



September 9, 2024

Mo Madani, Technical Director  
Building Codes & Standards Office  
2601 Blair Stone Road  
Tallahassee, Florida 32399

Via email: [mo.madani@myfloridalicense.com](mailto:mo.madani@myfloridalicense.com)

Re: **Support for IECC Mod CE#379**  
First 45-Day Public Review and Comment  
9<sup>th</sup> Edition (2026) Florida Building Code (FBC) – Code Development  
Review of the 2024 Changes to the International Energy Conservation Code (IECC)

Dear Mr. Madani:

In response to the above-referenced Public Review and Comment Notice by the Florida Building Commission, Drive Electric Florida (DEFL) respectfully submits these comments in support of Mod CE#379 to adopt Appendix CG of the 2024 International Energy Conservation Code (IECC) as part of the 2026 edition of the Florida Building Code (FBC).

Drive Electric Florida's reasoning is as follows:

1. EV-ready building codes save money versus costly retrofits and enable more efficient installation and operation of EV chargers;
2. IECC Appendix CG is a model EV-ready code that enjoys broad consensus support and includes language that supports cost-effective EV energy management technologies; and
3. Florida's high percentage of multifamily housing and growing levels of EV adoption require the Commission to update and modernize the FBC.

As noted below in the comments, adoption of Mod CE#379 meets the Commission's statutory responsibility as defined in the 2024 Florida Statutes, Sections 553.77 (Specific powers of the Commission) and 553.886 (Energy efficiency technologies).

### [About Drive Electric Florida](#)

Drive Electric Florida (DEFL) is a 501(c)(3) not-for-profit corporation based in Florida. DEFL members comprise a diverse range of stakeholders in Florida's EV ecosystem, including EV charging companies, equipment manufacturers, municipal and investor-owned electric utilities, consulting firms, and environmental organizations. The mission of Drive Electric

Florida is to support and accelerate the adoption of plug-in electric vehicles in Florida by engaging and educating the public, businesses, and policymakers; facilitating collaboration; and supporting EV-friendly policies and programs.

## Comments

Drive Electric Florida urges the Commission to adopt Appendix CG of the 2024 IECC. This language is numbered as Mod CE#379 in the Detail Report “Code Changes to the 2024 IECC – Commercial Provisions” provided by Florida’s Building Codes and Standards Office.<sup>1</sup> This language establishes different levels of EV infrastructure to be included in new construction, depending on the size and type of property.

1. EV-ready building codes save money versus costly retrofits and enable more efficient installation and operation of chargers.

Why do EV-ready building codes matter? A primary reason is cost savings. Similar to how installing fire suppression sprinklers in a building during construction is far less expensive than retrofitting sprinklers into an existing building, so too is it far less expensive to install EV infrastructure during construction than to retrofit a building afterwards. By planning ahead and taking a holistic, systems approach to EV charging infrastructure, significant economies of scale and efficiencies with installation can be realized. By comparison, retrofitting EV charging infrastructure can often be four to eight times as costly.<sup>2</sup>

Another reason why EV-ready building codes matter has to do with the complicated and inter-related nature of installing charging at multi-tenant properties. Unlike a single-family residence or a single-occupant commercial building, larger commercial properties have shared infrastructure elements. It is infeasible for a tenant to install a charger without impacting the infrastructure and energy constraints of the overall property.

A generic multifamily apartment or condominium building offers an illustrative example. Approximately 80% of EV charging happens at home, where consumers access convenient, reliable, and lower-cost charging, and utilities are positioned to manage EV charging effectively.<sup>3</sup> Multifamily residents deserve equal access to home charging just as their fellow Floridians living in single-family homes enjoy.

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<sup>1</sup> Florida’s Building Codes and Standards Office. (2024). Detail Report: Code Changes to the 2024 IECC – Commercial Provisions. Available at: [https://www.floridabuilding.org/fbc/thecode/2026\\_Code\\_Development/Pre\\_TAC\\_Reports\\_ICC\\_Sept\\_2024/Detail-report-Energy-Commercial.pdf](https://www.floridabuilding.org/fbc/thecode/2026_Code_Development/Pre_TAC_Reports_ICC_Sept_2024/Detail-report-Energy-Commercial.pdf).

<sup>2</sup> See, e.g., Southwest Energy Efficiency Project. SWEEP guide to EV infrastructure building codes. <https://www.swenergy.org/ev-infrastructure-building-codes/>.

