

Minnesota Attorney General: Administrative Rules Proceedings

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August 20, 2018

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RULE REVIEW CHECKLIST

File No. 1561 Docket No. 05.0009.0731

DATE RECEIVED 1/20/89 ADOPTED W/O HEARING X

REVIEW DATE 1/30/89 EMERGENCY RULE _____

DUE DATE 2/3/89 REVISOR APPROVED _____

APPROVED _____ REVISOR DISAPPROVED _____

~~DISAPPROVED~~ _____ FILED W/SEC. OF STATE _____

WITHDRAWN 2/3/89 RETURNED TO AGENCY _____

✓ Rule as adopted (4 copies)

✓ Notice to Solicit Outside Information/Opinion (if applicable)
- 8/22/86 Date published in State Register
- none Comments

_____ ~~Petition for Adoption of a Rule (if applicable)~~

_____ ~~Board's Authorizing Resolution~~
- _____ ~~Date adopted~~

✓ Proposed Rule
- yes Revisor's Certificate

✓ Notice of Intent to Adopt Rule
- NO Statutory Authority
- yes Small Business Statement
- yes Expenditure of public money statement
- yes Signature

✓ Statement of Need and Reasonableness (if applicable)
- yes Small Business Statement
- N/a Fees - § 16A.128

✓ Affidavit of Mailing Notice of Intent to Adopt Rule
- 11/2/88 Date (30)/25 days before adoption
- ✓ Notice attached
- _____ ~~Copy of rule or summary attached~~

✓ Publication in State Register
- 11/21/88 Date (30)/25 days before adoption

_____ 180-day deadline from:
- See Notes Effective date of law requiring rule (14.12) (both rules)
- 12/21/88 end of comment period (§ 14.26) (rules without hearing)
- _____ ~~effective date of statutory authority (§ 14.29) (emergency rules)~~

_____ ~~Resolution Adopting~~
- _____ ~~Date adopted~~

✓ Findings of Fact, Conclusions & Order Adopting
- 12/23/88 Date

_____ ~~Written requests, submissions or comments~~

✓ Declaration of attorney
- Mary Jo Murray Name of SAAG representing agency

_____ ~~Notice of Submission to Atty. Gen. (if applicable)~~

_____ ~~Aff. of Mailing Notice to Atty. Gen. (if applicable)~~

ATTORNEY GENERAL

February 10, 1989

DENNIS M. DEVEREAUX
Special Assistant to the Commissioner

JULIE A. LEPPINK
Special Assistant
Attorney General

6-9422

In the Matter of the Adopted Rule Relating to
Fluorescent Lamp Ballasts

The above-referenced rule has been approved as to its legality by the Attorney General on February 8, 1989.

Enclosed is the agency's copy of the approved rule. This office has already filed two copies with the Secretary of State who will forward one copy to the Revisor of Statutes. The fourth is being retained by this division of the Attorney General's Office for its records.

Also enclosed are any petitions, requests, submission or comments received by the agency and any extra copies of documents which the agency submitted to the Attorney General.

In order for a permanent rule without a hearing to become effective, your agency must publish a notice of adoption in the State Register in accoradance with Minn. Stat. §14.27. An emergency rule becomes effective five working days after approval by the Attorney General; however, the agency must publish a notice in the State Register in accordance with Minn. Stat. §14.34.

If you have any questions in this regard, please contact me.

JAL:rer
Enclosures

cc: Maryanne Hruby
Executive Director
Legislative Commission to Review
Administrative Rules

William Brown
Chief Administrative Law Judge
Office of Administrative Hearings

Department of Public Service

Adopted Permanent Rules Relating to Fluorescent Lamp Ballasts

Rules as Adopted

7605.0100 AUTHORITY.

The commissioner is authorized by Minnesota Statutes, section ~~116J.19~~ 216C.19, subdivision ~~7~~ 8, to establish minimum energy efficiency standards for fluorescent lamp ballasts. No person may sell, install, or place in inventory a fluorescent lamp ballast in Minnesota that does not comply with parts 7605.0100 to 7605.0160 after their effective dates.

7605.0110 APPLICABILITY.

Subpart 1. **Applicability.** Parts 7605.0100 to 7605.0160 apply to fluorescent lamp ballasts distributed in commerce for personal or commercial use or consumption that are:

A. manufactured on or after January 1, 1990; or

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

D. designed to operate at nominal input voltages of 120 or 277 volts;

E. designed to operate with an input current frequency of 60 Hertz; and

F. designed for use in connection with F40T12, F96T12, or F96T12HO lamps.

Subp. 2. **Exclusion.** Fluorescent lamp ballasts excluded from parts 7605.0100 to 7605.0160 are:

A. those designed for dimming or for use in ambient temperatures of zero degrees Fahrenheit or less; and

B. those with a power factor of less than 0.90 and sold for use in residential building applications.

7605.0120 DEFINITIONS.

Approved by Revisor

Subpart 1. **Scope.** The definitions in this part apply to parts 7605.0100 to 7605.0160.

Subp. 2. **ANSI standard.** "ANSI standard" means a standard approved by a committee accredited by the American National Standards Institute.

Subp. 3. **Ballast efficacy factor.** "Ballast efficacy factor" means the relative light output divided by the power input of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 4. **Ballast input voltage.** "Ballast input voltage" means the rated input voltage of a fluorescent lamp ballast.

Subp. 5. **Energy efficiency standard.** "Energy efficiency standard" means a performance standard:

A. that prescribes a minimum level of energy efficiency for a covered product, determined in accordance with test procedures prescribed under United States Code, title 42, section 6293; and

B. that includes any other requirement that the department may prescribe.

Subp. 6. **Fluorescent lamp ballast.** "Fluorescent lamp ballast" means a device used to start and operate fluorescent lamps by providing a starting voltage and current and limiting the current during normal operation.

Subp. 7. **F40T12.** "F40T12" means a nominal 40 watt tubular fluorescent lamp that is 48 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 8. **F96T12.** "F96T12" means a nominal 75 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.3-1978 (R1984).

Subp. 9. **F96T12H0.** "F96T12H0" means a nominal 110 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 10. **Input current.** "Input current" means the root-mean-square (RMS) current in amperes delivered to a fluorescent lamp ballast.

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Subp. 11. **Luminaire.** "Luminaire" means a complete lighting unit consisting of a fluorescent lamp or lamps and parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply through the ballast.

Subp. 12. **Nominal lamp watts.** "Nominal lamp watts" means the wattage at which a lamp is designed to operate.

Subp. 13. **Power factor.** "Power factor" means the power input divided by the product of ballast input voltage and input current of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 14. **Power input.** "Power input" means the power consumption in watts of a ballast and fluorescent lamp or lamps, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 15. **Relative light output.** "Relative light output" means the light output delivered through the use of a ballast divided by the light output delivered through the use of a reference ballast, expressed as a percent, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 16. **Test procedures.** "Test procedures" means the test procedures prescribed by the United States Department of Energy under United States Code, title 42, section 6293.

7605.0130 FLUORESCENT LAMP BALLAST STANDARDS.

A fluorescent lamp ballast covered by parts 7605.0100 to 7605.0160 must have a power factor of 0.90 or greater and a ballast efficacy factor not less than the following:

Application for Operation of	Ballast Input Voltage	Total Nominal Lamp Watts	Ballast Efficacy Factor
one F40T12 lamp.....	120	40	1.805
	277	40	1.805

Approved by Revisor _____

two F40T12 lamps.....	120	80	1.060
	277	80	~~1.060~~
			1.050
two F96T12 lamps.....	120	150	0.570
	277	150	0.570
two F96T12HO lamps.....	120	220	0.390
	277	220	0.390

7605.0140 TESTING AND QUALITY ASSURANCE.

Subpart 1. **Procedures.** For fluorescent lamp ballasts manufactured on or after January 1, 1990, a manufacturer shall provide for the testing of each type of model of any covered product which it manufactures, using test procedures applicable to that model that comply with ANSI standard 82.2-1984.

Subp. 2. **Samples.** The manufacturer shall cause the testing of samples of each model of fluorescent lamp ballast to be sold or installed in Minnesota of the type described in part 7605.0110, subpart 1. A sample of sufficient size of each model must be tested to ensure that the ballast efficacy factor is no greater than the mean of the sample or the lower 97-1/2 percent confidence limit of the true mean divided by 0.95. A minimum of four ballasts of each model must be randomly selected and tested at least once a year.

Subp. 3. **Power input and relative light output.** The power input and relative light output must be determined in accordance with the ANSI standard C82.2-1984.

7605.0150 LABELING.

The labeling of a fluorescent lamp ballast manufactured on or after January 1, 1990, must indicate conspicuously, in accordance with United States Code, title 42, section 6294, a capital letter "E" printed within a circle on the ballast and on the packaging of the ballast or of the luminaire into which the ballast has been incorporated.

7605.0160 INCORPORATIONS BY REFERENCE.

Subpart 1. **Generally.** The portions of the standards

Approved
by Revisor _____

listed in subpart 2 that are specified in parts 7605.0100 to 7605.0160 are incorporated by reference. The material is subject to frequent change, and all of the standards listed are available to the public at the libraries listed in subpart 3.

Subp. 2. **Standards.** The following American National Standards Institute standards are incorporated by reference:

A. ANSI Standard C78.1-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Rapid Start Types;

B. ANSI Standard C78.3-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Instant Start and Cold Cathode Types; and

C. ANSI Standard C82.2-1984: Methods of Measurement of Fluorescent Lamp Ballasts.

Subp. 3. **Availability.** The standards incorporated by reference are available to the public at the locations in items A and B.

