

This proposed revision would remove regulatory language at 7 CFR 253.6(f)(2) that imposes a maximum limit on dependent care deductions, thereby aligning the FDPIR regulations with current FDPIR and SNAP policy.

List of Subjects in 7 CFR Part 253

Administrative practice and procedure, Food assistance programs, Grant programs, Social programs, Indians, Reporting and recordkeeping requirements, Surplus agricultural commodities.

Accordingly, 7 CFR Part 253 is proposed to be amended as follows:

PART 253—ADMINISTRATION OF THE FOOD DISTRIBUTION PROGRAM FOR HOUSEHOLDS ON INDIAN RESERVATIONS

1. The authority citation for 7 CFR Part 253 continues to read as follows:

Authority: 91 Stat. 958 (7 U.S.C. 2011–2032).

- 2. In § 253.6:
a. Revise paragraph (d)(2)(i);
b. Redesignate paragraphs (d)(2)(ii) through (d)(2)(iv) as (d)(2)(iii) through (d)(2)(v), respectively;
c. Add new paragraph (d)(2)(ii);
d. Add new paragraph (d)(2)(vi);
e. Revise the second sentence of paragraph (e)(1)(i);
f. Add new paragraph (e)(3)(xi); and
g. Remove the second sentence of paragraph (f)(2).

The revisions and additions read as follows:

§ 253.6 Eligibility of households.

- (d) \* \* \*
(2) \* \* \*

(i) The cash value of life insurance policies and the first \$1,500 of the equity value of one bona fide pre-paid funeral agreement per household member. The equity value of a pre-paid funeral agreement is the value that can be legally converted to cash by the household member. For example, an individual has a \$1,200 pre-paid funeral agreement with a funeral home. The conditions of the agreement allow the household to cancel the agreement and receive a refund of the \$1,200 minus a service fee of \$50. The equity value of the pre-paid funeral agreement is \$1,150.

(ii) The value of funds held in retirement accounts described in sections 401(a), 403(a), 403(b), 408, 408A, 457(b), and 501(c)(18) of the Internal Revenue Code of 1986; the value of funds held in a Federal Thrift Savings Plan account as described in 5 U.S.C. 8439; and any other retirement

program or account for which a resource exclusion is allowed under the Supplemental Nutrition Assistance Program (SNAP).

\* \* \* \* \*

(vi) The value of funds held in a qualified education savings program described in section 529 of Internal Revenue Code of 1986 or in a Coverdell education savings account under section 530 of that Code, and any other education savings program or account for which a resource exclusion is allowed under SNAP.

\* \* \* \* \*

- (e) \* \* \*
(1) \* \* \*

(i) \* \* \* The income eligibility standards shall be the applicable SNAP net monthly income eligibility standards for the appropriate area, increased by the amount of the applicable SNAP standard deduction for that area.

\* \* \* \* \*

- (3) \* \* \*

(xi) Combat pay. Combat pay is defined as additional payment that is received by or from a member of the United States Armed Forces deployed to a combat zone, if the additional pay is the result of deployment to or service in a combat zone, and was not received immediately prior to serving in a combat zone.

\* \* \* \* \*

Dated: April 20, 2010.

Kevin W. Concannon,
Under Secretary, Food, Nutrition, and Consumer Services.

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DEPARTMENT OF ENERGY

10 CFR Part 431

[Docket No. EE–DET–03–001]

RIN 1904–AA86

Energy Conservation Program for Consumer Products and Certain Commercial and Industrial Equipment: Proposed Determination Concerning the Potential for Energy Conservation Standards for High-Intensity Discharge (HID) Lamps

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Proposed determination.

SUMMARY: The Energy Policy and Conservation Act (EPCA or the Act), as amended, requires the U.S. Department of Energy (DOE) to issue a final

determination by June 30, 2010, as to whether energy conservation standards for HID lamps are warranted. Pursuant to court order, this final determination must be made by June 30, 2010. This document informs interested parties of the analysis underlying this proposal, which examines the potential energy savings and whether a future energy conservation standard for this equipment would be technologically feasible and economically justified. In this document, DOE also announces the availability of a preliminary technical support document (TSD), which provides additional analysis in support of the determination. The preliminary TSD is available from the Office of Energy Efficiency and Renewable Energy’s Web site at http://www1.eere.energy.gov/buildings/appliance\_standards/commercial/high\_intensity\_lamps.html.

DATES: Written comments on this document and the preliminary TSD are welcome and must be submitted no later than May 27, 2010. For detailed instructions, see section IV “Public Participation.”

ADDRESSES: Interested parties may submit comments, identified by docket number EE–DET–03–001 and/or Regulation Identifier Number (RIN) 1904–AA86, by any of the following methods:

- 1. Federal eRulemaking Portal: http://www.regulations.gov. Follow the instructions for submitting comments.
2. E-mail: hid.determination@ee.doe.gov. Include docket number EE–DET–03–001 and/or RIN 1904–AA86 in the subject line of the message.
3. Mail: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, Mailstop EE–2J, Technical Support Document for High-Intensity Discharge (HID) Lamps, docket number EE–DET–03–001 and/or RIN 1904–AA86, 1000 Independence Avenue, SW., Washington, DC 20585–0121. Please submit one signed paper original.

4. Hand Delivery/Courier: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, 6th Floor, 950 L’Enfant Plaza, SW., Washington, DC 20024. Please submit one signed paper original.

For additional instruction on submitting comments, see section IV, “Public Participation.”

Docket: For access to the docket to read background documents, the preliminary TSD, or comments received, go to the U.S. Department of Energy, Resource Room of the Building Technologies Program, Sixth Floor, 950 L’Enfant Plaza, SW., Washington, DC

20024, (202) 586–2945, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Please call Ms. Brenda Edwards at the above telephone number for additional information about visiting the Resource Room. You may also obtain copies of certain documents in this proceeding from the Office of Energy Efficiency and Renewable Energy's Web site at [http://www1.eere.energy.gov/buildings/appliance\\_standards/commercial/high\\_intensity\\_lamps.html](http://www1.eere.energy.gov/buildings/appliance_standards/commercial/high_intensity_lamps.html).

**FOR FURTHER INFORMATION CONTACT:** Ms. Linda Graves, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies, EE–2J, 1000 Independence Avenue, SW., Washington, DC 20585–0121. Telephone: (202) 586–1851. E-mail: [Linda.Graves@ee.doe.gov](mailto:Linda.Graves@ee.doe.gov).

Ms. Jennifer Tiedeman, U.S. Department of Energy, Office of the General Counsel, GC–71, 1000 Independence Avenue, SW., Washington, DC 20585–0121. Telephone: (202) 287–6111. E-mail: [Jennifer.Tiedeman@hq.doe.gov](mailto:Jennifer.Tiedeman@hq.doe.gov).

For further information on how to submit or review public comments, contact Ms. Brenda Edwards, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, EE–2J, 1000 Independence Avenue, SW., Washington, DC 20585–0121. Telephone (202) 586–2945. E-mail: [Brenda.Edwards@ee.doe.gov](mailto:Brenda.Edwards@ee.doe.gov).

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#### **I. Summary of the Proposed Determination**

EPCA requires DOE to issue a final determination whether energy conservation standards for HID lamps would be technologically feasible, economically justified, and would result in significant energy savings. DOE has tentatively determined that such standards are technologically feasible, economically justified, and would result in significant energy savings. Thus, DOE proposes to issue a positive determination. In its analysis for this proposed determination, DOE evaluated potential standards for HID that would lead to a migration from less efficient probe-start metal halide (MH) lamps to more efficient pulse-start MH lamps and high-pressure sodium (HPS) lamps. Both pulse-start MH and HPS lamps are existing HID technologies that are technically feasible. DOE's analysis determined whether a potential standard that sets a level that eliminates inefficient probe-start MH lamps would be economically justified and would result in significant energy savings.

DOE has tentatively determined that standards for HID lamps would be expected to be economically justified from the perspective of an individual consumer. According to DOE's analysis, there is at least one set of standard levels for HID lamps which could be set that would reduce the life-cycle cost (LCC) of ownership for the typical consumer; that is, the increase in equipment cost resulting from a standard would be more than offset by energy cost savings over the life of the system.

