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Lynne Cayting
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Re: Proposed Chapter 127-A: Advanced Clean Cars II Program

Ms. Cayting:

ChargePoint thanks the Board of Environmental Protection (Board) for its proposal to adopt California's Advanced Clean Cars (ACC II) regulations. ChargePoint generally supports the Board's proposed adoption of the ACC II regulations, which would require – unless subject to an exemption listed in subsection (d) of the proposed regulations – manufacturers to produce zero-emission electric vehicles (ZEV) beginning with model year 2027, with increased production targets reaching 82% ZEV sales by 2032. ChargePoint believes the Board should adopt the ACC II regulations with the suggested action proposed by ChargePoint below. ChargePoint's recommendation will align current and future regulations adopted in Maine with current best practices for electric vehicle (EV) charging, reducing emissions from power generation, incorporating renewable energy, and ensuring the safe deployment of EV charging equipment.

I. About ChargePoint

ChargePoint is a world leading EV charging network with a comprehensive set of charging solutions available to customers. Since 2007, ChargePoint has been creating the new fueling network to move all people and goods on electricity. ChargePoint is committed to making it easy for businesses and drivers to go electric. ChargePoint's cloud subscription platform and software defined charging hardware is designed internally and includes options for every charging scenario from home and multifamily to workplace, parking, hospitality, retail, corridor, and fleets of all kinds. ChargePoint's primary business model is to sell our integrated charging software and hardware solutions directly to site hosts and provide services that enable them to provide charging services that align with their specific needs. Today, one ChargePoint account provides access to hundreds of thousands of places to charge in North America and Europe, with hundreds of public and private ChargePoint chargers located across Maine. To date, more than 172 million charging sessions have been delivered across more than 240,000 ChargePoint ports worldwide, with drivers plugging into the ChargePoint network on average every second.

II. Benefits of Transportation Electrification

Reaching 100% transportation electrification by 2035 presents myriad societal benefits. For instance, the American Lung Association estimates the monetized benefits of attaining 100% passenger ZEV sales by 2035 in Maine – directly tied to adopting ACC II – to be $3.6 billion.[1] Examples of additional benefits include an estimated avoidance of 330 premature deaths, 4,770 asthma attacks, and 25,200 lost days of work.[2]

Further, EV charging can be beneficial to the electrical distribution grid. Managed charging and/or the use of dynamic rates, if implemented effectively, can result in significant customer savings and grid benefits through load management.

III. Charging Infrastructure Deployment in Support of Increased Electric Vehicle Adoption

The EV charging industry has seen immense growth in recent years in direct response to the increased adoption of EVs. As a result, funding for EV chargers has dramatically increased. Notably, in response to increased public and private interest in transportation electrification's ability to improve human health and decrease emissions, the Infrastructure Investment and Jobs Act (IIJA), among other actions, allocated $5 billion for EV charging infrastructure through the National Electric Vehicle Infrastructure (NEVI) Formula Program (NEVI Program).[3] The NEVI Program aims to develop a national highway charging system by awarding federal formula funding across all 50 states. In addition, states may receive additional investment in the form of $2.5 billion awarded through competitive grants to deploy alternative fuel infrastructure, such as EV charging stations, both along highway corridors and in communities.[4] The NEVI Program is designed to promote equitable access to EVs, reduce emissions from transportation, and progress toward a federal goal of net zero emissions by 2050.

The Maine Department of Transportation has been allocated $19.3 million over five years to support the deployment of EVSEs along federally designated Alternative Fuel Corridors (AFCs).[5] Maine has already received $2.8 million in approved federal funding in 2022 and is estimated to receive an additional $4.1 million in 2023 for public charging infrastructure deployment along the 1,105 miles of AFCs throughout the state.[6] This funding will play a significant role in supporting drivers' adoption of EVs throughout the state.

