

Stricken language would be deleted from and underlined language would be added to present law.

State of Arkansas
91st General Assembly
Regular Session, 2017

As Engrossed: H3/20/17
A Bill

HOUSE BILL 1771

By: Representative S. Meeks

For An Act To Be Entitled

AN ACT TO CREATE THE ARKANSAS NIGHTTIME ENVIRONMENT
PROTECTION ACT; AND FOR OTHER PURPOSES.

Subtitle

TO CREATE THE ARKANSAS NIGHTTIME
ENVIRONMENT PROTECTION ACT.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. DO NOT CODIFY. Findings.

The General Assembly finds that:

(1)(A) Energy is wasted when methods of illumination are used excessively and inefficiently.

(B) This wasteful use of energy is not a cost-effective use of taxpayer money and adds unnecessary pollutants to our environment from the energy generation;

(2)(A) In addition, light pollution has been implicated in disruption of the human and animal circadian rhythm and strongly suspected as an etiology of suppressed melatonin production, depressed immune systems, and increases in certain cancer rates.

(B) The findings set out in subdivision (2)(A) of this section prompted the American Medical Association in June 2009 to adopt a resolution advocating the reduction of light pollution and glare through the use of energy efficient and shielded lighting;

(3) In addition, light pollution disrupts nocturnal animal activity, which results in diminished health and survival of various animal and plant populations;



(4) In addition, light pollution reduces the ability for Arkansans to enjoy recreational or educational astronomical observations of the starry night sky;

(5) In addition, light pollution reduces the ability for Arkansas scientists to conduct scientific research of the cosmos;

(6) In addition, inefficient luminaries may cast unwanted light outside the intended target area, creating light trespass; and

(7) Therefore, it is in the public interest to reduce light pollution to protect the nighttime environment and create awareness.

SECTION 2. Arkansas Code Title 8, Chapter 14, is amended to read as follows:

8-14-101. Title.

This chapter shall be known and may be cited as the ~~"Shielded Outdoor Lighting Act"~~ "Arkansas Nighttime Environment Protection Act".

8-14-102. Purpose.

~~The purpose of this chapter is to conserve energy and preserve the environment through the regulation of outdoor lighting fixtures~~ The purpose of this chapter is to regulate outdoor night lighting fixtures to promote safety, conserve energy, save tax dollars, and preserve the state's natural nighttime environment for astronomy and the health and welfare of our citizens and our wildlife.

8-14-103. Definitions.

As used in this chapter:

~~(1) "Outdoor lighting fixture" means an automatically controlled, outdoor artificial illuminating device, whether permanent or portable, used for illumination or advertisement, including searchlights, spotlights, and floodlights, whether for architectural lighting, parking lot lighting, landscape lighting, billboards, or street lighting; and~~

~~(2) "Shielded" means a fixture that is covered in a manner that light rays emitted by the fixture, either directly from the lamp or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where light is emitted.~~

(1) "Direct light" means light emitted directly from a *light*

source, off a reflector, or through a refractor or lens of a fixture;

(2)(A) "Electronic message center" means a self-luminous sign that emits or projects any kind of light, color, or message that is computer- or electronically generated.

(B) "Electronic message center" includes displays using lamps, light-emitting diodes, liquid crystal displays, or a flipper matrix and any sign that creates an image using an array of picture elements or pixels;

(3) "Excessive cost" means:

(A) The cost to meet a requirement under this chapter or the cost of additional wiring, controls, power requirements, poles, materials, and commissioning, designing, and maintenance needed to meet a requirement under this chapter that is at least one hundred twenty-five percent (125%) more expensive than a nonconforming fixture; or

(B) In the case of a tariff on a streetlight, the tariff for the streetlight for a conforming fixture is more expensive than the tariff for a nonconforming fixture;

(4) "Fixture" means a complete lighting unit, including without limitation a light source together with the parts designed to distribute the light, to position and protect the light source, and to connect the light source to the power supply;

