

UNIFORM BUILDING CODE COMMISSION
MEETING

August 14, 2024 9:00 AM

meet.google.com/xsz-hwgb-suc

Phone Numbers

(US)+1 254-881-9257

PIN: 653 220 525#

Anchor Location

Room 474

Heber M Wells Building

160 E 300 S

1. Roll call
2. Elect a chairman and vice-chair
3. Approve minutes from the December 20, 2023
4. Review proposed amendments to 2023 NEC
 - Article 210.8(A)
 - Article 210.8(D)
 - Article 210.52©(2)
 - Article 220.5(c)
 - Article 314.27(A)(2)
 - Article 406.4(D)(4)
5. Review recommendation from Electrical Advisory Committee for the 2023 NEC along with proposed amendments
6. Approve 2023 NEC with current and proposed amendments for public hearing

Advisory Committee Minutes

Electrical Advisory Committee 9-14-23, 10-12-23, 10-26-23, 11-9-23, 1-11-24, 2-8-24, 4-11-24, 5-9-24, 6-13-24, 7-11-24 & 7-18-24

Info Items

Spreadsheet for 2023 NEC

Next meeting date: September 11, 2024

Please call Sharon at 530-6163 if you do not plan on attending the meeting.



In compliance with the Americans with Disabilities Act, individuals needing special accommodations (including auxiliary communicative aids and services) during this meeting should notify Carol Inglesby, ADA Coordinator, Division of Occupational and Professional Licensing, 160 East 300 South, Salt Lake City UT 84111, Phone 530-6626, at least three working days prior to the meeting.

MINUTES
UTAH
UNIFORM BUILDING CODE COMMISSION

December 20, 2023

9:00

Convened: 9:11

Adjourned: 9:30

STAFF:

Stephen Duncombe, Bureau Manager
Sharon Smalley, Board Secretary
Nicole Herrera, Board Secretary
Matt Johnson, Legal Analyst

COMMISSIONERS:

Thomas Peterson
Josh Blazzard
Lorianne Bisping
Travis Dalley
Trent Hunt
Ken Adams
Gary Bullock

Chris Hendrickson
Art Anderson
Karl Mott
Joerg Ruegemer
Scott Carpenter (excused)
Steve Dailey

VISITORS:

Ross Ford
Herriman Building Dept

Bryce McConkie
Cathryn Nelson

PUBLIC HEARING

A public hearing was conducted by Matt Johnson for the corrections and new proposed amendments for Title 15A.

MINUTES

A motion was made by Trent Hunt to approve the minutes from the December 13, 2023, meeting as written. The motion was seconded by Karl Mott and passed unanimously.

MAKE A RECOMMENDATION
TO THE BUSINESS AND LABOR
INTERIM COMMITTEE

There were no comments made by the public during the public hearing. A motion was made by Karl Mott to approve the recommendations for Title 15A and to move them forward to the Business and Labor Interim Committee. The motion was seconded by Trent Hunt and passed unanimously.

The meeting adjourned at 10:07.

Note: These minutes are not intended to be a verbatim transcript but are intended to record the significant features of the business conducted in this meeting. Discussed items are not necessarily shown in the chronological order they occurred.

UTAH DEPARTMENT OF COMMERCE
DIVISION OF OCCUPATIONAL AND PROFESSIONAL LICENSING
160 East 300 South Salt Lake City UT 84111
PO Box 146741 Salt Lake City UT 84114-6741
E-mail: b8@utah.gov
Web: www.dopl.utah.gov

REQUEST FOR CODE AMENDMENT

Requesting Agency/Person: Home Builders Association of Utah	Date: 6 Jun 20204
Street Address: 38 W 113775 S suite 120	
City, State, Zip Draper Utah 84020	
Contact Person: Ross Ford	Phone: 801-361-9301
Code to be Amended: 2023 National Electric Code (NEC) (Include edition)	
Section: 210.8(A)	
Section GFCI for Kitchen Receptacles	

AMENDMENT:

In line 6 after the word kitchens add where the receptacles are installed to serve the countertop surfaces

Strike line 7

210.8(A) Dwelling Units.

All 125-volt through 250-volt receptacles installed in the locations and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel.

(1) Bathrooms

(2) Garages and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use

(3) Outdoors

(4) Crawl spaces — at or below grade level

(5) Basements

(6) Kitchens — where the receptacles are installed to serve the countertop surfaces

~~(7) Areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking~~

(8) Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink

(9) Boathouses

(10) Bathtubs or shower stalls — where receptacles are installed within 1.8 m (6 ft) of the outside

Purpose of or Reason for the amendment:

Reason:

GFCIs have been an unmitigated success, contributing significantly to reducing deaths due to electrical shock. In just 25 years after GFCIs were introduced, accidental electrocutions in the United States were cut by more than half, even though electricity use more than doubled¹. There is a clear relationship between the reduction in electrocutions and the increased use of GFCIs over the last 45 years as indicated in Figure 1 below. However, this success has relied on requiring the devices in locations where dangers exist which they can protect against.

