

To: Patricia McGuire, Carrboro Planning Director

Subject: Petition to add Electric Vehicle Ready Requirements to the LUMO

Meeting Date: December 13, 2018

Recommendation: The Environmental Advisory Board (EAB) petitions the Board of Alderman to start a process to amend the Land Use Ordinance (LUO) to add Electric Vehicle Readiness requirements. The EAB has researched and developed the text below for new developments:

Whereas, the Town of Chapel Hill Transportation Advisory Board with concurrence from the Chapel Hill Environmental Stewardship Board petitioned the Chapel Hill Town Council to consider modifying the LUMO to include provisions for, under certain circumstances, either installation of a minimum number of operating EV-capable parking spaces or a minimum number of parking spaces pre-wired to facilitate upgrade to full EV-capability in the future;

Whereas, both of the Town of Carrboro and Town of Chapel Hill are leaders in environmental protection and carbon reduction efforts;

Whereas, both of the Town of Carrboro and Town of Chapel Hill have similar environmental goals;

Whereas, many other governmental entities have adopted similar regulations (See references);

Whereas, many building and trades organization have drafted guidelines for implementing EV readiness (See references);

Whereas, Vision 2020, dated December 5, 2000 outlines Town goals to mitigate climate change, lower carbon emissions and increase energy efficiency that align with this proposal, namely

- **5.50 Energy**

- **5.51** The town should publicly promote every available means of energy conservation.

- The town's own alternative and renewable energy targets should include passive and active solar, and composted waste co-generation to fuel public vehicles and the heating of town facilities

- **5.52** The town should set a goal of reduced energy costs in all town buildings and increased fleet mileage for all town vehicles.

Whereas, the Town of Carrboro adopted the **Community Climate Action Plan**, Dated January 24, 2017 with various provisions that align with this proposal, namely,

- **Transportation Recommendation #1: 50% Challenge (Page 28)**, Reduce Greenhouse Gas Emissions from Motor Vehicle Use by 50% by 2025.
- **Carbon Free in 10 Years**, Page 76, Year 5 – Purchase an Electric car.

Whereas, the EAB has been recommending the following provisions in many SUP/CUP/rezoning reviews for almost a year with generally positive feedback from applicants,

Whereas, recommendations from the EAB are not legally enforceable,

Whereas, the EAB passed a motion to forward the proposal to Town government on December 13, 2018,

Therefore resolved, The EAB requests the following provisions be added to the Town of Carrboro LUO.

EV Ready Requirementsⁱ

These requirements apply to new or expanded parking lots and parking structures and developments which require a CUP or SUP or rezoning. They are not required retroactively for existing parking lots.

1. In parking lots with more than 50 spaces, EV charging stations installed in at least 3% of all parking spaces used by the project.
 - o Minimum of two EV charging station parking spaces for each project. At least one of which must be ADA compliant, per NCDOT's guidelines.
 - o Provide a Level 2 charging capacity (208 – 240 volts) or greater
 - o Comply with the relevant regional or local standard for electrical connectors, such as SAE Surface Vehicle Recommended Practice J1772, SAE Electric Vehicle Conductive Charge Coupler so that they are compatible with all types of chargers
 - o EV charging station spaces must be separate from and in addition to preferred parking spaces for green vehicles

2. Signage for parking of electric vehicles shall include:
 - o Information on the charging station to identify voltage and amperage levels and any time of use, fees, or safety information.
 - o As appropriate, directional signs to effectively guide motorists to the charging station space(s).
 - o Station(s) reserved for electric vehicles
 - o QR code linking to Town website for greenhouse gas emissions generation information

3. 20% of all total parking spaces will be made "EV Ready" for charging stations, meaning:
 - o Installation of dedicated electrical circuit and underground conduit required to run electricity to EV charging spot
 - o Electrical panels labeled "EV Ready"

SUMMARY OF ENVIRONMENTAL ADVISORY BOARD ACTION

Vote: Motion O'Connor, Second Sinclair

Ayes: Sinclair, Turner, O'Connor

Nays: 0

References

- <https://www.chargepoint.com/blog/contractors-guide-ev-ready-building-codes/>
- <http://www.transportationandclimate.org/ev-ready-codes-built-environment>
- <https://www.usgbc.org/credits/new-construction-core-and-shell-schools-new-construction-retail-new-construction-healthca-25>
- http://www.b3mn.org/guidelines2-2/s_12.html
- Full Electric Vehicle Ordinance Text
<http://www.codepublishing.com/WA/MountlakeTerrace/html/MountlakeTerrace19/MountlakeTerrace19126.html#19.126.070>
- Siting and Design Guidelines for Electric Vehicle Supply Equipment
http://www.transportationandclimate.org/sites/default/files/EV_Siting_and_Design_Guidelines.pdf
- <http://files.masscec.com/research/WatertownCleanEnergyRoadmap.pdf>
- <http://www.theenergycollective.com/greatplainsinstitute/2417956/making-city-ev-ready>
- Reducing Barriers to Electric Vehicle Adoption through Building Codes
<https://aceee.org/files/proceedings/2012/data/papers/0193-000012.pdf>
- Page 90 <https://www.ladbs.org/docs/default-source/publications/misc-publications/2010ca-green-building-standards-code.pdf?sfvrsn=11>
- Creating EV-Ready Towns and Cities: A Guide to Planning and Policy Tools
http://www.transportationandclimate.org/sites/default/files/EVSE_Planning_and_Policy_Tool_Guide.pdf
- City of Palo Alto - EV Code
<https://www.cityofpaloalto.org/civicax/filebank/documents/42838>
- Carrboro [Climate Action Plan](#)
<https://www.townofcarrboro.org/DocumentCenter/View/4116/Community-Climate-Action-Plan>
- [Carrboro Vision 2020](#) <http://www.townofcarrboro.org/785/carrboro-vision-2020>