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Public Hearing Comments Received on Proposed Regulations for Commercial and Industrial Air Compressors
Title 20, Division 2, Chapter 4, Article 4, Sections 1601-1609, California Code of Regulations
Public Hearing January 3, 2019

Commenter's Name	Comments/ Suggested Revisions	Response
Mr. David Prator Atlas Copco	1. First, we think that the proposal that was published amidst 10 C.F.R. Section 431.343, which includes by reference some of the very important information that's included in the DOE regulation.	1. Comment acknowledged. No change is necessary, as it does not provide further clarification or benefit. Title 20, California Code of Regulations (CCR), section 1604(s) incorporates the final U.S. Department of Energy (DOE) test procedure found in Appendix A to subsection T of part 431 of title 10 of the Code of Federal Regulations (10CFR) which in turn references 10 CFR section 431.343. It is unnecessary to re-reference section 10 CFR section 431.343 in title 20 of the CCR.
	2. Because of the smaller size of the California market relative to the U.S. size market the testing costs are proportionally higher and a major impediment to keep many of the compliant rotary models on the market. Allowing the use of currently existing data, July 2020 and before, industry test data will greatly reduce the adverse impacts of the proposal. As I said the DOE used ISO 1217 as the foundation for the development of its test standard. And they've said on many occasions since that the 1217 data was usable to certify compliance with DOE efficiency standard. DOE postponed the test rule effective date to December 30, 2017, and suspended any enforcement of the test rule for at least five years until after the compliance date of their yet-to-be-published energy standards. As a result of that DOE action, most of the industry has yet to start using the DOE testing for their standard test for compliance. We continue to use ISO 1217, so it's been very slowly adopted within the industry.	2. Comment acknowledged. No change is necessary. Title 20, CCR, section 1604(s) incorporates by reference the DOE test procedure for air compressors found in title 10, CFR, Appendix A to subsection T of part 431. The Energy Commission is preempted from requiring a test procedure different from the federal test procedure. On July 3, 2017, it became mandatory that any manufacturer representations with respect to energy use or efficiency be made in accordance with results from testing pursuant to the federal test procedure. Title 20, CCR, section 1606, requires the submittal of certification data for each appliance that is sold or offered for sale in California and a declaration that the submitted data has been determined from testing in accordance to the test procedure in title 20, CCR, section 1604(s), which is identical to the federal test procedure. The declaration is executed under penalty of perjury.

Commenter's Name	Comments/ Suggested Revisions	Response
		At multiple times during the proceeding, the Energy Commission clarified that reliance on historical test data is acceptable, as long as the requirements in title 20, CCR, sections 1604 and 1606 are met and attested to in the required declaration. Staff stated, at the January 9, 2019, business meeting, that it has no objection to a manufacturer, under penalty of perjury, certifying that their historical ISO 1217:2009 test data is in accordance with the test procedure in CCR, title 20, section 1604 (i.e., the DOE test procedure).[1] DOE's refusal to enforce, as a matter of policy, test procedures adopted in regulations does not mean that states cannot enforce those test procedures at the time they took effect. A manufacturer's decision not to follow that test procedure is a business decision the consequences of which the Commission is not responsible for mitigating.
	3. The proposed rule requires the listing of each rotary air compressor model offered for sale in California on the Modern Appliance Efficiency Database. It requires that this is based on a compliance certification used to test -- use of DOE test rule or mathematical modeling, validated with the DOE test rule. This is very interesting and very important, the last point, so far there's not been a single lab certified to provide such testing yet. Lab certification apparently does not retroactively validate prior test data. Conservatively, when we rate the standard is that we have to retest up to 6,000 models for the sale of units in California.	3. Comment acknowledged. No change is necessary. Testing is required for models manufactured on or after January 1, 2022. To reduce the amount of required testing, the regulations permit (1) testing of a basic model and extension of this data to additional models that have identical performance characteristics and (2) the use of alternative efficiency determination methods (AEDMs). AEDMs allow mathematical modeling of the performance of additional models, with differing performance characteristics, based on the tested performance data of a similar model. The manufacturer is responsible for determining if a given model can be certified using the basic model

[1] Transcript of Energy Commission January 9, 2019, Business Meeting, p. 31.

