

Second Regular Session
Seventy-third General Assembly
STATE OF COLORADO

INTRODUCED

LLS NO. 22-0102.01 Jery Payne x2157

HOUSE BILL 22-1218

HOUSE SPONSORSHIP

Valdez A.,

SENATE SPONSORSHIP

(None),

House Committees
Business Affairs & Labor

Senate Committees

A BILL FOR AN ACT

101 CONCERNING RESOURCE EFFICIENCY RELATED TO CONSTRUCTING A
102 BUILDING FOR OCCUPANCY.

Bill Summary

(Note: This summary applies to this bill as introduced and does not reflect any amendments that may be subsequently adopted. If this bill passes third reading in the house of introduction, a bill summary that applies to the reengrossed version of this bill will be available at <http://leg.colorado.gov>.)

Section 1 of the bill relocates existing statutes that require contractors to offer certain resource efficiency options when constructing certain buildings. **Section 1** also requires commercial buildings and multifamily residences to include electric vehicle charging for at least 10% of the parking spaces if the building is 25,000 square feet or more or if the building is part of a project that is 40,000 square feet or more of

Shading denotes HOUSE amendment. Double underlining denotes SENATE amendment.
Capital letters or bold & italic numbers indicate new material to be added to existing statute.
Dashes through the words indicate deletions from existing statute.

floor space in more than one building, with a total of 25 or more sets of living quarters or commercial units among all the buildings. These buildings must also have:

- The space in the electrical facilities to increase electric vehicle charging to 50% of the parking spaces; and
- Conduit run to increase electric vehicle charging to 50% of the parking spaces.

Section 3 requires a master electrician to follow these requirements when planning, laying out, and supervising the installation of wiring in a building. **Section 4** requires an architect to follow these requirements when planning, drafting plans for, and supervising the construction of a building. Continuing education requirements are put in place to educate master electricians and architects about these requirements.

1 *Be it enacted by the General Assembly of the State of Colorado:*

2 **SECTION 1.** In Colorado Revised Statutes, **add with amended**
3 **and relocated provisions** article 47 to title 38 as follows:

4 **ARTICLE 47**

5 **Resource Efficiency Requirements for Certain Buildings**

6 **38-47-101. [Formerly 38-35.7-106] Solar prewire option - solar**
7 **consultation.** (1) (a) Every person that builds a new single-family
8 detached residence for which a buyer is under contract shall offer the
9 buyer the opportunity to have each of the following options included in
10 the residence's electrical system or plumbing system, or both:

11 (I) A residential photovoltaic solar generation system or a
12 residential solar thermal system, or both;

13 (II) Upgrades of wiring or plumbing, or both, planned by the
14 builder to accommodate future installation of such systems; and

15 (III) A chase or conduit, or both, constructed to allow ease of
16 future installation of the necessary wiring or plumbing for such systems.

17 (b) The offer required by subsection (1)(a) of this section must be

1 made in accordance with the builder's construction schedule for the
2 residence.

3 (2) Every person that builds a new single-family detached
4 residence for sale, whether or not the residence has been prewired for a
5 photovoltaic solar generation system, shall provide to every buyer under
6 contract a list of businesses in the area that offer residential solar
7 installation services so that the buyer ~~if he or she so desires~~, can obtain
8 expert help in assessing whether the residence is a good candidate for
9 solar installation and how much of a cost savings a residential
10 photovoltaic solar generation system could provide. The list of businesses
11 shall be derived from a master list of Colorado solar installers maintained
12 by the Colorado ~~solar energy industries association~~ SOLAR AND STORAGE
13 ASSOCIATION, or a successor organization.

14 ~~(3) Repealed.~~

15 ~~(4)~~ (3) Providing the master list of solar installers prepared by the
16 Colorado ~~solar energy industries association~~ SOLAR AND STORAGE
17 ASSOCIATION, or a successor organization, to a buyer under contract ~~shall~~
18 DOES not constitute an endorsement of any installer or contractor listed.
19 A person that builds a new single-family detached residence ~~shall~~ IS not
20 ~~be~~ liable for any advice, labor, or materials provided to the buyer by a
21 third-party solar installer.

