Due to increased GHG emissions, Colorado’s climate has warmed 2°F on average in the last 30 years, along with an increased frequency of hotter than average days. This warming has resulted in an increasing number and intensity of heat waves, droughts, floods, and wildfires.

With this in mind, the City of Durango (City) and LPEA partnered to develop an Electric Vehicle (EV) Readiness Plan - with funding from the Colorado Energy Office (CEO) and Colorado Department of Local Affairs (DOLA). This plan outlines strategic actions that Durango can take to increase EV adoption. This transition, along with LPEA’s goal to reduce its carbon footprint by 50% from 2018 levels by 2030, supports the City’s goal to reduce greenhouse gas emissions by 30% from 2016 levels by 2030.

By planning for an EV future, Durango will support existing and future community members, commuters, and visitors who choose to drive electric, as well as align with current state initiatives related to improving the transportation sector and reducing transportation-related GHG emissions.

Vision

The City of Durango and LPEA share a vision of the future where Durango residents, businesses, and visitors choose electric vehicles over conventional fuel vehicles, and the greenhouse gas emissions associated with vehicular travel are drastically reduced.

Goal

By 2050, reduce greenhouse gas emissions from on-road transportation by 75% from the 2016 baseline, with a 6% reduction by 2030.

Cross-Cutting Priorities

Accessibility

Tourism
**Focus Areas**

**LEAD BY EXAMPLE**
- Replace 100% of City/LPEA fleet with ZEVs by 2050; replace 100% of light-duty vehicles, excluding Police Department vehicles, with EVs by 2030.
  - L-1 GoEV Cities Resolution
  - L-2 ZEV-Friendly Fleet Policies and Procedures
  - L-3 Fleet Charging Infrastructure
  - L-4 Light-Duty Fleet Optimization and Electrification Plan
  - L-5 Employee Commuting Incentives
  - L-6 EV Training
  - L-7 Peer Learning for Fleet Electrification
  - L-8 Adopt Electric Transit Technologies
  - L-9 Adopt Heavy-Duty ZEV Technologies
  - L-10 EV-Certified Fleet Mechanics

**INFRASTRUCTURE**
- Increase the number of charging stations annually based on projections, actual usage data, and user feedback.
  - I-1 Promoting Existing Local Charging Stations
  - I-2 Public Charging at Public Facilities
  - I-3 EV-Friendly Development Codes
  - I-4 Public Parking EV Strategy
  - I-5 Resources for Charging Station Installations
  - I-6 Business Rebates for EV Charging Stations
  - I-7 Matching Funds for Public Charging Stations on Private Property
  - I-8 Regional Public Charging Assessment and Installations
  - I-9 Regional EV Infrastructure Outreach Campaign
  - I-10 Workplace Charging Outreach
  - I-11 Electrical Infrastructure Upgrades
  - I-12 Vehicle-to-Grid Technologies
  - I-13 Mobility Hubs

**PUBLIC ADOPTION**
- By 2050, 70% of light-duty vehicles and 75% of heavy-duty vehicles will be EVs.
  - P-1 Resident EV Education
  - P-2 Business EV Education
  - P-3 EV Owner Recognition
  - P-4 School Bus Electrification
  - P-5 EV Marketing for Tourism
  - P-6 EV Marketing for Business Attraction
  - P-7 EV Advisors
  - P-8 Resident EV Purchasing Incentives
  - P-9 EV Commuter Transit Incentives
  - P-10 Commuter EV Vanpool Programs
  - P-11 E-bike Program
  - P-12 Workplace EV Carshare Outreach
  - P-13 Rental Fleet Electrification Outreach
  - P-14 Dealership Outreach
The transportation sector is the largest source of greenhouse gas (GHG) emissions, both in Colorado and worldwide. Due to increased GHG emissions, Colorado’s climate has warmed 2°F on average in the last 30 years, along with an increased frequency of hotter than average days. This warming has resulted in an increasing number and intensity of heat waves, droughts, floods, and wildfires (State of Colorado, 2020).

Without a significant shift in how we operate, the Colorado Energy Office predicts that average temperatures could increase by an additional 2.5 to 5°F by 2050, resulting in an increased severity of droughts, wildfires, and floods (State of Colorado, 2020).

Many of the vehicles that contribute to climate change through GHG emissions are also responsible for harmful air pollutants, including nitrogen dioxide and particulate matter. These pollutants have been linked to respiratory problems such as asthma and cardiovascular disease, especially for communities of color, the elderly, young children, and low-income households that often face higher exposure to pollutants and may be more vulnerable to associated health impacts (American Lung Association, 2020). Transitioning to a cleaner transportation system will enable us to begin addressing these inequities, in alignment with the Durango City Council’s goal to “advance initiatives to institute diversity, equity, and inclusion with the City” (City of Durango, 2020) and recent resolution to
reduce GHG emissions 80% by 2050 (City of Durango, 2019). This transition is also in alignment with La Plata Electric Association’s (LPEA) goal to reduce its carbon footprint by 50% by 2030 (La Plata Electric Association, 2020).

With this in mind, the City of Durango (City) and LPEA partnered to develop an Electric Vehicle (EV) Readiness Plan - with funding from the Colorado Energy Office (CEO) and Colorado Department of Local Affairs (DOLA). This plan gives City and LPEA staff, community leaders, transportation-related businesses, residents, visitors, and other stakeholders information on how to prepare for local and regional adoption of EVs.

**Electric Vehicles Overview**

**Defining EVs**

The term electric vehicle (EV) describes any vehicle that requires an electric charge to function as opposed to internal combustion engine (ICE) vehicles, which rely on the combustion of gasoline, diesel, or other fuels. Two types of EVs were considered throughout this planning process:

- **Battery electric vehicles (BEVs):**
  Run entirely on one or more electric motors (e.g., Nissan LEAF, Tesla Model 3)

- **Plug-in hybrid electric vehicles (PHEVs):**
  Called “plug-in” hybrids because they require an external charge to energize the onboard electric motor. PHEVs have an engine that burns fuel when the electric motor battery is depleted (e.g., Chevy Volt)

  Note, hybrids vehicles that contain both an electric motor and a gasoline engine but do not require any external battery charger (in other words, the vehicle does not plug-in) were not considered an EV as part of this Plan (e.g., Toyota Prius Hybrid).

This plan also references zero emission vehicles (ZEVs), which produce zero or near-zero exhaust emission of any criteria pollutant (or precursor pollutant) or greenhouse gas. ZEVs include battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), and fuel cell electric vehicles (FCEVs). In this plan, ZEVs are referenced primarily when discussing heavy-duty vehicles (because of anticipated hydrogen fuel cell technologies in heavy-duty applications).
EV Benefits
Transitioning to EVs results in a variety of environmental, health, and economic benefits that work toward the community’s sustainability vision outlined in the draft 2021 Durango Sustainability Plan. See Table 1 to explore EV benefits.

Table 1: EV Benefits

<table>
<thead>
<tr>
<th>BENEFIT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reducing GHG emissions</td>
<td>While all vehicles produce emissions during production, EVs produce significantly lower emissions while driving. The total lifecycle emissions for EVs is expected to decrease even more as production technology improves and the electric grid becomes greener.</td>
</tr>
<tr>
<td>Improving air quality</td>
<td>Switching to EVs can reduce and even eliminate harmful tailpipe emissions, including carbon monoxide and particulate matter that are linked to asthma, lung cancer, and other detrimental health impacts.</td>
</tr>
<tr>
<td>Energy independence and resilience</td>
<td>Much of the fuel used to produce the electricity for EVs is made in the U.S. Furthermore, recycled EV batteries can be used for building energy storage to manage energy demand, keeping costs low, and improving our resilience.</td>
</tr>
<tr>
<td>Cost savings</td>
<td>The average EV driver spends about half as much money on fuel and maintenance. Rebates, tax incentives, and offers from dealerships can help to lower upfront costs!</td>
</tr>
<tr>
<td>Performance</td>
<td>EVs offer instantaneous torque, quiet acceleration, and regenerative braking. EVs typically perform well in snow and ice due to their low center of gravity and balanced weight distribution. Several all-wheel drive and SUV EV options are now available, and light-duty truck models will be commercially available in the next few years as the marketplace rapidly expands.</td>
</tr>
</tbody>
</table>

Ethical Concerns of EV Batteries

Environmental impacts are associated with the manufacture of every vehicle. However, the lithium-ion batteries in current EVs pose specific social challenges related to the mining of materials used to produce them, including child labor and weak labor laws. There is significant ongoing research and commercial development aimed at both reducing the amount of cobalt and other mined materials used in EV batteries, while also improving and increasing options for battery reuse and recycling.
Today’s EV Market
There are more than 7.2 million EVs on roads around the world and nearly one million EVs in the U.S. (IEA, 2020). In Colorado, EVs contribute to 3.69% of the vehicle market (Auto Alliance, 2019), with rapid growth of EVs on the road across the state and in Durango (see Figure 1).

The COVID-19 pandemic has and is expected to continue to shrink the overall passenger car market. However, recovery measures, improved technology, and expanded infrastructure are expected to drive continued growth of EV adoption. Conservative forecasts project nearly 140 million EVs, or a 7% market share, worldwide by 2030. Under a more ambitious scenario, EVs are targeted to reach a 30% market share worldwide - placing 245 million EVs on the road by 2030 (IEA, 2020).

Domestically, the U.S. Department of Energy forecasts that under a medium growth scenario, there will be 14 million EVs on the road in the U.S. by 2030, representing a 5% market share (U.S. DRIVE, 2019). Colorado is expected to outpace national EV adoption. Under a medium growth scenario, 838,997 EVs are expected to be on the road by 2030, representing a 12% market share (Colorado Energy Office, 2019). All technologies follow an adoption curve and EVs are no different (see Figure 2). To reach statewide goals, Colorado must cross the chasm between “early adopters” to “early majority” 3-5 years sooner than is currently predicted (Colorado Energy Office, 2020).
Plan Purpose and Integration with Other Efforts

By planning for an EV future including municipal fleet transition, charging infrastructure, and public adoption, Durango will proactively support existing local initiatives as well as align with current state initiatives related to improving the transportation sector and reducing transportation-related GHG emissions. The following sections provide an overview of the State of Colorado, City of Durango, and LPEA policies and regulations supportive of EVs.

**LEV and ZEV Standards:** In November 2018 the Colorado Air Quality Control Commission (AQCC) adopted a Low Emission Vehicle (LEV) standard that set emission requirements for all new light- and medium-duty motor vehicles sold in Colorado, beginning with 2022 models. In August 2019 Colorado took the LEV standard one step further by becoming the tenth state to adopt a Zero Emission Vehicle (ZEV) standard, which requires automakers to sell at least 5% ZEVs by 2023 and 6% by 2025.

**Colorado EV Plan:** The Colorado Energy Office (CEO) released the updated, calling for a “large-scale transition of Colorado’s transportation system to zero emission vehicles, with a long-term goal of 100% of light-duty vehicles being electric and 100% of medium- and heavy-duty vehicles being zero emission.” The plan also sets statewide goals for a public charging network, specifically Level 3 DC fast chargers, and aims to have 940,000 EVs on the road in the state by 2030.

**Colorado EV Tax Credit:** For new EVs purchased in the state of Colorado, owners are eligible to receive a $2,500 credit with their state income tax refund. This amount will decrease to $2,000 in 2023. Or the credit may be applied at purchase through many electric vehicle manufacturers. For leased EVs, a $1,500 tax credit is available with a 2-year minimum lease. Unused tax credits can also be rolled forward to future years. For tax years 2010 – 2022, the tax credits are refundable. The credit is first applied against the income tax liability of the person who purchases, leases, or converts the qualifying motor vehicle. If the credit exceeds the tax due, the excess credit will be refunded.

**City of Durango Comprehensive Plan:** Durango’s 2017 Comprehensive Plan includes several policies that support and complement EV adoption, including:

- Policy 1.3.11: Coordinate with La Plata County, La Plata Electric and other entities to promote increased use of renewable energy sources such as wind, solar, biomass, hydro, geothermal, etc.
- Policy 4.4.1: Preserve, conserve and sustainably use natural resources so that future generations may enjoy the benefits of Durango’s natural environment
- Policy 5.4.4: Foster sustainable and resilient development that is compatible with established neighborhoods and contributes to reductions in resource consumption, greenhouse gas emissions, and improves quality of life
- Policy 8.5.16: Increase mobility options for residents, employees and visitors within Durango, and the sustainability of those choices.
- Policy 16.2.2: Encourage businesses and public entities to provide charging facilities for electric vehicles.
- Policy 19.3: Ensure that electrical, natural gas and telecommunications facilities are adequate to support the current and future needs of residents, businesses, and institutions.
**City of Durango Sustainability Action Plan**: Durango’s 2015 Municipal Sustainability Action Plan includes several objectives that support and complement EV adoption, including increasing municipal fleet efficiency and encouraging efficient energy use. The City is in the process of updating its Sustainability Action Plan in coordination with the development of this EV plan.

**City of Durango Strategic Plan**: The Durango City Council 2021 Strategic Plan guides the implementation of city services and influences the city’s budgeting process. Several objectives in this plan relate to Durango’s EV future, including environmental and social sustainability; affordability and economic opportunity; diversity, equity, and inclusion; and an effective infrastructure network.

**Durango City Council Resolution**: In August 2019, Durango City Council voted to unanimously pass a Resolution adopting the following goals: 80% reduction in greenhouse gas emissions from 2016 levels by 2050, with an interim goal of 30% emissions reduction by 2030.

**La Plata Electric Association Goal**: In 2019, La Plata Electric Association adopted a strategic goal to reduce its carbon footprint by 50% from 2018 levels by 2030, while keeping its cost of electricity lower than 70% of its Colorado rural electric cooperative peers.

**Land Use and Development Code**: In April 2021 City Council adopted code amendments requiring EV-ready and EV-charging-enabled parking stalls within new multifamily developments and general code language changes to reduce barriers to EV charging infrastructure. Additional code recommendations related to allowing EV charging in general, as well as requirements for hotel, grocery store, and other commercial retail uses, are proposed for future adoption. All code recommendations can be found in Appendix F: Code Recommendations.

**Multimodal Transportation Plan**: This EV Readiness Plan was developed in the context of Durango’s vision for an integrated multimodal transportation network. The City’s focuses on moving people, rather than just automobiles - providing an outstanding transit, bicycle, and walking community. Whether it be electric buses, vanpool vehicles, rideshare, personal vehicles, or bikes, EVs have the following roles in this integrated multimodal network.

- EVs produce no harmful pollutants that create risks for pedestrians and cyclists.
- Electric bikes (e-bikes) can make biking accessible to people of all ages and abilities.
- Electric buses provide a quiet smooth ride, allowing passengers to relax, work, learn, or engage in conversation.
- EVs require new infrastructure, which provides an opportunity to strategically locate EV charging stations next to transit stops, supporting electric shared mobility options for first- and last-mile connections.
Planning Process

Development of the Durango EV Readiness Plan was divided into five phases (see Figure 3), driven by stakeholder and community engagement and robust data analysis.

October to December 2020

**PHASE 1: GROUNDING**
This phase involves collecting data and interviewing key stakeholders in order to establish an understanding of Durango’s unique community goals and priorities.

January to February 2021

**PHASE 2: OPPORTUNITIES IDENTIFICATION**
This phase involves researching best practices and reaching out to community members in order to raise awareness of the EV Readiness Plan and gauge community interest in EV adoption.

January to March 2021

**PHASE 3: OPPORTUNITY ANALYSIS**
This phase involves assessing opportunities identified in Phase 2 in order to understand how various strategies might impact EV adoption rates and associated benefits, including greenhouse gas emission reduction and cost savings.

February to March 2021

**PHASE 4: PRIORITIZATION**
This phase involves using the results from Phase 3 analysis and stakeholder input to prioritize which strategies should be recommended for the final EV Readiness Plan.

March to April 2021

**PHASE 5: FINAL PLAN**
This final phase combines the results of previous phases to develop a draft EV Readiness Plan for review by the City, LPEA, and the public.

Figure 3. Planning Process

Stakeholder and Community Engagement

The development of Durango’s EV Readiness Plan included opportunities for input from key stakeholders and the broader community.

- Stakeholders included City and LPEA staff and community organization representatives identified by the City and LPEA as key partners in realizing an EV future for Durango (see Acknowledgements for a full list). Stakeholders were engaged early in the process, through focus groups and interviews, to identify barriers and opportunities related to electric vehicle (EV) adoption in Durango; and, later in the process to prioritize strategies for achieving EV adoption. For more details on stakeholder engagement see Appendix B: Outreach Summary.
- The Community was invited to contribute feedback through an online survey hosted on the City’s Virtual City Hall during the month of February 2021. More than 300 responses were collected. For more details see Appendix B: Outreach Summary.
EV Adoption Modeling Methodology

What Does the Future of Transportation Look Like in Durango?

