

# ELECTRIC VEHICLE (EV) CHARGING IN LARIMER COUNTY

Informational Guide



# LETTER FROM LARIMER COUNTY COMMISSIONERS

We are delighted to present the Larimer County Electric Vehicle Charging Guide, a collaborative initiative aimed at advancing sustainable transportation infrastructure within our community. As per the State's Electric Vehicle Plan, Larimer County is striving to achieve 1,447 Level 2 chargers and 309 direct current (DC) fast chargers by 2030, with your help and collaboration.

The guide's primary objective is to facilitate the seamless implementation of electric vehicle (EV) charging infrastructure in Larimer County. Emphasizing support for areas frequented for business, recreation, and major travel corridors, we aim to encourage widespread adoption of EV charging stations.

This comprehensive resource is tailored to businesses, non-profits, multi-family properties, and other entities within Larimer County contemplating the installation of public EV charging stations. It serves as a guide for decision-making, installation procedures, and the operational aspects of EV charging stations. Developed as part of the Larimer County Electric Vehicle Charging Station Action Plan and aligned with our Climate Smart Future Ready community goals, this guide is a testament to our dedication to shaping a greener, more sustainable future.

With combined expertise of the County, local governments, stakeholders, and particularly Xcel Energy Partners in Energy, we extend our gratitude to all involved in this collaborative effort. We trust that the Larimer County Electric Vehicle Charging Guide will serve as a valuable resource for our community's growth and sustainability.

Sincerely,

Jody Shadduck-McNally, John Kefalas, and Kristin Stephens Larimer County Board of Commissioners



### CONTENTS

Letter From Larimer County Commissioners	2
overview	4
Introduction	5
EV Charging 101	7
Installing Electric Vehicle Charging Stations	9
Frequently Asked Questions	16
Appendix A: EV Infrastructure Funding & Resources	19





This EV Charging Guide was funded by and developed in collaboration with Xcel Energy's Partners in Energy.



### **OVERVIEW**

This Electric Vehicle (EV) Charging in Larimer County Informational Guide will help businesses, organizations, and other private entities understand the benefits, considerations, and the steps for installing public EV charging stations. First, the guide discusses the need and the basics for public charging stations. Next, the guide explains one common path toward installing charging stations, including why to consider offering charging stations, how to scope and plan, construction considerations, and operating and maintaining stations. A case study provides one organization's experience and perspective about their installed EV chargers. Following the process, frequently asked questions for public charging stations are listed. Finally, Appendix A lists various funding sources and additional resources for public charging stations.



# INTRODUCTION

#### **Planning for EV Adoption**

Electric vehicle adoption is happening at a fast pace and public interest is expected to continue to grow. At the end of 2023, there were over 6,700 EVs in Larimer County, according to Atlas Public Policy. Thousands more are expected in the coming years as Colorado ramps up toward its goal of 940,000 light-duty EVs by 2030.

With more EVs comes the demand for more charging options. The County has installed some EV chargers and to keep up with expected demand and county-wide there is a need for an estimated 309 fast charging stations and 1,447 Level 2 public chargers by 2030.<sup>1</sup>

This is where businesses and private landowners come in. Installing EV chargers can provide another way to build customer loyalty and engagement. While business models are emerging, it may also provide an additional revenue stream after up-front costs are recouped.

This guide has important background information, checklists, and considerations for those interested in installing public-facing EV charging stations. If you are interested in adding charging stations, it is important to understand there are many players in this field, from the individual car owners to municipalities that oversee local zoning regulations that impact EV charging stations, and to Larimer County, which has its own codes and policies (Figure 1).

<sup>&</sup>lt;sup>1</sup> An Electric Vehicle Charging Station Action Plan for Larimer County https://www.larimer.gov/sites/default/files/larimer\_county\_partners\_in\_energy\_ev\_action\_plan.pdf



Figure 1. Local Electric Vehicle (EV) Charging Ecosystem

At the state level, it is important to be aware of the incentives offered in Colorado, in addition to keeping tabs on federal incentives (see <u>Appendix A: EV Infrastructure</u> <u>Funding & Resources</u>). Your electric utility provider may have additional incentives and services to support EV charging infrastructure. Electric utility providers in Larimer County include <u>Xcel Energy</u>, <u>Poudre Valley REA</u>, <u>Fort Collins Utilities</u>, <u>Estes Park</u> <u>Power and Communication</u>, and <u>Loveland Water and Power</u> and each have information about charging EVs.

