COUNCIL OF THE COUNTY OF MAUI

WATER AND INFRASTRUCTURE COMMITTEE

50ptem5er 20, 2020	Report No.	
September 26, 2025	Committee	

Honorable Chair and Members of the County Council County of Maui Wailuku, Maui, Hawaii

Chair and Members:

Your Water and Infrastructure Committee, having met on September 2, 2025, makes reference to Bill 109 (2025), entitled "A BILL FOR AN ORDINANCE AMENDING CHAPTER 20.35, MAUI COUNTY CODE, RELATING TO PROTECTING SEABIRDS FROM OUTDOOR LIGHTING."

Bill 109's purpose is to update requirements for outdoor-lighting fixtures to minimize light pollution and support public safety, security, crime prevention, and quality of life for Maui County's residents.

Your Committee notes that minimizing emissions of outdoor artificial light sources are beneficial to the environment and wildlife, particularly for native Hawaiian seabirds and sea turtles.

Your Committee notes that Chapter 20.35, Maui County Code, was established by Ordinance 3430 (2007) to set standards limiting degradation of the night visual environment by regulating the type and use of outdoor-lighting fixtures. Ordinance 5434 (2022) later amended the chapter by providing additional parameters for the use of outdoor-lighting fixtures, excluding neon, effective July 1, 2023.

Your Committee further notes that in recent years outdoor-lightingfixture use has been constrained by litigation and a lack of clear technical guidance.

By correspondence dated August 26, 2025, the Chair of your Committee transmitted a proposed CD1 version of Bill 109 (2025), entitled "A BILL FOR AN ORDINANCE AMENDING CHAPTER 20.35, MAUI COUNTY CODE, ON OUTDOOR LIGHTING."

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The proposed CD1 version incorporates nonsubstantive and technical revisions for clarity, consistency, and style.

The Director of Public Works noted the urgency of installing outdoorlighting fixtures already purchased by the County by the compliance deadline of October 21, 2025, three years from the date Ordinance 5434 was enacted.

He further noted that the lighting fixtures direct light downward to reduce glare and sky glow, are energy-efficient, and equipped with dimming capabilities that can be remotely managed in coordination with Hawaiian Electric Company. These features would allow targeted mitigation during the seabird fledgling season and in environmentally-sensitive areas.

The Deputy Chief of Police noted the importance of adequate outdoor-lighting for crime prevention and traffic safety. The Department reported that 75 to 80 percent of property crimes occur at night and improved lighting enhances visibility for law enforcement and the public.

Your Committee discussed the scientific and legal complexities surrounding blue-light emissions, color rendering, and seabird behavior. There are differing views on the adequacy of available lighting technologies and the relative contribution of streetlights to overall skyglow.

Your Committee discussed concerns that exempting outdoor-lighting fixtures from the two-percent blue-light content restriction would undermine the County's commitment to protect endangered seabirds. The restriction limits the amount of blue-light emitted since seabirds are particularly sensitive to blue wavelengths and can disorient fledglings during nighttime navigation.

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Your Committee also discussed the County's complaint-driven enforcement model and the need for stronger enforcement of existing shielding requirements, particularly along the shoreline.

Your Committee expressed interest in improving public education and reporting mechanisms for lighting violations.

Your Committee finds that Bill 109, CD1 (2025) would help to reduce energy costs, meet compliance deadlines, and implement seasonal protections for wildlife, while maintaining key safeguards.

Your Committee voted 8-1 to recommend passage of Bill 109, CD1 (2025), on first reading. Committee Chair Cook, Vice-Chair Sugimura, and members Johnson, Kama, Lee, Paltin, Sinenci, and U'u-Hodgins voted "aye." Committee member Rawlins-Fernandez voted "no."

Your Water and Infrastructure Committee RECOMMENDS that Bill 109, CD1 (2025), attached, entitled "A BILL FOR AN ORDINANCE AMENDING CHAPTER 20.35, MAUI COUNTY CODE, ON OUTDOOR LIGHTING," be PASSED ON FIRST READING and be ORDERED TO PRINT.