To understand what type of EV adoption rates Durango can expect, the project consultant assessed existing and projected transportation trends. The Durango area is growing rapidly, with a nearly 60% increase in the County’s population (from the 2016 baseline) predicted by 2050 according to the State Demographer’s Office (CO State Demography Office, 2020). If there are no changes in the number of miles traveled or the efficiency of vehicles driven in Durango, gasoline and diesel use will increase from 8.3 million gallons to 13.3 million gallons by 2050. Based on fuel price predictions from the Energy Information Agency (EIA) as shown in Figure 4, the amount of money spent on fuel for passenger vehicles on the road in Durango will increase by $26.7 million by 2050. This means the average annual driver’s fuel cost will increase from $1,200 to $1,700 between 2016 and 2050 if no changes are made. Table 2 shows the projected greenhouse gas (GHG) emissions, fuel use, and fuel costs under a business-as-usual scenario for Durango.

Table 2: Business-as-usual On-Road Vehicle Projections for Durango

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2030</th>
<th>Change from 2016</th>
<th>2050</th>
<th>Change from 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annual Estimate</td>
<td>Annual Estimate</td>
<td></td>
<td>Annual Estimate</td>
<td>Change from 2016</td>
</tr>
<tr>
<td>GHG Emissions (MT CO₂e)¹</td>
<td>75,600</td>
<td>97,800</td>
<td>29%</td>
<td>121,000</td>
<td>60%</td>
</tr>
<tr>
<td>Gasoline/Diesel Use (gallons)</td>
<td>8,341,000</td>
<td>10,794,000</td>
<td>29%</td>
<td>13,347,000</td>
<td>60%</td>
</tr>
<tr>
<td>Fuel Cost ($)²</td>
<td>$22,544,000</td>
<td>$36,505,000</td>
<td>62%</td>
<td>$49,249,000</td>
<td>118%</td>
</tr>
<tr>
<td>Normalized Per Person</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GHG Emissions (MT CO₂e/person)</td>
<td>4.2</td>
<td>4.2</td>
<td>0%</td>
<td>4.2</td>
<td>0%</td>
</tr>
<tr>
<td>Gasoline/Diesel Use (gallons/person)</td>
<td>462</td>
<td>462</td>
<td>0%</td>
<td>462</td>
<td>0%</td>
</tr>
<tr>
<td>Fuel Cost ($)/person</td>
<td>$1,200</td>
<td>$1,600</td>
<td>33%</td>
<td>$1,700</td>
<td>42%</td>
</tr>
</tbody>
</table>

¹ MT CO₂e is metric tons of carbon dioxide equivalent; emissions estimate includes GHG emissions from generation of electricity used by electric vehicles as well as direct emissions from gasoline and diesel used in ICE vehicles.
² Fuel Cost includes estimated electricity costs from electric vehicles.

Figure 4: Projected Regional Fuel Prices (US Energy Information Administration, 2021)
There are multiple local, state, and federal efforts underway to address GHG emissions and fuel use in the transportation sector. To understand the effect of these efforts on the future of on-road transportation in Durango, an adjusted business-as-usual scenario was modeled - taking the following considerations into account:

1. **Alternative Transportation:** The City of Durango has ongoing efforts to encourage use of public transportation and active transportation options. Based on the goal set in the current Multimodal Transportation plan, the anticipated impact of these efforts is to reduce the total vehicle miles traveled in Durango by 12% from the business-as-usual scenario by 2050.

2. **Increased Internal Combustion Engine (ICE) Vehicle Fuel Efficiency:** Newer vehicles are increasingly more fuel efficient than older ones; so, as Durango residents naturally replace older vehicles with newer ones, total fuel consumption will decrease. Based on national trends, it is expected that about 6% of vehicles on the road will be replaced each year. This level of replacement would result in an increase in average fuel economy of light-duty vehicles on the road in Durango from 24 miles per gallon (MPG) in 2016 to 37 MPG in 2050. It is expected that heavy duty vehicles will increase in fuel efficiency from 6 MPG to 8 MPG over the same time period. This natural turnover of ICE vehicles to more efficient vehicles in Durango will result in a 34% reduction in GHG emissions from the business-as-usual scenario by 2050.

3. **State Zero-Emissions Vehicle Legislation and LPEA’s Carbon Goals:** As explained in the next section, the state passed legislation to encourage EV sales. This legislation is expected to increase the number of light-duty electric vehicles on the road in Durango to 4,700 vehicles or about 9% of the projected number of vehicles in Durango in 2050. In addition, LPEA has a goal to be carbon neutral by 2042. The combined effect of the state’s ZEV regulations and LPEA’s carbon goals will reduce GHG emissions from on-road vehicles by 7% from the business-as-usual baseline by 2050.

The combined effect of these factors as an Adjusted Business as Usual (ABAU) for Durango prior to specific Plan efforts on GHG emissions, fuel use, and cost are shown in Table 3.

| Table 3: Adjusted Business-as-usual Emissions, Fuel Use, and Fuel Cost Estimates for Durango |
|---|---|---|---|---|---|
| | 2016 | 2030 | Change from 2016 | 2050 | Change from 2016 |
| **GHG Emissions (MT CO₂e)**<sup>3</sup> | | | | | |
| Annual Estimate | 75,600 | 74,500 | -1% | 65,600 | -13% |
| Gasoline/Diesel Use (gallons) | 8,341,000 | 8,156,000 | -2% | 7,195,000 | -14% |
| Fuel Cost ($)<sup>4</sup> | $22,544,000 | $27,745,000 | 23% | $27,247,000 | 21% |
| **Normalized Per Person** | | | | | |
| GHG Emissions<sup>3</sup> (MT CO₂e/person) | 4.2 | 3.2 | -24% | 2.3 | -46% |
| Gasoline/Diesel Use (gallons/person) | 462 | 349 | -24% | 249 | -46% |
| Fuel Cost ($) /person<sup>4</sup> | $1,200 | $1,200 | 0% | $900 | -25% |

<sup>3</sup> MT CO₂e is metric tons of carbon dioxide equivalent; emissions estimate includes GHG emissions from generation of electricity used by electric vehicles as well as direct emissions from gasoline and diesel used in ICE vehicles.

<sup>4</sup> Fuel Cost includes estimated electricity costs from electric vehicles.
How Do EVs and Transportation Trends Impact GHG Emissions?

To evaluate the potential contribution of EV adoption to the City’s GHG reduction goals and LPEA’s carbon goal, Durango-specific EV adoption scenarios were modeled. Light-duty EV adoption rates were based on a study developed by the Colorado Energy Office (CEO) (BCS Incorporated, 2015). CEO “high” and “medium” scenarios were used to develop local adoption projections since the CEO ‘low’ adoption rate was lower than the Adjusted Business-As-Usual scenario for Durango. Heavy-duty “high” EV adoption rates were derived from a zero-emission vehicle (ZEV) memorandum of understanding (MOU) signed by Colorado and other states that sets sales targets for 2030 and 2050. “Medium” heavy duty adoption rates were modelled at 50% of the ZEV MOU targets.

Interim-year sales estimates were modeled using an exponential uptake function based on historic EV sales trends from the U.S. Energy Information Agency, although this curve will be strongly influenced by model availability and state and local policies/incentives (US Energy Information Agency, 2020). Figure 5 shows the calculated impact of each of the adjusted business-as-usual scenarios described above as well as the projected GHG emissions reduction for both the medium-and high-adoption scenarios. The GHG emissions reduction from the EV adoption scenarios includes the anticipated decrease in the carbon intensity of LPEAs electricity generation profile.

![Figure 5: Durango On-Road Emissions Reduction Model](image)
The Durango EV Readiness Plan is structured to support an overarching vision of EV adoption and a measurable goal of GHG emissions reduction. To support this vision, the plan includes three focus areas to help organize the plan strategies or major initiatives the community can pursue in support of EV adoption. Each of these focus areas also identify measurable targets to track progress. The plan framework also includes two cross-cutting priorities to highlight special considerations that should be taken across all focus areas.

**Vision**

The City of Durango and LPEA share a vision of the future where Durango residents, businesses, and visitors choose electric vehicles over conventional fuel vehicles, and the greenhouse gas emissions associated with vehicular travel are drastically reduced.

**Goal**

By 2050, reduce greenhouse gas emissions from on-road transportation by 75% from the 2016 baseline, with a 6% reduction by 2030.
Cross-Cutting Priorities

Cross-cutting priorities are concepts relevant to multiple EV adoption strategies, across all focus areas. For the Durango EV Readiness Plan, accessibility and tourism were identified as cross-cutting priorities to help identify, evaluate, and inform plan strategies. The description of each cross-cutting priority below helps frame the scope of these priorities, their importance to Durango, and their relevance to this planning effort.

Accessibility

Historically, access to EVs has not been equitable. The upfront cost of new EVs is only now beginning to achieve parity with traditional vehicles and there is limited availability of used EVs. As a result, early EV adoption of EVs has predominantly been associated with more affluent demographics. Additionally, residents who live in multifamily properties often do not have access to charging at their homes and public charging options are generally located in more densely populated areas, creating infrastructure gaps in rural areas that make it difficult to ensure reliable charging. While EVs can reduce long-term transportation costs, produce lower greenhouse gas emissions, and improve local air quality, only residents who can afford the upfront cost of purchasing a new vehicle have historically reaped the benefits of owning an EV. This disparity is intensified by the fact that lower income populations may also have older, inefficient vehicles and longer commutes, and therefore stand to gain the most from these benefits. Given this disparity, elevating accessibility as a cross-cutting priority is essential to ensuring that all of Durango’s residents can benefit from an EV-centric future. Whether it’s considering electrifying transit, developing programs to lower the upfront cost of EVs to lower-income households, or exploring e-bike programs, the strategies in this plan seek to drive toward a more equitable EV future. For broader equity considerations, the City and LPEA will reference Appendix G: Implementation Equity Checklist, which provides an equity checklist to ensure racial disparities, the ability of marginalized communities to influence decisions, and fair and just distribution of societal benefits and burdens are imbedded into implementation.
Tourism

Durango is a major tourism destination in Colorado, attracting more than 1.7 million overnight visitors in 2019 alone (Visit Durango Colorado, 2020). Durango has large drive- and fly- tourism markets. Thousands of people drive each year from other parts of Colorado and nearby states to explore Durango and surrounding areas. Other national and international visitors fly into the Durango-La Plata Airport or other nearby hubs and rent a vehicle for the duration of their trip. There are opportunities in both segments to increase the use of EVs by visitors, such as supporting access to electric rentals or installing and promoting charging stations.

Importantly, one of the key features that sets apart Durango’s tourism market is the value placed on sustainability. Durango has and will continue to market itself as a hub for sustainable tourism. Given the confluence of sustainable tourism and Durango’s driver-oriented tourism market, infusing EVs into Durango’s tourism market will require a multi-pronged approach, and thus it is elevated across multiple focus areas within this plan.

Focus Areas, Strategies, and Targets

Achieving the vision and goal set forth in this Plan will require a concerted effort on multiple fronts. The strategies are grouped into three focus areas: Lead by Example, Infrastructure, and Public Adoption. Each of these focus areas include measurable targets that Durango can use to measure progress.

Strategies have been developed across all three focus areas to achieve specific targets and ultimately plan goals. The first set of strategies that can and should start immediately, to set Durango on its path toward an EV future are marked as Phase 1 (2021-2022). Additional strategies depend on the availability of resources and the advancement of EV technology and are marked as Phase 2 (2023-2025) and Phase 3 (2026-2030). Though they are planned for a little further in the future, Phase 2 and Phase 3 strategies are still crucial components of achieving the overall goals in this plan. A summary of Focus Area Targets and Strategies are provided below with detailed Phase I (2021-2021) strategies documented in Appendix E.
FOCUS AREA 1: LEAD BY EXAMPLE

The City of Durango and LPEA are committed to leading by example in a community-wide shift to EVs through the transition of their own fleet vehicles. The business case for fleet electrification grows stronger each year as EV technology advances. Tangible examples from City and LPEA fleets can not only reduce long-term fuel and maintenance costs and contribute to adopted greenhouse gas emissions goals, but also help generate familiarity among other potential buyers and demonstrate the case for EV.

City Fleet

The City of Durango fleet includes 100 vehicles, not including equipment like tractors, trailers, and generators. The majority of the fleet are light-duty trucks and SUVs (see Figure 6) which have few fully-electric options available today. Currently, each City department pays for its own fuel and contributes to a centralized fund that pays for vehicle replacements based on mileage limits or other thresholds. Adjusting this process to include EV considerations is a first and simple step to preparing for an electric fleet, which will become even more attainable as electric truck options are released.

City fleet vehicles spend the night at 10 different facilities. In anticipation of fleet electrification, the City will need to identify and prioritize which facilities need EV charging stations first and how these stations will fit into a centralized charging network control system - to ensure efficient charging patterns and inform budgeting. Currently, the City maintains three charging stations (six connectors) available for public use.

Figure 6. City Fleet
LPEA Fleet

LPEA’s Operations Department oversees 75 fleet vehicles for the Durango and Pagosa offices (see Figure 7). While LPEA has no formal vehicle replacement policy in place, the fleet has been able to quickly adapt to changing needs and new technologies. Currently, LPEA has two hybrid vehicles and maintains two charging stations (three connectors) for fleet use only and two stations (four connectors) available for public use.

Figure 7. LPEA Fleet
Target

☐ Replace 100% of City/LPEA fleet with ZEVs by 2050; replace 100% of light-duty vehicles, excluding Police Department vehicles, with EVs by 2030.

Strategies

The strategies used to meet this target will take the stepwise approach illustrated in Figure 8. The full list of Lead by Example strategies that have been prioritized in this plan are listed by phase in Table 4 and more detailed work plans for Phase 1 activities can be found in Appendix E: 2021-2022 Strategy Workplans.

Fleet Electrification

- Replacement of all fleet vehicles
- Charging infrastructure network

Pilot Projects

- Pilot vehicle purchases
- Priority charging installations
- Training with pilot vehicles

Foundational Activities

- EV-friendly processes and policies
- Electrical infrastructure assessment
- Educational and training opportunities

Figure 8: Lead by Example Strategy Approach
Table 4: Lead by Example Strategies

<table>
<thead>
<tr>
<th>Lead by Example Strategies*</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>L-1 GoEV Cities Resolution:</strong> Tailor the GoEV Cities Resolution for Durango and submit to Durango City Council for adoption to demonstrate the City’s commitment to EVs/ZEVs.</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td><strong>L-2 ZEV-Friendly Fleet Policies and Procedures:</strong> Review and adjust purchasing policies, and budgeting and procurement processes, to ensure future ZEV purchases will be supported.</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td><strong>L-3 Fleet Charging Infrastructure:</strong> Review likely charging infrastructure locations for fleet vehicles to understand necessary electrical upgrades. Install charging stations ahead of procurement in appropriate locations.</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td><strong>L-4 Light-Duty Fleet Optimization and Electrification Plan:</strong> Optimize light-duty fleet vehicle inventories, ensuring vehicles are selected based on the best fit for their intended use, prioritizing EVs.</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td><strong>L-5 Employee Commuting Incentives:</strong> Evaluate employee commuter incentives and expand benefits as appropriate to encourage employees to drive EVs, ride transit, ride bikes and e-bikes, or use other low-carbon modes of transportation.</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td><strong>L-6 EV Training:</strong> Leverage pilot EVs for employee training opportunities (e.g., driving, maintenance). Provide EV education for City and LPEA leadership.</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td><strong>L-7 Peer Learning for Fleet Electrification:</strong> Work with other cities, utilities, and the state to learn and share best practices related to fleet electrification, including charging strategies, charging control schemes, and maintenance.</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td><strong>L-8 Adopt Electric Transit Technologies:</strong> Purchase a few EV buses to pilot EV transit technologies and better understand performance and charging needs. Monitor new EV technology for buses and invest in electric buses that are suitable for Durango’s transit fleet. Install the required charging infrastructure and charging controls.</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td><strong>L-9 Adopt Heavy-Duty ZEV Technologies:</strong> Monitor new ZEV technology and invest in heavy-duty vehicles that are suitable for LPEA’s fleet. Install the required charging infrastructure and charging controls.</td>
<td>Phase 3: 2026-2030</td>
</tr>
<tr>
<td><strong>L-10 EV-Certified Fleet Mechanics:</strong> Provide EV maintenance certification opportunities for fleet mechanics.</td>
<td>Phase 3: 2026-2030</td>
</tr>
</tbody>
</table>

*See Appendix E: Phase 1 (2021-2022) Strategy Workplans*
FOCUS AREA 2: INFRASTRUCTURE

Although most EV drivers do their charging at home (US Department of Energy, n.d.), public and workplace charging is needed to increase convenience, enable longer-distance travel, and support a fully functional EV transportation system. Addressing range limitations in current vehicles and range anxiety in consumers is a major driver for installing various levels of charging infrastructure throughout the city, region, and state. Public and workplace charging is necessary to provide options for those without access to home charging. Evaluating infrastructure gaps and improving access to home charging can result in opportunities for investment that will yield the greatest benefit to EV drivers. Currently the International Council on Clean Transportation (ICCT) is working with the Colorado Energy Office (CEO) and Colorado Department of Transportation (CDOT) to develop an infrastructure gap analysis for the state of Colorado down to the county level. City and LPEA staff will continue to monitor this effort to ensure alignment with the state’s trajectory.