Once your EV charging stations are up and running, routine maintenance and fixing customer-identified problems are other key considerations. The last section of this guide includes Frequently Asked Questions that can be helpful to those who are new to EV charging.



# **EV CHARGING 101**

Most charging takes place at home. Public and workplace charging is critical for those who may not be able to access home charging such as renters, residents in multifamily developments, and people who do not have off-street parking. Sixty percent of EV drivers need chargers at work, either because of long commutes or no access to athome charging.<sup>2</sup> Public charging is also important for those driving longer distances or visiting from out of town. Workplace charging can be a great case for low-cost Level 1 charging, but due to the significant amount of time needed for charging using that type of charger, most business owners tend to install Level 2 and DC fast charging stations for publicly available charging stations. If you are interested in learning more about workplace charging, see the resource in <u>Appendix A</u> for <u>Watts@Work</u>.

#### Can Your Business Make Money Offering EV Charging Stations?

The answer depends on input costs (the price of running electricity to your charging stations and the installation price) and the anticipated traffic volume of EV users post installation. Atlas Public Policy <u>created an EV Charging Financial Analysis Tool</u> to help station installers understand typical financial expenditures and anticipated cash flow.

<sup>&</sup>lt;sup>2</sup> Charge@Work, <u>https://chargeatwork.org/</u>.

Below is a table with the basics of what you need to know for public Level 2 and DC fast charging.

	Level 2	DC Fast Charging
Estimated Amount of Range Added	25-40 miles of range for every 1 hour of charging.	40 miles of range for every 10 minutes of charging.
Electrical Work	Upgrades may be needed. Electrician required.	Upgrades needed. Electrician required.
Equipment Cost	\$2,500 - \$6,000*	\$20,000 - \$150,000*
Installation Cost	\$2,500 - \$9,000*	\$20,000 – \$138,000*
Consideration	Wide range of energy output affects charge time.	Not all locations have electrical infrastructure to support this type of charger.
Typical Locations	Home, workplace, and public	Travel corridors and public

\*Cost depends on many variables including length of electrical run. Source: How Much Does Electric Vehicle Charging Infrastructure Actually Cost? <u>https://www.icf.com/insights/transportation/electric-vehicle-charging-infrastructure-costs</u>

There are different ownership and operating models for charging stations. Some charging network owners like ChargePoint allow businesses to own the station and set the charging rate. Others like Tesla own the station and set the charging rate. EV chargers display the cost to charge an EV and can have payment options that can include the network's application or by using a credit card.

As of 2024, prices vary at EV charging stations and the industry is moving toward a fee structure that charges by the kilowatt-hour (kWh). The recommended price range in Colorado for Level 2 chargers is \$0.12 - 0.35 / kWh, according to the Colorado Department of Energy and Recharge Colorado's Recharging coaching service. For DC fast chargers the recommended range is \$0.35 - \$0.45 / kWh.



# INSTALLING ELECTRIC VEHICLE CHARGING STATIONS

It can take deliberate and careful planning before breaking ground for EV chargers. Depending on the number of charging bays, costs of installing a public charger can range from hundreds of dollars (for a private charger with no public interface) to more than one hundred thousand dollars for a DC fast charger. The following graphic explains one common journey toward setting up EV chargers.



Figure 2. Journey towards setting up EV chargers.

One critical step for all first-time charging station hosts is clearly understanding motivations for installation. Before launching into the planning, installation, and operation of EV chargers, it is important that business and private landowners consider the reasons and motivations for pursuing this project. Are you a restaurant or hotel owner who wants to offer an amenity to customers, even if they may have to pay for charging? Maybe you provide health services and want to offer low-cost charging as a perk for clients and employees.

When complications and questions arise, knowing why you are offering EV charging stations will help guide decision making.

#### 1. Know Your "Why" For Installing EV Charging Stations

Motivations among businesses for offering EV chargers vary widely. The points below detail some common reasons and benefits businesses offer EV charging.