This report is submitted in accordance with Rule 3 of the Rules of the Council.

TOM COOK, Chair

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ORDINANCE NO. _____

BILL NO. **109, CD1** (2025)

A BILL FOR AN ORDINANCE AMENDING CHAPTER 20.35, MAUI COUNTY CODE, ON OUTDOOR LIGHTING

BE IT ORDAINED BY THE PEOPLE OF THE COUNTY OF MAUI:

SECTION 1. This Ordinance recognizes that the growing urban, suburban, commercial, industrial, and hotel and resort uses in Maui County are increasing the proliferation of outdoor lighting. The Council finds that minimizing outdoor artificial light sources' overall emissions will benefit Maui County's people, environment, and wildlife.

Accordingly, this Ordinance's purpose is to minimize streetlight emissions using practical and appropriate approaches that promote public safety, security, crime prevention, and quality of life for Maui County's residents, visitors, pedestrians, and motorists, and are protective of wildlife.

SECTION 2. Section 20.35.030, Maui County Code, is amended to read as follows:

- **"20.35.030. Administration.** This chapter [shall] will be administered and enforced by the department of public works [and environmental management]."
- SECTION 3. Section 20.35.040, Maui County Code, is amended to read as follows:
 - **"20.35.040. Definitions.** For purposes of this chapter, unless it is plainly evident from the context that a different meaning

is intended, certain words and phrases [used in this chapter] are defined as follows:

["Augmented monochromatic lighting" means a lighting system designed in conformance with lighting standards adopted by the Illuminating Engineering Society of North America, such that at least 90 percent of the total lumens emitted are produced by low pressure sodium lamps, and no more than 10 percent of the total lumens emitted are produced from lamps that emit light across a broad portion of the light spectrum.

"Class I lighting" means outdoor lighting used for outdoor sales areas, service stations, outdoor eating areas, outdoor assembly or repair areas, and recreational facilities.

"Class II lighting" means all outdoor lighting used for, but not limited to, illumination for equipment yards, parking lots, outdoor security, and other similar applications in which general illumination of the ground is the primary concern.

"Class III lighting" means any outdoor lighting used for decorative effects, including but not limited to, waterfall and pond lighting, landscaping, and walkways.

"Class IV lighting" means all lighting used for the illumination of roadways.

"Committee" means the Maui County outdoor lighting standards committee.]

"Blue light content" means the ratio of the amount of energy emitted by the outdoor light fixture between 400 and 500 nanometers divided by the amount of energy between 400 and 700 nanometers.

"Color rendering index" means a measurement of how well a light source accurately renders colors and is an assessment of how the light source shows object colors naturally when compared to a familiar basis of reference, such as incandescent light or daylight.

"Correlated color temperature" or "CCT" means a measurement of the color properties of light emitted by lamps, being equal to the temperature, expressed in Kelvins. CCT values are typically provided on light manufacturer packing, specifications, and data sheets.

"Director" means the director of public works [and environmental management of the County of Maui or the director's duly authorized representative].

"Fully shielded" means the outdoor lighting fixture is constructed so [that] all [of] the light emitted by the fixture is projected downward below the horizontal plane of the <u>fixture's</u> lowest point [of the fixture].

"Glare" means a visual discomfort or impairment caused by a bright source of light in a direction near one's line of sight.

["High pressure sodium" or "HPS" means a bulb that is filled with high pressure sodium vapor and emits light across a broad portion of the light spectrum.]

<u>"Kelvin" means the measure of the correlated color temperature of a light source.</u>

"Light source" means the initial source of the light, <u>such as</u> a bare bulb.

"Light spectrum" means the band of electromagnetic radiation (light) that is visible to the human eye.

["Lighting system" means a project's outdoor lighting plan for class II uses.

"Low pressure sodium" or "LPS" means a bulb that is filled with low pressure sodium vapor and emits light across a narrow portion of the light spectrum.]

"Lumen" means the unit of light emission from a light source.