GFCIs are shown to be effective where a corded product is plugged into a standard “convenience” receptacle in a wet or damp location. However, the expanded requirement is for areas of the kitchen where handheld electric devices will never come near the sink. The extent of a “kitchen” is very open to

8 interpretation and may include any dining and living areas connected to it in today’s popular open floor plans. Many additional receptacles are covered by this new requirement.

Over 80 percent of the incidents cited as reason for this change in the model code resulted from people attempting to repair, modify or install an appliance while plugged in and contact occurring with the energized elements within the particular appliance. The NEC should not mandate GFCI protection for all kitchen outlets due to the clearly unsafe practices of unqualified individuals.

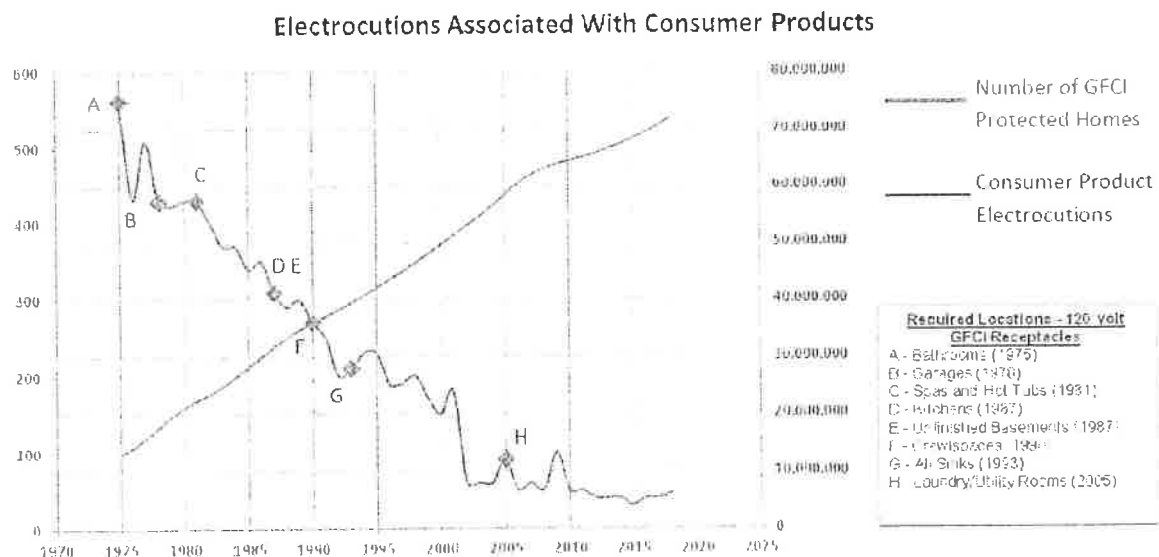


Figure 1: GFCI Protection in Homes Versus Electrocutions 1975 to 2018 (Source: A NEMA Ground Fault Personnel Protection Section Article entitled “GFCI Receptacles: Consumer Protection Personified” June 2020, Revision 2).

Footnotes:

1

“Know the Dangers in Your Older Home”, February 2015 (page 5), Electrical Safety Foundation International.

Cost or Savings Impact of Amendment:

This amendment will save 50 to 100 dollars per home.

Compliance Costs for Affected Persons (APerson® means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an agency.) (You must break out the impact cost to State Budget, Local Government and you must state aggregate cost to other persons {cost per person times number of persons affected}):

This amendment will have no cost change for affected persons

Signature:

Date: 6/6/2024

For Division Use:

Date Received:

Committee Action:

☒ Approved ☐ Denied
☐ Approved with revisions
☐ Referred to:
☐ Tabled

UBC Commission Decision for Hearing:

☐ Approved for hearing ☐ Denied
☐ Approved with revisions
☐ Referred to:
☐ Tabled

Date Filed:

Public Hearing Date:

UBC Commission Decision for Adoption:

☒ Approved ☐ Denied
☐ Approved with revisions
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Effective Date:

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Requesting Agency/Person: Home Builders Association of Utah	Date: 6 Jun 20204
Street Address: 38 W 113775 S suite 120	
City, State, Zip: Draper Utah 84020	
Contact Person: Ross Ford	Phone: 801-361-9301
Code to be Amended: 2023 National Electric Code (NEC) (Include edition)	
Section: 210.8(D)	
Section Title: Specific Appliances	

AMENDMENT:

Type proposed amendment in rule change form. (Using strikeout on portions being removed and underline on all new wording.)