A. All documents incorporated by reference in this chapter are available at the following locations in Saint Paul, Minnesota:

(1) Minnesota State Law Library; and

(2) James J. Hill Reference Library.

B. All ANSI standards are also available at the following locations:

(1) University of Minnesota Engineering Library; and

(2) American National Standards Institute, 1430 Broadway, New York, New York 10018, telephone (212) 354-3300.

Approved
by Revisor _____

Office of the Revisor of Statutes

Administrative Rules

TITLE: Adopted Permanent Rules Relating to Fluorescent Lamp Ballasts

AGENCY: Department of Public Service

MINNESOTA RULES: Chapter 7605

INCORPORATIONS BY REFERENCE:

Rule Number: 7605.0160, subpart 2

Material Incorporated: American National Standards Institute standards:

ANSI Standard C78.1-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Rapid Start Types;

ANSI Standard C78.3-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Instant Start and Cold Cathode Types; and

ANSI Standard C82.2-1984: Methods of Measurement of Fluorescent Lamp Ballasts.

10:05

APPROVED AS TO FORM AND LEGALITY
February 8, 1989
HUBERT H. HUMPHREY, III
ATTORNEY GENERAL
BY
SPECIAL ASSISTANT ATTORNEY GENERAL

The attached rules are approved for filing with the Secretary of State

STATE OF MINNESOTA
DEPARTMENT OF STATE
FILED
FEB 10 1989
Joan Anderson Growe
Secretary of State

Craig E. Lindeke
Craig E. Lindeke
Senior Assistant Revisor

RULE REVIEW CHECKLIST
RESUBMITTED RULE

File No. 1561 Docket No. 05.0009, 0731

RESUBMISSION DATE _____ ADOPTED W/O HEARING X
DATE DUE _____ EMERGENCY RULE _____

APPROVED 2/8/89 JJ REVISOR APPROVED _____
DISAPPROVED _____ REVISOR DISAPPROVED _____
WITHDRAWM 2/3/89 FILED W/SEC. STATE _____
RETURNED TO AGENCY _____

No **Does the revision raise significant new legal issues?**

_____ Review date

_____ Rule as adopted (4 copies) Make 2 copies w/o back page

_____ Supplemental Findings of Fact, Conclusions & Order Adopting

_____ ~~Board's Supplemental Resolution Adopting~~

_____ ~~Notice of submission to Attorney General~~

_____ Affidavit of Mailing ~~Notice to Attorney General~~

= 2/10/89 resubmission =

Department of Public Service

Proposed Permanent Rules Relating to Fluorescent Lamp Ballasts

Rules as Proposed (all new material)

7605.0100 AUTHORITY.

The commissioner is authorized by Minnesota Statutes, section 116J.19, subdivision 7, to establish minimum energy efficiency standards for fluorescent lamp ballasts. No person may sell or install a fluorescent lamp ballast in Minnesota after January 1, 1991, that has been placed in inventory after the effective date of these rules that does not comply with parts 7605.0100 to 7605.0160.

7605.0110 APPLICABILITY.

Subpart 1. **Applicability.** Parts 7605.0100 to 7605.0160 apply to fluorescent lamp ballasts distributed in commerce for personal use or consumption that:

A. are intended to operate at nominal input voltages of 120 or 277 volts;

B. have an input frequency of 60 Hz;

C. have maximum lamp operating currents greater than 350 milliamperes and less than 500 milliamperes; and

D. can be used to operate fluorescent lamp types F40T12, F96T12, or F96T12H0.

Subp. 2. **Exclusion.** Fluorescent lamp ballasts excluded from parts 7605.0100 to 7605.0160 are those designed for dimming or for use in ambient temperatures of zero degrees Fahrenheit or less.

7605.0120 DEFINITIONS.

Subpart 1. **Scope.** The definitions in this part apply to parts 7605.0100 to 7605.0160.

Subp. 2. **ANSI standard.** "ANSI standard" means a standard approved by a committee accredited by the American National Standards Institute.

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Subp. 3. **Ballast efficacy factor.** "Ballast efficacy factor" means the relative light output divided by the power input of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 4. **Ballast input voltage.** "Ballast input voltage" means the rated input voltage of a fluorescent lamp ballast.

Subp. 5. **Energy efficiency standard.** "Energy efficiency standard" means a performance standard:

A. that prescribes a minimum level of energy efficiency for a covered product, determined in accordance with test procedures prescribed under United States Code, title 42, section 6293; and

B. that includes any other requirement that the department may prescribe.

Subp. 6. **Fluorescent lamp ballast.** "Fluorescent lamp ballast" means a device used to start and operate fluorescent lamps by providing a starting voltage and current and limiting the current during normal operation.

Subp. 7. **F40T12.** "F40T12" means a nominal 40 watt tubular fluorescent lamp that is 48 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 8. **F96T12.** "F96T12" means a nominal 75 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.3-1978 (R1984).

Subp. 9. **F96T12H0.** "F96T12H0" means a nominal 110 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 10. **Input current.** "Input current" means the root-mean-square (RMS) current in amperes delivered to a fluorescent lamp ballast.

Subp. 11. **Luminaire.** "Luminaire" means a complete lighting unit consisting of a fluorescent lamp or lamps and parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply through the ballast.

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by Revisor _____

Subp. 12. **Power factor.** "Power factor" means the power input divided by the product of ballast input voltage and input current of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 13. **Power input.** "Power input" means the power consumption in watts of a ballast and fluorescent lamp or lamps, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 14. **Relative light output.** "Relative light output" means the light output delivered through the use of a ballast divided by the light output delivered through the use of a reference ballast, expressed as a percent, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 15. **Test procedures.** "Test procedures" means the test procedures prescribed by the United States Department of Energy under United States Code, title 42, section 6293.

Subp. 16. **Total nominal lamp watts.** "Total nominal lamp watts" means the wattage at which a lamp is designed to operate.

7605.0130 FLUORESCENT LAMP BALLAST STANDARDS.

A fluorescent lamp ballast covered by parts 7605.0100 to 7605.0160 must have a power factor of 0.90 or greater and a ballast efficacy factor not less than the following:

Application for Operation of	Ballast Input Voltage	Total Nominal Lamp Watts	Ballast Efficacy Factor
one F40T12 lamp.....	120	40	1.805
	277	40	1.805
two F40T12 lamps.....	120	80	1.060
	277	80	1.060
two F96T12 lamps.....	120	150	0.570
	277	150	0.570
two F96T12HO lamps.....	120	220	0.390

Approved by Revisor _____

7605.0140 TESTING AND QUALITY ASSURANCE.

Subpart 1. **Procedures.** A manufacturer shall provide for the testing of each type of model of any covered product which it manufactures, using test procedures applicable to that model that comply with ANSI standard 82.2-1984.

Subp. 2. **Samples.** The manufacturer shall cause the testing of samples of each model of fluorescent lamp ballast to be sold or installed in Minnesota of the type described in part 7605.0110, subpart 1. A sample of sufficient size of each model must be tested to ensure that the ballast efficacy factor certified under part 7605.0150 is no greater than the mean of the sample or the lower 97-1/2 percent confidence limit of the true mean divided by 0.95. A minimum of four ballasts of each model must be randomly selected and tested at least once a year.

Subp. 3. **Power input and relative light output.** The power input and relative light output must be determined in accordance with the ANSI standard C82.2-1984.

7605.0150 LABELING.

The labeling of a fluorescent lamp ballast manufactured after December 31, 1989, must indicate conspicuously, in accordance with United States Code, title 42, section 6294, a capital letter "E" printed within a circle on the ballast and on the packaging of the ballast or of the luminaire into which the ballast has been incorporated.

7605.0160 INCORPORATIONS BY REFERENCE.

Subpart 1. **Generally.** The portions of the standards listed in subpart 2 that are specified in parts 7605.0100 to 7605.0160 are incorporated by reference. The material is subject to frequent change, and all of the standards listed are available to the public at the libraries listed in subpart 3.

Subp. 2. **Standards.** The following American National Standards Institute standards are incorporated by reference:

A. ANSI Standard C78.1-1978 (R1984): Dimensional and

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by Revisor _____

Electrical Characteristics of Fluorescent Lamps, Rapid Start Types;

B. ANSI Standard C78.3-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Instant Start and Cold Cathode Types; and

C. ANSI Standard C82.2-1984: Methods of Measurement of Fluorescent Lamp Ballasts.

Subp. 3. **Availability.** The standards incorporated by reference are available to the public at the locations in items A and B.

A. All documents incorporated by reference in this chapter are available at the following locations in Saint Paul, Minnesota:

(1) Minnesota State Law Library; and

(2) James J. Hill Reference Library.

B. All ANSI standards are also available at the following locations:

(1) University of Minnesota Engineering Library; and

(2) American National Standards Institute, 1430 Broadway, New York, New York 10018, telephone (212) 354-3300.

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Office of the Revisor of Statutes

Administrative Rules

TITLE: Proposed Permanent Rules Relating to Fluorescent Lamp Ballasts

AGENCY: Department of Public Service

MINNESOTA RULES: Chapter 7605

INCORPORATIONS BY REFERENCE:

Rule Number: 7605.0160, subpart 2

Material Incorporated: American National Standards Institute standards:

ANSI Standard C78.1-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Rapid Start Types;

ANSI Standard C78.3-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Instant Start and Cold Cathode Types; and

ANSI Standard C82.2-1984: Methods of Measurement of Fluorescent Lamp Ballasts.

