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Part V

Department of Energy

Office of Energy Efficiency and Renewable Energy

10 CFR Part 430
Energy Conservation Program for Consumer Products: Fluorescent Lamp Ballasts Energy Conservation Standards; Final Rule
DEPARTMENT OF ENERGY

Office of Energy Efficiency and Renewable Energy

10 CFR Part 430

[Docket Number EE–RM–97–500]

RIN 1904–AA75


ACTION: Final rule.

SUMMARY: The Department of Energy (DOE or Department) has determined that revised energy conservation standards for fluorescent lamp ballasts will result in significant conservation of energy, are technologically feasible, and are economically justified. On this basis, the Department is today amending the existing energy conservation standards for fluorescent lamp ballasts as proposed and as recommended by stakeholders.

EFFECTIVE DATES: The effective date of this rule and the standards is April 1, 2005.


SUPPLEMENTARY INFORMATION:

I. Introduction

a. Overview

The Energy Policy and Conservation Act, as amended, specifies that the Department must consider for amended standards those standard levels that “achieve the maximum improvement in energy efficiency which the Secretary determines is technologically feasible and economically justified” and which will “result in significant conservation of energy.” 42 U.S.C. 6295. Consistent with these statutory requirements, DOE today is amending the energy conservation standards for fluorescent lamp ballasts for commercial and industrial applications.

When today’s standards go into effect, they will essentially require fluorescent lamp ballasts for F40 and F96 lamps to be the electronic type. The standards will segment the market into new applications and replacement applications and extend the implementation dates to mitigate the burdens to acceptable levels. The standards provide a phase-in period of approximately five years, until April 1, 2005, for new applications. In addition, today’s rule provides an additional phase in, until June 30, 2010, for ballasts intended for the replacement market. Replacement ballasts must be labeled for replacement use, have output leads which, when fully extended, are less than the length of the lamp it is intended to operate and be shipped in packages of ten or less.

Today’s rule exempts ballasts designed for residential applications, ballasts capable of being dimmed to 50 percent or less of its maximum output, and ballasts for use with two F96T12HO lamps at an ambient temperature of –20°F used with outdoor signs.

As a result of today’s rule, we estimate the cumulative national energy savings ranging from 1.20 to 2.32 Quads of energy for the period 2005 through 2030. These energy savings will result in carbon emission reductions of 11 to 19 million metric tons and NOX emission reductions of 34 to 60 thousand metric tons, during the same time frame. We believe most commercial and industrial consumers will save money. In total, we estimated the energy savings to have a net present value to American business and industry of 1.42 to 2.60 billion dollars.

b. Authority


Under the Act, the program consists essentially of three parts: testing, labeling, and Federal energy conservation standards. The Department, in consultation with the...
National Institute of Standards and Technology, amends or establishes new test procedures for each of the covered products. Section 323. Test procedures appear at 10 CFR Part 430, Subpart B. The Federal Trade Commission (FTC) prescribes rules governing the labeling of covered products after DOE publishes test procedures. Section 324(a). At the present time, there are Federal Trade Commission rules requiring labels for fluorescent lamp ballasts.

The National Appliance Energy Conservation Amendments of 1988 prescribed Federal energy conservation standards for ballasts. Section 325(g). The Act specifies that the standards are to be reviewed by the Department no later than January 1, 1992. Section 325(g)(7)(A).

Any new or amended standard must be designed so as to achieve the maximum improvement in energy efficiency that is technologically feasible and economically justified. Section 325(o)(2)(A).

Section 325(o)(2)(B)(i) provides that before DOE determines whether a standard is economically justified, it must first solicit comments on a proposed standard. After reviewing comments on the proposal, DOE must then determine that the benefits of the standard exceed its burdens, based, to the greatest extent practicable, on a weighing of the following seven factors:

(i) The economic impact of the standard on the manufacturers and on the consumers of the products subject to such standard;
(ii) The savings in operating costs throughout the estimated average life of the covered product in the type (or class) compared to any increase in the price of, or in the initial charges for, or maintenance expenses of, the covered products which are likely to result from the imposition of the standard;
(iii) The total projected amount of energy savings likely to result directly from the imposition of the standard;
(iv) Any lessening of the utility or the performance of the covered products likely to result from the imposition of the standard;
(v) The impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the imposition of the standard;
(vi) The need for national energy conservation; and
(vii) Other factors the Secretary considers relevant.

In addition, section 325(o)(2)(B)(iii) establishes a rebuttable presumption of economic justification in instances where the Secretary determines that “the additional cost to the consumer of purchasing a product complying with an energy conservation standard level will be less than three times the value of the energy savings during the first year that the consumer will receive as a result of the standard, as calculated under the applicable test procedure.” The rebuttable presumption test is an alternative path to establishing economic justification. Section 327 of the Act addresses the effect of Federal rules on State laws or regulations concerning testing, labeling, and standards. Generally, all such State laws or regulations are superseded by the Act. Section 327(a)(–c).

c. Background

The National Energy Conservation Policy Act, which amended the Energy Policy and Conservation Act, required DOE to establish mandatory energy efficiency standards for each of the 13 covered products. These standards were to be designed to achieve the maximum improvement in energy efficiency that was technologically feasible and economically justified.

The National Energy Conservation Policy Act provided, however, that no standard for a product be established if there were no test procedure for the product, or if DOE determined by rule either that a standard would not result in significant conservation of energy, or that a standard was not technologically feasible or economically justified. In determining whether a standard was economically justified, the Department was directed to determine whether the benefits of the standard exceeded its burdens by weighing the seven factors discussed above.

