

**INITIAL STATEMENT OF REASONS
FOR
PROPOSED BUILDING STANDARDS
OF THE
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
REGARDING THE AMENDMENT OF THE 2013 CALIFORNIA ELECTRICAL CODE (CEC)
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 3
(HCD /13)**

The Administrative Procedure Act (APA) requires an Initial Statement of Reasons (ISOR) to be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

STATEMENT OF SPECIFIC PURPOSE, PROBLEM, RATIONALE and BENEFITS:

(Government Code Section 11346.2(b)(1) requires a statement of specific purpose of each adoption, amendment or repeal, the problem the agency intends to address and the rationale for the determination by the agency that each adoption, amendment or repeal is reasonably necessary to carry out the purpose, including the problem the agency intends to address, for which it is proposed. The statement shall enumerate the benefits anticipated from the regulatory action, including the benefits or goals provided in the authorizing statute.)

1) The Public Problem, Administrative Requirement, or Other Circumstance Addressed

Administrative Requirement: Health and Safety Code Sections 17922 and 19990 direct the Department of Housing and Community Development (HCD) to adopt the most recent edition of the model code, which, in this case, is the National Electrical Code (NEC) published by the National Fire Protection Association (NFPA) as selected by the California Building Standards Commission (CBSC), into Part 3 of Title 24, of the California Code of Regulations (CCR).

2) Specific Purpose

HCD has determined the amendment of the 2013 edition of the California Electrical Code is needed pursuant to the requirements of Health and Safety Code Section 17921 and Government Code Section 12955.1.

The specific purpose of these regulations is to amend the 2013 California Electrical Code, Title 24, Part 3 of the California Code of Regulations (CCR) for the following programs:

- a) **State Housing Law:** relative to residential occupancies, buildings or structures accessory thereto.
- b) **Employee Housing Act:** relative to the use of electrical equipment and systems in or on any building or structure or outdoors on premises or property in accordance with Health and Safety Code Section 17040.
- c) **Mobilehome Parks and Special Occupancy Parks:** relative to the use of electrical equipment and systems in or on any permanent buildings, accessory buildings, and structures under the ownership and control of the park operator, within the park, in accordance with Health and Safety Code Section 18300 for mobilehome parks, and Health and Safety Code Section 18865 for special occupancy parks.
- d) **Factory-Built Housing Law:** relative to residential buildings, dwellings or portions thereof, or building components, or manufactured assemblies in accordance with Health and Safety Code Section 19990.

3) Rationale for Necessity

The 2013 California Electrical Code (CEC), based upon the 2011 National Electrical Code (NEC), becomes effective on January 1, 2014. HCD has developed amendments to the 2013 CEC to incorporate provisions recognized in Tentative Interim Agreements (TIAs) to the 2011 NEC (model code), which have been adopted into the 2014 NEC. The TIAs to the 2011 model code are considered "interim" because they are effective only between editions of the standard NEC. However, the two TIAs being addressed have been subject to the full standards-making process by the National Fire Protection Association and adopted into the 2014 National Electrical Code.

The proposed changes to the 2013 CEC are necessary to provide clarity and consistency for implementation, enforcement and application with regard to statewide needs related to the use and capacity of electric vehicles and electric vehicle supply equipment.

Specific Proposed Regulatory Actions:

HCD proposes to amend the 2013 California Electrical Code. The rationale for each amendment is listed below.

**1. CHAPTER 6
SPECIAL EQUIPMENT
ARTICLE 625 Electric Vehicle Charging System**

Section: 625.13 Electric Vehicle Supply Equipment Construction.

Rationale for Section 625.13: HCD proposes to amend the above referenced section, which was approved as Tentative Interim Agreement 11-2 for the 2011 National Electrical Code (NEC), and proposed and approved for the 2014 NEC (renumbered as Section 625.44). The NEC change proposal was intended to clarify the use of cord- and plug-connected electric vehicle supply equipment (EVSE) and conditions for these uses. This change is primarily for clarification purposes with no additional costs for implementation. The proposed amendment:

- Clarifies that cord- and plug-connected EVSE at the 250 volt level, but not higher, is acceptable under specified conditions. This provides safety for the public and recognizes the evolution of “Level 2” chargers which are now available in both hard-wired models and more versatile plug-in and transportable models.
- Clarifies receptacle outlet rating acceptable for levels of EVSE.
- Clarifies the cord length acceptable for use and reduces potential conflict between this section and Section 400.8 which prohibit EVSE use based on longer cord lengths.

There is no intended change in regulatory effect.

2. Section: 625.14 Rating.

Rationale for Section 625.14: HCD proposes to amend the above referenced section, which was approved as Tentative Interim Agreement 11-3 for the 2011 National Electrical Code (NEC), and proposed and approved for the 2014 NEC (renumbered as Section 625.41). The proposed language allows an option for calculating electric vehicle supply equipment loads which may not exceed electric service capacity or panel loads. This provides an alternate method for load calculation and, therefore, does not result in mandatory costs.

