

Mono County Alternative Fueling Station Corridor Policy



Mono County Local Transportation
Commission
Adopted X/XX/2019

1 TABLE OF CONTENTS

2 Purpose and Need	3
3 Overall Charging Network	5
3.1 Vehicle Types	5
3.2 Charger Types	6
3.3 Transit Fleet	7
3.4 Points of Interest within Mono County	9
4 Benefits of Zero-Emission Vehicles	10
4.1 Specific Community Benefits of ZEVs	10
5 Programs and Incentives	12
5.1 State Policy	12
5.2 Regional Programs	12
5.3 Incentives Offered	13
6 Funding and Costs	15
6.1 Vehicle Costs	15
6.2 Charger Costs	15
7 Goals, Objectives, and Policies	17
7.1 Goal	17
7.2 Objectives	17
8 Appendix A: EV Charging Permit Checklist	22

2 PURPOSE AND NEED

Federal and state policies promote the use of zero-emission vehicles (ZEVs), and California is one of the largest ZEV markets. Due to Governor Jerry Brown calling for 1.5 million ZEVs in California by 2025, significant growth has occurred in the state's ZEV market within the last few years. There are elevated levels of ZEV ownership in the metropolitan areas of Los Angeles, San Diego, and the San Francisco Bay Area, all of which are visitors to Mono County. Recent legislative requirements and increasing consumer desire for clean energy vehicles, the demand for fueling and charging infrastructure is on the rise throughout California. Mono County can accommodate and encourage ZEV fueling infrastructure along the major travel corridors, including US Route 395, US Route 6, and State Route (SR) 120.

In addition to legislation requirements, the Federal Highway Administration (FHWA) established a national network of alternative fueling and charging infrastructure along national highway system corridors. One of the corridors in this designation is US 395. The designation of an, "Alternative Fuel Corridor" intends to support the expansion of this national network through a process that provides opportunity, catalyze public interest, and encourages mutli-State and regional cooperation and collaboration.

Mono County Local Transportation Commission (LTC) is a designated Regional Transportation Planning Agency (RPTA) in order to meet specific transportation planning needs of the County. Unlike a Metropolitan Planning Organization (MPO) or Council of Governments (COG), LTC does not construct projects. One of LTC's main functions is to create and implement plans and policies. LTC acts as a method to formalize engagement from non-metropolitan area officials to incorporate rural transportation needs into the statewide transportation planning process.

Mono County LTC is proposing a broader set of actions to address ZEV fueling along highway corridors for various types of zero-emission and low carbon-emission vehicles, including all-electric vehicles, plug-in hybrid vehicles, hydrogen fuel cell vehicles, and vehicles that run on cleaner fuels such as biodiesel (also known as renewable diesel), compressed natural gas, and propane. Having a reliable network of charging and fueling stations for these vehicle types presents several benefits, including increasing driving range and accessibility for ZEV drivers traveling through the county and allowing the County and its local businesses to take advantage of state, federal, and private incentives, grants, and loans. In addition, it will generate economic activity as visitors driving ZEVs stop in Mono County communities and shop at local businesses while charging their cars or after filling up with alternative fuels.

This policy document also supports implementation of renewable energy and transportation goals in the Mono County Regional Transportation Plan (RTP). In particular, the actions undertaken to implement this policy will further the objectives of RTP Goal 3, which calls for the County to "plan and implement a resource-efficient transportation and circulation system that supports sustainable development within the county" as well as Policy 3.A to "reduce greenhouse gas emissions through local land use and

development decisions, and collaborate with local, state, and regional organizations to promote sustainable development.” In addition to the RTP, the Town of Mammoth Lakes has accepted its Walk, Bike, Ride action plan to prioritize alternative transportation options and improvements, including electric bikes and vehicles.

The infrastructure and facilities needed for alternative fuel vehicles (e.g., hydrogen fuel cell, biodiesel, compressed natural gas, and propane vehicles) are fundamentally different from those required for electric vehicles. The locations and types of fuel-dispensing systems are generally similar to those for conventional petroleum fueling stations; however, the specific facilities for alternative fuels (e.g., tanks, pumps) can differ from petroleum fuel-dispensing facilities and are regulated differently. The County's roles in promoting alternative fueling stations for clean energy vehicles are primarily to supply information to owners of existing gas stations along the designated highways, and to help interested owners access financing and other incentives to install alternative fueling facilities.

The following policies and actions will guide and encourage the installation of alternative fueling and EV charging infrastructure throughout Mono County. The County will focus on ensuring an adequate number and distribution of charging and fueling stations for existing and future ZEVs, including personal and commercial vehicles, providing a model for major transportation corridors and similar counties in the region. Both the Town of Mammoth Lakes and the rest of the unincorporated Mono County are committed to setting policy standards in order to support the development and growth of electric vehicles and related technology.

3 OVERALL CHARGING NETWORK

3.1 VEHICLE TYPES

Zero-emission vehicles (ZEVs) are vehicles with no harmful tailpipe emissions and including plug-in electric vehicles (PEVs) and full cell electric vehicles (FCEVs). Zero-emission vehicle technology has developed rapidly with several vehicle models available and more in development.

