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THE GENERAL ASSEMBLY OF PENNSYLVANIA

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HOUSE BILL

No. 1803 Session of  
2023

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

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REFERRED TO COMMITTEE ON ENVIRONMENTAL RESOURCES AND ENERGY,  
OCTOBER 31, 2023

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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 "Correlated color temperature" or "CCT." The CCT replicates  
6 the Kelvin temperature spectrum of a metal object when heated.  
7 The CCT is the color of the light perceived by the eye, with  
8 "warmer" colors toward the red end of the spectrum and "cooler"  
9 colors toward the blue end of the spectrum.

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

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

19 "Lamp." The component of a lighting unit that produces  
20 light.

21 "Light pollution." The scattering of artificial light into  
22 the nighttime sky, caused by excessive or improperly positioned  
23 artificial outdoor lighting, resulting in sky glow, light  
24 trespass and glare.

25 "Light trespass." Light emitted by a lighting unit that  
26 shines beyond the boundaries of the property on which the  
27 lighting unit is located.

28 "Lighting unit." A complete artificial illuminating device,  
29 installed or portable, including a lamp, together with the parts  
30 designed to distribute the light, such as a reflector or

1 refractor, parts to position and protect the lamps and parts to  
2 connect the lamps to the power supply.

3 "Lumen." A specific standard unit of measurement of luminous  
4 flux.

5 "Outdoor lighting units." Outdoor artificial illuminating  
6 devices, installed or portable, used for flood lighting, roadway  
7 and area lighting, general illumination or advertisement.

8 "Partially shielded lighting unit." A lighting unit that  
9 projects or directs its light parallel to or above the  
10 horizontal plane. The light from a lighting unit may be emitted  
11 either directly from the lamp or indirectly by reflection or  
12 refraction from any part of the lighting unit producing  
13 significant light pollution.

14 "Permanent outdoor lighting unit." Any lighting unit or  
15 system of lighting units that is outdoors and that is used for  
16 seven days or longer.

17 "Reflective roadway markings." Lines and markers with  
18 reflective properties to aid with vehicular and pedestrian  
19 safety.

20 "Reflective signage." Roadway and informational signage that  
21 has reflective properties to aid with vehicular and pedestrian  
22 safety.

23 "Responsible lighting principles." The use of advanced  
24 lighting technologies, including shielding, an upper limit on  
25 color temperature (2,700K), on-off controls, dimming controls,  
26 motion sensors and RGB or red, green and blue diodes. All  
27 applicable lighting shall utilize best available advanced  
28 lighting technologies.

29 "Roadway lighting." Permanent outdoor lighting units that  
30 are specifically intended to illuminate roadways for vehicular

1 traffic.

2 "Sky glow." Brightening of the night sky over inefficiently  
3 and improperly lit areas.

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

7 Section 4. Outdoor lighting control.

8 (a) Restrictions on outdoor lighting units.--State money may  
9 not be used to install, replace, maintain or operate permanent  
10 outdoor lighting units unless the following conditions are met:

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

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

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

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

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

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

27 (4) The lighting units shall have a correlated color  
28 temperature less than or equal to 2,700K. In residential  
29 areas, CCT should not exceed 2,200K. In dark sky locations or  
30 environmentally sensitive areas such as State parks, CCT

1 should be no more than 2,200K. No lighting units shall exceed  
2 2,700K.

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

11 (6) The lighting units in locations that are not in use  
12 after 11 p.m., including in environmentally sensitive areas  
13 such as State parks, shall use timers set to turn off after  
14 11 p.m. or equipped with motion sensors.

15 (7) Light trespass from the interior of a building or  
16 structure shall be minimized by lowering window shades after  
17 sunset or by turning off lighting when not in use.

18 (8) At the time of installation or replacement, the  
19 appropriate authority shall determine whether reflective  
20 roadway markings or reflective signage are appropriate and  
21 safe for the situation in lieu of outdoor lighting.

22 Reflectorized roadway markings, lines, warning signs,  
23 informational signs or other passive means shall be utilized  
24 for roadway lighting except at intersections of two or more  
25 streets or highways unless it is determined that adequate  
26 lighting cannot be achieved by reflective means.

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

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

1 replaced until the end of the life of the lamp but shall  
2 comply with subsection (c).

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

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

12 (i) All unshielded or partially shielded lighting  
13 units shall be:

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

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

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

29 (c) Repositioning of current lighting units.--Wherever  
30 possible, existing partially shielded and unshielded lighting

1 units shall be repositioned so as to minimize upward-directed  
2 light, glare and light trespass.

3 (d) Applicability.--The requirements of subsection (a) shall  
4 apply to all lighting on or in all newly constructed, renovated  
5 and retrofitted State-owned, State-supported, State-funded or  
6 State-related rights-of-way, roadways and sidewalks, spaces,  
7 facilities, properties, nonhabitable structures, monuments and  
8 flagpoles.

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

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

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

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

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

27 (5) New flagpoles shall be lit by means of a downward-  
28 facing lamp. Existing flagpoles that are up-lit by partially  
29 shielded or unshielded lighting units shall use a lamp of  
30 2,200K or lower to minimize the impact of glare, light

1 trespass and sky glow.

2 Section 5. Resources.

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

10 Section 6. Other laws.

11 This act shall not supersede any other Federal or State law  
12 controlling lighting, outdoor lighting units or signage, outdoor  
13 advertising, displays or devices.

14 Section 7. Effective date.

15 This act shall take effect in 60 days.