

ORDINANCE NO. 1351

CITY OF LACEY

AN ORDINANCE RELATING TO THE INFRASTRUCTURE FOR ELECTRIC VEHICLE CHARGING AND ADDING A NEW CHAPTER, 16.73 TO THE LACEY MUNICIPAL CODE AND ADOPTING A SUMMARY FOR PUBLICATION.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LACEY,

WASHINGTON, as follows:

Section 1. There is hereby added to the Lacey Municipal Code a new Chapter

16.73 entitled Electric Vehicle Infrastructure to read as follows:

**16.73.010 Intent**

- A. To provide adequate and convenient electric vehicle charging stations to serve the needs of the traveling public;
- B. To provide opportunities for Lacey residents to have safe and efficient personal electric charging stations located at their place of residence;
- C. To provide the opportunity for commercial and industrial projects to supply electrical vehicle charging station services to their customers and employees;
- D. To create standard criteria to encourage and promote safe, efficient and cost effective electric vehicle charging opportunities in a full range of zones and settings for convenience of service to those that use electric vehicles;

**16.73.015 General Provisions**

- A. **Use of specially designated charging stalls:** Electric vehicle charging stations should be reserved for parking and charging electric vehicles only.
- B. **Electric vehicles parking:** Electric vehicles may be parked in any space designated for public parking, subject to the restrictions that would apply to any other vehicle that would park in that space.

**16.73.020 Definitions**

- A. **“Battery charging station”** means an electrical component assembly or cluster or component assemblies designed specifically to charge batteries within electric vehicles, which meet or exceed any standards, codes, and regulations set forth by chapter 19.28 RCW and consistent with rules adopted under RCW 19.27.540.

**B. “BEV”** means a battery electric vehicle. A **battery electric vehicle**, or **BEV**, is a type of electric vehicle (EV) that uses chemical energy stored in rechargeable battery packs. As with other electric vehicles, BEVs use electric motors and motor controllers instead of internal combustion engines (ICEs) for propulsion. Sometimes, all-electric vehicles are referred as BEVs (although a plug-in hybrid vehicle is also a battery electric vehicle).

**C. “Battery exchange station”** means a fully automated facility that will enable an electric vehicle with a swappable battery to enter a drive lane and exchange the depleted battery with a fully charge battery through a fully automated process, which meets or exceeds any standards, codes, and regulations set forth by chapter 19.27 RCW and consistent with rules adopted under RCW 19.27.540.

**D. “Charging levels”** means the electrical force, or voltage, at which an electric vehicle’s battery is recharged. Levels 1, 2, and 3 are the most common EV charging levels, and include the following specifications:

1) Level 1 is considered slow charging. It requires a 15 or 20 amp breaker on a 120-volt AC circuit and standard outlet. This level of charging can fully recharge a BEV between 8 and 32 hours and a PHEV between 3 and 15 hours.

2) Level 2 is considered medium charging. It requires a 40 amp to 100 amp breaker on a 240-volt AC circuit. This level of charging can fully recharge a BEV between 4 and 6 hours and a PHEV between 1 and 2 hours.

3) Level 3 is considered fast charging. It requires a 60 amp or higher dedicated breaker on a 480 volt or higher three-phase circuit with special grounding equipment. Level 3 charging uses an off-board charger to provide the AC to DC conversion, delivering DC directly to the car battery. Charging time ranges from 25-40 minutes for BEVs and less than 20 minutes for PHEVs.

**E. “Electric vehicle”** means any vehicle that operates, either partially or exclusively, on electrical energy from the grid, or an off-board source, that is stored on-board for motive purpose. “Electric vehicle” includes: (1) a battery electric vehicle; (2) a plug-in hybrid electric vehicle a; (3) a neighborhood electric vehicle; (4) medium-speed electric vehicle; and (5) electric motorcycles.