Standards would also be cost-effective from a national perspective. The national net present value (NPV) from standards could be as much as \$15.0 billion in 2009\$ for products purchased from 2017 to 2046, assuming an annual real discount rate of 3 percent. This forecast considers only the direct financial costs and benefits of standards

to consumers, specifically the increased equipment costs of HID lamps and the associated energy cost savings. In its proposed determination analysis, DOE did not monetize or otherwise characterize any other potential costs and benefits of standards such as manufacturer impacts or power plant emission reductions. If the final determination is positive, then such additional impacts would be examined in a future analysis of the economic justification of particular standard levels in the context of a standards rulemaking that would set specific energy conservation requirements.

DOE's analysis also indicates that standards would result in significant cumulative energy savings over the analysis period (2017 to 2046)—at least 2.8 quads. This is equivalent to the annual electricity consumption of approximately 14 million U.S. homes.

Further documentation supporting the analyses described in this notice is contained in a separate preliminary TSD, available from the Office of Energy Efficiency and Renewable Energy's Web site at [http://www1.eere.energy.gov/buildings/appliance\\_standards/commercial/high\\_intensity\\_lamps.html](http://www1.eere.energy.gov/buildings/appliance_standards/commercial/high_intensity_lamps.html).

#### **A. Legal Authority**

The National Energy Conservation Policy Act of 1978 amended EPCA to add a part C to title III of EPCA<sup>1</sup> establishing an energy conservation program for certain industrial equipment. (42 U.S.C. 6311–6317) The Energy Policy Act of 1992 (EPACT), Public Law 102–486, 106 Stat. 2776 also amended EPCA, and included amendments that expanded title III to include HID lamps. Specifically, EPACT amended section 346 of EPCA (42 U.S.C. 6317) to provide in paragraph (a) that the Secretary of Energy (Secretary) must prescribe testing requirements and energy conservation standards for those HID lamps for which the Secretary determines that energy conservation standards “would be technologically feasible and economically justified, and would result in significant energy savings.” (42 U.S.C. 6317(a)(1))

Under EPCA, if DOE makes a positive determination, then it must proceed to establish testing requirements for those HID lamps to which the determination applies. (42 U.S.C. 6317(a)(1)) Subsequently, DOE will conduct a rulemaking to establish appropriate energy conservation standards. During the standards rulemaking, DOE would decide whether, and at what level(s), to

<sup>1</sup> For editorial reasons, Part C, Certain Industrial Equipment, was redesignated as Part A–1 in the United States Code.

promulgate energy conservation standards. This decision would be based on an in-depth consideration, with public participation, of the technological feasibility, economic justification, and energy savings of potential standard levels in the context of the criteria and procedures for prescribing new or amended standards established by section 325(o) and (p). (42 U.S.C. 6295(o)(p).)

### B. Background

DOE conducted previous analyses estimating the likely range of energy savings and economic benefits that would result from energy conservation standards for HID lamps, and prepared reports describing its analyses. DOE published these draft reports in June 2003 and December 2004, and made them available for public comment on the Office of Energy Efficiency and Renewable Energy's Web site at [http://www1.eere.energy.gov/buildings/appliance\\_standards/commercial/high\\_intensity\\_lamps.html](http://www1.eere.energy.gov/buildings/appliance_standards/commercial/high_intensity_lamps.html). The reports made no recommendation concerning the determination that DOE should make.

After the 2003 report, DOE received comments. The National Electrical Manufacturers Association (NEMA) encouraged DOE to extend coverage to HID lamps even if no energy conservation standard were set. (NEMA, No. 6 at pp. 1–2)<sup>2</sup> Again after the 2004 report, NEMA made a similar comment. NEMA also emphasized that “it is incumbent on DOE to state clearly in a forthcoming determination that HID lamps are ‘covered products’ and thus Federal law preempts State regulation of all HID lamps.” (NEMA, No. 15 at p. 1.)

In 2002, DOE began the analysis in preparation for a proposed determination. DOE conducted initial analyses and shared its initial findings regarding efficiency improvement in HID lamps in the June 2003 draft report. Subsequently, DOE received additional data and information provided by NEMA. More recently, NEMA provided HID lamp shipments by lamp type for 2003 to 2008, and shipments by wattage grouping (*i.e.*, low, medium, and high) for 2008 that was used in the analysis for today's proposed determination.

<sup>2</sup> A notation in the form “NEMA, No. 6 at pp. 1–2” identifies a written comment (1) made by NEMA; (2) recorded in document number 6 that is filed in the docket of the HID lamp energy conservation standards rulemaking EE–DET–03–001 and maintained in the Resource Room of the Building Technologies Program; and (3) which appears on pages 1–2 of document number 6.

### 1. Definitions

DOE reviewed the relevant portions of the Energy Independence Security Act of 2007 (EISA 2007), and 10 CFR part 431 for applicable existing definitions for use in conducting a determination for energy conservation standards for HID lamps. EISA 2007 amended EPCA, in part by adding key terms that are applicable to the HID determination, including “high intensity discharge lamp,” “mercury vapor lamp,” and “metal halide lamp.” (42 U.S.C. 6291) These terms are defined as follows:

“High intensity discharge lamp” means an electric-discharge lamp in which—

(1) The light-producing arc is stabilized by the arc tube wall temperature; and

(2) The arc tube wall loading is in excess of 3 watts (W)/centimeters squared (cm<sup>2</sup>), including such lamps that are mercury vapor, metal halide, and high-pressure sodium lamps. (42 U.S.C. 6291(46)(A).)

“Mercury vapor lamp” means a high intensity discharge lamp in which the major portion of the light is produced by radiation from mercury typically operating at a partial vapor pressure in excess of 100,000 pascals (Pa) (approximately 1 standard atmosphere). It includes clear, phosphor-coated, and self-ballasted screw-base lamps. (42 U.S.C. 6291(47)(A).)

“Metal halide lamp” means a high-intensity discharge lamp in which the major portion of the light is produced by radiation of metal halides and their product of dissociation, possibly in combination with metallic vapors. (42 U.S.C. 6291(63).)

Although current statutory definitions pertaining to HID lamps are relatively comprehensive, DOE believes that an additional definition will be necessary should DOE begin a test procedure rulemaking for HID lamps. Therefore, in the future, DOE will propose inserting a definition for “high pressure sodium lamp” into 10 CFR 431.452, “Definitions concerning high-intensity discharge lamps.”

Although low-pressure sodium (LPS) lamps are often classified as HID lamps in catalogues, they do not meet the definition of an HID lamp pursuant to EPCA, as amended. The arc tube wall loading for LPS lamps is lower than the statutorily defined 3 W/cm<sup>2</sup> threshold; therefore, LPS lamps are not HID lamps for purposes of today's proposed determination.

### 2. 2003 Draft Report

DOE received comments on the June 2003 draft report from Allegheny Power;

the American Council for an Energy-Efficient Economy (ACEEE); the California Department of Transportation (Caltrans); Delta Power Supply (Delta); EEI; NEMA; the Pennsylvania Department of Transportation (PennDOT); and Ms. Lucinda Seigel. Unlike today's proposed determination, DOE's previous reports focused primarily on MV lamps rather than all HID lamp technologies. The following is a discussion of general comments received in response to the 2003 draft report, and a limited review of specific technical comments.

Comments responding to the 2003 Draft Report were generally supportive of a positive determination, and indicated that substantial benefits could be obtained from a standard that eliminated less efficient MV lamps. Delta stated that it wanted its comment to be considered an “emphatic YES” to an HID lamp standard. (Delta, No. 9 at p. 2) Many interested parties were in favor of restrictions on MV lamps. Caltrans commented that a possible rule eliminating MV would not affect it because it had stopped installing MV products and replaced most MV fixtures with HPS. (Caltrans, No. 8 at p. 1) ACEEE commented on the 2003 draft report that “ACEEE agrees that it makes sense to establish a minimum efficacy standard that eliminates mercury vapor lamps for many, if not all, applications.” (ACEEE, No. 11 at p. 1) NEMA commented that MV lamps will have been in the marketplace for over 80 years, and energy efficient replacements in the form of HPS and MH lamps have been generally available for 40 years.

