

1 State of Arkansas  
2 92nd General Assembly  
3 Regular Session, 2019

# A Bill

HOUSE BILL 1309

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 TO CREATE THE ARKANSAS NIGHTTIME  
13 ENVIRONMENT 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) Energy is wasted when methods of illumination are used  
22 excessively and inefficiently;

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

26 (3)(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 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 (4) Light pollution disrupts nocturnal animal activity, which  
35 results in diminished health and survival of various animal and plant  
36 populations;





1 ~~indirectly from the fixture, are projected below a horizontal plane running~~  
2 ~~through the lowest point on the fixture where light is emitted.~~

3 (1) "Direct light" means light emitted directly from a light  
4 source, off a reflector, or through a refractor or lens of a fixture;

5 (2)(A) "Electronic message center" means a self-luminous sign  
6 that emits or projects any kind of light, color, or message that is computer-  
7 generated or electronically generated.

8 (B) "Electronic message center" includes without  
9 limitation displays using lamps, light-emitting diodes, liquid crystal  
10 displays, or a flipper matrix and any sign that creates an image using an  
11 array of picture elements or pixels;

12 (3) "Excessive cost" means:

13 (A) The cost to meet a requirement under this chapter or  
14 the cost of additional wiring, controls, power requirements, poles,  
15 materials, and commissioning, designing, and maintenance needed to meet a  
16 requirement under this chapter that is at least one hundred twenty-five  
17 percent (125%) more expensive than a nonconforming fixture; or

18 (B) In the case of a tariff on a streetlight, the tariff  
19 for the streetlight for a conforming fixture is more expensive than the  
20 tariff for a nonconforming fixture;

21 (4) "Fixture" means a complete lighting unit, including without  
22 limitation a light source together with the parts designed to distribute the  
23 light, to position and protect the light source, and to connect the light  
24 source to the power supply;

25 (5) "Fully shielded" means a fixture that does not allow light  
26 emissions, either directly from a light source or indirectly by reflection or  
27 refraction from any part of the lighting unit, above a horizontal plane  
28 running through the lowest point on the fixture where light is emitted;

29 (6) "Glare" means the effect produced by luminances within the  
30 visual field that is sufficiently greater than the luminance to which the  
31 eyes are adapted to cause annoyance, discomfort, or loss of visual  
32 performance and visibility;

33 (7) "Illuminance" means the level of light measured on an  
34 intercepting surface;

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

36 (9) "Light pollution" means general sky glow caused by the

1 scattering of artificial light in the atmosphere;

2 (10) "Light trespass" means excessive or unreasonable light  
 3 emitted by a fixture that shines beyond the boundaries of the property on  
 4 which the fixture is located;

5 (11) "Lumen" means a unit of luminous flux emitted within a unit  
 6 solid angle by a point source with a uniform luminous intensity of one (1)  
 7 candela;

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

10 (13) "Partially shielded" means a fixture that is constructed so  
 11 that the bottom edge of the shield is below the plane of the center line of  
 12 the lamp, reducing light above the horizontal to less than twenty percent  
 13 (20%) of the light emitted from any part of the lighting unit;

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

17 (15) "Public funds" means bond revenues or money appropriated or  
 18 allocated by the General Assembly, money raised through taxes or fees, and  
 19 county and municipal funds.

20  
 21 8-14-104. Shielding—Prohibitions—Exemptions Regulations for  
 22 outdoor illumination.

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

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

26 ~~(B) Subdivision (a)(1)(A) of this section shall not apply~~  
 27 ~~to any municipality or county if the governing body of the municipality or~~  
 28 ~~county determines by ordinance or to a municipally owned utility if the~~  
 29 ~~municipal employee responsible for procurement determines that the cost of~~  
 30 ~~acquiring a shielded outdoor lighting fixture will be prohibitive after~~  
 31 ~~comparing:~~

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

33 ~~(ii) The projected energy cost of the operation of~~  
 34 ~~the fixtures;~~

35 ~~(2) The Arkansas Department of Environmental Quality shall~~  
 36 ~~promulgate regulations prohibiting any person or entity from knowingly~~

1 ~~placing or disposing of the bulb or tube portion of an electric lighting~~  
 2 ~~device containing hazardous levels of mercury in a landfill after January 1,~~  
 3 ~~2008, if:~~

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

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

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

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

15 ~~(C) The commission shall require each electric public~~  
 16 ~~utility to inform its customers of the availability of the shielded lighting~~  
 17 ~~service.~~

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

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

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

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

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

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

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

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

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

- 1                   ~~(2) A correctional facility;~~
- 2                   ~~(3) A juvenile detention facility;~~
- 3                   ~~(4) An adult detention facility;~~
- 4                   ~~(5) A mental health facility; or~~
- 5                   ~~(6) A state supported institution of higher education.~~

6                   (a) A state agency, public corporation, county, or municipality shall  
 7 not use public funds to operate, maintain, install, or cause to be installed  
 8 a new or replacement permanent outdoor fixture unless the following  
 9 conditions are met:

10                   (1) The permanent outdoor fixture is a fully shielded fixture  
 11 when the initial rated lumens of the lamp of the permanent outdoor fixture is  
 12 greater than one thousand eight hundred lumens (1,800 lm);

13                   (2) The illuminance of a surface does not exceed what is  
 14 adequate for that purpose under guidelines recommended for that purpose by  
 15 the Illuminating Engineering Society of North America, as the guidelines  
 16 existed on January 1, 2019, or the minimum illuminance recommendation for  
 17 that purpose by the United States Department of Transportation, as the  
 18 recommendation existed on January 1, 2019;

19                   (3) Consideration has been given to the use of public funds for  
 20 the goals of eliminating glare, light pollution, and light trespass, reducing  
 21 energy use, and preserving the natural night environment; and

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

24                   (b) Illuminated roadway signage installed or replaced after October 1,  
 25 2019, shall be illuminated from within or from above the roadway signage,  
 26 except when illumination of the roadway signage from within or above is not  
 27 possible or would create excessive cost or maintenance issues.

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

31                   (A) The fixture is a fully shielded or partially shielded  
 32 fixture when the initial rated lumens of the lamp of the fixture is greater  
 33 than one thousand eight hundred lumens (1,800 lm);

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

36                   (C) The color temperature is four thousand kelvin (4,000K)

1 or less.

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

6 (d) After taking into account all costs, including long-term costs,  
7 associated with the operation and maintenance of a given fixture, the  
8 Arkansas Public Service Commission shall ensure that the rate schedule for  
9 public, residential, and commercial outdoor security and street lighting  
10 published by an electric utility for fixtures that are better shielded, use  
11 lower wattage, and require less maintenance, are properly reflective of the  
12 long-term cost of the fixtures and the energy consumption of the fixtures  
13 over the life of the fixtures.

14 (e) A new mercury vapor lamp shall not be installed in the state by a  
15 state agency, public corporation, county, municipality, public entity, or  
16 utility.

17 (f) The Arkansas Department of Environmental Quality shall promulgate  
18 rules prohibiting a person or entity from knowingly placing or disposing of  
19 the bulb or tube portion of an electric lighting device containing hazardous  
20 levels of mercury in a landfill if:

21 (1) The electric lighting device contains more than two-tenths  
22 milligram per liter (0.2 mg/l) of leachable mercury as measured by the  
23 toxicity characteristic leaching procedure set out in Method 1311 of the  
24 United States Environmental Protection Agency, as it existed on January 1,  
25 2019; and

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

29 (g) An entity that installs new or replacement street or outdoor  
30 lighting on behalf of a state agency, public corporation, county, or  
31 municipality or new or replacement street or outdoor lighting that will  
32 become the responsibility of a state agency, public corporation, county, or  
33 municipality shall comply with subsection (a) of this section.

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

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

7 8-14-106. Enforcement.

8 This chapter may be enforced by a town, city, or county of this state

9 by seeking injunctive relief in a court of competent jurisdiction.

10 This chapter shall be enforced by:

- 11 (1) The governing body of a political subdivision of the state
- 12 within its jurisdiction;
- 13 (2) A local code enforcement agency within the jurisdiction of
- 14 the governing body of a political subdivision of the state; and
- 15 (3)(A) The Arkansas Department of Environmental Quality within
- 16 its jurisdiction.

17 (B) If appropriate, the Arkansas Department of

18 Environmental Quality may refer any cases to a local or state code

19 enforcement agency or to a governing body of a political subdivision of the

20 state.

21

22 ~~8-14-107. Provisions supplemental~~

23 ~~The provisions of this chapter are cumulative and supplemental and~~

24 ~~shall not apply within a town, city, or county of this state that by~~

25 ~~ordinance has adopted provisions restricting light pollution that are equal~~

26 ~~to or more stringent than the provisions of this chapter.~~

27

28 8-14-108. Illuminated roadway signage – Electronic messaging centers.

29 (a) If roadway signage is illuminated with external fixtures:

- 30 (1) The external fixtures shall be directed and designed so that
- 31 a majority of the light falls upon the roadway sign's surface; and
- 32 (2) The external fixtures shall not create glare, light
- 33 trespass, or excessive amounts of light pollution.

34 (b)(1) Commercial and advertising roadway signage and devices,

35 including billboards and electronic message centers, installed or replaced

36 after October 1, 2019, that are within one-half (1/2) mile of and visible



1 from a highway system shall not prevent the driver of a vehicle from having a  
2 clear and unobstructed view of official signs and approaching or merging  
3 traffic.

4 (2) If a commercial and advertising roadway sign or device is  
5 illuminated with an external fixture:

6 (A) The external fixture shall be directed and designed so  
7 that a majority of the light falls upon the advertisement surface; and

8 (B) The external fixture does not create glare, light  
9 trespass, or excessive amounts of light pollution.