Level 2 and Level 3 DCFC Public Charging

The EV ownership lifestyle must be supported by affordable, reliable, and readily available residential and workplace charging infrastructure. However, not everyone is able to charge where they park their vehicle. Apartment and condo dwellers, renters, and those without dedicated parking do not typically have the ability to install at-home charging and rely on publicly available charging infrastructure. Depending on the level, public charging should be located within a reasonable distance of things to do in the corresponding charging timeframe. For example, Level 2 charging takes two-four (2-4) hours to substantially boost a long-range vehicle’s battery, therefore Level 2 chargers should be located near apartment and condo buildings, recreation centers, museums, hotels, theaters, playing fields, downtown, and any other areas one is likely to stay two hours or more. In comparison, Level 3 charging infrastructure, can charge a near-empty standard battery-sized vehicle in 45-60 minutes, so should be located near grocery or household goods stores, restaurants, gyms, and other shorter-term retailers as well as along key corridors.

Colorado Existing Infrastructure and Gap

As of April 2021, Colorado has 3,035 Level 2 and 415 Level 3 Direct Current Fast Chargers (DCFC) publicly-available charging connectors across the state, with concentrations in the Denver-Boulder metro areas and along the Front Range (Atlas Public Policy, 2021). In order for Colorado to support even half of its 2030 goal, or 470,000 EVs on the road, it is estimated that the state will need to increase to about 24,000 public chargers, 80% of which need to be Level 2 and the other 20% need to be Level 3 DCFC (Hsu, Slowik, & Lutsey, 2021).

State Funding for Charging Infrastructure

CEO administers the Charge Ahead Colorado EV charging infrastructure grant program, which provides funding to public and private entities interested in installing charging stations. CEO also provides EV coaching support to assist with these grant applications through ReCharge Colorado. Durango is served by Recharge Colorado through the Four Corners Office for Resource Efficiency (4CORE).
Durango Existing Infrastructure and Gap

As of March 2021, Durango has 43 Level 2 charging connectors at 11 locations and one Level 3 DCFC station planned (see Figure 9). A reliable and accessible public charging network with a mix of Level 2 and Level 3 DCFC infrastructure is needed, particularly to serve the more than 1.7 million annual overnight visitors (Visit Durango Colorado, 2020), as well as residents who live in apartments or other properties without an onsite charging option. The CEO identified 6 corridors along which travel demands indicate the need for DCFC infrastructure. Because of its location on one of these corridors, Durango is eligible for funding to install DCFCs and is installing its first through this program at the Transit Center (Colorado Energy Office, 2020).

Most standard-size EVs have a range of at least 100 miles, though new battery technology has increased this range to over 200 miles. The presence of Level 2 connectors in communities 110 miles or less from Durango - such as Pagosa Springs, Telluride, and Cortez, Colorado, and Farmington, New Mexico - ensures the City is already part of a regional network of infrastructure. Regional interconnectivity is important for residents and visitors using their vehicle for longer-distance travel; and, that connectivity can be advanced by the installation of Level 3 DCFCs, expansion and maintenance of Level 2 charging options, and introduction of electric transit options.

The exact number of charging stations needed in Durango is difficult to estimate. Best practices from other states, U.S. Department of Energy estimates, and the 2021 ICCT study on Colorado’s charging infrastructure gap help frame the potential trajectory of infrastructure required.
☐ Increase the number of charging stations annually based on projections, actual usage data, and user feedback.

To address the complexity in balancing investment costs, demand, and the need to provide confidence in charging availability as this market segment grows, Durango will monitor new and emerging data for home, workplace, and public charging. Durango will be able to refine specific targets over time to ensure that there are sufficient, quality charging options for residents, commuters, and visitors. We will begin planning and implementation efforts of charging infrastructure to ensure that we are keeping pace with and getting ahead of demand. Due to the large number of people who visit Durango, the number of public charging stations needed may be higher than in other more rural communities, as shown in Figure 10 as part of ICCT’s charging infrastructure gap analysis for the state of Colorado (Hsu, Slowik, & Lutsey, 2021). City and LPEA staff will continue to monitor the state’s infrastructure efforts to ensure alignment.

![Figure 10: 2030 county-level public chargers needed and share of EV stock, based on a high growth scenario (Hsu, Slowik, & Lutsey, 2021)](image)
Strategies

The full list of infrastructure strategies that have been prioritized in this plan are listed by phase in Table 5, and more detailed work plans for Phase 1 activities can be found in Appendix E: 2021-2022 Strategy Workplans.

<table>
<thead>
<tr>
<th>Infrastructure Strategies*</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-1 Promoting Existing Local Charging Stations:</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td>Promote existing charging stations to residents and visitors to maximize utilization.</td>
<td></td>
</tr>
<tr>
<td>I-2 Public Charging at Public Facilities:</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td>Install public charging stations at public facilities (e.g., library, recreation centers, airport).</td>
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</tr>
<tr>
<td>I-3 EV-Friendly Development Codes:</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td>Update the Land Development Code to include code requirements that encourage EV infrastructure in new development and redevelopment projects. View Appendix F: Code Recommendations for details.</td>
<td></td>
</tr>
<tr>
<td>I-4 Public Parking EV Strategy:</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td>Incorporate EV considerations into the City’s public parking strategy, to support the integration of EVs into Durango transportation infrastructure and systems.</td>
<td></td>
</tr>
<tr>
<td>I-5 Resources for Charging Station Installations:</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td>Connect local businesses, organizations, multifamily properties, and other property owners to resources for installing EV charging stations. Prioritize properties with longer dwell times, commensurate amenities, high visitor traffic, and high visibility.</td>
<td></td>
</tr>
<tr>
<td>I-6 Business Rebates for EV Charging Stations:</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td>Develop an EV charging rebate program for businesses.</td>
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</tr>
<tr>
<td>I-7 Matching Funds for Public Charging Stations on Private Property:</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td>Provide matching funds to businesses that install public charging stations.</td>
<td></td>
</tr>
<tr>
<td>I-8 Regional Public Charging Assessment and Installations:</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td>Work with regional partners to develop a regional charging infrastructure assessment to identify gaps and priorities. Use the assessment to inform where to install charging stations along regional corridors to serve visitors and commuters.</td>
<td></td>
</tr>
<tr>
<td>I-9 Regional EV Infrastructure Outreach Campaign:</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td>Work with regional partners to promote regional charging station opportunities.</td>
<td></td>
</tr>
<tr>
<td>I-10 Workplace Charging Outreach:</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td>Share workplace charging resources with Durango employers and property owners.</td>
<td></td>
</tr>
<tr>
<td>I-11 Electrical Infrastructure Upgrades:</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td>Prioritize electrical infrastructure upgrades where necessary for areas that are prime for public EV charging, including the downtown district.</td>
<td></td>
</tr>
<tr>
<td>I-12 Vehicle-to-Grid Technologies:</td>
<td>Phase 3: 2026-2030</td>
</tr>
<tr>
<td>Explore opportunities for intelligent integration of electric vehicles, the electric grid, and solar to increase system resilience through energy storage and peak demand management.</td>
<td></td>
</tr>
<tr>
<td>I-13 Mobility Hubs:</td>
<td>Phase 3: 2026-2030</td>
</tr>
<tr>
<td>Develop mobility hubs targeted toward long-distance commuters that include EV charging stations, transit stops, bikeshare, bike parking, and other multimodal connections.</td>
<td></td>
</tr>
</tbody>
</table>

*See Appendix E: Phase 1 (2021-2022) Strategy Workplans
FOCUS AREA 3: PUBLIC ADOPTION

There are several socio-economic factors that influence rate of EV adoption, including number of vehicles per household and household income. Exploring Durango’s unique demographic characteristics through the lens of EV adoption is yet another key to understand opportunities on which to focus and barriers to overcome during the development of the EV roadmap.

Durango is a mid-sized community, with 19,117 residents and an annual growth rate of approximately 1.4 percent over the last 10 years (Department of Local Affairs, 2020). Residents in Durango are relatively young; the median age of residents is 34 years (U.S. Census Bureau, 2018). The Colorado Demography Office projects that by 2030, the 25-34 and 65+ age ranges will experience the most growth, presenting opportunities for young families to choose EVs for their first vehicle purchases and for older adults to choose e-bikes as a way to age in place and continue enjoying Durango’s outdoor recreation activities (Colorado Department of Local Affairs, 2020).

Income

Given the upfront cost of EVs and the limited used-EV market, income is a major factor in EV ownership. On one hand, many of Durango’s households are considered middle- or upper-income households and may be able to spend more in the short term (given the long-term cost savings of EVs). The median household income in Durango is $63,000 and almost 62% of households earn more than $50,000 annually (U.S. Census Bureau, 2018). On the other hand, the upfront costs of EVs often present a barrier to lower-income residents. While EVs are expected to become cost competitive as technologies improve, improving EV access for all Durango residents can be achieved through outreach, financial incentives, and electric transit options.

Housing

Because most people charge their vehicle(s) at home, housing type is another predictor of EV access. The majority of homes (59%) in Durango are single-family homes (U.S. Census Bureau, 2018), which typically have easy access for EV charging in their garage, compared to apartments and condos. While this is good news for many Durango residents, improving access to EVs for all will require charging options in multifamily properties and expanded public charging options.

Why Age Matters

The age of Durango’s residents is an asset when it comes to EV planning! A 2020 CEO study identified adults aged 24-34 as an important age group for immediate EV promotion. This age group is most likely to be starting or growing their families and may be purchasing their first or second vehicle.
Commuting Patterns and Transportation Costs

On average, transportation costs, including fuel and maintenance, comprise approximately 21% of average household income in Durango (CNT, 2020). EV drivers often pay half as much as ICE drivers in fuel and maintenance costs. Even today, the total lifetime costs of many EVs are significantly lower than ICE vehicles. Savings in EVs are only expected to increase, as upfront costs of EVs come down and the market for used EVs increases.

Transit ridership in Durango has continued to rise despite service reductions due to budget decreases. 78% of Durango Transit riders are transit-dependent, primarily using these services for work, followed by shopping/errands and social/recreational purposes. Electrifying Durango’s transit system is an important pathway to improve equitable access to cleaner transportation.

Lifestyle Demands

Range anxiety and performance are the most often cited barriers to EV ownership. Especially in Durango, performance under harsh winter conditions and the ability to travel stress free across rural and mountain terrain will be important considerations for potential EV owners. Still, 55% of all households own two or more vehicles (U.S. Census Bureau, 2018). Households with multiple vehicles may consider replacing at least one vehicle with an EV and reserving the other for more rugged or remote destinations.

Finally, some Durango residents may desire EVs in classes that are not yet widely available. Electric SUVs and trucks have been slower to come to market, and many are not yet cost competitive. As technologies evolve, a broader range of options in these and other classes, at competitive prices, are expected to become available.

Seizing an Opportunity

Nearly 72 percent of residents in Durango drive to work, presenting a major opportunity to reduce transportation-related emissions and improve air quality. What’s more, the average Durango resident’s travel time to work is just 15 minutes, meaning range should not be a limiting factor for many workers, especially if charging is available at work or at home (U.S. Census Bureau, 2018).
By 2050, 70% of light-duty vehicles and 75% of heavy-duty vehicles will be EVs.

The Public Adoption target was set based on the modeling described in the Planning Process section. An interim vehicle adoption goal is also included, acknowledging that given vehicle replacement cycles (e.g., on average 6% annually), and EV technology and class availability, the adoption curve will not be linear. Figure 11 and Figure 12 show the total number of vehicles by type needed to meet this target.
Strategies

The full list of Public Adoption strategies that have been prioritized in this plan are listed by phase in Table 6 and more detailed work plans for Phase 1 activities can be found in Appendix E: 2021-2022 Strategy Workplans.

<table>
<thead>
<tr>
<th>Public Adoption Strategies*</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P-1 Resident EV Education</strong>: Share information and resources about EVs with residents, including how to charge at home and on the road.</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td><strong>P-2 Business EV Education</strong>: Share information and resources with businesses about fleet electrification and being an EV charging site host.</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td><strong>P-3 EV Owner Recognition</strong>: Develop a program to celebrate EV owners, to build awareness about EVs.</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td><strong>P-4 School Bus Electrification</strong>: Work with Durango School District 9-R to electrify their bus fleet.</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td><strong>P-5 EV Marketing for Tourism</strong>: Incorporate EV opportunities into Durango’s tourism marketing efforts.</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td><strong>P-6 EV Marketing for Business Attraction</strong>: Incorporate EV opportunities into Durango’s business attraction efforts.</td>
<td>Phase 1: 2021-2022</td>
</tr>
<tr>
<td><strong>P-7 EV Advisors</strong>: Dedicate LPEA staff to help residential and business customers navigate LPEA EV programs and connect to external resources. For fleets, provide support comparing total cost of ownership to inform return on investment.</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td><strong>P-8 Resident EV Purchasing Incentives</strong>: Provide cash vouchers, rebates, or other incentives to reduce the upfront cost of EVs.</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td><strong>P-9 EV Commuter Transit Incentives</strong>: Provide free transit passes to those who commute by EVs to park-n-rides.</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td><strong>P-10 Commuter EV Vanpool Programs</strong>: Work with employers of long-distance commuters to set up an EV vanpool program.</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td><strong>P-11 E-bike Program</strong>: Work with Fort Lewis College and local bike shops to start an e-bike share, rental, or group-buy discount program for residents and employees.</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td><strong>P-12 Workplace EV Carshare Outreach</strong>: Share information and resources about workplace EV carshare programs with Fort Lewis College and Durango employers, including the City and LPEA.</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td><strong>P-13 Rental Fleet Electrification Outreach</strong>: Work with the Durango Airport to share information and resources about EVs with rental agencies to encourage the adoption of EVs into their fleet.</td>
<td>Phase 2: 2023-2025</td>
</tr>
<tr>
<td><strong>P-14 Dealership Outreach</strong>: Connect local dealerships and auto repair shops to EV trainings, customer collateral, and other resources to support increased availability of EV purchase and maintenance options in Durango.</td>
<td>Phase 3: 2026-2030</td>
</tr>
</tbody>
</table>

*See Appendix E: Phase 1 (2021-2022) Strategy Workplans
IMPLEMENTATION

Implementation of the Durango EV Readiness Plan will require a coordinated approach, led by the City of Durango and LPEA, that involves and engages individuals and organizations from across the community and region. While community collaboration and partnerships will grow over time, achieving Durango’s EV vision rests on the organizational capacity of the City, LPEA, and key stakeholders who were involved in the planning process.

EV Action Team

While it is expected that the City’s Sustainability staff and LPEA’s Energy Management staff will provide leadership in certain strategies and be responsible for reporting, plan implementation will be done by many stakeholders at both the City and LPEA as well as the broader public. Therefore, an EV Action Team will be formed to coordinate decision making, reduce redundancies, and optimize efficiency. This team will meet regularly and be comprised of leaders from the City, LPEA, community organizations, businesses, and other key stakeholders.

At the beginning of each phase, the EV Action Team can review progress toward goals, and adjust for any material changes or updates in technology, policy, and the marketplace. They will then develop workplans for each phase strategy. These workplans detail specific steps required for strategy implementation, roles and responsibilities, timeline, staffing and cost estimates, and outside resources (see Appendix D: Strategy Workplan Template). Phase 1 strategy workplans are provided in Appendix E: Phase 1 (2021-2022) Strategy Workplans.

For broader equity considerations, the stakeholder team will reference Appendix G: Implementation Equity Checklist, which provides an equity checklist to ensure racial disparities, the ability of marginalized
communities to influence decisions, and fair and just distribution of societal benefits and burdens are imbedded into implementation.

**Tracking Progress**

On an annual basis, the status for the goal and each target (see Table 7) will be reviewed and updated as new data are available. This includes quantitative updates whenever possible, supported by qualitative narrative discussion about anticipated progress or results when numeric values are unavailable. The results of this tracking exercise will be presented to City and LPEA leadership and shared publicly on the City’s website.

