



Office of the City Manager

CONSENT CALENDAR
May 14, 2024

To: Honorable Mayor and Members of the City Council
 From: Dee Williams-Ridley, City Manager
 Submitted by: Terrance Davis, Director of Public Works
 Subject: Revised Fees for Public Use of City-Owned Electric Vehicle Charging Ports;
 Amending Berkeley Municipal Code Section 6.24.137

RECOMMENDATION

Adopt first reading of an Ordinance amending Berkeley Municipal Code (BMC) Section 6.24.137, Designation of and Restrictions for Electric Vehicle Parking Spaces, to:

- Establish a schedule of rates for electric vehicle charging stations, and
- Authorize the City Manager or her Designee to adjust the rates in accordance with the California Public Utility Commission's electricity rate increases.

SUMMARY

The City owns and operates 47 public Level 2 electric vehicle (EV) charging ports across five City sites. Adopted in 2015, the current fee for public use of these City-owned EV charging ports is \$1.50 per hour. City staff determined that this static fee does not reflect the complexities of the current operations, which include energy cost, ancillary (non-energy) costs, and the need for charging port use turnover. The proposed fee revision, presented in **Table 1**, addresses this issue by creating a layered fee structure that accounts for all facets of the City's public EV charging port operation.

City staff conducted a Berkeley-specific analysis of public EV charging port operations and determined that the current fee results in a significant net operating deficit for the City. The proposed fee revision reduces this operational deficit while maintaining a competitive fueling price for EV users, which aligns with City goals to incentivize EV adoption.

The proposed fee revision is in compliance with State regulations that require all public Level 2 charging ports to use an energy-based fee structure (i.e. dollars per kilowatt-hour [kWh]) before January 1, 2031. Adopting an energy-based fee structure also removes fueling cost inequities among users by charging users by the amount of energy dispensed rather than the time spent fueling.

This recommendation also grants the City Manager or their Designee authority to adjust the energy fees for public City-owned Level 2 EV charging ports each fiscal year as

needed. The maximum allowable annual percent increase shall not exceed the annual percent increase of Pacific Gas & Electric’s (PG&E’s) average electric rate, published in the California Public Utilities Commission’s (CPUC’s) most current Assembly Bill (AB) 67 Annual Report on electric and gas utility costs. This will ensure revenue keeps pace with actual operational energy costs. There is no expense to the City to implement the proposed fee revision.

FISCAL IMPACTS OF RECOMMENDATION

Currently, operational costs of public EV charging ports are subsidized by the utilities budget governing a given facility. The proposed fee revision will allow the City to:

- Reduce overall operational expenses – The City is currently losing money on public EV charging port operations. City staff recommend the proposed fee structure, which would reduce operational losses rather than recover all operational expenses, to better align with City goals to incentivize EV adoption.
- Adhere to State regulations – The proposed fee revision would comply with State requirements and remove fueling cost inequities associated with the current fee structure.

The current fee for public use of City-owned EV charging ports is \$1.50 per hour. The proposed fee revision is presented in **Table 1**. The proposed fee categories reflect actual operational expense categories.

Table 1. Proposed Revised City-owned Level 2 EV Charging Port Fee Structure

Fee Category	Effective	Fee
Baseline Energy	12:00 AM – 4:00 PM; 9:00 PM – 12:00 AM	\$0.30 per kWh
Time-of-Use Energy	4:00 PM – 9:00 PM	\$0.40 per kWh
Ancillary	All times	\$1.50 per session
Overstay	5:00 am to 10:00 pm After 4 hours 15 minutes of charging	\$1.00 per minute, up to 30 minutes

Under the current fee structure, the City generated \$12,637 from April 1, 2022 through March 31, 2023. The total public EV charging port operational cost for the same timeframe was approximately \$116,000, thus resulting in a net operating deficit of \$103,418 to the City. The City subsidizes this cost from the Off-Street Parking Fund 627, the Parking Meter Fund 631, and the Berkeley Marina Operations/Maintenance Fund 608, all funds that are still recovering financial from the COVID-19 pandemic and facing funding shortfalls. The recommended proposed fee revision would have allowed the City to collect \$83,412 in the above-mentioned timeframe, reducing the deficit by \$70,775. See **Table 2** for a detailed breakdown of the resulting net operating deficit of

the current fee as compared to the proposed fee revision. The proposed fee balances the need to better cover operating expenses with the need to maintain competitive fueling costs that still encourage EV adoption.

