



City Hall
601 4th Avenue E.
Olympia, WA 98501
360-753-8244

Land Use & Environment Committee

Electric Vehicle Parking Requirements Discussion

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Title

Electric Vehicle Parking Requirements Discussion

Recommended Action

Committee Recommendation:

Discussion only. No action requested.

City Manager Recommendation:

Discussion only. No action requested.

Report

Issue:

Discussion on the draft Electric Vehicle parking requirements under development.

Staff Contact:

Joyce Phillips, Principal Planner, Community Planning & Development, 360.570.3722
Pamela Braff, Climate Program Manager, City Manager's Office, 360.753.8249
Erik Jensen, Building Official, Community Planning & Development, 360.753.8280

Presenter(s):

Joyce Phillips, Principal Planner, Community Planning & Development

Background and Analysis:

Charging and/or charging-readiness for electric vehicles (EV or EVs) will soon become a requirement for most new development and redevelopment, as part of the State building codes.

EV-ready codes establish infrastructure requirements for new buildings, such as electrical capacity, pre-wiring, and any design features that are necessary for the installation of future EV charging stations.

EV-readiness is an important strategy to future-proof new buildings. It ensures that new buildings will be able to accommodate the anticipated rapid growth of electric vehicles, without requiring expensive and complicated retrofits in the future.

Electric Vehicle (EV) Readiness

Access to convenient charging is frequently cited as one of the most important factors influencing EV purchasing decisions. However, installing the necessary infrastructure to support EV charging after a building has been constructed can often be cost prohibitive. Ensuring that buildings are designed and built with the capacity to provide future EV-charging is known as EV-readiness.

Analyses of EV-infrastructure costs consistently report that it is more cost-effective to plan for future EV parking in new construction, than it is to retrofit buildings and parking lots to accommodate EV charging in the future. EV-readiness requirements can range from providing a minimum electrical panel capacity to support future charging, to the installation of fully operational EV-charging equipment.

The 2021 Washington State Building Code identifies three levels of EV-readiness:

- EV-Capable - A parking space provided with a conduit, electrical panel, and load capacity to support future installation of EV charging equipment.
- EV-Ready - A parking space provided with a receptacle outlet allowing charging of electric vehicles.
- EV-Charging Station - An EV-ready parking space with installed EV-charger.

In 2020, King County completed an assessment of EV charging infrastructure (Electric Vehicle Charging Options Report), reporting that previous studies have estimated the cost of a fully wired, level 2, EV-ready space in new construction to be:

- \$150 to \$375 per space for single-family homes and duplexes
- \$1,330 to \$1,380 per space for multifamily and commercial buildings

They also found that EV-readiness retrofits can be up to eight times more expensive than new construction, increasing costs by \$900 to \$5,000 per space. Increased costs for retrofits are attributed to breaking and repairing walls, parking surfaces, and sidewalks, as well as electrical service upgrades, more expensive methods of conduit installation, and additional permitting and inspection.

Electric Vehicle (EV) Readiness - Current Requirements and Options

In April 2022, the State Building Code Council approved amendments to the International Building Code, which establish statewide requirements to provide EV charging infrastructure in new construction, effective July 2023. The approved EV infrastructure requirements include:

- For single-family, duplex, and dwelling units with private garages: 1 EV-ready parking space per unit.
- For all other residential parking spaces: 10% EV-charging, 25% EV-ready, and 10% EV-capable.
- For all non-residential parking spaces: 10% EV-charging, 10% EV-ready, and 10% EV-capable. (Note: applies only to employee designation parking for assembly, educational, and mercantile occupancies).

To increase access to EV-ready parking, Olympia could adopt EV charging codes that set EV-ready standards beyond the state minimum. Several jurisdictions in Washington (e.g., Seattle, Lacey, and King County) have taken similar actions to establish local EV-readiness and EV-charging standards through land use and zoning requirements.

Land Use and Environment Committee direction

In June 2022, staff briefed the Land Use and Environment Committee on policy options to support electric vehicle charging in new construction. During the briefing, the Committee also received relevant background information on existing EV charging requirements under the Washington State Building Code, example policies from other jurisdictions, and recommended best practices for EV charging. After a brief discussion, the Committee directed staff to develop a proposal for a local EV readiness policy to achieve the recommended best practices for EV charging and readiness.

Focus Groups

In November, City Staff held four focus group meetings with people who would be directly impacted by EV Ready parking requirements. Feedback was solicited to help staff better understand the issues around increasing the EV parking requirements from the minimum state requirements to those of the emerging best practices. Members of the focus groups also shared information that is being used to develop the first draft of the code amendments that will be issued soon for focus group member and public review and comment prior to the public hearing, which has not yet been scheduled. A summary of focus group comments is attached.

Planning Commission

The Planning Commission received a briefing on the Focus Group comments in February of 2023. The Commission will conduct a public hearing on the draft code language once the proposal is issued, shared with Focus Group contributors, and routed for review.

Climate Analysis:

Transportation and the built environment are the two largest sources of emissions in Thurston County, making up more than 90% of regional greenhouse gas emissions. In 2019, the built environment, which includes the energy used to power, heat, and cool buildings, contributed 62% of regional emissions, while transportation contributed 31% of emissions.

Requiring EV-ready construction is consistent with the strategies and actions of the Thurston Climate Mitigation Plan.

EV-ready requirements support:

- Strategy T3: Increase the adoption of electric vehicles.
 - Action T3.1: EV parking new construction. Require large commercial and residential buildings to dedicate a percentage of parking spots for electric vehicle charging.
 - Action T3.5: EV ready building code. Require all new residential construction to be built EV ready.

Equity Analysis:

Access to electric vehicles and charging infrastructure is an important aspect of equity. Additionally, any requirements that increases upfront development costs impacts all new development, including

affordable housing proposals should be carefully considered. Staff is working to address equity issues in the draft code language in a manner that is appropriate in both the near and long term.

Neighborhood/Community Interests (if known):

City staff met with groups that would have specific interest in the provision of electric vehicle parking, to inform them of the upcoming state requirements and to discuss issues around the additional potential requirements under consideration to achieve best practice levels. This included representatives from Affordable Housing Developers, Architects, Engineers, Community Members, Realtors, Climate Advocates, Builders, and the Business Community. In addition, City staff met with staff from Puget Sound Energy to get a better understanding of any issues of concern.

Draft code language based on the input received to-date is almost finished and will be shared with those we spoke with earlier as well as the community as a whole. Any additional comments will be considered by the Planning Commission at the public hearing and as it develops its recommendation to City Council.

Financial Impact:

None. Development of draft code language is covered by the Department's base budget.

Options:

1. Discuss the draft Electric Vehicle parking requirements under development.
2. Do not discuss the draft Electric Vehicle parking requirements under development.
3. Discuss the draft Electric Vehicle parking requirements under development at another time.

Attachments:

Focus Groups Summary