**Table 7: EV Goal and Targets**

<table>
<thead>
<tr>
<th>Goal and Targets</th>
<th>Baseline</th>
<th>Data Source</th>
<th>Tracking Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plan Goal:</strong> By 2050, reduce</td>
<td>In 2016, the total on-road GHG emissions were 75,600 MT CO\textsubscript{2}e.</td>
<td>City Greenhouse Gas Emissions Inventories</td>
<td>City Sustainability</td>
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<tr>
<td>greenhouse gas emissions from</td>
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<td>on-road transportation by 75%</td>
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<td>from the 2016 baseline with a 6%</td>
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<tr>
<td>reduction by 2030.</td>
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</tr>
<tr>
<td><strong>Lead by Example Target:</strong></td>
<td>In 2020, both the City and LPEA’s fleets were comprised of less than 1% EV.</td>
<td>Vehicle Fleet Inventories</td>
<td>City Fleet, LPEA Operations</td>
</tr>
<tr>
<td>Replace 100% of City/LPEA fleet</td>
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<tr>
<td>with ZEVs by 2050; replace 100%</td>
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<tr>
<td>of light-duty vehicles, excluding</td>
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<td>Police Department vehicles, with</td>
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<tr>
<td>EVs by 2030.</td>
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<td></td>
<td></td>
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<tr>
<td><strong>Infrastructure Target:</strong></td>
<td>In 2020, Durango had 34 public charging stations. The number of workplace</td>
<td>U.S. Department of Energy Alternative Fueling</td>
<td>City Sustainability, LPEA</td>
</tr>
<tr>
<td>Increase the number of charging</td>
<td>and home charging stations was unknown.</td>
<td>Station Locator</td>
<td>Energy Management</td>
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<td>stations annually based on</td>
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<td>projections, actual usage data,</td>
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<td>and user feedback</td>
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<tr>
<td><strong>Public Adoption Target:</strong></td>
<td>In 2020, the portion of light- and heavy-duty vehicles that were EVs was</td>
<td>EVvaluateCO Dashboard, Durango Branch of the</td>
<td>City Sustainability, LPEA</td>
</tr>
<tr>
<td>By 2050, 70% of light-duty vehicles and 75% of heavy-duty vehicles will be EVs.</td>
<td>less than 1% of the vehicle population.</td>
<td>Colorado Division of Motor Vehicles</td>
<td>Energy Management</td>
</tr>
</tbody>
</table>

**Plan Updates**

The Durango EV Readiness Plan is intended to function as a living, dynamic document that evolves with technology and changing community needs and priorities. Every year, the City and LPEA will check in to evaluate outcomes and will plan to complete a full review and update of the plan every three to five years, so it remains relevant and impactful. Future updates to the Durango EV Readiness Plan might include a greater focus on vehicle-to-grid solutions, electric multimodal transportation options, and increasing EV access to all Durango residents.
### Strategy Summary

<table>
<thead>
<tr>
<th>Phase 1 (2021-2022)</th>
<th>Phase 2 (2023-2025)</th>
<th>Phase 3 (2026-2030)</th>
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<tbody>
<tr>
<td><strong>LEAD BY EXAMPLE</strong></td>
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<tr>
<td>L-1 GoEV Cities Resolution</td>
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<td>L-2 EV-Friendly Fleet Policies and Procedures</td>
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<td>L-3 Fleet Charging Infrastructure</td>
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<td>L-4 Light-Duty Fleet Optimization and Electrification Plan</td>
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<td>L-5 Employee Commuting Incentives</td>
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<td>L-6 EV Training</td>
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<td>L-7 Peer Learning for Fleet Electrification</td>
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<td>L-8 Adopt Electric Transit Technologies</td>
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<td>L-9 Adopt Heavy-Duty ZEV Technologies</td>
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<td>L-10 EV-Certified Fleet Mechanics</td>
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<td><strong>INFRASTRUCTURE</strong></td>
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<tr>
<td>I-1 Promoting Existing Local Charging Stations</td>
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<td>I-2 Public Charging at Public Facilities</td>
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<td>I-3 EV-Friendly Development Codes</td>
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<tr>
<td>I-4 Public Parking EV Strategy</td>
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<tr>
<td>I-5 Resources for Charging Station Installations</td>
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<tr>
<td>I-6 Business Rebates for EV Charging Stations</td>
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<td>I-7 Matching Funds for Public Charging Stations on Private Property</td>
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<td>I-8 Regional Public Charging Assessment and Installations</td>
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<td>I-9 Regional EV Infrastructure Outreach Campaign</td>
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<td>I-10 Workplace Charging Outreach</td>
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<td>I-11 Electrical Infrastructure Upgrades</td>
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<td>I-12 Vehicle-to-Grid Technologies</td>
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<td>I-13 Mobility Hubs</td>
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<td><strong>PUBLIC ADOPTION</strong></td>
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<td>P-1 Resident EV Education</td>
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<td>P-2 Business EV Education</td>
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<td>P-3 EV Owner Recognition</td>
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<td>P-4 School Bus Electrification</td>
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<td>P-5 EV Marketing for Tourism</td>
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<td>P-6 EV Marketing for Business Attraction</td>
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<td>P-7 EV Advisors</td>
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<td>P-8 Resident EV Purchasing Incentives</td>
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<td>P-9 EV Commuter Transit Incentives</td>
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<td>P-10 Commuter EV Vanpool Programs</td>
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<td>P-11 E-bike Program</td>
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<td>P-12 Workplace EV Carshare Outreach</td>
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<tr>
<td>P-13 Rental Fleet Electrification Outreach</td>
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</tbody>
</table>
APPENDICES

See following pages.
## APPENDIX A: EV GLOSSARY

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alternating current (AC)</strong></td>
<td>The most common form of electricity used in homes and businesses. Uses alternating current where the current periodically changes direction. Batteries require DC electricity to charge, so EV chargers must convert the supplied AC electricity to DC power.</td>
</tr>
<tr>
<td><strong>Amps</strong></td>
<td>The measurement of the amount of electrical energy “flowing” through a charger. This is determined by the electrical load required by the equipment and can vary over time.</td>
</tr>
<tr>
<td><strong>Battery Electric Vehicle (BEV)</strong></td>
<td>An all-electric vehicle, fueled by plugging into an external charger, has no tailpipe emissions. Requires minimal maintenance.</td>
</tr>
<tr>
<td><strong>Direct current (DC)</strong></td>
<td>The form of electricity with the current only flowing in one direction. This is the type of electricity batteries both supply and require (to charge). EV chargers must convert the supplied AC electricity to DC power.</td>
</tr>
<tr>
<td><strong>Electricity consumption</strong></td>
<td>Measured in kilowatt-hours (kWh) and represents the amount of electricity that has been consumed over a certain time period.</td>
</tr>
<tr>
<td><strong>Electric demand</strong></td>
<td>Measured in kilowatts (kW) and represents the rate at which electricity is consumed. Most commercial energy rates incorporate a charge for electric demand as well as electric consumption.</td>
</tr>
<tr>
<td><strong>Electric vehicle (EV)</strong></td>
<td>A vehicle that uses an electric engine for all or part of its propulsion.</td>
</tr>
<tr>
<td><strong>Electric vehicle supply equipment (EVSE)</strong></td>
<td>Infrastructure required to support EVs (e.g., chargers, electrical supplies).</td>
</tr>
<tr>
<td><strong>Heavy-duty vehicles</strong></td>
<td>Commercial vehicles over a minimum Gross Vehicle Weight Rating (GVRW) of 8,500 lbs.</td>
</tr>
<tr>
<td><strong>Hybrid Electric Vehicle (HEV)</strong></td>
<td>Contains both an electric motor and a gasoline engine. The gasoline engine powers a generator that charges the electric motor. No external battery charger is used. Runs at a constant speed, which increases fuel efficiency.</td>
</tr>
<tr>
<td><strong>Internal combustion engine (ICE)</strong></td>
<td>Traditional vehicle engine that uses the direct combustion of gasoline, diesel, or other fuels.</td>
</tr>
<tr>
<td><strong>Kilowatt-hour (kWh)</strong></td>
<td>The amount of electricity being sent to the EV battery from the charger in one hour. This is calculated by volts times amps, divided by 1,000.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td><strong>Level 1 charging station</strong></td>
<td>Uses a standard 120-volt AC outlet and can take 8 to 12 hours to fully charge a depleted battery; intended for residential use only.</td>
</tr>
<tr>
<td><strong>Level 2 charging station</strong></td>
<td>Uses a 220-volt or 240-volt AC outlet and can fully charge a depleted battery in 4 to 6 hours; can be used in both residential and commercial settings.</td>
</tr>
<tr>
<td><strong>Level 3/DC Fast charging station</strong></td>
<td>Uses an industrial 480-volt DC outlet and can charge a battery to 80% in 20 to 30 minutes; used in commercial settings where the anticipated charge time is limited (e.g., supermarket, gas station); will be used on Alternative Fuel Corridors – a national network of major thoroughfares supporting EVs and other alternative fuels.</td>
</tr>
<tr>
<td><strong>Light-duty vehicles</strong></td>
<td>Passenger cars with a maximum Gross Vehicle Weight Rating (GVRW) of 8,500 lbs, such as passenger cars, small SUVs (e.g., Chevrolet Equinox), and small pickups (e.g., Chevrolet Silverado 2500HD).</td>
</tr>
<tr>
<td><strong>Plug-in Hybrid Electric Vehicle (PHEV/PEV)</strong></td>
<td>Contains both an electric motor and a gasoline engine. An external plug is used to fuel the electric motor. The electric motor is used until the battery is depleted; at this point the gasoline engine takes over. Lower tailpipe emissions than traditional ICE and longer ranges than most BEVs.</td>
</tr>
<tr>
<td><strong>Range Anxiety</strong></td>
<td>Fear of running out of power in an EV before reaching a charging station or the desired destination.</td>
</tr>
<tr>
<td><strong>Range per hour (RPH)</strong></td>
<td>A measurement of the miles an EV can travel on one hour of charge. This is generally applied to EV charging stations and expressed in terms of typical EV efficiency.</td>
</tr>
<tr>
<td><strong>Vehicle miles traveled (VMT)</strong></td>
<td>A way of measuring integration of EVs and associated reduction in GHG emissions by considering electric miles that replace traditional vehicle miles.</td>
</tr>
<tr>
<td><strong>Volts</strong></td>
<td>A measurement of the force pushing the flow of energy through a charger. This measurement is determined by electricity supply. Standard household outlets provide 120 volts; outlets for dryers or other high-powered household equipment supply 240 volts.</td>
</tr>
<tr>
<td><strong>Zero Emission Vehicle (ZEV)</strong></td>
<td>A vehicle that produces zero or near-zero exhaust emission of any criteria pollutant (or precursor pollutant) or greenhouse gas under any possible operational modes or conditions; includes battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), and fuel cell electric vehicles (FCEVs).</td>
</tr>
</tbody>
</table>
APPENDIX B: OUTREACH SUMMARY

The development of Durango’s EV Readiness Plan included opportunities for input from key stakeholders and the broader community. This appendix summarizes the results of the following:

- Stakeholder Interviews and Focus Groups
- Stakeholder Workshop
- Community Survey

Stakeholder Interviews and Focus Groups
In order to gain an understanding of the barriers and opportunities related to electric vehicle (EV) adoption in Durango, the City of Durango (City) and La Plata Electric Association (LPEA) identified key stakeholders throughout the process. The first round of engagement was divided into two groups:

- **Interviews (7):** LPEA staff, City staff, an EV charging station site host, and the Durango EV Enthusiasts were invited to participate in 30-minute interviews to explain how their operations are or might be impacted by EV adoption. Barriers to and opportunities for EV adoption were identified in each interview, based on the stakeholder’s unique expertise. The interviews took place using Zoom Meetings and were documented through facilitator notetaking.

- **Focus Groups (4):** In order to engage key industries, four focus groups were organized: Economic Development, Tourism, Auto Sales and Service, and EV Infrastructure. The hour-long focus groups identified barriers to and opportunities for EV adoption, based on to the focus group’s unique perspective. The focus groups took place using Zoom Meetings and were documented through facilitator notetaking. Google Jamboards (virtual white boards), and Zoom Polls were also used in the Economic Development Focus Group to prompt stakeholders to share their feedback and ideas.

Interview: Jerry Sutherlin, Vice President of Operations, LPEA | Oct. 30, 2020

**Purpose:** To better understand electrification barriers and opportunities for LPEA’s fleet.

**About:**
- The LPEA fleet includes line operations vehicles (e.g., bucket trucks, digger derricks) and non-line operations (e.g., passenger cars, pickup trucks). There is interest to electrify both vehicle groups.
- The LPEA fleet is divided into Durango and Pagosa Springs operations.
- The LPEA fleet currently includes two electric vehicles and three hybrid vehicles.
### Barriers to EV Adoption
- Limited EV model availability - fleet operations require light- and heavy-duty trucks
- Relatively new fleet - limits the number of vehicles due for replacement
- No formal vehicle replacement plan/policy - no established criteria to support EV procurement

### Opportunities for EV Adoption
- Employee interest - some employees prefer to drive EVs
- Existing experience with EVs - LPEA has two EVs and seven charging connectors
- New technology - staff has heard positive feedback from peers about electric bucket trucks
- Telematics - telematics study could inform a vehicle replacement plan focused on right-sizing their fleet electrification efforts
- On-site maintenance - an LPEA mechanic has taken the initiative to learn more about EV maintenance
- Company growth - EVs contribute to beneficial electrification by adding load to LPEA’s system
- Community partnership - LPEA has begun working with school district to explore electric bus program

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**Interview: Wade Moore, Parking Operations Manager, City of Durango | Oct. 30, 2020**

**Purpose:** To better understand barriers and opportunities for EV adoption, related to parking in Durango.

**About:**
- The City’s Parking Division maintains approximately 1,000 parking meters and is in the process of transitioning all so they can accept payment by credit card.
- The City owns and operates three dual-port EV chargers in the Durango Transit Center (250 W 8th St.) parking lot. There is a fee of $1.50 per charge but electric vehicles do not require a parking permit while charging.

### Barriers to EV Adoption
- Aged infrastructure in downtown district - updates result in local business disruption
- Confusing signage - existing EV parking space signage references “efficient or electric vehicles”, making it difficult to enforce
- Perception that EV parking is not profitable - private property owners seem to be resistant to install EV chargers until profitability is proven
- Geography - Durango parking options are limited by mountainous terrain and the riverfront
- Funding - City’s EV parking fees are minimal; fees go to Transit Department to cover electricity costs

### Opportunities for EV Adoption
- Upcoming parking study - EVs can be incorporated into the parking study which will include recommendations for pricing structure, overall parking plan, and signage
- Public-private partnership - local business parking lots could provide EV parking
- Park-n-rides - the large number of long-distance commuters could leverage EV charging stations in park-n-ride lots

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*Electric Vehicle Readiness Plan* 33
Interview: Sarah Kelly and Gordon Rodda, Durango EV Enthusiasts | Oct. 30, 2020

**Purpose:** To better understand barriers to and opportunities for EV adoption in Durango, from the perspective of local, passionate EV owners.

**About:**

- The Durango EV Enthusiasts formed in 2017 when several first-time EV owners came together to learn from each other, share their knowledge with the larger community, and advocate for increased EV infrastructure.
- The group met regularly between 2017 and 2019, hosting informal ride-and-drives events, and participating in the community Snow Down light parade (in their EVs). When the group’s regular meetings experienced a decline in attendance, they shifted their efforts to develop an educational website, [ev4corners.org](http://ev4corners.org).

<table>
<thead>
<tr>
<th>Barriers to EV Adoption</th>
<th>Opportunities for EV Adoption</th>
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<tbody>
<tr>
<td>COVID-19 restrictions - limited outreach opportunities</td>
<td>Increased Tesla ownership - expected demand for networking and educational opportunities for new owners</td>
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<tr>
<td>Limited stock - local dealers don’t stock many EVs</td>
<td>Reduced emissions from EVs - residents are concerned with air quality</td>
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<tr>
<td>EV class availability - residents are looking for EV pickup trucks</td>
<td>Volunteer enthusiasm - Durango EV Enthusiasts are eager to support Durango’s EV Readiness Plan during planning, outreach, and implementation stages</td>
</tr>
<tr>
<td>Community perception - many residents believe there is insufficient charging to own an EV and that EVs are too complicated and, therefore, are not an option to consider</td>
<td>Outreach channels - Durango EV Enthusiasts is willing to share information through their website and their network</td>
</tr>
<tr>
<td>Upfront purchase cost - residents, especially those who prefer to buy used vehicles, may not consider EVs because of the upfront purchase costs</td>
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<td>Confusion of roles - Durango EV Enthusiasts doesn’t want to interfere with work being done by 4CORE</td>
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</table>
Interview: Nicol Killian, Community Development Assistant Director and Scott Shine, Planning Manager, City of Durango | Nov. 2, 2020

**Purpose:** To better understand barriers to and opportunities for EV adoption, related to planning and development in Durango.

