

1 State of Arkansas
2 88th General Assembly
3 Regular Session, 2011

A Bill

HOUSE BILL 1711

4
5 By: Representative S. Meeks
6

For An Act To Be Entitled

8 AN ACT TO CREATE THE ARKANSAS NIGHTTIME ENVIRONMENT
9 PROTECTION ACT; AND FOR OTHER PURPOSES.
10

Subtitle

11
12 THE ARKANSAS NIGHTTIME ENVIRONMENT
13 PROTECTION ACT.
14
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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) Light pollution has been implicated in disruption of the
27 human and animal circadian rhythm and strongly suspected as an etiology of
28 suppressed melatonin production, depressed immune systems, and increases in
29 certain cancers' rate.

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

34 (3) Light pollution disrupts nocturnal animal activity and
35 results in diminished various animal and plant populations' survival and
36 health;



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

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

6 (6) It is in the public interest to reduce light pollution to
 7 protect the nighttime environment and create awareness.

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

11 8-14-101. Title.

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

14
 15 8-14-102. Purpose.

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

22
 23 8-14-103. Definitions.

24 As used in this chapter:

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

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

34 (1) “Direct light” means light emitted directly from a lamp off
 35 a reflector or through a refractor of a fixture;

36 (2) “Energy conservation” means reducing energy costs and

1 resources used and includes using a light with lower wattage or a timer
2 switch;

3 (3) "Fixture" means a complete lighting unit, including a lamp
4 or lamps together with the parts designed to distribute the light, to
5 position and protect the lamps, and to connect the lamps to the power supply;

6 (4) "Fully shielded" means a fixture that allows no direct light
7 emissions, either directly from the lamp or indirectly by reflection or
8 refraction from any part of the lighting unit, above a horizontal plane
9 running through the lowest point on the fixture where light is emitted;

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

12 (6) "Illuminance" means the level of light measured at a
13 surface;

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

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

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

19 (10) "Lumen" means a specific standard unit of measurement of
20 luminous flux;

21 (11) "Parking lot" means a cleared area that is intended for
22 parking vehicles;

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

27 (13) "Permanent outdoor fixture" means a fixture or system of
28 fixtures that is outdoors and intended to be used for seven (7) days or
29 longer;

30 (14) "Public funds" means any bond revenues or any money
31 appropriated or allocated by the General Assembly, or any money raised
32 through taxes or fees;

33 (15) "Roadway lighting" means permanent outdoor fixtures that
34 are specifically intended to illuminate roadways for automotive vehicles;
35 and

36 (16) "Unshielded fixture" means a fixture in which either the

1 lamp and surrounding glass lens extend below the horizontal plane of opaque
 2 shielding elements or the lamp is situated on top of a post or on a pivoting
 3 support on the side of a building, causing light to be cast so that more than
 4 ten percent (10%) is projected above the horizontal creating glare.

5
 6 8-14-104. ~~Shielding—Prohibitions—Exemptions~~ Limits on outdoor
 7 illumination.

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

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

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

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

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

20 ~~(2) The Arkansas Department of Environmental Quality shall~~
 21 ~~promulgate regulations prohibiting any person or entity from knowingly~~
 22 ~~placing or disposing of the bulb or tube portion of an electric lighting~~
 23 ~~device containing hazardous levels of mercury in a landfill after January 1,~~
 24 ~~2008, if:~~

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

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

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

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

36 ~~(C) The commission shall require each electric public~~

1 utility to inform its customers of the availability of the shielded lighting
 2 service.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

31 (1) The fixture is a fully shielded fixture when the rated
 32 output of the fixture is greater than one thousand eight hundred (1,800)
 33 lumens;

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

36 (3)(A) The fixture's maximum illuminance does not exceed the

1 minimum illuminance recommended for that purpose by the Illuminating
2 Engineering Society of North America, as it existed on January 1, 2011, or
3 the minimum illuminance recommended for that purpose by the federal
4 Department of Transportation as it existed on January 1, 2011.

