NEC ADOPTION BY STATE: A State-by-State Guide to Compliance

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Contrary to popular belief, the National Electrical Code is not, in itself, a legally enforceable document. The National Fire Protection Association, which publishes the NEC in a document coded NFPA 70, is an international nonprofit organization; it has no authority to create laws or legally enforceable regulations. The code changes every three years (we'll address some of the recent changes in this article), which may explain why the United States has no federal mandate for following the NEC.

However, under state law, most electricians must adhere to some version of the National Electric Code. States and cities usually pass laws requiring builders to complete electrical installations according to NEC standards. That leads to another question: Which version of the NEC holds sway in your area?

As stated above, the authors of the NEC issue a new edition every three years, and states, counties, and municipalities sometimes move slowly to adopt those updates. The reason: Some changes might impose undue burdens on contractors without significantly improving safety, and many municipalities prefer to assess each new edition rather than issuing a simple mandate.

Unfortunately, this can create some confusion. The United States has a complex patchwork of NEC adoption. Some states legally enforce versions as old as the 2008 edition, while others are already requiring electricians to follow the 2020 NEC. A handful of states don't require adherence to any version of the NEC at all.

So how does an electrician know which NEC to consult during a new installation? The answer depends on the state you're in. Sometimes it depends on the county or city. In fact, once you start digging into the question of which states require electrical systems to comply with the NEC, things get rather confusing.

NEC Codes are "adopted in all 50 States," but regulations vary.

The NFPA website seems like a great place to start the hunt into current NEC adoption. Visit the official page for the National Electric Code on the NFPA website, and you'll get a clear answer on which states use the standard in their laws.

"Adopted in all 50 states, the NEC is the benchmark for safe electrical design, installation, and inspection to protect people and property from electrical hazards," the site says.

That's true on the surface, but slightly misleading: The NEC has been adopted *within* all 50 states, but it hasn't been adopted *by* all 50 states. The statement leaves out the complex reality of local building codes, which may or may not line up with state actions. Not every state has written compliance with any version of the NEC into their Codes of Regulations.

If you're looking for the legally enforceable edition of the NEC to consult, the safest course of action is to ask your local building department. With that said, studying state adoption of the NEC is a necessary first step for any electrician who plans to offer services in a new area.

This page contains the resources that electricians need to start researching. Remember, NEC adoption can change significantly from month to month, so use this resource as a starting point.

NEC Adoption in State Codes of Regulations

As of this writing, in April 2021, two states have adopted the 2008 edition of the NEC into their state Codes of Regulations:

Kansas and Indiana.

One state has adopted the 2011 edition of the NEC:

Nevada. The District of Columbia has also adopted the 2011 NEC.

Eight states have adopted the 2014 edition of the NEC:

Alabama, Delaware, Louisiana, Maryland, Montana, Pennsylvania, Oklahoma, and Virginia.

26 states have adopted the 2017 edition of the NEC:

Alaska, Arkansas, California, Connecticut, Florida, Hawaii, Idaho, Iowa, Kentucky, Maine, Michigan, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Rhode Island, South Carolina, Tennessee, Utah, Vermont, West Virginia, and Wisconsin.

These states have adopted the 2020 edition of the NEC:
Colorado, Georgia, Massachusetts, Minnesota, North Dakota, South Dakota, Texas, Washington, and Wyoming.

Finally, these are the states that do not have statewide adoption of any version of the NEC. Note that counties and municipalities in these states may require adherence to some version of the NEC; consult local building departments for more information.

Arizona, Illinois, Missouri, Mississippi

Many states pass NEC code requirements with amendments.

The purpose of those amendments can vary, but typically, amended NEC codes give added weight to statewide priorities. For example, the California Code of Regulations Title 24, Part 3 sets out clear guidance and requirements for new buildings while addressing sources of renewable energy.

Amendments may require surge protectors, set spacing for receptacles near water, mandate arc-fault circuit interrupters (AFCIs), or require tamper-resistant receptacles in certain types of homes. Some of these amendments could create an undue burden when applied at the national level, but are reasonable and appropriate for municipal-specific or statewide building codes.

The NFPA publishes special versions of the NEC for each state, which include detailed information on amendments. The Association also publishes municipality-specific guide documents for larger cities (the Chicago edition, for example, uses shaded text to clearly show readers where the Chicago code differs from the 2017 NEC).

How National Electric Code Versions Change from Year to Year

The NFPA has two arguments why every state should adopt the latest edition of the NEC with each new issue. First, it points out that as electrical products and requirements change, safety standards have to keep up. The most up-to-date NEC is also the safest, according to the NFPA.

The second argument is primarily an economic one. Stakeholders will save money on their electrical systems when the entire nation follows the same rules. The NFPA uses the phrase “economic efficiency through uniformity" to promote this concept.

In other words, when every city has its own electrical codes, electricians have to spend time (and money) researching unfamiliar standards every time they leave the city limits. Taxpayer resources are expended on lawmakers hiring experts or writing their own codes. Manufacturers can’t be sure that their components are up-to-code nationwide, limiting growth.

A single nationwide electrical code would be more efficient. There are also less-obvious economic benefits of universal adoption of up-to-date NEC editions, per the NFPA. The latest version of the National Electric Code allows smaller, more energy-efficient components; it will also provide safety information on newer, greener technologies, like on-site solar panels.

These innovations will dramatically reduce energy costs for consumers, leaving the NEC a potent gateway to virtually unlimited savings.

Of course, safety is at the core of the NFPA's mission. Older editions of the code may be insufficient for providing consistent protection for property owners.

Recent Changes to the National Electric Code

In making their claim about the advantages of newer NEC editions, the NFPA has a long history of safety innovations to point to. The Code was first published in 1897, and it's been adapting to the times ever since.

NEC innovations can almost certainly claim some of the credit for a dramatic reduction in fires and electrocutions over the years. Between 1980 and 2016 — years during which the NEC issued updates every third year — electrical fires in U.S. homes fell from 75,000 to just 45,300, with a low point of about 41,000 in 2012.

Past new editions of the NEC helped to end unsafe practices, from dangerous aluminum wiring to the narrow use of ground fault circuit interrupters. The 2008 NEC code introduced the necessity of tamper-resistant receptacles, which — given universal adoption — could help to prevent electric shocks to curious children.

In 2020, the NFPA updated the Code significantly. Some of the most significant changes include:

- All new one- or two-family dwelling units require outdoor emergency disconnects
- Lines feeding dwelling units require surge protection
- 125-250V receptacles within six feet of sinks require GFCI protection
- Addition of the 2000-volt Type P cable, commonly used in heavy-duty industrial applications.

Other changes may simplify code by combining articles, improving language, or setting different methods for load calculation. Electrical technology continues to improve, and each new edition of the NEC includes new articles to account for these improvements.

We published the first version of this article in 2019, and since then, state adoption has changed significantly. Electricians should know that most states eventually upgrade their building codes to the latest — or, at least, more recent — versions of the NEC.

Of course, adoption of the National Electric Code can vary from state to state (and in some cases, from county to county). With that said, the trend seems to be toward greater adoption of new NEC editions, so it may only be a matter of time before you can stop checking in with the local building department before you start an installation that's safe, efficient, and compliant with the latest version of the National Electrical Code.

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