The National Appliance Energy Conservation Act, which became law on March 17, 1987, amended the Energy Policy and Conservation Act in part by: redefining “covered products” (specifically, refrigerators, refrigerator-freezers, and freezers were combined into one product type from two; humidifiers and dehumidifiers were deleted; and pool heaters were added); establishing Federal energy conservation standards for 11 of the 12 covered products; and creating a schedule, according to which each standard is to be reviewed to determine if an amended standard is required. It also established the rebuttable presumption test of economic justification.

The National Appliance Energy Conservation Amendments of 1988, which became law on June 28, 1988, established Federal energy conservation standards for fluorescent lamp ballasts. These amendments also created a review schedule for DOE to determine if any amended standard for fluorescent lamp ballasts is required.


As directed by the Act, DOE published an advance notice of proposed rulemaking for fluorescent lamp ballasts, as well as a variety of other consumer products. (55 FR 39624, September 28, 1990). The advance notice presented the product classes that DOE planned to analyze, and provided a detailed discussion of the analytical methodology and analytical models that the Department expected to use in performing the analysis to support this rulemaking.

Pursuant to section 325 of the Act, DOE proposed to revise the energy conservation standards applicable to fluorescent lamp ballasts, as well as a variety of other consumer products. 59 FR 10464 (March 4, 1994). On January 31, 1995, the Department published a Rulemaking Determination that, based on comments received, it would issue a revised notice of proposed rulemaking for fluorescent lamp ballasts. 60 FR 5880 (January 31, 1995).

A moratorium was placed on publication of proposed or final rules for appliance efficiency standards as part of the FY 1996 appropriations legislation. Public Law 104–134. That moratorium expired on September 30, 1996.

On July 15, 1996, the Department published a Process Improvement Rule establishing procedures, interpretations and policies to guide the Department in the consideration of new or revised appliance efficiency standards (Procedures for Consideration of New or Revised Energy Conservation Standards for Consumer Products). 61 FR 36974.

The Department conducted numerous meetings, workshops and discussions regarding energy efficiency standards for fluorescent lamp ballasts resulting in the publication of a Draft Report on Potential Impact of Possible Energy Efficiency Levels for Fluorescent Lamp Ballasts, July, 1997; a Summary of Inputs for the Technical Support Document: Energy Efficiency Standards for Fluorescent Lamp Ballasts, April 20, 1998; and a Ballast Manufacturer Impact Analysis Analytical Approach, April 10, 1998. 62 FR 38222 (July 17, 1997) and 63 FR 16706 (April 16, 1998). A workshop was conducted on these analyses and documents on April 28,
1998. 63 FR 16706 (April 6, 1998). Based on comments and the growing popularity of electronic ballasts with T8 lamps, the Department solicited further comments specifically on the issue of whether market shifts (e.g., from T12 to T8 lamps) should be considered in determining the impact of an energy conservation standard on commercial and industrial consumers, manufacturers and the nation. 63 FR 58330 (October 30, 1998). Further comments on the above analyses, and modifications resulting from those comments, culminated in publishing a revised analysis on the Codes and Standards internet site (http://www.eren.doe.gov/buildings/ codes_standards/appblfr/ballast.html) in April of 1999. We also conducted a workshop reviewing this analysis on June 1, 1999. 64 FR 24634 (May 7, 1999). On the basis of comments received on these documents, DOE reviewed its analysis and prepared a TSD which also was placed on the above Codes and Standards internet site. On October 12 and 13, 1999, the National Electrical Manufacturers Association convened a meeting where its members negotiated with representatives of the American Council for an Energy Efficient Economy, the Natural Resources Defense Council, the Alliance to Save Energy and the Oregon Natural Resources Defense Council, the representatives of the American Council for an Energy Efficient Economy, the Natural Resources Defense Council, the Alliance to Save Energy and the Oregon Energy Office to produce a joint comment proposal for amended fluorescent lamp ballast standards. (Hereafter referred to as the Joint Comment.) The Department was invited and attended as an observer. We evaluated the impacts of the joint comment proposal and issued a proposed rule based on those comments. 65 FR 14128 (March 15, 2000). (Hereafter referred to as the Proposed Rule.) A public hearing on the proposed rule was held in Washington, D.C. on April 18, 2000.

II. General Discussion

a. Test Procedures

The Act provides that no standard for a product be established if there is no test procedure for the product. The Amendments of 1988 set forth test procedures and energy conservation standards for fluorescent lamp ballasts. Based upon the Amendments of 1988, the Department published the Federal test procedures for fluorescent lamp ballasts. 56 FR 18682 (April 24, 1991). As of the effective date of the extant energy conservation standards (ballasts manufactured on or after January 1, 1990) or incorporated into a luminaire by a luminaire manufacturer on or after April 1, 1991), all ballasts, whether energy efficient magnetic, cathode cutout or electronic, for use in connection with F40T12, F66T12 or F66T12HO lamps, are required to meet a ballast efficacy factor as measured by the Federal test procedures. No one has petitioned DOE indicating the Department’s test procedures are inadequate for testing fluorescent lamp ballasts using the above technologies. Since these are the same technologies considered in today’s final rule, the Department considers the current Federal test procedures applicable and appropriate for today’s final rule. Furthermore, stakeholders commenting in the Joint Comments stated that they consider the current Federal test procedures applicable and appropriate for their recommended ballast standards. (Joint Comment, No. 91 at 6).

b. Technological Feasibility

1. General

There are lamp ballasts in the market at all of the efficiency levels prescribed in today’s final rule. The Department, therefore, believes all of the efficiency levels contained in today’s final rule are technologically feasible.