#### **Reasons for offering EV charging**

- Customer amenity
- Employee perk
- Revenue source
- Sustainability values
- Offer in conjunction with fleet electrification
- Multifamily building amenity
- Regulatory compliance
- Prepare for the future

#### Benefits of hosting EV charging

- Customer attraction and loyalty
- Potential revenue source
- Competitive edge against peers
- Employee attraction and retention
- Symbol of values
- Resident attraction and retention
- Sustainability performance and reporting
- Leadership by example
- Green certifications or incentives

### Case Study: UCHealth in Northern Colorado

UCHealth was relatively early to installing EV chargers in 2018. At the beginning, it didn't cost anything to charge an EV at Poudre Valley Hospital in Fort Collins. Darren Boyle, Director of Facilities Management for UCHealth's Northern Colorado facilities, said that UCHealth soon decided to charge \$1 per hour to discourage EV owners from staying at the Level 2 chargers all day.

"We use it more for community benefit than income. I don't think the \$1 per hour cost pencils out but it's something we want to do for the right reasons," he said.

#### Charging by the numbers

Vendor: ChargePoint | Number of Chargers: 10 (in Fort Collins and Greeley)

First charger installed: 2018 | Tip: Know Your "Why" for Installing EV Chargers

That gets at one of the most important lessons for businesses and facilities looking to enter the charging space: know your "why". Are you looking to make a profit? Do you want to break even in a certain amount of time? And who should benefit from the chargers: the public or employees?

Boyle says the "why" for UCHealth comes from its mission: Improve lives. UCHealth wanted to make life easier for its clients so it decided to place four chargers right by the Emergency Room Department of Fort Collins-based Poudre Valley Hospital (PVH). Better lives for employees is also crucial, so it decided to offer up the EV chargers to employees as well as the public. The policy is first come, first served.

The EV chargers in 2018 were part of a large capital construction project at PVH. At the time, UCHealth added more electricity capacity than needed. And this gets to another important lesson: plan early. Back in 2018, UCHealth added enough electricity capacity for many more EV stations. This means that as demand rises, it can more easily install more physical chargers without a significant cost.

In fact, UCHealth typically uses construction projects as its prompt to add EV chargers. After Fort Collins, it added four to Greeley Hospital during a construction effort and it expects to add the firstever EV chargers to Loveland-based Medical Center of the Rockies in the next 1-2 years.

Costs to install EV infrastructure range widely depending on a variety of variables including electrical service updates and proximity to electrical infrastructure. According to an analysis from the consulting and technology services firm, ICF International installation costs for a Level 2 charger can range from \$2,500 to \$9,000.

When asked what he wishes he could do differently with EV charging, Boyle says it's thinking about EV charger placement more thoughtfully. Armed with what he knows now, all the EV chargers in Fort Collins are in an extremely high-traffic area of the parking lot. Boyle, who doesn't own an EV himself, notes that some EV owners might be more likely to use the chargers if they were in a less busy part of the parking lot. Another consideration may also be future handicap accessibility needs.

His last piece of advice is to plan for the unexpected after launch. Early on, he was surprised by the number of EVs that would hit and damage the chargers. But it all adds up to a small price to pay for improving lives. "When you talk about the number of benefits to the number of problems, we don't see a lot of problems," he said.

#### 2. Address Important Scoping Considerations

Once you identify the *why* of EV public charging, it is time to define the *what* and the *how* of your project.

One starting point is to research via the <u>Alternative Fueling Station Locator</u> what kind of chargers are available in your area. The following checklist represents important considerations during the scoping process:

Scoping Consideration	Key Concepts
Research Interest	<ul> <li>Consider surveying employee/visitor interest for on- site EV charging – see <u>Appendix A: EV</u> <u>Infrastructure Funding &amp; Resources</u> for workplace resource links.</li> <li>Contact the Northern Colorado <u>ReCharge Colorado</u> <u>Coach.</u></li> </ul>
Ownership Model	<ul> <li>How involved do you want to be for ongoing maintenance after launch?</li> </ul>
Budget	<ul> <li>Determine the budget for the project.</li> <li>Review available federal, state, local, and utility incentives (grants, financing, loans, tax incentives).</li> </ul>
Project Partners	<ul> <li>Identify project partners, including local electric utilities, a certified electrical contractor, neighboring property needs and opportunities, etc.</li> </ul>
Initial Site Selection	<ul> <li>What existing EV chargers are nearby?</li> <li>Is the area likely to flood?</li> <li>Number and type of charging units required both near and long term.</li> <li>Proximity to incoming electricity and potential metering enhancements.</li> <li>Consider future expansion.</li> </ul>
Permitting	<ul> <li>What electrical permits are needed from the city or county?</li> </ul>
Hardware and Software Capabilities	<ul> <li>Are payment capabilities needed?</li> <li>Will utilization data be collected?</li> <li>What monitoring and reporting would you like?</li> </ul>
Accessibility	<ul> <li>What is the user experience for individuals who have mobility considerations?</li> </ul>
Visitor Experience	<ul> <li>Amenity selection.</li> <li>Protection from the elements/weather.</li> <li>Proximity to a wireless internet connection, if needed.</li> </ul>

