ChargePoint, Inc.
254 East Hacienda Avenue | Campbell, CA 95008 USA
+1.408.841.4500 or US toll-free +1.877.370.3802

HB830/SB477
Residential Construction or Significant Renovation - Electric Vehicle Charging Bill

---

February 28, 2023
Environment and Transportation Committee

Re: HB830/SB477
Residential Construction or Significant Renovation - Electric Vehicle Charging Bill

To the Committee on Environment and Transportation:

Thank you for the opportunity to provide written testimony on the above-referenced legislation and for your commitment to the electrification of transportation in Maryland. ChargePoint is a strong supporter of the complete decarbonization of the transportation system and looks forward to continuing to work with the General Assembly on legislation such as the proposed to accelerate these efforts.

Background on ChargePoint
ChargePoint is the nation's leading electric vehicle ("EV") charging network, with charging solutions for every charging need and all the places EV drivers go: at home, work, around town and on the road.

ChargePoint's primary business model is not to operate charging stations ourselves, but to provide smart, networked charging solutions directly to businesses and organizations. We are committed to making it easy for cities, towns, state agencies, businesses, multifamily buildings, fleet operators, as well as individual drivers and public transit riders to go electric.

Our free downloadable app allows drivers to find charging stations (not only our stations but other stations under networks we have roaming agreements with), access data about how long a session takes, and pay for their session if payment is required. Site hosts can use our software to collect data about drivers and charge fees. We believe smart networked charging is the way of the future and are committed to making the experience a positive one for the driver and the owners and operators of our chargers. Additionally, ChargePoint has designed its network to allow other parties, such as electric utilities, the ability to access charging data and conduct load management to enable efficient EV load integration onto the electric grid.

There are currently 426 public charging stations on the ChargePoint network across Maryland.

Position on HB830/SB477

ChargePoint supports and applauds the intent of this bill. We believe updating code to include EV Ready requirements for parking spaces across residential dwellings is an effective way for the state to be proactive in ensuring there is enough EV charging infrastructure for Maryland residents as EV adoption continues to scale. Currently, it is estimated that 80-90% of charging takes place at home and ensuring that more drivers are able to transition to electric is critical for the state's transportation electrification goals. Likewise, updating these building codes to ensure

the basic electrical infrastructure for EV charging is installed at the time of building construction will make it easier and cheaper for families, building developers/operators to install EV charging equipment as it is demanded. There are substantial studies from across the country that demonstrate that future proofing new residential construction today with EV-ready infrastructure is significantly more cost effective than installing this infrastructure post construction as a retrofit. However, ChargePoint also supports the legislation's requirements that significant renovations that would increase the existing capacity of a housing unit would also integrate EV charging at such properties. Likewise, significant renovations that would accommodate the demand for future charging would also be more cost effective than piece-meal EVSE installations over time.

We offer the following recommendations based on our experience working on EV Readiness legislation in other states, which we believe will make the legislation stronger and clearer to the variety of businesses and organizations that would have to comply with these provisions.

1. ChargePoint believes that as proposed, Section (2)(D)(1)(I) sets a very low goal for multifamily residential buildings to incorporate EV Readiness into their properties. As drafted, only 4% of a residence's parking facilities would be required to support EV charging for a property. For residents in multifamily buildings, this could drastically impact their willingness to convert to an EV. Moreover, the 4% benchmark is not consistent with the current demand for EVs, which continues to grow. ChargePoint encourages that this provision be modified to allow for the future expansion of EV-charging and establish a minimum percentage of total number of parking spaces. ChargePoint recommends that in lieu of requiring at least one communal parking space for each 25 residential units be an EV-installed parking space for L2 charging, multifamily residential be required to provide the following percentages of EV-Ready Parking Spaces depending on the property's size:

   1-6 spaces: 20 % EV ready
   7-24 spaces: 30% EV ready
   25+: 40% EV ready

   As stated, the current requirements will not impactfully influence multifamily residential buildings' charging service offerings. By requiring newly constructed properties to install the necessary conduit and wiring at the time of construction through the proposed EV-Ready benchmarks above, the legislation will ensure that there is sufficient electrical capacity to accommodate EV adoption and continued growth.

   It is also critical to bear in mind that EV-Ready requirements can result in significant cost savings. While infrastructure needs vary by building type, studies have shown that the cost of an EV-Ready Space can save at least $2,500 as opposed to retrofit construction.[1]

2. ChargePoint requests modifying the EV-Ready Parking Space definition in the proposed legislation. ChargePoint's proposed definition also integrates energy management practices, which will significantly reduce the cost of complying with the bill's

[1] The City of Orlando highlighted a local EV-Ready building cost example prior to the passage of the City's EV-Ready Ordinance in 2021 and found that from a multi-family or commercial parking lot with 10 spaces, 2 of which would be EV ready, making 20% of the parking lot EV ready would cost $916 for new construction vs $3,460 in retrofit costs.

requirements. Networked Level 2 charging stations can share power among stations so every car can be charged optimally, without ever exceeding the rated electrical capacity for the site. Ensuring that building operators can share power from a single branch circuit will support the installation of a large number of EV chargers without requiring building developers to oversize the electrical panel, and without exceeding the capacity of the circuit.