2. Maximum Technologically Feasible Levels

The Act requires the Department, in considering any new or amended standards, to consider those that “shall be designed to achieve the maximum improvement in energy efficiency * * * which the Secretary determines is technologically feasible and economically justified.” (Section 325 (o)(2)(A)). Accordingly, for each class of product considered in this rulemaking, a maximum technologically feasible (max tech) design option was identified and considered as discussed in the Proposed Rule. 65 FR 14128, 14130 (March 15, 2000).

c. Energy Savings

1. Determination of Savings

The Department forecasted energy savings through the use of a national energy savings (NES) spreadsheet as discussed in the Proposed Rule. 65 FR 14128, 14131 (March 15, 2000).

2. Significance of Savings

Under section 325(o)(3)(B) of the Act, the Department is prohibited from adopting a standard for a product if that standard would not result in “significant” energy savings. While the term “significant” has never been defined in the Act, the U.S. Court of Appeals, in Natural Resources Defense Council v. Herrington, 768 F.2d 1355, 1373 (D.C. Cir. 1985), concluded that Congressional intent in using the word “significant” was to mean “non-trivial.”

d. Rebuttable Presumption

The National Appliance Energy Conservation Act established new criteria for determining whether a standard level is economically justified. Section 325(o)(2)(B)(iii) states:

“If the Secretary finds that the additional cost to the consumer of purchasing a product complying with an energy conservation standard level will be less than three times the value of the energy * * * savings during the first year that the consumer will receive as a result of the standard, as calculated under the applicable test procedure, there shall be a rebuttable presumption that such standard level is economically justified. A determination by the Secretary that such criterion is not met shall not be taken into consideration in the Secretary’s determination of whether a standard is economically justified.”

If the increase in initial price of an appliance due to a conservation standard would repay itself to the consumer in energy savings in less than three years, then we presume that such standard is economically justified. This presumption of economic justification can be rebutted upon a proper showing.

e. Economic Justification

As noted earlier, Section 325(o)(2)(B)(i) of the Act provides seven factors to be evaluated in determining whether a conservation standard is economically justified.

1. Economic Impact on Manufacturers and Consumers

We considered the economic impact on manufacturers and consumers as discussed in the Proposed Rule. 65 FR 14128, 14132 (March 15, 2000).

2. Life-Cycle Costs

We considered life cycle costs as discussed in the Proposed Rule. 65 FR 14128, 14132 (March 15, 2000).

3. Energy Savings

While significant conservation of energy is a separate statutory requirement for imposing an energy conservation standard, the Act requires DOE, in determining the economic justification of a standard, to consider the total projected energy savings that are expected to result directly from revised standards. The Department used the NES spreadsheet results, discussed earlier, in its consideration of total projected savings.
4. Lessening of Utility or Performance of Products

This factor cannot be quantified. In establishing classes of products and by providing exemptions, the Department has eliminated any degradation of utility or performance in the products in today’s final rule.

An issue of utility that was considered was the possibility of interference with certain equipment, such as medical monitoring equipment, caused by the high frequency of electronic ballasts. To prevent any interference that cannot be solved by electronic ballast designers, the Department is not establishing a standard for T8 ballasts, thereby allowing magnetic T8 ballasts for such applications.

5. Impact of Lessening of Competition

It is important to note that this factor has two parts; on the one hand, it assumes that there could be some lessening of competition as a result of standards; and on the other hand, it directs the Attorney General to gauge the impact, if any, of that effect.

In order to assist the Attorney General in making such a determination, the Department provided the Attorney General with copies of the Proposed Rule and the Technical Support Document for review. In a letter responding to the Proposed Rule, the Attorney General concluded “that the proposed standards would not adversely affect competition in the ballast market.” (Department of Justice, No. 99). The letter is printed at the end of today’s rule.

6. Need of The Nation To Conserve Energy

We reported the environmental effects from today’s final rule in the Proposed Rule. 65 FR 14128, 14153 (March 15, 2000).

7. Other Factors

This provision allows the Secretary of Energy, in determining whether a standard is economically justified, to consider any other factors that the Secretary deems to be relevant. Under this factor, the Secretary has decided to consider the life-cycle cost impacts on those subgroups of consumers who, if forced by standards to purchase electronic ballasts, would choose to switch from T12 to T8 lighting systems. This analysis is part of the Department’s continuing effort to study the economic impact of standards on consumers. While the Department does not believe it can develop levels based on consumer purchasing behavior given the findings of the court in Natural Resources Defense Council v. Herrington, 768 F. 2d 1355, 1406–07 (D.C. Cir. 1985), where the court stated that “the entire point of a mandatory program was to change consumer behavior” and “the fact that consumers demand short payback periods was itself a major cause of the market failure that Congress hoped to correct,” the Department considered the impact of likely consumer actions.

The Secretary also has strongly considered the Joint Comment. The Joint Comment segments the ballast market by defining replacement ballasts and proposed extended implementation dates for all segments of the ballast market to comply with the new standards. The Joint Comment also includes certain exemptions. All of these applications are oriented toward mitigating financial impacts on manufacturers and ensuring a minimal level of disruption to the ballast replacement marketplace.

III. Methodology

As discussed in the Proposed Rule, the Department developed new analytical tools for this rulemaking. The first tool was a spreadsheet that calculates Life-Cycle-Cost (LCC) and Payback. The second calculates national energy savings (NES). The Department also completely revised the methodology used in assessing manufacturer impacts including the adoption of the Government Regulatory Impact Model (GRIM). Additionally, DOE developed a new approach using the National Energy Modeling System (NEMS) to estimate impacts of ballast energy efficiency standards on electric utilities and the environment. 65 FR 14128, 14133–35 (March 15, 2000).