Strike 8 through 11

210.8(D) Specific Appliances.

GFCI protection shall be provided for the branch circuit or outlet supplying the following appliances
rated 150 volts or less to ground and 60 amperes or less, single- or 3-phase:

- (1) Automotive vacuum machines
- (2) Drinking water coolers and bottle fill stations
- (3) High-pressure spray washing machines
- (4) Tire inflation machines
- (5) Vending machines
- (6) Sump pumps
- (7) Dishwashers
- ~~(8) Electric ranges~~
- ~~(9) Wall-mounted ovens~~
- ~~(10) Counter-mounted cooking units~~
- ~~(11) Clothes dryers~~
- (12) Microwave ovens

Purpose of or Reason for the amendment:

Reason:

The two main reasons for this amendment are the (1) incompatibility issues caused by requiring 240-volt appliances to be on a GFCI device and (2) the inadequate substantiation given when it was adopted into the model code.

The change to this section now requires receptacles serving household ranges to be covered by a GFCI device. The Association of Home Appliance Manufacturers (AHAM) points out that when this code proposal was submitted to the NEC, it was not submitted to the relevant product safety standards for household appliances that plug into such outlets. As a result, no evaluation was conducted to evaluate issues of compatibility between these household appliances and GFCI devices, leading to nuisance tripping. For more information, see AHAM's white paper Nuisance Tripping of Ground-Fault Circuit Interrupters (GFCIs) for Appliances.

The GFCI was first introduced into the NEC when loads, such as appliances, in the home were operating on 60Hz electricity. Therefore, the GFCIs based their protection requirements on current measurements at 60Hz:

Virtually every modern AC electrical product has parts of the appliance that are operating at frequencies other than 60Hz. This is due to implementation of components like LED drivers, switched-mode power supplies, electrically commutated motors, and variable frequency drives. These components have been implemented to meet consumer demands but also to comply with mandatory energy efficiency regulations set by the U.S. Department of Energy and state regulators.

GFCIs need to be modernized. There are no existing requirements for how a GFCI shall react to frequencies above 60Hz. Even if appliances have minimal, safe levels of high frequency leakage current, GFCIs are tripping and disabling critical appliances. There is a UL 943 Task Group that is working to update the GFCI standard for modern electrical loads.

Until this update is published into UL 943 and made a compliance requirement, GFCI expansion in the NEC is premature.

Regarding the substantiation for this change in the model code, the unfortunate event used as the sole substantiation for the change involved an older stove with both an appliance manufacturing error as well as an installation error. This change goes beyond requiring belt and suspenders safety provisions, which were already in place.

The proposed requirement of GFCI protection for all 240-volt receptacles is too broad and not supported by the committee's substantiation. According to the NFPA article used to support the change, the appliance in question was "an older installation, one predating today's requirement to install an equipment grounding conductor in the branch circuit to the range". The tragedy was only possible with older wiring. This is another example that shows new construction and updated electrical systems do not constitute the same dangers as those in older homes, yet this requirement was not limited to homes with older wiring methods.

The committee contended that 240-volt receptacles presented similar hazards as 125-volt convenience receptacles and this is not true. 240-volt receptacles are installed behind the range or dryer without

being readily accessible to the consumer. 240-volt appliances are plugged in and left for the operation of the appliance, but 125-volt receptacles are generally accessible to the consumer. If the consumer chose to, they could use a convenience receptacle for extension cords or other appliance use, whereas a 240 volt receptacle is specific to that appliance.

Similar amendments were put in place last adoption cycle however the language in the 2023 code can be interpreted to get around previous amendments.

Cost or Savings Impact of Amendment:

The cost will vary depending on size of home and number of appliances, but it is estimated to generate a savings of over \$300 per home

Compliance Costs for Affected Persons (APerson@ means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an agency.) (You must break out the impact cost to State Budget, Local Government and you must state aggregate cost to other persons {cost per person times number of persons affected}):

This amendment will have no cost change for affected persons

Signature:

Date: 6/6/2024

For Division Use:

Date Received:

Committee Action:

☐ Approved ☐ Denied

☒ Approved with revisions

☐ Referred to:

☐ Tabled

UBC Commission Decision for Hearing:

☐ Approved for hearing ☐ Denied

☐ Approved with revisions

☐ Referred to:

☐ Tabled

Date Filed:

Public Hearing Date:

UBC Commission Decision for Adoption:

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☐ Approved with revisions

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REQUEST FOR CODE AMENDMENT

Requesting Agency/Person: Home Builders Association of Utah	Date: 6 Jun 20204
Street Address: 38 W 113775 S suite 120	
City, State, Zip Draper Utah 84020	
Contact Person: Ross Ford	Phone: 801-361-9301
Code to be Amended: 2023 National Electric Code (NEC) (Include edition)	
Section: 21.52(C)(2)	
Section Title: Kitchen receptacles on Islands and Peninsulas	

AMENDMENT:

Delete the entire section

Purpose of or Reason for the amendment:

Cost or Savings Impact of Amendment:

The cost will vary depending on size of home and number of devices, but it is estimated to generate a savings of over \$300 per home

Compliance Costs for Affected Persons (A Person@ means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an agency.) (You must break out the impact cost to State Budget, Local Government and you must state aggregate cost to other persons {cost per person times number of persons affected}):

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Requesting Agency/Person: Home Builders Association of Utah	Date: 6 Jun 20204
Street Address: 38 W 113775 S suite 120	
City, State, Zip Draper Utah 84020	
Contact Person: Ross Ford	Phone: 801-361-9301
Code to be Amended: 2023 National Electric Code (NEC) (Include edition)	
Section: 220.5(c)	
Section Title: Floor area	

AMENDMENT:

Type proposed amendment in rule change form. (Using strikeout on portions being removed and underline on all new wording.)

220.5(C) Floor Area. The floor area for each floor shall be calculated from the outside dimensions of the building, dwelling unit, or other area involved. For dwelling units, the calculated floor area shall not include open porches, garages, or unfinished areas not adaptable for future use as a habitable room or occupiable space.

Purpose of or Reason for the amendment:

In the 2023 NEC development cycle, garages were removed from the list of exempted areas solely because "there are general lighting load requirements throughout the entire dwelling," including the garage. As written, this section requires the floor area of garages to be included in the branch-circuit load calculations. It does not add any additional electrical loading through receptacle outlets, lighting, etc. It simply requires more capacity in the electrical panel despite discussions happening that electrical loads are declining due to more efficient lighting and appliances.

This amendment restores the application of this section to the 2020 code by replacing the word "garages".

Consider that the code requires the following electrical loads which would fall under the calculation of Section 220.5(C).

- One 20-amp receptacle outlet in each vehicle bay
- One lighting outlet

Section 220.41 allows motors rated less than 1/8 hp to be considered part of the minimum lighting load when connected to a lighting circuit. However, garage door openers available today are typically 1/2 hp or larger. They would need to be calculated separately and would not be included in the floor area calculation.

Cost or Savings Impact of Amendment:

There is no cost increase for this amendment.

Compliance Costs for Affected Persons (A Person® means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an agency.) (You must break out the impact cost to State Budget, Local Government and you must state aggregate cost to other persons {cost per person times number of persons affected}):

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Signature:

Date: 6/6/2024

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- ☐ Approved
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- ☐ Approved with revisions
- ☐ Referred to:
- ☐ Tabled

UBC Commission Decision for Hearing:

- ☐ Approved for hearing
- ☐ Denied
- ☐ Approved with revisions
- ☐ Referred to:
- ☐ Tabled

Date Filed:	Public Hearing Date:
UBC Commission Decision for Adoption: <input type="checkbox"/> Approved <input checked="" type="checkbox"/> Denied <input type="checkbox"/> Approved with revisions <input type="checkbox"/> Referred to: <input type="checkbox"/> Tabled	Effective Date:

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Requesting Agency/Person: Home Builders Association of Utah	Date: 6 Jun 20204
Street Address: 38 W 113775 S suite 120	
City, State, Zip Draper Utah 84020	
Contact Person: Ross Ford	Phone: 801-361-9301
Code to be Amended: 2023 National Electric Code (NEC) (Include edition)	
Section: 314.27(A)(2)	
Section Title: Ceiling Outlets	

AMENDMENT:

Type proposed amendment in rule change form. (Using strikeout on portions being removed and underline on all new wording.)

At every outlet used exclusively for ceiling suspended paddle fan lighting, the box shall be designed or installed so that a luminaire or lampholder can be attached. Boxes shall be required to support a luminaire weighing a minimum of 23 kg (50 lb). A luminaire that weighs more than 23 kg (50 lb) shall be supported independently of the outlet box, unless the outlet box is listed for not less than the weight to be supported. The interior of the box shall be marked by the manufacturer to indicate the maximum weight the box shall be permitted to support.

Purpose of or Reason for the amendment:

This amendment eliminates the need for weight rated boxes for small fixtures. For example, there is no need for a box to be rated to hold a 50 pound fixture when the fixture is a small LED light installed close to a wall and used to illuminate art.

Cost or Savings Impact of Amendment:

This amendment will reduce the cost by \$6 per non rated light box.