"Mercury vapor" means any lamp containing mercury in a fused quartz tube [which] that emits light across a broad portion of the light spectrum.

["Metal halide" means a lamp containing metal halide additives in addition to mercury vapor and emits light across a broad portion of the light spectrum.]

"Outdoor lighting fixture" means any artificial outdoor lighting device, permanently installed or portable, that is intended to provide illumination for visibility or decorative effects.

["Partially shielded" means the outdoor lighting fixture is constructed so that at least 90 percent of the light emitted by the fixture is projected below the horizontal plane of the lowest point of the fixture.

"Security lighting" means any outdoor artificial lighting device that is intended to discourage or prevent crime.]

"Traffic color compliant" means the 1931 CIE x y color coordinates of the outdoor light fixture that is outside of any of the traffic signal color boxes as defined by ITE ST-052 500/AGS-PM/1105."

SECTION 4. Section 20.35.060, Maui County Code, is amended to read as follows:

- **"20.35.060 General requirements.** A. All [new] outdoor lighting fixtures must [comply with the requirements of section 20.35.090.] be fully shielded, except that all outdoor lighting fixtures installed after January 1, 2026, must comply with this chapter.
- B. [All outdoor lighting fixtures that were legally installed before January 25, 2007, must comply with section 20.35.090.] All outdoor lighting fixtures used for the illumination of highways and roadways must have a color rendering index no less than 70 percent and a correlated color temperature not greater than 3,000 Kelvin.
- C. Mercury vapor must not be used for new outdoor lighting fixtures or for the replacement of existing outdoor lighting fixtures. [All existing mercury vapor outdoor lighting fixtures must be removed by January 25, 2017.]
- D. All outdoor lighting fixtures, except for neon, must limit short wavelength content to no more than [2] two percent of blue light content. ["Blue light content" means the ratio of the amount of energy emitted by the outdoor light fixture between four hundred and five hundred nanometers divided by the amount of energy between four hundred and seven hundred nanometers.]
 - E. All outdoor lighting fixtures, except for neon, must [be]:
 - 1. [Down directed with no light shining above the horizontal. Wall-mounted fixtures must have opaque shields to direct all light down, and, if the light hits a wall surface, the surface must be non-reflective (e.g., not a polished or glass surface; painted surfaces must have matte paint).] Not be aimed against a structure to cause glare visible from any abutting property.

- 2. **[**Fully shielded, including shielding that ensures no light shines over the ocean.**]** Not be aimed upward towards the sky or directed at the ocean or any abutting property.
- 3. [The director of public works must adopt administrative rules that sets height restrictions for outdoor lighting within one year of the effective date of the ordinance establishing this section.] Have a height, as determined by the director, that is minimized to the fullest extent possible.
- 4. [Traffic color compliant. "Traffic color compliant" means the 1931 CIE x y color coordinates of the outdoor light fixture is outside of any of the traffic signal color boxes as defined by ITE ST-052 500/AGS-PM/1105.] Be traffic color compliant.
- F. The director **[**of public works must establish and maintain a list of light fixtures that comply with **]** may adopt rules to implement this chapter."

SECTION 5. Section 20.35.070, Maui County Code, is amended to read as follows:

"20.35.070 Exemptions. A. The following <u>outdoor lighting</u> <u>fixtures</u> are exempt from [the provisions of] this chapter:

- 1. All outdoor lighting fixtures producing light directly by the combustion of fossil fuels, such as kerosene and gasoline.
- 2. Low wattage fixtures under 2.8 watts and string lights using bulbs less than [fifty] <u>50</u> lumens used for holiday decorations and cultural festivals, including Obon festivals, and fully shielded string lights [under 2.8 watts] using bulbs less than [fifty] <u>50</u> lumens.
- 3. Non-oceanfront private single-family, duplex, [triplex,] <u>triplex</u>, and [four-plex] <u>four-plex</u> residential incandescent light fixtures that are fully shielded or have a lumen output of less than [eight thousand one hundred] <u>8,100</u> lumens for each acre of property that is intended to be illuminated.
- <u>4.</u> Lighting for affordable housing projects that have already been approved by the council and for future affordable housing projects for only as long as there are no compliant lighting fixtures available at comparable cost to noncompliant lighting fixtures.
- [4.] <u>5.</u> Lighting for night sporting events and permitted special events on State department of education properties, private school properties, nonprofit organization properties, and County parks and facilities. Lighting for night sporting events and permitted special events on private property,

except for hotels and other transient accommodations, but not for private property in the sea level rise exposure area during the months of May to December.