IV. Discussion of Comments

As noted above, DOE proposed to revise the energy conservation standards applicable to fluorescent lamp ballasts on March 4, 1994. On January 31, 1995, the Department published a rulemaking determination that, based on comments received, it would issue a revised notice of proposed rulemaking for fluorescent lamp ballasts. Since that time, the Department conducted numerous meetings, workshops and discussions regarding energy efficiency standards for fluorescent lamp ballasts, resulting in a Draft Report on Potential Impact of Possible Energy Efficiency Levels for Fluorescent Lamp Ballasts, July, 1997; Summary of Inputs for the Technical Support Document: Energy Efficiency Standards for Fluorescent Lamp Ballasts, April 20, 1998; and Ballast Manufacturer Impact Analysis Analytical Approach, April 10, 1998. 62 FR 38222 (July 17, 1997) and 63 FR 16706 (April 6, 1998). A workshop was conducted on these analyses and documents on April 28, 1998. 63 FR 16706 (April 6, 1998). Based on comments and the growing popularity of electronic ballasts with T8 lamps, the Department solicited further comments specifically on the issue of whether market shifts (e.g., from T12 to T8 lamps) should be considered in determining the impact of an energy conservation standard on commercial and industrial consumers, manufacturers and the nation. 63 FR 58330 (October 30, 1998). Further comments on the above analyses, and modifications resulting from those comments, culminated in publishing an analysis on the Codes and Standards Internet site [http://www.eren.doe.gov/buildings/codes_standards/applbl/ ballast.html] in April of 1999. We also conducted a workshop on that analysis on June 1, 1999. 64 FR 24634 (May 7, 1999). These analyses presented the impacts of standards on consumers, the nation and manufacturers. The Department considered all comments regarding this rulemaking made prior to the three documents and posted revised analyses listed above, to have been resolved or contained within comments pertaining to those documents. Therefore, in the Proposed Rule, the Department only addressed comments made relative to those documents. Additionally, the National Electrical Manufacturers Association (NEMA), the American Council for an Energy Efficient Economy (ACEEE), the Natural Resources Defense Council (NRDC), the Alliance to Save Energy (Alliance) and the Oregon Energy Office (Oregon) submitted a joint comment for amended fluorescent lamp ballast standards. (Joint Comment, No. 91).

The Joint Comment presented the Department with a proposal for segmenting the market and extending the implementation dates to mitigate the burdens to acceptable levels while maintaining most of the benefits of standards. For example, the phase-in period for the standards proposed in the Joint Comment is approximately five years, until April 1, 2005. This allows the manufacturers and the marketplace additional time to make an orderly transition from energy efficient magnetic ballasts to the more efficient ballasts. In addition, the Joint Comment proposed an additional five-year phase-in for standards for ballasts intended for replacement market. While it is generally impossible to distinguish a ballast for the replacement market from one used in new construction or
renovation, the Joint Comment recommended that replacement ballasts be labeled for replacement use, have output leads which, when fully extended, are less than the length of the lamp it is intended to operate and they are shipped in packages of ten or less. In addition to the above, the Joint Comment also proposed limiting the exemptions relative to the extant standards. For example, the standards found in the National Appliance Energy Conservation Amendments of 1988 provided exemptions for cold temperature and dimming ballasts. The Joint Comment proposed limiting the exemption for cold temperature ballasts to those capable of being dimmed to 50 percent or less of its maximum output and the cold temperature ballast exemption would be limited to ballasts for use with two F96T12HO lamps at an ambient temperature of \( -20^\circ F \) and which is for use with outdoor signs.

While these stakeholders had previously commented on the above three documents and the web posting, the Department stated in the Proposed Rule, that based on their joint comment, the Joint Comment superseded their previous comments. Therefore, their previous comments were not addressed in the Proposed Rule.

NEMA, supported by MagneTek, Advance Transformer, OSRAM SYLVANIA, Power Lighting Products and Robertson Worldwide, testified at the Proposed Rule public hearing that they support the energy conservation standards contained in the Proposed Rule and requested that DOE issue those proposed energy conservation standards. They also stated the submission of the Joint Comment does not and should not supersede their previous comments. (NEMA, No. 95CC; MagneTek, No. 95BB; Advance, No. 95DD; OSRAM, No. 95HH; Power Lighting, No. 95GG; Robertson, No. 95FF). NEMA stated and commented that they are not requesting any revisions to the TSD, but are requesting that DOE acknowledge that there are differences of opinion regarding the derivation of certain inputs to the TSD. NEMA mentioned four items in particular: end-user ballast prices, electricity prices for magnetic ballast users, comparing T12 systems to T8 systems and comparing fixtures that use one ballast to fixtures that use more than one ballast. (NEMA, No. 99 at 3).

ACEEE commented it supports the Proposed Rule. While fully supporting the Proposed Rule, ACEEE also stated that it questions some aspects of the analysis provided in its previous comments. ACEEE specifically stated that it believes the manufacturer impact analysis significantly overstates the impacts on manufacturers and that it disagrees with the comments raised by NEMA. However, ACEEE is not asking for any revisions to the analysis, but that DOE should merely note the items that are in question. (ACEEE, No. 96).

NRDC commented that it supports the Proposed Rule and, while it does not endorse all of the steps of the analysis, it stated that DOE was correct in responding only to the Joint Comment. (NRDC, No. 97).

In a consensus process all parties typically give ground on positions held to arrive at a mutually agreeable outcome. Based on previous comments, we believed this to be the case for the stakeholders in this rulemaking in arriving at the recommended standards in the Joint Comments. For example, some stakeholders had previously commented that the ballast prices used in the Department’s analysis were too high, and some had previously commented that the ballast prices used were too low. Since these stakeholders had agreed to a common overall position in the Joint Comments, we believed it unnecessary to discuss the details of their previous disagreeing comments. However, the Department acknowledges that there are differences of opinion on the various inputs and details of the analysis contained in the TSD including the four areas mentioned by NEMA.

