

1 State of Arkansas  
2 89th General Assembly  
3 Regular Session, 2013  
4

*As Engrossed: H4/3/13*

# A Bill

HOUSE BILL 1568

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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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 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) In addition, light pollution disrupts nocturnal animal  
35 activity and results in diminished health and survival of various animal and  
36 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 scientist 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 the Arkansas Nighttime Environment Protection Act is to regulate outdoor  
21 night lighting fixtures to promote safety, conserve energy, save tax dollars,  
22 and preserve the state’s natural nighttime environment for the health and  
23 welfare of our citizens, our wildlife, and astronomy.

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 any bond revenues or any money  
32 appropriated or allocated by the General Assembly or any money raised through  
33 taxes or fees and 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 any 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 body of jurisdiction or a designee the purpose of the lighting  
3 installation or replacement cannot be achieved by reduction of the speed  
4 limit, installation of reflectorized roadway markers, lines, warnings, or  
5 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 chapter that is illuminated shall be illuminated from within the sign or  
11 from above the sign with fully shielded fixtures that minimize glare, except:

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

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

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

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

21 (C) The fixture does not create glare, light trespass, or  
22 excessive amounts of light pollution.

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

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

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

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

35 (d)(1) The Arkansas Public Service Commission shall, after taking into  
36 account all costs, including long term costs, associated with the operation

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

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

10 (e) It is unlawful for any person or entity to commit excessive or  
11 unreasonable light trespass unless permission is granted by the property  
12 owner upon whom the light trespass is occurring.

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

15 (g) An outdoor recreational facility shall not be illuminated after  
16 11:00 p.m. if it is not in use, except for necessary security and safety  
17 lighting.

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

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

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

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

35 (j) Unless preempted by federal law or a waiver is granted by the  
36 Arkansas Aviation and Aerospace Commission to address safety concerns, only

1 red lights shall be used during the nighttime hours on elevated objects for  
2 aircraft avoidance lights on structures built after the effective date of  
3 this act.

4  
5 8-14-105. ~~Penalties~~ Exemptions.

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

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

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

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

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

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

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

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

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

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

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

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

1 (6)(A) The lighting is for a municipality, a public or private  
2 state correction, detention, mental health facility, kindergarten through  
3 grade twelve (K-12) school, college, or university.

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

6 (7)(A) If it has been determined that a reasonable safety,  
7 security or excessive cost, or structural modification interest exists  
8 regarding becoming compliant with this chapter, the agency director, an  
9 elected official, or a body responsible for the fixture may waive the  
10 provisions of subdivision (5) of this section if, after a request for a  
11 waiver has been made and reviewed, the agency director or an elected official  
12 with jurisdiction or his or her designee determines that a waiver is  
13 necessary for the lighting application.

14 (B) The ruling may be appealed by a citizen of the state  
15 to the agency director, an elected official, or a body responsible for the  
16 fixture; and

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

19 (B) However, when existing lighting fixtures become  
20 unrepairable, a replacement is subject to § 8-14-104.

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

26  
27 8-14-106. Enforcement.

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

30 This chapter shall be enforced by:

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

33 (2) Any local or state code enforcement agency within the  
34 governing body's jurisdiction;

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

1 along streets and highways; and

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

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

7  
8 8-14-107. Provisions supplemental Violations.

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

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

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

15 (2) For a second offense or an offense that continues for thirty  
16 (30) days after the date of the warning, a fine of twenty-five dollars  
17 (\$25.00) minus the replacement cost for each offending fixture assessed; and

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

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

24  
25 8-14-108. Chapter cumulative and supplemental.

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

30  
31 SECTION 3. DO NOT CODIFY. EFFECTIVE DATE. This act becomes effective  
32 on October 1, 2013.

33  
34 */s/S. Meeks*