

1 State of Arkansas
2 88th General Assembly
3 Regular Session, 2011
4

As Engrossed: H3/18/11

A Bill

HOUSE BILL 1711

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 THE ARKANSAS NIGHTTIME ENVIRONMENT
12 PROTECTION ACT.
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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)(1) Each public electric utility shall file an application with the
10 Arkansas Public Service Commission to establish a schedule of rates and
11 charges for the provision of a shielded lighting service option to the
12 utility's customers.

13 (2) The Arkansas Public Service Commission shall require each
14 public electric utility to inform its customers of the availability of the
15 shielded lighting l service.

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

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

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

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

32 (1) The device contains more than two-tenths milligram per liter
33 (0.2 mg/l) of leachable mercury as measured by the Toxicity Characteristic
34 Leaching Procedure as set out in EPA test Method 1311; and

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

1
2 8-14-105. Penalties Exemptions.

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

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

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

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

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

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

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

18 (A) Programs;

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

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

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

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

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

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

36 (B) For lighting exempted under subdivision (6)(A) of this

1 section, this section shall serve only as a guideline and shall not be
2 binding;

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

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

12 (i) The lighting plan;

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

15 (iii) The reasons a waiver is necessary.

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

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

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

24 (B) However, when existing lighting fixtures become
25 unrepairable, a replacement is subject to this chapter;

26 (9) Marinas only if the facility's management deems
27 nonconforming lights to be necessary for public safety; or

28 (10)(A) Campuses of institutions of higher education.

29 (B) The Board of Trustees of each institution of higher
30 education shall make efforts to come into compliance as the board deems
31 resources and funding are available.

32 (C) As new lighting fixtures enter into a planning phase
33 for the campus after the effective date of this subchapter, the new lighting
34 fixtures shall conform with this subchapter.

35
36 8-14-106. Enforcement.

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

3 (a) This chapter shall be enforced by:

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

6 (2) Any local or state code enforcement agency within its
7 jurisdiction;

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

11 (4)(A) The Arkansas Department of Environmental Quality within
12 its jurisdiction.

13 (B) Where appropriate the Arkansas Department of
14 Environmental Quality may refer any cases to a local or state code
15 enforcement agency or to a local governing body.

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

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

20 (A) The extent to which a fixture may further a lawful
21 purpose;

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

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

25 (D) Acceptable mitigation measures.

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

29
30 ~~8-14-107. Provisions supplemental~~ Violations.

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

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

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

1 (2) For a second offense or offense that continues for thirty
2 (30) days after the date of the warning, a fine of twenty-five dollars
3 (\$25.00) minus the replacement cost for each offending fixture assessed; and

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

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

10
11 8-14-108. Rules and regulations.

12 (a)(1) Before the effective date of this chapter, the Arkansas State
13 Highway and Transportation Department, after giving consideration to the
14 standards adopted by the Illuminating Engineering Society of North America,
15 shall adopt rules for all highway, street, and right-of-way lighting and all
16 signage for and along streets and highways.

17 (2) The rules adopted under subdivision (a)(1) of this section
18 shall:

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

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

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

28 (1) Governing the placement and operation of fixtures, except
29 those under the jurisdiction of the Arkansas State Highway and Transportation
30 Department; and

31 (2) Defining light trespass.

32 (c)(1)(A) The Arkansas Department of Environmental Quality, in
33 consultation with interested agencies and organizations and giving
34 consideration to the standards adopted by the Illuminating Engineering
35 Society of North America, shall develop a pamphlet containing information
36 regarding this chapter, including without limitation:

1 (i) Outdoor lighting;

2 (ii) Energy conservation;

3 (iii) Light pollution;

4 (iv) Light trespass;

5 (v) Glare; and

6 (vi) The rules and regulations adopted by the
7 Arkansas Department of Environmental Quality under this chapter and the
8 penalties imposed for violations of this chapter.

9 (B) The pamphlet required under subdivision (c)(1)(A) of
10 this section shall be prepared in:

11 (i) An electronic format; and

12 (ii) If needed and as resources dictate, a physical
13 format.

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

17 (3) The Arkansas Department of Environmental Quality shall
18 ensure that every electric utility and municipality providing service shall
19 receive an adequate supply of the pamphlets developed under subdivision
20 (c)(1) of this section suitable for distribution to any interested party.

21 (d) If public utilities are required under this chapter or by a local
22 government ordinance to accelerate replacement of lighting fixtures, the cost
23 of the replacement shall be included in rates approved by the Arkansas Public
24 Service Commission.

25
26 8-14-109. Chapter cumulative and supplemental.

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

31
32 SECTION 3. DO NOT CODIFY. This chapter becomes effective on September
33 1, 2011.

34
35 /s/S. Meeks
36