The Department acknowledges end-user ballast prices are difficult to obtain since ballasts are part of lighting systems. However, the Department believes the end-user ballast prices used in the TSD are the best available and that the range of prices used represent a reasonable range of ballast prices paid by end-users. The Department acknowledges NEMA and ACEEE disagree with the prices used.

The Department examined state by state shipment data and electric prices submitted by NEMA and, after running a regression analysis on the data, found extremely low correlation between the magnetic/electronic ballast mix and state electricity price. Therefore, we did not discriminate between types of ballast users and ranges of electricity prices. The Department acknowledges NEMA continues to believe magnetic ballast users enjoy lower electricity prices than electronic ballast users. The Department did report and consider the impacts of consumers switching from T12 systems to T8 systems and from multiple magnetic ballast fixtures to single electronic ballast fixtures. The Department continues to believe that is the way many consumers will respond to today’s standard. The Department acknowledges NEMA’s belief those comparisons should not be made in the rule.

In addition to the above four items, Advance also commented that there is undue emphasis in the Proposed Rule on a scenario in which a major U.S. ballast factory is closed in the base case. Advance asks DOE to rephrase its comments on this sensitivity analysis. (Advance, No. 95DD).

Based on the dwindling U.S. ballast manufacturing job market from 1996, when NEMA testified before the U.S. House of Representatives Subcommittee on Energy and Power that 4,000 U.S. ballast manufacturing jobs would be at risk from an electronic ballast rule, to 1998, when the Department conducted its MFA and found only 738 U.S. ballast manufacturing jobs exist; it seemed reasonable to consider a sensitivity scenario where such job loss continued. However, no undue emphasis was placed on this scenario, and the Department acknowledges there is no testimony or evidence that Advance would close its major U.S. ballast factory and that the scenario is hypothetical.

Additionally, the Department asked for comments in the Proposed Rule on two issues to which NEMA responded. (NEMA, No. 98 at 4). The first issue was the validity of the analytical method used in the Proposed Rule to determine the impact of the standard on the national demand for labor. NEMA believes the method is inaccurate and that it is extremely difficult to make predictions regarding how expenditures in various sectors of the economy will result in labor demand 10 to 30 years in the future. The Department will continue to explore this issue in other rules in an effort to capture the total employment impact of energy conservation standards, both on manufacturers and the nation at large.

The second issue was how the Proposed Rule could have been written to make it easier to understand. NEMA stated that the Proposed Rule was well written and easy to understand if the party reading it had technical knowledge of the subject and that the style was an improvement over past Federal Register notices.

V. Analytical Results and Conclusion

Analytical Results

The Department presented the results of its analytical analysis, which was based on the Joint Comment, as discussed in the Proposed Rule, and no changes have been made to the analysis.
for today's final rule. 65 FR 14128, 14141–54 (March 15, 2000).

The rulemaking process is such that months to years can take place between the time an analysis is completed and a final rule, based on that analysis, is issued. During that time span, conditions or data are likely to change and the Department attempts to insure that any such changes will not compromise the robustness of the analysis or lead to a different conclusion. For example, the Proposed Rule used the 1999 Annual Energy Outlook forecast of electric prices and electrical generation mix to determine energy savings and net present value. Since the analysis was completed, the 2000 AEO forecast became available. The Department examined the impact of the 2000 AEO forecast on energy savings and net present value and found its impact on energy savings would be to change the range of energy savings reported in the Proposed Rule of 1.20 to 2.32 Quads to 1.23 to 2.39 Quads and the range of net present values reported in the Proposed Rule of 1.42 to 2.60 billion dollars to 1.42 to 2.62 billion dollars. The Department does not consider these changes to be meaningful or a basis to revise the analysis. Additionally, it would be unfair and incorrect to select only one portion of the analysis for revision, such as the electric price, without also examining other related inputs, such as equipment prices, which also might have slightly changed.

There also are other changes which have occurred, possibly in response to the Proposed Rule, which would probably somewhat revise the numerical results of a revised analysis. For example, OSRAM SYLVANIA has purchased the Motorola Lighting Division which would probably slightly change a revised MIA. However, the Department believes no changes to the MIA are warranted because of this change since OSRAM SYLVANIA supported today's final rule at the public hearing, which occurred after the purchase. While the Department acknowledges the analysis performed for the Proposed Rule does not fully reflect some of the changes in the industry and energy markets that have occurred more recently, the Department believes that this analysis is still a valid basis for today's final rule.

Conclusion

Section 325(l) of the Act specifies that the Department must consider, for amended standards, those standards that "achieve the maximum improvement in energy efficiency which the Secretary determines is technologically feasible and economically justified" and which will "result in significant conservation of energy.” Accordingly, the Department first considered the benefits and burdens of the max tech level of efficiency, i.e., electronic ballast standards. Furthermore, in considering this standard level, the Department considered the staggered implementation scheme and exemptions recommended in the Joint Comments. The Department concludes that an electronic ballast standard saves a significant amount of energy. The energy savings reported in the Department's analysis for an electronic ballast standard based on the Joint Comments ranged between 1.20 to 2.32 Quads of energy, not including the HVAC effects. The Department considers energy savings within this range to be significant. Furthermore, these energy savings are estimated to result in carbon emission reductions of 11 to 19 million metric tons and NOx emission reductions of 34 to 60 thousand metric tons.

The Department concludes that an electronic ballast standard is technologically feasible as these products are currently available and comprise roughly half of the market. In determining the economic justification of the Proposed Rule, which is the same as today's final rule, the Department considered the burdens and benefits of an electronic ballast standard. 65 FR 14128, 14154 (March 15, 2000).

