

GENERAL INFORMATION

Applicant: CITY OF BLOOMINGTON

Request: Amend the City Code to establish performance standards for electric vehicle charging stations and convenience facilities with fuel sales

CHRONOLOGY

Sustainability Commission	01/08/2019	
Planning Commission	03/21/2019 -	Study Session
One Weekly Article	05/17/2019 -	City Council Did Not Request Study Discussion
Planning Commission	08/08/2019 -	Public Hearing - Continued
Planning Commission	08/23/2019 -	Withdrawn
Planning Commission	11/07/2019 -	Public Hearing - Scheduled
City Council	12/02/2019 -	Public Hearing - Anticipated

DEADLINE FOR AGENCY ACTION

The Agency Action Deadline was waived by applicant.
Newspaper Notification: Confirmed – (10/24/2019 Sun Current – 10 day notice)
Direct Mail Notification: Not Required

STAFF CONTACT

Michael Palermo
Phone: (952) 563-8924
E-mail: mpalermo@bloomingtonmn.gov

PROPOSAL

Plug-in Electric Vehicles (PEVs) are becoming ever more prevalent on today’s roadways. Currently the City Code does not directly address electric vehicle (EV) charging as a use or provide any standards or requirements for electric vehicle chargers.

The proposed code amendments establish performance standards for EV chargers both as a primary use or accessory use. As an accessory use, EV charging is permitted in all zoning districts. If EV charging is a primary use, equivalent to a “convenience facility with fuel sales,” it must conform to newly established performance standards for “convenience facility with fuel sales.” The new “convenience facility with fuel sales” performance standards replace the “service station” performance standards and move from Chapter 19 to Chapter 21. They include additional fueling options such as EV charging and alternative fuels and remove outdated and irrelevant standards. The proposed amendment will also require EV chargers with new construction of multifamily units.

COMMISSION INPUT

The proposed ordinance is a result of input from the Planning Commission and Sustainability Commission. Both commissions considered options ranging from requiring EV chargers and EV charging infrastructure in all construction/reconstruction to simply removing barriers to EV chargers in the Code. Both Commission's agreed that EV charging should be added as a land use in the City Code and performance standards established. Both commissions discussed requiring EV chargers with new construction but provided different guidance.

Requiring chargers with construction ensures that a robust EV charging network is created. A major deterrent to EV adoption is "range anxiety" or the fear of running out of a charge mid trip. Providing access to chargers at home, work, and while conducting errands will help address this issue and may encourage EV adoption. EVs are better for the environment than internal combustion engines because they more efficiently use energy, they don't produce tail pipe emissions, and their fuel source – electricity - is increasingly generated by renewable sources such as wind and solar.

One way to promote EVs is to require EV chargers or EV charging infrastructure with construction/reconstruction. The cost of an EV charging unit is relatively low (\$500-\$2,000) compared to the cost of installation. Studies have shown that costs are about two thirds less to install EV charging infrastructure during a parking lot construction/reconstruction project than to retrofit.¹ Costs associated with design, added electrical panel space, trenching and laying conduit for EV chargers during parking lot construction is relatively inconsequential compared to a stand-alone EV Charger retrofit project.

The Sustainability Commission provided a letter (attached) to the Planning Commission and City Council recommending requiring EV chargers and infrastructure. They support this requirement because of the environmental benefits associated with EV adoption and the potential fiscal benefits to property owners by installing EV chargers or infrastructure with new construction. Their recommendations include requiring:

1. New and reconstructed residential garages be EV ready with appropriate electrical capacity.
2. New and reconstructed parking lots for multifamily buildings be equipped with EV chargers for 10% of parking spaces at a minimum of 2 spaces.
3. New and reconstructed commercial parking lots be EV ready with appropriate wiring and conduit for 1% of parking spaces at a minimum of 2 spaces.

The Planning Commission, at its March 14th study session, decided against requiring EV chargers and EV charging infrastructure with new construction of parking lots, commercial property, and new single family home construction. The Commission felt that property owners would not be deterred to install EV chargers in the future, despite the additional costs of installing, if market demand was strong enough. They also felt that while there is some standardization in EV chargers there still remains unknowns as the technology advances. They

¹ <http://evchargingpros.com/wp-content/uploads/2017/04/City-of-SF-PEV-Infrastructure-Cost-Effectiveness-Report-2016.pdf>

did not want to prematurely require EV chargers if the technology is going to change in the near future. EV infrastructure requirements such as only requiring conduit, electric panel space, etc. with construction/reconstruction was also dismissed. The Planning Commission was worried property owners would place EV infrastructure in a manner that would require significant change to make the infrastructure usable once the EV chargers were actually installed years later. They also thought EV infrastructure such as conduit would deteriorate if no EV charger was installed.