The attached rules are approved for publication in the State Register

Craig E. Lindeke
Senior Assistant Revisor

AFFIDAVIT OF MAILING

In the Matter of the Proposed Adoption of the Rule of the Department of Public Service, Energy Division, Relating to Fluorescent Lamp Ballasts

AFFIDAVIT OF MAILING THE NOTICE OF INTENT TO ADOPT A RULE WITHOUT A PUBLIC HEARING

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

That on the 3rd day of November, 19 88, at the City of St. Paul, County of Ramsey, State of Minnesota, I mailed the attached Notice of Intent to Adopt a Rule Without a Public Hearing by depositing in the State of Minnesota Central Mail System, a copy thereof, with postage prepaid, to all persons and associations on the aforementioned mailing list.

Philip K Goldstein
(name)

Legal Intern
(title)

Subscribed and sworn to before me this 3rd day of FEBRUARY, 1989.

Dennis M. Devereaux
Notary Public

DENNIS M. DEVEREAUX
NOTARY PUBLIC-MINNESOTA
RAMSEY COUNTY
My Comm. Expires Apr. 1, 1994

MINNESOTA
Department of Public Service

Administrative Office
(612) 296-7107

790 American Center
150 East Kellogg Boulevard
St. Paul, Minnesota 55101

RULES RELATING TO FLUORESCENT LAMP BALLASTS

Notice of Intent to Adopt Rules Without a Public Heating

Notice is hereby given that the Minnesota Department of Public Service proposes to adopt Minnesota Rules, Chapter 7605 without a public hearing. The Commissioner has determined that the proposed rules will be noncontroversial in nature and has elected to follow the procedures set forth in the Minn. Stat., sections 14.22 to 14.28.

Minnesota Rules, Chapter 7605 apply to manufacturers and sellers of all fluorescent lamp ballasts sold or installed in Minnesota.

All persons have 30 days in which to submit comment in support of or in opposition to any part of the proposed rules. Comment is encouraged. Each comment should identify the proposed rule addressed, the reason for the comment, and any change proposed.

All persons may make a written request for a public hearing on the proposed rule within the 30-day comment period. If 25 or more persons submit a written request for a public hearing within the 30-day comment period, a public hearing will be held unless a sufficient number withdraw their requests in writing. Any person requesting a public hearing must state his or her name and address and is encouraged to identify the portion of the proposed rule addressed, the reason for the request, and any change proposed. If a public hearing is required, the agency will proceed pursuant to Minn. Stat., sections 14.131 to 14.20.

Persons who wish to submit comments or a written request for a public hearing should submit such comments or requests to: Bruce D. Nelson, Department of Public Service, Energy Division, 900 American Center Building, 150 East Kellogg Boulevard, St. Paul, Minnesota 55101 (612)297-2313.

Comments or requests for a public hearing must be received by the Department of Public Service, Energy Division by 4:00 p.m., Dec.21, 1988. The proposed rule may be modified if the modifications are supported by the data and views submitted to the Department and do not result in a substantial change in the proposed rule as noticed.

A Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed rule and identifies the data and information relied upon to support the proposed rule has been prepared and is available by requesting a copy from Mr. Nelson at the address listed above.

The implementation of this rule will not require the expenditure of public money in excess of $100,000 by local bodies in either of the two years 13 following their adoption, nor do the rules have any impact on agricultural land.

The adoption of this rule would not affect small businesses in Minnesota. The Department has evaluated the effect of the proposed rules on small 12 businesses and has considered each of the methods prescribed by Minn. Stat. Section 14.155, subd. 2, for reducing the impact of the rules on small businesses. Small businesses would benefit from the proposed rule, since the required frequency of testing is reduced, resulting in less stringent compliance, schedules and deadlines in conformance with Minn. Stat. Section 14.155, subd. 2(a) and (b). The standards to be imposed by Minn. Chap. 7605 would is substantially the same as those currently required by federal legislation. The Department has determined that small businesses cannot be exempted from any or all requirements of the rules in conformance with Minn. Stat. Section 14.155, subd. 2(e).

If no hearing is required, upon adoption of the rule, the rule and the required supporting documents will be submitted to the Attorney General for review as to legality and form to the extent that form relates to legality. 9 Any person may request notification of the date of submission to the Attorney General. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the adopted rules, must submit a written request for such to Mr. Nelson at the above address.

Tony Perpich

Tony Perpich, Commissioner
Department of Public Service
Dated: 4 November 1988

Department of Public Service, Energy Division

In the matter of the Proposed Rule of the State Department of Public Service, Energy Division, Governing Fluorescent Lamp Ballasts

STATEMENT OF NEED AND REASONABLENESS
November, 1988

The Commissioner of the Minnesota Department of Public Service proposes to adopt rules without a public hearing. The Commissioner has determined that the proposed amendment of these rules will be non-controversial in nature and has elected to follow the procedures set forth in Minnesota Statutes sections 14.22 to 14.28. The above-captioned proposed rules governing the energy efficiency of ballasts for fluorescent lamps.

Authority
The Commissioner is authorized by Minnesota Statutes section 116J.19, subdivision 7, to establish minimum energy efficiency standards for fluorescent lamp ballasts.

Summary
The proposed rule amendment is a comprehensive program to insure that fluorescent lamp ballasts entering the Minnesota market will meet the national minimum efficiency standards signed into law under the National Appliance Energy Conservation amendments of 1988, 42 USC 6201. The Minnesota rules, Minn. Chap. 7605, prohibits the sale of fluorescent lamp ballasts not meeting these rules after January 1, 1991.

Small Business
The Department has evaluated the effect of the proposed rules on small businesses and has considered each of the methods prescribed by Minnesota Statutes Section 14.155, subd. 2, for reducing the impact of the rules on small businesses. The adoption of these amendments will not affect small businesses in Minnesota since the rules are the same as those mandated by the federal government. Minnesota Statutes section 14.115, subd. 2(e) requires the Department to consider exempting small businesses from any or all requirements of the rules. At this time there are no manufacturers of ballasts in Minnesota.

To assure that fluorescent lamp ballasts are energy efficient, it is essential that all manufacturers of such products be subject to the requirements of these rules. To exempt some businesses from these requirements would allow fluorescent lamp ballasts which were not energy efficient to be sold and installed in Minnesota. Thus, the Department concludes that small businesses cannot be exempted from the requirements imposed by these rules.

Public Monies

The implementation of these amendments will not require the expenditure of public monies in excess of $100,000 by local bodies in either of the two years following their adoption and meets the test of the exceptions to fiscal notes as provided by Minnesota Statutes 3.983 subpart 2. The proposed amendments would not have any impact on agricultural land.

If a public hearing is required, Bruce Nelson, Senior Engineer and Narv Somdahl, Manager of Conservation - Energy Division, Department of Public Service, will appear on behalf of the proposed rules at the hearing. They will testify regarding the need for and reasonableness of the proposed rules.

STATEMENT OF NEED AND REASONABLENESS

The Department of Public Service, Energy Division proposes to adopt the rules governing fluorescent lamp ballasts. It is important that only efficient fluorescent lamp ballasts are sold in Minnesota. These rules are reasonable because at the same time the Minnesota rules take effect, the federal "National Appliance Energy Conservation Amendments of 1988" will take effect. The Minnesota rules are concordant with the federal regulations. This is necessary because the federal law is preemptive in nature, being one that supersedes those in effect at the state level.

Minnesota law requires that all fluorescent lamp ballasts comply with the standards set forth in these rules. Minn. Rules Chap. 7605.0110, subpart 2, exempts fluorescent lamp ballasts designed for dimming or for use in ambient temperatures of 0 degrees Fahrenheit or less. These rules, like their federal counterpart, have exempted these ballasts because of the technical limitations that currently exist in the ballast industry.

AFFIDAVIT OF CERTIFICATE OF MAILING LIST

In the Matter of the Proposed Adoption of the Rule of the Department of Public Service, Energy Division, Relating to Fluorescent Lamp Ballasts

AFFIDAVIT OF CERTIFICATE OF MAILING LIST FOR NOTICE OF INTENT TO ADOPT A RULE WITHOUT A PUBLIC HEARING

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

Judith A. Schmidt, being first duly sworn deposes and says:

I hereby certify that the list of persons and associations who have requested, pursuant to Minnesota Statutes, sections 14.14, subdivision 1a and 14.22 or 14.30, that their names be placed on the state Department of Public Service, Energy Division, rulemaking list is accurate, complete, and current as of this 2nd day of November, 1988.

Judith A. Schmidt
(name)

Data Processing Coord. I
(title)

Subscribed and sworn to before me this 2ND day of NOVEMBER, 1988.

Dennis M. Devereaux
Notary Public

DENNIS M. DEVEREAUX
NOTARY PUBLIC-MINNESOTA
RAMSEY COUNTY
My Comm. Expires Apr. 1, 1994

B. transportation to and from inspection site, laboratories and other documented travel sites, based on current Department of Administration rates or rates specified in applicable bargaining unit agreements;

C. expense of purchase, rental, or repair of special equipment and supplies;

D. living expenses away from home, based on current Department of Administration rates or rates specified in applicable bargaining unit agreements;

E. inspection and consultant services contracted for by the state; and

F. laboratory expenses and analysis of data.

Subp. 2a. **Dams and water level controls.** Field inspection fees shall not be charged for any dam subject to parts 6115.0300 to 6115.0520. Such dams are subject to the inspection fee requirements of part 6115.0520. Field inspection fees for all other water level control structures shall be charged pursuant to parts 6115.0010 to 6115.0130.