**About:**
- The City’s Community Development Department is responsible for planning, business development, sustainability, parking, and other operations necessary to create an EV-ready community.

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<tr>
<th>Barriers to EV Adoption</th>
<th>Opportunities for EV Adoption</th>
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<tbody>
<tr>
<td>Lack of EV charging infrastructure - the City has spoken with service stations about adding charging stations, but there was no interest</td>
<td>Increasing Durango’s visibility - EVs will help elevate Durango for visitors and new businesses; hotels will be key locations</td>
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<tr>
<td>Parking perception - the Smiley Building converted several parking spaces to EV charging stations and have received complaints from the community about limiting downtown parking options</td>
<td>EV-ready code updates - the City is interested in incorporating EV-friendly policies into its Land Use Development Code, particularly around requirements for multifamily and commercial developments</td>
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<tr>
<td>Unclear EV code requirements - the code, as written, only addresses EV charging stations as a primary land use</td>
<td>Public charging stations - the City is interested in adding charging stations at public facilities including: the Community Recreation Center, Library, along highway corridors, and near or at Fort Lewis College</td>
</tr>
<tr>
<td>Upfront cost - need to focus on code requirements that help buildings get economically ready for EV adoption, rather than put a significant cost burden on developers and businesses</td>
<td>Upcoming parking study - the City is planning to update its parking codes and has the opportunity to incorporate EV considerations</td>
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<td>E-bikes - the City recently completed a successful pilot allowing e-bikes on the Animas River Trail and is considering expanding where e-bikes are allowed; considering shared e-bike program with Fort Lewis College</td>
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<td></td>
<td>Peer learning - best practices from communities similar to Durango resonate (e.g., Colorado - Grand Junction, Glenwood Springs, Boulder, Fort Collins, Montrose, Colorado Springs; Ketchum, ID; Park City, UT; ski resort towns)</td>
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<td></td>
<td>Lead by example - interest in how the City can lead the community in EV adoption through its fleet operations</td>
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</table>
Interview: Sarah Hill, Transportation Assistant Director and Devin King, Multimodal Administrator, City of Durango | Nov. 13, 2020

**Purpose:** To better understand barriers to and opportunities for EV adoption, related to multimodal transportation in Durango.

**About:**
- The City’s Transportation Department is responsible for transportation planning including transit and multimodal transportation.
- Transit electrification is a priority of the department.

<table>
<thead>
<tr>
<th>Barriers to EV Adoption</th>
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<tbody>
<tr>
<td>Transit fleet electrification - City has done preliminary research, but is waiting for technology advancements (e.g., eliminating the need for diesel heat)</td>
<td>EV commuter savings - reduced fuel and maintenance costs make EVs an attractive option for those with long commutes</td>
</tr>
<tr>
<td>Congestion - EVs don’t solve the congestion problem Durango faces, due to its geographic limitations of mountainous terrain and the riverfront</td>
<td>Mobility hubs - new EV infrastructure at locations with transit stops and bike infrastructure could support Durango’s multimodal vision</td>
</tr>
<tr>
<td>Funding - the gas tax is a major funding source for transit; unsure how that will factor into electrification</td>
<td>EV charging locations - Bodo Park, Three Springs (park-n-ride location for commuters)</td>
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<td>E-bikes - Durango is bike centric; opportunity to partner with Fort Lewis College and local bike shops for e-bike share or rental options (avoid external bike share company); e-bikes are also a good option for those aging in place</td>
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<td>Land Development Code update - opportunity to incorporate EV and mobility hub considerations</td>
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<td>Need for transportation to airport - new routes could be created for electric transit</td>
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<td>Electric van share - companies with employee commuters could cost share an electric van with the City or other partners</td>
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<td>Regional EV infrastructure - City has a contract with Roadrunner transit to allow pass overlap and could build on the partnership by adding EV charging stations at park-n-rides along those routes</td>
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<td>EV commuter incentive; potential to provide free transit passes for those who commute with an EV and park in the park-n-ride</td>
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Interview: Charles Shaw, Site Host, The Smiley Building | Dec. 3, 2020

**Purpose:** To better understand the experience of being a site host, including barriers to and opportunities for EV charging infrastructure buildout in Durango.

**About:**

- The Smiley Building installed 4, dual-port ChargePoint Level 2 charging stations through the Charge Ahead grant program; charging is used by building tenants, guests, and visitors to the area.
- LPEA provided a $1,200 per dual-port charger incentive. They received two and were very grateful; believes the City should offer a similar program to businesses.
- Usage has tapered off since the COVID-19 pandemic started (half or less of pre-COVID-19 utilization rate) despite tourists still frequenting downtown.
- Prior to COVID-19, stations welcomed a mix of Smiley Building tenants and guests (including those attending classes and patronizing the in-building Smiley Café) and tourists/visitors (including frequent Tesla vehicles with out-of-state license plates).

<table>
<thead>
<tr>
<th>Barriers to EV Infrastructure</th>
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<tr>
<td>• Existing gaps in infrastructure ecosystem - need a balance of appropriately-sited Level 3 and Level 2 chargers</td>
<td>• City and/or LPEA could incentivize local businesses and/or support funding of the 20% required for Charge Ahead</td>
</tr>
<tr>
<td>• Confusing and missing signage - existing EV parking space signage references “efficient or electric vehicles”, making enforcement difficult</td>
<td>• Focus on hotels, commercial, and workplace</td>
</tr>
<tr>
<td>• Lack of enforcement for charging to ensure enabled stalls are available and clear of impediments</td>
<td>• Potential to expand LPEA’s residential charging program to businesses</td>
</tr>
<tr>
<td>• Lack of financial support and resources for local businesses</td>
<td>• City needs a mix of appropriately-sited Level 3 and Level 2 chargers, ideally placed where people want to spend time (or where the City would like people to spend time)</td>
</tr>
</tbody>
</table>
Interview: Levi Lloyd, Operations and Utilities Director and Tom Kramer, Fleet Facilities Manager | Dec. 11, 2020

**Purpose:** To better understand barriers and opportunities for EV adoption related to City of Durango fleet operations.

**About:**
- The City fleet includes 324 pieces of equipment ranging from lawn mowers to trash trucks.
- The City tracks fleet mileage and hours through manual entry into a vehicle tracking database software.
- City departments pay for their own fuel and, annually, pay into an equipment fund that is used to replace vehicles when they reach the end of their warranty.
- Vehicles are replaced like for like, unless a new need appears.
- Vehicles are typically returned to the manufacturer after the warranty expires.
- Departments are responsible for purchasing and justifying any new additions (not replacements) to their fleet.

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<tr>
<th>Barriers to EV Adoption</th>
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<tr>
<td>EV model availability - City fleet is primarily trucks and other vehicles (e.g., 15-passenger buses) that do not currently have viable EV replacements</td>
<td>EV replacement planning - the City looks two years ahead in vehicle planning and has identified at least two candidates for all electric vehicles and several more for hybrid vehicles</td>
</tr>
<tr>
<td>Infrastructure cost - City fleet is parked at 6-10 facilities across town, so initial infrastructure investment would be significant</td>
<td>Equipment fund - the fund is structured in a way that would be able to fund EV replacements (if they are a good fit)</td>
</tr>
<tr>
<td>Lack of regional infrastructure - the fleet travels great distances, requiring regional infrastructure to support it; auto manufacturers are unwilling to send demo vehicles because there isn’t enough fast charging to get them to Durango</td>
<td>IT fleet - currently being right sized and could include EVs</td>
</tr>
<tr>
<td>Mechanic training - mechanics are ASE certified and would need additional training to service EVs</td>
<td>EV-ready facilities - existing or planned conduit is available for EV charging at several City facilities</td>
</tr>
<tr>
<td>State level coordination - advocating for rural EV infrastructure will support community and fleet EV efforts</td>
<td>Charging network control system - manage charging schedules to accommodate unique fleet needs, in coordination with IT and LPEA</td>
</tr>
</tbody>
</table>
Focus Group: Economic Development | Nov. 12, 2020

Participants:

- Alex Rugoff, Redevelopment Coordinator, City of Durango
- Imogen Ainsworth, Sustainability Coordinator, City of Durango
- Monique DiGiorgio, Executive Director, Local First
- Theresa Graven, Tourism and Communications Director, Visit Durango
- Mark Pearson, Executive Director, San Juan Citizen’s Alliance
- Lauren Haggerty, Membership Coordinator, Local First
- Tim Walsworth, Executive Director, Durango Business Improvement District

Key Takeaways:

- Regional partnerships will be vital to success, both to build out a regional charging network that allows safe, reliable travel and to provide opportunities for international visitors traveling via EVs.
- There is great synergy with Durango’s movement toward sustainable tourism and generally eco-conscious visitors.
- There isgood synergy with Durango’s businesses that desire to be sustainable; however, there are several barriers including: upfront costs of vehicles and infrastructure, lack of knowledge of the benefits of EVs, and a movement toward “work from home”.

Purpose: To identify barriers and opportunities related to supporting EV adoption by Durango’s businesses and supporting EV tourism.

<table>
<thead>
<tr>
<th>Barriers to EV Adoption</th>
<th>Opportunities for EV Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient network of regional charging to support EV travel - (e.g., missing charging options between Durango and Albuquerque, and along the Million Dollar Highway). Some existing charging station sites only support Tesla; need to support all EV types</td>
<td>Sustainable tourism - creating an EV-friendly community will attract eco-conscious visitors</td>
</tr>
<tr>
<td>Lack of education regarding benefits of EVs - (e.g., considerably less maintenance, much cheaper fuel, quick acceleration, drives well in winter conditions with snow tires, range)</td>
<td>o Durango is a drive-market (or fly-drive market) destination</td>
</tr>
<tr>
<td>Limited parking perception - drivers can be frustrated with limited parking directly in front of downtown destinations, although ample parking exists in nearby lots and streets; EV charging stations are sometimes perceived as “taking” away parking spaces</td>
<td>o Durango is launching a campaign to become a leader in “sustainable tourism”</td>
</tr>
<tr>
<td>Upfront costs - converting fleets to EV will require investment in charging infrastructure</td>
<td>o City/LPEA could partner with nearby airports to host EV rental fleets marketed toward international travelers, who tend to be eco-conscious and plan longer stays</td>
</tr>
<tr>
<td>Tenant limitations - businesses that do not own their property may not have the authority to install charging stations at their site</td>
<td>o 4CORE is helping develop carbon offset tourism for travelers</td>
</tr>
<tr>
<td>Capturing visitor business - recharging provides time for visitors to patronize Durango businesses</td>
<td>Public-private partnerships - certain business types are key charging sites (e.g., co-working space, hotels, downtown areas - to encourage visitors to explore while they charge)</td>
</tr>
<tr>
<td>Barriers to EV Adoption</td>
<td>Opportunities for EV Adoption</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>• Changing use patterns - new culture of “work from home” may reduce need for workplace charging for employees, increasing demand for home charging and public charging options</td>
<td>• Regional partnerships - neighboring cities can work together to build out a charging network that supports regional EV travel</td>
</tr>
<tr>
<td></td>
<td>• Charging infrastructure funding - state offers grants for DC fast chargers along key corridors and Level 2 chargers in public locations or for businesses; LPEA offers home charging incentives</td>
</tr>
<tr>
<td></td>
<td>• EV-friendly codes - incorporating EV best practices into codes will help accommodate future EV charging at homes and businesses</td>
</tr>
<tr>
<td></td>
<td>• General EV business education - leverage Business Improvement District (BID) outreach channels including Downtown and North Main monthly meetings and weekly newsletters; focus on cost saving opportunities for business fleet</td>
</tr>
<tr>
<td></td>
<td>• Sustainability business education - EV education campaign can also promote other sustainable practices for businesses; Local First supports businesses through triple bottom line decision making</td>
</tr>
<tr>
<td></td>
<td>• Reduced environmental impact - low- and no-emissions EVs reduce resident and visitor impact on the environment</td>
</tr>
<tr>
<td></td>
<td>• Business attraction - EV-friendly community will appeal to climate-conscious businesses and provide businesses “big-city” amenities</td>
</tr>
</tbody>
</table>

Quotes:

- “I can charge my car for $4.50 and get 160 miles” – Monique
- “Durango’s international visitors tend to stay longer, spend more money, and support local businesses” – Theresa
- “We want to position Durango as a leader in the sustainable tourism space”

Focus Group: Tourism | Nov. 17, 2020

Participants:

- Zach Burns, General Manager, DoubleTree by Hilton
- Tony Vicari, Director of Aviation, Durango-La Plata County Airport
- Imogen Ainsworth, Sustainability Coordinator, City of Durango
Key Takeaways:

- Durango-La Plata County Airport offers several EV-related opportunities, including fleet electrification, EV infrastructure installation, coordination of vehicle rental companies and other ground transportation options, and sustainable tourism messaging.
- Vehicle electrification needs to make financial sense; EV charging shouldn’t outstrip demand.
- As a drive market, Durango’s tourism industry has fared well during COVID-19; however, businesses that are part of larger companies may face spending limitations due to more widespread impacts of COVID-19. Short term, local businesses may be better equipped to support electrification that requires capital investment.
- Regional electrification is a priority since many tourists make long trips to remote areas.

Purpose: To better understand the role of key players in Durango’s tourism industry in EV adoption.

<table>
<thead>
<tr>
<th>Barriers to EV Adoption</th>
<th>Opportunities for EV Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information and data availability - need additional data for decision making (current and future demand as a percent of Durango’s market, life cycle costs, understanding of vehicle capability)</td>
<td>Hotel charging - promotion of existing free Level 2 public charging stations; space for additional stations</td>
</tr>
<tr>
<td>Model availability - majority of airport and hotel fleets are trucks and vans, necessitating EV classes to meet the demands of the job (for fleets) and of travel (for visitors)</td>
<td>Incorporating life-cycle costs - businesses with sufficient liquid capital can handle upfront cost if long-term return on investment (ROI) shows savings (e.g., airport fleet, rental cars)</td>
</tr>
<tr>
<td>Upfront costs - for businesses struggling financially during COVID-19, upfront costs may be too large a barrier; some organizations are focusing on “emergency” or “essential” spending only (e.g., hotels)</td>
<td>Airport opportunities - public parking, inbound travelers (rentals), airport fleet, ground transportation, airline ground service equipment</td>
</tr>
<tr>
<td>Lack of demand - the airport has received no formal requests, from guests, for charging stations</td>
<td>City development code - could require new commercial developments to install charging</td>
</tr>
<tr>
<td></td>
<td>Creative funding mechanisms - grants, public-private partnerships for public EV infrastructure, shared passenger vehicles, rental vehicles</td>
</tr>
<tr>
<td></td>
<td>Focus on heavy hitters - given economic climate, engage with those most able to participate in the near term (e.g., airport, Purgatory Ski Resort, Mesa Verde National Park, Durango &amp; Silverton Narrow Gauge Railroad)</td>
</tr>
<tr>
<td></td>
<td>Regional hub model - consider partnering with regional destinations, including Purgatory Ski Resort, Silverton, Pagosa Springs, and Wolf Creek Ski Area</td>
</tr>
<tr>
<td></td>
<td>EV Car Share Program - build awareness of EVs through Car Share program, or similar, which could serve Fort Lewis College or allow visitors to travel locally via EV</td>
</tr>
</tbody>
</table>
Focus Group: Infrastructure | Nov. 19, 2020

Participants:

- Drew Chandler, Principal, SEH, Inc.
- Nancy Dosdall, Planner, SEH, Inc.
- Kathy Hilimire, Sustainability Coordinator, Fort Lewis College
- Ben Jason, Owners, Living Solar
- Dominic May, Energy Management Supervisor, La Plata Electric Association
- Gary Whalen, Growth Fund Properties Group

Key Takeaways:

- To avoid expensive retrofits and leverage new development underway, requiring or incentivizing EV infrastructure in new development should be prioritized.
- Regional infrastructure is improving but remains a barrier for traveling to the south and to the Navajo Nation.
- Level 2 and Level 3 charging have unique opportunities to attract and retain visitors.
- Streamlining the development process for EV infrastructure is important in supporting potential site hosts.

Purpose: To better understand barriers to and opportunities for expanding local and regional EV infrastructure.

