

U.S. Department of Energy
Energy Efficiency and Renewable Energy


Energy Conservation Standards for General Service Fluorescent Lamps and Incandescent Reflector Lamps

ANOPR Public Meeting

Scope of Coverage

Building Technologies Program
Office of Energy Efficiency and Renewable Energy
U.S. Department of Energy

March 10-11, 2008




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EISA 2007

Energy Independence and Security Act of 2007

- **Amendments to EPCA contained in EISA 2007 significantly affected the scope of coverage for this rulemaking:**
 - Set energy conservation standards for general service incandescent lamps (GSIL) (no longer part of this rulemaking)
 - Amended 42 U.S.C. 6295(i)(5) to remove DOE's authority to consider coverage of additional GSIL, including IRL
 - Modified EPCA definitions for GSFL and IRL, bringing additional lamps under DOE's authority

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EISA 2007


General Service Fluorescent Lamp Definition

■ The term “general service fluorescent lamp” means a fluorescent lamp which can be used to satisfy the majority of fluorescent applications, but does not include any lamp designed and marketed for the following non-general lighting applications:

- (i) Fluorescent lamps designed to promote plant growth.
- (ii) Fluorescent lamps designed for cold temperature applications.
- (iii) Colored fluorescent lamps.
- (iv) Impact-resistant fluorescent lamps.
- (v) Reflectorized or aperture lamps.
- (vi) Fluorescent lamps designed for use in reprographic equipment.
- (vii) Lamps primarily designed to produce radiation in the UV region.
- (viii) Lamps with a CRI \geq 87.**

(42 U.S.C. 6291(30)(B))

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EISA 2007

Incandescent Reflector Lamp Definition

■ The term “incandescent reflector lamp” means a lamp in which light is produced by a filament heated to incandescence by an electric current, and which is not colored or designed for rough or vibration service applications, that contains an inner reflective coating on the outer bulb to direct the light, an R, PAR, **ER, BR, BPAR or similar bulb shapes** with E26 medium screw bases, a rated voltage or voltage range that lies at least partially within 115 and 130 volts, **a diameter which exceeds 2.25 inches**, and has a rated wattage that is 40 watts or higher.

(42 U.S.C. 6291(30)(C))

- DOE plans to continue to regulate IRL rated 40 to 205 watts.
- EISA included statutory exemptions for the following IRL:
 - ER30, BR30, BR40, and ER40 lamps rated at 50 watts or less;
 - BR30, BR40, or ER40 lamps rated at 65 watts; and
 - R20 lamps rated at 45 watts or less.

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EISA 2007

Colored Incandescent Lamp Definition

- **EISA 2007 introduces a new definition for colored incandescent lamp:**

The term “colored incandescent lamp” means an incandescent lamp designated and marketed as a colored lamp that has--

 - (i) a color rendering index of less than 50, as determined according to the test method given in C.I.E. publication 13.3-1995; or
 - (ii) a correlated color temperature of less than 2,500K, or greater than 4,600K, where correlated temperature is computed according to the Journal of Optical Society of America, Vol. 58, pages 1528-1595 (1968).
- **This new definition effectively removes the exclusion of neodymium incandescent reflector lamps from regulation. DOE considers standards for these lamps by creating a separate product class for “modified spectrum” IRL.**

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Preliminary Determination

Expansion Scope of Coverage

- **“...the Secretary shall initiate a rulemaking procedure to determine if the standards in effect for fluorescent lamps...should be amended so that they would be applicable to additional general service fluorescent lamps...” 42 U.S.C. 6295(i)(5)**
- **Schedule:**

Determination Analysis	Energy Conservation Standards
Preliminary Determination of Scope	ANOPR
Proposed Determination of Scope	NOPR
Final Determination of Scope	Final Rule