DOE also received specific technical comments regarding possible lamp efficacy (*i.e.*, a measure of the conversion of power into visible light which is the technical term for lamp efficiency in the lighting industry and which is expressed in units of lumens/W). ACEEE referenced the minimum lamp efficacy of 60 lumens/W permitted in exterior lighting by the American Society of Heating, Refrigerating and Air-Conditioning Engineers/IESNA Standard 90.1–1999. ACEEE further recommended that DOE set minimum efficacy requirements that would eliminate probe-start MH lamps greater than 150 W. (ACEEE, No. 11 at p. 2)

DOE received many comments regarding alternative, non-HID technologies, including induction and fluorescent. Non-HID technologies are achieving market penetration in lighting applications traditionally dominated by HID; however, a detailed evaluation of these non-HID technologies falls outside of the scope of today's proposed determination. DOE will more fully

consider other non-HID sources as part of a full standards rulemaking.

A comment was also received regarding the potential effect of standards on small businesses. Caltrans stated that small businesses usually are not manufacturers of lamps and ballasts and believed that the potential impact on small businesses would be minimal. (Caltrans, No. 8 at p. 1) In its technology and market assessments, DOE found that the majority of HID lamps are manufactured by a limited number of large companies. However, if DOE makes a positive determination, it will evaluate the potential effects of energy conservation standards on small businesses in subsequent HID lamp rulemakings.

### 3. 2004 Draft Report

DOE received additional comments on the December 2004 draft report from ACEEE, Benya Lighting Design (Benya), and NEMA. These comments are discussed in detail in the "Methodology" section of this notice.

## II. Discussion of the Analysis of High-Intensity Discharge Lamps

### A. Purpose and Content

DOE performed an analysis of the feasibility of achieving significant energy savings as a result of energy conservation standards for HID lamps. DOE presents the results of this analysis in a preliminary TSD for this proposed determination. In subsequent analyses for the standards preliminary analysis, NOPR, and final rule, DOE will perform the analyses required by EPCA. These analyses will involve more precise and detailed information that DOE will develop during the standards rulemaking process, and will detail the effects of proposed energy conservation standards for HID lamps.

### B. Methodology

To address EPCA requirements that DOE determine whether energy conservation standards for HID lamps would be technologically feasible and economically justified, and result in significant energy savings (42 U.S.C. 6317(b)(1)), DOE's performed five component analyses: (1) A market and technology assessment to understand better where and how HID lamps are used; (2) an engineering analysis to estimate the relationship between product costs and energy use; (3) an LCC analysis to estimate the costs and benefits to users from increased efficacy in HID lamps; (4) a national energy savings analysis to estimate the potential energy savings on a national scale; and (5) a national consumer

impacts analysis to estimate potential economic costs and benefits that would result from improving energy efficacy in the considered HID lamps. The following is a brief description of each analysis.

#### 1. Market and Technology Assessment

DOE conducted research into the market for considered HID lamps, including national annual shipments, the current range of lamp-and-ballast system efficacies, lamp applications and utilization, market structure, and distribution channels. It used information from trade associations that support industrial sectors and reviewed literature in technical journals. At DOE's request, NEMA provided data on lamp shipments of HID lamps, subcategorized by HPS, MV, and MH lamp data from its member manufacturers, for the five-year period from 2003 to 2008. NEMA had provided data for 1990 to 2002 to DOE in previous efforts related to today's proposed determination. Based on its market research, DOE found that HID lamps are typically used in commercial, industrial, and municipal applications with differing electricity tariffs. DOE estimates that, on average, HID lamps are used in applications (e.g., municipal (exterior) and industrial) that typically operate 12 hours per day or more.

Dimming of HID lamps is not common. DOE examined NEMA's Lighting Systems Division Document LSD 14-2002 *Guidelines on the Application of Dimming High Intensity Discharge Lamps* to evaluate typical practices for HID dimming. LSD 14-2002 notes that that dimming ballasts are relatively new (having only been commercially available since the 1990s); that HID lamps should not be dimmed below 50 percent of the rated lamp wattage; that color, life and efficacy are affected by dimming; and that few standards exist for dimming HID systems requiring that the system (lamp and ballast) be tested in the field to determine if the performance of the lamp and ballast working together is acceptable. Given these barriers to the dimming of HID lamps in typical applications, DOE assumed that the HID lamps are operating at full power for the purpose of the analysis supporting this proposed determination.

Several comments in response to the 2004 draft report addressed elements of the HID lamp market and how standards promulgated by DOE might impact the market. Benya commented that standards that effectively banned MV lamps could be warranted and beneficial. (Benya, No. 14 at p. 1) ACEEE commented that DOE should

focus on replacing probe-start MH with pulse-start MH, in addition to possibly introducing standards for MV lamps. (ACEEE, No. 16 at p. 1.)

Since these comments were received, new legislation was enacted in California that prevents MV ballasts from being manufactured or imported pursuant to 10 CFR 431.286. See CAL. CODE REGS. Title 20, § 1605.3(n)(2) (2010). Consequently the analysis for this proposed determination assumes that any MV lamp shipments will service existing MV ballasts only, and that MV lamp shipments will decline as a result.

Regulations currently in effect in six States (Arizona, California, New York, Oregon, Rhode Island, and Washington) limit the use of probe-start MH technologies by banning fixtures in the wattage range of 150-500 from having probe-start ballasts. DOE's analysis for the proposed determination uses information regarding the impact of the State regulations and considers market trends in both MV and probe-start MH technologies.

A key factor in the relative performance of different HID lamp technologies is the lamp lifetime. Manufacturers publish the life rating for HID lamps, known as B50 (i.e., the point at which 50 percent of an operating population of lamps is still operating). DOE received information regarding lamp and ballast lifetimes in comments received in response to the 2003 draft report. DOE received comments that MV and HPS lamps were typically relamped (i.e., replaced) every 4 years, and MH lamps typically every 2 years. (Caltrans, No. 8 at p. 2; Allegheny, No. 12 at p. 1) Allegheny further stated that the lamp life is generally the rated lamp life by the manufacturer. Typical life of HID lamps varies with lamp type and wattage, and ranges from 8,000 to greater than 24,000 hours, according to the manufacturer catalog data surveyed and included in the preliminary TSD. To determine annual maintenance costs, DOE uses median rated lamp lifetime as the basis for relamping schedules.

HID lamps typically cannot operate without a ballast that is specifically designed for a corresponding lamp technology. The vast majority of ballasts for HID lamps are of the electromagnetic (magnetic) type. The industry-accepted life of magnetic ballasts is 50,000 hours, and is widely cited in ballast catalogs and by utility programs. After the 2003 report, Allegheny stated that MV ballast lifetimes are 12 years or greater. (Allegheny, No. 12 at p. 1) The life of the light fixture (also known as a luminaire) varies but generally lasts as long as the ballast.

Another factor that can affect the energy consumption of an HID lighting system is the energy consumption of the ballast. DOE analyzed the system (lamp and ballast) power since particular lamp technologies are usually associated with a technology-specific ballast design. DOE received comments related to system input power in response to the technical reports preceding today's proposed determination. ACEEE commented that an energy analysis should use the system wattage for the input power. (ACEEE, No. 11 at p. 3) In response, DOE selected a representative ballast to pair with the lamp, and used the system input power to determine energy usage for the proposed determination. DOE evaluated manufacturer data on ballast performance for multiple HID ballast designs including constant-wattage autotransformer, constant-wattage isolated, high-reactance autotransformer, and magnetically-regulated electronic ballasts. Based on its evaluation, DOE determined that the variation in ballast input power across ballast designs for a given lamp wattage is relatively small compared to the energy use difference between different HID lighting system technologies. For example, for 175 W probe-start ballasts, the minimum surveyed input power was 200 W, the maximum surveyed input power was 226 W, and the median input power was 208 W. There is only a 13 percent range in input power from the minimum to the maximum input powers surveyed. DOE calculated median input wattage across applicable ballast designs to calculate the system energy consumption and concluded that ballast energy consumption variation should be less than a 7-percent effect. This variation is small compared to the relative magnitude of energy savings calculated in DOE's analysis. By comparison, the most efficient HID substitute for the baseline 175 watt probe start MH lamp is a 100 watt HPS lamp that uses more than 40 percent less power.