<table>
<thead>
<tr>
<th>Barriers to EV Adoption</th>
<th>Opportunities for EV Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity demand increase - volatility for LPEA and affordability concerns for host</td>
<td>Demand from students/faculty - Fort Lewis has seen high demand for its charging stations</td>
</tr>
<tr>
<td>Parking compromises - removing traditional parking for EV stations in congested areas like downtown or small restaurant parking lots may cause pushback</td>
<td>Regional infrastructure - more stations can be added to regional corridors through state corridor program (e.g., Pagosa Springs, Purgatory Ski Resort) will support student, residents, and visitor EV adoption</td>
</tr>
<tr>
<td>Retrofit costs - installing charging stations in existing development can be expensive. (e.g., Fort Lewis College had to pay more than $50,000 for a Level 2 installation due to unanticipated utility lines and bringing new service off transformer; Mercy Hospital Level 2 installation cost $18-20,000)</td>
<td>Existing EV-ready infrastructure - SEH installed conduit on Main Avenue in 2010 that could make EV charging station installations affordable and accessible</td>
</tr>
<tr>
<td>Lengthy installation process - permitting, code review, and construction can lead to lengthy installation timeline (e.g., Fort Lewis went through a year-long process)</td>
<td>Level 3 charging - could draw visitors to commercial districts, including Three Springs and downtown</td>
</tr>
<tr>
<td>Lack of infrastructure that connects Fort Lewis students to their hometowns, especially locations south of Durango, such as New Mexico, Arizona, and the Navajo Nation</td>
<td>Level 2 charging - could encourage visitors to stay overnight in Durango and patronize local businesses</td>
</tr>
<tr>
<td>Future-proofing stations - uncertainty of future demand and technology makes it difficult to</td>
<td>Airport charging - opportunity for Level 1 and Level 2 charging stations</td>
</tr>
<tr>
<td></td>
<td>Leadership by example - City and LPEA fleet electrification efforts (e.g., vehicle replacement policies prioritizing EVs) would demonstrate benefits to wider community</td>
</tr>
</tbody>
</table>
### Barriers to EV Adoption

- Ensure initial construction will be sufficient for years to come

### Opportunities for EV Adoption

- EV infrastructure at Three Springs - is only half built out, so there is an opportunity to install charging infrastructure during new development and position developer as “ahead of the curve”
- EV parking incentives – parking-reduction incentives (e.g., bike parking requirements) have been successful in the past

### Quotes:

- “We used an ‘if you build it, they will come’ approach and we have a high demand for our charging stations” – Kathy Hilimire
Focus Group: Auto Sales and Service | Nov. 20, 2020

Participants:
• Greg Rowland, Morehart Murphy Regional Auto Center
• Tom Ondrako, Durango Motor Company
• Mike Aus, Durango Motor Company

Key Takeaways:
• The auto sales industry understands the shift is coming and doesn’t want to get left behind, but needs to balance that with current customer demand.
• Durango’s EV plan should consider auto dealers as partners and help leverage and protect that partnership. Pop-up, direct sales companies that circumvent dealers often take away from the local auto industry and leave customers without long-term support.
• Increasing EV market share will require a multi-pronged approach, including improving regional charging infrastructure and educating the community as new models become available.
• As more truck and SUV models become available, the auto industry must overcome the chicken and egg issue of not stocking vehicles unless there is demand.

Purpose: To better understand key concerns, current barriers, and future opportunities, from the perspective of existing and future EV suppliers in Durango.

<table>
<thead>
<tr>
<th>Barriers to EV Adoption</th>
<th>Opportunities for EV Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial incentives are important to EV adoption - phaseout of state and federal tax incentives could be a barrier</td>
<td>Some manufacturers are providing demos without requiring franchises to become certified</td>
</tr>
<tr>
<td>Lack of model availability generally - can’t sell EVs if companies don’t make EVs</td>
<td>Model availability from key manufacturers is improving (e.g., Ford, GMC)</td>
</tr>
<tr>
<td>Demand for EVs is low - lack of truck and SUV availability, but majority of market is trucks and SUVs; models need to become available, be cost competitive, perform well, and have good range</td>
<td>4CORE partnerships - help organize group-buys and other educational events</td>
</tr>
<tr>
<td>Upfront cost of becoming certified to sell certain models can be prohibitive</td>
<td>Just transition for traditional mechanics; opportunity to work with trade partners and Fort Lewis College</td>
</tr>
<tr>
<td>Lack of infrastructure - especially fast charging and especially along key travel corridors; charging times already make EVs less desirable, and could become even less desirable if there was a wait line for charging</td>
<td>Applying tax credits to the lessor has been successful in metro areas</td>
</tr>
<tr>
<td>Would be helpful to have a piece of collateral as a leave-behind with EV customers</td>
<td>Two-car households are often a better market for EV sales (e.g., one EV, one gas-powered vehicle)</td>
</tr>
</tbody>
</table>
Stakeholder Workshop

One two-hour stakeholder workshop was held with representatives from each of the focus areas, including stakeholders involved in interviews and focus groups. Figure B1 captures most stakeholders, who were asked to introduce themselves via a virtual whiteboard. The objective of this virtual workshop was to prioritize plan strategies and to begin building out work plans for phase 1 and phase 2 strategies. The workshop included a short presentation providing a project and plan update along with an overview of draft goals and targets, then featured a 60-minute breakout session. During the breakout session, stakeholders were organized by focus area and asked to provide feedback on draft focus area targets and strategies. During breakout sessions, stakeholders identified strategies to be added and removed, noted where strategies needed to be re-prioritized, and began identifying key details for shorter term strategies (Phase 1). Strategy details included scope elements or key actions, strategy leads and partners, and resource needs. These details are captured in the strategy work plans for Phase 1 strategies. To facilitate break out groups, virtual whiteboards were used - to allow participants to reorganize strategies, add strategies, and remove strategies. Strategies were sorted by phase, and color coded based on the evaluation score they received (see Figure B2).

Figure B1: Stakeholder Introductions Virtual Whiteboard
Community Survey

A community survey was made available to the Durango community during the month of February - to collect community feedback related to barriers to and opportunities for EV adoption. The results are summarized below.

- Survey Dates: January 27 - March 1
- 309 Responses
- Survey Question Topics
  - **EV ownership status and charging habits** - Do you own? Are you planning to own soon? Where do you charge?
  - **EV ownership barriers and opportunities** - What is preventing you from owning/leasing? What would encourage you to own/lease?
  - **Interest in new programs** - EV carshare, e-bikes
  - **EV charging locations** - Where would you like to see charging stations?
  - **Awareness of existing incentives** - Tax credits, LPEA rebates

While all of the community survey questions will help inform how Durango implements its EV Readiness Plan, there were a few questions that directly informed strategy development. The responses to these questions are displayed on the following page.
If you do not own/lease an EV, what is preventing you from doing so? (select all that apply)

- They don't have a far enough range
- They're too expensive
- They're aren't enough available charging stations
- Other
- I don't think the technology is "there" yet
- I am not interested in EVs
- I don't have enough knowledge about EVs
- I can't access a charger because of where I live
- I don't feel safe using them
- My HOA or property manager doesn't permit charging...

What might encourage you to purchase/lease an EV? (select all that apply)

- A greater selection of EV trucks/SUVs
- A cost-reducing rebate at point of sale
- A tax credit
- More public charging
- If public charging took 30 min or less
- A cash voucher when trading in my old car
- If I could charge easily/reliably at home or work
- If public charge were free
- An opportunity to purchase a used EV
- Group discount at local dealerships
- Other
- None
- Educational resources
- If my peers owned an EV
### How often would you use an EV carshare if available?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>0%</th>
<th>20%</th>
<th>40%</th>
<th>60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple days per...</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A few times a month</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A few times a year</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Unsure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Which e-bike programs would you like to see in Durango (select all that apply)

<table>
<thead>
<tr>
<th>Program</th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citywide e-bikeshare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-bikeshare through employers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rebates for e-bikes at local bike shops</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public charging or e-bikes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designated trails for e-bikes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX C: STRATEGY EVALUATION METHODOLOGY

Strategies were evaluated based on a set of criteria and considerations. Note, the cross-cutting priorities of accessibility and tourism were evaluated as part of the impact category.

**Impact** – Does the strategy contribute to Durango’s goals and priorities?
- **GHG Reduction**: Does the strategy indirectly or directly reduce greenhouse gas emissions?
- **Mobility Improvement**: Does the strategy indirectly or directly improve mobility options for residents, employees, and visitors in Durango?
- **Accessibility Considerations**: Does the strategy indirectly or directly improve accessibility outcomes for low-income residents, multifamily residents, or non-English speakers in Durango?
- **Tourism Considerations**: Does the strategy indirectly or directly support the tourism industry?

**Support** – Is the strategy supported by the community?
- **Public Support**: Did the strategy receive support from stakeholders and/or community members in the community survey?

**Feasibility** – What type of resources are required to implement the strategy?
- **Staffing Resources**: Does the strategy require new staff or significant staff time?
- **Financial Resources**: Does the strategy require new municipal and/or utility funding resources?
- **Integration with Existing Systems/Policies**: Does the strategy require new or modified policies, processes, or programs?
- **Technology Availability**: Is there technology available to support strategy implementation?

Other, non-scoring considerations included:

**Timing**
- **Phase 1**: Launch strategy in 2021-2022
- **Phase 2**: Launch strategy between 2023-2025
- **Phase 2**: Launch strategy between 2025-2030

**Foundational**
- Is the strategy foundational to other strategies? Does it need to be implemented before other strategies can be implemented?
APPENDIX D: STRATEGY WORKPLAN TEMPLATE

Strategy # #: Title

What is the strategy?
Add strategy description here

How will the strategy be implemented?

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1:</strong> List steps needed to implement the strategy</td>
<td>Lead: Who is responsible for this step? (e.g., tracking metrics, reporting, organizing the support team)</td>
<td>Include activities to complete each quarter, including budget requests.</td>
<td>How much staffing time will be required to implement the strategy?</td>
<td>Are there resources outside of the City and LPEA (e.g. state programs, regional initiatives) that will need to be engaged or can be leveraged?</td>
</tr>
<tr>
<td></td>
<td>Support: Who from City, LPEA, or the community needs to support this step?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step 2:

How will impact be measured?

How will you measure the success of the strategy? Identify what metric(s) you will use to track progress, how often you will track progress, and how you will report progress.
APPENDIX E: PHASE 1 (2021-2022) STRATEGY WORKPLANS

This appendix includes workplans for the Durango EV Readiness Plan Phase 1 (2021-2022) strategies in each of the three focus areas. Workplans for Phase 2 (2023-2025) and Phase 3 (2026-2030) strategies will be developed in the year prior to each time frame. Each workplan includes:

• An overall description of the strategy
• Action steps included in the scope of the strategy
• Identification of City and LPEA departments, as well as community partners, who will lead and support strategy implementation
• Expected timing of strategy steps on a quarterly basis
• Estimated staff time required for implementation
  o † = The strategy requires a minimal amount of existing staff time and effort to implement and maintain.
  o † † = The strategy requires a moderate amount of existing staff time to implement and maintain.
  o † † † = The strategy requires new staff to be hired or contracted to implement and maintain.
• Estimated budget (hard costs) required for implementation
  o $ = The strategy can be fully funded through existing municipal/utility funds or grants.
  o $$ = The strategy requires a moderate amount of new municipal/utility funds, due to low-cost or external funding options like grants or private investment.
  o $$$ = The strategy requires significant new municipal/utility funding resources.
• Additional resources available to support implementation
Lead by Example

Strategy L-1: GoEV Cities Resolution

What is the strategy?
Tailor the existing GoEV Cities Resolution to meet the goals of the City of Durango and submit to City Council for adoption, to demonstrate the City’s commitment to EVs/ZEVs. By adopting the GoEV Resolution, local governments recognize greenhouse gas emissions from the transportation sector as one of the largest contributors to climate change and acknowledge a responsibility to reduce those emissions through local policy. The Resolution represents a commitment to embrace electric transportation - to meet the community’s goals and provide cleaner air, more affordable transportation, and leadership in furthering EV adoption nationwide.

How will the strategy be implemented?

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Resolution Adoption: Using the sample GoEV City Resolution Template, develop a resolution tailored to Durango for City Council adoption.</td>
<td><strong>Lead:</strong> City Sustainability, LPEA Energy Management</td>
<td><strong>Q4 2021:</strong></td>
<td>$</td>
<td>GoEV Cities &amp; Counties;</td>
</tr>
<tr>
<td><strong>Support:</strong> City Manager</td>
<td><strong>Q4 2021:</strong></td>
<td>• Contact other Go EV cities and SWEEP to learn more</td>
<td>$</td>
<td>GoEV Cities &amp; Counties;</td>
</tr>
<tr>
<td></td>
<td><strong>Q1 2022</strong></td>
<td>• Draft resolution</td>
<td>$</td>
<td>GoEV Cities &amp; Counties;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Submit resolution for City Council adoption</td>
<td>$</td>
<td>GoEV Cities &amp; Counties;</td>
</tr>
<tr>
<td>2. GoEV Commitment Follow-up: Leverage GoEV City resources to promote the City’s commitment, help implement the City’s EV Readiness Plan, and network with other GoEV cities to share lessons learned.</td>
<td><strong>Lead:</strong> City Sustainability, LPEA Energy Management</td>
<td><strong>Q2 2022:</strong></td>
<td>$</td>
<td>GoEV Cities &amp; Counties</td>
</tr>
<tr>
<td><strong>Support:</strong> City Communications</td>
<td><strong>Q2 2022:</strong></td>
<td>• Promote the City’s commitment as a GoEV city</td>
<td>$</td>
<td>GoEV Cities &amp; Counties</td>
</tr>
<tr>
<td></td>
<td><strong>Q3 2022 and beyond</strong></td>
<td>• Leverage resources available through GoEV Cities &amp; Counties</td>
<td>$</td>
<td>GoEV Cities &amp; Counties</td>
</tr>
</tbody>
</table>

How will impact be measured?

- Adopted GoEV City Resolution
### Strategy L-2: ZEV-Friendly Fleet Policies and Procedures

**What is the strategy?**
Review and adjust purchasing policies, and budgeting and procurement processes, to ensure future ZEV purchases will be supported.

**How will the strategy be implemented?**

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
</table>
| **1. ZEV First Policy**: Adopt a vehicle replacement policy that prioritizes zero emission vehicles. | **Lead**: City Fleet, LPEA Operations  
**Support**: City Sustainability, LPEA Energy Management | **Q4 2021**:  
• Draft and submit policy for leadership approval | / $ |  |
| **2. Budget & Procurement Process Updates**: Adjust fleet budgets to account for electric fuel costs and explore options to leverage the state’s cooperative purchasing program during the procurement process. | **Lead**: City Fleet, LPEA Operations  
**Support**: City Finance, LPEA Finance | **Q1 2022**:  
• Update fleet budget structure | / $ | State of Colorado Local Government Purchasing Assistance |
| **3. Charging Infrastructure Procurement Specs**: Develop charging infrastructure specifications, including IT requirements, to be used as additional stations are added. | **Lead**: City Fleet, LPEA Operations  
**Support**: City Information Services, LPEA Information Technology | **Q1 2022**:  
• Draft specs | / $ |  |

**How will impact be measured?**
- Adopted ZEV First Policy that includes recommended procurement and process updates that support the policy
- Recommended updates from the ZEV First Policy are instituted
## Strategy L-3: Fleet Charging Infrastructure

### What is the strategy?

Review likely charging infrastructure locations for fleet vehicles, to understand necessary electrical upgrades. Install charging stations ahead of procurement in appropriate locations.

### How will the strategy be implemented?

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potential Charging Station Mapping: Use vehicle usage data to identify preferred charging locations.</td>
<td><strong>Lead:</strong> City Fleet, LPEA Operations  &lt;br&gt; <strong>Support:</strong> LPEA Energy Management, LPEA Grid Solutions</td>
<td><strong>Q1 2022:</strong></td>
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<tr>
<td></td>
<td></td>
<td>• Map ideal charging station locations</td>
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</tr>
<tr>
<td>2. Electrical Infrastructure Assessment: Assess potential charging station locations, to review available electrical capacity and identify any necessary electrical upgrades. Some locations may be in coordination with public charging stations (I-2).</td>
<td><strong>Lead:</strong> LPEA Grid Solutions  &lt;br&gt; <strong>Support:</strong> City Building Maintenance, LPEA Operations</td>
<td><strong>Q1 2022:</strong></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Audit City and LPEA facilities for existing electrical capacity</td>
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<td></td>
<td></td>
<td><strong>Q2-3 2022:</strong></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Assess mapped locations based on vehicle dwell time and usage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Charging Station Installation: Contract with local installer(s) to install stations at priority locations, ahead of fleet EV purchases (L-4).</td>
<td><strong>Lead:</strong> City Fleet, LPEA Operations  &lt;br&gt; <strong>Support:</strong> City Building Maintenance</td>
<td><strong>Q4 2022 and beyond:</strong></td>
<td></td>
<td>Charge Ahead Colorado</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Submit necessary budget requests for charging stations</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Install charging stations</td>
<td></td>
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</tr>
</tbody>
</table>

### How will impact be measured?

- Number of fleet-facing charging station locations ready for construction
- Number of fleet-facing charging stations
### Strategy L-4: Light-Duty Fleet Optimization and Electrification Plan

#### What is the strategy?
Optimize light-duty fleet vehicle inventories, ensuring vehicles are selected based on the best fit for their intended use, prioritizing EVs. Participate in funding opportunities as available.