5 (B) If no lighting recommendation or regulation is
6 applicable, the average minimum allowance adequate for the intended purpose
7 shall be used;

8 (4) For roadway lighting unassociated with intersections of two
9 (2) or more streets or highways, a determination is made by the Director of
10 the Arkansas State Highway and Transportation Department or his or her
11 designee that the purpose of the lighting installation or replacement cannot
12 be achieved by reduction of the speed limit, installation of reflectorized
13 roadway markers, lines, warnings, or informational signs, or other passive
14 means; and

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

18 (b)(1) All roadway, commercial, and advertising signage, including
19 billboards, installed or replaced after the effective date of this chapter
20 shall be illuminated from within the sign or from above the sign with fully
21 shielded fixtures that eliminate glare.

22 (2) All existing signage installed before the effective date of
23 this chapter shall comply with this chapter by September 1, 2021.

24 (c) All fixtures installed or replaced after the effective date of
25 this chapter to illuminate public and commercial parking lots shall meet the
26 following requirements:

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

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

32 (d)(1) An electric utility shall not operate, maintain, install, or
33 cause to be installed any new or replacement residential or commercial
34 security lighting unless the following conditions are met:

35 (A) The fixture is a fully shielded or partially shielded
36 fixture when the rated output of the fixture is greater than one thousand

1 eight hundred (1,800) lumens; and

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

4 (2) If the property owner purchases nonconforming fixtures from
5 a third party, the electric utility may, at its discretion, install and
6 service the fixture if consideration is given to eliminating glare, light
7 pollution, light trespass, energy conservation, and the preservation of the
8 natural night environment.

9 (e) After taking into account all costs associated with a given
10 fixture, the Arkansas Public Service Commission shall ensure that the rate
11 schedule for the operation of residential and commercial security lighting
12 published by an electric utility is such that fixtures that are better
13 shielded, lower wattage, and more energy efficient are less expensive.

14 (f) It is unlawful for any person or entity to commit light trespass
15 that is unreasonable.

16 (g) New mercury vapor and new dropped lens outdoor light fixtures
17 shall not be installed in the state a by government agency, public entity, or
18 utility, and replacement equipment other than bulbs for these lighting
19 fixtures shall not be allowed.

20 (h) An outdoor recreational facility, whether public or private, shall
21 not be illuminated after 11:00 p.m. except for a state, national, or
22 international tournament or to conclude a recreational or sporting event or
23 other activity that is in progress before 11:00 p.m. at a ballpark, outdoor
24 amphitheater, arena, or similar facility.

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

30 (1) The device contains more than two-tenths milligram per liter
31 (0.2 mg/l) of leachable mercury as measured by the Toxicity Characteristic
32 Leaching Procedure as set out in EPA test Method 1311; and

33 (2) Adequate facilities exist for the public to properly dispose
34 of the device described in subdivision (i)(1) of this section.

35
36 8-14-105. ~~Penalties~~ Exemptions.

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

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

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

7 Section 8-14-104 does not apply if:

8 (1) A federal law, rule, or regulation preempts state law;

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

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

16 (A) Programs;

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

20 (C) Farms, ranches, dairies, feedlots, industrial,
 21 drilling, mining, or oil and gas facilities;

22 (4) It is part of a navigational lighting system for an airport,
 23 on a navigable waterway, or other lighting necessary for aircraft or
 24 watercraft safety;

25 (5)(A) In a situation in which there are special requirements,
 26 such as sports facilities, or historic decorative considerations, monuments,
 27 or the lighting of the United States flag under the United States Code.

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

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

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

1 (7)(A) If it has been determined that a reasonable safety and
 2 security interest exists, the director or his or her designee may waive the
 3 provisions of subdivision (5) of this section if, after a request for a
 4 waiver has been made and reviewed, the director or his or her designee
 5 determines that a waiver is necessary for the lighting application.

6 (B) A request for a waiver under subdivision (7)(A) of
 7 this section shall be made to the director or his or her designee in a form
 8 the director shall prescribe and shall include, without limitation a
 9 description of:

10 (i) The lighting plan;

11 (ii) A description of the efforts that have been
 12 made to comply with subdivision (5) of this section; and

13 (iii) The reasons a waiver is necessary.

14 (C)(i) In reviewing a request for a waiver under this
 15 subdivision, the director shall consider design safety, costs, and other
 16 factors deemed appropriate by the director.

