regulations, may exempt individual nonhuman primates from the plan for scientific reasons, provided these reasons are set forth in a research proposal and reviewed by the IACUC.

On May 7, 2014, APHIS received a petition submitted jointly by the New England Anti-Vivisection Society, the North American Primate Sanctuary Alliance, the Laboratory Primate Advocacy Group, and the Animal Legal Defense Fund requesting that we initiate rulemaking to amend the AWA regulations. Specifically, the petition asks that we amend § 3.81 to require that research facilities construct and maintain an ethologically appropriate environment for nonhuman primates housed at the facilities, that is, an environment that is appropriate with respect to the patterns of behavior exhibited by the nonhuman primates in their natural state. The petition also asks that we amend § 3.81 to specify minimum standards that must be met in order for an environment to be considered ethologically appropriate. The petition cites standards recently adopted by the National Institutes of Health (NIH) for chimpanzees used in NIH-funded research as a reference point for the development of such generally applicable minimum standards and as evidence of their feasibility.

The petition agrees that the intent of § 3.81 of the AWA regulations is to ensure that the environment provided to nonhuman primates housed at research facilities promotes the psychological well-being of the primates. The petition suggests, however, that because of ambiguities in the current regulations, research facilities have broad discretion regarding the actual environment provided to nonhuman primates at their facilities, and can meet the requirements in § 3.81 without actually meeting their intent.

The petition states that, by amending the AWA regulations in the manner that the petitioners suggest, we would remove these ambiguities and facilitate regulatory compliance.

We are making this petition available to the public and soliciting comments to help determine what action, if any, to take in response to this request. The petition and any comments submitted are available for review as indicated under ADDRESSES above. We welcome all comments on the issues outlined in the petition. In particular, we invite responses to the following questions:

1. Should APHIS amend § 3.81 of the AWA regulations to require research facilities to construct and maintain an ethologically appropriate environment for nonhuman primates, and specify the minimum standards that must be met for an environment to be considered ethologically appropriate?

2. What constitutes an ethologically appropriate environment for a nonhuman primate? Does this differ among species of nonhuman primates? If so, how does it differ?

3. Are there any environmental conditions that make an environment ethologically inappropriate for a nonhuman primate? If so, what are they? Do they differ among species of nonhuman primates?

4. Does an ethologically appropriate environment for nonhuman primates used in research differ from an ethologically appropriate environment for nonhuman primates that are sold or exhibited? If so, in what ways does it differ?

5. Who should make the determination regarding the ethological appropriateness of the environment for nonhuman primates at a particular research facility: The attending veterinarian for the facility, APHIS, or both parties? If both parties should jointly make such a determination, which responsibilities should fall to the attending veterinarian and which to APHIS?

We encourage the submission of scientific data, studies, or research to support your comments and position. We also invite data on the costs and benefits associated with any recommendations. We will consider all comments and recommendations received.


Done in Washington, DC, this 27th day of April 2015.

Kevin Shea,
Administrator, Animal and Plant Health Inspection Service.

[FR Doc. 2015–10195 Filed 4–30–15; 8:45 am]

BILLING CODE 4310–34–P

DEPARTMENT OF ENERGY
10 CFR Part 431
RIN 1904–AC55
Energy Conservation Standards for Commercial and Industrial Fans and Blowers: Availability of Provisional Analysis Tools


ACTION: Notice of Data Availability.

SUMMARY: The U.S. Department of Energy (DOE) has completed a provisional analysis of the potential economic impacts and energy savings that could result from promulgating an energy conservation standard for commercial and industrial fans and blowers. This analysis incorporates information and comments received after the completion of an analysis presented in a notice of data availability (NODA) published in December 2014. At this time, DOE is not proposing an energy conservation standard for commercial and industrial fans and blowers. This analysis may be used in support of the Appliance Standards Federal Rulemaking Advisory Committee (ASRAC) commercial and industrial fans working group negotiations to develop a recommendation for regulating commercial and industrial fans. DOE encourages stakeholders to provide any additional data or information that may improve the analysis and to present comments submitted to this NODA and to the NODA published in December 2014 to the working group.