(5) "Fully shielded" means a fixture that does not allow light emissions, either directly from a light source or indirectly by reflection or refraction from any part of the lighting unit, above a horizontal plane running through the lowest point on the fixture where light is emitted;

(6) "Glare" means the sensation produced by luminances within the visual field that is sufficiently greater than the luminance to which the eyes are adapted to cause annoyance, discomfort, or loss of visual performance and visibility;

(7) "Illuminance" means the level of light measured on an intercepting surface;

(8) "Lamp" means the component of a fixture that produces light;

(9) "Light pollution" means general sky glow caused by the scattering of artificial light in the atmosphere;

(10) "Light trespass" means excessive or unreasonable light emitted by a fixture that shines beyond the boundaries of the property on

which the fixture is located;

(11) "Lumen" means a unit of luminous flux emitted within a unit solid angle by a point source with a uniform luminous intensity of one (1) candela;

(12) "Lux" means the International System of Units unit of illuminance and is equal to one (1) lumen per square meter;

(13) "Partially shielded" means a fixture that is constructed so that the bottom edge of the shield is below the plane of the center line of the lamp, reducing light above the horizontal to less than twenty percent (20%) of the light emitted from any part of the lighting unit;

(14) "Permanent outdoor fixture" means a fixture or system of fixtures that is outdoors and intended to be used or is used for thirty (30) days or longer; and

(15) "Public funds" means bond revenues or money appropriated or allocated by the General Assembly or money raised through taxes or fees and county and municipal funds.

8-14-104. Shielding—Prohibitions—Exemptions Regulations for outdoor illumination.

~~(a) After January 1, 2006:~~

~~(1)(A) No public funds shall be used to install an outdoor lighting fixture unless it is shielded.~~

~~(B) Subdivision (a)(1)(A) of this section shall not apply to any municipality or county if the governing body of the municipality or county determines by ordinance or to a municipally owned utility if the municipal employee responsible for procurement determines that the cost of acquiring a shielded outdoor lighting fixture will be prohibitive after comparing:~~

~~(i) The cost of the fixtures; and~~

~~(ii) The projected energy cost of the operation of the fixtures;~~

~~(2) The Arkansas Department of Environmental Quality shall promulgate regulations prohibiting any person or entity from knowingly placing or disposing of the bulb or tube portion of an electric lighting device containing hazardous levels of mercury in a landfill after January 1, 2008, if:~~

~~(A) The device contains more than two tenths milligram per liter (0.2 mg/l) of leachable mercury as measured by the Toxicity Characteristic Leaching Procedure as set out in EPA test Method 1311; and~~

~~(B) Adequate facilities exist for the public to properly dispose of the device described in subdivision (a)(2)(A) of this section; and~~

~~(3)(A) Each electric public utility shall offer a shielded lighting service option.~~

~~(B) Not later than January 1, 2006, each electric public utility shall file an application with the Arkansas Public Service Commission to establish a schedule of rates and charges for the provision of a shielded lighting service option to the utility's customers.~~

~~(C) The commission shall require each electric public utility to inform its customers of the availability of the shielded lighting service.~~

~~(b) This chapter does not apply to acquisitions of:~~

~~(1) Incandescent outdoor lighting fixtures of one hundred fifty watts (150W) or less or other light sources of seventy watts (70W) or less;~~

~~(2) Outdoor lighting fixtures on advertisement signs on interstate or federal primary highways;~~

~~(3)(A) Outdoor lighting fixtures existing and legally installed before August 12, 2005.~~

~~(B) However, if an existing outdoor lighting fixture exempted from this chapter under subdivision (b)(3)(A) of this section needs to be replaced, the acquisition of the replacement outdoor lighting fixture shall be subject to the provisions of this chapter;~~

~~(4) Navigational lighting systems at airports or other lighting necessary for aircraft safety; and~~