~~The effective date of this subpart is August 1, 1985.~~

6115.0120 WATER APPROPRIATION PROCESSING FEE EXEMPTIONS.

The following water appropriation permit actions are exempt from amendment or transfer fees:

A. a change in mailing address;

B. a change of authorized agent when land ownership has not changed;

C. an assignment of a permit within the immediate family;

D. a change in pump location on surface water sources for the same operation;

E. an addition of a new well that replaces an old well for the same permitted operation and is completed at a similar depth in the same aquifer;

F. a decrease in the permitted pumping rate, amount of water authorized, or irrigated acreage;

G. an increase in the permitted pumping rate within ten percent;

H. an increase in the permitted appropriation within ten percent of the annual authorization for nonirrigation permits; or

I. an increase of less than 30 acres in the number of permitted irrigated acres.

Any amendments or transfers that exceed the exemptions in items A to I require a processing fee under part 6115.0065.

REPEALER. *Minnesota Rules*, part 6115.0080, subpart 1, is repealed.

Department of Public Service

Proposed Permanent Rules Relating to Fluorescent Lamp Ballasts

Notice of Intent to Adopt Rules Without a Public Hearing

NOTICE IS HEREBY GIVEN that the Minnesota Department of Public Service proposes to adopt *Minnesota Rules*, Chapter 7605 without a public hearing. The Commissioner has determined that the proposed rules will be noncontroversial in nature and has elected to follow the procedures set forth in the *Minnesota Statutes*, sections 14.22 to 14.28.

Minnesota Rules, Chapter 7605 apply to manufacturers and sellers of all fluorescent lamp ballasts sold or installed in Minnesota.

All persons have 30 days in which to submit comment in support of or in opposition to any part of the proposed rules. Comment is encouraged. Each comment should identify the proposed rule addressed, the reason for the comment, and any change proposed.

All persons may make a written request for a public hearing on the proposed rule within the 30-day comment period. If 25 or more persons submit a written request for a public hearing within the 30-day comment period, a public hearing will be held unless a sufficient number withdraw their requests in writing. Any person requesting a public hearing must state his or her name and address and is encouraged to identify the portion of the proposed rule addressed, the reason for the request, and any change proposed. If a public hearing is required, the agency will proceed pursuant to *Minnesota Statutes*, sections 14.131 to 14.20.

Persons who wish to submit comments or a written request for a public hearing should submit such comments or requests to: Bruce D. Nelson, Department of Public Service, Energy Division, 900 American Center Building, 150 East Kellogg Boulevard, St. Paul, Minnesota 55101 (612) 297-2313.

Comments or requests for a public hearing must be received by the Department of Public Service, Energy Division by 4:00 p.m., Dec. 21, 1988. The proposed rule may be modified if the modifications are supported by the data and views submitted to the Department and do not result in a substantial change in the proposed rule as noticed.

A Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed rule and identifies the data and information relied upon to support the proposed rule has been prepared and is available by requesting a copy from Mr. Nelson at the address listed above.

The implementation of this rule will not require the expenditure of public money in excess of $100,000 by local bodies in either of the two years following their adoption, nor do the rules have any impact on agricultural land.

The adoption of this rule would not affect small businesses in Minnesota. The Department has evaluated the effect of the proposed rules on small businesses and has considered each of the methods prescribed by *Minnesota Statutes* Section 14.155, subd. 2, for reducing the impact of the rules on small businesses. Small businesses would benefit from the proposed rule, since the required frequency of testing is reduced, resulting in less stringent compliance, schedules and deadlines in conformance with *Minnesota Statutes* Section 14.155, subd. 2(a) and (b). The standards to be imposed by *Minnesota Rules*, Chap. 7605 would be substantially the same as those currently required by federal legislation. The Department has determined that small businesses cannot be exempted from any or all requirements of the rules in conformance with *Minnesota Statutes* Section 14.155, subd. 2(e).

If no hearing is required upon adoption of the rule, the rule and the required supporting documents will be submitted to the Attorney General for review as to legality and form to the extent that form relates to legality. Any person may request notification of the date of submission to the Attorney General. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the adopted rules, must submit a written request for such to Mr. Nelson at the above address.

Dated: 4 November 1988

Tony Perpich
Commissioner
Department of Public Service

Rules as Proposed (all new material)

7605.0100 AUTHORITY.

The commissioner is authorized by *Minnesota Statutes*, section 116J.19, subdivision 7, to establish minimum energy efficiency standards for fluorescent lamp ballasts. No person may sell, install, or place in inventory a fluorescent lamp ballast in Minnesota that does not comply with parts 7605.0100 to 7605.0160 after their effective dates.

7605.0110 APPLICABILITY.

Subpart 1. **Applicability.** Parts 7605.0100 to 7605.0160 apply to fluorescent lamp ballasts distributed in commerce for personal or commercial use or consumption that are:

A. manufactured on or after January 1, 1990; or

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

D. designed to operate at nominal input voltages of 120 or 277 volts;

E. designed to operate with an input current frequency of 60 Hertz; and

F designed for use in connection with F40T12, F96T12, or F96T12HO lamps.

Subp. 2. **Exclusion.** Fluorescent lamp ballasts excluded from parts 7605.0100 to 7605.0160 are:

A. those designed for dimming or for use in ambient temperatures of zero degrees Fahrenheit or less; and

B. those with a power factor of less than 0.90 and sold for use in residential building applications.

7605.0120 DEFINITIONS.

Subpart 1. **Scope.** The definitions in this part apply to parts 7605.0100 to 7605.0160.

KEY: **PROPOSED RULES SECTION** — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **ADOPTED RULES SECTION** — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

Subp. 2. **ANSI standard.** "ANSI standard" means a standard approved by a committee accredited by the American National Standards Institute.

Subp. 3. **Ballast efficacy factor.** "Ballast efficacy factor" means the relative light output divided by the power input of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 4. **Ballast input voltage.** "Ballast input voltage" means the rated input voltage of a fluorescent lamp ballast.

Subp. 5. **Energy efficiency standard.** "Energy efficiency standard" means a performance standard:

A. that prescribes a minimum level of energy efficiency for a covered product, determined in accordance with test procedures prescribed under *United States Code*, title 42, section 6293; and

B. that includes any other requirement that the department may prescribe.

Subp. 6. **Fluorescent lamp ballast.** "Fluorescent lamp ballast" means a device used to start and operate fluorescent lamps by providing a starting voltage and current and limiting the current during normal operation.

Subp. 7. **F40T12.** "F40T12" means a nominal 40 watt tubular fluorescent lamp that is 48 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 8. **F96T12.** "F96T12" means a nominal 75 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.3-1978 (R1984).

Subp. 9. **F96T12H0.** "F96T12H0" means a nominal 110 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 10. **Input current.** "Input current" means the root-mean-square (RMS) current in amperes delivered to a fluorescent lamp ballast.

Subp. 11. **Luminaire.** "Luminaire" means a complete lighting unit consisting of a fluorescent lamp or lamps and parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply through the ballast.

Subp. 12. **Nominal lamp watts.** "Nominal lamp watts" means the wattage at which a lamp is designed to operate.

Subp. 13. **Power factor.** "Power factor" means the power input divided by the product of ballast input voltage and input current of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 14. **Power input.** "Power input" means the power consumption in watts of a ballast and fluorescent lamp or lamps, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 15. **Relative light output.** "Relative light output" means the light output delivered through the use of a ballast divided by the light output delivered through the use of a reference ballast, expressed as a percent, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 16. **Test procedures.** "Test procedures" means the test procedures prescribed by the United States Department of Energy under *United States Code*, title 42, section 6293.

7605.0130 FLUORESCENT LAMP BALLAST STANDARDS.

A fluorescent lamp ballast covered by parts 7605.0100 to 7605.0160 must have a power factor of 0.90 or greater and a ballast efficacy factor not less than the following:

Application for Operation of	Ballast Input Voltage	Total Nominal Lamp Watts	Ballast Efficacy Factor
one F40T12 lamp	120	40	1.805
	277	40	1.805
two F40T12 lamps	120	80	1.060
	277	80	1.060
two F96T12 lamps	120	150	0.570
	277	150	0.570
two F96T12H0 lamps	120	220	0.390
	277	220	0.390

7605.0140 TESTING AND QUALITY ASSURANCE.

Subpart 1. **Procedures.** For fluorescent lamp ballasts manufactured on or after January 1, 1990, a manufacturer shall provide for the testing of each type of model of any covered product which it manufactures, using test procedures applicable to that model that comply with ANSI standard 82.2-1984.

Subp. 2. **Samples.** The manufacturer shall cause the testing of samples of each model of fluorescent lamp ballast to be sold or

installed in Minnesota of the type described in part 7605.0110, subpart 1. A sample of sufficient size of each model must be tested to ensure that the ballast efficacy factor is no greater than the mean of the sample or the lower 97-1/2 percent confidence limit of the true mean divided by 0.95. A minimum of four ballasts of each model must be randomly selected and tested at least once a year.

Subp. 3. **Power input and relative light output.** The power input and relative light output must be determined in accordance with the ANSI standard C82.2-1984.

