

CALIFORNIA ENERGY COMMISSION

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SACRAMENTO, CA 95814-5512
www.energy.ca.gov



Notice of Public Comment Period Docket No. 15-MISC-03

Evaluation of Proposal to Include Refrigerant Economizers in the 2013 Building Energy Efficiency Standards as a Prescriptive Alternative

The California Energy Commission (Energy Commission) staff will review and evaluate the proposed alternative as it relates to the 2013 Building Energy Efficiency Standards section 140.9(a). The review of the proposal is to determine if the refrigerant economizer technology saves as much or more energy than a water economizer. During this review process the Energy Commission staff will also be accepting public comments. The public comment period is 60 calendar days, starting from the posting of the proposal.

Purpose

The 2013 Building Energy Efficiency Standards prescriptively require that an air or water economizer be installed in all newly constructed data centers. Currently approved alternative calculation methods are capable of simulating the annual energy use of data centers, allowing compliance tradeoffs between efficiency measures where the overall performance still satisfies the standard design (which contains an economizer). However, the approved alternative calculation methods do not have the capability to simulate the refrigerant economizer technology as described in the proposal.

Traditionally a direct expansion refrigerant system uses the refrigerant as the working fluid to absorb heat within the space and reject the heat at the condenser. The compressor is the component that moves the refrigerant through the cycle. The key feature of the proposed technology is that in the right conditions the compressor is shut off and a pump is run to move the refrigerant through the cycle. The economizing is in the form of energy savings due to the pump power versus the compressor power.

Background

The Building Energy Efficiency Standards (Title 24, Part 1) Section 10-109, allow for the Energy Commission to approve new compliance options which cannot be properly accounted for in currently approved compliance methods. The Energy Commission is directed by Public Resources Code section 25402.1 to approve compliance options for

products, materials and calculation methods when evidence supports the merits of the proposed compliance option. Compliance options represent new or additional ways to demonstrate compliance for products, material, designs or procedures used in construction of new and existing buildings. Approved compliance options encourage market innovation and allow the Energy Commission to respond to changes in building design, construction, installation and enforcement.

Written Comments

Written comments on the proposal should be submitted to the Dockets Unit by 4:00 p.m. on August 10, 2015. All comments will become part of the public record of this matter. Additionally, comments may be posted to the Energy Commission's website for this matter.

The Energy Commission encourages comments by e-mail and electronic submission, up to 5 MP. Please include your name and any organization name. Comments should be in a downloadable, searchable format such as Microsoft® Word (.doc) or Adobe® Acrobat® (.pdf). For additional information, see Standing Order re: Proceedings and Confidentiality Procedural Requirements for Filing, Service, and Docketing Documents with the Energy Commission, available at: www.energy.ca.gov/dockets/documents/2011_Standing_Order_for_Documents.pdf.

Please include the docket number 15-MISC-03 and indicate "Proposed Compliance Option for Data Centers using a Refrigerant Economizer" in the subject line. Send comments to: docket@energy.ca.gov.

If you prefer, you may send a paper copy of your comments to:

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 15-MISC-03
Proposed Compliance Option for Data Centers using a Refrigerant Economizer
1516 Ninth Street
Sacramento, CA 95814-5512

Please note that your written comments, attachments, and associated contact information (e.g. your address, phone, email, etc.) become part of the viewable public record. Additionally, this information may become available via Google, Yahoo, and any other search engines.

Public Participation

The Energy Commission's Public Adviser's Office provides the public assistance in participating in Energy Commission activities. If you want information on how to participate in this forum, please contact the Public Adviser's Office at (916) 654-4489 or toll free at (800) 822-6228, or by e-mail at PublicAdviser@energy.ca.gov.

Please direct all news media inquiries to the Media and Public Communications Office at (916) 654-4989, or by e-mail at mediaoffice@energy.ca.gov.

If you have questions on the technical subject matter, please call Mark Alatorre at (916) 654-4642.

The proposal and supporting materials can be downloaded here:
http://www.energy.ca.gov/title24/2008standards/special_case_appliance/