While the Planning Commission was hesitant to require EV chargers or infrastructure with all new development they did recommend requiring EV charger installation with new multifamily construction. Staff proposed starting with 1 EV charger per 50 units which corresponds to the rate of EV sales in Minnesota. This ratio can be increased as EV sales increase. Further explanation of this proposed requirement can be found in the Analysis section of this report.

ANALYSIS

The proposed ordinance amendments described below related to: EV charging performance standards; EV charging as a primary use subject to convenience facility with fuel sales” zoning requirements; replacing “service station” with redefined “convenience facility with fuel sales” definition; creating performance standards for “convenience facility with fuel sales;” and requiring EV charging for new multifamily construction.

EV Charging Performance Standards

Existing EV chargers in Bloomington are all considered accessory uses that complement a primary use on the site. They have been installed at shopping centers, hotels, apartment buildings, and office sites. However, the code does not currently provide any performance standards or requirements for EV charging. The proposed code amendments will continue to allow EV charging as an accessory use in all zoning districts subject to the following performance standards:

- Parking must meet standards set in § 21.301.06
- Up to five percent of off-street parking spaces with EV chargers, including EV exclusive parking spaces and spaces with proprietary EV chargers, may count toward the minimum number of required off-street parking spaces for commercial properties. Additional EV spaces will also count toward minimum off-street parking requirements when the electric vehicle charger is:
 - Nonproprietary (i.e. is not vehicle or brand specific charger). Acceptable connectors include but are not limited to SAEJ1772, CHAdeMO, and SAE Combo CCS.
 - Not exclusive - non-electric vehicles are permitted to use the parking space

Proposed additional performance standards for single family and two family homes include:

- EV chargers must only be for private use by the property owner and/or resident.
- EV chargers must be located in a garage or mounted to the garage, residential structure, or freestanding pole with footing subject to principle building setbacks.
- EV chargers located outside of a garage must be rated for outdoor use.

EV Charging as a Primary Use

While most EV chargers will be accessory to another use, in some situations EV charging may be a primary use. Level 3 fast charging stations can quickly recharge EVs. In some locations along highways EV charging stations closely resemble a traditional gas station. For these situations, the Planning Commission recommended integrating performance standards for EV charging into existing performance standards for fueling stations, which are currently located in Chapter 19. These standards are proposed to be updated to include alternative fuels, redefined as “convenience facility with fuel sales,” and moved to Chapter 21.

Convenience Facility with Fuel Sales Definition

The proposed amendment redefines “convenience facility with fuel sales,” which provides an opportunity to incorporate alternative fueling and EV charging under this use. The proposed new definition is:

CONVENIENCE FACILITY WITH FUEL SALES. An establishment where the principal uses are both: a) the sale of gasoline, hydrogen, propane, natural gas, biodiesel, ethanol, electric vehicle charging, or any other automobile engine fuel stored only in underground tanks directly to the public on the premises; and b) the sale of household and convenience items, food or other miscellaneous retail goods. Accessory uses may include but are not limited to a car wash, air dispensing, Minor Vehicle Repair and similar services.

Convenience Facility with Fuel Sales Standards

The proposed amendment will create performance standards for “convenience facility with fuel sales” in Chapter 21 of the zoning code. The “convenience facility with fuel sales” performance standards will incorporate and replace the “service station” performance standards from Chapter 19. The performance standards to be retained include:

- Front setback of 40 feet for buildings
- Setbacks of 35 feet for pump islands and alternative fueling dispensing stations
- Minimum lot width of 120 feet
- Interior curbs to separate sidewalks, landscape areas, and along property lines bordering streets are required.