7605.0150 LABELING.

The labeling of a fluorescent lamp ballast manufactured on or after January 1, 1990, must indicate conspicuously, in accordance with *United States Code*, title 42, section 6294, a capital letter "E" printed within a circle on the ballast and on the packaging of the ballast or of the luminaire into which the ballast has been incorporated.

7605.0160 INCORPORATIONS BY REFERENCE.

Subpart 1. **Generally.** The portions of the standards listed in subpart 2 that are specified in parts 7605.0100 to 7605.0160 are incorporated by reference. The material is subject to frequent change, and all of the standards listed are available to the public at the libraries listed in subpart 3.

Subp. 2. **Standards.** The following American National Standards Institute standards are incorporated by reference:

A. ANSI Standard C78.1-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Rapid Start Types;

B. ANSI Standard C78.3-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Instant Start and Cold Cathode Types; and

C. ANSI Standard C82.2-1984: Methods of Measurement of Fluorescent Lamp Ballasts.

Subp. 3. **Availability.** The standards incorporated by reference are available to the public at the locations in items A and B.

A. All documents incorporated by reference in this chapter are available at the following locations in Saint Paul, Minnesota:

(1) Minnesota State Law Library; and

(2) James J. Hill Reference Library.

B. All ANSI standards are also available at the following locations:

(1) University of Minnesota Engineering Library; and

(2) American National Standards Institute, 1430 Broadway, New York, New York 10018, telephone (212) 354-3300.

Adopted Rules

The adoption of a rule becomes effective after the requirements of Minn. Stat. § 14.14-14.28 have been met and five working days after the rule is published in *State Register*, unless a later date is required by statutes or specified in the rule.

If an adopted rule is identical to its proposed form as previously published, a notice of adoption and a citation to its previous *State Register* publication will be printed.

If an adopted rule differs from its proposed form, language which has been deleted will be printed with strikeouts and new language will be underlined. The rule's previous *State Register* publication will be cited.

An emergency rule becomes effective five working days after the approval of the Attorney General as specified in Minn. Stat. § 14.33 and upon the approval of the Revisor of Statutes as specified in § 14.36. Notice of approval by the Attorney General will be published as soon as practicable, and the adopted emergency rule will be published in the manner provided for adopted rules under § 14.18.

Department of Natural Resources

Adopted Permanent Rules Relating to Permit Requirements for Water Aeration Systems

The rules proposed and published at *State Register*, Volume 13, Number 3, pages 124-128, July 18, 1988 (13 S.R. 124) are adopted with the following modifications:

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

STATE OF MINNESOTA

DEPARTMENT OF PUBLIC SERVICE

In the matter of the Proposed Adoption of the Rule of the Department of Public Service, Energy Division, Relating to Fluorescent Lamp Ballasts	**FINDINGS OF FACT, CONCLUSIONS AND ORDER ADOPTING RULE WITHOUT PUBLIC HEARING**

Proper notice of Intent to Adopt a Rule Without a Public Hearing was given. Notice of the Commissioner's intent to adopt the above-entitled rule was published in the State Register on Nov. 21, 1988, and was sent by United States mail to all persons on the list maintained by the agency pursuant to Minnesota Statutes, sections 14.14, subdivision 1a and 14.22 on April 29, 1988. The statement of need and reasonableness was prepared before the Notice of Intent to Adopt a Rule without a Public Hearing was mailed to all persons on the rulemaking mailing list and published in the State Register and was available to the public.

All persons were given the opportunity to submit comment on the rule for 30 days after notice of proposed rulemaking. The agency received no requests for a public hearing. Therefore, the agency did not receive requests for a public hearing from 25 or more persons which were not withdrawn.

Based on the comments and evidence, I find the following:

1) A solicitation of outside opinion for proposed adoption of the rules relating to fluorescent lamp ballasts was published in 13 S.R. 397. Three responses were received. These comments were supportive.

2) The agency received no written comments in response to the proposed adoption of the rules without a public hearing published in 13 S.R. 1232.

3) One typographical error was noted and changed: Minn. Chap. 7605.0130; the ballast efficacy factor for two F40T12 lamps at 277 volts was changed to read 1.050 instead of 1.060.

NOW, THEREFORE, IT IS ORDERED that the rule identified as proposed amendment to the rule of the state Department of Public Service, Energy Division, governing residential thermal insulation standards is adopted this 23rd day of Dec., 1988, pursuant to authority vested in me by Minnesota Statutes, sections 325F.20, subdivision 1 and 325F.21, subdivisions 1 and 2.

O Peirce
Name

Comm DPS
Title

In the matter of the Adoption
of the Rule of the Department of
Public Service, Energy Division,
Relating to Fluorescent Lamp Ballasts

DECLARATION
OF COUNSEL

I, Mary Jo Murray, Special Assistant Attorney General, do hereby declare that I have examined the above-captioned rule, and the supporting rulemaking record, and that, based on my examination, the Administrative Procedure Act and Minnesota Rules, Chapter 2010 have been followed. Any exceptions are listed below. For Attorney General billing purposes, the four digit docket client code is 0731.

Dated: January 19, 1989

MARY JO MURRAY
Special assistant Attorney General

In the Matter of the Proposed Adoption
of the Rule of the Department of Public
Service, Energy Division, Relating to
Fluorscent Lamp Ballasts

WITHDRAWAL OF RULE
FROM ATTORNEY GENERAL

I hereby withdraw the above captioned rules from the Attorney General, this 3rd day of February 1989.

Tony Perpich
Commissioner

indicate at the hearing or send a request in writing to the Metropolitan Council at any time prior to the filing of the rules with the Secretary of State.

Please be advised that *Minnesota Statutes* chapter 10A (1986) requires each lobbyist to register with the state Ethical Practices Board within five days after the individual commences lobbying. A lobbyist is defined in *Minnesota Statutes,* Sec. 10A.01, subd. 11 (1986) as any individual:

(a) Engaged for pay or other consideration, or authorized by another individual or association to spend money, who spends more than five hours in any month or more than $250, not including the individual's own travel expenses and membership dues, in any year, for the purpose of attempting to influence legislative or administrative action by communicating or urging others to communicate with public officials; or

(b) Who spends more than $250, not including the individual's own travel expenses and membership dues, in any year for the purpose of attempting to influence legislative or administrative action by communicating or urging others to communicate with public officials.

The statute contains certain exceptions. Questions should be directed to the Ethical Practices Board, 625 North Robert Street, St. Paul, Minnesota 55101-2520, (612) 296-5615.

David Renz
Executive Director

Metropolitan Council

Public Hearing on 1989 Work Program and Budget

The Metropolitan Council will hold a public hearing on its proposed 1989 work program and budget on Monday, September 12, 1988, 10 a.m. at the Metropolitan Council offices, Mears Park Centre, 230 E. Fifth St., St. Paul. All interested persons are encouraged to attend the hearing and offer comments. People may register in advance to speak by calling Jane Larson at 291-6500. Copies of the proposed work program and budget are available for public inspection at designated libraries throughout the region. For information on the location of these libraries or a free copy of the budget document, call 291-8140.

Department of Public Service

Energy Division

Notice of Solicitation of Outside Information or Opinions Regarding Proposed Rule Governing Fluorescent Lamp Ballasts

NOTICE IS HEREBY GIVEN that the State Department of Public Service is seeking information or opinions from sources outside the agency in preparing to propose the rule governing Fluorescent Lamp Ballasts. The adoption of the rule is authorized by *Minnesota Statutes,* section 116J.19 subdivisions 8 and 15, which requires the agency to establish standards for the efficient use of energy as it relates to indoor illumination. All fluorescent lamp ballasts sold or installed in Minnesota must comply with these standards.

The State Department of Public Service requests information and opinions concerning the subject matter of the rule. Interested persons or groups may submit data or views on the subject matter of concern in writing or orally. Written statements should be addressed to:

Bruce D. Nelson
Department of Public Service
Energy Division
900 American Center Building
150 East Kellogg Boulevard
St. Paul, Minnesota 55101
(612) 297-2313

Oral statements will be received during regular business over the telephone and in person at the above address.

All statements of information and opinions shall be accepted until September 6, 1988. Any written material received by the State Department of Public Service shall become part of the rulemaking record to be submitted to the attorney general or administrative law judge in the event that the rule is adopted.

Dated: 9 August 1988

Marsha Battle-Jenks
Assistant Commissioner

STATE OF MINNESOTA

DEPARTMENT OF PUBLIC SERVICE

In the matter of the Proposed Adoption of the Rule of the Department of Public Service, Energy Division, Relating to Fluorescent Lamp Ballasts	**SUPPLEMENTAL FINDINGS OF FACT, CONCLUSIONS AND ORDER ADOPTING RULE WITHOUT PUBLIC HEARING**

Proper notice of Intent to Adopt a Rule Without a Public Hearing was given. Notice of the Commissioner's intent to adopt the above-entitled rule was published in the State Register on Nov. 21, 1988, and was sent by United States mail to all persons on the list maintained by the agency pursuant to Minnesota Statutes, sections 14.14, subdivision 1a and 14.22 on April 29, 1988. The statement of need and reasonableness was prepared before the Notice of Intent to Adopt a Rule without a Public Hearing was mailed to all persons on the rulemaking mailing list and published in the State Register and was available to the public.

All persons were given the opportunity to submit comment on the rule for 30 days after notice of proposed rulemaking. The agency received no requests for a public hearing. Therefore, the agency did not receive requests for a public hearing from 25 or more persons which were not withdrawn.