Zero-Emission Vehicles (ZEVs)

ZEVs are more affordable to operate over time than conventional vehicles, more convenient to refuel, and require less maintenance. The decision to buy a ZEV is not made on vehicle cost, appearance, or performance, but by infrastructure and policies within a community that exist to support ZEV usage. A potential ZEV buyer will consider whether their homes, communities, and regions have the capability to support their vehicle.

Plug-In Electric Vehicles (PEVs)

A PEV can operate on battery power and recharges from the electrical grid. Two types of PEVs currently available are battery-electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs).

Battery-Electric Vehicles (BEVs)

BEVs run completely on electricity stored in batteries and have an electric drive motor to operate the vehicle. These vehicles are also referred to as all-electric vehicles or electric vehicles (EVs). Presently, most BEVs have a range of 50-100 miles on a single charge.

Plug-In Hybrid Electric Vehicles (PHEVs)

PHEVs combine an electric drive system with an internal combustion gasoline engine. These vehicles plug into the electrical grid to recharge the onboard battery and have a refillable gasoline tank. PHEVs operate in electric mode first and then switch to or blend with gasoline power as necessary. These vehicles release emissions when running on their internal combustion engines and require maintenance comparable to a traditional gasoline vehicle. PHEVs typically have a range between 10-40 miles because they have smaller battery packs than BEVs.

Fuel Cell Electric Vehicles (FCEVs)

FCEVs create electricity from hydrogen to oxygen. When running low, the tank is filled at a hydrogen fueling station. FCEVs take 3 to 7 minutes to fill and have a range similar to gasoline vehicles. In a FCEV, hydrogen is 2-3 times more efficient than gasoline in a conventional vehicle.

3.2 CHARGER TYPES

There are a variety of charger types that connect to the power grid. Charger types widely range based on price of charger and average charging time per charge use.

PEV Charging

PEV charging stations come in many shapes, sizes, and brands. Charging equipment is broadly separated into levels based on the amount of electricity that is transferred to a vehicle battery in a certain period. Three categories are used to describe PEV charging:

AC Level 1: The most basic and common form of vehicle charging is Level 1. Level 1 charging transfers 120-volts of electricity from the electrical grid to vehicle batteries. PEVs typically come with a 120-volt charging cord that enables PEVs to plug into any traditional 120-volt outlet. Level 1 charging can also occur through dedicated charging equipment built for PEVs. This charging category is easy to implement but takes the longest to fully recharge a battery. A PEV typically gains 4-6 miles of range for every hour of charge.

AC Level 2: This level of charging transfers up to 240-volts of electricity to vehicles and recharges faster than the AC Level 1. A PEV typically gains 10-20 miles of range for every hour of charge. Since it operates at a higher voltage, Level 2 chargers often require the purchase and installation of dedicated charging equipment. Level 2 chargers encompass most of the publicly available charging equipment across California. Many owners of PEVs, particularly BEVs, have installed Level 2 charging in their homes.

DC Fast Charging: This level of charging provides the fastest battery recharge available for PEVs. DC Fast charging transfers a high voltage amount, typically between 400 and 500-volts. These chargers are mostly found in publicly available locations near major transportation corridors to maximize the use of BEVs and to attract an adequate number of vehicles that can charge during a brief period.

Hydrogen Fueling Stations

Hydrogen fueling stations operate similarly to traditional fueling stations. Hydrogen dispensers at a retail gasoline station appear similar to gasoline dispensers with a slightly different nozzle. A hydrogen fueling station consists of equipment for storing, compression, and dispensing hydrogen.

3.3 TRANSIT FLEET

Electric transit vehicles are increasingly gaining popularity for a variety of reasons. Electric Vehicle transit bus technology has also improved throughout the years. Electric vehicles have expanded to transit use, and communities are increasingly switching to all-electric fleets.

Electric Vehicle Transit Benefits

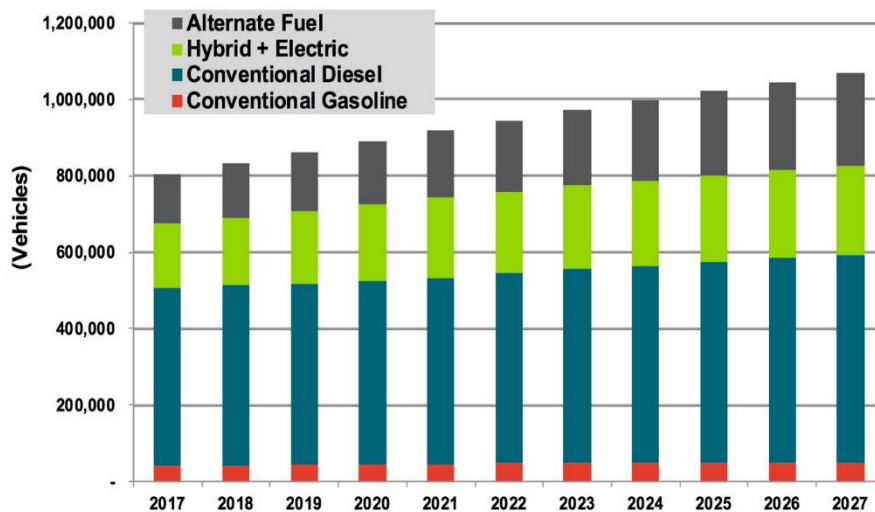
Electric buses offer a wide range of benefits to communities such as cleaner air, quieter neighborhoods, and efficiency for both cost and fuel. EV buses can lower the cost of fuel and maintenance for heavy-duty vehicles such as transit and school buses. Replacing diesel buses with electric buses brings EV technology to those who cannot afford to purchase their own EV vehicle; low-income residents rely more heavily on transit.