DATES: Information is available as of May 1, 2015.


Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at: http://www.regulations.gov. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by Docket number EERE–2013–BT–STD–0006, by any of the following methods:

(1) Email: to CIFB2013STD0006@ee.doe.gov. Include EERE–2013–BT–STD–0006 in the subject line of the message. Submit electronic comments in WordPerfect, Microsoft Word, PDF, or ASCII file format, and avoid the use of special characters or any form of encryption.


I. History of Energy Conservation Standards Rulemaking for Commercial and Industrial Fans and Blowers


Included among the various types of industrial equipment addressed by EPCA are commercial and industrial fans and blowers, the subject of this notice. (42 U.S.C. 631112 (A)) All references to EPCA refer to the statute as amended through the American Energy Manufacturing Technical Corrections Act (AEMTCA), Public Law 112–210 (December 18, 2012).

DOE initiated the current rulemaking by publishing a proposed coverage determination for commercial and industrial fans and blowers. 76 FR 37678 (June 28, 2011). This was followed by the publication of a Notice of Public Meeting and Availability of the Framework Document for commercial and industrial fans and blowers in the Federal Register. In the Framework Document, DOE requested feedback from interested parties on many issues related to analyses DOE would conduct as part of the rulemaking, such as engineering analysis, the manufacturer impact analysis (MIA), the life-cycle cost (LCC) and payback period (PBP) analyses, and the national impact analysis (NIA). 78 FR 7306 (February 1, 2013).2

On December 10, 2014, DOE published a Notice of Data Availability (the “December 2014 NODA”) that presented a provisional analysis estimating the potential economic impacts and energy savings that could result from promulgating a regulatory energy conservation standard for commercial and industrial fans and blowers. 79 FR 73246.3 The December 2014 NODA analysis relied on an electric input power based metric (i.e., “wire-to-air”), the fan energy index (FEI). The FEI of a fan was defined as the average electric input power, or fan energy rating, of a fan that exactly meets the efficiency level being analyzed (FERIII), divided by the average electric input power or fan energy rating of the

fan (FER). In the December 2014 NODA, the FER was calculated over a specific load profile based on the fan’s flow at peak total efficiency4 and at a specified speed.5

In October 2014, several energy efficiency advocates and representatives of fan manufacturers6 (the “Joint Stakeholders”) presented a different energy metric approach to DOE called “Fan Efficiency Ratio” . The Joint Stakeholder approach included a fan efficiency only metric (FERpm) as well as a wire-to-air metric (FERw).7 This metric approach was described in more details by AMCA in a white paper (“AMCA white paper”) published in December 2014 which AMCA included in comments to the December 2014 NODA.8 (AMCA, No. 48 at p. 15) Based on the additional information received, and comments to the December 2014 NODA, DOE revised its analysis. This second NODA presents an analysis that characterizes fan performance and efficiency levels using a revised FEI metric that is based on the FERw presented by the Joint Stakeholders. (See section III.A for details on the revised FEI metric)

II. Current Status

The analyses described in this NODA were developed to support a potential energy conservation standard for commercial and industrial fans. As DOE announced in an April 2015 notice, DOE intends to establish a negotiated rulemaking working group under the Appliance Standards and Rulemaking Federal Advisory Committee (ASRAC) in accordance with the Federal Advisory Committee Act (FACA) and the Negotiated Rulemaking Act (NRA) to negotiate proposed definitions, the equipment classes for which standards would be considered (including any system interaction effects), certain aspects of a proposed test procedure (if

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1 For editorial reasons, upon codification in the U.S. Code, Part C was redesignated Part A–I.

2 Supporting documents are available at: http://www.regulations.gov/#/docketDetail;D=EERE-2013-BT-STD-0006

3 The December 2014 NODA comment period was originally scheduled to close on January 26, 2015. DOE subsequently published a notice in the Federal Register extending the comment period to February 25, 2015, to allow additional time for interested parties to submit comments.

4 The efficiency of a fan is defined as the ratio of air output power to mechanical input power. Fan efficiency varies depending on the output flow and pressure. The best efficiency point or BEP represents the flow and pressure values at which the fan efficiency is maximized when operating at a given speed.