Another consideration is the visitor experience. People need something to do while they are waiting for their EVs to charge. Is there access to nearby greenspace? Can a picnic table or seating be added? Can you enhance the waiting experience by providing seating indoors? What about high-speed Wi-Fi to allow EV drivers to connect and finish up a few emails or personal tasks while charging their vehicles?

Last, think about physical accessibility and other planning. The Americans with Disabilities Act requires that EV stations be accessible to those with mobility or other constraints. The U.S. Department of Energy has specifics on what this looks like, including making the traditional parking stall larger, adding the proper accessible route slope, and grab bars. More information on accessibility can be at the <u>U.S. Department</u> of <u>Energy</u> and the <u>U.S. Access Board.</u>

Consider how many chargers you plan to add. It is better to start slow and add 1-2 so you can more easily recoup your investment. Adding multiple chargers will drive up costs and take years to pay off. Consider future proofing such as adding some or all the electrical infrastructure so construction costs are kept minimal. Add the EV charging station once there is more demand.

#### **Plan Your Funding Incentives**

Incentives such as tax credits and grants from federal and state governments and local utilities can help lower the installation costs for EV chargers. Find information about funding resources in <u>Appendix A: EV Infrastructure Funding & Resources</u> or contact a Recharge Coach

#### **Connect With Your Electrical Utility Early and Often**

Contact your utility representative to partner and discuss any EV charging project. Working together can help to avoid costly, time-consuming changes later in the process. Potential topics to discuss can include local grid limitations, electric capacity of site or needs for upgrades, costs for upgrades, electricity rate and/or time of use considerations and pricing structures, demand charges, and generation mix to supply electricity.

#### 3. Conduct Physical Site Planning

Once you have a general sense of what your EV charging project entails, it is time to conduct more detailed site planning. It is easiest and most cost-effective to integrate plans for installing public charging when other major site improvements are being made (e.g., major remodels/additions, new construction, repairing a sidewalk, etc.).

Some site planning concepts that need to be addressed pertain to:

Торіс	Key Concepts
Placement/ Geographic Location of Chargers	<ul> <li>Know your audience and their needs.</li> </ul>
Electrical Service	<ul> <li>Proximity to electrical panel and potential upgrades.</li> <li>What utility capacity is needed?</li> <li>Speak with a utility representative to help determine electrical rates and pricing structure for your electric needs.</li> </ul>
Number of Charging Bays	<ul> <li>Consider short- and long-term charging demand.</li> </ul>
Connectivity Service	<ul> <li>Proximity to a wireless internet connection, if needed for network, payment.</li> </ul>
Further Expansion	<ul> <li>Plan "make-ready" infrastructure to accommodate future needs more easily, e.g., put in extra conduit for future expansions.</li> </ul>
Signage and Security	<ul><li>Plan how to mark the space with signs and or paint.</li><li>Consider lighting for safety and easy operation.</li></ul>

One of the most important factors in site planning is the electrical service. Engage with your electric utility to determine the electrical capacity. Planning EV chargers as close to your existing electric service will reduce trenching and wiring costs.

#### 4. Construction

Now that you are ready to install an EV charger there are several actions to keep in mind including:

Торіс	Key Concepts
Equipment and Network Provider	<ul> <li>Select charging infrastructure manufacturer(s) and vendor(s) and network provider; confirm project logistics and equipment delivery.</li> </ul>
Obtain Required Permits	<ul> <li>Understand requirements and timeline.</li> </ul>
Construction and Electrical Contractors	<ul> <li>Choose a qualified and experienced installer who can properly install your EV chargers in compliance with all local codes.</li> </ul>
Begin Engineering and Construction	<ul> <li>If the project was awarded any incentives, ensure following all requirements for those incentives.</li> </ul>
Inspection	Determine inspection requirements
Add Station to Databases	<ul> <li>Once operating, add the station to the <u>AFDC</u> <u>Alternative Fueling Station Locator.</u></li> <li>Additional options include the <u>County's EV</u> <u>charging ledger</u>, <u>PlugShare, Google Maps</u>.</li> </ul>

#### 5. Operating and Maintaining Stations

Once the EV charger is installed, it is important to keep the charger in good working condition.