<sup>3</sup> Lepre, Nicole. (2021). EV Charging At Multi-Family Dwellings: Drivers, Barriers, and Recommendations. Atlas Public Policy. Available at: <https://atlaspolicy.com/wp-content/uploads/2021/01/EV-Charging-at-Multi-Family-Dwellings.pdf>.

Even if each household in a multifamily building has a dedicated parking space with its own EV charger connected directly to its own electrical panel, that household's panel still feeds into the overall property's master panel and utility service connection. Adding additional electrical load for an individual household, therefore, has implications for the other tenants and for the shared community infrastructure as well. EV-ready building codes help address this challenge by ensuring that expected future EV load is considered not just during construction, but even earlier, during the initial design and engineering phases.

EV-ready building codes also matter because they provide a common set of standards across the state. Incorporating EV-ready provisions into the state building code ensures that all jurisdictions within Florida play by the same minimum rules. This, in turn, helps developers more efficiently and cost effectively compete in the marketplace by establishing both predictability and consistency across the state.

With EV-ready building codes, utilities can more accurately anticipate future load growth needs based on the land use and zoning of their service territories. This enables more proactive and cost-effective grid planning by utilities. Proactive grid planning also enhances grid reliability, which benefits all Floridians.

2. IECC Appendix CG is a model EV-ready code that enjoys broad consensus support and includes language that supports cost-effective EV energy management technologies.

The 2024 IECC is the first edition of the IECC to include EV-readiness provisions. This historic addition to the code reflects the undeniable reality that EVs are an increasingly important part of America's transportation future, and America's built environment needs to plan for and accommodate that growth.

The IECC's triennial code revision process is a lengthy and time-consuming process that spans several years and involves the active participation of numerous and diverse stakeholders. Despite the broad range of different interests and perspectives, the IECC's consensus committee process worked well. The EV-readiness language in Appendix CG earned support not only from companies and organizations in the electric transportation sectors, but also from the homebuilding and building energy efficiency sectors, and others.

Language in Appendix CG includes provisions for EV charging energy management systems, or EMS. Sometimes referred to as "managed charging," "intelligent charging," or "smart charging," EV EMS can control how and when vehicles charge when they are plugged in. It is a critical tool to mitigate costly overbuilding of electrical infrastructure, not only on site but also at grid scale. Indeed, a recent U.S. Department of Energy study

projects that managing electric transportation load can reduce grid infrastructure costs by 30%.<sup>4</sup>

To illustrate the difference between unmanaged and managed charging, consider the same generic multifamily building in which four tenants return home after work and all plug in their EVs. In an unmanaged charging scenario, each charger will likely require its own dedicated circuit, and the building will require extra panel capacity for all four vehicles to charge simultaneously. Alternatively, by leveraging EMS, the four vehicles can also charge at partially overlapping times or sequentially. This flexibility means that each charger no longer needs its own dedicated circuit. Instead, the chargers can be connected to the electric panel via a shared circuit, and the capacity of the electric panel can be reduced in a corresponding way. This is an example of how EMS can reduce infrastructure needs and costs while realizing broader benefits.

Building codes are a key tool for reducing infrastructure costs through managed charging because they can establish lower requirements for infrastructure buildout when EMS is used. Such an approach incentivizes building engineers, developers, and property managers to plan holistically for the coordinated installation and operation of the chargers. On the other hand, if a building does not account for EMS at the time of construction, there is less incentive for tenants to coordinate their infrastructure investments. This can and often does lead to a patchwork quilt of mutually incompatible EV chargers installed at increased expense that lack the ability to coordinate and manage their combined electrical load.

The consensus code language in *Section CG101.2.5 System and Circuit Capacity* of Appendix CG directly encourages cost-effective EMS technology. Its default requirements without EMS are for each parking space to have a minimum system capacity of 7.2 kVA and minimum circuit capacity of 50 amperes. However, with EMS, the minimum system capacity is 3.3 kVA per space and minimum circuit capacity is 25 amperes per space.<sup>5</sup>

This Section CG101.2.5 that explicitly incorporates provisions for EMS aligns with the Commission’s statutory requirement to ensure that “[t]he provisions of the Florida Building Code must facilitate and promote the use of cost-effective energy conservation [and] energy-demand management... technologies in buildings.”<sup>6</sup>

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<sup>4</sup> See “Key Finding #3: Managed charging techniques can decrease incremental distribution grid investment needs by 30%, illustrating the potential for significant cost savings by optimizing PEV charging and other loads at the local level.” In U.S. Department of Energy. (2024). Multi-State Transportation Electrification Impact Study. Available at: <https://www.energy.gov/sites/default/files/2024-03/2024.03.18%20NREL%20LBNL%20Kevala%20DOE%20Multi-State%20Transportation%20Electrification%20Impact%20Study%20FINAL%20DOCKET.pdf>.

