

# Planning Commission Staff Report



**Subject:** Electric Vehicle Charging Stations  
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**Date:** July 8, 2020  
**Type of Item:** Work Session – Legislative

## Executive Summary

This work session continues the discussion from the June 10, 2020 work session and outlines potential Land Management Code amendments to require that certain homes be EV-Ready and that certain developments include Electric Vehicle Charging Station conduit and potential installations. Staff requests input from the Commission.

## Acronyms

EV Electric Vehicle  
LMC Land Management Code

*Terms that are capitalized as proper nouns throughout this staff report are defined in LMC § [15-15-1](#).*

## Background

This work session is a continuation of the June 10, 2020 discussion to establish an Electric Vehicle Charging Station Section in the Land Management Code ([Staff Report; Exhibit A: EV Charging Station Network Plans; Minutes](#), p. 2).

On June 10, 2020, the Commission requested that staff:

- Move forward with amendments to establish definitions and uniform standards for EV Charging Stations
- Prepare amendments that allow EV Charging Stations as an Accessory Use in all Zoning Districts
- Prepare a July work session to discuss the possibility of requiring EV Charging Station infrastructure and potentially installation for new development and redevelopment
- Consider solar arrays

Staff is working to finalize definitions and uniform standards, including additional requirements regarding snow removal and snow storage. Staff is also working on code to establish EV Charging Stations as an Accessory Use in all Zoning Districts.

This report outlines potential Land Management Code amendments to:

- (1) require that new Single-Family Dwellings, Duplexes, and Triplexes be EV-ready;
- (2) require that a number of all Parking Spaces for non-residential and Multi-Unit

Dwelling developments have infrastructure in place to support future EV Charging Station installation;

- (3) require that a number of all Parking Spaces for non-residential and Multi-Unit Dwelling development have EV Charging Stations installed; and
- (4) consider solar arrays.

### **Analysis**

The [General Plan Community Planning Strategy 5.7](#) suggests requiring dedicated parking and Charging Stations to support Electric Vehicles (EVs) within new development and redevelopment.<sup>1</sup>

#### **(1) Require new Single-Family Dwellings, Duplexes, and Triplexes to be EV-ready.**

The garages of many Single-Family Dwellings, Duplexes, and Triplexes can accommodate a Level 1 Charging Station, which operates on a standard household outlet. The outlet must operate on a dedicated circuit and may require an electrical permit for minor work, but is generally an inexpensive and easy retrofit.<sup>2</sup>

Potential LMC amendments could go one step further and require that Single-Family Dwellings, Duplexes, and Triplexes be EV-ready. This could be defined to mean that the garage include a 240 volt/40 amp outlet on a dedicated circuit to accommodate the potential installation of a Level 2 EV Charging Station. This 240 volt/40 amp outlet is like an outlet for a dryer and would be minimal in cost.<sup>3</sup>

Type of Dwelling	Parking Requirement	Required EV-Ready Outlets
Single-Family	Two Parking Spaces	One
Duplex	Four Parking Spaces	One per Unit (2 total)
Triplex	Six Parking Spaces	One per Unit (3 total)

Requiring that Single Family Dwellings, Duplexes, and Triplexes be EV-ready:

- Adds little cost to initial planning/construction
- Can be reviewed and permitted as part of the building permit process

<sup>1</sup> There are three EV Charging Station levels. Level 1 can generally be accommodated through a typical household outlet, but requires many hours to fully charge an EV battery. Level 2 and Level 3 (DC Fast Charging or DCFC) Charging Stations provide many more miles per charging hour, but require additional infrastructure.

<sup>2</sup> <https://www.energy.gov/eere/electricvehicles/charging-home>

<sup>3</sup> *Id.*

**(2) Require that a number of all Parking Spaces for non-residential and Multi-Unit Dwelling development have infrastructure in place to support future EV Charging Station installation.**

In 2018, the California Air Resources Board conducted a Technical and Cost Analysis for EV Charging Stations in Multi-Unit Dwellings and found that the cost of retrofitting Parking Spaces to accommodate EV Charging Stations in California can be as high as \$7,000 - \$8,000 per Parking Space, while installing Charging Station conduit at the time of construction costs approximately \$280 per Parking Space in a garage and \$760 per parking space in a parking lot.<sup>4</sup> Staff has found no comparative cost study specific to Utah, but based on City projects to retrofit parking lots for EV Charging Stations and City projects that include EV Charging Station infrastructure at the time of construction, building to accommodate the future installation of EV Charging Stations saves time, money, and resources.<sup>5</sup>

To avoid costly future retrofits, many communities are establishing a requirement that construction for new Development and redevelopment include EV Charging Station infrastructure to support the future installation of EV Charging Stations. Staff recommends that the Commission consider establishing a requirement that non-residential and Multi-Unit Dwelling Development and redevelopment provide EV Charging Station infrastructure for 10% of all required Off-Street Parking Spaces. Once baseline conduit is established, it can be expanded to accommodate additional EV Charging Stations beyond the initial 10%.