The burdens accrue to the manufacturers of magnetic ballasts, some of their suppliers and employees, and to some commercial and industrial consumers who, because of factors such as lower than average electric costs or hours of operation, will experience increased life cycle costs. The largest of these burdens accrue to the manufacturing sector. In the Proposed Rule, the Department estimated that businesses involved in the ballast industry would have net losses of between 47.4 and 121.4 millions of dollars of NPV as a result of electronic standards starting in the year 2003.

On the other hand, most commercial and industrial consumers will benefit from lower life cycle costs due to energy savings. In the Proposed Rule, the Department estimated the value to society of these savings to range from 2.43 to 3.86 billions of dollars of NPV as a result of electronic standards starting in the year 2003. These savings to the nation's businesses and industries potentially produce increased jobs in the economy at large and the energy savings result in reduced atmospheric emissions.

The Department gave considerable weight to the recommendations of the Joint Comment which attempts to balance these burdens and benefits. The Joint Comment proposal reduces energy savings by approximately 24 percent compared to the Department's analysis. These reductions come mainly from delaying the effective dates of the standards from the year 2003 to 2005 and later for replacement ballasts. However, these same extensions also reduce the impacts of the standards on manufacturers from what the Department estimated to levels which the manufacturers state are mitigated. (Joint Comment, No. 91 at 7). While the Department did not revise the MIA for the Proposed Rule or today's final rule, we believe the manufacturers' statement in the Joint Comment, that the impacts on them from the proposal are mitigated, is sufficient to conclude that, given the benefits, the standards in today's final rule are economically justified.

The Energy Policy and Conservation Act directs the Department to consider the impact of any lessening of competition that is likely to result from the standards, as determined by the Attorney General. In a letter responding to the Proposed Rule, the Attorney General concluded "that the proposed standards would not adversely affect competition in the ballast market.” (Department of Justice, No. 99).

After carefully considering the analysis, comments and benefits versus burdens, the Department is amending the energy conservation standards for fluorescent lamp ballasts as proposed in the Proposed Rule. The Department concludes this standard saves a significant amount of energy and is technologically feasible and economically justified. In determining economic justification, the Department finds that the benefits of energy savings, consumer life cycle cost savings, national net present value increase, job creation and emission reductions resulting from the standards outweigh the burdens of the loss of manufacturer net present value, possible plant closings and job loss and consumer life cycle cost increases for some users of fluorescent lamp ballasts covered by today's Final Rule.

VI. Procedural Issues and Regulatory Review

a. Review Under the National Environmental Policy Act

In issuing the March 4, 1994 Proposed Rule for energy efficiency standards for
eight products, one of which was fluorescent lamp ballasts, the Department prepared an Environmental Assessment (EA) (DOE/EA–0819) that was published within the Technical Support Document for that Proposed Rule. (DOE/EE–0009, November 1993.) We found the environmental effects associated with various standard levels for fluorescent lamp ballasts, as well as the other seven products, to be not significant, and we published a Finding of No Significant Impact (FONSI). 59 FR 15868 (April 5, 1994).

In conducting the analysis for the Proposed Rule, upon which today’s final rule is based, the Department evaluated design options as suggested in comments. As a result, the energy savings estimates and resulting environmental effects from revised energy efficiency standards for fluorescent lamp ballasts in that analysis differ somewhat from those that we presented for fluorescent lamp ballasts in the 1994 Proposed Rule. Nevertheless, the environmental effects expected from today’s final rule fall within ranges of environmental impacts from the revised energy efficiency standards for fluorescent lamp ballasts that DOE found in the FONSI not to be significant.

b. Review Under Executive Order 12866, “Regulatory Planning and Review”

Today’s regulatory action has been determined to be an “economically significant regulatory action” under Executive Order 12866, “Regulatory Planning and Review.” (58 FR 51735, October 4, 1993). Accordingly, today’s action was subject to review under the Executive Order by the Office of Information and Regulatory Affairs (OIRA) of the Office of Management and Budget. The draft submitted to OIRA and other documents submitted to OIRA for review have been made a part of the rulemaking record and are available for public review in the Department’s Freedom of Information Reading Room, 1000 Independence Avenue, SW, Washington, DC 20585, between the hours of 9 a.m. and 4 p.m., Monday through Friday, telephone (202) 566–3142.

The Proposed Rule contained a summary of the Regulatory Analysis which focused on the major alternatives considered in arriving at the approach to improving the energy efficiency of consumer products. The reader is referred to the complete draft “Regulatory Impact Analysis,” which is contained in the TSD, available as indicated at the beginning of this notice. It consists of: (1) A statement of the problem addressed by this regulation, and the mandate for government action; (2) a description and analysis of the feasible policy alternatives to this regulation; (3) a quantitative comparison of the impacts of the alternatives; and (4) the national economic impacts of the proposed standard.

c. Review under the Regulatory Flexibility Act

The Regulatory Flexibility Act, 5 U.S.C. 601 et seq., requires an assessment of the impact of regulations on small businesses. Small businesses are defined as those firms within an industry that are privately owned and less dominant in the market.

The Standard Industrial Classification (SIC) Code for fluorescent lamp ballast manufacturers is 36124. To be categorized as a “small” fluorescent lamp ballast manufacturer, a firm must employ no more than 750 employees.

In the fluorescent lamp ballast industry, there is one “small” manufacturer who produces both “affected” magnetic and electronic ballasts. The “small” manufacturer has its electronic and magnetic ballast manufacturing operations in the same plant. Its smaller size and less automated operations would seem to provide it with the flexibility to adapt to a new electronic ballast standard without significant asset write-offs or plant closures.

The negative impacts on the “small” manufacturer’s cash flows from operations, however, would likely be similar in proportion to those of the larger manufacturers.