<sup>5</sup> Florida’s Building Codes and Standards Office. (2024). Detail Report: Code Changes to the 2024 IECC – Commercial Provisions. Available at: [https://www.floridabuilding.org/fbc/thecode/2026\\_Code\\_Development/Pre\\_TAC\\_Reports\\_ICC\\_Sept\\_2024/Detail-report-Energy-Commercial.pdf](https://www.floridabuilding.org/fbc/thecode/2026_Code_Development/Pre_TAC_Reports_ICC_Sept_2024/Detail-report-Energy-Commercial.pdf).

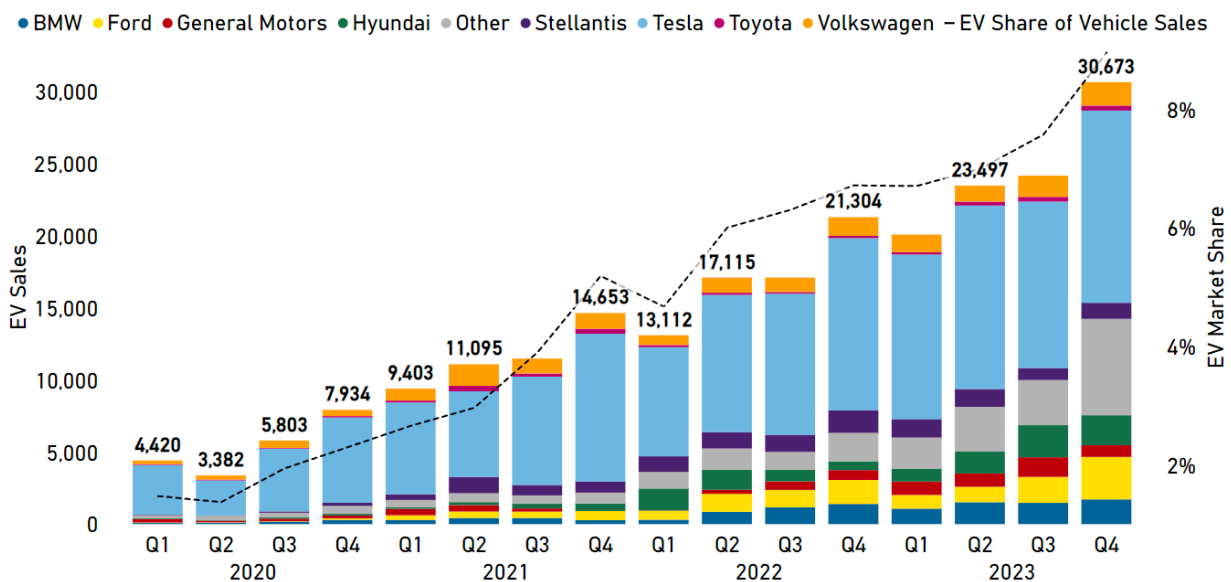
<sup>6</sup> § 553.886, Fla. Stat. (2024).

- Florida’s high percentage of multifamily housing and growing levels of EV adoption require the Commission to update and modernize the FBC.

Multifamily housing comprises a large percentage of Florida’s overall housing stock, and development trends suggest that its share will continue to increase. Between 2020 and 2022, large multifamily properties (10 or more units) accounted for more than 100,000 new units built in Florida.<sup>7</sup> This represents more than 30% of all new residential construction during that period. This rapid pace of new multifamily construction continues to increase, particularly in cities and metropolitan areas. Earlier this year, Miami-Dade County had the highest percentage in the nation of new multifamily units under construction as a percentage of its overall multifamily inventory.<sup>8</sup>

Florida is both a national and regional leader when it comes to consumer demand for EVs. Nationally, Florida ranks second only to California in its number of EVs on the road.<sup>9</sup> As of July 2024, Florida had more than 400,000 EVs, up from 300,000 at the end of 2023—more than a 30% increase in only seven months.<sup>10</sup>

Florida Light-Duty EV Sales and Market Share<sup>11</sup>



<sup>7</sup> U.S. Census Bureau. (n.d.) American Community Survey 2022 5-Year Estimates Data Profiles. Available at: <https://data.census.gov/table/ACSDP5Y2022.DP04?g=040XX00US12&d=ACS%205-Year%20Estimates%20Data%20Profiles>.