There are multiple benefits of EV transit buses, including:

- Longer service life due to few parts requiring maintenance;
- Lower operations and maintenance costs due to better reliability and fuel savings;
- Reduced bus garage heating and air conditioning costs due to fewer diesel engines idling in garages, which reduces expensive, winter heating and ventilation needs;
- A quiet and smooth propulsion providing an improved ride experience;
- EV buses can be used as a grid resource- charging when the electricity load is off-peak to better integrate renewable electricity, and potentially serving as a storage resource; and
- Being highly visible in the community.

Electric Vehicle Transit Costs

Chart 1.1 Annual Bus Sales by Fuel Type, World Markets: 2017-2027



(Source: Navigant Research)

Diesel sales are projected to decline from 58% to 51% over the next 10 years. Research also projects that the global bus market will expand from 800,000 to over a million. Hybrids and BEBs (battery-electric buses) will grow from 21% to 22% by 2027. Based on a one-year life cycle cost analysis

by Metro Transit, there are \$15,000 in fuel cost savings and \$10,000 in maintenance cost

savings per year, which result in a simple 12-year payback or return on investment for each bus. As the technology advances, the return on investment is expected to continue to improve.

EV Transit Programs

The Eastern Sierra Transit Authority (ESTA) is the transit agency that serves Mono County residents and visitors. The ESTA service territory is quite large and services a vast geographic area. ESTA routes traverse from Reno, Nevada, down to Lancaster. ESTA is committed to EV implementation through policy and capital purchases.

Known as the Innovative Clean Transit Measure, the California Air Resources Board approved a pioneering regulation that sets a statewide goal for public transit agencies to transition to full electric fleets by 2040. This new program recognizes that pollution doesn't affect communities equally; disadvantaged and largely low-income communities of color are greatly affected by transportation pollution. By replacing diesel buses, transit agencies can reduce pollution in overburdened communities and subsequently decrease diesel exposure among children.

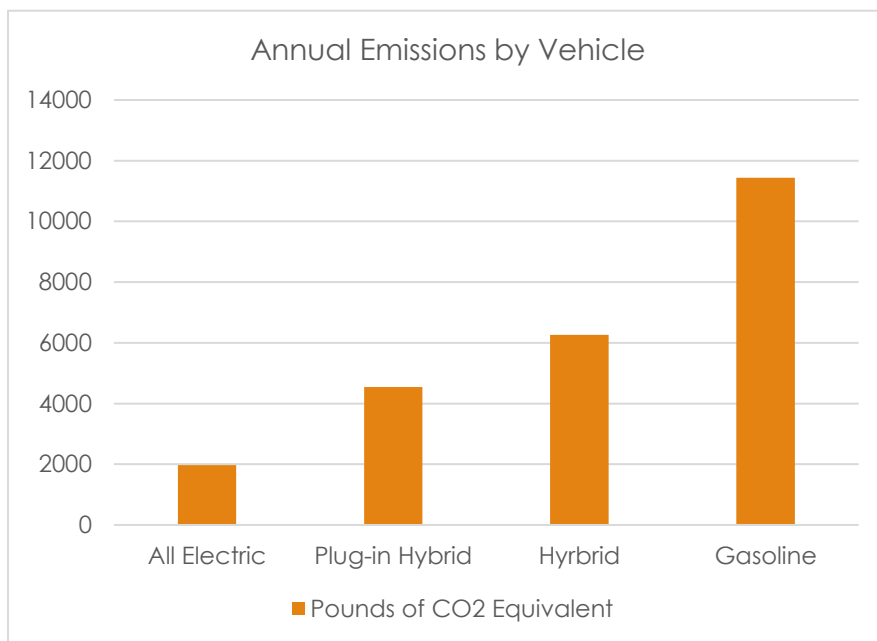
The Federal Transit Administration (FTA) is offering grant opportunity for low- and no-emission vehicles. The purpose of this program is to support the transition of the nation's transit fleet to the lowest polluting and most energy-efficient transit vehicles. The, "Low-No Program" provides funding to State and local governmental authorities for the purchase or lease of zero-emission and low-emission transit buses, including acquisition, construction, and leasing of required supporting facilities.

3.4 POINTS OF INTEREST WITHIN MONO COUNTY



4 BENEFITS OF ZERO-EMISSION VEHICLES

ZEVs benefit California cities, towns, counties, and rural communities. ZEVs provide new vehicle choices, fun and smooth electric driving, reduced noise, and lower the total cost of car ownership. Significant potential savings can result for ZEV drivers through lower costs to charge/fuel the vehicle and less required maintenance over time. ZEVs benefit communities by reducing local pollution from vehicle tailpipes, help local governments meet goals and combat climate change, and enable residents to transform their lifestyles using recent technologies.



