

CHAPTER 37

PUBLIC UTILITIES

HOUSE BILL 10-1001

BY REPRESENTATIVE(S) Tyler, Apuan, Court, Ferrandino, Fischer, Frangas, Gagliardi, Hullinghorst, Kagan, Kefalas, Labuda, Levy, McCann, Merrifield, Middleton, Miklosi, Pace, Pommer, Rice, Ryden, Scanlan, Schafer S., Soper, Todd, Vigil, Carroll T., Benefield, Kerr A., Solano;
 also SENATOR(S) Schwartz and Whitehead, Bacon, Boyd, Carroll M., Foster, Gibbs, Heath, Hudak, Johnston, Keller, Morse, Newell, Romer, Shaffer B., Steadman, Tochtrop, Williams.

AN ACT

CONCERNING INCENTIVES FOR THE INSTALLATION OF NEW DISTRIBUTED RENEWABLE ENERGY GENERATION FACILITIES IN COLORADO, AND, IN CONNECTION THEREWITH, INCREASING THE TARGET PERCENTAGES UNDER THE ELECTRIC UTILITY PORTFOLIO STANDARD TO ENCOURAGE COLORADO UTILITIES TO GENERATE THREE PERCENT OF THEIR RETAIL ELECTRICITY SALES FROM DISTRIBUTED RENEWABLE SOURCES BY THE YEAR 2020, ADOPTING STANDARDS FOR THE INSTALLATION OF DISTRIBUTED SOLAR ELECTRIC GENERATION EQUIPMENT, AND MAKING AN APPROPRIATION THEREFOR.

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

SECTION 1. The introductory portion to 40-2-124 (1) and 40-2-124 (1) (a), (1) (c) (I), (1) (c) (II), (1) (c) (III), (1) (c) (IV), and (1) (c) (VIII), Colorado Revised Statutes, are amended to read:

40-2-124. Renewable energy standard - definitions - net metering - legislative declaration. (1) Each provider of retail electric service in the state of Colorado, other than municipally owned utilities that serve forty thousand customers or ~~less~~ FEWER, shall be considered a qualifying retail utility. Each qualifying retail utility, with the exception of cooperative electric associations that have voted to exempt themselves from commission jurisdiction pursuant to section 40-9.5-104 and municipally owned utilities, shall be subject to the rules established under this article by the commission. No additional regulatory authority of the commission other than that specifically contained in this section is provided or implied. In accordance with article 4 of title 24, C.R.S., ~~on or before October 1, 2007,~~ the commission shall revise or clarify existing rules to establish the following:

- (a) Definitions of eligible energy resources that can be used to meet the

Capital letters indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.

standards. "Eligible energy resources" means recycled energy and renewable energy resources. ~~"Renewable energy resources" means solar, wind, geothermal, biomass, new hydroelectricity with a nameplate rating of ten megawatts or less, and hydroelectricity in existence on January 1, 2005, with a nameplate rating of thirty megawatts or less.~~ The commission shall determine, following an evidentiary hearing, the extent to which such electric generation technologies utilized in an optional pricing program may be used to comply with this standard. A fuel cell using hydrogen derived from an eligible energy resource is also an eligible electric generation technology. Fossil and nuclear fuels and their derivatives are not eligible energy resources. For purposes of this section:

(I) "Biomass" means:

(A) Nontoxic plant matter consisting of agricultural crops or their byproducts, urban wood waste, mill residue, slash, or brush;

(B) Animal wastes and products of animal wastes; or

(C) Methane produced at landfills or as a by-product of the treatment of wastewater residuals.

(II) "DISTRIBUTED RENEWABLE ELECTRIC GENERATION" OR "DISTRIBUTED GENERATION" MEANS:

(A) RETAIL DISTRIBUTED GENERATION; AND

(B) WHOLESALE DISTRIBUTED GENERATION.