**Table 2. Net Operating Deficit of Public EV Charging Port Operation
(April 1, 2022 - March 31, 2023)**

	Current Fee	Proposed Fee Revision
Operational Costs	\$116,000	\$116,000
Revenue	\$12,637	\$83,412
Net Operating Loss	\$103,363	\$32,588

The proposed fee revision meets California State regulations that require public Level 2 EV chargers to utilize an energy-based fee structure before January 1, 2031. Failure to comply with this regulation may result in the seizure by the State of any non-compliant charging ports.

There is no expense to the City related to implementation of the proposed fee revision. Revenue from this recommendation will be ongoing for as long as the City owns and operates public EV charging ports. Collected revenue will continue to be deposited into the Off-Street Parking Fund for Center Street Garage, Telegraph-Channing Garage, and Oxford Garage, and the Berkeley Marina Operations/Maintenance Fund.

CURRENT SITUATION AND ITS EFFECTS

The City owns and operates 22 dual-port and 3 single-port Level 2 EV charging stations for a total of 47 Level 2 EV charging ports across five City locations. A Level 2 charging port uses a 240-volt circuit and is the most common charging type of charging port for residential and commercial use. Thirty-one charging ports are located in Center Street Garage, eight are in Telegraph-Channing Garage, four are in Oxford Garage, two are at the West Berkeley Library, and two are at the Berkeley Marina, J-Dock. Providing EV charging ports for public use directly supports the City’s General Plan, Policy T-19, which calls for placing stations at major parking facilities and employment centers. It also responds to the City’s Climate Action Plan Goal 8 to encourage low-carbon vehicles and fuels. Assessing a reasonable fee for the use of public EV charging ports encourages responsible use of the charging resource and the electricity that supplies. Providing public EV charging ports at a reasonably competitive price also supports the City’s Electric Mobility Roadmap goal of Achieving Zero Net Carbon Emissions by continuing to incentivize the rapid adoption of EVs. The City aims to increase adoption of light-duty EVs to 25% by 2025, 55% by 2030, and 100% by 2045.

The current policy allows the City to charge a \$1.50-per-hour fee for the use of City-owned public EV charging ports. In 2014, the City received a California Energy Commission (CEC) Bay Area Charge Ahead Project 2 (BayCAP 2) grant for the deployment of 12 public Level 2 EV charging ports. Cost assumptions used to inform the current fee were based on historical regional data as no Berkeley-specific data was

available at the time. The \$1.50-per-hour fee assumed an average energy charge of \$0.15 per kWh for 350 days of the year, and an average energy charge of \$0.90 per kWh for the remaining 15 days. The increased energy charge for these 15 days per year reflected average pricing expected during the Peak Day Pricing rate schedule that PG&E was anticipated to implement in late 2015. The current fee accounted for assumed marginal demand charges due to use of the EV charging ports. The current fee also assumed annual maintenance costs (\$375 per charging port), ChargePoint network service fees (\$230 per charging port), and ChargePoint revenue collection fees (10% of total session fees). As part of the grant requirements the City optimized charging port use by implementing a time-based fee structure primarily designed to encourage charging port turnover.

Based on a recent analysis of the City's public EV charging port operation data, the current fee, designed to address energy costs, ancillary costs, and overstay at charging ports, does not generate sufficient revenue to cover actual costs. Since its adoption in 2015, overall energy costs have increased by 72%^{1,2}. Additionally, the current time-based fee does not account for increased energy demand costs incurred by the City during the 4:00 pm to 9:00 PM timeframe. The current fee also does not cover actual ancillary costs of all 47 public EV charging ports, as it was developed to cover only the 12 EV charging ports from the original deployment. As a result, the City currently runs a significant operational deficit. City staff's proposed fee structure splits the fee into multiple fee categories in a way that more accurately accounts for the current operational expenses.

