



October 1, 2020

RE: EV Parking Requirements Ordinance

Sustainable Madison Committee Members,

Thank you for the opportunity to provide comments on the draft EV Parking Requirements Ordinance. RENEW Wisconsin is a nonprofit organization dedicated to building a stronger, healthier, more vibrant Wisconsin through the advancement of renewable energy and electric vehicles.

RENEW supports the EV Parking Ordinance because it will help to prepare the City of Madison for an increase in electric vehicle adoption by ensuring that charging is available for residents who live and/or work in the City. As the Ordinance states, EV adoption is predicted to increase quickly in the coming years. We believe the City should be planning now to support residents' EV charging needs in the future, especially given the long lifetime of buildings and parking lots, the cost to retrofit those buildings with EV charging after they are built, and the clean air benefits of transitioning swiftly to electric transportation.

We suggest the following amendments to further bolster this piece of legislation:

- 1) **Where the ordinance says "EV Ready," change the terminology to "EV Installed."** The following are standard definitions used to explain the different terms that describe the electrical infrastructure up to and including the charger for EV charging:

EV Capable: Installed electrical panel capacity with a dedicated branch circuit and a continuous raceway from the panel to the future EV parking spot.

EV Ready: Installed electrical panel capacity and raceway with conduit to terminate in a junction box or 240-volt charging outlet.

EV Installed: Installing a minimum number of level 2 charging stations.

Based on those definitions and our conversations with Alder Abbas, we believe this ordinance is using "EV Ready" to mean "EV Installed." Using the correct terminology is important to ensure everyone understands what is required under this ordinance.

Additionally, should the terminology remain EV Ready, the percentage requirements should be increased to reflect the reduced requirements under EV Ready as compared to EV Installed.

- 2) The percentage of EV Capable spaces required in residential uses should be increased. EV Capable requires a relatively small investment compared to retrofitting for the capabilities in the future. Given the impending increase in EV adoption and number of renters in the City, we believe that increasing the requirements to begin at 30% and increase by 5% every 5-year period is reasonable and necessary.
- 3) Alter the number of EV Capable spaces required in commercial uses to be 30%, with no change over time. The purpose of the legislation is to prepare the buildings and parking lots in the City for EV charging. Starting with a smaller number of required spaces does not adequately prepare the infrastructure being built today for the needs only a decade or so down the line. In order to reap the most benefit from this Ordinance, starting and retaining a 30% EV Capable requirement is reasonable and necessary.

We appreciate the leadership that the City of Madison has shown in its commitment to renewable energy and electric vehicles. We are eager to help the City retain that leadership and increase its commitment to the future of clean energy technologies. Thank you for the opportunity to provide our expertise on this exciting topic.

/s/Heather Allen
Interim Executive Director
RENEW Wisconsin

CITY OF MADISON, WISCONSIN

AN ORDINANCE _____

PRESENTED
REFERRED

Plan Commission; Public
Hearings: PC (x/xx/xx),
CC (x/xx/xx)

Amending Sections 28.211, 28.061, 28.072, 28.082 and 28.091 and Creating Section 28.141(8)(e) of the Madison General Ordinances to create a new use, Electric Vehicle Charging Facility, and to require that future parking facilities are constructed to include a certain number of Electric Vehicle Capable and Electric Vehicle Ready spaces.

DRAFT

Drafted by: Doran Viste; John Strange

Date: August 17, 2020

SPONSORS: Ald. Abbas

DRAFTER'S ANALYSIS: This ordinance creates a new use in the Zoning Code, Electric Vehicle Charging Facility. This would be a stand-alone facility existing for the purpose of providing electric vehicle charging on a retail basis—like a gas station. These facilities may not also sell other types of vehicle fuel, such as gasoline. Under this ordinance, these facilities would be permitted uses in the Mixed-Use Center (MXC), Commercial Center Transitional (CC-T), Commercial Center (CC), Downtown Core (DC), Urban Office Residential (UOR), Urban Mixed Use (UMX), Traditional Employment (TE), Suburban Employment (SE), Suburban Employment Center (SEC), Employment Campus (EC), Parks and Recreation (PR), and Airport (AP) districts.

This ordinance also creates a requirement that commercial and residential parking facilities of a certain size and constructed after the effective date of this ordinance be constructed so that 50% of all spaces are electric vehicle capable (served with conduit/raceways and panel capacity to allow for the future installation of an EV charging station) and 10% of all residential spaces and 5% of all commercial spaces have at least a level 2 electric vehicle charging station installed.

The purpose of this amendment is to ensure and encourage the present and future availability of electric vehicle charging stations in parking facilities throughout the City. Future projections are that by 2038, EV sales nationwide will eclipse internal combustion engine vehicle sales and that by 2040 over 57% of the total new car market will be for EVs. In Madison, recent data showed that 1.9% of new vehicles sold were electric vehicles—the highest such rate in the Midwest. Additionally, EV sales in Wisconsin increased by 24% from 2017 to 2018. As electric vehicles see greater adoption by the market, and to meet the projected increased future demand for charging infrastructure, it will be necessary to retrofit older parking facilities. This ordinance ensures that not only will current and near-term charging station demand be met, but that future charging station demand can be cost-effectively provided. It is far cheaper and more efficient to build EV capable spaces at the time of new construction than to retrofit parking facilities in the future.

The Common Council of the City of Madison do hereby ordain as follows:

Approved as to form:

1. Section 28.211 entitled "Definitions" of the Madison General Ordinances is amended by creating therein the following:

"Auto Service Station. A place where gasoline, ~~electricity~~, or any other automobile engine fuel, kerosene, motor oil, lubricants, or grease (for operation of motor vehicles), ~~or minor accessories are~~ is retailed directly to the public on the premises and/or where the servicing or minor repair of automobiles may occur, and which may include electric vehicle charging stations or the sale of minor automobile accessories.