5 In the December 2014 NODA, DOE calculated the FEI at the speed corresponding to the highest electric motor synchronous speed configuration that exists within the fan’s operational speed range.

6 The Air Movement and Control Association (AMCA), New York Blower Company, National Resources Defense Council (NRDC), the Appliance Standards Awareness Project (ASAP), and the Northwest Energy Efficiency Alliance (NEEA).

7 Supporting documents from this meeting, including presentation slides are available at: http://www.regulations.gov/#/documentDetail;D=EERE-2013-BT-STD-0006-0029

8 All comments are available at: http://www.regulations.gov/#/docketDetail;D=EERE-2013-BT-STD-0006

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Where:
FER: electrical input power (hp) at operating point i;
Q: flow (cfm) at operating point i;
P: total fan efficiency (%) at operating point i;
\eta_{\text{fan},i}:\text{total fan efficiency} (%) at operating point i;
\eta_{\text{T},i}:\text{default transmission efficiency} (%) at operating point i.

\[
FER_i = \frac{Q_i \times P_i}{\eta_{\text{fan},i} \times 6343 \times \eta_{\text{T},i}} + L_{M,i} = \frac{BHP_i}{\eta_{\text{T},i}} + L_{M,i}
\]

For the FER_{STD} calculation of a fan that exactly meets the efficiency level being analyzed, DOE used the same FER equation, except the calculation of the fan shaft input power is based on a minimum allowable fan total efficiency:

\[
FER_{STD, i} = \frac{Q_i \times P_i}{\eta_{STD, i} \times 6343 \times \eta_{T,i}} + L_{M,i} = \frac{BHP_{STD,i}}{\eta_{T,i}} + L_{M,i}
\]

Where:
FER_{STD,i}: Maximum allowable electrical input
power (hp) at operating point i;
BHP_{STD,i}: Maximum allowable shaft input
power (hp) at operating point i;
Q: flow (cfm) at operating point i;
P: total pressure (in.wg) at operating point i;
\eta_{STD,i}: Minimum total fan efficiency (%) at operating point i;
\eta_{T,i}: default transmission efficiency (%) at operating point i (the minimally


11 These default losses assumptions are presented in the LCC spreadsheet, in the “Default Losses” worksheet. The default transmission efficiency is equal to one in case of a direct driven fan.
compliant fan is assumed to always be belt-driven;

\( L_m, i \): default electric motor losses (hp) at operating point \( i \);

\( \eta_{STD, i} \): Minimum total fan efficiency (%) at operating point \( i \);

\( BHP_{STD, i} \): Max allowable shaft input power (hp) at operating point \( i \);

\( Q_0 \): flow constant equal to 250

\( P_{CON, i} \): total pressure constant equal to 0.4

\( \eta_{target} \): constant used to establish the efficiency level

6343: conversion factor to I-P units.

For all fan categories, the minimum fan total efficiency at a given operating point is expressed as a function of flow and total pressure, as follows:

\[
\eta_{STD, i} = \eta_{target} - \frac{Q_i \times P_i}{(Q_i + Q_0)(P_i + P_{CON, i})} = \frac{Q_i \times P_i}{BHP_{STD, i} \times 6343}
\]

Where:

\( \eta_{STD, i} \): Minimum total fan efficiency (%) at operating point \( i \);

\( BHP_{STD, i} \): Max allowable shaft input power (hp) at operating point \( i \);

\( Q_0 \): flow constant equal to 250

\( P_{CON, i} \): total pressure constant equal to 0.4

\( \eta_{target} \): constant used to establish the efficiency level

This equation was based on the metric approach recommended by the Joint Stakeholders as well as on AMCA’s proposed values for \( Q_0 \) and \( P_0 \) and on DOE’s preliminary review of the applicability of this equation.