#### How will the strategy be implemented?

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
</table>
| 1. Fleet Vehicle Replacement Plan Updates: Update vehicle replacement plans to prioritize EVs. Outline when each vehicle will be replaced with an EV, based on planned replacement timing, and indicate necessary charging infrastructure. | **Lead:** City Fleet, LPEA Operations  
**Support:** City Sustainability, LPEA Energy Management | **Q2 2022:**  
- Update vehicle replacement plans in coordination with budget and procurement process updates | 1 / $ |  |
| 2. Fleet EV Purchases: Purchase EVs to replace light-duty vehicles identified in the replacement plan, in coordination with charging installations (L-3). | **Lead:** City Fleet, LPEA Operations  
**Support:** City Sustainability, LPEA Energy Management | **Q3 2022:**  
- Inventory available funding sources  
**Q4 2022 and beyond:**  
- Submit necessary budget requests for EVs | 1 / $$$ | Climate Mayors EV Purchasing Collaborative; Charge Ahead Colorado |

#### How will impact be measured?
- Number of fleet vehicles
- Percent of fleet vehicles that are EVs
Strategy L-5: Employee Commuting Incentives:

What is the strategy?
Evaluate employee commuter incentives and expand benefits as appropriate to encourage employees to drive EVs, ride transit, ride bikes and e-bikes, or use other low-carbon modes of transportation. For facilities with little to no public access, consider providing Level 1 charging options for employee use. For facilities with public charging infrastructure installed, consider providing subsidies for employee use of Level 2 charging stations. Align with Employee Traffic Reduction Program under evaluation by the Air Pollution Control Division of the Colorado Department of Health and Environment as appropriate.

How will the strategy be implemented?

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
</table>
| 1. Review Existing Incentives: Inventory existing EV parking, transit, and other community incentives offered to City and LPEA employees. Collect data on employee participation and program costs. | **Lead:** City Sustainability, LPEA Energy Management  
**Support:** City Building Maintenance, LPEA Operations | **Q2 2022:** 
- Evaluate existing programs by reviewing participation and soliciting employee feedback. | $/ |  |
| 2. Identify Potential Incentives: Review best practices to identify potential solutions, conduct employee surveys to understand interest in potential incentives, and research potential funding sources. | **Lead:** City Sustainability, LPEA Energy Management  
**Support:** City Human Resources, LPEA Human Resources | **Q3 2022:** 
- Develop recommended list of incentives | $/ |  |
| 3. Implement New Incentives: Secure budget for new incentives and install any necessary infrastructure. Develop a communications plan to promote the new incentives to employees and determine steps to regularly evaluate and improve the available incentives. | **Lead:** City Sustainability, LPEA Energy Management  
**Support:** City Building Maintenance, LPEA Operations | **Q3 2022:** 
- Submit necessary budget requests 
- **2023 and beyond** 
  - Install necessary infrastructure 
  - Conduct outreach to employees 
  - Launch new incentives 
  - Regularly evaluate and implement improvements | $/ |  |  |

How will impact be measured?
- Employee participation in incentive programs
## Infrastructure

### Strategy I-1: Promoting Existing Local Charging Stations

**What is the strategy?**

Promote existing charging stations to residents and visitors through City and LPEA websites, social media, partner networks, and other outreach channels in order to maximize utilization.

**How will the strategy be implemented?**

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
</table>
| 1. Promotional Materials: Develop and distribute marketing materials promoting existing local charging stations. | **Lead:** City Sustainability  
**Support:** City Communications, Visit Durango, 4CORE, Local First | **Q3 2021:**  
• Develop promotional materials and map(s)  
**Q4 2021 and beyond:**  
• Distribute promotional materials  
• Update materials as needed | $ |  |
| 2. Monitor Performance of Existing Charging Stations: Analyze data at City and LPEA public charging stations to better understand use. Leverage crowdsourced charging station apps and websites to understand user experiences and bring any issues to the attention of property owner(s). | **Lead:** City Sustainability, LPEA Energy Management  
**Support:** City Business Development | **Q1 2022 and beyond:**  
• Analyze City and LPEA data  
• Review crowdsourced charging station apps | $ / $ | PlugShare, ChargeHub, Open Charge Map, Google Maps |
| 3. Develop Local Programs to Support Interested and New EV Drivers: Develop creative ways to engage around the topics of EVs and charging. Consider developing a passport system to encourage residents and visitors to see the city through charging station and other significant landmarks. | **Lead:** City Sustainability  
**Support:** City Communications, Visit Durango, 4CORE, Local First | **Q1 2023 and beyond:**  
• Develop program(s) with input from the community | $ |  |

**How will impact be measured?**

- Number and reach of social media posts and newsletter articles
- Website traffic

*Electric Vehicle Readiness Plan*
## Strategy I-2: Public Charging at Public Facilities

### What is the strategy?
Install public charging stations at public facilities. Increasing EV visibility and access at these community locations can increase awareness, as well as provide charging options for those who may not have them at home.

### How will the strategy be implemented?

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potential Charging Station Mapping: Identify public facilities best suited for public charging stations. Prioritize locations with long dwell times (e.g., Community Recreation Center, Library, Park-n-Rides, Airport, Downtown) and available electrical capacity.</td>
<td><strong>Lead:</strong> City Sustainability, LPEA Energy Management <strong>Support:</strong> City Building Maintenance, City Community Development, LPEA Grid Solutions</td>
<td><strong>Q1 2022:</strong></td>
<td>Map ideal charging station locations</td>
<td></td>
</tr>
<tr>
<td>2. Electrical Infrastructure Assessment and Upgrades: Assess potential charging station locations to identify and complete any necessary electrical upgrades, in coordination with fleet charging station installations (L-3).</td>
<td><strong>Lead:</strong> LPEA Grid Solutions <strong>Support:</strong> City Building Maintenance</td>
<td><strong>Q2 2022:</strong></td>
<td>Assess mapped locations</td>
<td></td>
</tr>
<tr>
<td>3. Charging Station Installations: Contract with local installer(s) to install stations at priority locations, in coordination with fleet charging station installations (L-3).</td>
<td><strong>Lead:</strong> City Sustainability <strong>Support:</strong> City Building Maintenance</td>
<td><strong>Q3 2022 and beyond:</strong></td>
<td>Submit necessary budget requests for charging stations</td>
<td>Charge Ahead Colorado</td>
</tr>
</tbody>
</table>

### How will impact be measured?
- Number of charging stations at public facilities
- Charging station utilization at public facilities
## Strategy I-3: EV-Friendly Development Codes

**What is the strategy?**
Update the Land Development Code to include code requirements that encourage EV infrastructure in new development and redevelopment projects.

**How will the strategy be implemented?**

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
</table>
| 1. Land Development Code Updates: Update code to include EV charging as a land use, including use-specific standards. Adopt amendments that streamline and broaden EV charging. | **Lead:** City Planning  
**Support:** City Sustainability | Q3 2021:  
- Review and update code recommendations as needed.  
- Submit code amendments for adoption | $ / $ | Durango EV Readiness Plan Appendix F: Code Recommendations |
| 2. EV-Friendly Development Incentives: Research potential incentives, for future consideration, that encourage EV infrastructure (e.g., density bonuses, parking reductions, expedited permitting processes, or other developer incentives. | **Lead:** City Planning  
**Support:** City Sustainability | Q3 2022:  
- Draft recommendations report | $ / $ |

**How will impact be measured?**
- Number of EV charging stations built either by-right or as required by the code amendments
## Strategy I-4: Public Parking EV Strategy

### What is the strategy?
Incorporate EV considerations into the City’s public parking strategy, to support the integration of EVs into Durango transportation infrastructure and systems.

### How will the strategy be implemented?

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Parking Study EV Considerations: Incorporate EV considerations into upcoming City Parking Study. Include considerations around the following:</td>
<td><strong>Lead:</strong> City Parking</td>
<td><strong>Q3 2021:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Signage to support wayfinding, enforcement, and usage</td>
<td><strong>Support:</strong> City Sustainability, City Transportation</td>
<td>• Incorporate EV considerations into upcoming City Parking Study.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Fee structures to provide funding for electricity, enforcement, and future installations</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>• Enforcement to prevent non-EVs parked in EV public parking spaces</td>
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</tr>
</tbody>
</table>

### How will impact be measured?
- Inclusion of EV considerations in the EV Parking Study
Strategy I-5: Resources for Charging Station Installations

What is the strategy?

Connect local businesses, organizations, multifamily properties, and other property owners to resources (e.g., funding opportunities, best practices, marketing support) for installing EV charging stations. Prioritize properties with longer dwell times, commensurate amenities, high visitor traffic, and high visibility (e.g., retailers, hospital).

How will the strategy be implemented?

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
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</tr>
</thead>
</table>
| 1. Resource Guides: Develop and distribute print and digital materials summarizing charging station installation resources. | **Lead:** City Sustainability, LPEA Energy Management  
**Support:** City Communications, Visit Durango, 4CORE, Local First | **Q3 2021:**  
• Update City and LPEA websites with resources  
• Develop print resource guide summarizing resources | ⌂ / $ |  
2. Targeted Outreach to Ideal Site Hosts: Identify and conduct individual outreach to property owners of locations that would be ideal charging station site hosts based on dwell times and traffic patterns (e.g., hotels, grocery stores, medical centers) | **Lead:** City Sustainability, LPEA Energy Management  
**Support:** City Business Development, City Transportation, Visit Durango, BID, Local First, 4CORE | **Q4 2021:**  
• Develop a list of ideal site hosts |  
**Q1 2022:**  
• Develop targeted outreach plan in coordination with targeted business outreach | ⌂ / $ |  
**Q2 2022 and beyond:**  
• Launch targeted outreach plan implementation | ReCharge Coaching Services: Charge Ahead Colorado |

How will impact be measured?

• Number of events
• Number of businesses reached through events
• Number and reach of social media posts and newsletter articles
• Website traffic
• Installed infrastructure at targeted locations
Public Adoption

Strategy P-1: Residential EV Education

What is the strategy?
Share information and resources about EVs with residents through City and LPEA websites, social media, ride-and-drives, local events, and other virtual and in-person outreach options. The desired outcome of this strategy is equitable access to EV information, allowing all residents to make informed decisions about EV purchases. Though this strategy is foundational and will begin in Phase 1, it is essential that as technology changes education remains at the forefront of public adoption efforts.

How will the strategy be implemented?

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Local EV Awareness Market Research: Identify level of EV awareness, along with perceived barriers, across Durango’s residential demographics to inform outreach efforts.</td>
<td><strong>Lead:</strong> City Sustainability, LPEA Energy Management <strong>Support:</strong> 4CORE, Durango EV Enthusiasts</td>
<td>Q3 2021: • Conduct research or submit a budget request to hire a consultant</td>
<td>$-$$ (Varies – a simple overview can be done internally with existing community survey results and statewide study; a deeper dive may require hiring a consultant)</td>
<td>Colorado Energy Office Market Research; Durango EV Readiness Plan Community Survey</td>
</tr>
<tr>
<td>2. Communitywide EV Awareness Campaign: Provide EV educational opportunities that are available to all residents. Focus on establishing a foundation of EV awareness, to begin familiarizing the public with EVs and their benefits, and to debunk myths associated with EVs. Organize a EV Drive to Work event for commuters to learn about and test drive EVs.</td>
<td><strong>Lead:</strong> City Sustainability, LPEA Energy Management <strong>Support:</strong> 4CORE, Durango EV Enthusiasts</td>
<td>Q3 2021: • Update City and LPEA websites with existing EV information and resources • Promote EV group buy through 4CORE</td>
<td>/ $</td>
<td>Colorado Energy Office Outreach Campaign (expected); ReCharge Coaching Services</td>
</tr>
</tbody>
</table>
3. Targeted Outreach: Use EV Awareness Market Research results to develop customized outreach plans that address needs and interests relevant based on various demographic factors (e.g., age, income). Outreach methods and messaging should be tailored to target audiences, to respond to real and perceived barriers and provide equitable access to information.

**Lead:** City Sustainability, LPEA Energy Management  
**Support:** 4CORE, Durango EV Enthusiasts

**Q1 2022:**  
- Develop targeted outreach plans

**Q2 2022 and beyond**  
- Launch targeted outreach efforts

**ReCharge Coaching Services**

---

**How will impact be measured?**

- Number of events
- Number of individuals reached through events
- Number and reach of social media posts and newsletter articles
- Website traffic
Strategy P-2: Business EV Education

What is the strategy?
Share information and resources with businesses about fleet electrification and opportunities to be a charging site, host business association meetings, social media, and other virtual and in-person outreach options. This strategy is foundational to future strategies related to business incentives and programs. As with residential outreach, business outreach may be ongoing, especially as technology evolves and expands fleet vehicles eligible for electrification.

How will the strategy be implemented?

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
</table>
| 1. General Business EV Outreach: Provide EV educational opportunities that are available to all businesses. Focus on familiarizing local businesses with EV charging station and fleet benefits and opportunities | **Lead:** City Sustainability, LPEA Energy Management  
**Support:** City Business Development, Downtown Business Improvement District (BID), Local First | Q3 2021:  
- Update City and LPEA websites with existing business EV information and resources  
Q4 2021:  
- Develop outreach plan, including social media presentations, at the Green Business Roundtable.  
**Q1 2022 and beyond:**  
- Launch outreach plan implementation |  
ReCharge Coaching Services; Green Business Roundtable |
| 2. Targeted Outreach: Identify and conduct individual outreach to businesses located in ideal areas for public and workforce charging infrastructure opportunities and businesses with light-duty vehicle fleets. | **Lead:** City Sustainability, LPEA Energy Management  
**Support:** City Business Development, Visit Durango, BID, Local First | Q4 2021:  
- Develop a list of key business for targeted outreach  
**Q1 2022:**  
- Develop targeted outreach plan  
**Q2 2022 and beyond**  
- Launch targeted outreach plan implementation |  
ReCharge Coaching Services |

How will impact be measured?
- Number of events
- Number of businesses reached through events
- Number and reach of social media posts and newsletter articles
- Website traffic
## Strategy P-3: EV Owner Recognition

### What is the strategy?
Develop a program to celebrate EV owners, to build awareness about EVs. Many residents—especially those who do not own or drive an EV—may be unfamiliar with EV makes and models. This may lead to the perception that there are very few or no EVs in Durango and therefore they do not belong in Durango. Ensuring and elevating recognition could build confidence that Durango is a great place for EVs.

### How will the strategy be implemented?

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
</table>
| 1. Magnet Distribution: Develop and distribute magnetic bumper stickers to EV drivers, to help build awareness about EVs. | **Lead:** City Sustainability **Support:** Durango EV Enthusiasts, Local First, 4CORE | Q3 2021:  
• Design and print magnets | / $ | |
| | | Q4 2021:  
• Begin distributing magnets through Durango EV enthusiasts | / $ | |
| | | Q1 2022 and beyond  
• Promote and distribute magnets through City channels | / $ | |
| 2. Highlighting EV Driver Stories: Recruit volunteer EV drivers who receive magnets, to record videos and other media to share their EV driving experiences with Durango residents. | **Lead:** City Sustainability **Support:** Durango EV Enthusiasts, Local First, 4CORE | Q3 2022 and beyond  
• Recruit EV drivers to record videos of their experiences | / $ | |

### How will impact be measured?
- Number of magnets distributed
- Reach of EV driver stories (e.g., views, social media reaction)
## Strategy P-4: School Bus Electrification Workplan

### What is the strategy?
Work with Durango School District 9-R to electrify their bus fleet. In 2021, Durango School District 9-R was awarded nearly $330,000 to purchase a fully electric school bus and received an additional $120,000 to fund the requisite charging infrastructure. The school district intends to use this pilot project to inform the feasibility of purchasing additional fully electric school buses, especially as upfront costs decrease.

