

**This document has been prepared as part of the implementation project of Legal Pathways to Deep Decarbonization (Michael B. Gerrard and John C. Dernbach, eds. Environmental Law Institute [2019]) (LPDD). For background information on the project, see <https://lpdd.org>**

## MEMORANDUM IN SUPPORT OF MODEL MUNICIPAL ORDINANCE FOR USING STREET LIGHT POLES FOR ELECTRIC VEHICLE CHARGING

**Introduction:** "To reduce the United States' greenhouse gas emissions by at least 80% from 1990 levels by 2050 will require... deployment of approximately 300 million alternative fuel vehicles, which for the purposes of this chapter consists of electric vehicles [EVs], hybrids (electric and gas) and hydrogen vehicles ['AFVs']. The goal is to shift 80%-95% of the miles driven from gasoline to lower carbon energy sources like electricity and hydrogen." LPDD, Ch. 14 at 353. AFVs face a number of barriers to reaching these goals, including infrastructure deficiencies. LPDD, Ch. 14 at 361.

Electric vehicle owners rely primarily on charging their vehicles at home on a daily basis. Even Tesla, which has installed a wide commercial charging network, expects that residential charging will remain dominant. However, in some neighborhoods, many residents live in apartments without garages or access to charging. In general, there seems to be public consensus that funds for infrastructure development would be better spent developing charging stations that are available to the public, especially focusing on neighborhoods where "millions of Americans ... live in apartments or condominiums without charging access at home." LPDD, Ch. 14 at 362.

We propose a solution to this barrier to home charging--having municipalities use their street light poles to support Level Two electrical vehicle chargers. When municipalities convert street light poles to LED lights, they can use the excess electric power freed up by the conversion to power charging stations at the base of the pole, which can be installed by a private company (e.g. Ubitricity) at a cost of the equivalent of 110 US Dollars in 20-30 minutes.<sup>1/</sup> The adjacent parking space may be reserved for the limited times it takes to charge the EV. We propose that municipalities set a goal of installing by 2025 one charge point or port for every 50 units in neighborhoods or blocks with multi-family residences, to the extent there are sufficient street light poles on the same block. The charge ports would be accessible to those electric vehicle users who bring their own smart cable that allows for immediate charging and billing, so that the municipality does not lose money, and the concern that charging cables might be left on the street and destroyed is eliminated.<sup>2/</sup> The Bureau of Street Lighting in Los Angeles has installed electric vehicle charging stations on 132 streetlights.<sup>3/</sup> In addition, curbside charging is being, or has been, piloted in New York City, Indianapolis and Jersey City, as well as in Montreal and Europe.<sup>4/</sup> Arguably, simply

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<sup>1/</sup> <https://www.ubitrlicity.com/en/mobilecharging-system-2/qa/>;  
<https://www.youtube.com/watch?v=rKaEhBjt1ls>; <https://www.youtube.com/watch?v=8Gdt8Yggy4Q>;  
<https://www.cleaneenergywire.org/news/mobility-start-ubitrlicity-wants-revolutionise-e-car-charging>.

<sup>2/</sup> <https://www.curbed.com/2017/6/22/15855130/ubitrlicity-electric-car-charging-lamp-posts>

<sup>3/</sup> [bsl.lacity.org/smartcity-ev-charging.html](http://bsl.lacity.org/smartcity-ev-charging.html).

<sup>4/</sup> [Curb Enthusiasm/Deployment Guide for On-Street Electric Vehicle Charging](#), November 2018, prepared by WXY Architecture and Barretto Bay Strategies, in partnership with the NYC DOT and NYC Mayor's Office of Sustainability, at page 12.

starting piloting programs is insufficient at this time, as the need for infrastructure is imperative for the immediate transition to EVs.

"Level 2 charging is an economical way to jumpstart EV adoption. Level 2 stations present an advantage over other charging options in that they require less power than fast charging alternatives, and align with typical parking habits, allowing users to get an adequate charge in diverse contexts."<sup>5/</sup> Level 2 chargers can charge 10-20 miles of driving range per hour. Thus, in two hours, a commuter could recharge sufficiently for her daily commute. (While Level 3 chargers can recharge most electric vehicles by 80% in 30 minutes, their "high hardware and installation costs will limit curbside deployments;" they are instead being deployed at public stations, following the gas station model, by large EV charging corporations and by petroleum and automobile companies.)<sup>6/</sup> "In dense urban centers where off-street parking is limited, the expansion of public access curbside infrastructure is critical to increased local adoption" of EVs.<sup>7/</sup> Because two hours would generally be sufficient for delivery of a significant charge, "metered curbside spaces, and other time-limited zones can help support favorable charging turnover" at light poles.<sup>8/</sup>

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<sup>5/</sup> [Curb Enthusiasm](#) at page 12.

<sup>6/</sup> [Curb Enthusiasm](#) at page 13.

<sup>7/</sup> [Curb Enthusiasm](#) at page 18.

<sup>8/</sup> [Curb Enthusiasm](#) at page 19.