The primary difference between the revised FEI metric used in this NODA and the wire-to-air metric recommended by the Joint Stakeholders is that the Joint Stakeholders recommend using an equation expressing static efficiency as a function of static pressure and flow, while one recommended using total efficiency as a function of total pressure and flow, as recommended for ducted fans. In its white paper, AMCA states that a metric based on static efficiency should be used for unducted fans, to accommodate the selection of unducted fans based on the use of static pressure. AMCA noted, however, that this opinion is not shared across all the industry. Three additional representatives of the industry agreed that static efficiency should be the basis for any metric related to unducted fans because of existing selection practices, while one recommended using total efficiency for all fan categories. (Joint

Stakeholders, No. 50 at p. 3; AMCA, No. 48 at p. 16; CES Group LLC, No. 40 at p. 1; Multi-wing, No. 52 at p. 2; Carrier, No. 43 at p. 6; Morrison, No. 51 at p. 2)

DOE understands that using static pressure may be useful for selecting unducted fans, however, because static efficiency is, by definition, calculated using total pressure, and because the shaft input power of a fan is a function of the fan’s total output power and total efficiency, DOE maintains the use of an energy metric based on total pressure and total efficiency for all fan categories. DOE does not believe this approach would prevent end-users from selecting fans using either static or total pressure.

B. Engineering Analysis

The engineering analysis establishes the relationship between the manufacturer production cost (MPC) and efficiency levels of commercial and industrial fans and blowers. This relationship serves as the basis for the analysis tools to estimate the costs and benefits to individual consumers, manufacturers, and the nation.

As a first step in the engineering analysis, DOE established seven provisional fan groups based on characteristics such as the direction of airflow through the fan and the presence of a housing. While DOE analyzed seven provisional fan groups in this NODA, DOE expects the working group to discuss and ultimately recommend equipment classes for which standards would be considered. For each of the seven provisional fan groupings, DOE identified existing technology options that could affect efficiency. DOE then conducted a screening analysis to review each technology option and decide whether it: (1) Is technologically feasible; (2) is practicable to manufacture, install, and service; (3) would adversely affect product utility or product availability; or (4) would have adverse impacts on health and safety. The technology options remaining after the screening analysis consisted of a variety of impeller types and guide vanes.

DOE used these technology options to divide the fan groups into subgroups and conducted a market-based assessment of the prevalence of each subgroup at the different efficiency levels analyzed using the sales data provided by AMCA. This NODA has fewer subgroups than the December 2014 NODA due to limitations in the sales data provided by AMCA. DOE analyzed six efficiency levels in this NODA, each representing a different efficiency target (\( \eta_{target} \)). AMCA presented results for an efficiency target of 62 percent for ducted fans. This NODA includes one efficiency level representing the same efficiency target as well as additional levels above and below.

DOE estimated the MPCs for each technology option for each fan group as a function of blade or impeller diameter, independent of efficiency level. DOE then calculated MPCs for each fan group at each efficiency level analyzed by weighting the MPCs of each technology option within a group by its prevalence at the efficiency level being analyzed. The MPCs were derived from product teardowns and publically-available product literature and informed by interviews with manufacturers.

DOE’s preliminary MPC estimates indicate that the changes in MPC as efficiency level increases are small or, in some fan groups, zero. However, DOE is aware that aerodynamic redesigns are a primary method by which manufacturers improve fan performance. These redesigns require manufacturers to make large upfront investments for R&D, testing and prototyping, and purchasing new production equipment. DOE’s preliminary findings indicate that the magnitude of these upfront costs is more significant than the difference in MPC of a fan redesigned for efficiency compared to its precursor. For this NODA, DOE included a conversion cost markup in its calculation of the manufacturer selling price (MSP) to account for these.
analyses including the MPCs from the engineering analysis, the annual shipments by fan group from the NIA, and the manufacturer markups for the cost recovery markup scenario from the LCC analysis to model industry annual cash flows from the base year through the end of the analysis period. The primary quantitative output of this model is the industry net present value (INPV), which DOE calculates as the sum of industry annual cash flows, discounted to the present day using the industry specific weighted average cost of capital, or manufacturer discount rate.