Compliance Costs for Affected Persons (A Person® means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an agency.) (You must break out the impact cost to State Budget, Local Government and you must state aggregate cost to other persons {cost per person times number of persons affected}):

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City, State, Zip Draper Utah 84020	
Contact Person: Ross Ford	Phone: 801-361-9301
Code to be Amended: 2023 National Electric Code (NEC) (Include edition)	
Section: 406.4(D)(4)	
Section Title: Arch Fault Circuit Interrupters (AFCI) Receptacle Replacement	

AMENDMENT:

Delete the entire section

Purpose of or Reason for the amendment:

The last time the list of locations within a dwelling requiring AFCIs was changed was in the 2014 NEC, and it was substantiated by pointing to the decision to add them to the code in the 1990s. Since then, that original decision has not been revisited despite mounting evidence that these devices do not offer the benefits they were intended for.

AFCIs were first introduced in the 1999 edition of the National Electrical Code (NEC) with an effective date of Jan. 1, 2002. The approval of the code change was based on the U.S. Consumer Product Safety Commission (CPSC) report Revised Residential Fire Loss Estimates: 1980 –1998. However, the number of incidents cited at the time was nearly five times higher than in the later CPSC report 2010–2012 Residential Fire Loss Estimates (see Table 1). This significant change is not due to any effect from the slow rollout of AFCIs after 2002 which was limited to bedroom circuits until the 2008 NEC and only where the latest edition was adopted.

Table 1: Change in Electrical Distribution Fire Estimates

	CPSC Report 1980-1998	2015 CPSC Report 2010-2012	Percentage of Original Estimate
Total Estimated Fires Attended by the Fire Service (Annual Average)	47,000	9,600†	20%

† The properties that were included in the analysis were single/multifamily dwellings, any type of boarding houses, dormitories, sorority/fraternity houses, hotels/motels, and mobile and motor homes not in transit.

It is important to note that the lower number from the later report includes mobile (manufactured) homes and motor homes (RVs) that are not in transit. It is unclear to what extent these particular property types contribute to the overall number of fires, and the proposed exception does not exempt them.

Where the data showed that AFCIs would have a minimal benefit, the results were ignored. The resulting expected benefits led to AFCI requirements being included in the NEC, but they were overblown. Today, the data bears this out. AFCIs have now been protecting electrical systems in homes for two decades and that protection has grown to cover an extensive area of the home. If they were effective, one should reasonably expect to see fire data showing a steady decline in fires involving electrical wiring and related equipment. However, that is not the case.

The Fire Protection Research Foundation (FPRF), an affiliate of NFPA, concluded there is no practical method to collect relevant data in their report Residential Electrical Fire Problem: The Data Landscape. The FPRF investigated the available data in 2018 and concluded the following:

“Unfortunately, there are inherent challenges and barriers to the effective collection of the applicable data. Traditional data collection approaches have shortcomings that make their ultimate value questionable (e.g., lack of detail and quality on fire department collected residential fire events). Further, not all existing datasets are openly accessible, is lacking specific important details, or is

insufficient in quality.” There is no known data indicating that the expansion of AFCI requirements in the NEC has resulted in a quantifiable reduction of residential fires due to electrical malfunctions.

The problems with the original rationale were so evident that even electrical manufacturers spoke against the proposal at the time. During the 1998 code development cycle comment period, manufacturers’ representatives stated that a large body of information was available to support rejecting an AFCI mandate. The main issue: the electrical problems AFCIs are designed to prevent occur overwhelmingly in older dwellings.

The July 2021 issue of the U.S. Fire Administration’s Topical Fire Report Series reported “A strong relationship between housing age and the rate of electrical fires has been observed, with housing over 40 years old having the strongest association with electrical distribution fires [emphasis added].” This finding is from the 1988 CPSC study, “Residential Electrical Distribution System Fires,” so it is comparing homes that are now 80 years old with those that were new at that time of the study. No similar study has been made to compare the previous findings with homes built in the last four decades. When the home was built is important: The median age of one- and two-family housing in the U.S. is 40 years. The share of housing units built before 1970 is 38%, and those built before 1950 is 18%. According to a study conducted by the U.S. Consumer Product Safety Commission, dwellings built before 1965 may still have fuses instead of circuit breakers, and those built before 1945 may still have knob and tube wiring.

No data is collected on the age of a home when a fire occurs, and the vast majority of residential fires may occur in these older homes. The CPSC study showed that 85% of fires of electrical origin occur in homes that are more than 20 years old at the time of the study. This means that the bulk of these homes were wired in accordance with the 1965 or earlier editions of the NEC. Further, they were wired with products manufactured to product safety standards of a similar vintage. In the years since this study was produced, numerous changes have been made in both the NEC and product safety standards which mitigate against similar fires in newer homes—even as they age.

