

September 27, 2023

**BY EMAIL**

John Donaldson, Acting Chief Counsel  
National Highway Traffic Safety Administration  
Interpretations.NHTSA@dot.gov

**Re: LED Vehicle Headlights – Request for Interpretation**

Dear John Donaldson,

This letter is a formal Request for Interpretation for whether an automaker is required to comply with the Administrative Procedure Act in regard to vehicle lighting.

The Administrative Procedure Act of 1946 (5 U.S.C. 551-559) governs the procedures of Administrative Law. It is our understanding that automakers are required to comply with these procedures when they wish to create, modify, or repeal an administrative rule. The NHTSA rule for Lamps, Reflective Devices, and Associated Equipment is Section 108 of the NHTSA Federal Motor Vehicle Safety Standards. The automakers have previously complied with the Administrative Procedure Act in regard to FMVSS-108 and have petitioned NHTSA for authorization to use different headlamp technology. For example:

1. **Rectangular Headlights** - Prior to 1976, NHTSA disallowed the use of rectangular headlight systems.<sup>1</sup> The automakers petitioned NHTSA to be authorized to use rectangular headlights. The petition was approved, and rectangular headlamps were authorized as of September 1, 1976.
2. **Replaceable Bulbs** – Ford petitioned NHTSA for authorization to use replaceable bulbs.<sup>2</sup> This petition was approved in 1983.
3. **Adaptive Driving Beam** – Toyota petitioned NHTSA for authorization to use ADB headlights. This petition was approved and published in the Federal Register on February 22, 2022.<sup>3</sup>
4. **Light Emitting Diode Headlights** – We can find no indication that any automaker has petitioned NHTSA for approval to use of LED headlights.

In addition to the absence of any petition to NHTSA for approval to use LED headlights, we are not aware of any automaker that has petitioned the Food and Drug Administration for authorization to use LED headlights. The FDA is the sole federal agency with the authorization and mandate from Congress, via 21 U.S.C. 360hh – 360ss, to regulate electromagnetic radiation from electronic products, which includes LED headlights. The FDA has not approved the use of any LED headlights and has not published the required

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<sup>1</sup> <https://www.govinfo.gov/content/pkg/FR-1975-11-24/pdf/FR-1975-11-24.pdf>

<sup>2</sup> <https://deepblue.lib.umich.edu/bitstream/handle/2027.42/49367/UMTRI-98-21.pdf>

<sup>3</sup> <https://www.federalregister.gov/documents/2022/02/22/2022-02451/federal-motor-vehicle-safety-standards-lamps-reflective-devices-and-associated-equipment-adaptive>

performance standards for LED headlights to ensure the comfort, health, and safety of the public. As per 21 U.S.C. 360ii, the FDA is required to liaise with NHTSA in the development of performance standards for LED headlights. This has not occurred.

The physics characteristics of the light emitted by LEDs are drastically different than the physics characteristics of light from a tungsten filament. The spatial, spectral, and temporal properties are all different and all require restrictions from the FDA and regulations from NHTSA to prevent glare and protect the eyes and nervous system, as well as to ensure that LED headlights do not create discriminatory barriers for those who are neurologically intolerant of LED visible radiation. Characteristics of LED headlights that must be regulated include peak luminance, spatial distribution, spectral power distribution, square wave flicker, and pulse width modulation.

In previous petitions to NHTSA for changes to FMVSS-108, NHTSA has approved the petitions in the name of safety. There is a significant amount of evidence that shows that LED headlights are less safe than tungsten filament headlights. For example, nearly 50,000 individuals have signed a petition to NHTSA titled *Ban Blinding Headlights and Save Lives!*<sup>4</sup> This petition has thousands of comments about LED headlights being dangerous. For example, *"I swear people don't care if they could end up killing someone with those lights...."* and *"I am unable to drive at night because of these glaring, blinding lights. This much light is not necessary for any driver!"*

The Reddit subgroup */r/fuckyourheadlights* has over 20,000 members who regularly post evidence of how dangerous the LED headlights are. Figure 1 shows an example of the blue/white glare from LED headlights reflected in a rear review mirror.



Figure 1 - LED Headlights in Mirror

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<sup>4</sup> <https://www.change.org/p/u-s-dot-ban-blinding-headlights-and-save-lives>

Figure 2 shows a screen grab from a video post shows a driver unable to see a trash can in the road due to the glare from LED headlights. (<https://tinyurl.com/yw64fjyh>)



*Figure 2 - Crash Into Trash Can*

Given the automakers' and NHTSA's past compliance with the Administrative Procedure Act, and given the hazards and dangers of LED headlights, and given the lack of the required performance standards from the FDA, we request an opinion from your office as to whether an automaker is required to comply with 5 U.S.C. 551-559 and petition NHTSA for authorization to use LED headlights on their vehicles.

Sincerely,

/s/ Mark Baker

President

Soft Lights Foundation

[mbaker@softlights.org](mailto:mbaker@softlights.org)

cc:

Representative Mike Thompson

Representative Mark Pocan

Senator Maria Cantwell