~~(H)~~ (III) "Recycled energy" means energy produced by a generation unit with a nameplate capacity of not more than fifteen megawatts that converts the otherwise lost energy from the heat from exhaust stacks or pipes to electricity and that does not combust additional fossil fuel. "Recycled energy" does not include energy produced by any system that uses energy, lost or otherwise, from a process whose primary purpose is the generation of electricity, including, without limitation, any process involving engine-driven generation or pumped hydroelectricity generation.

(IV) "RENEWABLE ENERGY RESOURCES" MEANS SOLAR, WIND, GEOTHERMAL, BIOMASS, NEW HYDROELECTRICITY WITH A NAMEPLATE RATING OF TEN MEGAWATTS OR LESS, AND HYDROELECTRICITY IN EXISTENCE ON JANUARY 1, 2005, WITH A NAMEPLATE RATING OF THIRTY MEGAWATTS OR LESS.

(V) "RETAIL DISTRIBUTED GENERATION" MEANS A RENEWABLE ENERGY RESOURCE THAT IS LOCATED ON THE SITE OF A CUSTOMER'S FACILITIES AND IS INTERCONNECTED ON THE CUSTOMER'S SIDE OF THE UTILITY METER. IN ADDITION, RETAIL DISTRIBUTED GENERATION SHALL PROVIDE ELECTRIC ENERGY PRIMARILY TO SERVE THE CUSTOMER'S LOAD AND SHALL BE SIZED TO SUPPLY NO MORE THAN ONE HUNDRED TWENTY PERCENT OF THE AVERAGE ANNUAL CONSUMPTION OF ELECTRICITY BY THE CUSTOMER AT THAT SITE. FOR PURPOSES OF THIS SUBPARAGRAPH (V), THE CUSTOMER'S "SITE" INCLUDES ALL CONTIGUOUS PROPERTY OWNED OR LEASED BY THE CUSTOMER WITHOUT REGARD TO INTERRUPTIONS IN CONTIGUITY CAUSED BY EASEMENTS, PUBLIC THOROUGHFARES, TRANSPORTATION

RIGHTS-OF-WAY, OR UTILITY RIGHTS-OF-WAY.

(VI) "WHOLESALE DISTRIBUTED GENERATION" MEANS A RENEWABLE ENERGY RESOURCE IN COLORADO WITH A NAMEPLATE RATING OF THIRTY MEGAWATTS OR LESS AND THAT DOES NOT QUALIFY AS RETAIL DISTRIBUTED GENERATION.

(c) Electric resource standards:

(I) Except as provided in subparagraph (V) of this paragraph (c), the electric resource standards shall require each qualifying retail utility to generate, or cause to be generated, electricity from eligible energy resources in the following minimum amounts:

(A) Three percent of its retail electricity sales in Colorado for the year 2007;

(B) Five percent of its retail electricity sales in Colorado for the years 2008 through 2010;

(C) ~~Ten~~ TWELVE percent of its retail electricity sales in Colorado for the years 2011 through 2014, WITH DISTRIBUTED GENERATION EQUALING AT LEAST ONE PERCENT OF ITS RETAIL ELECTRICITY SALES IN 2011 AND 2012 AND ONE AND ONE-FOURTH PERCENT OF ITS RETAIL ELECTRICITY SALES IN 2013 AND 2014;

(D) ~~Fifteen~~ TWENTY percent of its retail electricity sales in Colorado for the years 2015 through 2019, WITH DISTRIBUTED GENERATION EQUALING AT LEAST ONE AND THREE-FOURTHS PERCENT OF ITS RETAIL ELECTRICITY SALES IN 2015 AND 2016 AND TWO PERCENT OF ITS RETAIL ELECTRICITY SALES IN 2017, 2018, AND 2019; and

(E) ~~Twenty~~ THIRTY percent of its retail electricity sales in Colorado for the years 2020 and thereafter, WITH DISTRIBUTED GENERATION EQUALING AT LEAST THREE PERCENT OF ITS RETAIL ELECTRICITY SALES.