Since only one of the seven manufacturers of fluorescent lamp ballasts is “small,” the Department concludes that today’s final rule would not affect a “substantial” number of “small” manufacturers. In addition, the firm’s flexible manufacturing operations, along with the expected proportional financial impacts, strongly suggests that the energy-efficiency standards would not produce “significant” economic impacts on that one manufacturer. Furthermore, the small manufacturer is a signer of the Joint Comment.

In view of the foregoing, the Department has determined and hereby certifies pursuant to section 605(b) of the Regulatory Flexibility Act that, for this particular industry, the standard levels in today’s final rule will not “have a significant economic impact on a substantial number of small entities,” and it is not necessary to prepare a regulatory flexibility analysis.

d. Review Under the Paperwork Reduction Act

No new information or record keeping requirements are imposed by this rulemaking. Accordingly, no Office of Management and Budget clearance is required under the Paperwork Reduction Act. 44 U.S.C. 3501 et seq.

e. Review Under Executive Order 12988, “Civil Justice Reform”

With respect to the review of existing regulations and the promulgation of new regulations, Section 3(a) of Executive Order 12988, “Civil Justice Reform,” 61 FR 4729 (February 7, 1996), imposes on Executive agencies the general duty to adhere to the following requirements: (1) Eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; and (3) provide a clear legal standard for affected conduct rather than a general standard and promote simplification and burden reduction. With regard to the review required by section 3(a), section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) Clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in section 3(a) and section 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE reviewed today’s final rule under the standards of section 3 of the Executive Order and determined that, to the extent permitted by law, the final regulations meet the relevant standards.

f. “Takings” Assessment Review

DOE has determined pursuant to Executive Order 12630, “Governmental Actions and Interference with Constitutionally Protected Property Rights,” 52 FR 8859 (March 18, 1988), that this regulation would not result in any takings that might require compensation under the Fifth Amendment to the United States Constitution.

g. Review under Executive Order 13132

Executive Order 13132 (64 FR 43255, August 4, 1999) imposes certain
requirements on agencies formulating and implementing policies or regulations that preempt State law or that have federalism implications. Agencies are required to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and carefully assess the necessity for such actions. Agencies also must have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications. DOE published its intergovernmental consultation policy on March 14, 2000. (65 FR 13735). DOE has examined today’s final rule and has determined that it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. State regulations that may have existed on the products that are the subject of today’s final rule were preempted by the Federal standards established in the NAECA Amendments of 1988. States can petition the Department for exemption from such preemption based on criteria set forth in EPCA.

h. Review Under the Unfunded Mandates Reform Act

With respect to a proposed regulatory action that may result in the expenditure by State, local and tribal governments, in the aggregate, or by the private sector of $100 million or more (adjusted annually for inflation), section 202 of the Unfunded Mandates Reform Act of 1995 (UMRA) requires a Federal agency to publish estimates of the resulting costs, benefits and other effects on the national economy. 2 U.S.C. 1532(a), (b). UMRA also requires each Federal agency to develop an effective process to permit timely input by state, local, and tribal governments on a proposed significant intergovernmental mandate. The Department’s consultation process is described in a notice published in the Federal Register on March 18, 1997 (62 FR 12820). Today’s final rule may impose expenditures of $100 million or more on the private sector. It does not contain a Federal intergovernmental mandate.

Section 202 of UMRA authorizes an agency to respond to the content requirements of UMRA in any other statement or analysis that accompanies the proposed rule. 2 U.S.C. 1532(c). The content requirements of section 202(b) of UMRA relevant to a private sector mandate substantially overlap the economic analysis requirements that apply under section 325(o) of EPCA and Executive Order 12866. The Supplementary Information section of the Notice of Final Rulemaking and “Regulatory Impact Analysis” section of the TSD for this Final Rule responds to those requirements.

Under section 205 of UMRA, the Department is obligated to identify and consider a reasonable number of regulatory alternatives before promulgating a rule for which a written statement under section 202 is required. DOE is required to select from those alternatives the most cost-effective and least burdensome alternative that achieves the objectives of the rule unless DOE publishes an explanation for doing otherwise or the selection of such an alternative is inconsistent with law. As required by section 325(o) of the Energy Policy and Conservation Act (42 U.S.C. 6295(o)), today’s final rule establishes energy conservation standards for fluorescent lamp ballasts that are designed to achieve the maximum improvement in energy efficiency that DOE has determined to be both technologically feasible and economically justified. A full discussion of the alternatives considered by DOE is presented in the “Regulatory Impact Analysis” section of the TSD for today’s final rule.

i. Review Under the Treasury and General Government Appropriations Act of 1999

Section 654 of the Treasury and General Government Appropriations Act of 1999 (Pub. L. No. 105–277) requires Federal agencies to issue a Family Policymaking Assessment for any proposed rule or policy that may affect family well-being. Today’s final rule would not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

j. Review Under the Plain Language Directives

Section 1(b)(12) of Executive Order 12866 requires that each agency draft its regulations to be simple and easy to understand, with the goal of minimizing the potential for uncertainty and litigation arising from such uncertainty. Similarly, the Presidential memorandum of June 1, 1998 (63 FR 31883) directs the heads of executive departments and agencies to use plain language in all proposed and final rulemaking documents published in the Federal Register.

Today’s rule uses the following general techniques to abide by Section 1(b)(12) of Executive Order 12866 and the Presidential memorandum of June 1, 1998:

- Organization of the material to serve the needs of the readers (stakeholders).
- Use of common, everyday words in short sentences.
- Shorter sentences and sections.

k. Congressional Notification

As required by 5 U.S.C. 801, DOE will submit to Congress a report regarding the issuance of today’s final rule prior to the effective date set forth at the outset of this notice. DOE also will submit the supporting analyses to the Comptroller General (GAO) and make them available to each House of Congress. The report will state that it has been determined that the rule is a “major rule” as defined by 5 U.S.C. 804(2).