2016 Clean Cities Alternative Fuel Vehicle Inventory

4.1 SPECIFIC COMMUNITY BENEFITS OF ZEVs

The following provide more detail on the specific community benefits of Electric Vehicles:

1. Increasing the number of ZEVs on the road reduce tailpipe pollution and its harmful effects on local residents. The ZEVs quieter engines also reduce localized noise pollution.
2. With zero tailpipe emissions, the carbon footprint of a ZEV is significantly less than a conventionally powered vehicle. While climate change is a global issue, the impact is often felt in local communities.
3. Installing public charging equipment and hydrogen fueling stations ensures that local communities are an attractive place for ZEV drivers to live, shop, and do business. Locating public charging equipment near retail business, can attract drivers to shop there.
4. Many potential drivers are uncertain whether infrastructure of other ZEV services are available in their communities. By providing infrastructure and other local support and by publicly promoting such services, communities expand consumer choice and encourage residents that want to make this transition.

5. The use of electricity and hydrogen to power vehicles supports domestically produced sources of energy. This can reduce reliance on imported energy sources and uncertainty over fuel costs. As “vehicle-to-grid” technologies develop, they will enable car batteries and fuel cells to provide electricity back to the grid, allowing ZEVs to become an important source of distributed energy storage in communities.
6. ZEVs offer new, clean, and economical fuel choices to local residents and businesses. PEVs enable the convenience of charging at home over night.
7. Adding ZEVs into fleets can bring forth potential cost savings, environmental benefits, and further establish electrifying communities.

The following table outlines community benefits based on the electric vehicle type:

Benefits of Electric Vehicles			
Benefit	Hybrid Electric	Plug-in Electric	All-Electric
Fuel Economy	Better than similar conventional vehicles. Most mid-size HEVs achieve combined fuel economy ratings higher than 40 mpg	Better than similar HEVs and conventional vehicles. Most PHEVs achieve combined fuel economy ratings higher than 90 mpge.	Better than similar HEVs, PHEVs, and conventional vehicles. Most EVs achieve fuel economy ratings higher than 100 mpge.
Emissions Reductions	Lower emissions than similar conventional vehicles. HEV emissions vary by vehicle and type of hybrid power system. HEVs are often used to meet local air quality improvement strategies and federal requirements.	Lower emissions than HEVs and similar conventional vehicles. PHEVs produce no tailpipe emissions when in electric-only mode. Life cycle emissions depend on the sources of electricity, which vary region to region.	Zero tailpipe emissions. EVs produce no tailpipe emissions. Life cycle emissions depend on the sources of electricity, which vary from region to region. Emissions reductions are substantial in most regions of the US.
Fuel Cost Savings	Less expensive to run than a conventional vehicle. HEV fuel cost savings vary by vehicle model and type of hybrid power system. For many HEV models, fuel costs are approximately 8 cents per mile.	Less expensive to run than an HEV or conventional vehicle in electric-only mode, PHEV electricity costs range about 2-4 cents per mile. On gasoline only, fuel costs range about 5-10 cents per mile.	Less expensive than an HEV or conventional vehicle. EVs run on electricity only. Electricity costs for a typical EV range 2-4 cents per mile.
Fueling Flexibility	Can fuel at gas stations.	Can fuel at gas stations; can charge at home; public charging stations, and some workplaces	Can charge at home, public charging stations, and some workplaces.

2016 Clean Cities Coalition

5 PROGRAMS AND INCENTIVES

5.1 STATE POLICY

The state legislature passed Assembly Bill (AB) 1236 in 2015, with the goal of making the use of ZEVs more feasible and accessible for drivers in California and facilitating the development of infrastructure to support these vehicles. AB 1236 requires local governments to adopt an ordinance creating a streamlined and expedited permitting process for electric vehicle (EV) charging stations, and to publish a checklist of criteria that EV charging stations must comply with for a permit to be issued.

5.2 REGIONAL PROGRAMS

Mono County developed a draft EV charging station permitting ordinance and checklist. Refer to Appendix A to view the checklist.

Liberty Utilities-Walker/Coleville

Electric Vehicle Program

Liberty Utilities offers time-of-use (TOU) rates to residential and small commercial customers who wish to charge their electric vehicles during off-peak periods. Upon approval from the California Public Utilities Commission (CPUC), Liberty will offer incentives to eligible customers who install EV charging stations in their home or small business: \$1,500 for residential customers and \$2,500 for small commercial customers. The program also includes plans to install innovative technology EV chargers throughout our service territory enabling customers to extend their EV driving range.

Additionally, Liberty has a grant program for the installation of DC fast chargers that includes oversight, full funding of installation and any infrastructure improvements, and 50% of cost of charger.

Southern California Edison (SCE)-Bridgeport, Lee Vining, and South County

Charge Ready Home Installation Rebate Program

For a limited time, Southern California Edison (SCE) is offering a rebate program to help electric vehicle (EV) drivers offset the cost of installing and permitting the necessary electric infrastructure for certain types of home EV charging.