~~(5) Outdoor lighting fixtures that are necessary for worker safety at farms, ranches, dairies, or feedlots or industrial, mining, or oil and gas facilities.~~

~~(c) This chapter does not apply to outdoor lighting fixtures maintained or installed by:~~

~~(1) A public school district;~~

~~(2) A correctional facility;~~

~~(3) A juvenile detention facility;~~

~~(4) An adult detention facility;~~

~~(5) A mental health facility; or~~

~~(6) A state supported institution of higher education.~~

(a) A state agency, public corporation, county, or municipality shall not use public funds to operate, maintain, install, or cause to be installed a new or replacement permanent outdoor fixture unless the following conditions are met:

(1) The permanent outdoor fixture is a fully shielded fixture when the initial rated lumens of the lamp of the permanent outdoor fixture is greater than one thousand eight hundred lumens (1,800 lm);

(2) The illuminance of a surface does not exceed what is adequate for that purpose under guidelines recommended for that purpose by the Illuminating Engineering Society of North America, as the guidelines existed on January 1, 2017, or the minimum illuminance recommendation for that purpose by the United States Department of Transportation, as the recommendation existed on January 1, 2017; and

(3) Consideration has been given to the use of public funds for the goals of eliminating glare, light pollution, and light trespass, reducing energy use, and preserving the natural night environment.

(b) Illuminated roadway signage installed or replaced after the effective date of this chapter shall be illuminated from within or from above the roadway signage, except when illumination of the roadway signage from within or above is not possible, or would create excessive cost or maintenance issues.

(c)(1) An electric utility shall not operate, maintain, install, or cause to be installed a fixture for new or replacement residential or commercial security lighting unless the following conditions are met:

(A) The fixture is a fully shielded or partially shielded fixture when the initial rated lumens of the lamp of the fixture is greater than one thousand eight hundred lumens (1,800 lm); and

(B) The fixture is designed to maximize energy conservation and to minimize light pollution, glare, and light trespass.

(2) If a property owner purchases a fixture that does not conform to the requirements of subdivision (c)(1) of this section from a third party, the electric utility, at the electric utility's discretion, may install, operate, and service the fixture.

(d)(1) After taking into account all costs, including long-term costs,

associated with the operation and maintenance of a given fixture, the Arkansas Public Service Commission shall ensure that the rate schedule for public, residential, and *commercial outdoor*, security and street lighting published by an electric utility for fixtures that are better shielded, use lower wattage, and require less maintenance, are properly reflective of the long-term cost of the fixtures and the energy consumption of the fixtures over the life of the fixtures.

(e) A new mercury vapor lamp shall not be installed in the state by a state agency, public corporation, county, municipality, public entity, or utility.

(f) The Arkansas Department of Environmental Quality shall promulgate regulations prohibiting any person or entity from knowingly placing or disposing of the bulb or tube portion of an electric lighting device containing hazardous levels of mercury in a landfill after January 1, 2008, if:

(1) The electric lighting device contains more than two-tenths milligram per liter (0.2 mg/l) of leachable mercury as measured by the toxicity characteristic leaching procedure set out in Method 1311 of the United States Environmental Protection Agency; and

(2) Adequate facilities exist for the public to properly dispose of the electric lighting device described in subdivision (f)(1) of this section.

(g) Any entity that installs new or replacement street or outdoor lighting on behalf of a state agency, public corporation, county, or municipality or that will become the responsibility of a state agency, public corporation, county, or municipality shall comply with subsection (a) of this section.

8-14-105. Penalties Exemptions.