22 ~~(5) Repealed.~~

23 ~~(6)~~ (4) Nothing in this section ~~shall preclude~~ PRECLUDES a person
24 that builds a new single-family detached residence from:

25 (a) Subjecting solar photovoltaic electrical system upgrades to the
26 same terms and conditions as other upgrades, including but not limited to
27 charges related to upgrades, deposits required for upgrades, deadlines,

1 and construction timelines;

2 (b) Selecting the contractors that will complete the installation of
3 solar photovoltaic electrical system upgrades;

4 (c) Stipulating in the purchase agreement or sales contract that
5 solar photovoltaic electrical system upgrades are based on technology
6 available at the time of installation and such upgrades may not support all
7 solar photovoltaic systems or systems installed at a future date, and that
8 the person that builds a new single-family detached residence ~~shall~~ IS not
9 ~~be~~ liable for any additional upgrades, retrofits, or other alterations to the
10 residence that may be necessary to accommodate a solar photovoltaic
11 system installed at a future date.

12 ~~(7)~~ (5) (a) This section applies to contracts entered into on or after
13 August 10, 2009, to purchase new single-family detached residences built
14 on or after August 10, 2009.

15 (b) This section does not apply to:

16 (I) An unoccupied home serving as sales inventory or a model
17 home; or

18 (II) A manufactured home as defined in section 24-32-3302 (20).

19 **38-47-102. [Formerly 38-35.7-107] Water-smart homes option.**

20 (1) (a) Every person that builds a new single-family detached residence
21 for which a buyer is under contract shall offer the buyer the opportunity
22 to select one or more of the following water-smart home options for the
23 residence:

24 ~~(I) Repealed.~~

25 ~~(H)~~ (I) If dishwashers or clothes washers are financed, installed,
26 or sold as upgrades through the home builder, the builder shall offer a
27 model that is qualified pursuant to the federal environmental protection

1 agency's Energy Star program, AS DEFINED IN SECTION 6-7.5-102 (15), at
2 the time of offering. Clothes washers ~~shall~~ MUST have a water factor of
3 less than or equal to six gallons of water per cycle per cubic foot of
4 capacity.

5 ~~(HH)~~ (II) If landscaping is financed, installed, or sold as upgrades
6 through the home builder and will be maintained by the home owner, the
7 home builder shall offer a landscape design that follows the landscape
8 practices specified in this ~~subparagraph~~ ~~(HH)~~ SUBSECTION (1)(a)(II) to
9 ensure both the professional design and installation of such landscaping
10 and that water conservation will be accomplished. These best
11 management practices are contained in the document titled "Green
12 Industry Best Management Practices (BMPs) for the Conservation and
13 Protection of Water Resources in Colorado: Moving Toward
14 Sustainability", 3rd release, and appendix, released in May 2008, or this
15 document's successors due to future inclusion of improved landscaping
16 practices, water conservation advancements, and new irrigation
17 technology. The best management practices specified in this ~~subparagraph~~
18 ~~(HH)~~ SUBSECTION (1)(a)(II), through utilization of the proper landscape
19 design, installation, and irrigation technology, accomplish substantial
20 water savings compared to landscape designs, installation, and irrigation
21 system utilization where these practices are not adhered to. The following
22 best management practices and water budget calculator form the basis for
23 the design and installation for the front yard landscaping option if
24 selected by the homeowner as an upgrade:

25 (A) Xeriscape: To include the seven principles of xeriscape that
26 provide a comprehensive approach for conserving water;

27 (B) Water budgeting: To include either a water allotment by the

1 water utility for the property, if offered by the water utility, or a landscape
2 water budget based on plant water requirements;

3 (C) Landscape design: To include a plan and design for the
4 landscape to comprehensively conserve water and protect water quality;

5 (D) Landscape installation and erosion control: To minimize soil
6 erosion and employ proper soil care and planting techniques during
7 construction;

8 (E) Soil amendment and ground preparation: To include an
9 evaluation of the soil and improve it, if necessary, to address water
10 retention, permeability, water infiltration, aeration, and structure;

11 (F) Tree placement and tree planting: To include proper soil and
12 space for root growth and to include proper planting of trees, shrubs, and
13 other woody plants to promote long-term health of these plants;

14 (G) Irrigation design and installation: To include design of the
15 irrigation system for the efficient and uniform distribution of water to
16 plant material and the development of an irrigation schedule;

17 (H) Irrigation technology and scheduling: To include water
18 conserving devices that stop water application during rain, high wind, and
19 other weather events and incorporate evapotranspiration conditions.
20 Irrigation scheduling should address frequency and duration of water
21 application in the most efficient manner. ~~and~~

22 (I) Mulching: To include the use of organic mulches to reduce
23 water loss through evaporation, reduce soil loss, and suppress weeds.