**F. “Electric vehicle charging station”** means a public or private parking space located together with a battery charging station which permits the transfer of electric energy (by conductive or inductive means) to a battery or other storage device in an electric vehicle. An electric vehicle charging station is permitted as an accessory use to any principal use.

**G. “Electric vehicle infrastructure”** means structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations, rapid charging stations, and battery exchange stations.

**H. “Electric vehicle parking space”** means any marked parking space that identifies the use to be exclusively for an electric vehicle.

**I. “Fast charging station”** means an industrial grade electrical outlet that allows for faster recharging of electric vehicle batteries through higher power levels, which meets or exceeds any standards, codes, and regulations set forth by chapter 19.28 RCW and consistent with rules adopted under RCW 19.27.540.

**J. “NEV”** Means a Neighborhood Electric Vehicle. This is an electric vehicle that is capable of traveling at a maximum speed of 25 mph. They come with safety features like headlights, turn signals and seat belts. They may also be referred to as Low Speed Vehicles or LSVs.

**K. “Non-Electric Vehicle”** means any motor vehicle that does not meet the definition of “electric vehicle.”

**L. “PHEV”** Is a **plug-in hybrid electric vehicle**, also known as a **plug-in hybrid**. It is a hybrid vehicle with rechargeable batteries that can be restored to full charge by connecting a plug to an external electric power source. A PHEV shares the characteristics of both a conventional hybrid electric vehicle, having an electric motor and an internal combustion engine; and of an all-electric vehicle, also having a plug to connect to the electrical grid. Most PHEVs on the road today are passenger cars, but there are also PHEV versions of commercial vehicles and vans, utility trucks, buses, trains, motorcycles, scooters, and military vehicles.

#### **16.73.030 Where Permitted**

**A. Zones allowed:** “Electric Vehicle charging stations” shall be considered an allowed use in association with a primary permitted use in every zoning designation;

**B. Compatibility:** For land use compatibility purposes, the charging activity should be proportionate to the associated permitted use; “Electric vehicle charging station(s)” shall be permitted in association with a single family use designed to serve the occupants of the home with a level 1 or 2 charging level. Whereas, charging station(s) installed in a parking lot at a commercial destination, or located in a vehicle service station in close proximity to Interstate 5, is expected to have intensive use and will be permitted to have multiple “fast charging stations” to serve expected demand.

**C. Battery Exchange Stations:** “Battery exchange stations” are permitted in any commercial, industrial or mixed use zone. Provided, all other requirements for the building or space the use occupies can be satisfied, such as design review, fire code and building code requirements. This use is specifically prohibited in exclusively residential zones or zones designated OSI for environmentally sensitive reasons.

#### **16.73.035 Process for review**

**A. New residential construction:** If associated with new residential construction, installation of a charging station shall be processed in association with the underlying permit(s).

**B. Retrofitting single family residential:** If retrofitting a single family home for a charging station, an electrical permit shall be required.

**C. Retrofitting a commercial site, multifamily residential or community site in a residential land division:**

**1) SPR Required if Impacts identified:** If the Director of Community Development determines that retrofitting for a charging station(s) in an existing commercial, multifamily, or community site in a residential land division, could significantly impact parking, landscaping, signing, drainage or other public interest concerns, the proposal will be reviewed and approved through the City Site Plan Review (SPR) process (LMC 16.84).

**2) Exempted if no impacts identified:** If the Director of Community Development determines a retrofit will not adversely impact any issues of public interest, the proposal may be exempted from SPR requirements.

**3) Site plan required for evaluation:** To determine if the application will be processed through SPR or exempted, the applicant shall submit a site plan showing the location and scope of the proposal.

**4) Electrical permit required:** All applications, exempted or requiring SPR, shall also require an electrical permit.

**D. Battery exchange:** If the facility includes a battery exchange station, or is associated with a new commercial activity requiring SPR approval, the application shall be reviewed and approved through SPR, (LMC 16.84).