~~Violations of this chapter are punishable by:~~

~~(1) A warning for a first offense; and~~

~~(2) A fine of twenty five dollars (\$25.00) minus the replacement cost for each offending outdoor lighting fixture for a second or subsequent offense or for an offense that continues for thirty (30) calendar days from the date of the warning.~~

(a) Section 8-14-104 does not apply if:

(1) A federal law, rule, or regulation preempts § 8-14-104;

(2) Fire, police, rescue, correctional, or medical personnel need outdoor lighting for temporary emergencies not to exceed thirty (30) days in duration unless a waiver is granted by the Director of the Arkansas Department of Emergency Management;

(3) The outdoor lighting fixture is necessary for worker safety and is used on a temporary basis for nighttime work, including without limitation work performed on:

(A) Projects or improvements relating to the construction, reconstruction, improvement, or maintenance of a street, highway, building, structure, or facility; and

(B) Farms, ranches, dairies, and feedlots and in industrial, drilling, mining, or oil and gas facilities;

(4) The lighting is part of a navigational lighting system for an airport or on a navigable waterway or provides other lighting necessary for aircraft or watercraft safety;

(5)(A) In a situation in which there are special lighting requirements, such as sports facilities, or historic decorative considerations, monuments, decorative lighting on bridges over navigable waterways, or the lighting of the United States flag under the Federal Flag Code, 4 U.S.C. §§ 4-10.

(B) However, lighting exempted under subdivision (a)(5)(A) of this section shall be selected and installed to shield the lamp or lamps from direct view to the greatest extent possible and to minimize upward lighting and light trespass;

(6)(A) The lighting is for a public or private state correction facility, a detention facility, or a mental health facility.

(B) For lighting exempted under subdivision (a)(6)(A) of this section, § 8-14-104 shall serve only as a guideline;

(7)(A) The outdoor fixture existed and was legally installed before the effective date of this act.

(B)(i)(a) If a outdoor fixture exempted under subdivision (a)(7)(A) of this section is to be replaced, the outdoor fixture shall be brought into compliance with § 8-14-104, unless the governing body determines that excessive cost, excessive structural modifications, or safety concerns prevent compliance.

(b) As used in subdivision (a)(7)(A)(ii)(a) of this section, "governing body" means an agency director, an elected official, or a body responsible for the fixture.

(ii)(a) If a governing body makes a determination under subdivision (7)(B)(i) or subdivision (7)(B)(ii) of this section, the governing body shall submit an annual report to the Arkansas Pollution Control and Ecology Commission, outlining the current status of exempted fixtures and the efforts or plans that have been made to bring the exempted fixtures into compliance.

(b) The commission shall determine the time and manner for submission of the annual report required under subdivision (a)(7)(B)(iii)(a) of this section.

(c) If the commission determines that a state agency, public corporation, county, municipality, public or charter school, or college or university has brought into compliance with § 8-14-104 all fixtures that can be brought into compliance, the commission shall no longer require the agency, public corporation, county, municipality, public or charter school, or college or university to submit the annual report.

(C)(i) From time to time, at the discretion and in the manner determined by the commission, the commission shall compile the reports required under subdivision (7)(B) of this section into one (1) comprehensive report.

(ii) The commission shall:

(a) File the comprehensive report required under subdivision (7)(C)(i) of this section with the cochairs of the Legislative Council; and

(b) Make each comprehensive report required under subdivision (7)(C)(i) of this section available to the general public in a manner determined by the commission.

(b) Upon petition to the commission, in the manner and method established by the commission, the commission may waive any provision of this chapter on a case-by-case basis if consideration has been given to reduce light pollution, save taxpayer dollars, and to protect the nighttime environment.

(c)(1) A waiver under subsection (b) of this section may be appealed to the commission by a citizen of the city or county where the waiver was

applied.

(2) The commission shall then hold a public hearing to hear all sides, before making a final determination.

8-14-106. Enforcement.

~~This chapter may be enforced by a town, city, or county of this state by seeking injunctive relief in a court of competent jurisdiction.~~

This chapter shall be enforced by:

(1) The governing body of a political subdivision of the state within its jurisdiction;

(2) A local or state code enforcement agency within the jurisdiction of the governing body of a political subdivision of the state; and

(3)(A) The Arkansas Department of Environmental Quality within its jurisdiction.