24 ~~(IV)~~(III) Installation of a pressure-reducing valve that limits static
25 service pressure in the residence to a maximum of sixty pounds per
26 square inch. Piping for home fire sprinkler systems ~~shall~~ MUST comply
27 with state and local codes and regulations but are otherwise excluded

1 from this ~~subparagraph (IV)~~ SUBSECTION (1)(a)(III).

2 (b) The offer required by ~~paragraph (a) of this subsection (1)~~
3 SUBSECTION (1)(a) OF THIS SECTION shall be made in accordance with the
4 builder's construction schedule for the residence. In the case of
5 prefabricated or manufactured homes, "construction schedule" includes
6 the schedule for completion of prefabricated walls or other
7 subassemblies.

8 (2) Nothing in this section precludes a person that builds a new
9 single-family detached residence from:

10 (a) Subjecting water-efficient fixture and appliance upgrades to
11 the same terms and conditions as other upgrades, including charges
12 related to upgrades, deposits required for upgrades, deadlines, and
13 construction timelines;

14 (b) Selecting the contractors that will complete the installation of
15 the selected options; or

16 (c) Stipulating in the purchase agreement or sales contract that
17 water-efficient fixtures and appliances are based on technology available
18 at the time of installation, such upgrades may not support all
19 water-efficient fixtures or appliances installed at a future date, and the
20 person that builds a new single-family detached residence is not liable for
21 any additional upgrades, retrofits, or other alterations to the residence that
22 may be necessary to accommodate water-efficient fixtures or appliances
23 installed at a future date.

24 (3) This section does not apply to unoccupied homes serving as
25 sales inventory or model homes.

26 (4) The upgrades described in ~~paragraph (a) of subsection (1)~~
27 SUBSECTION (1)(a) of this section ~~shall~~ MUST not contravene state or local

1 codes, covenants, and requirements. All homes, landscapes, and irrigation
2 systems ~~shall~~ MUST meet all applicable national, state, and local
3 regulations.

4 **38-47-103. [Formerly 38-35.7-109] Electric vehicle charging**
5 **system - electric heating system - energy efficiency information -**

6 **options - definitions.** (1) (a) A person that builds a new residence for
7 which a buyer is under contract shall offer the buyer the opportunity to
8 have the residence's electrical system include one of the following:

- 9 (I) An electric vehicle charging system;
- 10 (II) Upgrades of wiring planned by the builder to accommodate
11 future installation of an electric vehicle charging system; or
- 12 (III) A two-hundred-eight- to two-hundred-forty-volt alternating
13 current plug-in receptacle in an appropriate place accessible to a motor
14 vehicle parking area.

15 (b) A person that builds a new residence for which a buyer is
16 under contract shall offer the buyer the opportunity to have the residence
17 include an efficient electrical heating system, including an electric water
18 heater, electric boiler, or electric furnace or heat-pump system.

19 (c) A person that builds a new residence for which a buyer is
20 under contract shall offer the buyer pricing, energy efficiency, and utility
21 bill information for each natural gas, electric, or other option available
22 from and information pertaining to those options from the federal Energy
23 Star program, as defined in section 6-7.5-102 (15), or similar information
24 about energy efficiency and utilization reasonably available to the person
25 building the residence.

26 (d) Subsection (1)(a) of this section does not apply to a residence
27 in which the electrical system has been substantially installed before a

1 buyer enters into a contract to purchase the residence. Subsection (1)(b)
2 of this section does not apply to a residence in which the heating system
3 has been substantially installed before a buyer enters into a contract to
4 purchase the residence.

5 (2) To comply with this section, the offer required by subsection
6 (1) of this section must be made in accordance with the builder's
7 construction schedule for the residence.