Commenter's Name	Comments/ Suggested Revisions	Response
	AEDM requires some DOE testing to validate the model, presumably also at a California-certified lab. And when CAGI, many years ago initiated a program for third party testing and we contracted with a laboratory that does that on our behalf. And so we have a very good idea of what it costs for members to test and so this is going to be about $4,000 per model. Many of the smaller manufacturers have reported much higher costs for testing of their machines. So if you consider the 6,000 models that are sold in California today, or offered for sale in California, the cost to retest all of those machines would be in excess of $20 million. We think the use of existing 1217 data to certify compliance will reduce compliance cost and reduce the number of efficient models withdrawn from California. 1217 data results are fundamentally equal to the DOE test rule results, so there's no material conflict between the two.	approach, an AEDM, or must be separately tested and certified. Regardless of approach, every unit sold or offered for sale in the state must comply with the energy efficiency standards. The Energy Commission determined that the regulations, including the cost of testing, are based on feasible efficiencies and do not result in any added total costs for consumers over the designed life of the appliances, as required by Public Resources Code (PRC) 25402 (c)(1). Testing must occur at Energy Commission-approved test laboratories. The test laboratory approval process is specified in section 1603 of Title 20 and includes an online application through the Modernized Appliance Efficiency Database System (MAEDbS). Because the regulations had not been adopted yet, compressor test lab certification had not yet been incorporated into MAEDbS. Test laboratories may begin to obtain approval through MAEDbS a few months before the standards compliance date. Tests conducted pursuant to 1604(s) of Title 20 before the test lab is approved by the Commission may be used to certify data after the test lab obtains Commission-approval. Retesting is not necessary in that case. However, as the Energy Commission repeated throughout the proceeding, reliance on historical test data is acceptable, as long as the requirements of the California Code of Regulations (CCR), Title 20, section 1604 and 1606 are met and attested to in the required declaration. Staff stated, at the January 9, 2019, business meeting, "Any test results that are done according to the test procedure, whether they occur before the test lab is approved or after the test

Commenter's Name	Comments/ Suggested Revisions	Response
		lab is approved, is fine for certification to our database. And our regulations are pretty clear on this and this is across all appliances, not specific to compressors."[2] California's regulations are silent on the sampling requirements for testing as a general rule for appliances, but does contain sampling requirements where relevant for specific appliances. The Energy Commission has consistently interpreted its regulations as requiring no more than a single unit to be tested for certification purposes. However, that enforcement testing may require two units to be tested if the first unit fails to meet the efficiency standards or the efficiency levels reported in the Energy Commission's database, with a determination based on the mean value of the two tests.[3] This is different from the DOE's general requirements, which specify the need for testing two units unless otherwise specified for a specific appliance.[4] For compressors, DOE specifies that manufacturers must randomly select and test "a sample of sufficient size" to ensure that a unit meets the reported efficiency values.[5] However, the Energy Commission did not adopt the DOE's sampling requirements into the regulations with respect to direct testing of compressor models, and therefore the DOE requirement for testing two units does not apply to direct testing. When using an alternative efficiency determination method (AEDM), it is correct

[2] Transcript of Energy Commission January 9, 2019, Business Meeting, p. 29.
[3] See, e.g., Transcript of Energy Commission January 9, 2019, Business Meeting, p. 31 ("for our regulations we only require testing of a single unit in order to certify that test data to the database, for that model").
[4] 10 C.F.R. § 429.11(b).
[5] 10 C.F.R. § 492.63(a).

Commenter's Name	Comments/ Suggested Revisions	Response
		that testing of two units is required, as the DOE sampling requirement for AEDMs is incorporated into the Energy Commission's adopted text.[6]
	4. We provide it here and we provided in our earlier comments that we submitted, I think page through, some language that we think that the Commission would consider or could consider to help rectify the problem, the data issue problem. And finally Atlas Copco would sincerely support a request that the Energy Commission remove item four from the January 9th, 2019 Business Agenda, in order to accommodate the 15-day comment period on the proposed revisions regarding the prior test data.	4. Comment acknowledged. No change is necessary. After careful and meaningful consideration of all comments received, the Energy Commission determined that no changes would be made to the originally proposed regulatory language and as such, a 15-day comment period is not required.
Brian Boyce Energy Solutions on behalf of the California Investor Owned Utilities	1. We recommend that the Energy Commission shorten their gap between adoption and compliance to early 2020. We note that the Warren-Alquist Act only requires a one year gap between adoption and compliance.	1. Comment acknowledged. No change is necessary. Energy Commission staff determined that the January 1, 2022, effective date is appropriate because DOE pre-published a Notice of Final Rule on December 5, 2016, and if DOE had published the final rule as scheduled, the effective date would have been early 2022. Additionally, although an earlier effective date could yield earlier, and therefore greater energy savings, Energy Commission staff believed that an earlier effective date would increase manufacturer costs and burden and could decrease product availability throughout California. Therefore, an effective date of January 1, 2022, was considered a more appropriate balance of costs and savings.
	2. The investor owned utilities support test-and list for additional classes of compressors. We understand	2. Comment acknowledged. No change is necessary. After considering all the information

