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February 5, 2024

International Code Council
2024 Appeals Board
500 New Jersey Avenue, NW
6th Floor
Washington, D.C. 20001

RE: Tesla Comments on the 2024 IECC Appeals on EV Power Transfer Infrastructure Provisions

Members of the ICC 2024 Appeals Board,

Tesla[1] appreciates the opportunity to provide comments on appeals 23-07-AGA, 23-08-APGA, 23-03-BOMANMHC, 23-05-RegionVI, and 23-06-RegionVI, which pertain to electric vehicle (EV) charging infrastructure in residential and commercial buildings. We also request to participate in and present information at the Appeals Board hearings on February 21, 22, and 23, 2024. In submitting these comments, Tesla urges the Appeals Board to uphold the outcome of the code development and voting process of the 2024 IECC Residential and Commercial Consensus Committees and reject these appeals.

These comments respond to the submitted appeals on the EV Power Transfer Infrastructure provisions in the 2024 IECC-C, Section C405.14 and IECC-R, Section R404.7. The appeals were submitted by the American Gas Association (AGA), American Public Gas Association (APGA), Building Owners and Managers Association International (BOMA) and the National Multifamily Housing Council (NMHC), and ICC Region VI.

The appellants raise four primary complaints:

1) Certain provisions go beyond the scope and intent of the IECC;
2) The 2024 code-making process suffered from procedural-specific issues;
3) The “Consensus Building Forum” violated ICC procedures; and
4) Certain subject-specific issues are present.

Tesla was an involved member in the subcommittee code development process and worked extensively with committee members and interested parties to rigorously develop accurate, effective, and adoptable code language in the EV Power Transfer Infrastructure provisions in the 2024 IECC. As such, Tesla submits the following comments in response to the complaints made in the appeals:

- The proposed EV infrastructure and electrification provisions are clearly within the scope and intent of IECC;
- The 2024 IECC development consensus-building process followed necessary procedures, encouraged stakeholder participation, and was transparent;
- The subject-specific issues identified by appellants do not warrant rejection of this code; and
- EV-ready building codes will contribute to greenhouse gas reductions and align with the IECC’s core objective.

[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.

I. The proposed EV infrastructure and electrification provisions are clearly within the scope and intent of IECC.

During the 2021 IECC appeals process, many of the same appellants contested the proposed EV Power Transfer Infrastructure provisions using the familiar justification that such provisions went beyond the scope and intent of the IECC. In direct response to this issue, the 2019 Group B Appeals Board directed the ICC Board of Directors to investigate expanding the scope of the IECC to include these relevant energy-related goals including decarbonization and electrification. In alignment with this recommendation, the ICC Board amended the IECC's scope and intent, establishing a new framework and decarbonization strategy reflected in *Leading the Way to Energy Efficiency: A Path Forward on Energy* and *Sustainability to Confront a Changing Climate and Decarbonization of the Built Environment: Solutions from the International Code Council.*[2] This scope change allows for EV infrastructure and electrification-related code provisions that were not considered in the 2021 version to be included in the 2024 IECC. Such changes would not have been made if they did not significantly alter what is permissible within the scope and intent.

Furthermore, ICC Staff issued a memorandum that corroborates this scope modification: *"Any content within the scope and intent of the code may be included either in the body of the code as minimum requirements or as an adoptable appendix based on the determination of the responsible Consensus Committee. Where content is to be included in an adoptable appendix, the appendix must include mandatory enforceable language.[3]"* This statement clarifies that additional energy efficiency and greenhouse gas reduction resources are *not* restricted to appendices and may be included in the main body of the code.

Importantly, this updated scope has been reviewed, scrutinized, and debated by IECC Subcommittees and Consensus Committees multiple times during the 2024 IECC development process, finding each time that the provisions are in scope and necessary for inclusion in the main body of the 2024 IECC code. When ICC made the crucial decision to change the essential nature of the IECC development process from a model energy code to a standard, it imbued the Consensus Committees with the authority to decide the final content of the code in accordance with Section 9.0 of the ICC Consensus Procedures.[4] Both committees met on numerous occasions and voted in accordance with ICC voting procedures to come to the final approved code changes. We urge the Appeals Board to respect the Subcommittee and Consensus Committee determinations and their time and effort spent during the last few years developing these crucial EV infrastructure and electrification provisions.

II. The 2024 IECC development consensus-building process followed necessary procedures, encouraged stakeholder participation, and was transparent.

The 2024 IECC code-making process adhered to the highest standards of transparency and inclusivity. In response to the 2019 Group B Appeals Board Recommendation, the IECC developed a new process to improve stakeholder engagement and public participation. Thousands of hours were dedicated to the 2024 IECC development, ensuring all voices were heard and no access denied. The appellants had the opportunity to provide input through multiple rounds of public comments and committee meetings. The IECC's procedures facilitated open dialogue among stakeholders throughout the entire development process.