The current fee does not meet the Electric Vehicle Fueling Systems Specifications in California Code of Regulations (CCR) Title 4 §4001 and §4002.11, which became effective January 1, 2020. The regulations state that public Level 2 EV charging stations installed before January 1, 2021 must implement an energy-based fee structure (i.e. dollars per kWh) by January 1, 2031. All City-owned Level 2 EV charging stations were installed prior to January 1, 2021, and therefore, must comply with this regulation.

Converting to an energy-based fee structure also eliminates fueling cost inequities associated with time-based fees. The charging speed, or charging rate, at which an EV is able to receive energy depends on the EV model. Because the current fee is time-based, users with EV models designed with slower charging rates effectively pay more than users of EVs with faster charging rates for the same amount of energy.

Revising the fee associated with public use of City-owned Level 2 EV charging ports advances the City's goals to provide state-of-the-art, well-maintained infrastructure, amenities, and facilities; provide an efficient and financially-healthy City government; and be a global leader in addressing climate change, advancing environmental justice, and protecting the environment.

¹ East Bay Community Energy. July 2023. *PG&E – EBCE Joint Rate Comparisons*.

² California Public Utilities Commission. April 2020. *California Electric and Gas Utility Cost Report*.

BACKGROUND

This proposed fee structure revises the EV charging fee at City-owned public Level 2 EV charging ports as shown in **Table 1**. The fee structure is broken out by energy (baseline and time-of-use), ancillary, and overstay operations. The proposed fee revision is based on actual operational costs for the timeframe April 1, 2022 through March 31, 2023. City staff determined that this timeframe was the best available dataset at the time the analysis for this report was conducted. The following subsections describe the methodology for developing each fee component.

Energy Fee

On-going expenses associated with energy costs are electricity charges and demand charges from the City’s energy providers. The City’s EV charging ports are not separately metered and, as a result, the portion of monthly energy costs associated with EV charging activity was estimated using EV charging station service provider (ChargePoint) energy usage data. A per kWh energy cost was calculated for each City EV charging port site. The prorated energy cost of all sites was \$0.36 per kWh. This cost captures EV charging port usage during both non-peak and peak, or Time-of-Use, periods. The prorated cost per kWh was calculated based on the number of charging ports installed at each of the five City sites. A detailed energy cost breakdown is shown in **Table 3**.

Table 3 Energy Cost Breakdown

Charging Port Site	Cost per kWh	Percent of Total Charging Ports	Prorated Cost per kWh
Center Street Garage	\$0.36	66%	\$0.23
Telegraph-Channing Garage	\$0.25	17%	\$0.04
Oxford Garage	\$0.39	9%	\$0.03
West Berkeley Library	\$0.90	4%	\$0.04
Berkeley Marina, J-Dock	\$0.33	4%	\$0.01
Total Prorated Energy Cost			\$0.36 per kWh

Ancillary Fee

Ancillary costs, or non-energy costs, consist of annual maintenance and service provider (ChargePoint) network service plan charges (\$468 per charging port); and ChargePoint revenue collection fees (10% of the session fees). The network service fee covers software updates, station programming, cellular connections, and around-the-clock driver support. Ancillary costs were calculated on a per-operational-hour basis across all five sites. Total annual hours of use per EV charging port assumes an average EV charging port availability of 7,221 hours and an average public EV charging

port utilization rate of 10 percent. The average ancillary cost per charging port was \$1.52 per operational hour. Per ChargePoint data, the average active EV charging session was two hours. A detailed ancillary cost breakdown is shown in **Table 4**.

Table 4 Ancillary Cost Breakdown

Expenses	Annual Per Charging Port Cost	Hours of Use per Year (assuming 10% utilization)	Cost per Operational Hour
Station Replacement	\$578.05	722	\$0.80
Network Service & Warranty Plan	\$468.33	722	\$0.65
ChargePoint Revenue Collection Fee	\$52.53	722	\$0.07
Ancillary Cost			\$1.52 per operational hour

A benchmark analysis was performed by Staff to ensure the recommended fee remains competitive and would continue to incentivize EV adoption. The recommended baseline energy fee of \$0.30 per kWh is comparable to the Oakland-Emerlyville average fee of \$0.32 per kWh. Staff also compared the total fueling cost for 50 miles of range under five fee scenarios: (1) proposed fee, (2) current fee, (3) average Oakland-Emerlyville fee, (4) average retail gas price, and (5) an alternative proposed fee (see **Table 5**).