**16.73.040 Design Criteria and guidelines**

**A. Design Criteria for commercial and multifamily development or common/community owned areas of a residential development:** The following criteria should be applied to electric charging facilities.

**1. Number required:** This is an optional improvement. No minimum number of stalls applies. Provided, if electric vehicle stalls are reserved for electric vehicles, care should be taken to ensure enough spots are available for all of a site's parking needs.

**2. Generally:** Location and layout of electric vehicle parking is expected to vary based on the design and use of the primary parking lot. It is expected flexibility will be required to provide the most convenient and functional service to users. Standards and criteria should be considered guidelines and flexibility should be allowed when alternatives can better achieve objectives for provision of this service.

**3. Signage to identify:** Each charging station space should be posted with signage indicating the space is only for electric vehicle charging purposes. Days and hours of operations should be included if time limits or tow away provisions are to be enforced by the owner.

**4. Signage to find:** Installation of wayfinding signs at the parking lot entrance and at appropriate decision points to effectively guide motorists to the charging station space(s).

**5. Maintenance:** Charging station equipment should be maintained in all respects, including the functioning of the charging equipment.

**6. Accessibility:** Where Charging Station equipment is provided within an adjacent pedestrian circulation area, such as a sidewalk or accessible route to the building entrance, charging equipment should be located so as to not interfere with accessibility requirements of WAC 51-50-005.

**7. Lighting:** Where Charging Station equipment is installed adequate site lighting should also be provided unless charging is for daytime purposes only.

**8. Notification of station specifics:** Information on the charging station must identify voltage and amperage levels and time of use, fees or safety information.

**9. Avoid the most convenient parking spaces:** Stalls should not be located in the most convenient spots because this would encourage use by non electric vehicles.

**10. Avoid conflict with handicap spots:** Stalls should generally not be located adjacent to handicap spots unless designed for handicap use.

**11. Design for compatibility:** Design should be appropriate to the location and use. Facilities should be able to be readily identified by electric cars users but blended into the surrounding landscape/architecture for compatibility with the character and use of the site.

**12. Size:** Where provided, spaces should be standard size parking stalls.

**13. Public streets:** Generally charging stations should not be located along public streets where it could impact the landscaping and aesthetic components of the streetscape. Sites within the streetscape must be approved by the Public Works Director.

#### **B. Electric vehicle charging station design standards for single family residential sites.**

Installation of vehicle charging stations on single family residential sites shall meet the manufacturing and installation requirements of the International Building Code (IBC) and National Electrical Code (NEC).

Section 2. The Summary attached hereto is hereby approved for publication.

PASSED BY THE CITY COUNCIL OF THE CITY OF LACEY,  
WASHINGTON, at a regularly-called meeting thereof, held this 12<sup>th</sup> day of  
August, 2010.

CITY COUNCIL

By: Tom Nelson  
Mayor

Approved as to form:

[Signature]  
City Attorney

Attest:

Carol Lita  
City Clerk

SUMMARY FOR PUBLICATION

ORDINANCE NO. 1351

CITY OF LACEY

The City Council of the City of Lacey, Washington, passed on August 12, 2010, Ordinance No. 1351, entitled "AN ORDINANCE RELATING TO THE INFRASTRUCTURE FOR ELECTRIC VEHICLE CHARGING AND ADDING A NEW CHAPTER, 16.73 TO THE LACEY MUNICIPAL CODE AND ADOPTING A SUMMARY FOR PUBLICATION."

The main points of the Ordinance are described as follows:

1. The Ordinance is created for the purpose of encouraging the location of convenient electric vehicle charging stations for use of the traveling public.
2. The Ordinance specifies the infrastructure requirements for electric vehicle charging stations in the various zones in the City and for battery charging stations in those zones where the location of such facility is proper.
3. The Ordinance approves this Summary for publication.

A copy of the full text of this Ordinance will be mailed without charge to any person requesting the same from the City of Lacey.

Published: August 16, 2010.