Additionally:

- NEC must recognize technology that will support the rollout of electric vehicles and existing infrastructure and regulation may place constraints on where EVs will be permitted.
- NEC 625.14 (2011 NEC) requires electrical vehicle supply equipment to be considered as a continuous load and to be added at 125% of the full load charging capacity of the equipment which may result in the service being too small to accommodate the load.
- The 2011 NEC has no provision for shedding loads to offset the EVSE load or to reduce charging loads to ensure the total home or building load was within the rating of the involved equipment.
- Allowance of “smart” EVSE or and energy management system may address situations where an infrastructure upgrade may otherwise be necessary and prevent use of an electric vehicle.

TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS

(Government Code Section 11346.2(b)(3) requires an identification of each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies in proposing the regulation(s).)

None.

STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS

(Government Code Section 11346.2(b)(4) requires a statement of the reasons why an agency believes any mandates for specific technologies or equipment or prescriptive standards are required.)

Technology for electric vehicles and supporting infrastructure, including electric vehicle supply equipment, is rapidly evolving. To avoid regulatory impediments to the use of new technology and equipment, it is necessary to incorporate acceptable standards which recognize changing technology and safety for the general public. The 2013 California Electrical Code is currently based on the 2011 National Electrical Code (model code). The proposed amendments in this rulemaking package have been proposed and accepted as Tentative Interim Agreements (TIAs) applicable to the 2011 NEC. As a TIA, the provisions are only in effect between editions of the code. As such, the provisions in the TIAs were proposed for the 2014 National Electrical Code, reviewed, modified as necessary for clarity and approved for the 2014 model code. The amendment language proposed during this intervening code adoption cycle for the 2013 CEC is language which appears in the approved 2014 NEC.

In addition, due to California's goals for reducing greenhouse gas and to use the deployment of electric vehicles to help reduce air pollution, it is important to remove any impediments to the use of electric vehicles and the necessary supporting infrastructure. This proposal helps to accomplish that goal.

CONSIDERATION OF REASONABLE ALTERNATIVES

(Government Code Section 11346.2(b)(5)(A) requires a description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific action or procedures, the imposition of performance standards shall be considered as an alternate. It is not the intent of this paragraph to require the agency to artificially construct alternatives or describe unreasonable alternatives.)

None. There were no alternatives available to HCD. HCD is required by statute to adopt the model code by reference. The proposed amendments are the only reasonable alternative for clarifying the 2013 CEC. The proposed language has been reviewed and approved at the national level and considered emerging electric vehicle and energy management technology.

REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS

(Government Code Section 11346.2(b)(5)(B) requires a description of any reasonable alternatives that have been identified or that have otherwise been identified and brought to the attention of the agency that would lessen any adverse impact on small business.)

None. There were no alternatives available to HCD. HCD is required by statute to adopt the model code by reference. The proposed amendments have no negative impact on small business. In fact, the amendments may increase consumer consideration for purchase and use of electric vehicles and supporting infrastructure.

FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS

(Government Code Section 11346.2(b)(6)(A) requires the facts, evidence, documents, testimony, or other evidence on which the agency relies to support an initial determination that the action will not have a significant adverse economic impact on business.)

HCD has determined that this regulatory action would have no significant adverse economic impact on California business enterprises and individuals, including the ability of California businesses to compete with businesses in other states. In fact, the amendments may increase consumer consideration for purchase and use of electric vehicles and supporting infrastructure and provide further safety in use of electric equipment.

ESTIMATED COST OF COMPLIANCE, ESTIMATED POTENTIAL BENEFITS, AND RELATED ASSUMPTIONS USED FOR BUILDING STANDARDS

(Government Code Section 11346.2(b)(6)(B) states if a proposed regulation is a building standard, the initial statement of reasons shall include the estimated cost of compliance, the estimated potential benefits, and the related assumptions used to determine the estimates.)

The proposed amendments are not additional requirements, but provide clarity in use of electric vehicle charging equipment and providing standards to ensure safety in their use. Another aspect of the amendments is an alternative method of calculating loads from installation of electrical vehicle charging equipment. Although the alternative load calculations are dependent on use of "Smart" EVSEs or energy management systems, the proposed amendments do not require installation or use of this equipment; therefore, there is no mandated cost for compliance. The potential benefits from these amendments include clarity on the use of cord- and plug-connected EVSE, especially at the Level 2 level, which may be prohibited due to misinterpretations of the existing code language. Clarifying this issue may promote further consideration of purchase of electric vehicles due to the availability, lower cost, and portability of plug-in Level 2 EVSE. The load calculation option may help avoid the need for upsizing electrical service and panels resulting in less infrastructure costs for using electric vehicles. In addition, the amendment language provides more clarity regarding receptacle ratings and associated amperages to provide public safety. These measures will not result in increased costs, but instead may result in decreased costs since the use of less costly options for facilitating electric vehicle use are recognized.

DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS

(Government Code Section 11346.2(b)(7) requires a department, board, or commission within the Environmental Protection Agency, the Resources Agency, or the Office of the State Fire Marshal to describe its efforts, in connection with a proposed rulemaking action, to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues. These agencies may adopt regulations different from these federal regulations upon a finding of one or more of the following justifications: (A) The differing state regulations are authorized by law and/or (B) The cost of differing state regulations is justified by the benefit to human health, public safety, public welfare, or the environment.)

These regulations do not duplicate nor conflict with federal regulations.