These older homes were also wired with a very limited number of receptacle outlets, resulting in extensive use of extension cords or improper alterations and additions to the original electrical system, both recognized fire hazards. In addition, they are more likely to have outdated appliances, space heaters or other characteristics that might lead to a greater risk of a fire starting. Newer homes have fire blocking, hardwired smoke alarms and egress windows installed to today’s codes, all of which increase the chances of surviving a fire if one does start. Even as homes built to today’s residential code get older, they will continue to provide protection for families through their improved safety.

From 1980 to 2015, data shows there has been a significant drop in the number of reported fires, injuries and fatalities in the United States. During that time period the number of fires has dropped by 50 percent and fatalities have dropped by about the same margin, even as the population increased.

The decline was sharpest during the 1980s before AFCIs were introduced. This further supports the

23

importance of encouraging homeowners to move up to newer homes without the added burden of increased regulation.

It is clear that requiring AFCIs in new construction will not prevent all damage. This is due to the fact

that AFCIs cannot prevent all fires and, more importantly, that electrical fires occur overwhelmingly in older houses. While questions regarding construction code requirements intended to increase the safety of homes cannot, and should not, be decided solely on the issue of cost, it is reasonable to ask if there is a demonstrated need for the requirement or if an acceptable level of safety can be achieved through other, less expensive means. The cost of an incremental increase in the margin of safety can be quite high.

The lack of data to support AFCI expansion caused the leadership of the governing code-making panel to ask the NFPA Research Foundation (an affiliate of NFPA who publishes the NEC) to analyze existing fire data and make recommendations on next steps. Its report "Residential Electrical Fire Problem: The Data Landscape" acknowledged that "data and data analytics is lacking to guide the optimum approaches to minimize residential electrical fires and related hazards." The report also observes that "while proving the effectiveness of preventative measures (e.g., AFCIs) is a challenging task, the significant limitations associated with the existing traditional data sources presents serious concerns." It is clearly not the time to expand AFCI coverage in the home when the benefits cannot be verified.

Higher regulatory costs have real consequences for working American families. These regulations end up pushing the price of housing beyond the means of many teachers, police officers, firefighters and other middle-class workers. Nationally, for every \$1,000 increase in the price of a home, about 140,500 households are priced out of the market for a median-priced new home. (These households would qualify for the mortgage before the price increase, but not afterward. In Utah for every \$1000 increase about 1498 households are priced out of the market.

Mandating costly incremental increases in safety will only protect those who can afford them and will often decrease safety for those who cannot. Families who cannot qualify to purchase homes due to the increased costs from mandatory code requirements such as AFCIs will have to live in housing that is less safe, because that housing was built to less stringent code requirements.

Cost or Savings Impact of Amendment:

The cost will vary depending on size of home and number of devices, but it is estimated to generate a savings of over \$300 per home

Compliance Costs for Affected Persons (APerson@ means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an agency.) (You must break out the impact cost to State Budget, Local Government and you must state aggregate cost to other persons {cost per person times number of persons affected}):

This amendment will have no cost change for affected persons

Signature:	Date: 6/6/2024
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For Division Use:

Date Received:	
Committee Action: Δ Approved <input checked="" type="radio"/> Denied Δ Approved with revisions Δ Referred to: Δ Tabled	UBC Commission Decision for Hearing: Δ Approved for hearing Δ Denied Δ Approved with revisions Δ Referred to: Δ Tabled
Date Filed:	Public Hearing Date:
UBC Commission Decision for Adoption: Δ Approved <input checked="" type="radio"/> Denied Δ Approved with revisions Δ Referred to: Δ Tabled	Effective Date:

Part 6

Statewide Amendments to National Electrical Code

15A-3-601 General provisions.

The following are adopted as amendments to the NEC to be applicable statewide:

- (1) The IRC provisions are adopted as the residential electrical standards applicable to residential installations under the IRC. All other installations shall comply with the adopted NEC.
- (2) In NEC, Section 210.8(A), the words "through 250-volt" are deleted.
- (3) In NEC, Section 210.8(A)(5), the word "Basements" is deleted and replaced with "Unfinished portions or areas of the basement not intended as habitable rooms."
- (4) NEC, Section 210.8(F), is deleted.
- (5) NEC, Sections 210.52(C)(2) and (3) are deleted and replaced with the following:

"210.52(C)(2) Island and peninsular countertops and Work Surfaces. Receptacle outlets, if installed to serve an island or peninsular countertop or work surface, shall be installed in accordance with 210.52(C)(3). If a receptacle outlet is not provided to serve an island or peninsular countertop or work surface, provisions shall be provided at the island or peninsula for future addition of a receptacle outlet to serve the island or peninsular countertop or work surface.