Electric Vehicle or EV means any vehicle that is licensed and registered for operation on public and private highways, roads, and streets, and that operates either partially or exclusively, on electrical energy from the grid, or an off-board source, that is stored on-board via a battery for motive purpose. Electric Vehicle includes:

- (1) a battery electric vehicle; and
- (2) a plug-in hybrid electric vehicle.

Electric Vehicle Charging Facility. A stand-alone facility where electricity is provided directly to the public on the premises for purposes of charging electric vehicles at one or more electric vehicle charging stations. An Electric Vehicle Charging Facility may also retail minor accessories but may not provide other types of vehicle fuel, such as gasoline.

Electric Vehicle Charging Station. A parking space that is served by electric vehicle supply equipment for the purpose of transferring electric energy to a battery or other energy storage device in an electric vehicle. The terms Level 1, 2, and 3 charging stations are the most common electric vehicle charging levels, and include the following specifications:

- (1) Level 1 is considered slow charging and operates on a 15 to 20 amp breaker on a 120 volt AC circuit.
- (2) Level 2 is considered medium charging and operates on a 40 to 100 amp breaker on a 208 or 240 volt AC circuit.
- (3) Level 3 is considered "fast" or "rapid" charging and typically operates on a 60 amp or higher breaker on a 480 volt or higher three phase circuit with special grounding equipment. Level 3 stations are primarily for commercial and public applications and are typically characterized by industrial grade electrical outlets that allow for faster recharging of electric vehicles.

Electric Vehicle Supply Equipment or EVSE are the conductors, including the ungrounded, grounded, and equipment grounding conductors, and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

EV Capable Space means a designated parking space which is provided with electrical panel capacity and space to support a minimum 40-ampere, 208/240-volt branch circuit, and the installation of raceways, both underground and surface mounted, to support the future installation of EVSE to serve the parking space.

EV Installed Space means a designated parking space which is provided with one 40-ampere, 208/240-volt dedicated branch circuit with at minimum a level 2 charging station installed to service Electric Vehicles.

2. Subdivision (e) entitled "Electric Vehicle Charging Station Requirements" of Subsection (8) entitled "Parking Design and Location" of Section 28.141 entitled "Parking and Loading Standards" of the Madison General Ordinances is created as follows:

"(e) Electric Vehicle Charging Station Requirements. Parking facilities shall be designed and built to meet the following requirements:

1. Where 6 or more parking spaces are being provided for residential uses, the following standards must be met:

Years	EV Capable Spaces	EV Installed Spaces (Min. of Level 2)
2021-2025	30%	2%
2026-2030	35%	4%
2031-2035	40%	6%
2036-2040	45%	8%
2041+	50%	10%

2. Where parking is being provided for certain uses where customers park vehicles in excess of six hours, as specified in this paragraph, the following standards must be met:

Years	EV Capable Spaces	EV Installed Spaces (Min. of Level 2)
2021-2025	30%	1%
2026-2030	30%	2%
2031-2035	30%	3%
2036-2040	30%	4%
2041+	30%	5%

- a. The requirements of this paragraph shall apply to the following uses:
 - i. Office
 - ii. Hotels and Inns ~~Hospitality~~
 - iii. Hospital/Health Clinic
 - iv. ~~Multi-Family / Mixed use building~~
 - v. Educational institutions, including Schools, College, University or Similar Institutions of Higher Learning
 - vi. Parking Lots and Parking Structures
 - vii. Any other use, except for those specified in subparagraph b., where customers are expected to park vehicles in excess of six hours.
- b. The requirements of this paragraph shall not apply to the following uses:
 - i. Retail
 - ii. Service Businesses
 - iii. Restaurants
 - iv. Warehousing and Storage
 - v. Manufacturing

3. Accessible Stations. Accessible charging stations shall be provided based on the following:

Number of EV Ready Stations Required	Min. Accessible
0-2	0
3-50	1
51-100	2
101+	3 +1 for each additional 50 stations"

3. Table 28D-2 of Section 28.061 entitled "Mixed-Use and Commercial Districts Uses" of the Madison General Ordinances is amended by amending and creating therein the following:

"Mixed-Use and Commercial Districts"							
	LMX	NMX	TSS	MXC	CC-T	CC	Supplemental Regulations
Automobile Services							
<u>Electric Vehicle Charging Facility</u>		P	P	P	P	P	

4. The Table 28E-2 of Subsection (1) of Section 28.072 entitled "Downtown District Uses" of the Madison General Ordinances is amended by amending therein the following:

"Downtown and Urban Districts"						
	DC	UOR	UMX	DR1	DR2	Supplemental Regulations
Automobile Services						
<u>Electric Vehicle Charging Facility</u>	P	P	P			

5. Table 28F-1 of Subsection (1) of Section 28.082 entitled "Employment District Uses" of the Madison General Ordinances is amended by amending therein the following:

"Employment Districts"							
	TE	SE	SEC	EC	IL	IG	Supplemental Regulations
Automobile Services							
<u>Electric Vehicle Charging Facility</u>	P	P	P	P			

6. Table 28G-1 of Subsection (1) of Section 28.091 entitled "Special District Uses" of the Madison General Ordinances is amended by amending therein the following:

"Special Districts"						
	A	UA	CN	PR	AP	Supplemental Regulations
Automobile Services						
<u>Electric Vehicle Charging Facility</u>				P	P	