(II) (A) Of the amounts OF DISTRIBUTED GENERATION in SUB-SUBPARAGRAPHS (C), (D), AND (E) OF subparagraph (I) of this paragraph (c), at least ~~four percent~~ shall be derived from solar electric generation technologies. ~~At least one-half of this four percent shall be derived from solar electric technologies located on-site at customers' facilities~~ RETAIL DISTRIBUTED GENERATION.

(B) Solar generating equipment located on-site at customers' facilities shall be sized to supply no more than one hundred twenty percent of the average annual consumption of electricity by the consumer at that site. For purposes of this sub-subparagraph (B), the consumer's "site" shall include all contiguous property owned or leased by the consumer, without regard to interruptions in contiguity caused by easements, public thoroughfares, transportation rights-of-way, or utility rights-of-way.

(C) DISTRIBUTED GENERATION AMOUNTS IN THE ELECTRIC RESOURCE STANDARD FOR THE YEARS 2015 AND THEREAFTER MAY BE CHANGED BY THE COMMISSION FOR THE PERIOD AFTER DECEMBER 31, 2014, IF THE COMMISSION FINDS, UPON APPLICATION BY A QUALIFYING RETAIL UTILITY, THAT THESE PERCENTAGE REQUIREMENTS ARE NO LONGER IN THE PUBLIC INTEREST. IF SUCH A FINDING IS

MADE, THE COMMISSION MAY SET THE LOWER DISTRIBUTED GENERATION REQUIREMENTS, IF ANY, THAT SHALL APPLY AFTER DECEMBER 31, 2014. IF THE COMMISSION FINDS THAT THE PUBLIC INTEREST REQUIRES AN INCREASE IN THE DISTRIBUTED GENERATION REQUIREMENTS, THE COMMISSION SHALL REPORT ITS FINDINGS TO THE GENERAL ASSEMBLY.

(III) Each kilowatt-hour of electricity generated from eligible energy resources in Colorado, OTHER THAN RETAIL DISTRIBUTED GENERATION, shall be counted as one and one-quarter kilowatt-hours for the purposes of compliance with this standard.

(IV) To the extent that the ability of a qualifying retail utility to acquire eligible energy resources is limited by a requirements contract with a wholesale electric supplier, the qualifying retail utility shall acquire the maximum amount allowed by the contract. For any shortfalls to the amounts established by the commission pursuant to subparagraph (I) of this paragraph (c), the qualifying retail utility shall acquire an equivalent amount of either renewable energy credits; documented and verified energy savings through energy efficiency and conservation programs; or a combination of both. Any contract entered into by a qualifying retail utility after December 1, 2004, shall not conflict with this ~~article~~ SECTION.

(VIII) ~~Each kilowatt-hour of~~ Electricity from eligible energy resources ~~may take advantage of~~ SHALL BE SUBJECT TO only one of the methods for counting kilowatt-hours set forth in subparagraphs (III), (VI), and (VII) of this paragraph (c).

SECTION 2. The introductory portion to 40-2-124 (1) and 40-2-124 (1) (e) (I), Colorado Revised Statutes, are amended, and the said 40-2-124 (1) (e) is further amended BY THE ADDITION OF A NEW SUBPARAGRAPH, to read:

40-2-124. Renewable energy standard - definitions - net metering - legislative declaration. (1) Each provider of retail electric service in the state of Colorado, other than municipally owned utilities that serve forty thousand customers or ~~less~~ FEWER, shall be considered a qualifying retail utility. Each qualifying retail utility, with the exception of cooperative electric associations that have voted to exempt themselves from commission jurisdiction pursuant to section 40-9.5-104 and municipally owned utilities, shall be subject to the rules established under this article by the commission. No additional regulatory authority of the commission other than that specifically contained in this section is provided or implied. In accordance with article 4 of title 24, C.R.S., ~~on or before October 1, 2007~~, the commission shall revise or clarify existing rules to establish the following:

(e) A standard rebate offer program, under which:

(I) (A) Each qualifying retail utility, except for cooperative electric associations and municipally owned utilities, shall make available to its retail electricity customers a standard rebate offer of a ~~minimum of two dollars~~ SPECIFIED AMOUNT per watt for the installation of eligible solar electric generation on customers' premises up to a maximum of one hundred kilowatts per installation.

