

January 2, 2024

Construction Industries Division
Regulation and Licensing Department
5500 San Antonio Drive NE, Suite F
Albuquerque, NM 87109

Attention: Public Comments

RE: Tesla Comments on the repeal and replacement of 14.7.6 NMAC - 2018 New Mexico Residential Energy Conservation Code and 14.7.9 NMAC - 2018 New Mexico Commercial Energy Conservation Code

Dear Construction Industries Division Staff,

Tesla¹ appreciates the opportunity to comment on the repeal of the 2018 New Mexico Energy Conservation Codes and replacement with the 2021 Energy Conservation Codes. Advancing building energy codes presents a unique opportunity for New Mexico home and business owners to reduce utility bills and greenhouse gas emissions.

We applaud the Division's leadership in pushing forward the state's energy code in a timely manner. Although forty-two states have statewide energy codes, only a handful have been proactive in adopting, updating, and enforcing the most up-to-date codes. Energy codes ensure that a building's energy use is included as a fundamental part of the design and construction process of new buildings; making an early investment in building energy improvements will pay dividends to residents of New Mexico for years into the future.

Section R404.4.1 and Section R404.4.2 of the proposed 2021 New Mexico Residential Energy Conservation Code would require that new single- and two-family dwellings with onsite parking provide the wiring, panel capacity, and receptacle to support future electric vehicle charging equipment. Section C405.13.1 of the proposed 2021 New Mexico Commercial Energy Conservation Code would require new commercial occupancy types to provide a mix of EV capable and EVSE spaces, ranging from 1% to 20% EV power transfer infrastructure requirements.

While we appreciate that Division staff had the foresight to include EV readiness requirements, we are concerned that the proposed percentages do not match the ambition of the state's recent adoption of Advanced Clean Cars II (ACC II) and will result in an under-investment in necessary charging infrastructure. Accordingly, the proposed rule changes can be improved and simplified to align more closely with advancements in the 2024 International Energy Conservation Code (IECC), which has appropriately accounted for future EV adoption. Our comments below include the following recommendations:

¹ Tesla's mission is to accelerate the world's transition to sustainable energy. To accomplish its mission, Tesla designs, develops, manufactures, and sells high-performance fully electric vehicles and energy generation and storage systems, installs, and maintains such systems, and sells solar electricity. Tesla also owns and operates an extensive EV charging network across the U.S. including stations in New Mexico.

- Adopt Section R404.7, Electric Vehicle Power Transfer Infrastructure, of the 2024 IECC residential code in its entirety
- Adopt Section C405.14, Electric Vehicle Power Transfer Infrastructure, of the 2024 IECC commercial code in its entirety
- Pull forward the EV readiness requirements of the 2024 IECC within three months of its publication

I. Adopt Section R404.7, Electric Vehicle Power Transfer Infrastructure, of the 2024 IECC residential code in its entirety

Section R404.7 of the 2024 IECC-residential (IECC-R) code requires that new one- and two-family dwellings and townhouses with designated parking provide one EV capable, EV ready, or EVSE space per dwelling unit. Multifamily buildings with three stories or less must provide an EV capable space, EV ready space, or EVSE space for 40 percent of dwelling units or automobile parking spaces, whichever is less. These requirements give building owners flexibility in establishing the level of EV readiness that will fit their current and future needs, while still providing the necessary minimum EV charging load that the distribution system needs to be sized for.

Moreover, the language in Section R404.7 was developed as a consensus proposal with input from a diverse group of stakeholders including representatives from the home builders, electrical manufacturers, EV charging providers, and utilities. It went through several rounds of public comment and editorial changes to ensure clarity, consistency, enforceability, and technical soundness. Additionally, adoption of Section R404.7 can help reduce chances of errors, such as ones committed in Section R404.4.1 (1) of the proposed 2021 New Mexico Residential Conservation Code, in which “receptacle” is misspelled as “receptable.” Adopting Section R404.7 outright would help Division staff streamline and quicken the public input process given that the language has already been thoroughly vetted.

II. Adopt Section C405.14, Electric Vehicle Power Transfer Infrastructure, of the 2024 IECC commercial code in its entirety

Table C405.14.1 of Section C405.14 of the 2024 IECC-commercial (IECC-C) code includes required EV capable, EV ready, and EVSE installed percentages in Group A through S-2 commercial occupancy types. Similarly, Table C405.13.1 in the proposed 2021 New Mexico Commercial Conservation Code lays out EV capable and EVSE installed requirements for the same commercial occupancy types. Between Tables C405.14.1 and C405.13.1, the percentage requirements for Group H (laboratories), Group R-3 and R-4 (residential care facilities), and Group S (storage) are the same, but the similarities stop there. The main difference is that the 2024 IECC-C proposes much higher percentages and includes EV-ready requirements.

