



DATE: February 25, 2020

CATEGORY: Consent

DEPT.: City Manager's Office

TITLE: **Fees for Electric Vehicle Chargers**

RECOMMENDATION

Adopt a Resolution Amending the City of Mountain View Master Fee Schedule to Change the Fees for Electric Vehicle Chargers, to be read in title only, further reading waived (Attachment 1 to the Council report).

BACKGROUND

On July 7, 2015, the City Council approved instituting a fee for use of City-owned, Level 2 electric vehicle (EV) chargers in Mountain View. The fees were set at \$1.50 per hour for the first two hours (with a one-hour minimum) and \$5 per hour after two hours. In March 2016, based on community input, the City Manager authorized adjusting the fees to \$1 per hour for the first two hours (with a one-hour minimum), and \$4 per hour after two hours.

On December 4, 2018, the City Council directed staff to evaluate opportunities to expand EV charging at City-owned sites downtown and analyze available grants and incentives to offset the cost. The City Council approved \$250,000 in funds to support this effort and authorized transfer of these funds to the Annual New Energy Conservation Measures CIP (19-25) on February 12, 2019.

On December 16, 2019, the California Office of Administrative Law approved amendments to the Electric Vehicle Fueling Systems Specifications in the California Code of Regulations Title 4, Sections 4001 and 4002.11. These regulations specify that pricing for EV charger usage should be according to the amount of electricity dispensed rather than time. The rule change does not preclude station owners from charging other fees, such as hourly fees for parking (in addition to per-kWh pricing) or "overstay" fees. These regulations apply to new Level 2 EV chargers installed on or after January 1, 2021. EV chargers installed prior to that date have until January 1, 2031 to comply.

ANALYSIS

Staff initiated an analysis of the current EV fees based on EV driver feedback and planned installation of additional EV chargers that may provide electricity at a different speed than the City's existing chargers.

Feedback from users has indicated that the per-hour pricing structure is relatively expensive for plug-in hybrids and older EVs. These vehicles can only charge at up to 3.3 kW, compared to the maximum charger output of 6.6 kW, meaning they are receiving only half the amount of electricity as other EV users for the same hourly fee. Based on an analysis of charging session data from 2019, nearly 40 percent of EVs plugged into the City's chargers are charging at rates below 6.6 kW. Therefore, a per-kWh fee structure would be more equitable for all EV charger users.

The City recently installed nine EV chargers at the Community Center and is in the process of installing 34 additional EV chargers in the downtown parking facilities. These chargers will use Adaptive Load Management™ technology that can vary power distribution among all actively charging vehicles to manage peak power consumption. This allows for a greater number of EV chargers to be installed within the existing electrical capacity of the downtown parking structures, avoiding the need for costly electrical upgrades. However, this variable power delivery also means that the current per-hour pricing structure could result in users receiving different amounts of electricity for the same price. Adopting a per-kWh fee structure across all of the City's charging stations would result in equal user cost relative to the amount of electricity dispensed.

Current EV Charger Fee Structure

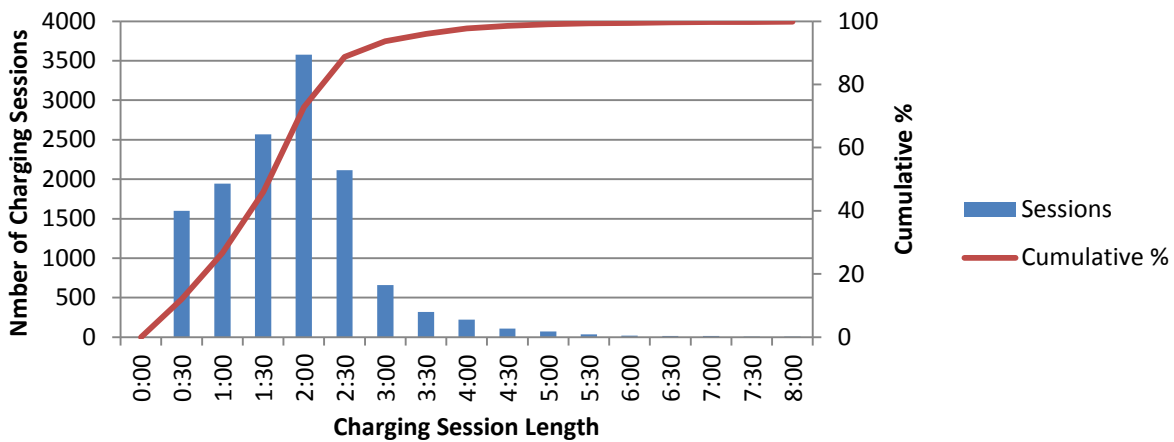
The primary intent of the EV charger fees is to recover costs incurred by the City to own, operate, and provide electricity for these charging stations. In addition to cost recovery, considerations in setting the fee structure for EV chargers include maintaining prices low enough to incentivize EV use over gasoline-powered vehicles and ensuring vehicle turnover so that EV chargers are available to multiple users throughout the day. Table 1 contains the current pricing structure for the City's EV chargers.