Based on the comments and evidence, I find the following:

1) A typographical error citing the enabling legislation for this rule was corrected. It was within Minn. Rules Chap. 7605.0100. The correct cite should read Minn. Stat. sec. 216C.19 subdivision 8.

NOW, THEREFORE, IT IS ORDERED that the rule identified as proposed amendment to the rule of the state Department of Public Service, Energy Division, governing residential thermal insulation standards is adopted this 6 day of Feb, 1989 ~~1988~~; pursuant to authority vested in me by Minnesota Statutes, sections 325F.20, subdivision 1 and 325F.21, subdivisions 1 and 2.

O Reynil
Name

Comm DPS
Title

Department of Public Service

Adopted Permanent Rules Relating to Fluorescent Lamp Ballasts

Rules as Adopted

7605.0100 AUTHORITY.

The commissioner is authorized by Minnesota Statutes, section 116J.19, subdivision 7, to establish minimum energy efficiency standards for fluorescent lamp ballasts. No person may sell, install, or place in inventory a fluorescent lamp ballast in Minnesota that does not comply with parts 7605.0100 to 7605.0160 after their effective dates.

7605.0110 APPLICABILITY.

Subpart 1. **Applicability.** Parts 7605.0100 to 7605.0160 apply to fluorescent lamp ballasts distributed in commerce for personal or commercial use or consumption that are:

A. manufactured on or after January 1, 1990; or

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

D. designed to operate at nominal input voltages of 120 or 277 volts;

E. designed to operate with an input current frequency of 60 Hertz; and

F. designed for use in connection with F40T12, F96T12, or F96T12HO lamps.

Subp. 2. **Exclusion.** Fluorescent lamp ballasts excluded from parts 7605.0100 to 7605.0160 are:

A. those designed for dimming or for use in ambient temperatures of zero degrees Fahrenheit or less; and

B. those with a power factor of less than 0.90 and sold for use in residential building applications.

7605.0120 DEFINITIONS.

Approved by Revisor

Subpart 1. **Scope.** The definitions in this part apply to parts 7605.0100 to 7605.0160.

Subp. 2. **ANSI standard.** "ANSI standard" means a standard approved by a committee accredited by the American National Standards Institute.

Subp. 3. **Ballast efficacy factor.** "Ballast efficacy factor" means the relative light output divided by the power input of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 4. **Ballast input voltage.** "Ballast input voltage" means the rated input voltage of a fluorescent lamp ballast.

Subp. 5. **Energy efficiency standard.** "Energy efficiency standard" means a performance standard:

A. that prescribes a minimum level of energy efficiency for a covered product, determined in accordance with test procedures prescribed under United States Code, title 42, section 6293; and

B. that includes any other requirement that the department may prescribe.

Subp. 6. **Fluorescent lamp ballast.** "Fluorescent lamp ballast" means a device used to start and operate fluorescent lamps by providing a starting voltage and current and limiting the current during normal operation.

Subp. 7. **F40T12.** "F40T12" means a nominal 40 watt tubular fluorescent lamp that is 48 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 8. **F96T12.** "F96T12" means a nominal 75 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.3-1978 (R1984).

Subp. 9. **F96T12HO.** "F96T12HO" means a nominal 110 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 10. **Input current.** "Input current" means the root-mean-square (RMS) current in amperes delivered to a fluorescent lamp ballast.

Approved by Revisor _____

Subp. 11. **Luminaire.** "Luminaire" means a complete lighting unit consisting of a fluorescent lamp or lamps and parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply through the ballast.

Subp. 12. **Nominal lamp watts.** "Nominal lamp watts" means the wattage at which a lamp is designed to operate.

Subp. 13. **Power factor.** "Power factor" means the power input divided by the product of ballast input voltage and input current of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 14. **Power input.** "Power input" means the power consumption in watts of a ballast and fluorescent lamp or lamps, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 15. **Relative light output.** "Relative light output" means the light output delivered through the use of a ballast divided by the light output delivered through the use of a reference ballast, expressed as a percent, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 16. **Test procedures.** "Test procedures" means the test procedures prescribed by the United States Department of Energy under United States Code, title 42, section 6293.

7605.0130 FLUORESCENT LAMP BALLAST STANDARDS.

A fluorescent lamp ballast covered by parts 7605.0100 to 7605.0160 must have a power factor of 0.90 or greater and a ballast efficacy factor not less than the following:

Application for Operation of	Ballast Input Voltage	Total Nominal Lamp Watts	Ballast Efficacy Factor
one F40T12 lamp.....	120	40	1.805
	277	40	1.805

Approved by Revisor _____

two F40T12 lamps.....	120	80	1.060
	277	80	~~1.060~~
			1.050
two F96T12 lamps.....	120	150	0.570
	277	150	0.570
two F96T12HO lamps.....	120	220	0.390
	277	220	0.390

7605.0140 TESTING AND QUALITY ASSURANCE.

Subpart 1. **Procedures.** For fluorescent lamp ballasts manufactured on or after January 1, 1990, a manufacturer shall provide for the testing of each type of model of any covered product which it manufactures, using test procedures applicable to that model that comply with ANSI standard 82.2-1984.

Subp. 2. **Samples.** The manufacturer shall cause the testing of samples of each model of fluorescent lamp ballast to be sold or installed in Minnesota of the type described in part 7605.0110, subpart 1. A sample of sufficient size of each model must be tested to ensure that the ballast efficacy factor is no greater than the mean of the sample or the lower 97-1/2 percent confidence limit of the true mean divided by 0.95. A minimum of four ballasts of each model must be randomly selected and tested at least once a year.

Subp. 3. **Power input and relative light output.** The power input and relative light output must be determined in accordance with the ANSI standard C82.2-1984.

7605.0150 LABELING.

The labeling of a fluorescent lamp ballast manufactured on or after January 1, 1990, must indicate conspicuously, in accordance with United States Code, title 42, section 6294, a capital letter "E" printed within a circle on the ballast and on the packaging of the ballast or of the luminaire into which the ballast has been incorporated.

7605.0160 INCORPORATIONS BY REFERENCE.

Subpart 1. **Generally.** The portions of the standards

Approved
by Revisor _____

listed in subpart 2 that are specified in parts 7605.0100 to 7605.0160 are incorporated by reference. The material is subject to frequent change, and all of the standards listed are available to the public at the libraries listed in subpart 3.

Subp. 2. **Standards.** The following American National Standards Institute standards are incorporated by reference:

A. ANSI Standard C78.1-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Rapid Start Types;

B. ANSI Standard C78.3-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Instant Start and Cold Cathode Types; and

C. ANSI Standard C82.2-1984: Methods of Measurement of Fluorescent Lamp Ballasts.

Subp. 3. **Availability.** The standards incorporated by reference are available to the public at the locations in items A and B.

A. All documents incorporated by reference in this chapter are available at the following locations in Saint Paul, Minnesota:

(1) Minnesota State Law Library; and

(2) James J. Hill Reference Library.

B. All ANSI standards are also available at the following locations:

(1) University of Minnesota Engineering Library; and

(2) American National Standards Institute, 1430 Broadway, New York, New York 10018, telephone (212) 354-3300.

Approved
by Revisor _____

Office of the Revisor of Statutes

Administrative Rules

TITLE: Adopted Permanent Rules Relating to Fluorescent Lamp Ballasts

AGENCY: Department of Public Service

MINNESOTA RULES: Chapter 7605

INCORPORATIONS BY REFERENCE:

Rule Number: 7605.0160, subpart 2

Material Incorporated: American National Standards Institute standards:

ANSI Standard C78.1-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Rapid Start Types;

ANSI Standard C78.3-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Instant Start and Cold Cathode Types; and

ANSI Standard C82.2-1984: Methods of Measurement of Fluorescent Lamp Ballasts.

The attached rules are approved for filing
with the Secretary of State

Craig E. Lindeke
Senior Assistant Revisor

AG rule

Department of Public Service

Adopted Permanent Rules Relating to Fluorescent Lamp Ballasts

Rules as Adopted

7605.0100 AUTHORITY.

The commissioner is authorized by Minnesota Statutes, section 116J.19, subdivision 7, to establish minimum energy efficiency standards for fluorescent lamp ballasts. No person may sell, install, or place in inventory a fluorescent lamp ballast in Minnesota that does not comply with parts 7605.0100 to 7605.0160 after their effective dates.

7605.0110 APPLICABILITY.

Subpart 1. **Applicability.** Parts 7605.0100 to 7605.0160 apply to fluorescent lamp ballasts distributed in commerce for personal or commercial use or consumption that are:

A. manufactured on or after January 1, 1990; or

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

D. designed to operate at nominal input voltages of 120 or 277 volts;

E. designed to operate with an input current frequency of 60 Hertz; and

F. designed for use in connection with F40T12, F96T12, or F96T12HO lamps.

Subp. 2. **Exclusion.** Fluorescent lamp ballasts excluded from parts 7605.0100 to 7605.0160 are:

A. those designed for dimming or for use in ambient temperatures of zero degrees Fahrenheit or less; and

B. those with a power factor of less than 0.90 and sold for use in residential building applications.

7605.0120 DEFINITIONS.

Approved by Revisor

Subpart 1. **Scope.** The definitions in this part apply to parts 7605.0100 to 7605.0160.

Subp. 2. **ANSI standard.** "ANSI standard" means a standard approved by a committee accredited by the American National Standards Institute.

