

1 State of Arkansas
2 90th General Assembly
3 Regular Session, 2015

A Bill

HOUSE BILL 1003

4
5 By: Representative S. Meeks

For An Act To Be Entitled

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

Subtitle

12 THE ARKANSAS NIGHTTIME ENVIRONMENT
13 PROTECTION ACT.

14
15
16
17 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

18
19 SECTION 1. DO NOT CODIFY. Findings.

20 The General Assembly finds that:

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

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

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

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

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



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

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

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

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

10
 11 SECTION 2. Arkansas Code Title 8, Chapter 14, is amended to read as
 12 follows:

13 8-14-101. Title.

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

16
 17 8-14-102. Purpose.

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

24
 25 8-14-103. Definitions.

26 As used in this chapter:

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

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

36 (1) "Direct light" means light emitted directly from a lamp, off

1 a reflector, or through a refractor of a fixture;

2 (2) "Excessive cost" means the cost to replace and operate a
3 conforming replacement fixture that is at least one and one-half (1 1/2)
4 times more expensive than a nonconforming fixture;

5 (3) "Fixture" means a complete lighting unit, including without
6 limitation a lamp or lamps together with the parts designed to distribute the
7 light, to position and protect the lamps, and to connect the lamps to the
8 power supply;

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

13 (5) "Glare" means direct light emitting from a fixture that
14 causes reduced vision or momentary blindness;

15 (6) "Illuminance" means the level of light measured on an
16 intercepting surface;

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

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

20 (9) "Light trespass" means light emitted by a fixture that
21 shines beyond the boundaries of the property on which the fixture is located;

22 (10) "Lumen" means a specific standard unit of measurement of
23 luminous flux;

24 (11) "Partially shielded" means a fixture that is constructed so
25 that the bottom edge of the shield is below the plane of the center line of
26 the lamp, reducing light above the horizontal to less than twenty percent
27 (20%) of the light emitted from any part of the lighting unit;

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

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

34
35 8-14-104. ~~Shielding Prohibitions Exemptions~~ Regulations for
36 outdoor illumination.

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

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

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

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

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

13 ~~(2) The Arkansas Department of Environmental Quality shall~~
14 ~~promulgate regulations prohibiting any person or entity from knowingly~~
15 ~~placing or disposing of the bulb or tube portion of an electric lighting~~
16 ~~device containing hazardous levels of mercury in a landfill after January 1,~~
17 ~~2008, if:~~

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

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

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

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

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

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

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

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

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

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

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

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

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

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

15 ~~(2) A correctional facility;~~

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

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

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

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

20 (a) An agency, public corporation, county, or municipal subdivision of
 21 this state shall not use public funds to operate, maintain, install, or cause
 22 to be installed a new or replacement permanent outdoor fixture unless the
 23 following conditions are met:

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

27 (2) The permanent outdoor fixture is designed to maximize energy
 28 conservation and to minimize light pollution, glare, and light trespass;

29 (3) The permanent outdoor fixture's maximum illuminance does not
 30 exceed what is adequate for that purpose under guidelines recommended for
 31 that purpose by the Illuminating Engineering Society of North America, as the
 32 guidelines existed on January 1, 2013, or the minimum illuminance
 33 recommendation for that purpose by the United States Department of
 34 Transportation, as the recommendation existed on January 1, 2013;

35 (4) For roadway lighting unassociated with intersections of two
 36 (2) or more streets or highways, a determination is made by the Director of

1 the Arkansas State Highway and Transportation Department or his or her
2 designee or a body having jurisdiction or its designee that the purpose of
3 the lighting installation or replacement cannot be achieved by reduction of
4 the speed limit, installation of reflectorized roadway markers, lines,
5 warnings, or informational signs, or other passive means; and

6 (5) Full consideration has been given to the use of public funds
7 for the goals of eliminating glare, light pollution, and light trespass,
8 reducing energy use, and preserving the natural night environment.

9 (b) Roadway signage installed or replaced after the effective date of
10 this act that is illuminated shall be illuminated from within the roadway
11 signage or from above the roadway signage with fully shielded fixtures that
12 minimize glare, except:

13 (1) When illumination of the roadway signage from within or
14 above is not possible;

15 (2) That commercial and advertising roadway signage, including
16 billboards, installed or replaced after the effective date of this act shall
17 be illuminated from within the roadway signage or if the roadway signage is
18 illuminated with external fixtures, then:

19 (A) Light from an external fixture must be directed so a
20 majority of the light falls upon the advertisement surface;

21 (B) The lamp is not visible from the roadway; and

22 (C) An external fixture does not create glare, light
23 trespass, or excessive amounts of light pollution.