17 (ii) A ruling under subdivision (7)(C)(i) of this
 18 section may be appealed to the Arkansas State Highway Commission which shall
 19 have the final authority to approve or deny the waiver; or

20 (8)(A) The outdoor lighting fixture existed and was legally
 21 installed before the effective date of this chapter.

22 (B) However, when existing lighting fixtures become
 23 unrepairable, a replacement is subject to this chapter.

24
 25 8-14-106. Enforcement.

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

28 (a) This chapter shall be enforced by:

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

31 (2) Any local or state code enforcement agency within its
 32 jurisdiction;

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

36 (4) The Arkansas Department of Environmental Quality within its

1 jurisdiction.

2 (b)(1) The Arkansas Department of Environmental Quality shall handle
3 and review all complaints of light trespass.

4 (2) In making a determination of light trespass, the Arkansas
5 Department of Environmental Quality shall consider the following factors:

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

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

10 (C) The general character and use of properties; and

11 (D) Acceptable mitigation measures.

12 (c) The Arkansas Department of Environmental Quality shall pursue a
13 case of light trespass only if a complaint has been made by the property
14 owner or a designee of the property owner upon whom the light is trespassing.

15
16 8-14-107. Provisions supplemental Violations.

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

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

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

23 (2) For a second offense or offense that continues for thirty
24 (30) days after the date of the warning, a fine of twenty-five dollars
25 (\$25.00) minus the replacement cost for each offending fixture assessed; and

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

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

32
33 8-14-108. Rules and regulations.

34 (a)(1) Before the effective date of this chapter, the Arkansas State
35 Highway and Transportation Department, after giving consideration to the
36 standards adopted by the Illuminating Engineering Society of North America,

1 shall adopt rules for all highway, street, and right-of-way lighting and all
2 signage for and along streets and highways.

3 (2) The rules adopted under subdivision (a)(1) of this section
4 shall:

5 (A) Include a system to ensure that the use of state funds
6 for street lighting complies with the requirements set forth in this chapter;
7 and

8 (B) Provide for the wide dissemination of information
9 regarding the system created under subdivision (a)(1) of this section.

10 (b) Before the effective date of this chapter, the Arkansas Department
11 of Environmental Quality, after giving consideration to the standards adopted
12 by the Illuminating Engineering Society of North America, shall adopt rules
13 and regulations:

14 (1) Governing the placement and operation of fixtures, except
15 those under the jurisdiction of the Arkansas State Highway and Transportation
16 Department; and

17 (2) Defining light trespass.

18 (c)(1) The Arkansas Department of Environmental Quality, in
19 consultation with interested agencies and organizations and giving
20 consideration to the standards adopted by the Illuminating Engineering
21 Society of North America, shall develop a physical pamphlet and an electronic
22 pamphlet containing information regarding this chapter, including without
23 limitation:

24 (A) Outdoor lighting;

25 (B) Energy conservation;

26 (C) Light pollution;

27 (D) Light trespass;

28 (E) Glare; and

29 (F) The rules and regulations adopted by the Arkansas
30 Department of Environmental Quality under this chapter and the penalties
31 imposed for violations of this chapter.

32 (2) The Arkansas Department of Environmental Quality shall
33 distribute the pamphlet developed under subdivision (c)(1) of this section to
34 every municipality and every electric utility.

35 (3) The Arkansas Department of Environmental Quality shall
36 ensure that every electric utility and municipality providing service shall

1 receive an adequate supply of the pamphlets developed under subdivision
2 (c)(1) of this section suitable for distribution to any interested party.

3 (d) The Arkansas Building Authority shall:

4 (1) Review the outdoor lighting provisions in the building codes
5 used in Arkansas;

6 (2) Make recommendations for appropriate changes to comply with
7 this chapter; and

8 (3) Permit and inspect outdoor lighting based on the standards
9 under this chapter.

10 (e) If public utilities are required under this chapter or by a local
11 government ordinance to accelerate replacement of lighting fixtures, the cost
12 of the replacement shall be included in rates approved by the Arkansas Public
13 Service Commission..

14
15 8-14-109. Chapter cumulative and supplemental.

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

20
21 SECTION 3. DO NOT CODIFY. This chapter becomes effective on September
22 1, 2011.