Table 1: Current Fees for EV Chargers

First 2 hours	\$1/hour (1-hour minimum, prorated by minute)
After 2 hours	\$4/hour (prorated by minute)

Due to high adoption of EVs in the region, the City’s EV charging spaces are often fully occupied during peak hours. One contributor to this is that some vehicles continue to occupy EV charging spaces after charging is complete, preventing other EV drivers from accessing the chargers. The City’s current fee structure is intended to encourage vehicle turnover by increasing the price after two hours. An analysis of the City’s existing EV chargers suggests this pricing structure is successful in providing an incentive for turnover as the number of charging sessions drops sharply for sessions that exceed two hours. As shown in Figure 1, 73 percent of charging sessions are two hours or less, and 98 percent are less than four hours (the posted time limit).

Figure 1: Number of Charging Sessions by Session Length



Recommended New EV Charger Fee Structure

Staff surveyed over 100 charging stations in the region with publicly posted pricing information and determined that most used a per-kWh rather than hourly rate. Among publicly owned EV charging stations surveyed, 65 percent of locations used a per-kWh pricing structure, and 60 percent of locations had some type of hourly “overstay” fee.

Staff recommends the City adopt a fee structure with the following components, which are comparable to median fees surveyed at publicly owned chargers and modeled to achieve cost recovery:

- A fee of \$0.20 per kWh for electricity while the vehicle is actively charging; and
- An “overstay” fee of \$3 per hour once the vehicle stops charging after a grace period of 20 minutes. As noted in the resolution, the City Manager may waive the overstay fee during off-peak hours at any location. Initially, this fee will be waived

for the Community Center chargers from 9:00 p.m. to 8:00 a.m., though these hours may be adjusted at the City Manager's discretion.

This recommended pricing structure would be more equitable for all EV charger users while maintaining an incentive to move the vehicle once charging is complete. Average battery size in electric vehicles has increased significantly in recent years, meaning it can take longer to fully charge an EV. As a result, EV drivers that use City-owned chargers as their primary source of electricity (either because they lack home charging or have a long commute) may need to charge for more than two hours. Currently, nearly 30 percent of vehicles using the City's EV chargers are actively charging for more than two hours, incurring higher hourly fees. Switching to an overstay fee that begins only when vehicles are no longer actively charging allows the City to better support EV users that need to charge for longer periods while ensuring reasonable turnover so that the chargers are available to other users.

Currently, 89 percent of vehicles using the City's chargers are unplugged within the proposed 20-minute grace period. This means that if current usage patterns continue, only 11 percent of users would incur an hourly overstay fee with the rest paying only for the cost of electricity received. Staff will continue to evaluate charger usage and propose adjustments to the hourly fees, as necessary, to maintain adequate turnover of vehicles.

In order to support EV users who lack access to chargers at home, staff proposes encouraging overnight charging at certain facilities by waiving the hourly overstay fee during off-peak hours. Initially, this would apply only to the EV chargers at the Community Center from 9:00 p.m. to 8:00 a.m. As the City adds EV chargers to additional facilities, staff will evaluate the feasibility of waiving off-peak overstay fees at these sites. The resolution (Attachment 1) authorizes the City Manager to waive the off-peak hour overstay fee at any location. Appropriate off-peak hours will be determined for each location and may be adjusted as needed.

Cost Recovery

The proposed fee structure is designed to achieve cost recovery for the City's expenses in operating the EV chargers. Relevant costs include electricity usage, electricity demand charges, maintenance and repair expenses, and network and billing fees. Table 2 contains estimated costs and projected revenue based on the assumption that there will be twice as many charging sessions in 2020 as in 2019 due to installation of 34 additional EV chargers, assumed to have similar usage patterns.

Table 2: Projected Annual Cost Recovery

Estimated Costs		Projected Revenue with New Fees	
Electricity Use	\$27,300	Electricity Fees (\$0.20/kWh)	\$30,000
Electricity Demand Charges	4,200		
Maintenance/Repairs	3,600	Overstay Fees (\$3/hour)	10,500
Network Fees (ChargePoint)	5,400		
Total Costs:	\$40,500	Total Revenue:	\$40,500

Exact costs and revenue are highly dependent on EV charger utilization patterns as City facilities are on time-of-use electricity tariffs that have varying prices for electricity at different times of the day. Staff anticipates that maintenance and repair costs will also be highly variable year-to-year and likely increase over time. Additionally, factors such as future changes in electricity tariffs, network fees, and charger utilization will affect cost recovery. Staff will continue to monitor changes in these factors and propose adjustments to the fees, as necessary, to maintain but not exceed cost recovery levels.

FISCAL IMPACT

No fiscal impact is expected as the proposed fee structure is designed to maintain cost recovery for expenses associated with operating City-owned EV chargers.

ALTERNATIVES

1. Do not adopt the resolution, and continue to charge the existing fees.
2. Modify some or all of the components of the proposed fees.
3. Provide other direction.

PUBLIC NOTICING

Agenda posting and e-mails sent to community members who signed up to receive updates about the Mountain View Sustainability Program.

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EB-SA/6/CAM
622-02-25-20CR
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Attachment: 1. Resolution Amending the City of Mountain View Master Fee Schedule to Change the Fees for Electric Vehicle Chargers