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

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

16 (B) Not be of an intensity or brilliance that may cause  
17 glare or impair the vision of a driver of a motor vehicle, or otherwise  
18 interfere with a driver's operation of a motor vehicle;

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

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

23 (4) A measurement required under this subsection shall:

24 (A) Not be made within thirty (30) minutes after sunset or  
25 thirty (30) minutes before sunrise;

26 (B) Be taken from or as close as is practically possible  
27 to directly in front of or perpendicular from the center point of the face of  
28 the roadway signage from a height of five feet (5') or approximately the same  
29 height as a driver's eye level;

30 (C) Be taken from or as close as is practically possible  
31 to a distance from the roadway signage in feet equal to the square root of  
32 the area of the commercial and advertising roadway sign or device in square  
33 feet multiplied by one hundred (100);

34 (D) Be taken with the roadway signage displaying a solid  
35 white image or if monochrome a solid image of the roadway signage's color;  
36 and

1                   (E) Be taken with the roadway signage on and compared to  
2 the ambient light with the sign off.

3                   (5) Under this subsection, roadway signage is considered visible  
4 from the highway system if it or light emitting from it is plainly visible to  
5 a driver of a vehicle who is proceeding in a legally designated direction and  
6 traveling at the posted speed limit.

7                   (6) Billboards and electronic message centers installed before  
8 October 1, 2019, that are within one-half (1/2) mile of and visible from a  
9 highway system shall be brought into compliance within five (5) years after  
10 October 1, 2019.

11                   (7) Remote sensing equipment shall not be installed on a sign  
12 for the purpose of personalizing advertisements displayed on an electronic  
13 message center.

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15                   8-14-109. Exemptions.

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

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

18                   (2) Fire, police, rescue, correctional, or medical personnel  
19 need outdoor lighting for temporary emergencies not to exceed thirty (30)  
20 days in duration unless a waiver is granted by the Director of the Arkansas  
21 Department of Emergency Management;

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

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

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

29                   (C) In industrial, drilling, mining, or oil and gas  
30 facilities;

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

34                   (5)(A) There are special lighting requirements, including  
35 without limitation:

36                   (i) At sports facilities;

1 (ii) For historic decorative considerations;

2 (iii) At monuments;

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

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

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

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

13 (B) For lighting exempted under subdivision (a)(6)(A) of  
14 this section, § 8-14-104 shall serve only as a guideline;

15 (7)(A) The outdoor fixture existed and was legally installed  
16 before October 1, 2019.

17 (B)(i)(a) If an outdoor fixture exempted under subdivision  
18 (a)(7)(A) of this section is to be replaced, the outdoor fixture shall be  
19 brought into compliance with § 8-14-104, unless the governing body determines  
20 that excessive cost, excessive structural modifications, or safety concerns  
21 prevent compliance.

22 (b) As used in subdivision (a)(7)(B)(i)(a) of  
23 this section, "governing body" means an agency director, an elected official,  
24 or a body responsible for the fixture.

25 (ii)(a) If a governing body makes a determination  
26 under subdivision (a)(7)(B)(i) of this section, the governing body shall  
27 submit an annual report to the Arkansas Pollution Control and Ecology  
28 Commission, outlining the current status of exempted fixtures and the efforts  
29 or plans that have been made to bring the exempted fixtures into compliance.

30 (b) The commission shall determine the time  
31 and manner for submission of the annual report required under subdivision  
32 (a)(7)(B)(ii)(a) of this section.

33 (c) If the commission determines that a state  
34 agency, public corporation, county, municipality, public or charter school,  
35 or college or university has brought into compliance with § 8-14-104 all  
36 fixtures that can be brought into compliance, the commission shall no longer

1 require the agency, public corporation, county, municipality, public or  
2 charter school, or college or university to submit the annual report as  
3 required under subdivision (a)(7)(B)(ii).

4 (C)(i) At the discretion and in the manner determined by  
5 the commission, but at least yearly, the commission shall compile the reports  
6 required under subdivision (a)(7)(B) of this section into one (1)  
7 comprehensive report.

8 (ii) The commission shall:

9 (a) File the comprehensive report required  
10 under subdivision (a)(7)(C)(i) of this section with the cochair of the  
11 Legislative Council; and

12 (b) Make each comprehensive report required  
13 under subdivision (a)(7)(C)(i) of this section available to the general  
14 public in a manner determined by the commission.

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

20 (c)(1) A waiver under subsection (b) of this section may be appealed  
21 to the commission by a citizen of the city or county where the waiver was  
22 applied.

23 (2) The commission shall then hold a public hearing to hear all  
24 sides before making a final determination.

25  
26 8-14-110. Violations.

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

28 (1) Warning for a first offense;

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

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

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

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

3                   (2) If the fine is assessed by the Arkansas Department of  
4 Environmental Quality, the funds shall be deposited into the Arkansas  
5 Department of Environmental Quality Fund Account to be utilized as set out in  
6 19-5-302(4)(A).

7  
8                   8-14-111. Chapter cumulative and supplemental.

9                   This chapter is cumulative and supplemental and shall not apply within  
10 a county or municipality that, by ordinance or resolution, has adopted  
11 provisions restricting light pollution that are equal to or more stringent  
12 than this chapter.

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14                   SECTION 3. EFFECTIVE DATE. This act is effective on and after October  
15 1, 2019.

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