It is uncommon for the Commission to approve a non-residential project with fewer than 10 Parking Spaces (See LMC [§ 15-3-6](#), *Parking Ration Requirements For Specific Land Use Categories, Non-Residential Uses*, which requires a number of parking spaces per 1,000 square feet or per employee). However, there may be a gap between requirements for Triplexes and smaller Multi-Unit Dwellings.<sup>6</sup> Parking requirements for Multi-Unit Dwellings are based on the size of the Unit, shown in the table below:

Unit Size	Parking Requirement
< 1,000 square feet	1 per Unit
> 1,000 square feet and < 2,000 square feet	1.5 per Unit
> 2,000 square feet	2 per Unit

<sup>4</sup> *Electric Vehicle (EV) Charging Infrastructure: Multifamily Building Standard: Technical and Cost Analysis*, California Air Resources Board (2018), p. 8.

<sup>5</sup> The City's affordable housing developments must meet the City's net-zero resolution requirements and EV Charging Station conduit is installed at the time of construction. While some cities exempt affordable housing requirements from EV Charging Station requirements, staff recommends that private affordable housing developments meet the same EV Charging Station standard the City meets.

<sup>6</sup> The LMC defines a Multi-Unit Dwelling as a "building containing four (4) or more Dwelling Units." LMC [§ 15-15-1](#).

To address the potential gap of Multi-Unit Dwellings with fewer than 10 Parking Spaces, the LMC could be amended to require that Multi-Unit Dwellings with less than 10 Parking Spaces be constructed with one EV-ready Parking Space per Unit. Multi-Unit Dwellings with 10 or more Parking Spaces could be required to install EV Charging Station infrastructure for 10% of all Parking Spaces.

**(3) Requiring that a number of all Parking Spaces for non-residential and Multi-Unit Dwelling development have EV Charging Stations installed.**

Some communities require that a percentage of Parking Spaces have EV Charging Station infrastructure in place and also require the installation of Level 2 EV Charging Stations for a certain number of Parking Spaces at the time of construction.



The image above shows the City-installed dual port Level 2 Charging Station at City Park. The City could require the installation of a dual port Level 2 Charging Station at the time of construction for a number of total Parking Spaces.

This could include one dual port installation for every:

- 25 Parking Spaces (example – City Hall south parking lot);
- 50 Parking Spaces (example – Brewpub parking lot);
- 75 Parking Spaces (example – City Library parking lot);
- 100 Parking Spaces (example – Boneyard parking lot);
- 125 Parking Spaces (example – City Library + Mawhinney parking lots)

- 150 Parking Spaces (example – Fresh Market parking lot)

The first of all dual EV Charging Stations could be required to be ADA accessible, but would not need to be reserved for exclusive ADA use. The second dual EV Charging Station could be reserved exclusively for EV Charging.<sup>7</sup>

Staff recommends potentially requiring EV Charging Station installation for every 100 Parking Spaces with the possibility of increasing this number in the future. This year, the City is installing 100 public EV Charging Stations throughout town that are free for public use. Additionally, the City is offering grants to incentivize landowners to install EV Charging Stations for public use.

It is difficult to conduct any parking studies at this time to estimate the average use of existing EV Charging Stations due to diminished traffic and parking as a result of the pandemic. Staff recommends starting with a conservative number of EV Charging Station installation requirements and then re-evaluating this requirement once studies can be conducted to determine EV Charging Station use under normal traffic and parking patterns.

Also, staff recommends drafting the code so that private property owners are not prohibited from establishing and charging a fee for EV Charging Station use.

#### **(4) Consider Solar Arrays**

In 2018, the City Council adopted [Resolution 32-2018](#) to establish a net-zero carbon goal for City operations in 2022 and citywide in 2030. In 2019, the Utah Legislature passed [H.B. 411](#), *Community Renewable Energy Act*, which allows cities to work with Rocky Mountain Power to develop a renewable energy portfolio by 2030. Park City, in collaboration with Rocky Mountain Power, is on track to operate on 100% renewable energy by 2030 citywide. Much of this renewable energy will be produced outside of City boundaries.

To produce additional on-site renewable energy, some projects include solar canopies over parking lots:

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<sup>7</sup> The Parking Department is proposing amendments to the Municipal Code of Park City Title 9, *Parking Code*, to enact an enforcement mechanism for gas-fueled vehicles parking in EV Charging Stations.



Photo Credit: The University of Utah, *New Solar Canopy at University of Utah* (UNEWS 2016)

Many City projects and private developments include rooftop solar. However, under the LMC, rooftop solar must meet certain requirements to ensure that the panels are not unsightly. LMC [§ 15-5-5\(G\)](#), *Solar Energy Systems*, requires the solar panels to be incorporated into the roof plan and architectural features, mounted flush to the roof with non-reflective finishes.

Solar canopies in Parking Areas have advantages in that they provide shade to parked vehicles in addition to providing on-site renewable energy. However, standalone solar canopies are visually prominent. If the LMC is amended to accommodate solar canopies in Parking Areas, staff recommends visual mitigation similar to what is in place for rooftop solar with extra considerations in the Historic Districts.

### **Public Outreach**

Staff published notice of the proposed amendments in the Community Development Newsletter, asked the City's Advisory Committee on sustainability for input, and reached out to the Park City Homebuilders Association and developers for feedback. Public input received to date is attached as Exhibit A. Staff will continue to reach out to the public as these Land Management Code amendments develop.

### **Recommendation**

Staff recommends that the Commission review and provide feedback on the proposed Land Management Code EV Charging Station amendments. Depending on feedback, staff will return for an additional work session or proposed LMC amendments in August or September.