

Background and motivation

In 1999, New Mexico adopted the Night Sky Protection Act to “to regulate outdoor night lighting fixtures to preserve and enhance the state; s dark sky while promoting safety, conserving energy and preserving the environment.” The NSPA seeks these goals principally by requiring the shielding of lighting fixtures to direct their output downward.

However, the Act is not curtailing the growth of light pollution. On top of this, the value of protecting the night has become increasingly clear – for human health, for science and culture, for plants and animals, for tourism, and for astrobusiness.

To become effective, the Act must reflect current technology (especially the development and widespread adoption of LEDs) and incorporate the current best lighting principles and practices. These principles and practices protect the night while providing the illumination necessary for nighttime safety and security, for pedestrian and vehicular travel and, for work and play.

Proposed modifications to NM Night Sky Protection Act

SB34 proposes to modify the existing Night Sky Protection Act in a small, but impactful, way: **we will require all new lighting to be shielded to the current standard recommended by DarkSky International** (at least 95% of the total light from a luminaire to be directed below an angle of 10 degrees from a horizontal plane, see diagram below), with a few common sense exceptions:

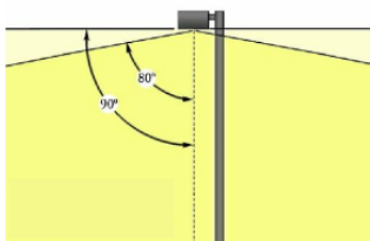
- we establish a partial exception for brighter lights near the ground that are illuminating upward: these must be directed at something and not at the sky
- we establish an exception for fainter lights near the ground
- we establish an exception for strings of small lights and temporary holiday lighting.
- we maintain an exemption for highway lighting signs
- we maintain an exemption for digital electronic billboards
- we add a total exemption for temporary lighting associated with film or television production, construction, or emergency services.

In addition, SB34 removes exemptions:

- for new noncompliant lights that are turned off after 11:00.
- for new traditional advertising signs
- for new lights at farms, ranches, dairies, feedlots or industrial, mining or oil and gas facilities, but delay the implementation of the shielding requirement for these facilities until 2027, to allow implementations currently in progress to proceed without modification.

These exemptions are removed because responsible lighting can still ensure both safety and effectiveness.

There are no requirements for modification of existing lights or their operation until they are replaced.



This diagram demonstrates the small revision to the shielding definition: light from fixtures will be required to fall in the darker yellow zone with only a minimal contribution in the lighter yellow zone. This prevents light from travelling large distances horizontally where it can scatter up into the sky. It also provides for greater safety by minimizing glare and saves energy and money.