8 (3) Nothing in this section precludes a person that builds a new
9 residence from:

10 (a) Subjecting electric vehicle charging system upgrades to the
11 same terms and conditions as other upgrades, including charges related
12 to upgrades, deposits required for upgrades, deadlines, and construction
13 timelines;

14 (b) Selecting the contractors that will complete the installation of
15 electric vehicle charging system upgrades;

16 (c) Stipulating in the purchase agreement or sales contract that:

17 (I) Electric vehicle charging system upgrades are based on
18 technology available at the time of installation and might not support all
19 electric vehicle charging systems or systems installed in the future; and

20 (II) The person that builds a new residence is not liable for any
21 additional upgrades, retrofits, or other alterations to the residence
22 necessary to accommodate an electric vehicle charging system installed
23 in the future.

24 (4) As used in this section:

25 (a) "Electric vehicle charging system" means:

26 (I) An electric vehicle charging system as defined in section
27 38-12-601 (6)(a) that has power capacity of at least 6.2 kilowatts, ~~that is~~

1 Energy Star certified, and ~~that~~ has the ability to connect to the internet; or

2 (II) An inductive residential charging system for battery-powered
3 electric vehicles that:

4 (A) Is certified by Underwriters Laboratories or an equivalent
5 certification;

6 (B) ~~that~~ Complies with the current version of article 625 of the
7 National Electrical Code, published by the National Fire Protection
8 Association, and other applicable industry standards;

9 (C) ~~that~~ Is Energy Star certified; and

10 (D) ~~that~~ Has the ability to connect to the internet.

11 (b) "Residence" means a single-family owner-occupied detached
12 dwelling.

13 (5) (a) This section applies to contracts entered into on or after
14 September 14, 2020, to purchase new residences built on or after
15 September 14, 2020.

16 (b) This section does not apply to:

17 (I) An unoccupied home serving as sales inventory or a model
18 home; or

19 (II) A manufactured home as defined in section 24-32-3302 (20).

20 **38-47-104. Requirements to have adequate electric vehicle**
21 **charging facilities on large commercial and multifamily buildings -**
22 **definitions. (1) THIS SECTION APPLIES TO:**

23 (a) A CONTRACT EXECUTED ON OR AFTER JULY 1, 2023, TO
24 CONSTRUCT A HIGH-OCCUPANCY BUILDING PROJECT;

25 (b) THE PLANNING OF OR DRAFTING FOR A HIGH-OCCUPANCY
26 BUILDING PROJECT ON OR AFTER THE EFFECTIVE DATE OF THIS SECTION;

27 AND

1 (c) THE LAYING OUT OF OR CONSTRUCTION OF A HIGH-OCCUPANCY
2 BUILDING PROJECT ON OR AFTER THE EFFECTIVE DATE OF THIS SECTION.

3 (2) A CONTRACTOR, MASTER ELECTRICIAN, OR ARCHITECT THAT IS
4 PLANNING, DESIGNING, OR CONSTRUCTING A HIGH-OCCUPANCY BUILDING
5 PROJECT SHALL PLAN, DESIGN, AND CONSTRUCT THE HIGH-OCCUPANCY
6 BUILDING PROJECT TO HAVE:

7 (a) AN ELECTRIC VEHICLE CHARGING SYSTEM FOR AT LEAST TEN
8 PERCENT OF THE PARKING SPACES USED BY THE OCCUPANTS OF THE
9 HIGH-OCCUPANCY BUILDING PROJECT;

10 (b) ENOUGH AVAILABLE ROOM IN THE POWER EQUIPMENT
11 FACILITIES TO PROVIDE AN ELECTRIC VEHICLE CHARGING SYSTEM TO AT
12 LEAST FIFTY PERCENT OF THE PARKING SPACES USED BY THE OCCUPANTS
13 OF THE BUILDING; AND

14 (c) CONDUIT WIRE, AND A POWERED NEMA 14-50 PLUG-IN
15 RECEPTACLE, NEMA 6-50 PLUG-IN RECEPTACLE, OR TERMINATION POINT
16 AT THE PARKING SPACE INSTALLED AS NECESSARY TO PROVIDE AN
17 ELECTRIC VEHICLE CHARGING SYSTEM RATED FOR FIFTY AMPS AT
18 MINIMUM AND TWO HUNDRED EIGHT TO TWO HUNDRED FORTY VOLTS TO
19 AT LEAST FIFTY PERCENT OF THE PARKING SPACES USED BY THE
20 OCCUPANTS OF THE BUILDING.