For this proposed determination, DOE analyzed a range of lamp capacities. At least two conventions exist for characterizing HID lamp capacity: Input power and light output. DOE categorized representative HID lamps based on the light output (measured in mean lumens) of the analyzed baseline lamp types since, as lamps get more efficient, the input power should decrease as the user service (*i.e.*, light output) stays the same or increases. The analyzed equipment classes correspond with medium-wattage HID lamps (defined as between 150 and 500 watts),

which was the primary wattage range considered in the 2004 draft report. However, because DOE considers lumen output instead of wattage as a more appropriate measure of lamp utility from a consumer perspective, it uses lumen output as the basis for categorization in today's proposed determination as shown in table II.1 in section C.1 of this notice which provides the engineering analysis results.

## 2. Engineering Analysis

In the engineering analysis, DOE identified representative baseline HID lighting systems and energy-efficient substitutes within each lumen output category. Both the baseline system and the efficiency substitutes have different power ratings, with the power rating decreasing with the increased efficacy of the substitute. The engineering analysis outputs of cost and power consumption are critical inputs to subsequent financial cost-benefit calculations for individual consumers performed in the LCC and the national impacts analysis. DOE developed end-user prices, including a contractor mark-up rate and average national sales tax, for analyzed lamp, lamp-and-ballast, and luminaire designs.

DOE did not include MV lamps in the engineering analysis for today's proposed determination. DOE forecasts that MV lamp shipments will decline to zero by the effective date of a potential HID lamps standard, assumed as 2017 because of the ban on MV ballast manufactured after January 1, 2008, codified in EPCA as amended. (42 U.S.C. 6295(ee).) Consequently, DOE did not analyze MV baseline lamps in its LCC analysis because MV fixtures are no longer a viable purchase option. However, DOE did consider the existing MV in existing HID installed base when it performed its national energy savings/national consumer benefits analysis. This installed base of MV systems will age and be replaced with other HID technologies over time.

DOE examined other currently available commercial equipment for replacing the least efficacious (baseline) HID sources—MV and probe-start MH. ACEEE commented on the 2003 draft report, noting that a potential standard should address replacing probe-start MH lamps with pulse-start MH lamps. (ACEEE, No. 11 at p. 2.) Substitutes include either HPS or pulse-start MH as typical options when replacing either MV or probe-start MH technologies. HPS lamps are among the most efficient electric light sources, and are a viable substitute in applications where energy efficiency and/or lower first cost is

considered more important than color quality. Pulse-start MH is the most efficient broad spectrum ("white light") HID technology, and has a higher first cost than MV and HPS. DOE received related comments during the Metal Halide Lamp Fixture (DOE Docket No. EERE-2009-BT-STD-0018/RIN 1904-AC00) public meeting on January 26, 2010. During this meeting, Philips noted that after California enacted a provision regarding ballast efficiency that affects probe-start MH lamp ballasts, the manufacturer saw sales shift from probe-start MH to both pulse-start MH and HPS. (Philips, RIN1904-AC00 Public Meeting Transcript, No. 1.2.005, at pp. 85 and 164) Philips noted that when California implemented standards that eliminated probe-start MH technologies, the manufacturer saw a majority of its sales for probe-start MH lamps shift in equal portions to pulse-start MH and HPS lamps, respectively. Therefore, DOE used both HPS and pulse-start MH as substitute options to the baseline probe-start MH technologies.

DOE assumes in the analysis supporting today's proposed determination that changes in lamp technology will lead to changes in the entire lamp system. DOE therefore used a systems approach in analyzing the representative equipment types because both lamps and ballasts determine a system's energy use and light output. Accordingly, the analysis paired lamps with corresponding ballasts to develop representative lamp-and-ballast systems, in order to estimate the actual energy usage and light output of operating lamps.

In the engineering analysis for today's proposed determination, DOE only considered magnetic ballasts because they are the most common ballast for HID lighting systems. DOE estimates that magnetic ballasts constitute over 90 percent of HID ballasts currently sold and an even higher percentage of the installed HID ballast stock. Electronic ballasts entered the market at the end of the 1990s, and still occupy less than a 10 percent market share because of a variety of technical and operational barriers that are discussed in some detail in the preliminary TSD.

## 3. Life-Cycle Cost Analysis

DOE conducted an initial LCC analysis to estimate the net financial benefit to users from the increased efficacy of HID lamps. The LCC analysis compared the additional initial cost of a more efficacious lamp and related fixture to the discounted value of electricity savings over the life of the fixture ballast. DOE's LCC analysis used

the following inputs: Estimated average annual operating hours and lamp lifetimes; estimated average prices for lamps and fixtures; representative maintenance costs; electricity prices paid by users of HID lamps; and the discount rate. In commenting on previous draft reports, PennDOT noted that tariffs vary by region even within the same State. (PennDOT, No. 5 at p. 1.) While DOE agrees that there is regional variation of tariffs, for the purpose of today's proposed determination, DOE uses national average electricity prices for 2009 from the Energy Information Administration's (EIA) Annual Energy Outlook 2009 (AEO 2009) for commercial and industrial applications to calculate impacts for the average HID lamp user. The LCC analysis does not include MV lamps, since MV ballasts can no longer be imported or manufactured; DOE assumed that when MV ballasts failed consumers would have to switch to another HID technology.

The LCC analysis not only evaluated the replacement of the HID lamp, but also those cases where the whole system would need to be replaced. Given the specificity of HID lamp-and-ballast combinations, DOE assumed that replacement of baseline HID systems with energy-efficient substitutes would, at a minimum, require a new lamp-and-ballast system. In some cases, the physical and operational characteristics of the replacement lamp-and-ballast system may also require replacement of the entire fixture. Consequently, DOE treated lamp-and-ballast and fixture replacement as economic issues in the LCC analysis, which considers the installed cost of the lamp, lamp-and-ballast system, and fixture. In analyzing the lighting system, the ballast has the longer lifetime and therefore represents the lifetime of the system (which may have the lamp replaced several times before the ballast is replaced). DOE therefore set the LCC analysis period equal to the lifetime of the fixture ballast in years, *i.e.*, 50,000 hours divided by the annual operating hours. This approach is consistent with the LCC methodology that DOE used in the 2003 draft report.

DOE assigned annual operating hours to representative equipment based on two operating scenarios. Exterior lighting applications were assumed for the commercial operating scenario, where HID lamps with poorer color quality (*e.g.*, HPS) are a viable substitute (*e.g.*, street and parking lot lighting). Interior lighting applications were assumed for the industrial operating scenario, where "white light" substitutes

with higher color quality (*e.g.*, pulse-start MH) are assumed as mandatory.

DOE obtained information on hours of operation for the different scenarios from industry publications that provide guidance for installers and lighting engineers. From these sources DOE estimated 4,200 hours per year of operation for exterior applications and 5,840 hours per year for interior applications. A more detailed discussion of the data sources and the derivation of these estimates are provided in the preliminary TSD.

In the LCC analysis, DOE also includes maintenance costs in the estimation of the LCC of HID lighting systems. DOE examined a range of publicly available information sources and estimated an average annual maintenance cost of \$225 per relamping for exterior applications. DOE could not find comparable data for representative interior maintenance costs but because of the increased accessibility and better working conditions for interior installations, DOE divided the exterior relamping costs by three to estimate the interior relamping costs. Therefore, for today's proposed determination DOE used \$225 for each exterior relamping and \$74 for each interior relamping. DOE requests comment on these representative maintenance costs.

