

DOCKETED

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MEUS Comments - 15-Day Language Express Terms for Title 24 2019 Building Energy Efficiency Standards

Additional submitted attachment is included below.

May 5, 2018

Commissioner Andrew McAllister and Energy Commission Staff
Docket Unit, MS-4
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Re: MEUS Comments - 15-Day Language Express Terms for Title 24 2019 Building Energy Efficiency Standards (Docket No. 17-BSTD-02)

Dear Commissioner McAllister and Energy Commission Staff,

Mitsubishi Electric Cooling & Heating, a division of Mitsubishi Electric US, Inc. (“MEUS”), a manufacturer of Variable-speed Mini-splits and Multi-splits (VSMS) and Variable Refrigerant Flow (VRF) heating and cooling systems, appreciates the opportunity to submit comments in response to the California Energy Commission’s proposed changes to the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6, and associated administrative regulations in Chapter 10 of Part 1 as published in the Revised Express Terms (15-Day Language) on April 20, 2018.

COMMENTS ON DEMAND RESPONSIVE CONTROLS:

MEUS agrees that it is in the best interest to consolidate all information related to Demand Response in one section as is being proposed. This allows for a comprehensive overview of the requirements and allows future reference to one section.

Per the Revised Express Terms issued on April 20th 2018, Section 110.12.a.1 states:

1. *“All demand responsive controls shall be either:*

- A. *A certified OpenADR 2.0a or OpenADR 2.0b Virtual End Node (VEN), as specified under Clause 11, Conformance, in the applicable OpenADR 2.0 Specification; or:*
- B. *Certified by the manufacturer as being capable of responding to a demand response signal from a certified OpenADR 2.0b Virtual End Node by automatically implementing the control functions requested by the Virtual End Node for the equipment it controls.”*

Although this revision is closer to what MEUS was recommending in the previous version of the 2019 CEC Title 24 standard, this still will cause many complications as stated in the previous response to the 45-day language. By requiring OpenADR as the base protocol for the functionality of demand response equipment, this will create more issues such as:

- A. Many manufacturers do not have flexibility with development schedules. Production is typically mapped out at least a year in advance along with the finances and headcount necessary to bring these projects to realization. Manufacturers also have quality assurance phases to projects which verify that the product is completed to their standards and will meet what their customers' expectations. Depending on the extent of the manufacturer's programs, this can add a significant time investment to the project.
- B. Customers often have a limited budget to upgrade their homes or to fix existing issues. Many customers who have already purchased demand response equipment may see the need to replace their equipment as unnecessary and may leave the program entirely. With the demand response program in its earliest stages, it is essential that as many customer be enrolled and participate.
- C. Utility customers live in areas with varying geography, population density, and infrastructure present. Because of the varying surroundings of their customers, a different solution may be used in one area versus another. Having a single protocol may cause some customer to be left out of participating in demand response events. As stated before, the program needs to have as many customers as possible in order to allow for demand response programs to become commonplace instead of exclusive.
- D. Another major concern with all members is with stranded resources. There always exists a possibility that a newer protocol may replace OpenADR 2.0. Although all communications methods have their pros and cons, by limiting the ability to choose can reduce future innovation. With this risk still being present, it produces hesitation from various collaborators in order to invest the time and resources.

Recommendation

MEUS proposes the following change to section 110.12(a) as shown in *red*:

- B. Certified by the manufacturer as being capable of responding to a demand response signal from a certified OpenADR 2.0b Virtual End Node by automatically implementing the control functions requested by the Virtual End Node for the equipment it controls.*
- C. Certified by the manufacturer as being capable of responding to a CTA-2045 demand response signal on an SGD (Smart Grid Device) via a UCM (Universal Communication Module) communicating using one or more of the technologies specified in Section 110.12(a)2.*

MEUS does agree with the remaining portions of section 110.12.a and believes that those sections will help with meeting various energy reduction goals. Also the remaining points give enough freedom to the manufacturers to allow for them to develop new products or use pre-existing equipment.

MEUS appreciates the Commission to allow for feedback from all party members involved. It is recommended to expand the protocol requirements to allow for others besides OpenADR. MEUS would like to extend the possibility of working with the CEC in order to help facilitate discussion on this topic if necessary.

COMMENTS ON FILTRATION AND FAN EFFICACY:

Mitsubishi Electric is also concerned about the mandatory measures in 120.1(b) and (c) that requires MERV13 filtration on return air in central systems. Although this requirement seems to exclude compact air handlers, the definitions are vague and it can cause significant hardship and redesign of entire lines if manufacturers have few workable solutions for meeting this requirement in a way that does not also require 2" filters or significant product redesign in very compressed product development timelines. We support the comments already submitted to the docket on this topic by Beth Braddy of Trane, and highly recommend allowing an alternative where high filtration performance is required on outdoor air intakes to lower fine particulates in non-attainment areas as well as assure that level of filtration statewide. Requiring high filtration rates in central systems is not practical because it comes into direct conflict with higher fan efficacy objectives. Please reconsider the MERV13 return air requirement.

In addition to this, we continue to support static pressure testing during HERS testing of HVAC systems as this metric will definitively isolate problems with duct design and filtration from fan efficacy. Fan efficacy varies less than 1% at the factory, and it should not be assumed that high fan watt-draw in the field is a result of fan efficiency. Static pressures performed with and without filters in place would isolate problems with filtration as opposed to duct design, and HVAC contractors commissioning systems should know the difference.

COMMENT ON TEST PROTOCOL FOR DUCTED AND DUCTLESS VARIABLE CAPACITY HEAT PUMPS:

Although we have heard open discussion regarding a forthcoming test protocol that will allow variable capacity and VRF systems to get better ratings under the California Energy Code, there is no provision for how the new rating system will be implemented in the code.

We appreciate clarification on this point and feel it is appropriate to address it in the same manner that the new credit for NEEA advanced heat pump water heaters is addressed.

COMMENT ON MINI-SPLIT SYSTEM INCLUSION IN CHART 110.2(a-k):

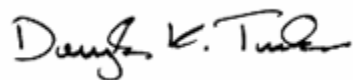
For some reason, mini-splits and low capacity heat pumps have been entirely omitted from chart 110.2(a-k). Given the importance of this reference material, and the quantity of this category of product on the market, we feel it is important to address this omission.

COMMENT ON UV SCUBBER HAZARDS AND OPPOSITION TO THEM BY CARB AND EPA:

As we commented on the 45-day language, most HVAC contractors offer “UV filtration” devices as an auxiliary product or system option yet they are clearly recognized by CARB and EPA to pose significant health hazards. MEUS submitted research and EPA comments on these products previously. We feel this is a significant public health issue that should be addressed by CEC in concert with other regulatory agencies. EPA and CARB have already expressed the opinion that they do not have jurisdictional rights to prohibit use of UV scrubbers. We would appreciate CEC opening dialogue with these agencies to create appropriate regulation.

MEUS appreciates the opportunity of the Commission to allow for comments to be provided. Thank you very much and we look forward to the completion of the future Title 24 standard.

Best regards,



Douglas K. Tucker
Director, Industry and Government Relations