21 (3) (a) TO COMPLY WITH THIS SECTION, A CONTRACTOR, MASTER
22 ELECTRICIAN, OR ARCHITECT MAY:

23 (I) PARTNER WITH A THIRD-PARTY COMPANY TO INSTALL AND
24 MAINTAIN CHARGING STATIONS; OR

25 (II) INCLUDE THE COST OF COMPLYING WITH THIS SECTION IN THE
26 PRICE TO PLAN, DRAFT, OR CONSTRUCT THE HIGH-OCCUPANCY BUILDING
27 PROJECT.

1 (b) A HIGH-OCCUPANCY BUILDING PROJECT OWNER MAY CHARGE
2 THE COST OF COMPLYING WITH THIS SECTION DIRECTLY TO INDIVIDUAL
3 TENANTS THAT USE THE ELECTRIC VEHICLE CHARGING SYSTEMS.

4 (4) AS USED IN THIS SECTION:

5 (a) "ELECTRIC VEHICLE CHARGING SYSTEM" MEANS:

6 (I) AN ELECTRIC VEHICLE CHARGING SYSTEM AS DEFINED IN
7 SECTION 38-12-601 (6)(a) THAT HAS POWER CAPACITY OF AT LEAST 6.2
8 KILOWATTS, IS ENERGY STAR CERTIFIED, AND HAS THE ABILITY TO
9 CONNECT TO THE INTERNET; OR

10 (II) AN INDUCTIVE RESIDENTIAL CHARGING SYSTEM FOR
11 BATTERY-POWERED ELECTRIC VEHICLES THAT:

12 (A) IS CERTIFIED BY UNDERWRITERS LABORATORIES OR AN
13 EQUIVALENT CERTIFICATION;

14 (B) COMPLIES WITH THE CURRENT VERSION OF ARTICLE 625 OF THE
15 NATIONAL ELECTRICAL CODE, PUBLISHED BY THE NATIONAL FIRE
16 PROTECTION ASSOCIATION, AND OTHER APPLICABLE INDUSTRY
17 STANDARDS;

18 (C) IS ENERGY STAR CERTIFIED; AND

19 (D) HAS THE ABILITY TO CONNECT TO THE INTERNET.

20 (b) "HIGH-OCCUPANCY BUILDING PROJECT" MEANS:

21 (I) A BUILDING WITH TWENTY-FIVE THOUSAND SQUARE FEET OR
22 MORE OF FLOOR SPACE THAT IS USED OR INTENDED TO BE USED FOR
23 COMMERCIAL PURPOSES OR FOR MULTIFAMILY RESIDENCES; OR

24 (II) A PROJECT TO BUILD FORTY THOUSAND SQUARE FEET OR MORE
25 OF FLOOR SPACE IN MORE THAN ONE BUILDING WITH A TOTAL OF
26 TWENTY-FIVE OR MORE SETS OF LIVING QUARTERS OR COMMERCIAL UNITS
27 IN ALL THE BUILDINGS.

1 (c) "NEMA" MEANS THE NATIONAL ELECTRICAL MANUFACTURERS
2 ASSOCIATION, OR ITS SUCCESSOR.

3 **SECTION 2. Repeal of relocated provisions in this act.** In
4 Colorado Revised Statutes, **repeal** 38-35.7-106, 38-35.7-107, and
5 38-35.7-109.

6 **SECTION 3.** In Colorado Revised Statutes, **add** 12-115-125 as
7 follows:

8 **12-115-125. Electric vehicle charging requirements for large**
9 **buildings - efficiency options - rules - continuing education.** (1) A
10 MASTER ELECTRICIAN SHALL COMPLY WITH SECTION 38-47-104 WHEN
11 PLANNING, LAYING OUT, AND SUPERVISING THE INSTALLATION OF WIRING
12 IN A HIGH-OCCUPANCY BUILDING PROJECT, AS DEFINED IN SECTION
13 38-47-104 (4)(b).