The 2024 IECC-C consensus committee heavily contemplated the variation between occupancy type to reflect how pervasive electric vehicle charging will be for residents, employees, and customers. For example, vehicle charging will be more common at Group A (auditoriums), Group B (offices), Group M (mercantile), and Group E (education) where vehicles are parked for many hours at a time, and therefore have total combined EV readiness requirements of 45%. On the other hand, Groups F (industrial), Group S (storage), and Group U (utility) will typically require less vehicle charging based on fewer parking stalls and occupancy usage outside of employees, therefore EV readiness requirements are less than 7%. R-2 occupancies (large

multifamily housing) have 100% EV readiness requirements because that is where vehicles are parked overnight for many hours at a time and retrofitting existing parking spots to provide EV charging is complex and costly. Unlike residents of single-family homes, multifamily tenants are commonly renters without the authority to retrofit parking spaces to install charging equipment. When retrofitting to provide EV charging is possible, tenants and owners can face costs of 4-6 times higher than if done during new construction². The ability to charge an EV overnight is additionally important for multifamily tenants who are rural, low-income, and in disadvantaged communities, who typically have longer commutes and drive older EVs with shorter ranges.

The commercial consensus committee also did extensive cleanup of the definitions within Section C405.14, again to ensure clarity, consistency, and technical soundness. We recommend that Division staff review and adopt the vetted EV capable, EV ready, and EVSE spaces definitions of the 2024 IECC-C for the same reasons stated above. Additionally, acceptance of these definitions can help reduce chances of errors, such as ones committed in Section C4505.13.2 (1) of the proposed 2021 New Mexico Commercial Conservation Code, in which 914 mm is mistakenly noted as the equivalency of 6 feet.

Finally, the 2024 IECC-C includes percentage requirements and appropriate definitions for EV ready spaces, in addition to EV capable and EVSE installed spaces, in the Group R-1 (hotels, motels) and Group R-2 (large multifamily housing) requirements. "EV ready" is defined as a full circuit installation that terminates at an outlet or enclosure. Full circuit installations are plug-and-play ready and minimize total costs and additional barriers to installing EVSE. This makes sense for the hotel/motel and multifamily context, where guests and residents may need greater access to spaces outfitted with EVSE or outlets that would enable them to plug and charge. Alternatively, "EV capable" requires panel capacity, a dedicated circuit and raceway, but does not include a way for someone to drive up to a parking spot and plug in and charge. It is important to include EV ready requirements in addition to EV capable and EVSE installed for residents of multifamily housing in particular, who lack the resources, incentives, and authority to hire an electrician to upgrade their building's electrical system.

III. Pull forward the EV readiness requirements of the 2024 IECC within three months of its publication

With New Mexico's recent adoption of Advanced Clean Cars II (ACC II), which requires 82% of new vehicles sold in the state to be zero-emission by 2032, the state is poised to significantly accelerate transportation electrification. The resultant increase in EV adoption due to ACC II will require all buildings with parking to provide EV charging in some form by or before 2032 to support vehicle charging for residents, employees, and customers. However, buildings that have not been properly future proofed with adequate EV charging infrastructure will face much greater renovation costs than new construction featuring such future proofing. New buildings are built to last for at least 50 years, so it's critical that charging infrastructure is incorporated at the pre-construction stage to ensure that new buildings can accommodate the charging needs of future EV owners.

With only three code cycles between now and 2032, it is essential that each code cycle stay on track with achieving New Mexico's electric vehicle goals. Falling short in this code cycle prolongs the climate impacts that ACC II seeks to address and will mean that future code cycles will require even larger, more disruptive advancements in EV readiness requirements. Adoption

² <https://caletec.aodesignsolutions.com/assets/files/CALGreen-2019-Supplement-Cost-Analysis-Final-1.pdf>

of the EV Power Transfer Infrastructure requirements in the 2024 IECC-C and IECC-R can help the state stay on this trajectory.

New York and Rhode Island, fellow ACC II states, have already committed to skipping the 2021 IECC in favor of adopting the 2024 IECC when it becomes available. The 2024 IECC has undergone over two years of development and is nearing its final stages prior to publication. It is expected to be published in the first quarter of 2024. We recommend that New Mexico follow precedent set by Rhode Island S855³ and adopt EV Power Transfer Infrastructure requirements of the 2024 IECC-C and IECC-R within three months of its publication.

Tesla appreciates the opportunity to provide feedback on the repeal the 2018 New Mexico Energy Conservation Codes and replacement with the 2021 Energy Conservation Codes.

Sincerely,

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Tesla, Inc.

³ <https://webserver.rilegislature.gov/BillText23/SenateText23/S0855.pdf>