Through the Charge Ready Home Installation Rebate Program, residential customers can receive a rebate of up to \$1,500 toward their out-of-pocket costs for the electrical upgrades and permitting fees necessary to allow installation of a Level 2 (240-volt) EV charging station. The rebate does not cover the cost of the charging stations, but it will help cover the cost of installing and permitting the charging station. The electrical upgrades eligible for the rebate may include a new 240-volt circuit and socket, new or upgraded panel, new meter socket, and permit fees. In order to receive the rebate, the applicant must be a customer of SCE and enroll in an eligible SCE Time-Of-Use (TOU) rate.

TOU rates are based on the time of day and the season when electricity is used, and these rate plans can help customers manage their energy costs by taking advantage of lower rates during off-peak and super-off-peak periods.

Charge Ready Program

The program supports the deployment of a minimum of 10 charging stations (Type 1 or Type 2) per site. The number of charging stations approved through the program will be determined based on several criteria, including current and near term EV adoption and the number of parking spaces available at your site. A limited number of sites with significant deployment costs, based on estimates, may not be eligible to participate in the program. All charging stations must be installed on a new dedicated circuit deployed by SCE. The program covers all electric infrastructure costs related to the new circuit. SCE also offers a rebate to offset some or all of the costs for the charging stations and their installation.

Valley Electric Association-Oasis

Nevada's Electric Highway

As part of Nevada's Electric Highway program headed by former Governor Brian Sandoval, Valley Electric has received funding in order to install EV charging stations near US Highway 95. Funding for EV charging stations is entirely for communities along or near US Highway 95, and no service-wide programs are available at this time. The Nevada "Electric Highway" project is believed to be the nation's first in a rural area.

5.3 INCENTIVES OFFERED

National

- Federal Tax Credit for Plug-in Vehicles
 - Plug-in electric vehicles purchased in or after 2010 may be eligible for a federal income tax credit of up to \$7,500. Plug-in electric vehicles purchased in or after 2019 may be eligible for a federal income tax credit up to \$3,750.
 - The credit amount will vary based on the capacity of the battery used to fuel the vehicle.
- Federal Tax Credit for Fuel Cell Vehicles
 - A federal tax credit of up to \$8,000 is available for the purchase of qualified light-duty fuel cell vehicles, depending on the vehicle's fuel economy. Tax credits are also available for medium- and heavy-duty fuel cell vehicles; credit amounts are based on vehicle weight.

Statewide

- The California Access Program (CalCAP)
 - Loans enrolled in the Electric Vehicle Charging Station Financing Program can be used for the design, development, purchase, and installation of electric vehicle charging stations at small business locations in California. Funded by the California Energy Commission, the California Capital Access Program (CalCAP) may provide up to 100% coverage to lenders on certain loan defaults. Borrowers may be eligible to receive a rebate of 10-15% of the enrolled loan amount.
- Property-Assessed Clean Energy (PACE)
 - Property-Assessed Clean Energy (PACE) financing allows property owners to borrow funds to pay for energy improvements, including purchasing and installing EVSE. The borrower repays over a defined period of time through a special assessment on the property. Local governments in California are authorized to establish PACE programs. Property owners must agree to a contractual assessment on the property tax bill, have a clean property title, and be current on property taxes and mortgage
- The Clean Vehicle Assistance Program
 - The Clean Vehicle Assistance Program provides grants and affordable financing to help low-income Californians purchase a new or used hybrid or electric vehicle. Our goal is to make clean vehicles accessible and affordable to all who qualify
- Clean Vehicle Rebate
 - In addition to the standard rebate amount provided through the CVRP of up to \$5,000, qualifying low income households may receive an additional \$2,000 CVRP rebate. This increased rebate amount is for consumers with household incomes less than or equal to 300 percent of the federal poverty level. Increased rebate amounts are available for fuel-cell EVs, battery EVs and plug-in hybrid EVs.
- Consumer Assistance Program (CAP)
 - The Consumer Assistance Program (CAP) is administered by the Bureau of Automotive Repair (BAR) and is designed to help improve California's air quality. A consumer may retire a qualified vehicle and receive \$1000. Consumers meeting low income eligibility requirements may receive \$1500. In addition, CAP provides qualified consumers who own a vehicle that cannot pass its biennial (every other year) Smog Check inspection up to \$500 in financial assistance toward emissions-related repairs.
- Adopt-A-Charger
 - Adopt-a-charger is a nonprofit organization that spreads adoption of plug-in chargers by utilizing sponsors to "adopt" chargers to make them free.

6 FUNDING AND COSTS

Electric vehicles are generally more expensive than their conventional counterparts. However, lower fueling and maintenance costs can make them a competitive option. As battery technology improves, the cost of electric vehicles is expected to continue to drop.

6.1 VEHICLE COSTS

Fuel costs for HEVs, PHEVs, and EVs are lower than for similar conventional vehicles. Electric drivetrains are mechanically more efficient than internal combustion engines; EVs convert about 59%–62% of the electric energy from the grid to power at the wheels, while conventional gasoline vehicles only convert about 17%–21% of the energy stored in gasoline to power at the wheels. HEVs and PHEVs use significantly less gasoline or diesel fuel than their conventional counterparts, and the more electricity a PHEV uses, the lower its fuel costs. Additionally, electricity prices are less volatile than gasoline and diesel fuel prices, so drivers can forecast their fueling expenses over longer periods of time. Over the life of the vehicle, electric-drive vehicle owners can expect to save thousands of dollars in fuel costs, relative to the average new vehicle.