[6] CCR, title 20, section 1604(s)(3) of the adopted regulations require additional testing in Code of Federal Register, title 10, section 429.63 and 429.70 when applying an AEDM.

Commenter's Name	Comments/ Suggested Revisions	Response
	that there is a lack of data at this point on reciprocating compressors. It's understandable that you can't have a standard without enough test data. But we would like to see an EL 0 published for these other classes of compressors to generate important data that will immediately support energy efficiency incentive programs by utilities such as the California Investor Owned Utilities.	relied upon, the information submitted to the record, and all the comments received, the Energy Commission chose not to include these other classes of compressors in the scope of the regulation. The Energy Commission may establish test procedures and efficiency standards for these other classes of compressors at a future time, as these are not federally covered products and may be an opportunity for additional energy savings.
Chris Knuffman Quincy Compressor	For reciprocating compressors, the DOE method doesn't fit and the DOE rules don't fit for reciprocating compressors even though ISO 1217 does. And the main reason for that is there is no definition of ancillary equipment and no defined protocols for reciprocating compressors. Reciprocating compressors were eliminated early on in the DOE rulemaking process and there is no industry standard for testing reciprocating compressors. …reciprocating compressors, the savings really isn't scalable like rotary compressors, because they're more intermittent duty.	Comment acknowledged. No change is necessary. After considering all the information available at the time it began its rulemaking, the Energy Commission chose not to include reciprocating compressors in the scope of the regulation. For rotary compressors, which were included in the scope of the regulation, the Energy Commission determined that the regulations, including the cost of testing, are based on feasible efficiencies and do not result in any added total costs for consumers over the designed life of the appliances, as required by PRC 25402(c)(1). The Energy Commission may establish test procedures and efficiency standards for reciprocating compressors at a future time, as these are not federally covered products and may be an opportunity for additional energy savings.
Mr. Russ Randle Atlas Copco	1. One of the proposals that's been put forward suggests that the data would be usable if they comply with a procedure that did not exist until 2017. But nobody has suggested that the data are at all inaccurate. We submit that it's unwise to discard millions of dollars of accurate data particularly when the Commission has chosen an expedited timeline.	1. Comment acknowledged. No change is necessary. Title 20, CCR, section 1604(s) incorporates by reference the DOE test procedure for air compressors found in title 10, CFR, Appendix A to subsection T of part 431. The Energy Commission is preempted from requiring a test procedure different from the federal test procedure. On July 3, 2017, it became mandatory that any

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		manufacturer representations with respect to energy use or efficiency be made in accordance with results from testing pursuant to the federal test procedure. Title 20, CCR, section 1606, requires the submittal of certification data for each appliance that is sold or offered for sale in California and a declaration that the submitted data has been determined from testing in accordance to the test procedure in title 20, CCR, section 1604(s), which is identical to the federal test procedure. The declaration is executed under penalty of perjury. At multiple times during the proceeding, the Energy Commission clarified that reliance on historical test data is acceptable, as long as the requirements in title 20, CCR, sections 1604 and 1606 are met and attested to in the required declaration. Staff stated, at the January 9, 2019, business meeting, that it has no objection to a manufacturer, under penalty of perjury, certifying that their historical ISO 1217:2009 test data is in accordance with the test procedure in CCR, title 20, section 1604 (i.e., the DOE test procedure).[7] DOE's refusal to enforce, as a matter of policy, test procedures adopted in regulations does not mean that states cannot enforce those test procedures at the time they took effect. A manufacturer's decision not to follow that test procedure is a business decision the consequences of which the Commission is not responsible for mitigating.