- [5.] <u>6.</u> Aviation obstruction lighting used to enhance the visibility of structures [of] <u>or</u> fixed obstacles that may conflict with the safe navigation of aircraft.
- [6.] <u>7.</u> Temporary, portable lighting used [for emergency services including public safety, road construction or emergency repair, and road crossing.] <u>by emergency services personnel.</u>
- <u>8. Temporary lighting used for the repair or construction of roads, utilities, and other public infrastructure.</u>
- B. Lighting used for the illumination of highways and roadways are exempt from subsection 20.35.060(D).
- [B.] <u>C.</u> All outdoor lighting fixtures legally installed or used as portable lighting [prior to the enactment of the ordinance establishing subsections 20.30.060(D) and (E)] <u>before October 21, 2022</u>, are exempt from [the provisions of those] subsections <u>20.35.060(D)</u> and (E) [for three years from the date of enactment of the ordinance;] <u>until October 21, 2025</u>; except that temporary, portable lighting used for County or state construction projects remain exempt from this chapter [beyond the three-year period] if, and for only as long as, there are no compliant lighting fixtures available that meet industry standards for construction projects."

SECTION 6. Section 20.35.080, Maui County Code, is amended to read as follows:

"20.35.080 Submission of plans. A. All outdoor lighting fixtures must conform to this chapter and chapter [16.18(B),] 16.18B, as applicable, and to any permit and inspection requirements of this chapter and chapter [16.18(B).] 16.18B. An applicant for any electrical permit required for the installation of an outdoor lighting fixture, except residential outdoor lighting fixtures, must submit to the director information sufficient to show that the proposed installation will comply with this chapter. The submission must include the following:

- 1. The location of the property where the outdoor lighting fixtures will be installed.
- 2. Plans describing the locations of the outdoor lighting fixtures on the property.
- 3. A description of the outdoor lighting fixtures, including manufacturer's catalog cuts and drawings.

B. The information required by subsection A must be sufficiently complete to enable the director to readily determine [whether] if the proposed installation complies with this chapter. When plans and specifications are required for an electrical permit by chapter [16.18(B),] 16.18B, the electrical engineer certifying the plans and specifications must also certify in writing that all proposed outdoor lighting fixtures comply with this chapter."

SECTION 7. Section 20.35.090, Maui County Code, is repealed.

["20.35.090 Shielding requirements and usage restrictions.Outdoor lighting fixtures must conform to the following shielding requirements and usage restrictions:

Lamp Type	Shielding Requirement	Usage Restrictions
Class I		
Metal halide	Fully shielded	Off from 11:00 p.m. to sunrise*
All others	Fully shielded	None
Class II		
All lights	Fully shielded	None
Class III		
Neon	None	Off from 11:00 p.m. to sunrise*
All others	Fully shielded	None
Others	Fully shielded	Off from 11:00 p.m. to sunrise*
Class IV		
All lights	Fully shielded	None

^{*}These lights may be used between 11:00 p.m. and sunrise if business or recreational activities are taking place, but must be turned off no later than one hour after conclusion of activities."]

SECTION 8. Material to be repealed is bracketed. New material is underscored. In printing this bill, the County Clerk need not include the brackets, the bracketed material, or the underscoring.

SECTION 9. This Ordinance takes effect on approval.

APPROVED AS TO FORM AND LEGALITY:

Department of the Corporation Counsel County of Maui

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INTRODUCED BY:

MUKI LEI KLOUGIMURA