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Preliminary Determination

Scope of Coverage Criteria / Rationale

- **Statutory definition for GSFL (42 U.S.C. 6291(30)(B))**
- **Potential energy savings of the lamps**
 - Estimated using market-share information and incremental energy savings of more-efficacious lamps.
- **Includes lamps whose shipments may not currently be high-volume but which have the potential to grow.**
 - Mitigates the risk that regulating one lamp type may lead to rapid increased sales of other, non-regulated lamps.
- **Potential for a standard to meet two remaining statutory criteria**
 - Technologically feasible
 - Economically justified

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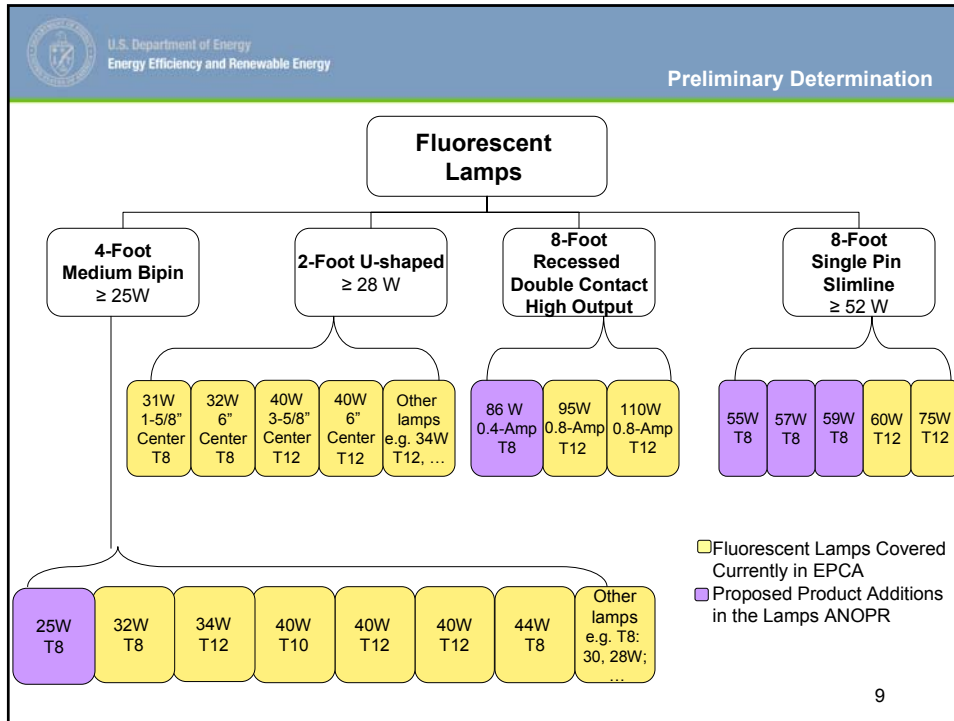
Preliminary Determination

Preliminary Determination of Scope - GSFL

- **Additional General Service Fluorescent Lamps**
 - Four-foot, medium bipin lamps with wattages ≥ 25 and < 28
 - Eight-foot recessed double contact, rapid start, HO lamps not defined in ANSI C78.1-1991 (e.g., 86W, T8, 0.4 A, high-frequency)
 - Eight-foot single pin instant start slimline lamps, with a rated wattage ≥ 52 , not defined in ANSI C78.3-1991 (e.g., 59W, T8, single pin)



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- U.S. Department of Energy
Energy Efficiency and Renewable Energy
- Preliminary Determination
- ### Other Lamps Considered for Coverage
- **DOE considered, but is presently not planning to extend coverage to the following lamp types:**
 - **T5 Miniature Bipin Lamps**
 - Lower potential for per-unit energy savings because they already represent more efficacious product.
 - Currently small market share.
 - Regulation of these lamps may slow the adoption of these higher-efficacy products.
 - **Very High Output Lamps**
 - Though may have potential for relatively large per-unit energy savings, research indicates that they have small and decreasing market share.
 - **Fluorescent lamps with alternate lengths, diameters, bases, and shapes**
 - Constitute a small market share with little potential to grow.
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Consideration of Additional General Service Fluorescent Lamps

DOE invites comment on its considered expansion of coverage of general service fluorescent lamps. (Issue #1)