Subp. 3. **Ballast efficacy factor.** "Ballast efficacy factor" means the relative light output divided by the power input of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 4. **Ballast input voltage.** "Ballast input voltage" means the rated input voltage of a fluorescent lamp ballast.

Subp. 5. **Energy efficiency standard.** "Energy efficiency standard" means a performance standard:

A. that prescribes a minimum level of energy efficiency for a covered product, determined in accordance with test procedures prescribed under United States Code, title 42, section 6293; and

B. that includes any other requirement that the department may prescribe.

Subp. 6. **Fluorescent lamp ballast.** "Fluorescent lamp ballast" means a device used to start and operate fluorescent lamps by providing a starting voltage and current and limiting the current during normal operation.

Subp. 7. **F40T12.** "F40T12" means a nominal 40 watt tubular fluorescent lamp that is 48 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 8. **F96T12.** "F96T12" means a nominal 75 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.3-1978 (R1984).

Subp. 9. **F96T12HO.** "F96T12HO" means a nominal 110 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 10. **Input current.** "Input current" means the root-mean-square (RMS) current in amperes delivered to a fluorescent lamp ballast.

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Subp. 11. **Luminaire.** "Luminaire" means a complete lighting unit consisting of a fluorescent lamp or lamps and parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply through the ballast.

Subp. 12. **Nominal lamp watts.** "Nominal lamp watts" means the wattage at which a lamp is designed to operate.

Subp. 13. **Power factor.** "Power factor" means the power input divided by the product of ballast input voltage and input current of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 14. **Power input.** "Power input" means the power consumption in watts of a ballast and fluorescent lamp or lamps, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 15. **Relative light output.** "Relative light output" means the light output delivered through the use of a ballast divided by the light output delivered through the use of a reference ballast, expressed as a percent, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 16. **Test procedures.** "Test procedures" means the test procedures prescribed by the United States Department of Energy under United States Code, title 42, section 6293.

7605.0130 FLUORESCENT LAMP BALLAST STANDARDS.

A fluorescent lamp ballast covered by parts 7605.0100 to 7605.0160 must have a power factor of 0.90 or greater and a ballast efficacy factor not less than the following:

Application for Operation of	Ballast Input Voltage	Total Nominal Lamp Watts	Ballast Efficacy Factor
one F40T12 lamp.....	120	40	1.805
	277	40	1.805

Approved by Revisor _____

two F40T12 lamps.....	120	80	1.060
	277	80	~~1.060~~
			1.050
two F96T12 lamps.....	120	150	0.570
	277	150	0.570
two F96T12HO lamps.....	120	220	0.390
	277	220	0.390

7605.0140 TESTING AND QUALITY ASSURANCE.

Subpart 1. **Procedures.** For fluorescent lamp ballasts manufactured on or after January 1, 1990, a manufacturer shall provide for the testing of each type of model of any covered product which it manufactures, using test procedures applicable to that model that comply with ANSI standard 82.2-1984.

Subp. 2. **Samples.** The manufacturer shall cause the testing of samples of each model of fluorescent lamp ballast to be sold or installed in Minnesota of the type described in part 7605.0110, subpart 1. A sample of sufficient size of each model must be tested to ensure that the ballast efficacy factor is no greater than the mean of the sample or the lower 97-1/2 percent confidence limit of the true mean divided by 0.95. A minimum of four ballasts of each model must be randomly selected and tested at least once a year.

Subp. 3. **Power input and relative light output.** The power input and relative light output must be determined in accordance with the ANSI standard C82.2-1984.

7605.0150 LABELING.

The labeling of a fluorescent lamp ballast manufactured on or after January 1, 1990, must indicate conspicuously, in accordance with United States Code, title 42, section 6294, a capital letter "E" printed within a circle on the ballast and on the packaging of the ballast or of the luminaire into which the ballast has been incorporated.

7605.0160 INCORPORATIONS BY REFERENCE.

Subpart 1. **Generally.** The portions of the standards

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listed in subpart 2 that are specified in parts 7605.0100 to 7605.0160 are incorporated by reference. The material is subject to frequent change, and all of the standards listed are available to the public at the libraries listed in subpart 3.

Subp. 2. **Standards.** The following American National Standards Institute standards are incorporated by reference:

A. ANSI Standard C78.1-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Rapid Start Types;

B. ANSI Standard C78.3-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Instant Start and Cold Cathode Types; and

C. ANSI Standard C82.2-1984: Methods of Measurement of Fluorescent Lamp Ballasts.

Subp. 3. **Availability.** The standards incorporated by reference are available to the public at the locations in items A and B.

A. All documents incorporated by reference in this chapter are available at the following locations in Saint Paul, Minnesota:

(1) Minnesota State Law Library; and

(2) James J. Hill Reference Library.

B. All ANSI standards are also available at the following locations:

(1) University of Minnesota Engineering Library; and

(2) American National Standards Institute, 1430 Broadway, New York, New York 10018, telephone (212) 354-3300.

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Department of Public Service

Adopted Permanent Rules Relating to Fluorescent Lamp Ballasts

Rules as Adopted

7605.0100 AUTHORITY.

The commissioner is authorized by Minnesota Statutes, section 116J.19, subdivision 7, to establish minimum energy efficiency standards for fluorescent lamp ballasts. No person may sell, install, or place in inventory a fluorescent lamp ballast in Minnesota that does not comply with parts 7605.0100 to 7605.0160 after their effective dates.

7605.0110 APPLICABILITY.

Subpart 1. **Applicability.** Parts 7605.0100 to 7605.0160 apply to fluorescent lamp ballasts distributed in commerce for personal or commercial use or consumption that are:

A. manufactured on or after January 1, 1990; or

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

D. designed to operate at nominal input voltages of 120 or 277 volts;

E. designed to operate with an input current frequency of 60 Hertz; and

F. designed for use in connection with F40T12, F96T12, or F96T12HO lamps.

Subp. 2. **Exclusion.** Fluorescent lamp ballasts excluded from parts 7605.0100 to 7605.0160 are:

A. those designed for dimming or for use in ambient temperatures of zero degrees Fahrenheit or less; and

B. those with a power factor of less than 0.90 and sold for use in residential building applications.

7605.0120 DEFINITIONS.

Approved by Revisor

Subpart 1. **Scope.** The definitions in this part apply to parts 7605.0100 to 7605.0160.

Subp. 2. **ANSI standard.** "ANSI standard" means a standard approved by a committee accredited by the American National Standards Institute.

Subp. 3. **Ballast efficacy factor.** "Ballast efficacy factor" means the relative light output divided by the power input of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 4. **Ballast input voltage.** "Ballast input voltage" means the rated input voltage of a fluorescent lamp ballast.

Subp. 5. **Energy efficiency standard.** "Energy efficiency standard" means a performance standard:

A. that prescribes a minimum level of energy efficiency for a covered product, determined in accordance with test procedures prescribed under United States Code, title 42, section 6293; and

B. that includes any other requirement that the department may prescribe.

Subp. 6. **Fluorescent lamp ballast.** "Fluorescent lamp ballast" means a device used to start and operate fluorescent lamps by providing a starting voltage and current and limiting the current during normal operation.

Subp. 7. **F40T12.** "F40T12" means a nominal 40 watt tubular fluorescent lamp that is 48 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 8. **F96T12.** "F96T12" means a nominal 75 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.3-1978 (R1984).

Subp. 9. **F96T12HO.** "F96T12HO" means a nominal 110 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 10. **Input current.** "Input current" means the root-mean-square (RMS) current in amperes delivered to a fluorescent lamp ballast.

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Subp. 11. **Luminaire.** "Luminaire" means a complete lighting unit consisting of a fluorescent lamp or lamps and parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply through the ballast.

Subp. 12. **Nominal lamp watts.** "Nominal lamp watts" means the wattage at which a lamp is designed to operate.

Subp. 13. **Power factor.** "Power factor" means the power input divided by the product of ballast input voltage and input current of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 14. **Power input.** "Power input" means the power consumption in watts of a ballast and fluorescent lamp or lamps, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 15. **Relative light output.** "Relative light output" means the light output delivered through the use of a ballast divided by the light output delivered through the use of a reference ballast, expressed as a percent, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 16. **Test procedures.** "Test procedures" means the test procedures prescribed by the United States Department of Energy under United States Code, title 42, section 6293.

7605.0130 FLUORESCENT LAMP BALLAST STANDARDS.

A fluorescent lamp ballast covered by parts 7605.0100 to 7605.0160 must have a power factor of 0.90 or greater and a ballast efficacy factor not less than the following:

Application for Operation of	Ballast Input Voltage	Total Nominal Lamp Watts	Ballast Efficacy Factor
one F40T12 lamp.....	120	40	1.805
	277	40	1.805

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two F40T12 lamps.....	120	80	1.060
	277	80	~~1.060~~
			1.050
two F96T12 lamps.....	120	150	0.570
	277	150	0.570
two F96T12HO lamps.....	120	220	0.390
	277	220	0.390

7605.0140 TESTING AND QUALITY ASSURANCE.

Subpart 1. **Procedures.** For fluorescent lamp ballasts manufactured on or after January 1, 1990, a manufacturer shall provide for the testing of each type of model of any covered product which it manufactures, using test procedures applicable to that model that comply with ANSI standard 82.2-1984.