List of Subjects in 10 CFR Part 430


Issued in Washington, DC, on August 22, 2000.

Dan W. Reicher,
Assistant Secretary, Energy Efficiency and Renewable Energy.

For the reasons set forth in the preamble, Part 430 of Chapter II of Title 10, Code of Federal Regulations is amended, as set forth below.

Part 430—ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS


2. Section 430.32 of subpart C is amended by revising paragraph (m) to read as follows:

§ 430.32 Energy and water conservation standards and effective dates.

(m) Fluorescent lamp ballasts.

(1) Except as provided in paragraphs (m)(2), (m)(3), and (m)(4) of this section, each fluorescent lamp ballast—

(A) Manufactured on or after January 1, 1990;

(B) Sold by the manufacturer on or after April 1, 1990; or

(C) Incorporated into a luminaire by a luminaire manufacturer on or after April 1, 1991; and

(ii) Designed—

(A) To operate at nominal input voltages of 120 or 277 volts;

(B) To operate with an input current frequency of 60 Hertz; and
(C) For use in connection with an F40T12, F96T12, or F96T12HO lamps shall have a power factor of 0.90 or greater and shall have a ballast efficacy factor not less than the following:

<table>
<thead>
<tr>
<th>Application for operation of</th>
<th>Ballast input voltage</th>
<th>Total nominal lamp watts</th>
<th>Ballast efficacy factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>One F40 T12 lamp</td>
<td>120</td>
<td>40</td>
<td>1.805</td>
</tr>
<tr>
<td>Two F40 T12 lamps</td>
<td>120</td>
<td>80</td>
<td>1.060</td>
</tr>
<tr>
<td>Two F96T12 lamps</td>
<td>120</td>
<td>150</td>
<td>0.570</td>
</tr>
<tr>
<td>Two F96T12HO lamps</td>
<td>120</td>
<td>220</td>
<td>0.390</td>
</tr>
</tbody>
</table>

(2) The standards described in paragraph (m)(1) of this section do not apply to—

- (A) A ballast that is designed for dimming or for use in ambient temperatures of 0 °F or less, or a ballast that:
  - (i) A ballast that is designed for dimming or for use in ambient temperatures of 0 °F or less and for use only in residential building applications.

<table>
<thead>
<tr>
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<th>Total nominal lamp watts</th>
<th>Ballast efficacy factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>One F40 T12 lamp</td>
<td>120</td>
<td>40</td>
<td>2.29</td>
</tr>
<tr>
<td>Two F40 T12 lamps</td>
<td>120</td>
<td>80</td>
<td>1.17</td>
</tr>
<tr>
<td>Two F96T12 lamps</td>
<td>120</td>
<td>150</td>
<td>0.63</td>
</tr>
<tr>
<td>Two F96T12HO lamps</td>
<td>120</td>
<td>220</td>
<td>0.39</td>
</tr>
</tbody>
</table>

- (B) A ballast that has a power factor of less than 0.90 and is designed for use in an outdoor sign;

- (C) A ballast that has a power factor of less than 0.90 and is designed and labeled for use only in residential building applications; or

- (D) A replacement ballast as defined in paragraph (m)(4)(ii) of this section.

(ii) Designed—

- (A) To operate at nominal input voltages of 120 or 277 volts;
- (B) To operate with an input current frequency of 60 Hertz; and
- (C) For use in connection with an F40T12, F96T12, or F96T12HO lamps; shall have a power factor of 0.90 or greater and shall have a ballast efficacy factor not less than the following:

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</tbody>
</table>
Appendix

[The following letter from the Department of Justice will not appear in the Code of Federal Regulations.]

DEPARTMENT OF JUSTICE

Antitrust Division

Main Justice Building, 950 Pennsylvania Avenue, N.W., Washington, D.C. 20530-0001, (202) 514-2401/(202) 616-2645

Mary Anne Sullivan,

General Counsel, Department of Energy,

Washington, DC 20585.

Dear Ms. Sullivan:

I am responding to your March 28, 2000 letter seeking the views of the Attorney General about the potential impact on competition of the proposed energy efficiency standards for fluorescent lamp ballasts. Your request was submitted pursuant to Section 325(o)(2)(B)(i) of the Energy Policy and Conservation Act, 42 U.S.C. §§ 6291, 6295, which requires the Attorney General to make a determination of the impact of any lessening of competition that is likely to result from the imposition of proposed energy efficiency standards. The Attorney General’s responsibility for responding to requests from other departments about the effect of a program on competition has been delegated to the Assistant Attorney General for the Antitrust Division in 28 CFR § 0.40(g).

We have reviewed the proposed standards and the supplementary information published in the Federal Register notice and submitted to the Attorney General, which includes information provided to the Department of Energy by ballast manufacturers, their suppliers, and their customers. The proposed standards could not be met by most types of magnetic fluorescent lamp ballasts and would likely result in the increased use of electronic ballasts. Our conclusion is that the proposed standards would not adversely affect competition in the ballast market.

In reaching this conclusion we note that production of electronic ballasts has already grown to more than 60 percent of industry sales, and that each of the seven manufacturers that together account for more than 95 percent of the domestic ballast market already produces electronic ballasts. The ballast manufacturers have said the proposed standards would not force any of them to exit the ballast business.

Further, the proposed standards would be phased in—five years for new ballasts and ten years for replacement ballasts—and include a number of exemptions, such as an exemption for residential applications. Finally, there is no indication in the record that the proposed standards would limit electronic ballast production by any firms and therefore would not likely reduce competition in the production of electronic ballasts. We therefore conclude that the proposed standards will not likely reduce competition in the sale of ballasts.

Sincerely,

Joel I. Klein.

[FR Doc. 00-24004 Filed 9-18-00; 8:45 am]

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