The fuel efficiency of an all-electric vehicle may be measured in kilowatt-hours (kWh) per 100 miles. To calculate the cost per mile of an all-electric vehicle, the cost of electricity (in dollars per kWh) and the efficiency of the vehicle (how much electricity is used to travel 100 miles) must be known. If electricity costs \$0.11 per kWh and the vehicle consumes 34 kWh to travel 100 miles, the cost per mile is about \$0.04. If electricity costs \$0.11 per kilowatt-hour, charging an all-electric vehicle with a 70-mile range (assuming a fully depleted 24 kWh battery) will cost about \$2.64 to reach a full charge. This cost is about the same as operating an average central air conditioner for about 6 hours. General Motors estimates the annual energy use of the Chevy Volt is about 2,520 kilowatt-hours, which is less energy than what is required to power a typical water heater or central air conditioning.

6.2 CHARGER COSTS

The cost of a single port Electric Vehicle Charging Station (EVSE) unit ranges from \$300-\$1,500 for Level 1, \$400-\$6,500 for Level 2, and \$10,000-\$40,000 for DC fast charging (shown below). Installation costs vary greatly from site to site with a ballpark cost range of \$0-\$3,000 for Level 1, \$600-\$12,700 for Level 2, and \$4,000-\$51,000 for DC fast charging.

There is an industry consensus that the cost of EVSE units is trending downwards and will continue to decrease. However, installation costs are highly variable and there is no consensus among industry stakeholders about the direction of future installation costs. In addition, state and local incentives in many places encourage EVSE installation through funding and technical assistance. For the cost to charge your electric vehicle, there are three primary approaches: 1) pay-as-you-go, 2) monthly subscriptions, and 3) free.

Maintenance of charging stations can range and vary depending on charger manufacturer. Most agencies create a maintenance agreement with the charger manufacturer that renews annually. Maintenance agreements may cost between \$500 and \$1,500.

Charging Options						
Type	Amperage	Voltage	Power Output	Typical Charging Timeline	Primary Use	Unit Cost Range*
AC Level 1	12-16 amps	120 V	1.3-1.9 kW	2 to 5 miles of range per hour of charging	Residential and workplace charging	\$300-\$1,500
AC Level 2	Up to 80 amps	208 V or 240 V	Up to 19.2 kW, typically for residential applications	10 to 20 miles of range per hour of charging	Residential, workplace, and public charging	\$400 to \$6,500
DC Fast	Up to 200 amps	208 to 600 V	25-150 kW	50 to 70 miles of range in less than 20 minutes	Public charging	\$10,000 to over \$40,000

*2015 Data from Alternative Fuels Data Center

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7 GOALS, OBJECTIVES, AND POLICIES

7.1 GOAL

Promote US 395, US 6, and SR 120 in Mono County as alternative fueling station corridors.

7.2 Objectives

1. Facilitate the provision of ZEV fueling and charging infrastructure along US 395, US 6, and SR 120 to
 - Encourage Mono County's ZEV local drivers to visit other local communities and businesses;
 - Inspire ZEV drivers to visit Mono County communities and patronize local businesses;
 - Promote regional and interregional development of ZEVs and charging stations;
 - Educate the community on electric vehicles;
 - Protect the environment and promote clean air; and
 - And comply with federal and state clean energy and greenhouse gas reduction requirements.

7.3 Policies and Actions

Policy A General Guidelines

Action A.1 Establish guidelines for siting of EV charging stations.

Identify and prioritize communities targeted for installation of charging stations, based on population, location/distribution along the highways, and number of visitor points of interest.

1st Tier Priority Communities:

- Bridgeport
- Lee Vining
- Benton
- Crowley Lake

2nd Tier Priority Communities:

- Walker
- Mono City
- Chalfant

3rd Tier Priority Communities

- Coleville
- Sunny Slopes

The charging stations in the communities, focusing on the following criteria:

- Proximity to local businesses providing services to visitors (cafes, grocery stores, shops, Wi-Fi hotspots, restrooms, etc.)
- Proximity to visitor amenities (visitor centers, parks, community centers)
- Availability at hotels, campgrounds, recreational vehicle (RV) parks

The locations will identify the desired number of charging stations by community, as well as by charging station type:

- Level 2 pedestal chargers (220V AC)
- Level 3 super charging stations (480V DC)
- Tesla Superchargers

Action A.2 Determine cost to charge for public use of charging stations.

Conduct research and outreach to determine the optimal rate and method for charging customers for the use of EV charging stations (e.g., by the hour, by the kilowatt-hour [kWh], or by the charging session). A different method and/or rate may be appropriate for several types/levels and locations of charging stations.

Action A.3 Install EV charging stations at County-owned sites.

Install EV charging stations at County-owned sites. Public locations that may accommodate EV chargers include:

- Parks
- Libraries
- Community centers
- County courthouses and administration buildings
- Schools

Action A.4 Develop sign guidelines and standards for EV charging and alternative fueling stations.