For the LCC analysis, DOE estimated average commercial and industrial electricity prices using the 2017 to 2030 forecasts from EIA's *AEO 2009*. After the 2003 Report, DOE received two comments regarding the price of electricity. ACEEE recommended using a later version of the *AEO* in the final rule. (ACEEE, No. 11 at 3.) PennDOT stated that energy tariffs vary across the State between the range of \$0.035/kWh to \$0.15/kWh. PennDOT felt that the 2003 rates between \$0.09/kWh to \$0.11/kWh may not return a valid result when compared to actual costs. (PennDOT, No. 5 at p. 1.) While DOE agrees that there may be substantial variability in tariffs, for today's proposed determination DOE believes that using the average price of electricity is sufficient to characterize the overall economic justification of a potential standard. DOE is therefore using the average price per end use sector (*i.e.*, commercial or industrial) over the course of the analysis period. DOE requests comment as to whether in the full rulemaking analysis, DOE's analysis should include the minimum, mean, and the maximum energy tariffs for the relevant end use sectors.

In the LCC analysis, the discount rate determines the relative value of future energy savings compared to increases in first costs that may arise from a

potential energy conservation standard. DOE received comments from ACEEE regarding the discount rates used in the 2003 report. ACEEE felt that the 8-percent rate was reasonable and the 15-percent rate was much too high. (ACEEE, No. 11 at p. 2.) For commercial and industrial consumers, DOE estimates the cost of capital for commercial and industrial companies by examining both debt and equity capital, and develops an appropriately weighted average of the cost to the company of equity and debt financing. The resulting average discounted industrial and commercial discount rates used in the LCC analysis are 7.6 percent and 7.0 percent, respectively.

In the 2003 report, DOE used retail catalog pricing for HID lamp and fixture prices. In response, NEMA commented that retail price catalogs are not a good source of actual cost information and recommended hiring an energy service company to solicit bids on prices. (NEMA, No. 6 at p. 4.) DOE considered this comment, but while DOE agrees that there may be inaccuracies in list prices, DOE believes that there may also be distortions in bid prices that would create data that is unrepresentative of future costs. Currently the country is experiencing a deep recession where bid prices are likely to be substantially deflated compared to the case of average economic conditions. This is likely to distort any bid price data that would be solicited by DOE. DOE therefore believes at this time that catalogue price data is as representative as bid price data for the purposes of today's proposed determination.

DOE estimated the base purchase price of representative HID lamps, ballasts, and fixtures using prices available on both the W.W. Grainger, Inc. and Goodmart Web sites. These online retailer price catalogues were selected because they offer a wide range of products (*i.e.*, lamps, ballasts, and fixtures) for multiple types of HID lamps and wattages. The municipal procurement contracts also exist for HID lamps and can provide price data, but do not contain price data for other components of the lamp system needed for the analysis. DOE also evaluated State procurement contracts for fixtures but found them to be highly variable. DOE therefore used the prices developed from the Grainger and Goodmart Web sites as an information source that is publicly available (requiring no special log in to access the data) and which offers product information that could be applied to the full range of HID lighting system technologies and components. The preliminary TSD lists the price data that

DOE obtained from all sources, including RS-Means, State procurement contracts, Grainger, and Goodmart. HID prices vary by region, manufacturer, quantity, type, and quality (and that end users may pay different prices), and therefore DOE attempted to select price data for different lighting system options that were directly comparable. DOE invites comment on its selection and analysis of the available HID lighting system price data.

DOE added a contractor mark-up to the fixture cost to reflect the actual installed prices in the LCC. ACEEE commented that DOE should assume a 13-percent contractor mark-up rate. (ACEEE, No. 11 at p. 2.) DOE compared this markup with data from other lighting rules, agreed with the ACEEE comment, and used a mark-up of 13 percent in the proposed determination. DOE also added an average national sales tax of 7 percent to the installed cost.

Depending on when different parts of an HID lighting system are replaced, the costs of switching to improved efficacy lamps can vary. DOE therefore requested comment in the 2003 draft report regarding when a standard might prompt: (1) A lamp replacement; (2) replacement of both the lamp and the ballast; or (3) replacement of the entire HID lighting fixture. Allegheny commented that for all but roadway fixtures that are customer-owned and under Allegheny's contract maintenance, Allegheny would replace the fixture outright if the lamp were no longer available. (Allegheny, No. 12 at pp. 2-3.) DOE also asked interested parties "to provide their estimates of the percentage of the market that will

choose each replacement option." Allegheny surveyed fixture and lamp suppliers and found that 80 percent would replace the fixture, and the remaining 20 percent would either replace the lamp or lamp-and-ballast. (Allegheny, No. 12 at pp. 2-3.) Allegheny's comments are supported by ACEEE's comments that "evidence supports full luminaire replacement of some metal halide systems over more time-consuming lamp/ballast replacements." (ACEEE, No. 11 at p. 3.) Today's proposed determination includes lamp-and-ballast and fixture replacement costs when determining the LCC for HID lamps.

4. National Energy Savings Analysis

To estimate national energy savings for HID lamps sold from 2017 through 2046, DOE calculated the estimated energy usage of analyzed lamp-and-ballast systems in a base case (absent a standard) and a standards case. DOE calculated the installed base of HID lamps using historical lamp shipments data provided by NEMA. Projected shipments were based on the lamp lifetimes, system energy use, and operating scenarios developed for the LCC analysis, as well as estimated market and substitution trends in the base case and standards case.

To estimate potential energy savings from the proposed energy conservation standard, DOE used an accounting model that calculated total end-use electricity savings in each year of a 30-year forecast. The model featured an equipment-retirement function to calculate the number of units sold in a given year, or vintage, which would still be in operation in future years. For

example, some of the HID lamps sold in 2030 will operate through 2035.

DOE calculated primary energy (i.e., energy used by the power plant) savings associated with end-use electricity savings using data from EIA's *AEO 2009*. These data provided an average multiplier for relating end-use electricity to primary energy use for each year from 2017 to 2030. DOE extrapolated the trend in these years to derive factors for 2031 to 2046.

5. National Consumer Impacts Analysis

DOE estimated the national economic effect on end users in terms of the NPV of cumulative benefits from 2017 to 2046. It considered the effects under the same range of scenarios as it did for estimating national energy savings. It used the new equipment costs and energy savings for each energy efficiency level that it applied in the LCC analysis. To simplify the analysis, DOE estimated the value of energy savings using the average *AEO 2009* forecast electricity price from 2017 to 2030. DOE discounted future costs and benefits by using 3 percent and 7 percent discount rate, according to the "Guidelines and Discount Rates for Benefit Analysis of Federal Programs," issued by the Office of Management and Budget in 1992 (Circular No. A-94, Revised).

C. Analysis Results

1. Engineering Analysis

As described above, DOE conducted separate analyses examining 10 representative HID lamp types, as presented in Table II.1.

TABLE II.1—REPRESENTATIVE LAMP OPTIONS

Category	Sub-category	Approximate light output mean lumens*	Baseline W	Energy efficient option 1, PMH** W	Energy efficient option 2, HPS W
Medium wattage (150–500) .....	Probe-Start MH baseline .....	8,800	175	150	100
		13,700	250	175	150
		23,500	360	320	250
		25,200	400	320	250

\* Mean lumens provided from manufacturers' catalogs.

\*\* PMH = pulse-start metal halide.

In the engineering analysis, for a lamp to be considered a suitable option, its replacement had to produce at least 90 percent of the mean lumen output of the baseline system and draw less power than the baseline lamp-and-ballast system. Power was determined by the lamp-and-ballast input, based in part on

the representative ballast type chosen for each option.