(B) ~~Such~~ THE STANDARD REBATE offer shall allow the customer's retail electricity consumption to be offset by the solar electricity generated. To the extent that solar

electricity generation exceeds the customer's consumption during a billing month, such excess electricity shall be carried forward as a credit to the following month's consumption. To the extent that solar electricity generation exceeds the customer's consumption during a calendar year, the customer shall be reimbursed by the qualifying retail utility at its average hourly incremental cost of electricity supply over the prior twelve-month period unless the customer makes a one-time election, in writing, to request that the excess electricity be carried forward as a credit from month to month indefinitely until the customer terminates service with the qualifying retail utility, at which time no payment shall be required from the qualifying retail utility for any remaining excess electricity supplied by the customer. The qualifying retail utility shall not apply unreasonably burdensome interconnection requirements in connection with this standard rebate offer. Electricity generated under this program shall be eligible for the qualifying retail utility's compliance with this article.

(I.5) THE AMOUNT OF THE STANDARD REBATE OFFER SHALL BE TWO DOLLARS PER WATT; EXCEPT THAT THE COMMISSION MAY SET THE REBATE AT A LOWER AMOUNT IF THE COMMISSION DETERMINES, BASED UPON A QUALIFYING RETAIL UTILITY'S RENEWABLE RESOURCE PLAN OR APPLICATION, THAT MARKET CHANGES SUPPORT THE CHANGE.

SECTION 3. The introductory portion to 40-2-124 (1) and 40-2-124 (1) (f) (IV), (1) (g) (I), (1) (g) (III), (1) (g) (IV), and (1) (i), Colorado Revised Statutes, are amended, and the said 40-2-124 (1) (f) is further amended BY THE ADDITION OF A NEW SUBPARAGRAPH, to read:

40-2-124. Renewable energy standard - definitions - net metering - legislative declaration. (1) Each provider of retail electric service in the state of Colorado, other than municipally owned utilities that serve forty thousand customers or ~~less~~ FEWER, shall be considered a qualifying retail utility. Each qualifying retail utility, with the exception of cooperative electric associations that have voted to exempt themselves from commission jurisdiction pursuant to section 40-9.5-104 and municipally owned utilities, shall be subject to the rules established under this article by the commission. No additional regulatory authority of the commission other than that specifically contained in this section is provided or implied. In accordance with article 4 of title 24, C.R.S., ~~on or before October 1, 2007~~, the commission shall revise or clarify existing rules to establish the following:

(f) Policies for the recovery of costs incurred with respect to these standards for qualifying retail utilities that are subject to rate regulation by the commission. These policies shall provide incentives to qualifying retail utilities to invest in eligible energy resources in the state of Colorado. Such policies shall include:

(IV) Considering, when the qualifying retail utility applies for a certificate of public convenience and necessity under section 40-5-101, rate recovery mechanisms that provide for earlier and timely recovery of costs prudently and reasonably incurred by the qualifying retail utility in developing, constructing, and operating the eligible energy resource, including:

(A) Rate adjustment clauses until the costs of the eligible energy resource can be included in the utility's base rates; and

(B) A current return on the utility's capital expenditures during construction at the utility's weighted average cost of capital, including its most recently authorized rate of return on equity, during the construction, startup, and operation phases of the eligible energy resource;

(VII) A REQUIREMENT THAT ALL DISTRIBUTED RENEWABLE ELECTRIC GENERATION FACILITIES WITH A NAMEPLATE RATING OF ONE MEGAWATT OR MORE BE REGISTERED WITH A RENEWABLE ENERGY GENERATION INFORMATION TRACKING SYSTEM DESIGNATED BY THE COMMISSION.