The amendment also proposes to remove several existing “service station” performance standards that are deemed no longer relevant, including:

- Above ground storage tanks – These will no longer be permitted.
- Food sales may not exceed 25% of total floor area - Food sales, such as found in a convenience facility, requires a conditional use permit and the 25% floor area maximum is outdated and irrelevant.
- Standards related to truck and trailer rental – Removing these will prohibit such rentals as a conditional use associated with fuel stations. The City Code has separate performance standards for vehicle rental facilities. Removing this language from fuel station standards would remove potential use conflicts. For example, in the I-1 zoning district, fuel stations are a permitted conditional use but vehicle rental facilities are prohibited.

Multifamily:

The proposed ordinance requires newly constructed multifamily buildings to include one Level 2 electric vehicle charger for every 50 units or fraction thereof. This was recommended by the Planning Commission during the August 8th meeting. The Sustainability Commission recommended 10% of parking be equipped with EV Chargers. Staff proposed 1 per 50 units because this corresponds to the sales rate of EVs to internal combustion engines. This ratio can be amended as demand changes over time.

The primary reason for requiring EV chargers in residential development is that the vast majority of charging occurs when vehicles are parked at home. One study, “Plug-in Electric Vehicle and Infrastructure Analysis” by the Idaho National Laboratory found that over 85% of vehicle charging occurs at home². For those with a charger at their workplace the amount of charging at home is reduced to about 60% which is still substantial. The proposed multifamily requirement would greatly simplify ownership of an electric vehicle for those living in multifamily units in Bloomington.

The 2017 American Community Survey five year estimates published by the US Census Bureau estimate about one third of occupied housing units in Bloomington are multifamily.³ Almost all the projected housing units in the near future are expected to be in multifamily buildings. Requiring EV chargers in multifamily increases the ability for residents of Bloomington to have the option of owning an EV. Incorporating charging stations into construction will add minimal expense to the developer/property owner. An estimated cost per EV charger is \$2,000 to \$3,000. The majority of the installation cost, when part of a greater construction project, is associated with the actual charging station. Other costs related to installation include upgrading the electrical panel and running the electrical wiring are minor when included with an overall development project. Requiring 1 EV charger per 50 spaces would add less than 0.3% to the total construction costs of parking.

The City of Edina has reported, albeit anecdotally, that where they required EV chargers in multifamily, many developers have reported high usage and wished they had installed more up front. Currently only the IndiGO Apartments provide EV chargers in Bloomington (15 chargers for 395 units, just over one charger per 25 units). Of the 15 chargers, two are publicly available to guests and the other 13 are available for residents to lease.

² <https://avt.inl.gov/sites/default/files/pdf/arra/ARRAPEVnInfrastructureFinalReportLgltSept2015.pdf>

³ <https://data.census.gov/cedsci/table?q=S2504&table=S2504&tid=ACSST5Y2017.S2504&g=1600000US2706616&astDisplayedRow=33>

ORDINANCE CHANGES SINCE 8-8-2019 PLANNING COMMISSION MEETING

At Staff request, on August 8th, the Planning Commission continued the Electric Vehicle Charging Ordinance agenda item. The item was formally withdrawn on August 29th to allow staff to further refine the ordinance language. The proposed ordinance is substantively the same as the August 8th proposal but adjustments were made to the language as described below.

- The definitions were adjusted. The updated ordinance replaced the term “Electric Vehicle Charging Station” with “Electric Vehicle Charger.” This is to avoid confusion with fuel station.
- The updated ordinance no longer differentiates between types of chargers by using the terms “primary” and “incidental.” Instead it defines when an electric vehicle charger becomes a “convenience facility with fuel sales” subject to the corresponding zoning requirements. All other EV chargers must follow the electric vehicle charger standards which are substantially equivalent to the “incidental” standards described in the previous draft.

The remainder of the ordinance has not changed.

PUBLIC OUTREACH

Notice of the public hearing on the proposed amendments to the City Code was published in the Sun Current, the official newspaper. Notice will also be sent via e-mail to 1,006 registered users of the “Zoning Ordinance Updates” and 1,416 registered users of the “Planning Commission” E-Subscribe groups. The proposed amendments and supporting information contained in the staff report will be posted on the City website.

RECOMMENDATION

Staff recommends approval of the Code amendments through the following motion:

In Case PL2019-191, I move to recommend approval of an ordinance, as attached to the staff report, to establish electric vehicle charger performance standards, redefine and create performance standards for convenience facilities with fuel sales, and remove service station performance standards, and require EV chargers in new multifamily construction thereby amending Chapters 19 and 21 of the City Code.