2. Life-Cycle Cost and Payback Period Analysis

Table II.2 to Table II.5 present the results for medium wattage probe-start MH lamps and higher-efficiency substitute HID lamps in a lamp-only

replacement scenario. In this scenario, a failed baseline lamp is replaced either with an identical baseline lamp, or with a substitute lamp-and-ballast system. These analyses were based on representative, incremental lamp and fixture prices as well as maintenance costs. A full rulemaking would yield more detailed results than the

representative analyses conducted. than the LCC of an inefficient lamp-only  
 Generally, the LCC of a high-efficiency replacement.  
 lamp and ballast replacement is higher

TABLE II.2—175 W PROBE-START MH BASELINE

	Industrial/interior		Commercial/exterior	
	Baseline 175 W MH \$	Substitute 1 150 W PMH \$	Baseline 175 W MH \$	Substitute 2 100 W HPS \$
Ballast Price .....		190.22		234.10
Lamp Price .....	49.58	64.09	49.58	49.23
Total First Cost .....	49.58	254.31	49.58	283.33
Incremental First Cost .....		204.73		233.75
Annual Operating Cost .....	149.23	141.02	297.28	263.26
Annual Operating Cost Differential .....		8.21		34.02
Life-Cycle Cost (7% Discount Rate) .....	808.83	1,056.34	1,947.52	2,059.27
LCC Savings .....		-247.51		-111.75
Payback Period (years) .....		24.94		6.87

TABLE II.3—250 W PROBE-START MH BASELINE

	Industrial/interior		Commercial/exterior	
	Baseline 250 W MH \$	Substitute 1 175 W PMH \$	Baseline 250 W MH \$	Substitute 2 150 W HPS \$
Ballast Price .....		195.54		260.18
Lamp Price .....	53.08	68.76	53.08	60.91
Total First Cost .....	53.08	264.30	53.08	321.09
Incremental First Cost .....		211.22		268.01
Annual Operating Cost .....	178.85	149.59	330.11	288.18
Annual Operating Cost Differential .....		29.26		41.93
Life-Cycle Cost (7% Discount Rate) .....	853.30	994.23	1,983.51	2,126.51
LCC Savings .....		-140.93		-143.00
Payback Period (years) .....		7.22		6.39

TABLE II.4—360 W PROBE-START MH BASELINE

	Industrial/interior		Commercial/exterior	
	Baseline 360 W MH \$	Substitute 1 320 W PMH \$	Baseline 360 W MH \$	Substitute 2 250 W HPS \$
Ballast Price .....		226.43		211.52
Lamp Price .....	56.92	90.54	56.92	79.64
Total First Cost .....	56.92	316.97	56.92	291.16
Incremental First Cost .....		260.05		234.24
Annual Operating Cost .....	217.75	205.97	373.22	331.69
Annual Operating Cost Differential .....		11.78		41.53
Life-Cycle Cost (7% Discount Rate) .....	788.24	1,083.54	1,919.94	2,146.17
LCC Savings .....		-295.30		-226.23
Payback Period (years) .....		22.08		5.64

TABLE II.5—400 W PROBE-START MH BASELINE

	Industrial/interior		Commercial/exterior	
	Baseline 400 W MH \$	Substitute 1 320 W PMH \$	Baseline 400 W MH \$	Substitute 2 250 W HPS \$
Ballast Price .....		226.43		211.52
Lamp Price .....	58.08	90.54	58.08	79.64
Total First Cost .....	58.08	316.97	58.08	291.16
Incremental First Cost .....		258.89		233.08
Annual Operating Cost .....	237.74	205.97	395.37	331.69
Annual Operating Cost Differential .....		31.77		63.68
Life-Cycle Cost (7% Discount Rate) .....	810.40	1,083.54	1,937.06	2,146.17
LCC Savings .....		-273.14		-209.11

TABLE II.5—400 W PROBE-START MH BASELINE—Continued

	Industrial/interior		Commercial/exterior	
	Baseline 400 W MH \$	Substitute 1 320 W PMH \$	Baseline 400 W MH \$	Substitute 2 250 W HPS \$
Payback Period (years) .....	.....	8.15	.....	3.66

Table II.6 to Table II.69 present the results for medium wattage probe-start MH lamps and higher-efficiency substitute HID lamps in a new construction or fixture replacement

scenario. In this scenario, a consumer selects either a baseline or substitute fixture and lamp. In the exterior lighting cases, the HPS substitutes have a lower LCC. These analyses were based on

representative and incremental lamp and fixture prices as well as maintenance costs. A full rulemaking would yield more detailed results than the representative analyses conducted.

TABLE II.6—175 W PROBE-START MH BASELINE

	Industrial/interior		Commercial/exterior	
	Baseline 175 W MH \$	Substitute 1 150 W PMH \$	Baseline 175 W MH \$	Substitute 2 100 W HPS \$
Fixture Price (incl. ballast) .....	260.51	310.10	356.51	376.34
Lamp Price .....	49.58	64.09	49.58	49.23
Total First Cost .....	310.09	374.19	406.09	425.57
Incremental First Cost .....	.....	64.10	.....	19.73
Annual Operating Cost .....	149.23	141.02	297.28	263.26
Annual Operating Cost Differential .....	.....	8.21	.....	34.02
Life-Cycle Cost (7% Discount Rate) .....	1,069.34	1,176.22	2,304.03	2,201.51
LCC Savings .....	.....	-106.89	.....	102.52
Payback Period (years) .....	.....	7.81	.....	0.58

TABLE II.7—250 W PROBE-START MH BASELINE

	Industrial/interior		Commercial/exterior	
	Baseline 250 W MH \$	Substitute 1 175 W PMH \$	Baseline 250 W MH \$	Substitute 2 150 W HPS \$
Fixture Price (incl. ballast) .....	297.77	325.63	393.77	382.01
Lamp Price .....	53.08	68.76	53.08	60.91
Total First Cost .....	350.85	394.39	446.85	442.92
Incremental First Cost .....	.....	43.54	.....	-3.93
Annual Operating Cost .....	178.85	149.59	330.11	288.18
Annual Operating Cost Differential .....	.....	29.26	.....	41.93
Life-Cycle Cost (7% Discount Rate) .....	1,151.07	1,124.32	2,377.28	2,248.34
LCC Savings .....	.....	26.75	.....	128.94
Payback Period (years) .....	.....	1.49	.....	-0.09

TABLE II.8—360 W PROBE-START MH BASELINE

	Industrial/interior		Commercial/exterior	
	Baseline 360 W MH \$	Substitute 1 320 W PMH \$	Baseline 360 W MH \$	Substitute 2 250 W HPS \$
Fixture Price (incl. ballast) .....	352.43	415.69	448.43	393.34
Lamp Price .....	56.92	90.54	56.92	79.64
Total First Cost .....	409.35	506.23	505.35	472.98
Incremental First Cost .....	.....	96.88	.....	-32.37
Annual Operating Cost .....	217.75	205.97	373.22	331.69
Annual Operating Cost Differential .....	.....	11.78	.....	41.53
Life-Cycle Cost (7% Discount Rate) .....	1,140.67	1,272.81	2,368.37	2,328.00
LCC Savings .....	.....	-132.14	.....	40.37
Payback Period (years) .....	.....	8.22	.....	-0.78

TABLE II.9—400 W PROBE-START MH BASELINE

	Industrial/interior		Commercial/exterior	
	Baseline 400 W MH \$	Substitute 1 320 W PMH \$	Baseline 400 W MH \$	Substitute 2 250 W HPS \$
Fixture Price (incl. ballast) .....	372.31	415.69	468.31	393.34
Lamp Price .....	58.08	90.54	58.08	79.64
Total First Cost .....	430.39	506.23	526.39	472.98
Incremental First Cost .....		75.84		-53.41
Annual Operating Cost .....	237.74	205.97	395.37	331.69
Annual Operating Cost Differential .....		31.77		63.68
Life-Cycle Cost (7% Discount Rate) .....	1,182.71	1,272.81	2,405.37	2,328.00
LCC Savings .....		-90.10		77.37
Payback Period (years) .....		2.39		-0.84

### 3. National Energy Savings and Consumer Impacts

DOE estimated national energy savings and consumer effects of energy conservation standards for the considered HID lamps using its own engineering analysis data. DOE assumed that energy conservation standards would take effect in 2017, and estimated cumulative energy savings and NPV impacts relative to a base case and a standards case.

The results using DOE's analysis of design options indicate cumulative energy savings for medium-wattage HID lamps of 2.8 quads and a corresponding NPV of \$15.0 billion (2009\$) at a 3 percent discount rate and \$3.5 billion at a 7 percent discount rate over a 30-year analysis period (2017–2046).

In estimating the NPV, DOE estimated the fraction of replacements that would use the different technologies and would be either a lamp-only or a total fixture replacement. While some replacements would have negative LCC, on a national scale these are outweighed by those lamp and fixture replacements that have positive economic impacts on consumers.