(g) Retail rate impact rule:

(I) (A) Except as otherwise provided in subparagraph (IV) of this paragraph (g), for each qualifying utility, the commission shall establish a maximum retail rate impact for this section of two percent of the total electric bill annually for each customer. The retail rate impact shall be determined net of new alternative sources of electricity supply from noneligible energy resources that are reasonably available at the time of the determination.

(B) If the retail rate impact does not exceed the maximum impact permitted by this paragraph (g), the qualifying utility may acquire more than the minimum amount of eligible energy resources and renewable energy credits required by this section. AT THE REQUEST OF THE QUALIFYING RETAIL UTILITY AND UPON THE COMMISSION'S APPROVAL, THE QUALIFYING RETAIL UTILITY MAY ADVANCE FUNDS FROM YEAR TO YEAR TO AUGMENT THE AMOUNTS COLLECTED FROM RETAIL CUSTOMERS UNDER THIS PARAGRAPH (g) FOR THE ACQUISITION OF MORE ELIGIBLE ENERGY RESOURCES. SUCH FUNDS SHALL BE REPAID FROM FUTURE RETAIL RATE COLLECTIONS, WITH INTEREST CALCULATED AT THE QUALIFYING RETAIL UTILITY'S AFTER-TAX WEIGHTED AVERAGE COST OF CAPITAL, SO LONG AS THE RETAIL RATE IMPACT DOES NOT EXCEED TWO PERCENT OF THE TOTAL ANNUAL ELECTRIC BILL FOR EACH CUSTOMER.

(C) AS BETWEEN RESIDENTIAL AND NONRESIDENTIAL RETAIL DISTRIBUTED GENERATION, THE COMMISSION SHALL DIRECT THE UTILITY TO ALLOCATE ITS EXPENDITURES ACCORDING TO THE PROPORTION OF THE UTILITY'S REVENUE DERIVED FROM EACH OF THESE CUSTOMER GROUPS; EXCEPT THAT THE UTILITY MAY ACQUIRE RETAIL DISTRIBUTED GENERATION AT LEVELS THAT DIFFER FROM THESE GROUP ALLOCATIONS BASED UPON MARKET RESPONSE TO THE UTILITY'S PROGRAMS.

(III) Subject to the maximum retail rate impact permitted by this paragraph (g), the qualifying retail utility shall have the discretion to determine, in a nondiscriminatory manner, the price it will pay for renewable energy credits from on-site customer facilities that are no larger than ~~one~~ FIVE hundred kilowatts.

(IV) (A) For cooperative electric associations, the maximum retail rate impact for this section is one percent of the total electric bill annually for each customer.

(B) NOTWITHSTANDING SUBPARAGRAPH (I) OF THIS PARAGRAPH (g), THE COMMISSION MAY ENSURE THAT CUSTOMERS WHO INSTALL DISTRIBUTED GENERATION CONTINUE TO CONTRIBUTE, IN A NONDISCRIMINATORY FASHION, THEIR FAIR SHARE TO THEIR UTILITY'S RENEWABLE ENERGY PROGRAM FUND OR

EQUIVALENT RENEWABLE ENERGY SUPPORT MECHANISM EVEN IF SUCH CONTRIBUTION RESULTS IN A CHARGE THAT EXCEEDS TWO PERCENT OF SUCH CUSTOMERS' ANNUAL ELECTRIC BILLS.