Develop guidelines and design standards for signage along highways and within communities directing drivers to EV charging stations and alternative fuel stations. The guidelines are to be consistent with standards in the California Manual on Uniform Traffic Control Devices.

Install directional signage for EV charging stations and alternative fuel stations along the designated highways and within the central Main Street areas of communities with visitor points of interest.

Policy B Permitting and Processing

Action B.1 Amend the Zoning Ordinance to support provision of EV charging stations.

Enact the following amendments to Mono County Code Title 19 – Zoning:

Consistent with the goals and requirements of AB 1236, adopt an ordinance creating an expedited and streamlined permitting process for EV charging stations.

Mono County Alternative Fueling Station Corridor Policy

Adopt a subsequent ordinance specifying EV charging stations as a permitted accessory use in all residential and commercial zones. In the case of a proposal for EV charging as the primary use of a property, a conditional use permit would be required (in certain commercial zones only, as determined to be appropriate).

Establish incentives for new commercial developments to provide EV charging stations.

Allow for a reduction in overall parking requirements for new commercial buildings in exchange for provision of one or more charging station(s), as follows:

For buildings requiring five to nine parking spaces, allow for a 20 percent reduction in the overall parking requirement for a space providing a Level 2 EV charger. The maximum parking reduction allowed is 40 percent in exchange for two Level 2 EV chargers.

For buildings requiring 10 or more parking spaces, allow for a 10 percent reduction in the overall parking requirement for each space providing a Level 2 EV charger, and a 20 percent reduction for each space providing a Level 3 EV charger or Tesla Supercharger. The maximum parking reduction allowed is 30% in exchange for up to three EV chargers.

Applies to new developments located within one-half mile of US 395, US 6, or SR 120.

Ensure that standards for parking spaces and EV charging stations are consistent with the California Building Code Title 24 and Americans with Disabilities Act.

Establish incentives for providing EV charging stations as part of expansions of existing commercial buildings.

Allow for a reduction in the number of additional parking spaces required for expansions of existing commercial buildings in exchange for provision of one or more charging station(s), as follows:

For expansion projects triggering a requirement for two to four additional parking spaces, allow for a 50 percent reduction in the additional parking requirement for each space providing a Level 2 EV charger. The requirement for additional parking may be eliminated entirely in exchange for the provision of the corresponding number of chargers.

For expansion projects triggering a requirement for five or more additional parking spaces, allow for a 20 percent reduction in the additional parking requirement for each space providing a Level 2 EV charger, and a 50 percent reduction in the additional parking requirement for each space requiring a Level 3 EV charger or Tesla Supercharger. The requirement for additional parking may be eliminated entirely in exchange for the provision of the corresponding number of chargers.

Applies to new developments located within one-half mile of US 395, US 6, or SR 120.

Ensure that standards for parking spaces and EV charging stations are consistent with the California Building Code Title 24 and Americans with Disabilities Act.

Policy C Marketing and Development

Action C.1 Perform outreach and collaborate with other groups.

Conduct outreach to business organizations, business owners, and property owners to inform them of the policy and encourage them to install EV charging stations. Potential groups for targeting outreach may include, but are not limited to, the following:

- Chambers of Commerce (Bridgeport, Lee Vining, and Northern Mono)
- Business owners/property owners of key EV charger sites
- Public lands and visitor sites (e.g., Mono Basin National Forest Scenic Area Visitor Center)

Seek to establish interagency partnerships between the Planning Division and the Economic Development, Tourism & Film Commission, to promote EV charging and alternative fueling stations in tourist information and materials. Work with Economic Development to create an informational guide and supporting presentation for businesses/property owners summarizing:

- The benefits of installing EV chargers (attracting customers)
- Equipment and energy supply needs
- Installation costs
- Installation and permitting procedures
- Optimal cost to charge public users for EV charging (for various charger types)

Assist business owners and property owners in accessing information about state and federal grants, loans, tax credits, and other incentives supporting installation of EV charging infrastructure.

Action C.2 Promote the availability and locations of EV charging and alternative fueling stations through visitor/tourist materials.

Promote US 395, US 6, and SR 120 in Mono County as alternative fueling station corridors through visitor information, including but not limited to visitor guides, brochures, maps, and other printed materials, and the County tourism website. These information sources should include references and/or links to websites or mobile apps that support locating EV charging and alternative fueling stations (e.g., PlugShare, ChargePoint, NextCharge, Alternative Fuels Data Center).

Action C.3 Create Standardization guidelines for EV charger development.

Support the creation of standard design guidelines for EV charger development. Design guidelines enforce best practices and will ensure consistency throughout the County.

Policy D Financing and Incentives

Action D.1 Provide procedural incentives for provision of EV charging stations for renovations of existing buildings and facilities.

Consider offering incentives such as waived or reduced permit fees for property renovation projects that include installation of EV charging stations. These incentives would apply to projects located within one-half mile of US 395, US 6, or SR 120.

Action D.2 Identify potential sources of funding and share information with property owners.