Торіс	Key Concepts
Regular Inspection and Cleaning	<ul> <li>Clean filters and the surrounding area of any debris or dirt accumulated.</li> <li>Inspect connections, cables, wiring, ports.</li> </ul>
Regular Monitoring and Analytics	<ul> <li>Monitor utility bill.</li> <li>Monitor the EV charger for potential problems.</li> <li>Collect utilization data.</li> <li>Monitor user feedback/reviews from relevant online applications.</li> </ul>
Training and Support	Conduct staff training as applicable.
Environmental Impacts	<ul> <li>Maintain access through snow removal, landscape maintenance.</li> </ul>
Pricing	<ul> <li>Post a pricing structure and monitor local market to stay competitive.</li> </ul>

#### What Next?

Now that you know more about EV charging basics, you understand the benefits, and are informed of planning needs for EV charging, you may be ready to talk to someone to get you started. The Colorado Energy Office ReCharge Colorado program supports installation of charging infrastructure across the state. ReCharge Coaches provide coaching services for EVs and infrastructure development. They help businesses, workplaces, and multiunit housing developments identify monetary savings, grant opportunities and other advantages related to deploying EVs and charging infrastructure. Find the ReCharge coach for your area at

https://energyoffice.colorado.gov/transportation/ev-education-resources/rechargecolorado.



# **FREQUENTLY ASKED QUESTIONS<sup>3</sup>**

#### What makes for a good charging station location?

For a cost-effective and successful charging station installation, site owners should consider how much use they can expect and how much benefit electric vehicle drivers can get from charging while parked at that location. The best way to ensure that your charging station is used is to know that a resident, employee, or regular client owns an EV and wants to charge it at your location. Consider surveying potential users of the EV charging stations before deciding on a location. Ask them about their expected usage, car type, number of trips to the location, desired amenities, and where they currently charge and live.

#### What type of charging station should I install?

There are several kinds of charging stations – including Level 1, Level 2, and DC Fast Charging – so the one you choose will depend on a number of factors. These include expected customer use cases, cost, and site design considerations. Speaking with an EV charging provider will help you determine the right fit for your situation.

#### What are DC fast charging stations?

DC fast charging utilizes direct-current (DC) energy transfer and a 480-volt alternating current (AC) input to provide extremely rapid recharges at heavily used public charging locations. Depending on the EV, DC fast charge stations can provide an 80% recharge in as little as 20 minutes. Charging speeds depend on a car's battery size and charging

<sup>&</sup>lt;sup>3</sup> Many of the questions and answers are adapted from New York State's charging station host frequently asked questions website, <u>https://www.nyserda.ny.gov/All-Programs/ChargeNY/Charge-Electric/Charging-Stations-Hosts-FAQs</u>.

hardware, but many EVs can now charge in excess of 100 kW (more than 100 miles of range in 20 minutes). DC fast charging is primarily an option for all-electric vehicles and few plug-in hybrid EVs can use DC fast chargers. There are three main connectors for DC fast chargers; EVs that can use DC fast chargers are only compatible with one of the following:

- SAE Combined Charging System (CCS) is a widely accepted charging standard used by most automakers.
- **CHAdeMO** is a common charging standard primarily used by Nissan and Mitsubishi.
- The North American Charging Standard (NACS) or J3400 was Tesla's proprietary charging technology. In 2022 Tesla opened the connector to other automakers and is opening up its Supercharger Network to other EVs.

#### Can I pair an EV charger with on-site renewables?

EV charging can be paired with on-site renewable energy generation, most commonly by co-locating EVs with on-site solar energy systems, and in some cases batteries. Check with your local utility about interconnection availability in your area, find reputable installers, and ensure you understand financing and payback expectations.