IV. Comments on ACC II Regulations

Adopting the ACC II regulations will help move Maine forward with its goals to reduce greenhouse gas ("GHG") emissions, which is essential for meeting the state's Climate Action Plan and improving air quality for all.[7] The ACC II regulations will also create quality jobs for Maine's residents to build, install, and maintain the electric vehicle supply equipment ("EVSE") needed to support an increasingly electrified transportation and logistics industry. However, in order to effectively reduce GHG emissions and ensure that the transition to electric vehicles is equitable for all, Maine must adopt its proposed ACC

[1] https://www.lung.org/clean-air/electric-vehicle-report/driving-to-clean-air.
[2] *Id.*
[3] https://www.fhwa.dot.gov/environment/nevi/.
[4] https://highways.dot.gov/newsroom/biden-harris-administration-opens-applications-first-round-25-billion-program-build-ev.
[5] https://www.fhwa.dot.gov/bipartisan-infrastructure-law/evs_5year_nevi_funding_by_state.cfm.
[6] https://driveelectric.gov/state-plans/.
[7] https://www.maine.gov/climateplan/the-plan

II regulations in tandem with other complementary policies. The ACC II regulations are a huge step towards Maine achieving its decarbonization and public health goals.

In order to ensure that Maine achieves its statewide goals, ChargePoint believes that it will be critical to address part of ACC II's policies as described below.

V. ZEV Target Levels

The ACC II proposed regulations in Maine stop short of adopting the full 100% ZEV sales target set by California and instead propose adopting the regulations only up to 82% ZEVs by 2032. ChargePoint urges the Board to adopt the full requirement of 100% ZEVs by 2035. As previously stated, the benefits of EV adoption are plentiful. Acting swiftly on this matter will allow Maine to meet its climate action goals, will position the state as a leader in the path to transportation electrification, and will allow Maine's residents and businesses to reap the benefits of EVs more quickly and with more certainty in the transformative decade to come.[8]

VI. Minimum Technical Requirements for ZEVs

The ACC II regulations include several requirements for ZEVs to become effective beginning in model year 2026. The minimum technical requirements require each battery electric vehicle (BEV) sold to "be equipped with a 20-foot Underwriter Laboratory (UL) 2594-certifed charging cord capable of both Level 1 and Level 2 electrical charging."[9]

ChargePoint appreciates that increasing the ease of home charging is crucial to support EV uptake and retention and that access to L2 charging at a driver's place of residence and other locations creates a superior driver experience compared to L1 charging. However, due to the increased electrical loads on the grid, a wide range of home electrical infrastructure capabilities, and a desire to integrate new EV load with renewables and demand response programs, ChargePoint is concerned that the proposal to only meet the ACC II requirements through 2032 and to meet the requirements set forth in Subsection 1962.3 (B) and 1962.3 (C), if not modified, could do more harm in Maine than good.

ChargePoint recommends that the Board adopt the ACC II regulations. However, it urges the state to adopt the full 2035 emissions target and to work with other ACCII states to remove the requirement for automakers to provide a "charging cord capable of both Level 1 and Level 2 electrical charging" by removing the Level 2 requirement in 1962.3 (B) and 1962.3 (C).

<u>Level 2 Charging is an Aftermarket Product</u>

ChargePoint believes that automakers, new car dealers, charging providers, and local electrical contractors are in the best position to provide a wide range of charging solutions to meet the needs of EV drivers. For their part, automakers and dealers are already providing charging cables as either standard or optional equipment. Use of these charging cables may vary by automaker, make, model, and consumer preference. Allowing EV drivers to match their preferences for charging with the appropriate solution given their unique electrical system should be the primary goal. Mandating a particular style of charging cable to be sold as standard equipment with EVs does not allow for consideration of unique needs of particular EV drivers and does not allow sufficient flexibility to

[8] https://www.maine.gov/climateplan/the-plan

[9] Final Regulation Order, Amendments to Section 1962.3, Title 13, California Code of Regulations at 4.

automakers to provide solutions based on use and user feedback. L2 charging in particular is better suited as an add-on or aftermarket product that can be tailored to the specific driver's needs.

