

# A Survey of State Lighting Codes

Robert G. Davis and Steven M. Meyers  
Lighting Research Center, Rensselaer Polytechnic Institute

## Introduction

Regulations for lighting energy use are usually included as part of a state building code. Traditionally, state regulators adopted lighting regulations from a model energy code or from a consensus standard. Recently, however, a few states have developed unique codes, which in some cases approach lighting regulation from a different perspective than the model codes or standards. The survey described in this paper was conducted to determine if other states intended to utilize these unique state codes in their future regulations, or if they would continue to use the model codes and consensus standards.

## Methodology

During the summer of 1991, a telephone survey was conducted. In this survey, a contact person in each state was asked to summarize the current status of their state's lighting code, and to describe any pending revisions to the state code. States which had indicated potential revisions were contacted again in February of 1992 to determine if the planned revisions had been implemented. The preliminary results were issued in a draft report to the project sponsors in October of 1991, and a revised report was published in June 1992 (Davis and Meyers 1992).

## Results

### Model Codes

Most states currently use a model code or a consensus standard for regulating lighting at either the state or the local level. The model code most commonly used is the *Model Energy Code* (1989), and the consensus standard most commonly used is *ASHRAE/IES Standard 90* (ASHRAE 1989). Both of these documents present a methodology for determining a maximum watts-per-square foot (unit power density) for lighting systems. Thus, the unit power density method, also referred to as the "performance" method, is by far the most common form of lighting regulation at the state level.

### Unique State Codes

Although most states utilize either model codes or consensus standards in the lighting regulation portions of their energy code, a few have developed unique approaches to lighting regulation. Two are the most notable: California and New York. California's Title 24 (1991) uses a power density approach for lighting, providing three alternative paths for the power density limit determination. Furthermore, the lighting power budget determinations in one compliance path are based on the recommended illuminances (light levels) for various spaces. Thus, while still using the power density approach, this code differs from the model codes in some important areas.

The *New York State Energy Conservation Construction Code* (1991) includes both power density requirements and, significantly, component efficiency standards. This code establishes minimum efficacies for fluorescent lamps and minimum efficiencies for certain categories of luminaires. By doing so, New York became the first state to regulate lighting by component standards for lamps and luminaires.

### No Lighting Regulation

The survey shows three states which currently do not regulate lighting energy use. These states are identified in Figure 1.

### Regulating Authority

In addition to documenting the nature of the lighting regulation being used in each state, the survey also identified the regulating authority in each state. In thirty-six states, lighting is regulated by a state agency for all projects; four states have state-wide regulations which apply only to state-owned projects; seven other states have local regulations for lighting but no regulation at the state level. The nature of the regulating authority for each state is depicted in Figure 1.

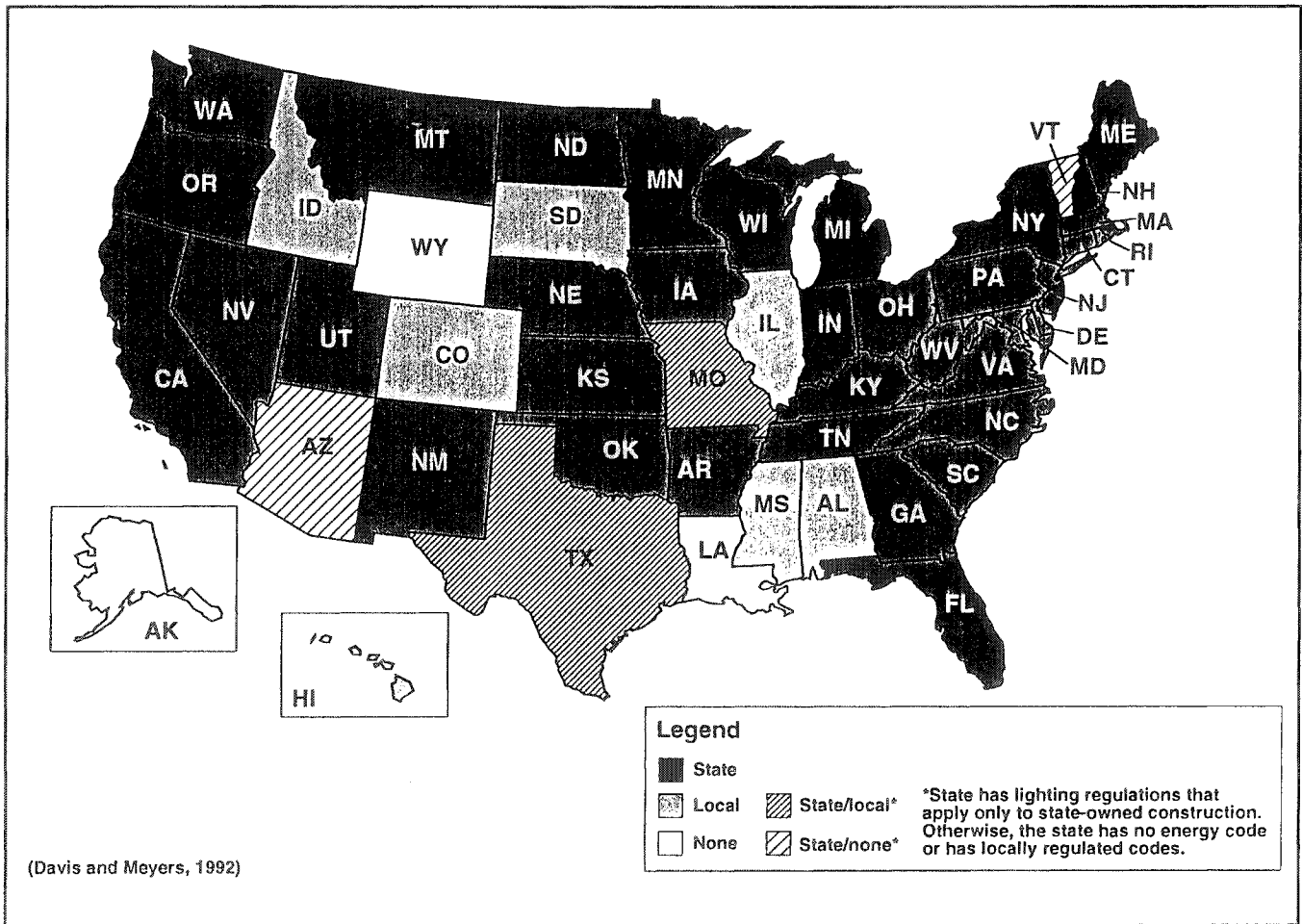


Figure 1. Lighting Regulating Authority

Another important outcome of the project was identifying the contact office in each state for information about lighting regulation. Addresses and phone numbers for each state are provided in the final report (Davis and Meyers, 1992).

## Summary

The survey revealed that, although a very few states have developed their own approaches to lighting regulation, the majority of states continue to use either model codes or consensus standards as the basis for lighting energy codes. While aware of the different approaches being taken in states such as California and New York, other state regulators do not seem to be developing plans to adopt codes similar to those used in these two states.

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