210.2(C)(3) Receptacle outlet location. Receptacle outlets shall be located in one or more of the following:

- (a) On or above, but not more than 500 mm (20 inches) above a countertop or work surface.
- (b) In a countertop using receptacle assemblies listed for use in countertops.
- (c) In a work surface using receptacle outlet assemblies listed for use in work surfaces or listed for use in countertops.

Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, sinks, or range tops as covered in the exception to 210.52(C)(1), occupying assigned spaces shall not be considered as these required outlets.

Exception: In dwelling units designed to be accessible to persons with disabilities, receptacles shall be permitted to be installed not more than 300 mm (12 inches) below the countertop or work surface.

Receptacles installed below a countertop or work surface shall not be located where the countertop or work surface extends more than 150 mm (6 inches) beyond its support or base. "

- (6) NEC, Section 210.12, is deleted.
- (7) NEC, Section 210.65, is deleted.
- (8) NEC, Section 230.67, is deleted.
- (9) NEC, Section 230.71, is deleted and replaced with the following: "230.71 Maximum Number of Disconnects. (A) General. The service disconnecting means for each service permitted by 230.2, or for each set of service-entrance conductors permitted by 230.40, Exception No. 1, 3, 4, or 5 shall consist of not more than six switches or sets of circuit breakers, or a combination of not more than six switches and sets of circuit breakers, mounted in a single enclosure, in a group of separate enclosures, or in or on a switchboard or in switchgear. There shall be not more than six sets of disconnects per service grouped in any one location. For the purpose of this section, disconnecting means installed as part of listed equipment and used solely for the following shall not be considered a service disconnecting means:
 - (1) Power monitoring equipment;

- (2) Surge-protective device(s); Utah Code Page 2
 - (3) Control circuit of the ground-fault protection system; or
 - (4) Power-operable service disconnecting.
- (B) Single-Pole Units. Two or three single-pole switches or breakers, capable of individual operation, shall be permitted on multiwire circuits, one pole for each ungrounded conductor, as one multipole disconnect, provided they are equipped with identified handle ties or a master handle to disconnect all conductors of the service with no more than six operations of the hand.
- (C) Beginning on July 1, 2027, Section 230.71(B) is no longer in effect.
- (10) NEC, Section 314.27(C), is deleted and replaced with the following: "314.27(C) Boxes at Ceiling-Suspended (Paddle) Fan Outlets. Outlet boxes or outlet box systems used as the sole support of a ceiling-suspended (paddle) fan shall be listed, shall be marked by their manufacturer as suitable for this purpose, and shall not support ceiling-suspended (paddle) fans that weigh more than 32 kg (70 lb). For outlet boxes or outlet box systems designed to support ceiling-suspended (paddle) fans that weigh more than 16 kg (35 lb), the required marking shall include the maximum weight to be supported."
- (11) NEC, Section 406.9(C), is deleted and replaced with the following: "406.9(C) Bathtub and Shower Space. Receptacles shall not be installed within or directly over a bathtub or shower stall."

Amended by Chapter 209, 2023 General Session

Part 6

Statewide Amendments to National Electrical Code

15A-3-601 General provisions.

The following are adopted as amendments to the NEC to be applicable statewide:

- (1) The IRC provisions are adopted as the residential electrical standards applicable to residential installations under the IRC. All other installations shall comply with the adopted NEC.

~~(2) In NEC, Section 210.8(A), the words "through 250-volt" are deleted.~~

~~(3)(2)~~ NEC, Section 210.8(A) number (5) the word "Basements" is deleted and replaced with "Unfinished portions or areas of the basement not intended as habitable rooms."

~~(3)~~ In NEC, Section 210.8(A) number (6), the following is added after the word Kitchens: " – where the receptacles are installed to serve the countertop surfaces".

~~(4)~~ In NEC, Section 210.8(A) number (7) is deleted".

~~(5)~~ In NEC, Section 210.8(D) numbers (8) through (12) are deleted.

~~(4)(6)~~ In NEC, Section 210.8(F), is deleted.