14 (2) THE BOARD SHALL:

15 (a) PUBLICIZE THIS SECTION AND THE REQUIREMENTS OF ARTICLE
16 47 OF TITLE 38 TO MASTER ELECTRICIANS; AND

17 (b) PROMULGATE RULES REQUIRING EACH MASTER ELECTRICIAN
18 TO SUCCESSFULLY COMPLETE A CONTINUING EDUCATION CURRICULUM
19 THAT COVERS THE REQUIREMENTS OF THIS SECTION AND ARTICLE 47 OF
20 TITLE 38. EACH MASTER ELECTRICIAN SHALL COMPLETE THE CURRICULUM
21 WITHIN TWELVE MONTHS AFTER BEING ISSUED A LICENSE IN COLORADO,
22 WITHIN TWELVE MONTHS AFTER THE EFFECTIVE DATE OF THIS SECTION,
23 AND AT LEAST ONCE EVERY TEN YEARS. A MASTER ELECTRICIAN MAY
24 COUNT THE CONTINUING EDUCATION CURRICULUM TOWARD THE
25 CONTINUING EDUCATION REQUIRED IN SECTION 12-115-110 (4)(d).

26 **SECTION 4.** In Colorado Revised Statutes, **add** 12-120-418 as
27 follows:

1 **12-120-418. Electric vehicle charging requirements for large**
2 **buildings - rules - continuing education.** (1) AN ARCHITECT SHALL
3 COMPLY WITH SECTION 38-47-104 WHEN PLANNING, DRAFTING PLANS FOR,
4 AND SUPERVISING THE CONSTRUCTION OF A HIGH-OCCUPANCY BUILDING
5 PROJECT, AS DEFINED IN SECTION 38-47-104 (4)(b).

6 (2) THE BOARD SHALL:

7 (a) PUBLICIZE THIS SECTION AND ARTICLE 47 OF TITLE 38 TO
8 ARCHITECTS; AND

9 (b) PROMULGATE RULES REQUIRING EACH ARCHITECT TO
10 SUCCESSFULLY COMPLETE A CONTINUING EDUCATION CURRICULUM THAT
11 COVERS THE REQUIREMENTS OF THIS SECTION AND ARTICLE 47 OF TITLE
12 38. EACH ARCHITECT SHALL COMPLETE THE CURRICULUM WITHIN TWELVE
13 MONTHS AFTER BEING ISSUED A LICENSE IN COLORADO, WITHIN TWELVE
14 MONTHS AFTER THE EFFECTIVE DATE OF THIS SECTION, AND AT LEAST
15 ONCE EVERY TEN YEARS. AN ARCHITECT MAY COUNT THE CONTINUING
16 EDUCATION CURRICULUM TOWARD THE CONTINUING EDUCATION
17 REQUIRED IN THE RULES PROMULGATED UNDER SECTION 12-120-416.

18 **SECTION 5.** In Colorado Revised Statutes, 38-33.3-103, **amend**
19 the introductory portion and (33) as follows:

20 **38-33.3-103. Definitions.** As used in the declaration and bylaws
21 of an association, unless specifically provided otherwise or unless the
22 context otherwise requires, and in this ~~article~~ ARTICLE 33.3:

23 (33) "Xeriscape" means the combined application of the seven
24 principles of landscape planning and design, soil analysis and
25 improvement, hydro zoning of plants, use of practical turf areas, uses of
26 mulches, irrigation efficiency, and appropriate maintenance under section
27 ~~38-35.7-107 (1)(a)(III)(A)~~ 38-47-102 (1)(a)(II)(A).

1 **SECTION 6. Act subject to petition - effective date -**
2 **applicability.** (1) This act takes effect at 12:01 a.m. on the day following
3 the expiration of the ninety-day period after final adjournment of the
4 general assembly; except that, if a referendum petition is filed pursuant
5 to section 1 (3) of article V of the state constitution against this act or an
6 item, section, or part of this act within such period, then the act, item,
7 section, or part will not take effect unless approved by the people at the
8 general election to be held in November 2022 and, in such case, will take
9 effect on the date of the official declaration of the vote thereon by the
10 governor.
11 (2) This act applies to conduct occurring on or after the applicable
12 effective date of this act.