The proposed fee revision (Scenario 1) resulted in a 5%-65% increase in fueling costs as compared to the current fee (Scenario 2), and a 17%-49% increase as compared to the Oakland-Emerlyville average fee (Scenario 3). The recommended fee resulted in a 16%-33% decrease in fueling costs as compared the average retail gas price (Scenario 4). While Scenario 5, the alternative proposed fee, would generate revenue that more closely meets the City’s operational expenses (\$115,700 for the April 1, 2022 through March 31, 2023 timeframe), it would result in fueling costs that are comparable or more expensive than Scenario 4, average retail gas price. Staff believe that Scenario 5 would hinder the adoption of EVs in Berkeley.

Table 5 Fueling Cost Benchmark Analysis

Scenario	Fee Type	Unit Price	Unit	Per Session Fee	Total Cost for 50 miles of Range
1	Proposed Fee	\$0.30 - \$0.40	Per kWh	\$1.50	\$7.46 - \$9.45
2	Current Berkeley Fee	\$1.50	Per hour	\$0	\$4.52 - \$9.03
3	Average Oakland-Emeryville Fee	\$0.32	Per kWh	\$0	\$6.36
4	Average Retail Gas – San Francisco	\$5.40	Per gallon	\$0	\$11.21
5	Alternative Proposed Fee	\$0.30 - \$0.53	Per kWh	\$3.00	\$8.96 – \$13.53

Note: Scenario 2 assumes a charging rate range of 3.3 kW – 6.6 kW.

This recommendation grants the City Manager or her Designee authority to adjust the baseline energy and Time-of-Use energy fees on an annual basis as needed. The maximum allowable annual percentage increase shall not exceed the annual percentage increase in PG&E’s average electric rate, published Table 1.8 of the CPUC’s most current AB 67 Annual Report on electric and gas utility costs. The AB 67 Annual Report for any given year is typically published on April 1st of the following year and the subsequent rate increase would be implemented on July 1. Changes to ancillary fee or overstay fee are outside of this authority.

Overstay Fee

The proposed fee revision includes an overstay fee of \$1 per minute up to 30 minutes after four hours and 15 minutes of charging. The overstay fee would be effective from 5:00 am to 10:00 pm. The purpose of the overstay fee is to encourage turnover to better optimize charging port use and prohibit use of a charging port beyond a reasonable period of time. This overstay fee is in alignment with the City’s current Parking Enforcement citation of \$30 for “Exceeding EV Parking Space Time Limit” of four hours.

Commission Comments

City staff presented the proposed fee revision at the Environment and Climate Commission on November 29, 2023 as part of a larger presentation on the implementation of the City’s Electric Mobility Roadmap. The Commission was supportive of the fee structure and provided suggested improvements to the overstay fee and the annual energy fee increase components. Staff addressed Commission comments by editing the proposed policy as follows:

- a) The overstay fee is not triggered during the 10:00 pm to 5:00 am timeframe to accommodate overnight charging needs, and
- b) The annual maximum percent energy fee increase was linked to the CPUC's AB 67 Annual Report to better reflect actual energy cost increases.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

The proposed fee revision for City-owned Level 2 EV charging ports supports the City's Electric Mobility Roadmap goal of Achieving Zero Net Carbon Emissions by continuing to encourage EV adoption. It also responds to the City's Climate Action Plan's Goal 8 of encouraging low-carbon vehicles and fuels. The fee continues to promote station turnover to allow access by greater numbers of potential users. Staff also determined that the proposed fee revision still promotes and incentivizes EV adoption because EV fueling costs at the proposed fee remain lower than gas fueling costs.

RATIONALE FOR RECOMMENDATION

The proposed fee revision is expected to (1) reduce operating deficit, (2) comply with State requirements, and (3) set a price point that is competitive with other local charging rates and is cheaper than gas, thereby incentivizing EV vehicle use as per City policy.