#### What site design factors affect installation cost?

For recommendations on site design consult Siting and Design Guidelines for EVSE.

Charging station installation costs can exceed the cost of the hardware itself and are influenced by a number of design factors that should be considered such as:

- **Currently available electrical service.** All new charging station installations should have a load analysis performed on the facility's electrical demand to determine if there is capacity to add EV charging stations. AC Level 2 stations will need a dedicated 240-volt (40 amp) circuit and upgrading electrical service may be necessary.
- Distance between the electrical panel and the charging station. A longer distance between the electrical panel and the EV charging station means higher installation costs because it increases the amount of necessary trenching (and repair), conduit, and wire. It is desirable to minimize the distance between the electrical panel and EV charging station as much as possible while also considering the location of the charging station on the property.
- Location of charging station on the property. Consider the impact of placing the charging station at a particular location on the property. For example, placing charging station parking spaces in the back of a building might discourage their use, but other customers may be upset if an underutilized charging station is installed in prime parking spaces.

Other considerations have less impact on installation costs but can impact how effective the station is at benefiting EV drivers and other clients. Some of these include the path the charging cord takes when in use and parking lot management practices.

#### Can I charge people for using my charging station?

Yes, you are allowed to charge people for using your station, although many station owners provide free charging as an enticement or benefit. If you decide to charge for use, there are a number of factors to consider in determining what works best for you including:

- Charging for use depends on the venue. Your decision will depend in part on the venue where it is operating. In some areas, particularly in the larger cities, some garages that charge for parking may find clients that are willing to pay extra for EV charging on a regular basis because they do not have the ability to charge at their residence.
- Charging for use depends on site installation purpose. The profit generated by the station is not the only opportunity to generate a return on investment from the charging station. Charging stations might attract EV drivers who then patronize your business, retain valuable employees, or provide a sense of your environmental stewardship which might help attract EV and non-EV residents, employees, or customers.
- How charging for use works. Station owners can charge per hour, per session, or per unit of electricity.
  - **Per Hour:** If you charge per hour, there is a set cost for any vehicle whether it is charging or not, and different vehicles receive electricity at different rates, so the cost of energy may vary widely by charging session.
  - **Per Session:** This is usually more appropriate for workplace charging or charging stations that have very short, regular sessions.
  - **Per Unit of Energy (usually kilowatt-hour [kWh]):** This accurately accounts for the true cost of electricity for the charging station owner but does not give an incentive for a car that is fully charged to leave the space.

Some site owners have tried combinations of these approaches, such as charging a flat rate for the first two hours, then an increasing rate for longer sessions. Some locations might prefer to lower their operating expenses by not joining a charging station network and offering to charge for free.



# APPENDIX A: EV INFRASTRUCTURE FUNDING & RESOURCES

As of July 2024

#### **Electric Utility**

- Platte River Power Authority provides EV rebates to Estes Park Power and Communication, Fort Collins Utilities, and Loveland Water and Power through the Efficiency Works program.
  - Efficiency Works EV rebates: <u>https://efficiencyworks.org/electric-vehicle-information/</u>
  - Estes Park Power and Communication: <u>https://estespark.colorado.gov/electricvehicles</u>
  - Fort Collins Utilities EV information: <u>https://www.fcgov.com/utilities/business/improve-efficiency</u>
  - Loveland Water and Power EV information: <u>https://www.lovelandwaterandpower.org/city-</u> <u>government/departments/water-and-power/i-am-a-resident/efficiency-</u> <u>programs-and-rebates/residential-energy-efficiency-programs-and-</u> <u>rebates/electric-vehicles</u>
- Xcel Energy EV offerings for businesses: https://my.xcelenergy.com/s/business/ev
- Poudre Valley REA EV charging rebates: <u>https://pvrea.coop/for-members/rebates/ev-rebates/</u>