All interested parties in this code-making process, including the appellants, had ample opportunity to engage and participate in the IECC's Consensus Building Forum. There is no evidence that this approach departed from the IECC's core tenants of openness, transparency, balance of interests, due process, an appeals process, and consensus.[5] Contrary to appellant claims that the committee's consensus building approach was a bad faith attempt

[2] https://www.iccsafe.org/products-and-services/codes-standards/energy/
[3] https://www.iccsafe.org/wp-content/uploads/IECC-Discount-Rates-and-Code-Content-Memorandum_02_15.22.pdf
[4] https://www.iccsafe.org/wp-content/uploads/Revision-of-ICC-Consensus-Procedures_2-of-2-_revised-12.6.18B.pdf
[5] https://www.iccsafe.org/products-and-services/i-codes/code-development/code-development-procedures/

to subvert the opinions of certain stakeholders, many of the appeal submitters actively participated in the consensus building approach utilized by the residential committee and were given ample opportunity to voice their opposition to all parts of the omnibus package. Furthermore, the final omnibus package received a 30-3 affirmative vote from the residential consensus committee, indicating broad support and consensus.

III. The subject-specific issues identified by appellants do not warrant rejection of this code.

Appellants assert that unsubstantiated cost claims were made to justify the inclusion of charging infrastructure provisions in this code. On the contrary, it has been studied and shown that the installation of EV charging infrastructure during the construction phase is significantly less expensive than during a retrofit.[6] It is undeniable that retrofitting an existing building with conduit, wiring, concrete boring, and additional electrical panel capacity to support EV charging is more expensive than if completed during new construction. Automakers have collectively committed to sell around 47 million EVs a year by 2030 and the energy to charge those vehicles in inextricably linked to buildings.[7] New buildings must be prepared ahead of time for this forthcoming reality, otherwise homeowners and business owners will be subjected to higher costs and inconveniences down the line. As such, the 2024 IECC's EV Power Transfer Infrastructure provisions offer long-term cost savings for residents and owners of commercial and residential buildings. Additionally, speculative supply chain challenges cited by appellants should not be used to deter code requirements if they meet technical merit and code objectives.

IV. EV-ready building codes will contribute to greenhouse gas reductions and align with the IECC's core objective.

Every major global automaker has announced plans to electrify a significant portion of their vehicle fleet. This transportation electrification transition necessitates strategic adjustments in building codes to accommodate the increasing demand for EV charging infrastructure at buildings where vehicle park. Accordingly, the requirements in the IECC-C and IECC-R will adequately future proof residential and commercial buildings for EVs at the lowest total cost and result in significant greenhouse gas reductions. According to estimates from the Pacific Northwest National Laboratory, the EV Power Transfer Infrastructure requirements in the 2024 IECC for a single family home could result in carbon emissions reductions of 6,532 lbs of CO2e per year.[8] EV-ready codes align with the IECC's intent of *"ensuring that it is adoptable, cost effective, consensus driven, and helps communities meet their energy efficiency and greenhouse gas emission reduction goals*.[9]" According to the Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990–2021, the transportation sector accounted for the largest portion (29%) of total U.S. GHG emissions in 2021. Cities across the country are severely affected by the air pollution caused by the transportation sector and have reacted with climate action plan goals and policies intended to drive the transition to a decarbonized transport sector.[10] We urge the Appeals Board to approve the EV-ready code requirements to ensure the respective greenhouse gas emission reduction goals of local governments are met.

Finally, the 2024 IECC EV Power Transfer Infrastructure provisions are necessary to establish minimum codes for state and local jurisdictions to consider, amend, and adopt. Without a national model code that local jurisdictions can adopt, states and local jurisdictions will continue to adopt variable ad conflicting codes, creating a lack of uniformity to prepare for transportation electrification. States and local jurisdictions expect guidance from the ICC on codes to adequately prepare for the future and keep pace with technological innovation.

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[6] https://www.peninsulacleanenergy.com/wp-content/uploads/2020/08/PCE_SCVE-EV-Infrastructure-Cost-Analysis-Report-2019.11.05.pdf
[7] https://assets.bbhub.io/professional/sites/24/2023-COP28-ZEV-Factbook.pdf
[8] https://www.iccsafe.org/wp-content/uploads/2024-IECC-Interim-Residential-Progress-Indicator-to-ICC.pdf
[9] https://www.iccsafe.org/wp-content/uploads/ICC_Leading_Way_to_Energy_Efficiency.pdf
[10] https://theicct.org/wp-content/uploads/2021/06/EV-cities-update-aug2020.pdf

Tesla appreciates the opportunity to comment on the 2024 IECC Appeals. We strongly urge the Appeals Board to uphold the outcome of the voting process and maintain the EV Power Transfer Infrastructure provisions in the 2024 IECC.

Sincerely,

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