[7] Transcript of Energy Commission January 9, 2019, Business Meeting, p. 31.

Commenter's Name	Comments/ Suggested Revisions	Response
	2. We reiterate the request for a 15-day language and that the matter be taken off the agenda from the January 9th meeting lest it be viewed as prejudging any correction of these problems, both in terms of putting in the correct Code of Federal Regulations citation for ISO 1217, and to deal with the certification issues, the language that we have submitted going forward.	2. Comment acknowledged. No change is necessary. After careful and meaningful consideration of all comments received, the Energy Commission determined that no changes would be made to the originally proposed regulatory language and as such, a 15-day comment period is not required.
	3. In terms of the oil-free compressors or lubricant-free, we had submitted additional language given the test-and-list that was put forward. It seems to be a fundamental misunderstanding. These compressors, the oil free, are quite a lot more complex and quite different machines than is the case for lubricant injected. They are used in places where very high purity, high-pressure air is needed, including hospitals, pharmaceutical manufacturers, semiconductor manufacturing and aerospace.	3. Comment acknowledged. Comment accepted. No change will be made. After considering all the information relied upon, the information submitted to the record, and all the comments received, the Energy Commission chose not to include non-lubricated compressors in the scope of the regulation.
	4. …with regard to the accelerated timeline that's been suggested, that's all the more reason to resolve these data problems very quickly.	4. Comment acknowledged. No change is necessary. Same response as 1.
	5. And it should be noted the DOE went for a five-year timeline precisely because there was insufficient engineering personnel to meet a three-year timeline that had been proposed.	5. Comment acknowledged. No change is necessary. Energy Commission staff determined that the January 1, 2022, effective date is appropriate because DOE pre-published a Notice of Final Rule on December 5, 2016, and if DOE had published the final rule as scheduled, the effective date would have been early 2022. The Energy Commission determined that the regulations are based on feasible efficiencies and do not result in any added total costs for consumers over the

Commenter's Name	Comments/ Suggested Revisions	Response
		designed life of the appliances, as required by PRC 25402(c)(1). PRC 25402(c)(1) requires that the regulations become effective no sooner than one year after the date of adoption. Although an earlier effective date could yield earlier, and therefore greater energy savings, Energy Commission staff believed that an earlier effective date would increase manufacturer costs and burden and could decrease product availability throughout California. Therefore, an effective date of January 1, 2022, was considered a more appropriate balance of costs and savings.
	6. And in particular smaller manufacturers will be placed at a serious disadvantage.	6. Comment acknowledged. No change is necessary. The performance regulations are agnostic to the size of the manufacturer and require all manufacturers to meet the same requirements. In its pre-publication final rule, a document relied upon for this proceeding, DOE found that small manufacturers may observe higher costs of debt than larger manufacturers but that small manufacturers are not expected to face significantly higher conversion costs, to improve the efficiency of their compressors, than their larger competitors. During the Energy Commission proceeding, no reasonable alternatives to the proposed regulations were proposed that would lessen any adverse impact on small business or that would be less burdensome and equally effective in achieving the purposes of the regulation in a manner that achieves the purposes of the statute being implemented.
Mr. Louis Starr NEEA	1. Northwest Energy Efficiency Alliance is supportive of California establishing standards and using the DOE test procedure…. this is an excellent opportunity for California to take advantage of some work that has been developed by DOE and actually get some energy savings inside of the State of California.	1. Comment acknowledged. General comment. No response is necessary.