### How will the strategy be implemented?

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
</table>
| 1. Promoting the New Electric Bus: Promote the new electric bus through City and LPEA outreach channels. | **Lead:** City Sustainability, LPEA Energy Management, Durango School District 9-R  
**Support:** City Community Development | **Q3 2021:**  
• Promote the District’s first electric bus through City and LPEA channels | $ / $ |
| 2. Bus Charging Plan: Develop a plan to identify bus charging locations, select rate structures, and purchase charging infrastructure to support additional electric buses. | **Lead:** LPEA Grid Solutions, Durango School District 9-R  
**Support:** LPEA Energy Management | **Q1 2022**  
• Develop a strategic bus charging plan | $ / $ |
| 3. Bus Fleet Electrification: Continue monitoring funding opportunities that would facilitate the purchase of additional electric buses; develop a bus electrification plan to replace buses at their end of life with electric alternatives. | **Lead:** LPEA Energy Management, Durango School District 9-R  
**Support:** City Sustainability | **Q3 2021**  
• Submit budget requests for electric bus purchases if supplemental funding is available  
**Q4 2021 and beyond:**  
• Keep track of funding opportunities for additional electric buses  
• Work with LPEA to evolve and update a strategic bus charging plan  
• Purchase new buses as funding allows | $ / $$$ |

### How will impact be measured?
- Number of electric buses added
Strategy P-5: EV Marketing for Tourism

**What is the strategy?**
Incorporate EV opportunities into Durango’s tourism marketing efforts, in coordination with Visit Durango, hotels, rental car agencies, Purgatory Resort, Airport, and others. Preliminary efforts will focus on building a foundation for Durango’s EV marketing by identifying and highlighting existing successes, such as the new DCFC station at the transit center. Additional efforts to market Durango as an EV-friendly destination may include highlighting Park-n-Ride charging, working with key tourism partners to co-market, and developing an EV-themed road trip itinerary.

**How will the strategy be implemented?**

<table>
<thead>
<tr>
<th>Scope</th>
<th>Lead &amp; Support Roles</th>
<th>Timeline</th>
<th>Estimated Staff Time and Budget</th>
<th>Additional Resources</th>
</tr>
</thead>
</table>
| **1. EV Tourism Campaign:** Develop a marketing campaign encouraging EV drivers to visit Durango and encouraging visitors to rent an EV while visiting. | **Lead:** City Sustainability, Visit Durango  
**Support:** Durango-La Plata County Airport, hotels, Purgatory Resort | **Q3 2021:**  
- Identify foundational elements to include in marketing campaign  
- Convene partners to prioritize next steps | 1 / $$ | Colorado Tourism Office Electric Byways Tourism Toolkit |
|  | **Q4 2021:**  
- Design tourism campaign | | |
|  | **Q1 2022 and beyond:**  
- Launch tourism campaign  
- Meet regularly with tourism partners to discuss campaign | | |

**How will impact be measured?**
- Number and reach of social media posts and newsletter articles
- Number of EV rented at Airport
APPENDIX F: CODE RECOMMENDATIONS

Existing Contemplation of EVs
Currently contemplated under the land use, “Fueling or Charging Station,” EV charging infrastructure is directly addressed within the existing City of Durango Land Use Development Code (LUDC). Defined as “a building and/or surfaced area where vehicles may be refueled or charged,” charging stations currently may be allowed as a limited use in the Central Business District (CB) and Mixed-Use - Neighborhood (MU-N) zones and are allowed by-right in the Mixed-Use - Arterial Corridor (MU-A), Commercial - General (CG), Commercial - Regional (CR), Light Industry (LI) zones and within Planned Development (PD) as illustrated below in Figure F-1. Current use-specific standards include prohibiting Level 3 DCFC in the Central Business District (CB) and requirements for access.

![Figure F-1: Land Use Development Code Table](attachment:image)

First, we would like to acknowledge the City for contemplating EV infrastructure - it is rare in many communities today that a land use code is current enough to address this technology. Second, we want to acknowledge that EV infrastructure is a rapidly evolving technology, so while it made sense at the time when the additions above were included in the LUDC, the industry has undergone incremental advancements that should be considered in updates - specifically the trend of charging where you park, which reduces the fear that additional on-site parking is needed to meet demand. Third, there are aspects of EV charging infrastructure the LUDC does not currently address (e.g., signage, stall markings, accessory land use) that could be considered, to allow for consistency and a level of predictability. Finally, we look to future-proof any language to the extent practical, to reduce additional code amendments in the foreseeable future.

LUDC EV Recommendations
To streamline regulations, reduce confusion, and enhance the City’s ability to usher in privately developed EV charging infrastructure, we recommend the following:

- Decouple EV charging stations from “fueling” creating a new land use, use-specific standards, and definitions.
- Permit EV charging stations as both a primary and accessory use.
- Future-proof terms and definitions, as the technology is constantly evolving.
- Strike a balance between the goals of the City, the pressures of the development community, and the predicted exponential increase in EV adoption by residents and visitors.
EV-Focused LUDC Changes
This section includes the proposed LUDC language edits, primarily through the requirements of EV charging stations and/or EV-Ready Parking Spaces. Note the underline denotes new language to be added to the LUDC beyond those amendments already adopted in 2021.

Section 2-1-3-6 Motor Vehicle and Heavy Equipment, and Recreation and Amusement Use / Zone Matrix, Table 2-1-3-6 Motor Vehicle and Heavy Equipment, and Recreation and Amusement Uses

- Edit Row 4, “Fueling or Charging Station,” to read “Electric Vehicle Charging Station.”
  - Amend table to “A” Allowed within MU-N and BP zones, in addition to existing allowances in MU-A, CG, CR, and LI.
  - Amend table to “S” Special Use within EN-MF, RM, RH, and CB zones.

- Add a row beneath called “Fueling Stations,” and carry over the applicable existing allowances and regulations.

Section 2-2-3-12 Standards for Motor Vehicle and Heavy Equipment Related Uses

- Edit “C. Fueling or Charging Station,” to read “Electric Vehicle Charging Station,” with the following provisions:
  - “Electric Vehicle Charging Station. Level 1 and Level 2 EV charging stations shall be permitted in all Zones as a principal or accessory use. Level 3 DCFC stations shall be allowed as an “S” Special Use within the EN-MF, RM, RH, and CB zones.
  - **Demonstration of Available Electric Capacity.** Level 3 DCFC stations shall provide documentation regarding the availability of power to meet demand during peak charging periods without compromising the City’s electric power grid.
  - **Landscaping and Buffering.** Where the landscaping and buffering requirements of Article 4-6, Landscaping and Buffering, are less dense than those shown in Table 2-2-3-12B...” include the rest of this reference and corresponding table per existing LUDC.

- Add “D. Fueling Stations,” and carry forward all applicable provisions from the existing.

Article 4-5 Parking and Loading, Section 4-5-1-1 Purpose of Article

- Consider adding a statement affirming the City’s commitment to EVs/ZEVs.

Section 4-5-1-2 Application of Article

- Add “H. Electric Vehicle Parking. Electric vehicle (EV) parking is required as set out in Section 4-5-2-11, Required Electric Vehicle Park and Preparation.”

Section 4-5-2-11 Required Electric Vehicle Parking and Preparations
Sec. 4-5-2-3.5 Required Electric Vehicle Parking

A. Generally. Level 1 and Level 2 EV charging stations (insert reference to definition) shall be permitted in all Zones unless otherwise noted herein.

B. Commercial Retail, Mixed-Use, Services, Commercial, and Service, Personal. Newly constructed Commercial Retail exceeding 15,000 square feet shall construct ten percent (10%) of the total required off-street parking spaces (per Section 4-5-2-2 Required Off-Street Parking Spaces (Parking Table)) as EV-Ready Parking Spaces (insert reference).

1. Alternatively – “install Level 2 EV charging stations at the rate of five percent (5%) of the required parking spaces.”

C. Hotel/Motel, Tourist or Business and Hotel/Motel, Convention. Newly constructed Hotel/Motel developments shall construct ten percent (10%) of the total required off-street parking spaces (per Section 4-5-2-2 Required Off-Street Parking Spaces (Parking Table)) as EV-Ready Parking Spaces (insert reference).

1. Alternatively – “install Level 2 EV charging stations at the rate of five percent (5%) of the required parking spaces.”

D. Multi-Unit Buildings. These requirements shall apply where the total minimum required parking spaces for a new multi-unit building development reaches or exceeds 15 spaces.

1. Newly constructed multi-unit building developments shall install one (1) Level 2 electric vehicle charging station per 15 required parking spaces. If the development is required to provide 15 parking spaces, one (1) shall be enabled with a Level 2 EV charging station.

2. Newly constructed multi-unit building developments shall construct fifteen percent (15%) of the total required off-street parking spaces (per Section 4-5-2-2 Required Off-Street Parking Spaces (Parking Table)) as EV-Ready Parking Spaces (insert reference).

<table>
<thead>
<tr>
<th># of Parking Spaces Required</th>
<th># of EV-Ready Parking Spaces Required</th>
<th># of EV Charging Stations Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-14 spaces</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>15 spaces</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>16+ spaces</td>
<td>15% of required</td>
<td>1 per 15 spaces required</td>
</tr>
</tbody>
</table>
E. **Rounding.** When the calculation of required parking spaces, EV charging stations, and EV-Ready Parking Spaces results in a fractional parking space, the result of the parking calculation shall be rounded up to the nearest whole number.

F. **Parking Count.** EV Charging Stations and EV-Ready Parking Spaces shall count towards the required on-site parking and are not in addition to the required parking.

G. **Signage.** EV charging stations may include signage identifying spaces as restricted parking for EV charging. Regulatory signage, including any parking restrictions, shall be installed immediately adjacent to, and visible from the EV Charging Station. Such signs shall not count towards the aggregate sign area or maximum number of signs per parcel per Section 3-6 Signs.

**Definitions Added:**

**Electric Vehicle:** Any vehicle that operates either partially or exclusively by an electric motor instead of a gasoline engine. “Electric Vehicle” includes battery-electric vehicles and plug-in hybrid vehicles. For purposes of this LUDC, electric bicycles, scooters, and other forms of micromobility are not considered Electric Vehicles.

**Electric Vehicle Supply Equipment (EVSE):** The conductors, including the ungrounded, grounded and equipment grounding conductors, and the Electric Vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the Electric Vehicle.

**EV-Ready Parking Space:** A designated parking space which is provided with one 50-ampere, 208/240-volt branch circuit for a future dedicated Level 2 EV Charging Station. The circuit shall terminate in a NEMA 6-50 or NEMA 14-50 receptacle or a suitable electrical connector rated for 208/240 or greater service. The circuit shall have no other outlets unless otherwise shared by other EVSE. The service panel shall include an overcurrent protective device and provide sufficient capacity and space to accommodate the circuit and overcurrent protective device and be located in close proximity to the proposed location of the future EV Charging Station(s).

**Existing Definition to be Amended:**

**Electric Vehicle (EV) Charging Station** means a public or private parking space that is enabled with electric vehicle supply equipment (EVSE) for the purpose of delivering energy to an electric vehicle (EV). EV Charging Stations are rated based on levels:

1. **Level 1.** Provides alternating current (AC) energy to the vehicle with a voltage between zero and 120.
2. **Level 2.** Provides AC energy to the vehicle with a voltage greater than 120, up to and including 240.
3. **Level 3 Direct Current Fast Charger (DCFC).** Provides direct current (DC) energy to the vehicle with a voltage greater than 240.
APPENDIX G: IMPLEMENTATION EQUITY CHECKLIST

Increasingly, equity is a focus when exploring improvements to mobility and transportation systems. However, without a clear strategy and understanding of how to put equity into action, efforts can often fall flat, risking doing more harm than good. It is important to remember that equity is not just a commitment – it is a practice. Equity is not just a destination or a box to be checked - it is the journey of how we will all live and move around in an equitable society.

Plans and initiatives focused on addressing systemic injustices of transportation and mobility must also provide the following benefits to low-income populations, communities of color, older adults, and persons with disabilities in a way that is meaningful, direct, and assured:

- Increased access to affordable, efficient, safe, and reliable mobility options.
- A reduction in air pollution, increasing air quality.
- Enhanced economic opportunities.

This appendix provides a procedural checklist for the City of Durango, La Plata Electric Association (LPEA), and their partners to use as a guide for imbedding equity into electric vehicle (EV) strategy implementation. This checklist was inspired by the Urban Sustainability Directors Network’s A Guidebook on Equitable Clean Energy Program Design for Local Governments and Partners. Throughout the checklist, the term “initiative” is used to represent any program, project, policy, or outreach effort that is part of the strategy implementation.

1. Prepare the Team Internally
   - Assemble the team that will help organize and implement the initiative - note that this team will grow once the target audience has been identified.
   - Build internal team alignment and a shared understanding of equity.
   - Define desired equity outcomes for the initiative.
   - Periodically hold trainings and share resources with the internal team regarding equitable mobility. This could include case studies of successful program or policy implementation.
   - Gather and assess baseline data\(^5\) to define the initiative’s target audience, for example:
     - Whose mobility is most restricted?
     - Who faces high transportation costs?
     - Who does not have the ability to charge a personal EV at home?
     - Who does not have access to a personal vehicle?
     - Who has the longest commute?

\(^5\) This may include surveys, interviews, existing data sets, and anecdotal accounts.
2. Invite and Listen to the Community

☐ Review past community engagement efforts and identify potential gaps in outreach as well as participants and communities that are marginalized, underrepresented, or not represented.

☐ Partner with experienced and trusted community organizers/organizations that represent or are otherwise connected to your identified audience for engagement efforts.

☐ Select and deploy appropriate modes of engagement, and minimize the burden of participation, using the City of Durango Equitable Community Engagement Guide.

☐ Listen - to understand community goals and existing initiatives, and identify barriers to accessing EVs (e.g., cost, lack of awareness, EV charging access/reliability, physical).

3. Structure the Initiative

☐ Employ experienced and trusted community organizers/organizations that represent or are otherwise connected to your identified audience - to join the team, to structure the initiative. Be sure to contemplate compensation for individuals and/or organizations for their time.

☐ Refine equity goals the initiative will seek to achieve, based on community feedback from Step 2.

☐ Remove barriers to participation in the initiative, based on community feedback from Step 2 (e.g., financing mechanisms, culturally competent messaging).

☐ Map out participant interaction with the initiative and access to initiative resources - to ensure a positive experience.

☐ Build equity into the supply chain via workforce development and procurement.

☐ Before moving to implementation, have a discussion with the team to assess how well the initiative is structured, based on the Key Questions to Consider Before Implementation, and refine as necessary.

4. Implement the Initiative

☐ Develop an implementation timeline.

☐ Determine roles and responsibilities for implementation.

☐ Recruit participants and administer the initiative.

☐ Conduct monitoring and evaluation.

☐ Determine steps for refining the initiative on a regular basis, based on evaluation results.

5. Audit the Initiative

☐ Develop an equity audit process, based on the Key Questions to Consider Before Implementation - to assess reach and impact.

☐ Scrutinize materials, policies, and programs for gaps, and outreach for missing participants/communities.

☐ Revise and adjust roles and responsibilities, for implementation, accordingly.
Key Questions to Consider Before Implementation

**Participation:** Which marginalized or vulnerable populations may be impacted by or could benefit from the initiative? How have you identified these populations?

**Disproportionate impacts:** Does the proposed action generate burdens (including costs), either directly or indirectly, to marginalized or vulnerable populations? If yes, are there opportunities to mitigate these impacts?

**Shared benefits:** Can the benefits of the proposed action be pursued, in progressive ways, to reduce historical or current disparities? Are the benefits dispersed not only equally, but equitably?

**Accessibility:** Are the benefits of the proposed action broadly accessible to households and businesses throughout marginalized or vulnerable populations?

**Engagement:** Does the proposed action engage and empower marginalized or vulnerable populations in a meaningful, authentic, and culturally appropriate manner? Are community stakeholders involved and engaged in implementation and budgeting?

**Capacity:** Does the proposed action help build community capacity through funding, an expanded knowledge base, or other resources? Are you sharing as much decision-making power as feasible?

**Alignment and partnership:** Does the proposed action align with and support existing marginalized or vulnerable population priorities, creating an opportunity to leverage resources and build collaborative partnerships?

**Relationship building:** Does the proposed action help foster the building of effective, long-term relationships and trust between diverse communities, the City of Durango, and LPEA?

**Economic opportunity and staff diversity:** Does the proposed action support marginalized or vulnerable populations through workforce development, contracting opportunities, or increased diversity of City and LPEA staff? Does the proposed action have dedicated set-asides for marginalized or vulnerable communities?

**Accountability:** Does the proposed action have appropriate accountability mechanisms to ensure that marginalized or vulnerable populations will equitably benefit from and not be disproportionately harmed?

**Compensation:** Are community members being adequately compensated for their time, energy, and shared experience? Is compensation acknowledged and available when asking for individuals’ and organizations’ time, energy, and experience?

Developed by the City of Portland and The Greenlining Institute.
APPENDIX H: WORKS CITED


