Electric Vehicle (EV)-Ready Code Project FAQ

Updated 1/11/2023

What will Portland require for EV charging?
The main proposal is to require developments with five or more new dwelling units, when parking spaces are included, to provide EV-ready infrastructure as follows:

- 100% of parking spaces when six or fewer spaces are provided; or
- 50% of parking space when more than six spaces are provided.

What does "EV-Ready" mean?
OAR 918-460-0200 (Building Codes Division) contains the requirements for what EV-ready infrastructure means, and the Oregon Structure Specialty Code is the mechanism under which plans will be reviewed. In general, "EV-ready" requirements include conduit and designated space within the building (or a designated location on the property for installing remote service) for current or future electrical service capacity to support at least a Level 2 EV charger.

Oregon Building Code Division EV-Ready requirements can be found here:
https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=291676

Does this EV-Ready Code proposal require actual EV chargers and/or outlets to be installed?
The EV-Ready Code Project (at the State level and in Portland) does not require buildings to include chargers or outlets, it only requires developers to install conduit and to show where the future electrical capacity, needed to power the chargers, will go.

Why require 100% EV-Ready for 6 parking spaces or less and 50% for 7 or more spaces?
Portland will need to rapidly scale up the amount of available EV chargers, especially in residential locations, to meet climate goals and keep up with the demand resulting from current EV adoption trends as well as expected future EV adoption growth rates.

Staff explored rules for a variety of cities when determining a potential EV-Ready percentage requirement. It is easier and less expensive to include the infrastructure at the time of construction with the understanding that these buildings will be around for 50-100 years. When EV-Ready infrastructure is not included in new construction, later adopters need to then figure out how to work with building managers and owners to install expensive conduits after construction of the building.

Most of the building stock in Portland consists of existing buildings. Requiring 100% of parking spaces to be EV-Ready at smaller parking areas will facilitate scaling up EV chargers to augment the lack of EV-infrastructure in the existing building stock, especially in cases where parking supply may be more limited.

The Oregon State Building Code and DLCD rules require a minimum of 20% of the parking spaces to be EV-Ready for new construction of commercial buildings, and 40% of the parking spaces to be EV-Ready for new construction of mixed-use and multi-dwelling buildings with over 5 residential units.

This code update would require higher ratios of the parking to be EV-Ready in Portland acknowledging that a greater percentage of people in Multnomah County, than elsewhere in the state, have purchased

electric vehicles. While Multnomah County represents approximately 20% of the state population, the County has nearly 30% of the registered EVs[1].

The EV-Ready requirement percentages are a result of staff balancing the expected EV charging demand in Portland with development costs to install conduit. Staff's approach is to minimize the likelihood of stranded assets(i.e. unused conduit) while at the same time preparing for the increased need for EV charging infrastructure to support future EVs. It is also important to acknowledge that developers always have the option to increase the amount of EV infrastructure in their projects as the market for EVs increases over time.

How does Portland's requirement compare to the State's building and land use requirements?
In 2021 the Oregon legislature passed House Bill 2180 (HB2180), which required an update to the Oregon Structural Specialty Code (i.e. the commercial building code). These new rules require that 20% of parking spaces in newly constructed, privately-owned commercial buildings – as well as multi-dwelling and mixed-use buildings with five or more residential units – provide EV-ready spaces (as described above). The legislation allows a municipality to go above the 20% requirement for these building types through a "process concerning land use." The Building Codes Division (BCD) rules went into effect on 7/1/22.

In 2021-2022, the Department of Land Conservation and Development (DLCD) led the Climate-Friendly and Equitable Communities Rulemaking process, which augments HB2180 provisions addressing climate-friendly and equitable land use and transportation planning. As part of the rulemaking, DLCD increased the required percentage of EV-ready parking spaces for mixed-use/multi-dwelling development with at least five units to 40%.

The City's EV Ready Code Project brings Portland's Zoning Code into alignment with these new state regulations, while adopting higher local ratios (for residential and mixed-use developments) based on years of study and outreach begun by the City through the following actions: Council directed Climate Emergency Work Plan – Resolution No. 37585 adopted on August 24, 2022; Climate Emergency Declaration Resolution No. 37494 on June 30, 2020; and 2017 Portland Electric Vehicle Strategy – Resolution No. 37255 on December 14, 2016.

The City of Portland is proposing the following zoning code changes:
Require developments with five or more new dwelling units, when including parking spaces, to provide electric vehicle-ready infrastructure as follows:

- 100% of parking spaces when six or fewer spaces are provided; or
- 50% of parking spaces (but a minimum of six) when more than six spaces are provided.

Are EVs Accessible to Low-Income Communities?
EVs were once rare and were only owned by a few, usually higher income, early adopters. According to Oregon State's Department of Transportation (ODOT) and Department of Energy (ODOE), a decade ago there were fewer than 1,000 electric vehicles registered in Oregon. As of the end of April 2022, there are more than 50,000 electric vehicles [2]on Oregon roads. These vehicles can now be purchased on either

[1] Oregon Department of Energy, Oregon Department of Energy, Mar. 2022, www.oregon.gov/energy/Data-and-Reports/Pages/Oregon-Electric-Vehicle-Dashboard.aspx.
[2] Oregon Department of Energy, Oregon Department of Energy, Mar. 2022, www.oregon.gov/energy/Data-and-Reports/Pages/Oregon-Electric-Vehicle-Dashboard.aspx.

the new or used market. EVs are expected to become even more accessible and affordable over time. Due to policy changes and the market response to those changes, it is anticipated that it will become increasingly difficult to access a traditional internal combustion engine (ICE) vehicle. Most vehicle manufacturers are ramping up the sale of EVs and many States have committed to phase out the sale of passenger ICE vehicles by 2030 or 2035. Oregon has banned the sale of new gas-powered cars by 2035. Additional information about states phasing out ICE vehicles and equity considerations can be found on page 4 in the *EV – Ready Code Project Recommended Draft* which is available on the project website.