Standards can affect INPV in several ways including requiring upfront investments in manufacturing capital as well as research and development expenses, which increase the cost of production and potentially alter manufacturer markups. DOE expects that manufacturers may lose a portion of INPV due to standards. The potential loss in INPV due to standards is calculated as the difference between INPV in the base-case (absent new energy conservation standards) and the INPV in the standards case (with new energy conservation standards in effect). DOE examines a range of possible impacts on industry by modeling various pricing strategies commercial and industrial fan manufacturers may adopt following the adoption of new energy conservation standards for commercial and industrial fans.

In addition to INPV, the MIA also calculates the manufacturer markups, which are applied to the MPCs derived in the engineering analysis, to arrive at the manufacturer selling prices (MSPs) in the base case. For efficiency levels above the baseline, which require manufacturers to redesign models that do not meet the potential standards, conversion cost recovery markups were incorporated into the MSP in addition to the manufacturer markup. These conversion markups are based on the total conversion costs from the MIA and calculated to allow manufacturers to recover their upfront conversion costs. They are calculated by amortizing the conversion investment over the units shipped throughout the analysis period that were redesigned to meet the efficiency level being analyzed. The base case and standards case MSPs were used as inputs for downstream analyses.

D. Life-Cycle Cost and Payback Period Analyses

The LCC and PBP analyses determine the economic impact of potential standards on individual consumers, in the compliance year. The LCC is the total cost of purchasing, installing and operating a commercial or industrial fan over the course of its lifetime.

DOE determines the LCC by considering: (1) The total installed cost to the consumer (which consists of manufacturer selling price, distribution channel markups, and sales taxes); (2) the range of annual energy consumption of commercial and industrial fans as they are used in the field; (3) the operating cost of commercial and industrial fans (e.g., energy cost); (4) equipment lifetime; and (5) a discount rate that reflects the real consumer cost of capital and puts the LCC in present-value terms. The PBP represents the number of years needed to recover the increase in purchase price of higher-efficiency commercial and industrial fans through savings in the operating cost. PBP is calculated by dividing the incremental increase in installed cost of the higher efficiency product, compared to the baseline product, by the annual savings in operating costs.

For each considered standards case corresponding to each efficiency level, DOE measures the change in LCC relative to the base case. The base case is characterized by the distribution of equipment efficiencies in the absence of new standards (i.e., what consumers would have purchased in the compliance year in the absence of new standards). In the standards cases, equipment with efficiency below the standard levels “roll-up” to the standard level in the compliance year.

To characterize annual fan operating hours, DOE established statistical distributions of consumers of each fan category across sectors (industry or commercial) and applications (clean air ventilation, exhaust, combustion, drying, process air, process heating/cooling, and others), which in turn determined the fan’s operating hours. Recognizing that several inputs to the determination of consumer LCC and PBP are either variable or uncertain (e.g., annual energy consumption, lifetime, discount rate), DOE conducts the LCC and PBP analysis by modeling both the uncertainty and variability in the inputs using Monte Carlo simulations and probability distributions.

In addition to characterizing several of the inputs to the analyses with probability distributions, DOE developed a sample of individual fan selections (i.e., a fan models and the operating flow and pressure values for which they were purchased) using fan sales data provided by AMCA.

18 See description in LCC spreadsheet, LCC sample description worksheet.
developing this sample, DOE was able to perform the LCC and PBP calculations for each fan selection to account for the variability in energy consumption associated with each fan selection. DOE notes that when developing the LCC sample, it did not include fan sales data for which no flow and pressure selection information was available.

The primary outputs of the LCC and PBP analyses are: (1) Average LCC in each standards case; (2) average PBPs; (3) average LCC savings at each standards case relative to the base case; and (4) the percentage of consumers that experience a net benefit, have no impact, or have a net cost for each fan group and efficiency level. The average annual energy consumption derived in the LCC analysis is used as an input in the NIA.

E. National Impact Analysis

The NIA estimates the national energy savings (NES) and the net present value (NPV) of total consumer costs and savings expected to result from potential new standards at each EL. DOE calculated NES and NPV for each EL as the difference between a base case forecast (without new standards) and the standards case forecast (with standards). Cumulative energy savings are the sum of the annual NES determined for the lifetime of a commercial or industrial fan shipped during a 30 year analysis period assumed to start in 2019. Energy savings include the full-fuel cycle energy savings (i.e., the energy needed to extract, process, and deliver primary fuel sources such as coal and natural gas, and the conversion and distribution losses of generating electricity from those fuel sources). The NPV is the sum over time of the discounted net savings each year, which consists of the difference between total energy cost savings and increases in total equipment costs. NPV results are reported for discount rates of 3 and 7 percent.

