



California Energy Commission

DOCKETED

14-BSTD-01

TN 73919

OCT 31 2014

October 31, 2014

California Energy Commission (CEC)
Dockets Office, MS-4

Re: *2016 Building Standards Update* (Docket Number 14-BSTD-01)

Dear CEC staff:

These comments are submitted by Goodman Global, Inc. ("Goodman") in response to the CEC's recent notice of staff workshop on the draft language associated with residential and nonresidential building energy efficiency standards.

Goodman manufactures residential and light commercial heating and cooling equipment. Our products are sold and installed by contractors in every state within the United States. Goodman is a member of Daikin group, the largest HVAC manufacturer in the world. We appreciate the opportunity to comment during this process of updating the 2016 building standards. Our comments are provided below.

Section 1 – Prescriptive Economizer Requirements for Space Conditioning Systems

In June 2014, CEC modified its nonresidential compliance manual to account for each individual cooling fan system. In an effort to remain consistent with the manual, section 140.4(e)1 of the draft Title 24 building standards should be modified to include "each individual cooling fan system" so that the section clearly correlates the 54,000 Btu/h capacity with the indoor unit size and not the outdoor unit. The nonresidential compliance manual was modified in the following manner in June 2014:

D. Economizers

§140.4(e)

An economizer must be fully integrated and must be provided for each individual cooling fan system that has a total mechanical cooling capacity over 54,000 Btu/h. The economizer may be either:

1. An air economizer capable of modulating outside air and return air dampers to supply 100 percent of the design supply air quantity as outside air; or
2. A water economizer capable of providing 100 percent of the expected system cooling load at outside air temperatures of 50°F dry-bulb and 45°F wet-bulb and below.

Section 2 – 2013 Residential Alternative Calculation Method (ACM) Reference Manual

On April 22, 2014 a revised Residential ACM Reference Manual was published by CEC. Included in that version was the addition of the following statement on page 18, “Until there is an approved compliance option for ductless heat pumps (mini-split, multi-split VRF systems) they are simulated as a split system equivalent to the standard design with default duct conditions.”

We have great concern with this provision as it will essentially force all ductless heat pumps to be modeled as 13 SEER units, when in reality they are capable of producing much higher efficiency, as indicated within the AHRI Directory of Certified Performance. The proposed design provision within section 2.4 of the 2013 Residential ACM Reference Manual severely handicaps ductless systems in comparison to other systems, effectively banning them from new construction applications. Additionally, by forcing ductless systems to be modeled as 13 SEER units, this provision promotes a process that minimizes the contribution of these systems to CEC’s goal of striving towards net-zero energy for residential buildings by the year 2020.

It is important to note that the compliance option for ducted central systems took approximately eight years and two code cycles to develop, with much, if not all of the cost funded by CEC. During this time, ducted systems were not forced to be handicapped while measures were developed to address installation issues that could negatively affect the systems’ operational efficiencies.

We appreciate CEC staff’s recent efforts to work with manufacturers on this important issue and resolve it as soon as possible. Until final language is developed, we would recommend that mini-split and multi-split VRF system efficiencies listed within the AHRI Directory of Certified Product Performance be used to model performance. The industry is currently developing a HERS inspector checklist for such products and will share them with CEC staff shortly.”

Section 3 – Concluding Remarks

Goodman appreciates the opportunity to provide these comments. If you have any questions regarding this submission, please do not hesitate to contact me.

Sincerely,

**Gary
Clark/a
xr**

Digitally signed by Gary
Clark/xr
DN: cn=Gary Clark/xr
gn=Gary Clark/xr c=United
States l=US
e=gary.clark@goodmanmfg.c
om
Reason: I am the author of
this document
Location:
Date: 2014-07-07 17:18-04:00

Gary Clark
Senior Vice President of Marketing
Tel: 713/263-5439
Email: gary.clark@goodmanmfg.com