Available Federal and State incentives have resulted in price parity between EVs and ICE vehicles. Used EVs are currently available and will become even more prevalent over time as more new EV model options become available. Oregon offers some of the country's most generous EV rebates, to income-qualified Oregonians, in the country. Oregon offers the following EV rebates:

- Up to $7500 for income qualified applicants for a new EV
- Up to $5000 on a used EV for income qualified applicants

Federal Tax credits currently offer up to an additional $7500 when purchasing a qualifying new EV. The Inflation Reduction Act will expand federal incentives to include up to a $4000 credit for qualifying used EVs. As of January 28, 2022, the lowest price used EV for sale in Oregon was a 2013 Nissan Leaf for under $6000[3]. Making use of the $5000 Oregon EV rebate would reduce the price of the vehicle to under $1000. The Portland Clean Energy Fund (PCEF) is supporting a Metropolitan Family Services program offering low-interest loans and grants for low-income Portlanders purchase of new or used EVs, or electric bikes. This loan or grant can be stacked with State rebates and federal incentives. At this point in time, purchasing a used EV is feasible for low-income Portlanders. Additionally, EVs are cheaper to own than ICE vehicles due to less expensive fuel and maintenance costs. Modeling shows that EV owners save an average of $6,000 over the vehicle's lifetime. [4]

Due to the amount of savings associated with owning an EV, low-income Portlanders can really benefit from owning an EV rather than an older gas vehicle. However, it is unrealistic for them to access an EV without convenient and affordable access to EV charging.

Will this EV-Ready Proposal impact minimum parking requirements and/or require developers to build parking spaces?
The proposed amendments do not create any new minimum parking requirements. Projects that are currently exempt from parking requirements will continue to be exempt. The amendments only dictate the number of EV-ready spaces in situations where new parking spaces are created.

Will this impact the cost of Affordable Housing?
BPS commissioned a consultant report from Johnson Economics stating that "the expected percentage impact of this mandate on rent levels is expected to be below 1.0% for new construction." Johnson Economics agrees that this is an overestimate at this point due to the electrical capacity not being a requirement, which was thought to be the case at the time the economic analysis was completed.

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[3] "Oregon Electric Vehicle Trends." Recurrent, Recurrent, 2022, www.recurrentauto.com/research/oregon-electric-vehicle-trends?utm_source=linkedin&utm_medium=social&utm_campaign=brand. Accessed 8 Aug. 2022.
[4] Orvis, Robbie. "Most Electric Vehicles are Cheaper to Own Off the Lot than Gas Cars." Energy Innovation Policy & Technology LLC, Energy Innovation Policy and Technology LLC, May 2022, energyinnovation.org/wp-content/uploads/2022/05/Most-Electric-Vehicles-Are-Cheaper-Off-the-Lot-Than-Gas-Cars-From-Day-One.pdf.

Portland General Electric (PGE) and Pacific Power are planning to offer funding support to a group of affordable housing projects to offset costs associated with EV-Ready requirements for new construction of these projects. Funding will be prioritized for projects that have already identified budgets and will be impacted in the early phase of EV-Ready building code implementation.

Are there ADA requirements associated with EV installations in Portland?
The U.S. Access Board released the Design Recommendations for Accessible EV Charging Stations. At this point this information is intended to be used as guidance, not a requirement, and has therefore not yet been incorporated into the Oregon Building Code but it may inform future state amendments.

Is E-Bike Charging Access Included in this Proposal?
EV-Ready infrastructure for e-bike parking is outside of the scope of this project due to the bike parking code being recently updated on March 1st of 2020. The bike parking code update included requirements for the installation of outlets to charge e-bikes in long-term secure bike parking areas for tenants.

The EV-Ready Code Project (at the State level and in Portland) does not require buildings to include chargers or outlets, it only requires builders to install empty conduit and for builders to show where the future electrical capacity, needed to power the chargers, will go. The empty conduits end at vehicle parking spaces which, in most cases, are not the safest place to park a bike, given the car/bike conflict risks. The focus of this project is to have builders install EV-Ready infrastructure (mainly conduits) during construction, to avoid the expensive retrofitting that would be needed to install EV chargers for vehicles after a building is constructed.

With regards to the idea of providing public e-bike access to outlets at short-term bike racks on private property, BPS staff is concerned that the practical use case for this type of charging is rare. At this point in time, there may be unintended consequences associated with the installation of a publicly accessible 110 volt outlet. Discussions with e-bike users revealed that most people do not carry their battery charging cords and would feel uncomfortable leaving charging cords outside, unaccompanied at a public outlet. Unlike car batteries, many e-bike batteries are able to dislocate from the bike and be carried inside a building to be charged at an outlet.

City of Portland staff are very interested in understanding potential ways to facilitate e-cargo bike deliveries. Our understanding is that commercial cargo bikes generally do battery swaps rather than charge on the street due to the short duration of delivery pick-up/drop-offs and the need to maximize the amount of time the bike can be used for deliveries.
Additionally, there may be ADA issues with a cord going from a building to a bike impacting building access and sidewalk accessibility.

The PSC discussed this issue in detail and concluded that it is too early to determine a regulatory approach for providing public e-bike access to outlets at short-term bike racks on private property and suggested that the issue continue to be monitored.

PBOT is developing requirements and a permitting process for EV chargers located on the sidewalk and other areas of the public right-of-way. BPS staff are engaged in discussions with PBOT staff about how to support e-bike users and provide public e-bike charging access where and when it makes sense.