#### **Federal**

- Charging infrastructure procurement and installation resource: <u>https://afdc.energy.gov/fuels/electricity\_infrastructure\_development.html</u>
- Charging infrastructure operation and maintenance resource: <u>https://afdc.energy.gov/fuels/electricity\_infrastructure\_maintenance\_and\_operation.html</u>
- Plug-in electric vehicle handbook for public charging hosts: <u>https://afdc.energy.gov/files/pdfs/51227.pdf</u>
- Plug-in electric vehicle handbook for workplace charging hosts: <u>https://afdc.energy.gov/files/u/publication/pev\_workplace\_charging\_hosts.pdf</u>
- Rural charging toolkit: https://www.transportation.gov/rural/ev/toolkit
  - The rural EV infrastructure funding table is a list of federal programs that can fund rural electric vehicle infrastructure. <u>https://www.transportation.gov/rural/ev/toolkit/ev-infrastructure-fundingand-financing/funding-matrix</u>
- Urban charging toolkit: https://www.transportation.gov/urban-e-mobility-toolkit
  - The urban electric mobility infrastructure funding table is a list of federal programs that can fund electric mobility infrastructure in urban areas. <u>https://www.transportation.gov/urban-e-mobility-toolkit/e-mobilityinfrastructure-funding-and-financing/funding-table-dataset</u>
- EV Infrastructure Tax Credits: EV chargers are eligible for a tax credit of up to 30% of the cost, or 6% in the case of property subject to depreciation (not to exceed \$100,000). <u>https://www.irs.gov/credits-deductions/alternative-fuel-vehicle-refueling-property-credit</u>
- Charging and Fueling Infrastructure (CFI) Discretionary Grant Program: A competitive grant program distributing \$2.5 billion over five years to strategically deploy EV charging infrastructure and other alternative fueling infrastructure projects in urban and rural communities in publicly accessible locations, including downtown areas and local neighborhoods, particularly in underserved and disadvantaged communities. <a href="https://www.fhwa.dot.gov/environment/cfi/">https://www.fhwa.dot.gov/environment/cfi/</a>
- Federal Lands Access Program (FLAP): Provides funds for projects on transportation facilities that are located on or adjacent to, or that provide access to, federal lands (e.g., national parks, national forests). Projects are typically located within 10 miles of the federal land boundary; this can include urban areas which are adjacent to federal lands. Funds are distributed by formula among states that have federal lands. State DOTs, Tribes, and local governments interested in EV infrastructure can apply through their state for FLAP funding for charging infrastructure and transportation planning. FHWA funded projects must meet the EV Charging Minimum Standards Rule, issued in February 2023. https://highways.dot.gov/federal-lands/programs-access

- National Electric Vehicle Infrastructure (NEVI) Program: The Formula Program will provide \$5 billion of dedicated funding to states to strategically deploy EV charging infrastructure and establish a nationwide network of 500,000 EV chargers by 2030 that ensures a convenient, affordable, reliable, and equitable charging experience for all users. <u>https://www.fhwa.dot.gov/environment/nevi/</u>
- Rebuilding American Infrastructure with Sustainability and Equity (RAISE): A discretionary grant program that provides an opportunity to invest in road, rail, transit, and port projects that achieve national objectives. The eligibility requirements of RAISE allow project sponsors at the state and local levels to obtain funding for multimodal, multi-jurisdictional projects. In FY21, RAISE increased its program focus on zero-emission vehicle infrastructure, including EV charging. <u>https://www.transportation.gov/RAISEgrants</u>

#### **State**

- Charge Ahead Colorado: A competitive grant program offers an 80% match for charging station costs up to \$9,000 for Level 2 chargers and between \$35,000 and \$50,000 for DCFC chargers (depending on charger power output). https://energyoffice.colorado.gov/charge-ahead-colorado
- Direct Current Fast Charging (DCFC) Plazas: A competitive grant program designed to increase access to high-speed charging in communities and along highway corridors across Colorado. The program offers enhanced incentives for projects located in disproportionately impacted communities, sites incorporating battery storage and for applicants proposing three or more stations along designated EV corridors. <u>https://energyoffice.colorado.gov/zero-emissions-vehicles/dcfc-plazas</u>
- Fleet ZERO: Colorado's Fleet-ZERO is a competitive grant that supports charging for fleet owners and operators seeking to electrify their vehicles, as well as public and semi-public fleet charging sites and providers offering EV chargingas-a-service to fleets. The program prioritizes investments in disproportionately impacted communities and enhanced incentives for qualifying entities. <u>https://energyoffice.colorado.gov/fleet-zero</u>

#### Regional

- Drive Clean Colorado's list of incentives and funding opportunities: <u>https://drivecleancolorado.org/resources/incentives-and-grants</u>
- Drive Clean Colorado Workplace Charging Program: <u>Watts@Work</u>