

THE GENERAL ASSEMBLY OF PENNSYLVANIA

HOUSE BILL

No. 1803 Session of 2023

INTRODUCED BY PIELLI, MADDEN, HILL-EVANS, HOWARD, VENKAT, SANCHEZ, MALAGARI, HADDOCK, SHUSTERMAN, GREEN, OTTEN, PROBST, DIAMOND, BOROWSKI, BRENNAN AND TAKAC, OCTOBER 31, 2023

AS REPORTED FROM COMMITTEE ON ENVIRONMENTAL RESOURCES AND ENERGY, HOUSE OF REPRESENTATIVES, AS AMENDED, APRIL 30, 2024

AN ACT

1 Providing for management of responsible outdoor night lighting;  
2 and imposing duties on the Department of General Services.

3 The General Assembly of the Commonwealth of Pennsylvania  
4 hereby enacts as follows:

5 Section 1. Short title.

6 This act shall be known and may be cited as the Responsible  
7 Outdoor Lighting Control Act.

8 Section 2. Intent.

9 Government structures, facilities, places and spaces shall  
10 serve as models of best practices for private structures,  
11 facilities, places and spaces. This Commonwealth shall encourage  
12 residents, business owners and others to join in transitioning  
13 to responsible lighting principles.

14 Section 3. Definitions.

15 The following words and phrases when used in this act shall  
16 have the meanings given to them in this section unless the  
17 context clearly indicates otherwise:

1 "BUG rating." A luminaire classification system, developed  
2 by the United States Illuminating Engineering Society (IES),  
3 that ranks and defines how many lumens of light a lighting unit  
4 emits backwards, upwards and in glare.

5 "CONSTRUCTION." THE PROCESS OF BUILDING, ALTERING, <--  
6 REPAIRING, IMPROVING OR DEMOLISHING ANY PUBLIC STRUCTURE OR  
7 BUILDING, OR OTHER PUBLIC IMPROVEMENTS OF ANY KIND, TO ANY  
8 PUBLIC REAL PROPERTY. THE TERM DOES NOT INCLUDE THE ROUTINE  
9 OPERATION OR MAINTENANCE OF EXISTING STRUCTURES, BUILDINGS OR  
10 REAL PROPERTY.

11 "Correlated color temperature" or "CCT." The CCT replicates  
12 the Kelvin temperature spectrum of a metal object when heated.  
13 The CCT is the color of the light perceived by the eye, with  
14 "warmer" colors toward the red end of the spectrum and "cooler"  
15 colors toward the blue end of the spectrum.

16 "ENVIRONMENTALLY SENSITIVE AREA." A STATE GAME LAND, STATE <--  
17 FOREST, STATE PARK OR STATE NATURAL HERITAGE AREA. THE TERM  
18 SHALL ALSO INCLUDE AN AREA THAT IS AN EXEMPLARY ECOLOGICAL  
19 COMMUNITY THAT WOULD BE EASILY DISTURBED OR DEGRADED BY HUMAN  
20 ACTIVITY AND DEVELOPMENT, AS DETERMINED BY THE RELEVANT STATE  
21 AGENCY, STATE-AIDED ENTITY OR STATE-RELATED INSTITUTION, IN  
22 CONSULTATION WITH THE DEPARTMENT OF CONSERVATION AND NATURAL  
23 RESOURCES.

24 "Fully shielded." A lighting unit that is constructed in  
25 such a manner that all light emitted, either directly from the  
26 lamp or indirectly by reflection or refraction from any part of  
27 the lighting unit, is projected below the horizontal plane. The  
28 downward-pointing beam of light should preferably be cast within  
29 an angle of 30 degrees from the vertical. No part of the lamp  
30 should protrude outside of the lighting unit or shield.

1 "Glare." Light emitted by a lighting unit that causes  
2 reduced visibility of objects or momentary blindness.

3 "Lamp." The component of a lighting unit that produces  
4 light.

5 "Light pollution." The scattering of artificial light into  
6 the nighttime sky, caused by excessive or improperly positioned  
7 artificial outdoor lighting, resulting in sky glow, light  
8 trespass and glare.