To calculate the NES and NPV, DOE projected future shipments and efficiency distributions for each EL and efficiency levels analyzed. DOE recognizes the uncertainty in projecting shipments and electricity prices; as a result the NIA includes several different scenarios for each. Other inputs to the NIA include the estimated commercial and industrial fan lifetime used in the LCC analysis, manufacturer selling prices from the MIA, average annual energy consumption, and efficiency distributions from the LCC.

IV. Issues on Which DOE Seeks Public Comment

DOE is interested in receiving comment on all aspects of this analysis. DOE is particularly interested in receiving comments and views of interested parties concerning the following issues:

1. DOE requests comments on the equation expressing fan total efficiency as presented in this notice, as a function of flow and total pressure.
2. DOE requests comment on the values of the flow constant (Q0) and total pressure constant (P0) used to calculate the minimum fan total efficiency at a given operating point.
3. DOE requests comments on the default transmission efficiency equation used in the FEI calculation.
4. DOE requests comments on the default motor losses assumptions used in the FEI calculation.
5. DOE requests comments on how manufacturers determine/would determine whether to redesign or eliminate a fan model that is not compliant at an operating point or points at which it has been sold previously.
6. DOE estimated the number of redesigns at each efficiency level based on the sales data provided by AMCA. DOE recognizes that the AMCA data does not include all commercial and industrial fan sales for the industry, and that existing fans can operate at more selection points than those at which they were sold as represented in the AMCA sales database. DOE requests comments on whether the resulting total conversion costs presented in the spreadsheets released with this NODA are representative of the industry at the efficiency levels analyzed. If not, how should the number of redesigns be adjusted to be representative of the industry?
7. DOE requests additional information to allow quantifying installation, repair, and maintenance costs for industrial and commercial fans.
8. DOE requests additional information to allow quantifying lifetimes for industrial and commercial fans.
9. DOE requests additional information to allow quantifying annual operating hours for industrial and commercial fans.
10. DOE seeks inputs and comments on the estimates of flow and total pressure operating points used in the energy use analysis.

11. DOE requests comments on how to account for consumers purchasing fans without providing any selection data (i.e., design flow and pressure values) in the LCC calculations.
12. DOE requests comment on determining the motor horsepower based on 120 percent of the fan shaft input power when performing the energy use calculation.
13. DOE requests comments on the method used in the LCC to identify fans that could be considered substitutes.
14. DOE seeks comments and inputs regarding the use of typical fan curves and efficiency curves in order to calculate fan shaft input power at different flow and pressure values based on a fan selection’s performance data at a single given design point.
15. DOE seeks inputs to support the development of trends in fan efficiency over time in the base case and in the standards cases.

The purpose of this NODA is to notify industry, manufacturers, consumer groups, efficiency advocates, government agencies, and other stakeholders of the publication of an analysis of potential energy conservation standards for commercial and industrial fans. Stakeholders should contact DOE for any additional information pertaining to the analyses performed for this NODA.

Issued in Washington, DC, on April 21, 2015.

Kathleen B. Hogan, Deputy Assistant Secretary for Energy Efficiency, Energy Efficiency and Renewable Energy.

[FR Doc. 2015–10036 Filed 4–30–15; 8:45 am]

BILLING CODE 6450–01–P

SMALL BUSINESS ADMINISTRATION

13 CFR Part 127

RIN 3245–AG72

Women-Owned Small Business Federal Contract Program

AGENCY: U.S. Small Business Administration.

ACTION: Proposed rule.

SUMMARY: The U.S. Small Business Administration (SBA) proposes to amend its regulations to implement section 825 of the National Defense Authorization Act for Fiscal Year 2015 (2015 NDAA). Section 825 of the 2015 NDAA included language granting contracting officers the authority to award sole source contracts to Women-