Across North America, jurisdictions are increasingly integrating “circuit sharing” in municipal building code requirements. Enabling these cost-saving measures would help Maryland significantly decarbonize the transportation sector and, nationally, will help balance potentially competing interests across all beneficial electrification technologies.

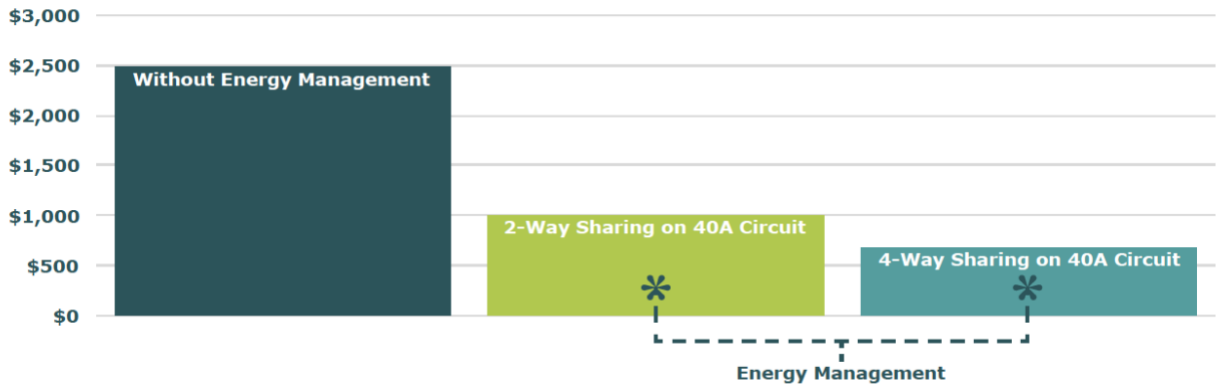


Fig. 1: Cost per parking space to provide 100% “EV Ready” parking in a new 6-story multifamily building with or without energy management.

ChargePoint respectfully recommends the following EV-Ready Space definition to be consistent with current EV-ready provisions across the country as well as adding the underlined text to enable the use pf energy management systems to control EVSE loads:

"EV-ready parking space” means a dedicated parking space that features an electrical branch circuit terminating in a junction box or receptacle for Level 2 Electric Vehicle Supply Equipment located in close proximity to the proposed location of the EV parking space. Each branch circuit serving EV-ready spaces shall terminate at an outlet or enclosure, located within 3 feet (914 mm) of each EV ready space it serves. The panelboard or other electrical distribution equipment directory shall designate the branch circuit as "For electric vehicle supply equipment (EVSE)" and the outlet or enclosure shall be marked "For electric vehicle supply equipment (EVSE)." The capacity of each branch circuit serving multiple EV ready spaces designed to be controlled by an energy management system providing load management in accordance with NFPA 70, shall have a minimum capacity of 4.1 kVA per space.

OR, at minimum, ChargePoint requests that the legislation’s current definition be modified accordingly to ensure that is consistent with existing national standards and definitions for an EV-Ready Parking Space:

"EV-Ready Parking Space" means a dedicated parking space that has a full circuit installation of a minimum of ~~30~~ **40** ampere, 208/250-volt circuit panel capacity, raceway wiring, ~~a NEMA 14-50R~~ receptacle, and circuit overprotection devices.

3. To support the recommendations for energy management practices being integrated into the proposed definition of an EV-Ready Parking Space, ChargePoint also encourages the addition of the definition of EV Energy Managements Systems as follows:

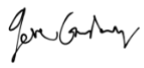
   "EV Energy Management Systems" means a system to control electric vehicle supply equipment electrical loads comprised of monitor(s), communications equipment, controller(s), timer(s) and other applicable devices.

Conclusion

Thank you again for the opportunity to provide feedback on the proposed legislation included in this testimony. ChargePoint applauds the Committee for its focus on transportation electrification as one of the keys to unlocking further greenhouse gas emission reductions in Maryland.

We look forward to serving as a resource to the Committee as it continues to evaluate policies that can reduce emissions while leveraging significant private capital and creating thousands of jobs across Maryland.

Sincerely,



Jena Ginsburg
Manager, Public Policy
ChargePoint