(i) Rules necessary for the administration of this article including enforcement mechanisms necessary to ensure that each qualifying retail utility complies with this standard, and provisions governing the imposition of administrative penalties assessed after a hearing held by the commission pursuant to section 40-6-109. The commission shall exempt a qualifying retail utility from administrative penalties for an individual compliance year if the utility demonstrates that the retail rate impact cap described in paragraph (g) of this subsection (1) has been reached and the utility has not achieved full compliance with paragraph (c) of this subsection (1). THE QUALIFYING RETAIL UTILITY'S ACTIONS UNDER AN APPROVED COMPLIANCE PLAN SHALL CARRY A REBUTTABLE PRESUMPTION OF PRUDENCE. Under no circumstances shall the costs of administrative penalties be recovered from Colorado retail customers.

SECTION 4. Article 2 of title 40, Colorado Revised Statutes, is amended BY THE ADDITION OF THE FOLLOWING NEW SECTIONS to read:

40-2-128. Solar photovoltaic installations - supervision by certified practitioners - qualifications of electrical contractors. (1) EFFECTIVE JANUARY 1, 2012, FOR ALL PHOTOVOLTAIC INSTALLATIONS FUNDED WHOLLY OR PARTIALLY THROUGH RATEPAYER-FUNDED INCENTIVES AS PART OF THE RENEWABLE ENERGY STANDARD ADJUSTMENT ALLOWED UNDER SECTION 40-2-124:

(a) (I) THE PERFORMANCE OF ALL PHOTOVOLTAIC ELECTRICAL WORK, THE INSTALLATION OF PHOTOVOLTAIC MODULES, AND THE INSTALLATION OF PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT SHALL BE SUBJECT TO ON-SITE SUPERVISION BY A CERTIFIED PHOTOVOLTAIC ENERGY PRACTITIONER AS DESIGNATED BY THE NORTH AMERICAN BOARD OF CERTIFIED ENERGY PRACTITIONERS (NABCEP) OR ANOTHER NATIONALLY RECOGNIZED PROFESSIONAL ORGANIZATION DESIGNATED BY THE COLORADO STATE ELECTRICAL BOARD BY RULE. UPON THE INITIAL APPLICATION FOR FUNDING OR IN THE INITIAL CONTRACT PROPOSAL, THE APPLICANT SHALL ASSUME RESPONSIBILITY FOR EMPLOYING OR CONTRACTING WITH ONE OR MORE CERTIFIED ENERGY PRACTITIONERS TO SUPERVISE THE INSTALLATION AND AS NECESSARY TO MAINTAIN THE THREE-TO-ONE RATIO REQUIRED BY PARAGRAPHS (b) AND (c) OF THIS SUBSECTION (1), INCLUDING DURING ANY OFF-SITE, PRE-INSTALLATION ASSEMBLY. APPROVAL OF THE PAYMENT OF ANY INCENTIVES FOR THE WORK SHALL BE CONDITIONED UPON THE APPLICANT'S SUPPLYING THE NAME AND CERTIFICATION NUMBER OF EACH CERTIFIED ENERGY PRACTITIONER WHO ACTUALLY PROVIDED ON-SITE SUPERVISION OR WAS PRESENT TO MAINTAIN THE THREE-TO-ONE RATIO REQUIRED BY PARAGRAPHS (c) AND (d) OF THIS SUBSECTION (1).

(II) NEITHER THE COMMISSION NOR THE UTILITY SHALL HAVE RESPONSIBILITY FOR MONITORING OR ENFORCING COMPLIANCE WITH THIS SECTION. IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT TO OBTAIN THE INFORMATION REQUIRED BY SUBPARAGRAPH (I) OF THIS PARAGRAPH (a), AND IT SHALL BE THE RESPONSIBILITY OF THE QUALIFYING RETAIL UTILITY TO OBTAIN FROM THE APPLICANT AND RETAIN, FOR AT LEAST ONE YEAR AFTER COMPLETION OF THE INSTALLATION, COPIES OF ALL

DOCUMENTATION SUBMITTED BY THE APPLICANT IN CONNECTION WITH THE INSTALLATION.