<sup>8</sup> Umpierre, Chris. (2024). Southeast Florida is Undergoing the Most Intense Multifamily Construction Activity Among Major Markets. Miami Realtors. Available at: <https://www.miamirealtors.com/2024/04/15/southeast-florida-is-undergoing-the-most-intense-multifamily-construction-activity-among-major-markets/>.

<sup>9</sup> Atlas EV Hub. (2024). EV Market Dashboard. Available at: <https://www.atlasevhub.com/materials/ev-market-dashboard/>.

<sup>10</sup> Orlando Utilities Commission. (2024). Internal data pull from Florida Department of Highway Safety and Motor Vehicles.

<sup>11</sup> Southern Alliance for Clean Energy. (2024). Transportation Electrification in the Southeast: Florida (May 2024 Update). Available at: [https://www.cleanenergy.org/wp-content/uploads/ET-Report-Updated-State-Pages-Florida-Edited-5\\_20\\_24.pdf](https://www.cleanenergy.org/wp-content/uploads/ET-Report-Updated-State-Pages-Florida-Edited-5_20_24.pdf).

Regionally, Florida has more than three times as many EVs on its roads as does Georgia, the next highest state in the Southeast. In terms of market share, Florida also leads. It is the only state in the Southeast in which EV sales exceed 8% market share of all new light-duty vehicles sold.<sup>12</sup>

The 2026 edition of the Florida Building Code will be in effect from the end of 2026 through the end of 2029. By 2029, when this next edition of the Code will still be governing new construction, DEFL anticipates Florida's large multifamily construction market will continue to add 50,000 new units annually. DEFL conservatively projects that Florida's EV sales will have reached between 150,000 and 200,000 vehicles sold annually and comprise at least 15% to 20% market share of new vehicles sold.

Florida statute requires of the Commission that when considering updates to the Code, it "ascertain their effect upon the cost of building construction and determine the effectiveness of their provisions."<sup>13</sup> As noted earlier, incorporating EV infrastructure standards into new construction is far less costly and far more effective than retrofitting a property after it is already built. Indeed, the large and growing number of multifamily properties across Florida, the rapidly growing consumer demand for EVs, and the corresponding electrification needs for Florida's multifamily buildings, make it imperative for the Commission to update the FBC by adopting the EV infrastructure provisions of Appendix CG.

For a state that prides itself on modernizing and strengthening its built environment to be more forward-looking and resilient, neglecting to incorporate Appendix CG in the 2026 Code would be a glaring omission. Not including Appendix CG would significantly increase infrastructure costs for Florida drivers, reduce customer choice of transportation options, and exacerbate the challenges that Florida's electric utilities face in managing and maintaining the electric grid affordably, reliably, and resiliently.

Regrettably, the topic of EVs has at times become politicized. To be clear, DEFL is not asking the Florida Building Commission to take a political position about electric vehicle adoption. What DEFL is asking of the Commission is to address the reality of surging EV adoption in Florida, by supporting customer choice for Florida drivers and making sure Florida's buildings do not get left behind in the technological transition. Updating the Code to incorporate the IECC's thoroughly vetted and consensus-driven EV-readiness standards will ensure that new commercial construction can affordably and cost-effectively accommodate this transition. This approach is consistent with the Commission's statutory

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<sup>12</sup> Ibid.

<sup>13</sup> § 553.77, Fla. Stat. (2024).

responsibility which, Drive Electric Florida respectfully submits, compels the Commission to act.

### In Closing

Thank you for your consideration of these comments. Drive Electric Florida and its members look forward to continuing to participate and serving as a resource to the Commission as the 2026 FBC revision cycle moves forward. Please do not hesitate to contact DEFL if you or the Commissioners have questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kenneth Hernandez". The signature is fluid and cursive, with the first name "Kenneth" being more prominent than the last name "Hernandez".

Kenneth Hernandez  
Board President