#### D. Discussion

##### 1. Technological Feasibility

Section 346(a)(1) of EPCA (42 U.S.C. 6317(a)(1)) mandates that DOE determine whether energy conservation standards for HID lamps would be “technologically feasible.” DOE proposes to determine that energy conservation standards for HID lamps would be technologically feasible because they can be satisfied with HID lighting systems that are currently available on the market.

##### 2. Significance of Energy Savings

Section 346(a)(1) of EPCA (42 U.S.C. 6317(a)(1)) mandates that DOE determine whether energy conservation standards for HID lamps would result in

“significant energy savings.” Today’s proposed determination estimates that a standard for HID lamps would result in energy savings of at least 2.8 quads over a 30-year analysis period (2017–2046). Although the term “significant” is not defined in the Act, the U.S. Court of Appeals for the District of Columbia, in *Natural Resources Defense Council v. Herrington*, 768 F.2d 1355, 1373 (DC Cir. 1985), indicated that Congress intended “significant” energy savings in a manner consistent with section 325 of the Act (42 U.S.C. 6295(o)(3)(B)) to be savings that were not “genuinely trivial.” DOE published two other determinations in 2006 (Small Electric Motors, 71 FR 38799, 38806 (July 10, 2006)) and 2009 (Non-Class A External Power Supplies, 74 FR 56928, 56929 (November 3, 2009)) for other equipment and products that had significant savings. DOE’s determination for small electric motors estimated energy savings of 0.61 to 0.78 quads over a 20-year period and therefore met the threshold for “significant.” In the small electric motors determination, DOE used analysis for room air conditioners as a precedent, finding that savings of 0.36 to 0.96 quads over a 30-year period met the requirement for a standard. 62 FR 50122, 50142 (September 24, 1997). DOE’s analysis in the determination for Non-Class A External Power Supplies resulted in 0.14 quads of energy over 30 years (2013–2042), and DOE deemed those energy savings as “significant.” In the 2009 final rule for energy conservation standards for refrigerated bottled or canned beverage vending machines, DOE estimated that 0.159 quads would be saved over 30 years (2012–2042). 74 FR 44914, 44915 (August 31, 2009). DOE believes that the estimated energy savings of 2.8 quads over 30 years for the considered HID lamps are not “genuinely trivial,” and DOE proposes to determine that potential energy conservation standards for HID lamps

would result in significant energy savings.

### 3. Economic Justification

Section 346(b)(1) of EPCA requires that energy conservation standards for HID lamps be economically justified. (42 U.S.C. 6317(b)(1)) Using the methods and data described in section II.B, DOE conducted a LCC analysis to estimate the net benefits to users from increased efficiency in the considered HID lamps. DOE then aggregated the results from the LCC analysis to estimate national energy savings and national economic impacts. DOE estimated that the net present value of the consumer costs and benefits from a potential standard are \$15.0 billion and \$3.5 billion at three percent and seven percent discount rates respectively. Thus, DOE proposes to determine that potential energy conservation standards for HID lamps are economically justified.

### III. Procedural Issues and Regulatory Review

#### A. Review Under Executive Order 12866

This proposed determination is not subject to review under Executive Order (E.O.) 12866, “Regulatory Planning and Review.” 58 FR 51735 (October 4, 1993).

#### B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996) requires preparation of an initial regulatory flexibility analysis for any rule that, by law, must be proposed for public comment, unless the agency certifies that the proposed rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. A regulatory flexibility analysis examines the impact of the rule on small entities and considers alternative ways of reducing negative effects. Also,

as required by E.O. 13272, "Proper Consideration of Small Entities in Agency Rulemaking," 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003 to ensure that the potential impact of its rules on small entities are properly considered during the DOE rulemaking process. 68 FR 7990 (February 19, 2003). DOE made its procedures and policies available on the Office of the General Counsel's Web site at <http://www.gc.doe.gov>.

DOE reviewed today's proposed determination under the provisions of the Regulatory Flexibility Act and the policies and procedures published on February 19, 2003.

Today's proposed determination, if adopted, would set no standards; it would only positively determine that future standards may be warranted and should be explored in an energy conservation standards rulemaking. Economic impacts on small entities would be considered in the context of such a rulemaking. On the basis of the foregoing, DOE certifies that the proposed determination, if adopted, would have no significant economic impact on a substantial number of small entities. Accordingly, DOE has not prepared a regulatory flexibility analysis for this proposed determination. DOE will transmit this certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the Small Business Administration for review under 5 U.S.C. 605(b).

#### C. Review Under the Paperwork Reduction Act of 1995

This proposed determination, which proposes to determine that the development of energy conservation standards for HID lamps is warranted, would impose no new information or record keeping requirements. Accordingly, the Office of Management and Budget (OMB) clearance is not required under the Paperwork Reduction Act. (44 U.S.C. 3501 *et seq.*)

#### D. Review Under the National Environmental Policy Act of 1969

In this notice, DOE proposes to positively determine that future standards may be warranted and that environmental impacts should be explored in an energy conservation standards rulemaking. DOE has determined that review under the National Environmental Policy Act of 1969 (NEPA), Pub. L. 91-190, codified at 42 U.S.C. 4321 *et seq.* is not required at this time. NEPA review can only be initiated "as soon as environmental impacts can be meaningfully evaluated" (10 CFR 1021.213(b)). Because this

proposed determination would only determine that future standards may be warranted, but would not propose to set any standard, DOE has determined that there are no environmental impacts to be evaluated at this time. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

#### E. Review Under Executive Order 13132

E.O. 13132, "Federalism," 64 FR 43255 (August 10, 1999), imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have Federalism implications. The Executive Order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to assess carefully the necessity for such actions. The Executive Order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in developing regulatory policies that have Federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process that it will follow in developing such regulations. 65 FR 13735 (March 14, 2000). DOE has examined today's proposed determination and concludes that it would not preempt State law or have substantial direct effects on the States, on the relationship between the Federal government and the States, or on the distribution of power and responsibilities among the various levels of government. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the equipment that is the subject of today's proposed determination. States can petition DOE for exemption from such preemption to the extent permitted, and based on criteria, set forth in EPCA. (42 U.S.C. 6297) No further action is required by E.O. 13132.

#### F. Review Under Executive Order 12988

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of E.O. 12988, "Civil Justice Reform," 61 FR 4729 (February 7, 1996), imposes on Federal agencies the duty to: (1) Eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; (3) provide a clear legal standard for affected conduct rather than a general standard; and (4) promote simplification and burden reduction. Section 3(b) of E.O. 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the

regulation specifies the following: (1) The preemptive effect, if any; (2) any effect on existing Federal law or regulation; (3) a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) the retroactive effect, if any; (5) definitions of key terms; and (6) other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of E.O. 12988 requires Executive agencies to review regulations in light of applicable standards in sections 3(a) and 3(b) to determine whether these standards are met, or whether it is unreasonable to meet one or more of them. DOE completed the required review and determined that, to the extent permitted by law, this proposed determination meets the relevant standards of E.O. 12988.

#### G. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) (Pub. L. 104-4, codified at 2 U.S.C. 1501 *et seq.*) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. For regulatory actions likely to result in a rule that may cause expenditures by State, local, and Tribal governments, in the aggregate, or by the private sector of \$100 million or more in any 1 year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a) and (b)) UMRA requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed "significant intergovernmental mandate." UMRA also requires an agency plan for giving notice and opportunity for timely input to small governments that may be potentially affected before establishing any requirement that might significantly or uniquely affect them. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820 (March 18, 1997). (This policy is also available at <http://www.gc.doe.gov>). Today's proposed determination contains neither an intergovernmental mandate nor a mandate that may result in the expenditure of \$100 million or more in any year, so these UMRA requirements do not apply.

#### *H. 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. 105-277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This proposed determination 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.