9 "Light trespass." Light emitted by a lighting unit that  
10 shines beyond the boundaries of the property on which the  
11 lighting unit is located.

12 "Lighting unit." A complete artificial illuminating device,  
13 installed or portable, including a lamp, together with the parts  
14 designed to distribute the light, such as a reflector or  
15 refractor, parts to position and protect the lamps and parts to  
16 connect the lamps to the power supply.

17 "Lumen." A specific standard unit of measurement of luminous  
18 flux.

19 "Outdoor lighting units." Outdoor artificial illuminating  
20 devices, installed or portable, used for flood lighting, roadway  
21 and area lighting, general illumination or advertisement.

22 "Partially shielded lighting unit." A lighting unit that  
23 projects or directs its light parallel to or above the  
24 horizontal plane. The light from a lighting unit may be emitted  
25 either directly from the lamp or indirectly by reflection or  
26 refraction from any part of the lighting unit producing  
27 significant light pollution.

28 "Permanent outdoor lighting unit." Any lighting unit or  
29 system of lighting units that is outdoors and that is used for  
30 seven days or longer.

1 "Reflective roadway markings." Lines and markers with  
2 reflective properties to aid with vehicular and pedestrian  
3 safety.

4 "Reflective signage." Roadway and informational signage that  
5 has reflective properties to aid with vehicular and pedestrian  
6 safety.

7 "Responsible lighting principles." The use of advanced  
8 lighting technologies, including shielding, an upper limit on  
9 color temperature (2,700K), on-off controls, dimming controls,  
10 motion sensors and RGB or red, green and blue diodes. All  
11 applicable lighting shall utilize best available advanced  
12 lighting technologies.

13 "Roadway lighting." Permanent outdoor lighting units that  
14 are specifically intended to illuminate roadways for vehicular  
15 traffic.

16 "Sky glow." Brightening of the night sky over inefficiently  
17 and improperly lit areas.

18 "STATE AGENCY." ANY OF THE FOLLOWING, AS THE TERMS ARE  
19 DEFINED UNDER 62 PA.C.S. § 103 (RELATING TO DEFINITIONS):

<--

20 (1) EXECUTIVE AGENCY.

21 (2) INDEPENDENT AGENCY.

22 (3) STATE-AFFILIATED ENTITY.

23 "STATE-AIDED ENTITY." A POLITICAL SUBDIVISION OR OTHER  
24 GOVERNMENTAL UNIT THAT RECEIVES STATE FUNDS DIRECTLY OR  
25 INDIRECTLY FOR CONSTRUCTION.

26 "STATE-RELATED INSTITUTION." THE PENNSYLVANIA STATE  
27 UNIVERSITY, THE UNIVERSITY OF PITTSBURGH, LINCOLN UNIVERSITY OR  
28 TEMPLE UNIVERSITY.

29 "Wallpack lights." Lighting units that are fixed to a  
30 building's exterior, usually on a wall that faces outward from a

1 building.

2 Section 4. Outdoor lighting control.

3 ~~(a) Restrictions on outdoor lighting units. State money may <--~~  
4 ~~not be used to install, replace, maintain or operate permanent~~  
5 ~~outdoor lighting units unless the following conditions are met:~~

6 (A) RESTRICTIONS ON OUTDOOR LIGHTING UNITS.--A STATE AGENCY, <--  
7 STATE-RELATED INSTITUTION OR STATE-AIDED ENTITY MAY NOT INSTALL  
8 OR REPLACE PERMANENT OUTDOOR LIGHTING UNITS OR LAMPS UNLESS THE  
9 FOLLOWING CONDITIONS ARE MET:

10 (1) The permanent outdoor lighting unit is fully  
11 shielded and emits:

12 (i) Backward light not above an angle of 30 degrees  
13 from the downward vertical direction and corresponding to  
14 the IES rating of B0 on the BUG rating system.

15 (ii) Zero lumens upward and corresponding to the IES  
16 rating of U0 on the BUG rating system.

17 (iii) Forward or sideways light not above an angle  
18 of 30 degrees from the downward vertical direction to  
19 eliminate glare.

20 (2) Outdoor lighting units are established to avoid  
21 light trespass and shall not exceed a luminous ~~flux~~ FLUX of <--  
22 220 lumens at the property boundary.