Charging providers, such as ChargePoint, also offer a variety of solutions to meet the needs of EV drivers. Leading charging providers have residential and multifamily charging options that are UL listed, ENERGY STAR certified, and have the ability to be managed to ensure charging benefits the electrical grid. Charging providers are also partnering with automakers to provide easy access to L2 charging options for purchasers of new vehicles.[10,11]

Finally, electrical contractors play an important role in ensuring charging takes place in accordance with the National Electrical Code (NEC) and other best practices. While ChargePoint understands the desire to make charging easier for EV drivers, it is critical that the Board understand that each driver's electrical system will have different characteristics. Ensuring that charging is done in accordance with the NEC and the manufacturer's guidelines is critical to ensuring that EVs are safely adopted at scale.

Focusing on providing access to 110-volt, L1 charging as standard equipment will be more cost effective for automakers and consumers. Additionally, automakers, new car dealers, charging providers, and electrical contractors will still be available to assist consumers with the correct L2 charger, if desired, to meet their needs and fit their unique electrical system.

Variable Amperage

While ChargePoint understands the desire to empower consumers to utilize, in a simple way, the electrical infrastructure at their place of residence, ChargePoint is concerned that the specifications of the "charging cord," as required by the ACC II regulations, could put Maine's consumers, property, and vehicles at risk. Specifically, the user-selectable ability to adjust the amperage during (and presumably before) charging could be confusing to EV drivers unfamiliar with the electrical system at their place of residence.

While the need to modify the home's electric circuit may be virtually eliminated by allowing the consumer to select a lower amperage for charging, that notion assumes that an average consumer will have enough knowledge of their existing electrical system to choose the appropriate amperage for their situation. ChargePoint is concerned that the average consumer does not have the expertise to evaluate the electrical system at their home and choose the appropriate amperage for the charging cord. This problem would be more acute at multi-family residences or other locations where the driver may not have access to the electrical panel to determine the appropriate amperage for the circuit. If the EV driver were to select an improper amperage, damage could be done to the charging cable, electrical infrastructure used by the charging cable, and possibly further upstream in the electrical system.

Grid Integration and Smart Charging

The ACC II requirements do not adequately consider grid impacts of unmanaged charging through the use of a convenience cord. Electrifying the transportation sector has the opportunity to both clean the air and benefit the electrical grid, but only if charging is properly managed. To ensure the opportunity for vehicle electrification to be beneficial to the grid, best practices for electric vehicle charging (in

[10] Toyota and ChargePoint Enhance EV Driving Experience with Home and Public Charging.
[11] ChargePoint and Volvo Cars Team Up to Offer Charging Solutions for US and Canadian Drivers.

particular for L2) are that charging equipment should be ENERGY STAR certified and be networked (have the ability to manage charging with consideration of local grid characteristics). Additionally, the grid value of managed charging is location specific and wall mounted L2 EV chargers, unlike vehicles, have a fixed location with respect to the grid. This makes wall mounted EV chargers the most straightforward points to calculate the load relief achieved at the service, feeder, or local network level. Further, energy management organizations typically manage charging at each charger or at a site-level, not at a vehicle level, thus making it easier for them to participate in the program.

In addition, managed charging is frequently employed to support equitable and cost-effective access to power for drivers in existing and new in multifamily residential buildings, and a growing number of cities and states have incorporated "electric vehicle charging energy management" (i.e. managed charging) into EV-ready code.

While charging equipment meeting these criteria may be more expensive, beyond what would likely make sense to offer as standard equipment, the benefits to the grid should be considered by the Board. As EVs proliferate, ensuring that the charging of vehicles can be managed will be important to Maine's utilities, grid operators, and all those receiving electric service.

VII. Conclusion

ChargePoint thanks the Board for the opportunity to provide these comments. In summary, ChargePoint recommends that Board adopt the Advanced Clean Cars II regulations up to the full 2035 requirements and work with other ACC II states to remove the requirement for automakers to provide a "charging cord capable of both Level 1 and Level 2 electrical charging" by removing the Level 2 requirement in 1962.3 (B) and 1962.3 (C).

Sincerely,

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