#### *I. Review Under Executive Order 12630*

Pursuant to E.O. 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights," 53 FR 8859 (March 15, 1988), DOE determined that this proposed determination would not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

#### *J. Review Under the Treasury and General Government Appropriations Act of 2001*

The Treasury and General Government Appropriation Act of 2001 (44 U.S.C. 3516, note) requires agencies to review most disseminations of information they make to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. The OMB's guidelines were published at 67 FR 8452 (February 22, 2002), and DOE's guidelines were published at 67 FR 62446 (October 7, 2002). DOE has reviewed today's proposed determination under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

#### *K. Review Under Executive Order 13211*

E.O. 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use," 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OMB a Statement of Energy Effects for any proposed significant energy action. A "significant energy action" is defined as any action by an agency that promulgates a final rule or is expected to lead to promulgation of a final rule, and that: (1) Is a significant regulatory action under E.O. 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (3) is designated by the Administrator of OIRA as a significant energy action. For any proposed significant energy action, the agency must give a detailed statement of any adverse effects on

energy supply, distribution, or use if the proposal is implemented, and of reasonable alternatives to the proposed action and their expected benefits on energy supply, distribution, and use.

DOE has concluded that today's action proposing to determine that development of energy conservation standards for HID lamps may be warranted would not have a significant adverse effect on the supply, distribution, or use of energy. This action is also not a significant regulatory action for purposes of E.O. 12866, or any successor order. Therefore, this proposed determination is not a significant energy action. Accordingly, DOE has not prepared a Statement of Energy Effects for this proposed determination.

#### *L. Review Under the Information Quality Bulletin for Peer Review*

On December 16, 2004, OMB, in consultation with the Office of Science and Technology Policy (OSTP), issued its Final Information Quality Bulletin for Peer Review (the Bulletin). 70 FR 2664 (January 14, 2005). The Bulletin establishes that certain scientific information shall be peer reviewed by qualified specialists before it is disseminated by the Federal government, including influential scientific information related to agency regulatory actions. The purpose of the Bulletin is to enhance the quality and credibility of the Government's scientific information. Under the Bulletin, the energy conservation standards rulemaking analyses are "influential scientific information." The Bulletin defines "influential scientific information" as "scientific information the agency reasonably can determine will have, or does have, a clear and substantial impact on important public policies or private sector decisions." 70 FR 2667 (January 14, 2005).

In response to OMB's Bulletin, DOE conducted formal in-progress peer reviews of the energy conservation standards development process and analyses, and has prepared a Peer Review Report pertaining to the energy conservation standards rulemaking analyses. The "Energy Conservation Standards Rulemaking Peer Review Report," dated February 2007, has been disseminated and is available at [http://www1.eere.energy.gov/buildings/appliance\\_standards/peer\\_review.html](http://www1.eere.energy.gov/buildings/appliance_standards/peer_review.html).

### **IV. Public Participation**

#### *A. Submission of Comments*

DOE will accept comments, data, and information regarding this notice of proposed determination no later than

the date provided at the beginning of this notice. After the close of the comment period, DOE will review the comments received and determine, by June 30, 2010, whether energy conservation standards for HID lamps are warranted.

Comments, data, and information submitted to DOE's e-mail address for this proposed determination should be provided in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format. Submissions should avoid the use of special characters or any form of encryption, and wherever possible comments should include the electronic signature of the author. No telefacsimiles (faxes) will be accepted.

According to 10 CFR Part 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit two copies: One copy of the document should have all the information believed to be confidential deleted. DOE will make its own determination as to the confidential status of the information and treat it according to its determination.

Factors of interest to DOE when evaluating requests to treat submitted information as confidential include (1) a description of the items; (2) whether and why such items are customarily treated as confidential within the industry; (3) whether the information is generally known or available from public sources; (4) whether the information has previously been made available to others without obligations concerning its confidentiality; (5) an explanation of the competitive injury to the submitting persons which would result from public disclosure; (6) a date after which such information might no longer be considered confidential; and (7) why disclosure of the information would be contrary to the public interest.

#### *B. Issues on Which DOE Seeks Comments*

Comments are welcome on all aspects of this proposed determination. DOE is particularly interested in receiving comment from interested parties on the following issues as they relate to HID lamps:

- Applications not included in the proposed determination analysis;
- Definition of high-pressure sodium lamps;
- Equipment (including lamp, ballast, and fixture) lifetimes;
- Possible negative effects on small businesses;
- Present-year shipments estimates;
- Present-year efficiency distributions;
- Market-growth forecasts;

- Usage profiles;
- Technology options for increasing efficiency;
- Costs related to increasing efficiency;
- Equipment cost;
- Maintenance costs;
- Unit energy consumption calculations and values; and
- Alternative sources, databases, and methodologies for the analyses and inputs used in this proposed determination.

#### V. Approval of the Office of the Assistant Secretary

The Assistant Secretary of DOE's Office of Energy Efficiency and Renewable Energy has approved publication of this proposed determination.

#### List of Subjects in 10 CFR Part 431

Administrative practice and procedure, Confidential business information, Energy conservation, Reporting and recordkeeping requirements.

Issued in Washington, DC, on April 22, 2010.

Cathy Zoi,

Assistant Secretary, Energy Efficiency and Renewable Energy.

[FR Doc. 2010-9714 Filed 4-26-10; 8:45 am]

BILLING CODE 6450-01-P

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2010-0449; Directorate Identifier 2009-SW-38-AD]

RIN 2120-AA64

#### Airworthiness Directives; Agusta S.p.A. (Agusta) Model A109E Helicopters

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose adopting a new airworthiness directive (AD) for the Agusta Model A109E helicopters. This proposed AD results from a mandatory continuing airworthiness information (MCAI) AD issued by the European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community. The MCAI AD states that after a report of an electrical failure, an investigation revealed inadequate functioning of the

35 amperes (Amps) battery bus (BATT BUS) circuit breaker that was not within design requirements. These actions are intended to replace the 35 Amps with a 50 Amps circuit breaker and replace the wires with oversized ones to prevent an electrical failure, loss of electrical power, and subsequent loss of control of the helicopter.

**DATES:** We must receive comments on this proposed AD by May 27, 2010.

**ADDRESSES:** You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting your comments electronically.

- *Fax:* (202) 493-2251.

- *Mail:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

You may get the service information identified in this proposed AD from Agusta, Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA), Italy, telephone 39 0331-229111, fax 39 0331-229605/222595, or at [http://customersupport.agusta.com/technical\\_advice.php](http://customersupport.agusta.com/technical_advice.php).

*Examining the docket:* You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is stated in the **ADDRESSES** section of this AD. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** DOT/FAA Southwest Region, Mark Wiley, ASW-111, Aviation Safety Engineer, Rotorcraft Directorate, Regulations and Policy Group, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222-5114, fax (817) 222-5961.

#### SUPPLEMENTARY INFORMATION:

##### Comments Invited

We invite you to send any written data, views, or arguments about this proposed AD. Send your comments to an address listed in the **ADDRESSES**

section of this proposal. Include "Docket No. FAA-2010-0449; Directorate Identifier 2009-SW-38-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

#### Discussion

EASA, which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2009-0137, dated June 23, 2009, to correct an unsafe condition for the Agusta Model A109E helicopters.

Following a report of an electrical failure, Agusta investigated the electrical power generation system and identified inadequate functioning of the 35 Amps BATT BUS circuit breaker. To prevent an electrical failure, the manufacturer has developed a BATT BUS circuit breaker modification kit for replacing the 35 Amps circuit breaker with a 50 Amps circuit breaker and replacing the wires with oversized ones. You may obtain further information by examining the MCAI AD and any related service information in the AD docket.

#### Related Service Information

Agusta has issued Bollettino Tecnico No. 109EP-98, dated June 22, 2009, that specifies modifying the BATT BUS circuit breaker installation. The service information specifies modifying the fuselage electrical installation, part number (P/N) 109-0741-49, and the overhead panel electrical installation, P/N 109-0741-55, with a BATT BUS circuit breaker modification kit, P/N 109-0824-73-101. The actions described in the MCAI AD are intended to correct the same unsafe condition as that identified in the service information.

#### FAA's Evaluation and Unsafe Condition Determination

This model helicopter has been approved by the aviation authority of Italy and is approved for operation in the United States. Pursuant to our bilateral agreement with Italy, EASA, their Technical Agent, has notified us of the unsafe condition described in the MCAI AD. We are proposing this AD