23 (3) Any wallpack lights must be fully shielded to an  
24 angle of no more than 30 degrees from the downward vertical  
25 direction to eliminate glare and light trespass.

26 (4) The lighting units shall have a correlated color  
27 temperature less than or equal to 2,700K. In residential  
28 areas, CCT should not exceed 2,200K. In dark sky locations or  
29 environmentally sensitive areas ~~such as State parks~~, CCT <--  
30 should be no more than 2,200K. No lighting units shall exceed

1 2,700K.

2 ~~(5) The use of outdoor lighting must be minimized to~~ <--  
3 ~~only that which is needed for comfort and safety while still~~  
4 ~~maintaining compliance with responsible lighting principles.~~  
5 ~~For buildings, lights should be placed only at entrances and~~  
6 ~~exits. Low intensity facade lighting is permitted as long as~~  
7 ~~the light projects downwards and no lighting spills beyond~~  
8 ~~the facade being lit. Between 11 p.m. and 6 a.m., lighting~~  
9 ~~units shall be turned off or dimmed.~~

10 (5) THE USE OF OUTDOOR LIGHTING MUST BE MINIMIZED TO <--  
11 ONLY THAT WHICH IS NEEDED FOR COMFORT AND SAFETY, AS  
12 DETERMINED BY THE STATE AGENCY, STATE-RELATED INSTITUTION OR  
13 STATE-AIDED ENTITY HAVING JURISDICTION OVER THE PROPERTY,  
14 WHILE COMPLYING WITH RESPONSIBLE LIGHTING PRINCIPLES. THE  
15 AGENCY HAVING JURISDICTION OF THE PROPERTY SHALL CONSIDER THE  
16 FOLLOWING FOR BUILDINGS, TO THE EXTENT CONSISTENT WITH  
17 COMFORT AND SAFETY NEEDS:

18 (I) PLACING LIGHTS ONLY AT ENTRANCES AND EXITS.

19 (II) UTILIZING LOW INTENSITY FACADE LIGHTING THAT  
20 ENSURES THAT THE LIGHT PROJECTS DOWNWARD AND THAT NO  
21 LIGHTING SPILLS BEYOND THE FACADE BEING LIT.

22 (III) TURNING OFF OR DIMMING LIGHTING UNITS BETWEEN  
23 11 P.M. AND 6 A.M.

24 (6) The lighting units in locations that are not in use  
25 after 11 p.m., including in environmentally sensitive areas  
26 ~~such as State parks,~~ shall use timers set to turn off after <--  
27 11 p.m. or BE equipped with motion sensors OR MANUAL <--  
28 SWITCHES.

29 (7) Light trespass from the interior of a building or  
30 structure shall be minimized by lowering window shades after

1 sunset or by turning off lighting when not in use.

2 ~~(8) At the time of installation or replacement, the~~ <--  
3 ~~appropriate authority shall determine whether reflective~~  
4 ~~roadway markings or reflective signage are appropriate and~~  
5 ~~safe for the situation in lieu of outdoor lighting.~~

6 ~~Reflectorized roadway markings, lines, warning signs,~~  
7 ~~informational signs or other passive means shall be utilized~~  
8 ~~for roadway lighting except at intersections of two or more~~  
9 ~~streets or highways unless it is determined that adequate~~  
10 ~~lighting cannot be achieved by reflective means.~~

11 (8) AT THE TIME OF INSTALLATION OR REPLACEMENT OF <--  
12 LIGHTING UNITS FOR ROADWAYS, THE STATE AGENCY, STATE-RELATED  
13 INSTITUTION OR STATE-AIDED ENTITY WITH JURISDICTION OVER THE  
14 ROADWAY SHALL DETERMINE WHETHER REFLECTIVE ROADWAY MARKINGS  
15 OR REFLECTIVE SIGNAGE ARE APPROPRIATE AND SAFE FOR THE  
16 SITUATION IN LIEU OF OUTDOOR LIGHTING. REFLECTIVE ROADWAY  
17 MARKINGS AND REFLECTIVE SIGNAGE SHALL BE USED UNLESS IT IS  
18 DETERMINED BY THE AGENCY HAVING JURISDICTION OVER THE ROADWAY  
19 THAT ADEQUATE LIGHTING CANNOT BE ACHIEVED BY REFLECTIVE  
20 MEANS.