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

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

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

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

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

1 associated with the operation and maintenance of a given fixture, the
2 Arkansas Public Service Commission shall ensure that the rate schedule for
3 public, residential, and commercial security and street lighting published by
4 an electric utility for fixtures that are better shielded, use lower wattage,
5 and require less maintenance, are properly reflective of the long-term cost
6 savings of using the fixtures.

7 (e) It is unlawful for any person or entity to commit excessive or
8 unreasonable light trespass unless permission is granted by the property
9 owner upon whose property the light trespass is occurring.

10 (f) A new mercury vapor lamp shall not be installed in the state by a
11 government agency, public entity, or utility.

12 (g) An outdoor recreational facility shall not be illuminated after
13 11:00 p.m. if it is not in use, except for necessary security and safety
14 lighting.

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

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

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

27 (i) Any entity that installs new or replacement street or outdoor
28 lighting on behalf of an agency, public corporation, county, or municipal
29 subdivision of this state or that will become the responsibility of an
30 agency, public corporation, county, or municipal subdivision of this state
31 shall comply with subsection (a) of this section.

32 (j) Navigation lights on towers built after the effective date of this
33 act shall use only red lights after dark.

34
35 8-14-105. ~~Penalties~~ Exemptions.

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

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

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

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

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

8 (2) Fire, police, rescue, correctional, or medical personnel
9 need outdoor lighting for temporary emergencies not to exceed thirty (30)
10 days in duration unless a waiver is granted by the Director of the Arkansas
11 State Highway and Transportation Department;

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

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

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

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

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

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

31 (6)(A) The lighting is for a municipality, a public or private
32 state correction, detention, mental health facility, school for grades
33 kindergarten through twelve (K-12), college, or university.

34 (B) For lighting exempted under subdivision (6)(A) of this
35 section, § 8-14-104 shall serve only as a guideline and shall not be binding;

36 (7)(A) It has been determined that a reasonable safety, security

1 or excessive cost, or structural modification interest exists regarding
 2 becoming compliant with this chapter.

3 (B)(i) The agency director, an elected official, or a body
 4 responsible for the fixture may waive the provisions of subdivision (a)(7) of
 5 this section if:

6 (a) A request for a waiver has been made and
 7 reviewed; and

8 (b) The agency director, an elected official,
 9 or a body responsible for the fixture that reviewed the waiver request
 10 determines that a waiver is necessary for the lighting application.

11 (C) The waiver under subdivision (a)(7)(B) may be appealed
 12 by a citizen of the state to the agency director, an elected official, or a
 13 body responsible for the fixture that reviewed the waiver request; and

14 (8)(A) The outdoor lighting fixture existed and was legally
 15 installed before the effective date of this act.

16 (B) However, when an existing lighting fixture becomes
 17 unrepairable, a replacement is subject to § 8-14-104.

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

23
 24 8-14-106. Enforcement.

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

27 This chapter shall be enforced by:

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

30 (2) A local or state code enforcement agency within the
 31 governing body's jurisdiction;

32 (3) The Arkansas State Highway and Transportation Department
 33 over highways, streets, and right-of-way lighting and all signage for and
 34 along streets and highways; and

35 (4)(A) The Arkansas Department of Environmental Quality within
 36 its jurisdiction.

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

4 (b) In making a determination of light trespass, the code enforcement
5 agency having jurisdiction in the area shall consider the following factors:

6 (1) The extent to which a fixture may further a lawful purpose;

7 (2) The severity of the effect under various circumstances, of
8 the fixture upon the property of other persons;

9 (3) The general character and use of properties; and

10 (4) Acceptable mitigation measures.

11 (c) The code enforcement agency having jurisdiction in the area shall
12 pursue a case of light trespass only if a complaint has been made by the
13 property owner or a designee of the property owner upon whose property the
14 light is trespassing.

15 (d) Upon a finding of light trespass, the code enforcement agency
16 having jurisdiction in the area, if possible and to the extent the code
17 enforcement agency having jurisdiction in the area deems practical, shall
18 work with both parties to voluntarily mitigate the issue.

19
20 8-14-107. ~~Provisions supplemental~~ Violations.

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

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

26 (1) For a first offense, a warning;

27 (2) For a second offense or an offense that continues for thirty
28 (30) days after the date of the warning, a fine of twenty-five dollars
29 (\$25.00) minus the replacement cost for each offending fixture assessed; and

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

33 (b) Money raised by fines assessed under subsection (a) of this
34 section shall be deposited into the general fund of the agency assessing the
35 fine to offset the cost of enforcement.

36

1 8-14-108. Chapter cumulative and supplemental.

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

6
7 SECTION 3. DO NOT CODIFY. Reports.

8 Each electric utility shall submit a review of its outdoor lighting fee
9 schedule to the Arkansas Public Service Commission at least one (1) time
10 every three (3) years during the first ten-year period after this effective
11 date of this act.

12
13 SECTION 4. EFFECTIVE DATE. This act becomes effective on October 1,
14 2015.