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From: Gary & Carolyn Fox <alamofox@sbcglobal.net>
Sent: Monday, June 08, 2015 1:33 PM
To: Energy - Docket Optical System
Subject: Docket 15-BSTD-01: Adoption of 15-Day Language for the 2016 Energy Efficiency Building Standards

Please consider the following comments concerning Docket 15-BSTD-01, Adoption of 15-Day Language for the 2016 Energy Efficiency Building Standards.

1. Section 130.5(a)

As Currently Written:

Nonresidential, high-rise residential and hotel/motel buildings shall comply with the applicable requirements of Sections 130.5(a) through 130.5(d).

(a) Service Electrical Metering. Each electrical service or feeder shall have a permanently installed metering system which measures electrical energy use in accordance with TABLE 130.5-A.

EXCEPTION to Section 130.5(a): Service or feeder for which the utility company provides a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.

Comment

1. Neither of the terms “service” or “feeder” are defined in this document. A reasonable assumption would be to use the definitions from the California Electrical Code. Per that Code, a “feeder” is essentially any connecting conductor between the point of connection with the electrical utility (a.k.a. “service”) and the “branch circuit” (the premises wiring that connects the load equipment to the next upstream overcurrent device). Assuming these definitions, permanently installed metering would be required throughout a facility, much more than the true intent of this requirement, if the intent still follows the guidance provided in the 2013 Compliance Manual for non-residential buildings. If these new requirements are not intended to expand this scope so greatly, then a reference should be made to the conductors that supply individual buildings. Terms already defined or used by the California Electrical Code should be used in this document if appropriate as they are well understood by building inspectors, engineering professionals and contractors.
2. For high-rise residential occupancies, the identity of which loads should be metered is not clear. It is assumed that there is no intent to put a greater burden on the tenants of high-rise residential buildings than those who reside in other types of residential occupancies. It would be reasonable for the Commission to require metering of common building loads, maintained by the building owner. If that is the case, the requirements should be clarified to indicate that common building loads are to be metered. Such a requirement would make sense for multiple tenant commercial buildings also.
3. The word “demand” is not used in the way commonly understood by the electrical industry. “Demand” refers to the amount of load averaged over a period of time. It is defined in this manner in IEEE Standard 141-1993, “IEEE Recommended Practice for Electric Power Distribution in Industrial Plants,” and in IEEE Standard 241-1990, “IEEE Recommended Practice for Electric Power Systems in Commercial Buildings.” “Instantaneous kW” is not an average measurement. It makes no sense to combine these words. “Demand” should

be deleted. Refer instead to "power" or "kW."

4. Exception to 130.5(a) refers to a "utility-defined period" whereas Table 130.5-A refers to "user-definable period." Both portions should refer to the same thing. "Utility-defined period" could mean many things. It could refer to a demand interval, or one of many periods defined in the rate structure (e.g. "peak," "partial-peak," "off-peak," "summer," "winter"). The user should be able to define the period for which he wants to use available energy information. "User-definable" makes the most sense.
5. Metering records are available from the utility, more so than something that "indicates" kW and kWh. A utility metering system that supplies measurements of energy and power is still useful and should satisfy the intent.

The following is recommended to correct the issues identified in the above comments.

Recommended Change

Nonresidential, high-rise residential and hotel/motel buildings shall comply with the applicable requirements of Sections 130.5(a) through 130.5(d).

(a) Service Electrical Metering. Each electrical service that supplies a building or structure, or feeder that supplies a building or structure, shall have a permanently installed metering system which measures electrical energy use in accordance with TABLE 130.5-A.

(1) On services that supply buildings containing multiple tenants, the feeders that supply common building loads shall have a permanently installed metering system which measures electrical energy use in accordance with TABLE 130.5-A. The meter requirements shall be determined by the rating of the feeder supplying the common building loads.

EXCEPTION to Section 130.5(a): Service or feeder for which the utility company provides a metering system that provides energy (kwh) and power (kw) measurements in accordance with Table 130.5-A.

Thank you for your attention to this matter.

Yours truly,

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