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	2. I'd also like to speak in support of doing a test-and-list requirement on reciprocating air compressors.	2. Comment acknowledged. No change is necessary. After considering all the information relied upon, the information submitted to the record, and all the comments received, the Energy Commission chose not to include reciprocating compressors in the scope of the regulation. The Energy Commission may establish test procedures and efficiency standards for reciprocating compressors at a future time, as these are not federally covered products and may be an opportunity for additional energy savings.
Mr. Chris Granda Appliance Standards Awareness Project	With regards to the issue of test and list for reciprocating equipment we are sympathetic to the concerns brought up by Quincy Compressor with the DOE test method not being appropriate for reciprocating equipment. But if as Mr. Knuffman said ISO 1217 is appropriate, and if there is pathway towards using ISO 1217 test data for certification, perhaps that opens the door to test-and-list for larger reciprocating equipment as well.	Comment acknowledged. No change is necessary. After considering all the information relied upon, the information submitted to the record, and all the comments received, the Energy Commission chose not to include reciprocating compressors in the scope of the regulation. The Energy Commission may establish test procedures and efficiency standards for reciprocating compressors at a future time, as these are not federally covered products and may be an opportunity for additional energy savings.
Mr. Steve Eaton Ingersoll Rand	Regarding the test-and-list for reciprocating compressors. I think the CEC should understand that during the DOE test rule writing, because they early on eliminated reciprocating compressors along with other technologies from their rulemaking, there was no further consideration to some of the complexities that would come into definition.	Comment acknowledged. No change is necessary. After considering all the information relied upon, the information submitted to the record, and all the comments received, the Energy Commission chose not to include reciprocating compressors in the scope of the regulation. The Energy Commission may establish test procedures and efficiency standards for reciprocating compressors at a future time, as these

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		are not federally covered products and may be an opportunity for additional energy savings.
Mr. Matt Smith	Curtis would like to that we support the position as espoused by CAGI, Atlas 1 Copco, Quincy and Ingersoll Rand. Historical test data performed in accordance with ISO 1217 should be allowed to show compliance with the new standard. If not, the burden on manufacturers will be substantial especially for smaller market shareholders. We have not reviewed the impact at this time, but given our volume in California, and the known costs of testing, we would likely be forced to severely restrict our product offering in the state."	Comment acknowledged. No change is necessary. Title 20, CCR, section 1604(s) incorporates by reference the DOE test procedure for air compressors found in title 10, CFR, Appendix A to subsection T of part 431. The Energy Commission is preempted from requiring a test procedure different from the federal test procedure. On July 3, 2017, it became mandatory that any manufacturer representations with respect to energy use or efficiency be made in accordance with results from testing pursuant to the federal test procedure. Title 20, CCR, section 1606, requires the submittal of certification data for each appliance that is sold or offered for sale in California and a declaration that the submitted data has been determined from testing in accordance to the test procedure in title 20, CCR, section 1604(s), which is identical to the federal test procedure. The declaration is executed under penalty of perjury. At multiple times during the proceeding, the Energy Commission clarified that reliance on historical test data is acceptable, as long as the requirements in title 20, CCR, sections 1604 and 1606 are met and attested to in the required declaration. Staff stated, at the January 9, 2019, business meeting, that it has no objection to a manufacturer, under penalty of perjury, certifying that their historical ISO 1217:2009 test data is in accordance with the test procedure in CCR, title 20, section 1604 (i.e., the DOE test procedure).[8]

[8] Transcript of Energy Commission January 9, 2019, Business Meeting, p. 31.

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		DOE's refusal to enforce, as a matter of policy, test procedures adopted in regulations does not mean that states cannot enforce those test procedures at the time they took effect. A manufacturer's decision not to follow that test procedure is a business decision the consequences of which the Commission is not responsible for mitigating.
Somach Simmons & Dunn	Comment letter received by docket on January 3, 2019 1. The Commission should decline to impose test-and-list requirements on reciprocating compressors between one and 500 horsepower (hp). 2. The Commission should decline to impose test-and-list requirements on non-lubricated compressors between one and 500 hp. 3. The Commission should decline to impose test-and-list requirements on rotary lubricated compressors between one and 10 hp. 4. The Commission should decline to impose test-and-list requirements on rotary lubricated compressors between 200 and 500 hp.	Comment acknowledged. No change is necessary. After considering all the information relied upon, the information submitted to the record, and all the comments received, the Energy Commission chose not to include these other classes of compressors in the scope of the regulation. The Energy Commission may establish test procedures and efficiency standards for these other classes of compressors at a future time, as these are not federally covered products and may be an opportunity for additional energy savings.
Sullivan Palatek	Comment letter received on by docket on January 3, 2019. The Commission should not include reciprocating compressors in the scope of the proposed regulations.	Comment acknowledged. No change is necessary. After considering all the information relied upon, the information submitted to the record, and all the comments received, the Energy Commission chose not to include reciprocating compressors in the scope of the regulation. The Energy Commission may establish test procedures and efficiency standards for reciprocating compressors at a future time, as these are not federally covered products and may be an opportunity for additional energy savings.