(B) If appropriate, the Arkansas Department of Environmental Quality may refer any cases to a local or state code enforcement agency or to a governing body of a political subdivision of the state.

8-14-107. ~~Provisions supplemental~~ Violations.

~~The provisions of this chapter are cumulative and supplemental and shall not apply within a town, city, or county of this state that by ordinance has adopted provisions restricting light pollution that are equal to or more stringent than the provisions of this chapter.~~

(a) A person that violates this chapter is subject to:

(1) For a first offense, a warning;

(2) For a subsequent offense or an offense that continues for thirty (30) days after the date of the warning, a fine of twenty-five dollars (\$25.00); and

(3) For an offense continuing for more than sixty (60) days after the date of the warning, a fine of twenty-five dollars (\$25.00) for each offending fixture for each calendar month the violation continues.

(b) Money raised by fines assessed under subsection (a) of this section shall be deposited into the general fund of the agency, public corporation, county, municipality assessing the fine.

8-14-108. Illuminated roadway signage – Electronic messaging centers.

(a) If roadway signage is illuminated with external fixtures:

(1) The external fixtures shall be directed and designed so that a majority of the light falls upon the roadway sign's surface; and

(2) The external fixtures do not create glare, light trespass, or excessive amounts of light pollution.

(b)(1) Commercial and advertising roadway signage and devices, including billboards and electronic message centers, installed or replaced after the effective date of this chapter that are within one-half (1/2) mile of and visible from a highway system shall not prevent the driver of a vehicle from having a clear and unobstructed view of official signs and approaching or merging traffic.

(2) If a commercial and advertising roadway sign or device is illuminated with an external fixture:

(A) The external fixture shall be directed and designed so that a majority of the light falls upon the advertisement surface; and

(B) The external fixture does not create glare, light trespass, or excessive amounts of light pollution.

(3) If a commercial and advertising roadway sign or device is an electronic message center:

(A) The commercial and advertising roadway sign or device shall:

(i) Be equipped with a sensor or other device that automatically determines the ambient light conditions and is programmed to automatically dim appropriately;

(ii) Not be of an intensity or brilliance that may cause glare or impair the vision of a driver of a motor vehicle, or otherwise interfere with a driver's operation of a motor vehicle;

(iii) Not change intensity or expose its message for less than four (4) seconds; and

(iv) Not exceed three lux (3 lx) over the ambient light as measured with an illuminance meter.

(4) A measurement required under this subsection shall:

(A) Not be made within thirty (30) minutes after sunset or thirty (30) minutes before sunrise;

(B) Be taken from or as close as is practically possible to directly in front of or perpendicular from the center point of the face of the roadway signage from a height of five feet (5') or approximately the same height as a driver's eye level;

(C) Be taken from or as close as is practically possible to a distance from the roadway signage in feet according to the formula: square root of the area of the commercial and advertising roadway sign or device in square feet times one hundred (100);

(D) Be taken with the roadway signage displaying a solid white image or if monochrome a solid image of the roadway signage's color; and

(E) Be taken with the roadway signage on and compared to the ambient light with the sign off.

(5) Under this subsection, roadway signage is considered visible from the highway system if it or light emitting from it is plainly visible to a driver of a vehicle who is proceeding in a legally designated direction and traveling at the posted speed limit.

(6) Billboards and electronic message centers installed before the effective date of this chapter that are within one-half (1/2) mile of and visible from a highway system shall be brought into compliance within five (5) years after the effective date of this chapter.

(7) Remote sensing equipment shall not be installed on a sign for the purpose of personalizing advertisements displayed on an electronic message center.

8-14-109. Chapter cumulative and supplemental.

This chapter is cumulative and supplemental and shall not apply within a county or municipality that, by ordinance or resolution, has adopted provisions restricting light pollution that are equal to or more stringent than the provisions of this chapter.

SECTION 3. EFFECTIVE DATE. This act becomes effective on October 1, 2017.

/s/S. Meeks