21 (9) FOR LIGHTING FIXTURES LOCATED WITHIN THE STATE  
22 CAPITOL COMPLEX DETERMINED BY THE CAPITOL PRESERVATION  
23 COMMITTEE TO BE HISTORIC IN NATURE, LIGHT BULBS SHALL BE  
24 TRANSITIONED TO BULBS OF 1,800K. THIS PARAGRAPH SHALL NOT  
25 APPLY TO THE CAPITOL DOME.

26 (b) Replacement of current lighting units.--

27 (1) All lighting units with lamps greater than 2,700K  
28 that were installed prior to the effective date of this  
29 paragraph and that produce light pollution need not be  
30 replaced until the end of the life of the lamp but shall

1 comply with subsection (c).

2 (2) At the end of the life of an existing lamp,  
3 partially shielded lighting units shall be fitted with a new  
4 lamp that is 2,200K or lower and shall be remediated, either  
5 by repositioning or by full shielding, so that the light  
6 casts to an angle of no more than 30 degrees from the  
7 downward vertical direction.

8 ~~(3) If a State funded entity already possesses~~ <--  
9 ~~unshielded or partially shielded lighting units, the~~  
10 ~~following shall apply:~~

11 (3) IF A STATE AGENCY, STATE-RELATED INSTITUTION OR <--  
12 STATE-AIDED ENTITY CURRENTLY OPERATES UNSHIELDED OR PARTIALLY  
13 SHIELDED LIGHTING UNITS, THE FOLLOWING SHALL APPLY:

14 (i) All unshielded or partially shielded lighting  
15 units shall be:

16 (A) immediately remediated upon the end of the  
17 life of the lamp with a new lamp that is 2,200K or  
18 lower; and

19 (B) remediated either by repositioning the  
20 lighting unit or by fully shielding the lamp so that  
21 the light casts to an angle of no more than 30  
22 degrees from the downward vertical direction.

23 ~~(ii) If an entity chooses to replace current,~~ <--  
24 ~~unshielded or partially shielded lighting units before~~  
25 ~~the end of the life of the lamp, the entity may not~~  
26 ~~purchase new, unshielded or partially shielded lighting~~  
27 ~~units as replacements. If the entity does purchase new~~  
28 ~~unshielded or partially shielded lighting units as~~  
29 ~~replacements, the entity may not receive State assistance~~  
30 ~~with the cost of the new lighting units.~~



1 (II) IF A STATE AGENCY, STATE-RELATED INSTITUTION OR <--  
2 STATE-AIDED ENTITY CHOOSES TO REPLACE CURRENT, UNSHIELDED  
3 OR PARTIALLY SHIELDED LIGHTING UNITS BEFORE THE END OF  
4 THE LIFE OF THE LAMP, THE STATE AGENCY, STATE-RELATED  
5 INSTITUTION OR STATE-AIDED ENTITY MAY NOT PURCHASE NEW,  
6 UNSHIELDED OR PARTIALLY SHIELDED LIGHTING UNITS AS  
7 REPLACEMENTS. IF THE STATE AGENCY, STATE-RELATED  
8 INSTITUTION OR STATE-AIDED ENTITY PURCHASES NEW,  
9 UNSHIELDED OR PARTIALLY SHIELDED LIGHTING UNITS AS  
10 REPLACEMENTS, THE STATE AGENCY, STATE-RELATED INSTITUTION  
11 OR STATE-AIDED ENTITY MAY NOT RECEIVE STATE ASSISTANCE  
12 WITH THE COST OF THE NEW LIGHTING UNITS.

