

DOCKETED

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Comment Received From: Christopher Granda
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Comments of ASAP and ACEEE to Docket Number 18-AAER-05

Additional submitted attachment is included below.

**Appliance Standards Awareness Project
American Council for an Energy-Efficient Economy**

December 21, 2018

Commissioner Andrew McAllister
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Dear Commissioner McAllister:

The following are the comments of the signatories in response to the California Energy Commission's docket # 18-AAER-05 on energy efficiency standards for commercial and industrial air compressors.

Summary

We commend the CEC for advancing this rulemaking for large air compressors. The US Department of Energy completed a rulemaking to establish national energy efficiency standards for this equipment in December of 2016, but has not published the completed standards in the Federal Register. By adopting the withheld federal compressor standards as California state standards, CEC will help establish them as *de facto* national standards. CEC also has an opportunity to address a shortcoming of the withheld federal standards by broadening the scope from only rotary air compressors to include a "test and list" requirement for large reciprocating air compressors. This will serve as an initial data-gathering step that enables the possibility of future standards on large reciprocating products.

Comments

We support CEC's proposal to adopt efficiency levels for lubricated rotary air compressors. The efficiency requirements included in the Proposed Express Terms issued by the CEC on November 16, 2018 are consistent with the notice of proposed rulemaking (NOPR) issued by the US Department of Energy (DOE) on December 15, 2016. DOE developed the proposed minimum efficiency levels through extensive research and consultation with industry.

DOE's failure to publish the final rule for over two years has delayed the realization of significant energy savings for US businesses, and created significant uncertainty for the US compressor industry. DOE's federal compressor standards were designed to bring US compressor energy efficiency requirements at least partially in line with the pending European Union air compressor standards developed through the Lot 31 process (<http://www.eco-compressors.eu/>). The state of Vermont adopted DOE's withheld compressor standards in May of 2018, to become effective on July 1, 2020. By following Vermont's lead, the CEC will encourage other states to follow suit and help to establish the withheld federal standards as *de facto* national compressor standards.

We recommend that CEC expand the scope of this proposal to require manufacturers to test and list larger reciprocating compressors. DOE's withheld final rule does not include reciprocating compressors as covered equipment. This means that no reciprocating air compressor would be subject to mandatory minimum efficiency standards, nor would manufacturers be required to base energy performance claims on results obtained using DOE's compressor test procedure. This is despite the fact that the shipments analysis included in the Technical Support Document (TSD) for DOE's rulemaking found that reciprocating compressors make up more than 97% of all compressors shipped in the US (see section 3.5.4). In the TSD DOE described how different classes of air compressors are deployed, noting that larger reciprocating compressors are common even in heavy commercial applications and that "compressors of multiple types may be employed in tandem" in industrial applications. DOE's analysis clearly suggests that reciprocating products represent a substantial share of all compressor energy consumption, and that larger reciprocating compressors both complement and compete with rotary compressors in commercial and industrial applications. In general, the larger the reciprocating compressor, the more similar it is in terms of annual operating hours and energy consumption to a rotary compressor of similar capacity.

Given the variety of reciprocating compressors on the market, and the lack of data about their energy performance, we agree that it would not be appropriate for CEC standards to subject this class of equipment to energy efficiency requirements at this time. However, consistent with CEC's proposed coverage for rotary compressors, we recommend that CEC expand the Proposed Express Terms to require manufacturers of reciprocating compressors that:

1. Have full-load actual volume flow rate greater than or equal to 35 cubic feet per minute (cfm), or are distributed in commerce with a compressor motor nominal horsepower greater than or equal to 10 horsepower (hp),
2. Have a full-load actual volume flow rate less than or equal to 1,250 cfm, or are distributed in commerce with a compressor motor nominal horsepower less than or equal to 200 hp, and
3. Are driven by a three-phase electric motor,

to base energy performance claims for their products on the results of CEC's proposed compressors test procedure, and to list their products in the Modernized Appliance Efficiency Database System.

Requiring the manufacturers of large reciprocating compressors to test and list their products would be an important step toward a better understanding this class of equipment, and would provide consistent energy performance data to enable minimum efficiency requirements eventually to be set based on empirical information. By restricting a test and list requirement to larger models, which account for most of the energy consumption by reciprocating compressors, CEC would exclude the vast majority of models available and minimize the testing burden on industry.

We appreciate the opportunity to provide these comments and look forward to the final rule.

Sincerely,

A handwritten signature in black ink that reads "Christopher Granda". The signature is written in a cursive style with a large initial 'C'.

Chris Granda
Senior Researcher/Advocate
Appliance Standards Awareness Project

A handwritten signature in blue ink that reads "Chris Perry". The signature is written in a cursive style with a large initial 'C'.

Chris Perry
Senior Analyst, Buildings Program
American Council for an Energy Efficient Economy