(b) ALL WORK PERFORMED ON THE ALTERNATING-CURRENT SIDE OF THE INVERTER WILL BE PERFORMED BY AN ELECTRICAL CONTRACTOR WHO EMPLOYS A LICENSED JOURNEYMAN ELECTRICIAN OR A LICENSED RESIDENTIAL WIREMAN WHO WILL PERFORM THE WORK. ALL ELECTRICAL WORK THAT PERTAINS TO ARTICLE 23 OF TITLE 12, C.R.S., WILL BE PERFORMED BY AN ELECTRICAL APPRENTICE REGISTERED WITH THE APPROPRIATE STATE REGULATORY AGENCY, A LICENSED JOURNEYMAN ELECTRICIAN, OR A LICENSED RESIDENTIAL WIREMAN. THE APPROPRIATE RATIO OF NO LESS THAN ONE JOURNEYMAN OR RESIDENTIAL WIREMAN FOR EVERY THREE ELECTRICAL APPRENTICES WILL BE MAINTAINED.

(c) ON A SYSTEM WITH A DIRECT CURRENT DESIGN CAPACITY OF MORE THAN FIVE HUNDRED KILOWATTS:

(I) DURING ANY PHOTOVOLTAIC ELECTRICAL WORK, THE RATIO OF THE NUMBER OF PERSONS WHO ARE ASSISTING WITH THE WORK AND WHO ARE NEITHER LICENSED ELECTRICIANS NOR REGISTERED ELECTRICAL APPRENTICES TO THE NUMBER OF PERSONS WHO ARE CERTIFIED AS PROVIDED IN PARAGRAPH (a) OF THIS SUBSECTION (1) SHALL NEVER EXCEED THREE TO ONE, AND A PERSON WHO IS BOTH LICENSED AND CERTIFIED SHALL NOT COUNT DOUBLE FOR PURPOSES OF MEASURING THIS RATIO; AND

(II) THERE SHALL BE AT LEAST ONE ON-SITE SUPERVISOR WHO IS CERTIFIED AS PROVIDED IN PARAGRAPH (a) OF THIS SUBSECTION (1) DURING THE FOLLOWING STAGES; EXCEPT THAT, IF AT ANY TIME DURING ANY OF THE FOLLOWING STAGES, THERE ARE MORE THAN TWELVE PERSONS ON THE WORK SITE WHO ARE NEITHER LICENSED ELECTRICIANS NOR REGISTERED ELECTRICAL APPRENTICES AND WHO ARE NOT CERTIFIED AS PROVIDED IN PARAGRAPH (a) OF THIS SUBSECTION (1), THERE SHALL BE AT LEAST TWO PERSONS WHO ARE CERTIFIED AS PROVIDED IN PARAGRAPH (a) OF THIS SUBSECTION (1) PRESENT ON THE WORK SITE AND PROVIDING DIRECT SUPERVISION:

(A) THE INSTALLATION OF PHOTOVOLTAIC MODULES;

(B) THE INSTALLATION OF PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT; AND

(C) ANY PHOTOVOLTAIC ELECTRICAL WORK.

(d) ON A SYSTEM WITH A DIRECT CURRENT DESIGN CAPACITY OF FIVE HUNDRED KILOWATTS OR LESS:

(I) THE RATIO OF THE NUMBER OF PERSONS WHO ARE ASSISTING WITH THE WORK AND WHO ARE NEITHER LICENSED ELECTRICIANS NOR REGISTERED ELECTRICAL APPRENTICES TO THE NUMBER OF PERSONS WHO ARE CERTIFIED AS PROVIDED IN PARAGRAPH (a) OF THIS SUBSECTION (1) SHALL NEVER EXCEED THREE TO ONE, AND A PERSON WHO IS BOTH LICENSED AND CERTIFIED SHALL NOT COUNT DOUBLE FOR PURPOSES OF MEASURING THIS RATIO, DURING THE FOLLOWING STAGES:

(A) THE INSTALLATION OF PHOTOVOLTAIC MODULES;

(B) THE INSTALLATION OF PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT; AND

(C) ANY PHOTOVOLTAIC ELECTRICAL WORK; AND

(II) THERE SHALL BE, AT ALL TIMES, AT LEAST ONE ON-SITE SUPERVISOR WHO IS CERTIFIED AS PROVIDED IN PARAGRAPH (a) OF THIS SUBSECTION (1).