~~(5) NEC, Sections 210.52(C)(2) and (3) are deleted and replaced with the following:~~

~~"210.52(C)(2) Island and peninsular countertops and Work Surfaces. Receptacle outlets, if installed to serve an island or peninsular countertop or work surface, shall be installed in accordance with 210.52(C)(3). If a receptacle outlet is not provided to serve an island or peninsular countertop or work surface, provisions shall be provided at the island or peninsula for future addition of a receptacle outlet to serve the island or peninsular countertop or work surface.~~

~~210.2(C)(3) Receptacle outlet location. Receptacle outlets shall be located in one or more of the following:~~

~~(1) On or above, but not more than 500 mm (20 inches) above a countertop or work surface.~~

~~(2) In a countertop using receptacle assemblies listed for use in countertops.~~

~~(3) In a work surface using receptacle outlet assemblies listed for use in work surfaces or listed for use in countertops.~~

~~Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, sinks, or range tops as covered in the exception to 210.52(C)(1), occupying assigned spaces shall not be considered as these required outlets.~~

~~Exception: In dwelling units designed to be accessible to persons with disabilities, receptacles shall be permitted to be installed not more than 300 mm (12 inches) below the countertop or work surface.~~

~~Receptacles installed below a countertop or work surface shall not be located where the countertop or work surface extends more than 150 mm (6 inches) beyond its support or base.~~

~~(6) NEC, Section 210.12, is deleted.~~

~~(7) NEC, Section 210.65, is deleted.~~

~~(8) NEC, Section 215.18, is deleted.~~

~~(9) NEC, Section 225.42 is deleted.~~

~~(8)(10)~~ NEC, Section 230.67, is deleted.

~~(9)(11)~~ NEC, Section 230.71, is deleted and replaced with the following: "230.71 Maximum Number of Disconnects. (A) General. The service disconnecting means for each service permitted by 230.2, or for each set of service-entrance conductors permitted by 230.40, Exception No. 1, 3, 4, or 5 shall consist of not more than six switches or sets of circuit breakers, or a combination of not more than six switches and sets of circuit breakers, mounted in a single enclosure, in a group of separate enclosures, or in or on a switchboard or in switchgear. There shall be not more than six sets of disconnects per service

grouped in any one location. For the purpose of this section, disconnecting means installed as part of listed equipment and used solely for the following shall not be considered a service disconnecting means:

- (1) Power monitoring equipment;
- (2) Surge-protective device(s); Utah Code Page 2
- (3) Control circuit of the ground-fault protection system; or
- (4) Power-operable service disconnecting.

(B) Single-Pole Units. Two or three single-pole switches or breakers, capable of individual operation, shall be permitted on multiwire circuits, one pole for each ungrounded conductor, as one multipole disconnect, provided they are equipped with identified handle ties or a master handle to disconnect all conductors of the service with no more than six operations of the hand.

(C) Beginning on July 1, 2027, Section 230.71(B) is no longer in effect.

~~(10) In NEC, Section 314.27(C), is deleted and replaced with the following: "314.27(C) Boxes at Ceiling-Suspended (Paddle) Fan Outlets. Outlet boxes or outlet box systems used as the sole support of a ceiling-suspended (paddle) fan shall be listed, shall be marked by their manufacturer as suitable for this purpose, and shall not support ceiling-suspended (paddle) fans that weigh more than 32 kg (70 lb). For outlet boxes or outlet box systems designed to support ceiling-suspended (paddle) fans that weigh more than 16 kg (35 lb), the required marking shall include the maximum weight to be supported."~~

(12) In NEC, Section 334.24, the last sentence is deleted and replaced with the following: "For flat cables, the minor diameter dimension of the cable shall be used to determine the bending radius when bending on the flat side of the cable. For all other bends, the major diameter dimension shall be used."

(13) In NEC, Section 338.24, the last sentence is deleted and replaced with the following:

"For flat cables, the minor diameter dimension of the cable shall be used to determine the bending radius when bending on the flat side of the cable. For all other bends, the major diameter dimension shall be used."

(14) In NEC, Section 406.9(B)(2), the words "be listed weather-resistant type, and installation shall" are deleted.

~~(11) In NEC, Section 406.9(C), is deleted and replaced with the following: "406.9(C) Bathtub and Shower Space. Receptacles shall not be installed within or directly over a bathtub or shower stall."~~

(15) NEC, Section 700.3(A) is deleted and replaced with the following: "700.3(A) Conduct or Witness Test. The authority having jurisdiction shall conduct or witness a test of the complete system upon installation and periodically afterward."

Amended by Chapter 209, 2023 General Session

Section/Article	Overview	Financial Impact	Support at written	Impact	Modify
720.6	Emergency management system (EMS) must be built	These systems are never required, so no cost impact.	*		
720.30	EMS access requirements relocated from 712 and clarified	These systems are never required, so no cost impact. Also, the code is moved to a different section on this chapter and not change anything in reality.	*		
760.33	Surge protection is required for power-limited fire alarm control panels	Adds about \$100.00 to a fire alarm system, if there isn't already SPD upstream. It is worth remembering that a fire alarm system does not include the typical single- and multiple-station smoke alarm currently found in dwellings.	*		
820.1	Title of article revised for clarity	None	*		