Conduct research to identify available sources of funding for installation of EV charging and alternative fueling infrastructure, including state and federal grants, loans, tax credits, and other incentives. Potential sources include, but are not limited to:

- California Energy Commission – Alternative and Renewable Fuel and Vehicle Technology Program
- US Department of Energy – Energy Efficiency & Renewable Energy Program
- Federal Alternative Fueling Infrastructure Tax Credit
- Utility incentive and rebate programs

Action D.3 Provide EV charging and alternative fueling infrastructure information and assistance to business owners and property owners.

Make information about financing and incentives available to property owners and business owners, in conjunction with outreach, to encourage installation of EV charging and alternative fueling infrastructure. The County will also offer resources and/or technical assistance in applying for funds to property owners and business owners wishing to install EV charging or alternative fueling stations for public use.

8 APPENDIX A: EV CHARGING PERMIT CHECKLIST

Mono County Community Development Department

Building Division

PO Box 3569
Mammoth Lakes, CA 93546
760-924-1800

PO Box 8
Bridgeport, CA 93517
760-932-5420

Electric Vehicle Charging Station Permit

Eligibility Checklist for Expedited Electric Vehicle Charging Station Permit: Non-Residential Buildings and Facilities

Type of Charging Station(s)	Power Levels (proposed circuit rating)	Check one
Level 1	110/120 volt alternating current (VAC) at 15 or 20 Amps	<input type="radio"/>
Level 2-3.3 kilowatt (kW) (low)	208/240 VAC at 20 or 30 Amps	<input type="radio"/>
Level 2 6.6 kW (medium)	208/240 VAC at 40 Amps	<input type="radio"/>
Level 2 9.6kW (high)	208/240 VAC at 50 Amps	<input type="radio"/>
Level 2 192 kW (highest)	208/240 VAC at 100 Amps	<input type="radio"/>
Other (provide detail): _____	Provide rating: _____	<input type="radio"/>

Permit Application Requirements:

Does the application include EVCS manufacturer's specs and installation guidelines?	Y	N
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Electrical Load Calculation Worksheet:

A. Is an electrical load calculation worksheet included? (CEC 220)	Y	N
B. Based on the load calculation worksheet, is a new electrical service panel upgrade required?	Y	N
If yes, do plans include the electrical service panel upgrade?	Y	N
C. Is the charging circuit appropriately sized for a continuous load of 125% ?	Y	N
D. If charging equipment proposed is a Level 2-9kW station with a circuit rating of 50 Amps or higher, is a completed circuit card with electrical calculations included with the single line diagram?	Y	N

Site Plan and Single Line Drawing:

A. Is a site plan and separate electrical plan with a single-line diagram included with the permit application?	Y	N
If mechanical ventilation requirements are triggered for indoor venting requirements (CEC625.29 {D}), is mechanical plan included with the permit application?	Y	N
B. Is the site plan fully dimensioned and drawn to scale?	Y	N
1) Showing location, size and use of all structures?	Y	N
2) Showing location of electrical panel to charging system?	Y	N
3) Showing type of charging system and mounting?	Y	N

Mono County Alternative Fueling Station Corridor Policy

Compliance with the 2016 California Electrical Code:

A. Does the plan include EVCS manufacturer’s specs and installation guidelines?	Y	N
B. Does the electrical plan identify the amperage and location of the existing electrical service panel?	Y	N
If yes, does the existing panel schedule show room for additional breakers?	Y	N
C. Is the charging unit rated more than 60 amps or more than 150V to ground?	Y	N
If yes, are disconnecting means provided in a readily accessible location in line of site and within 50’ of EVCS? (CAC 625.23)	Y	N
D. Does the charging equipment have a Nationally Recognized Testing Laboratory (NRTL) approved listing mark? (UL 2202/UL02200)	Y	N
E. If trenching is required, is the trenching detail called out?	Y	N
1) Is the trenching in compliance with electrical feeder requirements from structure to structure? (CEC 225)	Y	N
2) Is the trenching in compliance with minimum cover requirements for wiring methods or circuits? (18” for direct burial per CEC 300)	Y	N

Compliance with the 2016 California Green Building Standards Code (CGBSC):

A. Do the CAL Green EV Readiness installation requirements apply to this project?	Y	N
1) Do the plans demonstrate conformance with CGBSC Table 5.106.5.3.3 for the minimum required number of charging spaces?	Y	N
2) Do the construction plans comply with the design requirements set forth in CGBSC 5.106.5.31 for single charging spaces or CGBSC 5.106.5.3.2 for multiple charging spaces?	Y	N

Compliance with the 2016 California Building Code, Chapter 11-B Accessibility Features:

A. Do the Plans clearly depict all required accessible EVCS features for the disabled?	Y	N
1) Do the plans identify the correct number and type of accessible EVCS stalls required in accordance with Table 11B-228.3.2.1?	Y	N
2) Do the plans detail compliance with the accessible EVCS features required by 11B-812 and Figure 11B-812.9?	Y	N

Notes: This criteria is intended for an expedited EVCS permitting process. If any items are checked NO, please revise plans to fall within the eligibility checklist. Otherwise the permit application may go through the standard plan review and approval process.

Electrical plans shall be completed, stamped and signed by a California Licensed Electrical Engineer or a C-10 Electrical Contractor.

Project Address: _____

Applicant Signature: _____

Applicant Printed Name: _____