Subp. 2. **Samples.** The manufacturer shall cause the testing of samples of each model of fluorescent lamp ballast to be sold or installed in Minnesota of the type described in part 7605.0110, subpart 1. A sample of sufficient size of each model must be tested to ensure that the ballast efficacy factor is no greater than the mean of the sample or the lower 97-1/2 percent confidence limit of the true mean divided by 0.95. A minimum of four ballasts of each model must be randomly selected and tested at least once a year.

Subp. 3. **Power input and relative light output.** The power input and relative light output must be determined in accordance with the ANSI standard C82.2-1984.

7605.0150 LABELING.

The labeling of a fluorescent lamp ballast manufactured on or after January 1, 1990, must indicate conspicuously, in accordance with United States Code, title 42, section 6294, a capital letter "E" printed within a circle on the ballast and on the packaging of the ballast or of the luminaire into which the ballast has been incorporated.

7605.0160 INCORPORATIONS BY REFERENCE.

Subpart 1. **Generally.** The portions of the standards

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by Revisor _____

listed in subpart 2 that are specified in parts 7605.0100 to 7605.0160 are incorporated by reference. The material is subject to frequent change, and all of the standards listed are available to the public at the libraries listed in subpart 3.

Subp. 2. **Standards.** The following American National Standards Institute standards are incorporated by reference:

A. ANSI Standard C78.1-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Rapid Start Types;

B. ANSI Standard C78.3-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Instant Start and Cold Cathode Types; and

C. ANSI Standard C82.2-1984: Methods of Measurement of Fluorescent Lamp Ballasts.

Subp. 3. **Availability.** The standards incorporated by reference are available to the public at the locations in items A and B.

A. All documents incorporated by reference in this chapter are available at the following locations in Saint Paul, Minnesota:

(1) Minnesota State Law Library; and

(2) James J. Hill Reference Library.

B. All ANSI standards are also available at the following locations:

(1) University of Minnesota Engineering Library; and

(2) American National Standards Institute, 1430 Broadway, New York, New York 10018, telephone (212) 354-3300.

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Office of the Revisor of Statutes

Administrative Rules

TITLE: Adopted Permanent Rules Relating to Fluorescent Lamp Ballasts

AGENCY: Department of Public Service

MINNESOTA RULES: Chapter 7605

INCORPORATIONS BY REFERENCE:

Rule Number: 7605.0160, subpart 2

Material Incorporated: American National Standards Institute standards:

ANSI Standard C78.1-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Rapid Start Types;

ANSI Standard C78.3-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Instant Start and Cold Cathode Types; and

ANSI Standard C82.2-1984: Methods of Measurement of Fluorescent Lamp Ballasts.

The attached rules are approved for filing
with the Secretary of State

Craig E. Lindeke
Senior Assistant Revisor

Department of Public Service

Adopted Permanent Rules Relating to Fluorescent Lamp Ballasts

Rules as Adopted

7605.0100 AUTHORITY.

The commissioner is authorized by Minnesota Statutes, section 116J.19, subdivision 7, to establish minimum energy efficiency standards for fluorescent lamp ballasts. No person may sell, install, or place in inventory a fluorescent lamp ballast in Minnesota that does not comply with parts 7605.0100 to 7605.0160 after their effective dates.

7605.0110 APPLICABILITY.

Subpart 1. **Applicability.** Parts 7605.0100 to 7605.0160 apply to fluorescent lamp ballasts distributed in commerce for personal or commercial use or consumption that are:

A. manufactured on or after January 1, 1990; or

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

D. designed to operate at nominal input voltages of 120 or 277 volts;

E. designed to operate with an input current frequency of 60 Hertz; and

F. designed for use in connection with F40T12, F96T12, or F96T12HO lamps.

Subp. 2. **Exclusion.** Fluorescent lamp ballasts excluded from parts 7605.0100 to 7605.0160 are:

A. those designed for dimming or for use in ambient temperatures of zero degrees Fahrenheit or less; and

B. those with a power factor of less than 0.90 and sold for use in residential building applications.

7605.0120 DEFINITIONS.

Approved by Revisor

Subpart 1. **Scope.** The definitions in this part apply to parts 7605.0100 to 7605.0160.

Subp. 2. **ANSI standard.** "ANSI standard" means a standard approved by a committee accredited by the American National Standards Institute.

Subp. 3. **Ballast efficacy factor.** "Ballast efficacy factor" means the relative light output divided by the power input of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 4. **Ballast input voltage.** "Ballast input voltage" means the rated input voltage of a fluorescent lamp ballast.

Subp. 5. **Energy efficiency standard.** "Energy efficiency standard" means a performance standard:

A. that prescribes a minimum level of energy efficiency for a covered product, determined in accordance with test procedures prescribed under United States Code, title 42, section 6293; and

B. that includes any other requirement that the department may prescribe.

Subp. 6. **Fluorescent lamp ballast.** "Fluorescent lamp ballast" means a device used to start and operate fluorescent lamps by providing a starting voltage and current and limiting the current during normal operation.

Subp. 7. **F40T12.** "F40T12" means a nominal 40 watt tubular fluorescent lamp that is 48 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 8. **F96T12.** "F96T12" means a nominal 75 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.3-1978 (R1984).

Subp. 9. **F96T12H0.** "F96T12H0" means a nominal 110 watt tubular fluorescent lamp that is 96 inches in length and 1.5 inches in diameter and conforms to ANSI standard C78.1-1978 (R1984).

Subp. 10. **Input current.** "Input current" means the root-mean-square (RMS) current in amperes delivered to a fluorescent lamp ballast.

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Subp. 11. **Luminaire.** "Luminaire" means a complete lighting unit consisting of a fluorescent lamp or lamps and parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply through the ballast.

Subp. 12. **Nominal lamp watts.** "Nominal lamp watts" means the wattage at which a lamp is designed to operate.

Subp. 13. **Power factor.** "Power factor" means the power input divided by the product of ballast input voltage and input current of a fluorescent lamp ballast, as measured under test conditions specified in ANSI standard C82.2-1984.

Subp. 14. **Power input.** "Power input" means the power consumption in watts of a ballast and fluorescent lamp or lamps, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 15. **Relative light output.** "Relative light output" means the light output delivered through the use of a ballast divided by the light output delivered through the use of a reference ballast, expressed as a percent, as determined in accordance with the test procedures specified in ANSI standard C82.2-1984.

Subp. 16. **Test procedures.** "Test procedures" means the test procedures prescribed by the United States Department of Energy under United States Code, title 42, section 6293.

7605.0130 FLUORESCENT LAMP BALLAST STANDARDS.

A fluorescent lamp ballast covered by parts 7605.0100 to 7605.0160 must have a power factor of 0.90 or greater and a ballast efficacy factor not less than the following:

Application for Operation of	Ballast Input Voltage	Total Nominal Lamp Watts	Ballast Efficacy Factor
one F40T12 lamp.....	120	40	1.805
	277	40	1.805

Approved by Revisor _____

two F40T12 lamps.....	120	80	1.060
	277	80	~~1.060~~
			1.050
two F96T12 lamps.....	120	150	0.570
	277	150	0.570
two F96T12H0 lamps.....	120	220	0.390
	277	220	0.390

7605.0140 TESTING AND QUALITY ASSURANCE.

Subpart 1. **Procedures.** For fluorescent lamp ballasts manufactured on or after January 1, 1990, a manufacturer shall provide for the testing of each type of model of any covered product which it manufactures, using test procedures applicable to that model that comply with ANSI standard 82.2-1984.

Subp. 2. **Samples.** The manufacturer shall cause the testing of samples of each model of fluorescent lamp ballast to be sold or installed in Minnesota of the type described in part 7605.0110, subpart 1. A sample of sufficient size of each model must be tested to ensure that the ballast efficacy factor is no greater than the mean of the sample or the lower 97-1/2 percent confidence limit of the true mean divided by 0.95. A minimum of four ballasts of each model must be randomly selected and tested at least once a year.

Subp. 3. **Power input and relative light output.** The power input and relative light output must be determined in accordance with the ANSI standard C82.2-1984.

7605.0150 LABELING.

The labeling of a fluorescent lamp ballast manufactured on or after January 1, 1990, must indicate conspicuously, in accordance with United States Code, title 42, section 6294, a capital letter "E" printed within a circle on the ballast and on the packaging of the ballast or of the luminaire into which the ballast has been incorporated.

7605.0160 INCORPORATIONS BY REFERENCE.

Subpart 1. **Generally.** The portions of the standards

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listed in subpart 2 that are specified in parts 7605.0100 to 7605.0160 are incorporated by reference. The material is subject to frequent change, and all of the standards listed are available to the public at the libraries listed in subpart 3.

Subp. 2. **Standards.** The following American National Standards Institute standards are incorporated by reference:

A. ANSI Standard C78.1-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Rapid Start Types;

B. ANSI Standard C78.3-1978 (R1984): Dimensional and Electrical Characteristics of Fluorescent Lamps, Instant Start and Cold Cathode Types; and

C. ANSI Standard C82.2-1984: Methods of Measurement of Fluorescent Lamp Ballasts.

Subp. 3. **Availability.** The standards incorporated by reference are available to the public at the locations in items A and B.

A. All documents incorporated by reference in this chapter are available at the following locations in Saint Paul, Minnesota:

(1) Minnesota State Law Library; and

(2) James J. Hill Reference Library.

B. All ANSI standards are also available at the following locations:

(1) University of Minnesota Engineering Library; and

(2) American National Standards Institute, 1430 Broadway, New York, New York 10018, telephone (212) 354-3300.

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