ALTERNATIVE ACTIONS CONSIDERED

Two alternative actions were considered as part of this analysis:

- Council could take no action, in which the current fee structure remains in place. As a result, the City would forego a potential increase in public EV charging port revenue. On January 1, 2031, the City would be non-compliant with State regulation, which may result in seizure of non-compliant charging stations. Additionally, public EV charging at City-owned EV charging ports would remain inequitable for those with EV models that charge at slower rates.
- Council could implement an energy-based fee structure designed to meet operational costs or create profit. This action disincentivizes rapid adoption of EVs as EV fueling costs would be comparable or more expensive than gas fueling costs and would be out of line with EV charging port rates in nearby cities per Staff's benchmark analysis.

CONTACT PERSON

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Attachments:

1: Ordinance

ORDINANCE NO. -N.S.

AMEND BERKELEY MUNICIPAL CODE SECTION 6.24.137, DESIGNATION OF AND RESTRICTIONS FOR ELECTRIC VEHICLE PARKING SPACES, TO ESTABLISH A SCHEDULE OF RATES FOR ELECTRIC VEHICLE CHARGING STATIONS, AND AUTHORIZE THE CITY MANAGER TO ADJUST THE RATES IN ACCORDANCE WITH THE CALIFORNIA PUBLIC UTILITY COMMISSION'S ELECTRICITY RATE INCREASES

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That Berkeley Municipal Code Section 6.24.137 is amended to read as follows:

A. *Designation of Parking Spaces.* The City Traffic Engineer is authorized in accordance with the purposes of this chapter to designate spaces in off-street public parking facilities for the exclusive parking of electric vehicles that are connected to electric vehicle charging stations for the purpose of transfer of electricity to the battery or other energy storage device of an electric vehicle.

B. *Signs or Markings.* Upon designation of a parking space or spaces for the exclusive use of electric vehicles pursuant to Subsection A of this section, the Public Works department shall place signs or markings giving adequate notice that the parking space or spaces are restricted and to be used only for such electric vehicles. The signs or markings shall be in compliance with California Vehicle Code § 22511 indicating that vehicles left standing in violation of the restriction may be removed. The parking restriction shall not apply to the designated parking spaces until the sign or markings have been placed.

C. In parking stalls designated by the use of markings and/or posting as electric vehicle charging stations, only electric vehicles are allowed to park for charging events during designated hours.

D. It is unlawful for the operator of any vehicle to allow a vehicle to park or stand in a designated electric vehicle charging station longer than the posted time limit.

E. It is unlawful for the operator of an electric vehicle to allow that vehicle to park or stand in a designated electric vehicle charging station unless the vehicle is actively conducting a charging event.

F. The police department is authorized to cite and/or remove or cause the removal of vehicles parked in violation of this section in accordance with California Vehicle Code § 22511.

G. Fees for use of electric vehicle charging stations at electric vehicle parking spaces hereinabove set forth in 6.24.137 shall be as follows:

1. Baseline energy fee of \$0.30 per kilowatt-hour, effective from 12:00 a.m. to 4:00 p.m. and from 9:00 p.m. to 12:00 a.m. everyday.
2. Time-of-Use energy fee of \$0.40 per kilowatt-hour, effective from 4:00 p.m. to 9:00 p.m. everyday.
3. Ancillary fee of \$1.50 per charging session.
4. Overstay fee of \$1.00 per minute up to 30 minutes, effective after 4 hours and 15 minutes of charging from 5:00 a.m. to 10:00 p.m. everyday.
5. The City Manager may adjust the energy fees by increments no smaller than one cent (\$0.01).
6. The maximum allowable annual percentage increase in energy fees shall not exceed the annual percentage increase in PG&E's average electric rate, published in Table 1.8 of the California Public Utility Commission's most current Assembly Bill 67 Annual Report on electric and gas utility costs.
7. Adjustments to the energy fees associated with the use of electric vehicle charging stations shall be posted to the City's website no later than 30 days prior to the adjustment.
8. Energy fees may be adjusted no more than once per fiscal year.

Section 2. Copies of this Ordinance shall be posted for two days prior to adoption in the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way. Within 15 days of adoption, copies of this Ordinance shall be filed at each branch of the Berkeley Public Library and the title shall be published in a newspaper of general circulation.