13 (c) Repositioning of current lighting units.--Wherever  
14 possible, existing partially shielded and unshielded lighting  
15 units shall be repositioned so as to minimize ~~upward directed~~ <--  
16 ~~light, glare and light trespass.~~

17 ~~(d) Applicability. The requirements of subsection (a) shall~~  
18 ~~apply to all lighting on or in all newly constructed, renovated~~  
19 ~~and retrofitted State owned, State supported, State funded or~~  
20 ~~State related rights of way, roadways and sidewalks, spaces,~~  
21 ~~facilities, properties, nonhabitable structures, monuments and~~  
22 ~~flagpoles. GLARE, LIGHT TRESPASS AND UPWARD-DIRECTED LIGHT. <--~~

23 (D) APPLICABILITY.--

24 (1) THE REQUIREMENTS OF SUBSECTION (A) SHALL APPLY TO  
25 THE FOLLOWING:

26 (I) LIGHTING ON OR IN ALL NEWLY CONSTRUCTED,  
27 RENOVATED OR RETROFITTED STATE PROPERTY, WHETHER THAT  
28 PROPERTY IS OWNED OR LEASED BY THE COMMONWEALTH,  
29 INCLUDING RIGHTS-OF-WAY, ROADWAYS AND SIDEWALKS, SPACES,  
30 FACILITIES, PROPERTIES, NONHABITABLE STRUCTURES,

1 MONUMENTS AND FLAGPOLES.

2 (II) A STATE AGENCY OR A CONSTRUCTION PROJECT  
3 RECEIVING FUNDING FROM A STATE AGENCY AND UNDERTAKEN BY A  
4 STATE-RELATED INSTITUTION OR STATE-AIDED ENTITY.

5 (2) WHILE IN THE PROCESS OF SECURING STEADY, REGULAR  
6 ACCESS TO 2,700K LAMPS, A STATE AGENCY, STATE-RELATED  
7 INSTITUTION OR STATE-AIDED ENTITY MAY USE 3,000K LIGHTS AS A  
8 SUBSTITUTE FOR A PERIOD OF NO MORE THAN 12 MONTHS FOLLOWING  
9 THE EFFECTIVE DATE OF THIS PARAGRAPH.

10 (e) Exceptions.--The following instances shall be exempt  
11 from the requirements of subsection (a):

12 (1) If Federal laws, rules or regulations preempt State  
13 regulations.

14 (2) If fire, police, rescue or repair personnel need  
15 light for temporary emergencies or road repair work.

16 (3) If it has been determined that a reasonable safety  
17 and security interest exists at correctional and hospital  
18 facilities that cannot be addressed by another method without  
19 increasing the cost or reducing the effectiveness of the  
20 lighting.

21 (4) The lighting units on active sports or show grounds  
22 may use lamps greater than 2,700K, but only for the duration  
23 of a specific practice, match or event. Lighting units shall  
24 be positioned, angled or shielded so as to prevent direct  
25 glare and light trespass onto neighboring property or  
26 properties. The shielding must fully eliminate directly  
27 upward light emission.

28 (5) New flagpoles shall be lit by means of a downward-  
29 facing lamp. Existing flagpoles that are up-lit by partially  
30 shielded or unshielded lighting units shall use a lamp of

1 2,200K or lower to minimize the impact of glare, light  
2 trespass and sky glow.

3 Section 5. Resources.

4 ~~The Department of General Services shall make available a~~ <--  
5 ~~resource guide for the public to add compliant lighting to homes~~  
6 ~~and businesses. The guide shall include references to publicly~~  
7 ~~accessible Internet websites of advocacy groups approved by the~~  
8 ~~Commonwealth that provide education, guidance and specifications~~  
9 ~~relating to the implementation of responsible lighting~~  
10 ~~principles.~~

11 THE DEPARTMENT OF GENERAL SERVICES SHALL MAKE AVAILABLE A <--  
12 RESOURCE GUIDE FOR THE PUBLIC ENCOURAGING THE UTILIZATION OF  
13 RESPONSIBLE LIGHTING PRINCIPLES IN HOMES AND BUSINESSES. THE  
14 GUIDE SHALL BE PREPARED IN COLLABORATION WITH THE DEPARTMENT OF  
15 CONSERVATION AND NATURAL RESOURCES.

16 Section 6. Other laws.

17 This act shall not supersede any other Federal or State law  
18 controlling lighting, outdoor lighting units or signage, outdoor  
19 advertising, displays or devices.

20 Section 7. Effective date.

21 This act shall take effect in 60 days.