

Local Policies for Electric Vehicle Readiness

By Philip Barnes and Vincent Sikora, July 2021

Local governments in Delaware have a role to play in supporting the ongoing transition to an electric vehicle (EV) future, especially for EV charging stations and infrastructure. Federal and state governments have sizeable policy levers that they can pull to direct transportation systems and markets toward EVs, but so too do municipalities. Indeed, Delaware's local governments could use their legislative and administrative authority over zoning, parking, signage, and building codes to foster EV-readiness and reap the benefits of the technology, which includes economic development, increased property values, and cleaner local environments.^{1,2,3}

ZONING

Regulating land use is one of the most important functions of local government, and zoning is a powerful policy tool that can be exercised by municipal authorities to support EV charging. To add clarity for developers and property owners, local authorities in Delaware are encouraged to update their zoning ordinance to allow EV infrastructure, including charging stations, across all zoning types.⁴ For example, municipalities could establish permitting procedures for Level 1 and Level 2 chargers, the most common and straightforward types of chargers, in all zoning districts including single and multifamily zones, while limiting Level 3 fast chargers to commercial or industrial zones, or as a conditional use in certain zones. This was the approach taken by the small town of Chelan, Washington, where they modified their zoning ordinance to permit EV charging across zones.⁵

Communities may also leverage zoning incentives to create a voluntary path toward the deployment of new charging stations.⁶ Some municipalities are choosing to offer density bonuses to developers who install chargers in their multiunit properties.

Indianapolis took this approach in 2016 when they amended the zoning ordinance to provide density credits to developers who included charging stations in new construction.⁷ Such a policy may be attractive in more built-up areas of Delaware, like Newark or Wilmington.



PARKING

EV parking should be coupled with dedicated charging and may require updating guidelines to ensure maximum safety and accessibility to new stations. An ideal EV-friendly parking framework incorporates design standards, lighting, maintenance, and signage. Some jurisdictions are creating EV parking/charging minimums with the goal of spurring EV adoption. Sunnyvale, California's municipal code states that in new multiunit developments, parking spaces for at least 30 percent of the units must be pre-wired for Level 2 charging, with the remaining spaces pre-wired for Level 1 charging.⁸

Given the high demand for parking in certain areas, it is important that dedicated EV spaces with chargers are not occupied by gas-powered vehicles. Some states including Arizona, Maryland, Illinois, Oregon, and Washington authorized fines and

towing penalties to prevent gas-powered vehicles from parking in EV-designated spots.⁹

SIGNAGE

Appropriate signage is needed for wayfinding to EV charging and communicating at stations, and municipalities should modernize their sign and/or zoning ordinances in support of EVs. The Delaware Department of Transportation-approved sign for EV charging stations is shown below.¹⁰



Mountlake Terrace, Washington, updated their design and signage standards to communicate directions to local charging stations; station information including voltage, amperage, and charging costs; and signs at charging stations to alert motorists about EV-only parking.¹¹

BUILDING AND ELECTRICAL CODES

Municipalities can further prepare for EVs by establishing requirements for new commercial buildings and multi-family dwellings, or structures

undergoing renovations, to install or pre-wire vehicle chargers.¹² Charging-readiness in new construction saves thousands of dollars per EV space over a retrofit scenario.¹³ A code requirement establishing minimum electrical capacity for future charging installation is another effective cost-saving strategy.¹⁴

Rather than being prescriptive, codes can also offer flexibility and incentives. The City of Newark made amendments to the 2018 International Energy Conservation Code and created a points system to incentivize developers of commercial, institutional, multi-family residential, and industrial projects to add green amenities in new construction. The optional installation of charging stations at a minimum of 2 percent of total constructed parking, a figure equivalent to the share of EVs on the road, earns developers 3 points toward a required minimum of 50 points.¹⁵ Newark's policy shows how communities can support EVs with creativity and flexibility, and can serve as a model for other jurisdictions in Delaware.

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¹ ChargePoint, 2015

² Bedo, 2019

³ Hilpert & Breyesse, 2014

⁴ Stainken et al., 2020

⁵ Chelan, WA, 2012

⁶ U.S. Department of Energy, 2015

⁷ Tuohy, 2016

⁸ Sunnyvale, CA, 2018

⁹ Stainken et al, 2020

¹⁰ Luszc, 2015

¹¹ Mountlake Terrace, WA, 2010

¹² Larsen, 2021

¹³ Pike, Steuben, & Kamei, 2016

¹⁴ Minezaki, Kido, & Pike, 2019

¹⁵ Newark, DE, 2020

For the full works cited, visit:

www.bidenschool.udel.edu/ipa/resources/publications