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Atlas Copco Compressors LLC
Presentation to California Energy Commission

Docket No. 18-AAER-05

Commercial & Industrial Air Compressors

January 3, 2019

Sustainable Productivity

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Summary

- Proposal Omitted 10 C.F.R. Section 431.343 Important to Validity of Test Method
- Because of Smaller Size of California Market Than U.S. Market, Testing Costs Are Proportionally Much Higher and Major Impediment to Keeping Many Compliant Rotary Models on the Market
- Allowing Use of Currently Existing (July 2020 and before) Industry Test Data Will Greatly Reduce Adverse Impacts
- One Fourth of Current Rotary Air Compressor Models Will Fail Proposed Efficiency Standard

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California Is a Small Market to Bear Nationwide Compliance Costs

- US Market in 2013 for Rotary Air Compressors Covered by Standard Was 23,700 Units
- Estimated California Share Was 3,100 Units
- About 6,000 Distinct Rotary Compressor MODELS Offered for Sale; Relatively Few UNITS of Any One Model Are Sold in California

Proposed Rules Would Ignore Prior Valid Efficiency Test Results

- Industry Compressor Efficiency Standard – ISO1217:2009 – Was Adopted by US and International Bodies for Customer Acceptance Testing of Air Compressors
- No Reason to Question Accuracy of ISO1217 Data
- DOE Adopted ISO1217 As Basis for Its Test Method and Used ISO1217 Data to Develop Efficiency Standards
- Most Existing Rotary Compressor Models Have Been Tested With ISO1217

DOE Test Method

- DOE Adopted Test Method Based on ISO1217; Said Prior ISO1217 Data Were Usable to Certify Compliance With DOE Efficiency Standard
- DOE Postponed Test Rule Effective Date to Dec. 30, 2017 and Suspended Any Enforcement of DOE Test Rule for at Least 5 Years
- As a Result of DOE Actions, Industry Testing Using DOE Method Has Been Slow As Opposed to ISO1217 Testing

Compliance Certification

- Proposed Commission Rule Requires Listing of Each Rotary Air Compressor Model Offered for Sale in California on Modern Appliance Efficiency Database (MAEDBS)
- Listing Requires Compliance Certification Based on Use of DOE Test Rule or AEDM – Alternative Efficiency Demonstration Method – Validated with DOE Test Rule Data
- Proposed Language Requires Testing at California Certified Lab; No Such Labs Yet Exist for the DOE Test Method

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Compliance Certification (cont.)

- Lab Certification Apparently Does Not Retroactively Validate Prior Test Data
- Conservative Reading Is That Each Compressor Model MUST Be Re-Tested in Order to Offer That Model for Sale in California, 6,000 in All
- AEDM Requires Some DOE Testing to Validate AEDM, Presumably at California Certified Lab

Compressor Efficiency Testing Is Costly

- DOE Test Method Costs About $4,000 per Model at CAGI Member Lab Rates; Smaller Manufacturers Report Much Higher Costs Per Model; Testing All 6,000 Models Offered for Sale Would Likely Cost More than $20 Million
- DOE Suspended Application of Test Rule, For a Variety of Reasons, Including High Costs of Testing to Small Businesses (See Atlas Copco Comment Letter, p. 13)
- Many Manufacturers Will Simply Withdraw from California Those Models Meeting Efficiency Standards But With Low Sales Volumes, Rather Than Re-Test

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Use ISO1217 Data to Reduce Adverse Impacts of Proposed Rule

- ISO1217 Is Basis for DOE Test Rule; Both Measure the Same Parameters and Then Calculate Efficiency
- ISO1217 Data Are a Reliable Measure of Rotary Air Compressor Efficiency, Long Used by Industry
- Use of Existing ISO1217 Data to Certify Compliance Will Reduce Compliance Costs and Reduce Number of Efficient Models Withdrawn from California, Consistent With Government Code section 11346.5(a)(13)
- ISO1217 Results Are the Functional Equivalent of DOE Test Rule Results so There Is No Material Conflict Between Use of ISO1217 and DOE Test Rule

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Suggested Additional Language to Section 1606(a)(3)(A) Exception 1

- Provided further that, for any rotary air compressor model offered by a manufacturer for sale in the United States prior to July 1, 2020 the manufacturer may make the required statement relying upon on any of the following factual bases:
  - Results of testing conducted according to ISO1217:2009;
  - Mathematical forecasts relying upon ISO1217:2009 testing of similar air compressor models made by the same manufacturer, and appropriately validated;
  - Testing conducted before July 1, 2020 using the compressor efficiency test specified in 10 C.F.R. Part 429; or
  - AEDM calculations validated with test results conducted according to 10 C.F.R. Part 429 prior to July 1, 2020.
- For statements based on any of these factual bases, the manufacturer shall also certify that the laboratory testing used for certification or validation was properly conducted by appropriate professional personnel with properly calibrated equipment and in compliance with effective quality control standards. (See Atlas Copco Comment Letter, pp. 17-18)

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Timing Request

- Atlas Copco Requests That the Energy Commission Remove Item 4 From the January 9, 2019 Business Meeting Agenda In Order to Accommodate 15 Day Comment Period on Proposed Revisions Regarding Use of Prior Test Data
- Revise Language to Include Omitted 10 C.F.R. Section 431.343; Important to Validity of Test Method

Response to California IOU Comments: Failing Models and California Impacts

- DOE Estimates That 1/4 of Rotary Air Compressor Models Will Fail the Efficiency Standard; Atlas Copco's Analysis Agrees
- More Rigorous Standard (TSL3) Would Result in Failure by Nearly Half of Current Rotary Air Compressor Models
- Small Size of California Market Means Non-Compliant Models Simply Withdrawn from California Sale; TSL3 Would Be Very Disruptive

Committed to Sustainable Productivity.


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