

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

State of Arkansas As Engrossed: H2/18/19 H2/21/19 H2/27/19 H3/5/19

92nd General Assembly

A Bill

Regular Session, 2019

HOUSE BILL 1309

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) Energy is wasted when methods of illumination are used
excessively and inefficiently;

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

(3)(A) 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;

(4) Light pollution disrupts nocturnal animal activity, which
results in diminished health and survival of various animal and plant
populations;



(5) Light pollution reduces the ability for Arkansans to enjoy recreational or educational astronomical observations of the starry night sky;

(6) Light pollution reduces the ability for Arkansas scientists to conduct scientific research of the cosmos;

(7) Inefficient luminaries may cast unwanted light outside the intended target area, creating light trespass; and

(8) It is in the public interest to reduce light pollution to protect the nighttime environment and create awareness of the need to reduce light pollution.

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

Chapter 14

~~Shielded Outdoor Lighting Act~~ Arkansas Nighttime Environment Protection Act

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~~ 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 the state's citizens and 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-generated or electronically generated.

(B) "Electronic message center" includes without limitation 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 effect 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) "Governing body" means an agency director, elected official, or a public body responsible for a fixture, including without limitation a municipality, board, the Arkansas Department of Transportation, and the State Highway Commission;

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

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

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

(11) "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;

(12) "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;

(13) "Lux" means a unit of illuminance that is equal to one (1) lumen per square meter;

(14) "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;

(15) "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

(16) "Public funds" means bond revenues or money appropriated or allocated by the General Assembly, 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)(A) 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 light environment.

(B) The state agency, public corporation, county, or municipality may use as guidance the guidelines for the illuminance of a surface as recommended by the Illuminating Engineering Society of North America, as the guidelines existed on January 1, 2019, or the minimum illuminance recommendation by the United States Department of Transportation, as the recommendation existed on January 1, 2019, as guidance; and

(3) The color temperature is four thousand kelvin (4,000K) or less.

(b) Illuminated roadway signage installed or replaced after October 1, 2019, 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 area 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);

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

(C) The color temperature is four thousand kelvin (4,000K) or less.

(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) 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) An entity that installs new or replacement street or outdoor lighting on behalf of a state agency, public corporation, county, or municipality or new or replacement street or outdoor lighting 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~~

~~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.~~

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; and

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

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

~~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.~~

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 shall not create glare, light trespass, or excessive amounts of light pollution.

(b)(1) 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.

(2) If a commercial and advertising roadway sign or device is an electronic message center, the commercial and advertising roadway sign or device shall:

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

(B) 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;

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

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

(3) 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 equal to the square root of the area of the commercial and advertising roadway sign or device in square feet multiplied by 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.

(4) 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.

(5) Billboards and electronic message centers installed before October 1, 2019, 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 October 1, 2019.

(6) 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. Exemptions.

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;

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

(B) On farms, ranches, dairies, and feedlots; and

(C) 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) There are special lighting requirements, including without limitation:

(i) At sports facilities;

(ii) For historic decorative considerations;

(iii) At monuments;

(iv) For decorative lighting on bridges over navigable waterways;

(v) For lighting of the United States flag under the Federal Flag Code, 4 U.S.C. §§ 4-10;and

(vi) For lighting at a public or private state correction facility, a detention facility, or a mental health facility, including lighting on the grounds of the facility and on necessary roads leading up to and around the facility as determined by the facility in consultation with the Arkansas Department of Transportation or the entity responsible for the road leading up to and around the facility.

(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 outdoor fixture existed and was legally installed before October 1, 2019.

(B) If an outdoor fixture exempted under subdivision (6)(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; and

(7)(A) The governing body responsible for the fixtures has:

(i) Determined that compliance with this chapter would impose an excessive cost on the governing body; and

(ii) Adopted an ordinance or resolution that shows the excessive cost of installing conforming fixtures.

(B) The ordinance or resolution shall include a:

(i) Specific list of the fixtures exempted; and

(ii) Cost analysis of installing conforming fixtures versus non-conforming fixtures that supports the governing body's conclusion that the cost of installing conforming fixtures is excessive.

8-14-110. Violations.

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

(1) Warning for a first offense;

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

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

(b) Money raised by fines assessed under subsection (a) of this section shall be deposited into:

(1) The general fund of the public corporation, county, or municipality assessing the fine; or

(2) If the fine is assessed by the Arkansas Department of Environmental Quality, the funds shall be deposited into the Arkansas Department of Environmental Quality Fund Account to be utilized as set out in 19-5-302(4)(A).

8-14-111. 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 this chapter.

SECTION 3. EFFECTIVE DATE. This act is effective on and after October 1, 2019.

/s/S. Meeks