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 Energy & Environment

Senate Committees

Transportation & Energy

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

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.

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

future installation of the necessary wiring or plumbing for such systems.

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

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-2- HB22-1218

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

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

(3) Repealed.

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

(5) Repealed.

- (6) (4) Nothing in this section shall preclude PRECLUDES a person that builds a new single-family detached residence from:
- (a) Subjecting solar photovoltaic electrical system upgrades to the same terms and conditions as other upgrades, including but not limited to charges related to upgrades, deposits required for upgrades, deadlines,

-3- HB22-1218

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	(II) (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

-4- HB22-1218

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

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

- (A) Xeriscape: To include the seven principles of xeriscape that provide a comprehensive approach for conserving water;
 - (B) Water budgeting: To include either a water allotment by the

-5- HB22-1218

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 (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

-6- HB22-1218

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

subassemblies.

- 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
- 8 (2) Nothing in this section precludes a person that builds a new single-family detached residence from:
 - (a) Subjecting water-efficient fixture and appliance upgrades to the same terms and conditions as other upgrades, including charges related to upgrades, deposits required for upgrades, deadlines, and construction timelines;
 - (b) Selecting the contractors that will complete the installation of the selected options; or
 - (c) Stipulating in the purchase agreement or sales contract that water-efficient fixtures and appliances are based on technology available at the time of installation, such upgrades may not support all water-efficient fixtures or appliances installed at a future date, and the person that builds a new single-family detached residence is not liable for any additional upgrades, retrofits, or other alterations to the residence that may be necessary to accommodate water-efficient fixtures or appliances installed at a future date.
 - (3) This section does not apply to unoccupied homes serving as sales inventory or model homes.
 - (4) The upgrades described in paragraph (a) of subsection (1) SUBSECTION (1)(a) of this section shall MUST not contravene state or local

-7- HB22-1218

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

in which the electrical system has been substantially installed before a

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-8- HB22-1218

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

-9- HB22-1218

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

-10- HB22-1218

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
2.7	PROJECT

-11- HB22-1218

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 $625\mathrm{of}$ 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.

-12- HB22-1218

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:

-13- HB22-1218

1	12-120-418. Electric vehicle charging requirements for large
2	buildings - rules - continuing education. (1) AN ARCHITECT SHALL
3	${\tt COMPLYWITHSECTION38-47-104WHENPLANNING,DRAFTINGPLANSFOR,}$
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).

-14- HB22-1218

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

effective date of this act.

-15- HB22-1218