(2) AS USED IN THIS SECTION, UNLESS THE CONTEXT OTHERWISE REQUIRES:

(a) (I) "PHOTOVOLTAIC ELECTRICAL WORK" MEANS WIRING, GROUNDING, OR REPAIRING ELECTRICAL APPARATUS AND EQUIPMENT IN A PHOTOVOLTAIC DISTRIBUTED GENERATION SYSTEM.

(II) "PHOTOVOLTAIC ELECTRICAL WORK" INCLUDES THE PRE-INSTALLATION ASSEMBLY OF PHOTOVOLTAIC MODULES TO PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT FOR INSTALLATION ON-SITE.

(III) "PHOTOVOLTAIC ELECTRICAL WORK" DOES NOT INCLUDE SITE PREPARATION, TRENCHING OR EXCAVATING, HAULING, OR OTHER WORK THAT IS NOT SPECIFICALLY DESCRIBED IN SUBPARAGRAPH (I) OR (II) OF THIS PARAGRAPH (a).

(b) "PHOTOVOLTAIC MODULE" MEANS THE MODULE OR PANEL THAT GENERATES ELECTRICITY THROUGH A PHOTOVOLTAIC PROCESS.

(c) "PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT" MEANS THE RACKING, MOUNTING, APPARATUS, EQUIPMENT, OR STRUCTURE THAT PHYSICALLY SUPPORTS AND SECURES ONE OR MORE PHOTOVOLTAIC MODULES IN PLACE OR TO A ROOF, WALL, FOUNDATION, OR PEDESTAL.

40-2-129. New resource acquisitions - factors in determination - local employment - "best value" metrics. WHEN EVALUATING ELECTRIC RESOURCE ACQUISITIONS, THE COMMISSION SHALL CONSIDER, ON A QUALITATIVE BASIS, FACTORS THAT AFFECT EMPLOYMENT AND THE LONG-TERM ECONOMIC VIABILITY OF COLORADO COMMUNITIES. TO THIS END, THE COMMISSION SHALL REQUIRE UTILITIES TO REQUEST THE FOLLOWING INFORMATION REGARDING "BEST VALUE" EMPLOYMENT METRICS: THE AVAILABILITY OF TRAINING PROGRAMS, INCLUDING TRAINING THROUGH APPRENTICESHIP PROGRAMS REGISTERED WITH THE UNITED STATES DEPARTMENT OF LABOR, OFFICE OF APPRENTICESHIP AND TRAINING; EMPLOYMENT OF COLORADO WORKERS AS COMPARED TO IMPORTATION OF OUT-OF-STATE WORKERS; LONG-TERM CAREER OPPORTUNITIES; AND INDUSTRY-STANDARD WAGES, HEALTH CARE, AND PENSION BENEFITS. WHEN A UTILITY PROPOSES TO CONSTRUCT NEW FACILITIES OF ITS OWN, THE UTILITY SHALL SUPPLY SIMILAR INFORMATION TO THE COMMISSION.

SECTION 5. Article 38.5 of title 24, Colorado Revised Statutes, is amended BY THE ADDITION OF A NEW SECTION to read:

24-38.5-104. Photovoltaic installer qualifications - cooperation with department of regulatory agencies. (1) EFFECTIVE JULY 1, 2011, ALL PHOTOVOLTAIC INSTALLATIONS FUNDED WHOLLY OR PARTIALLY THROUGH STATE OR FEDERAL GRANTS, INCLUDING GRANTS UNDER THE FEDERAL "AMERICAN

RECOVERY AND REINVESTMENT ACT OF 2009", PUB.L. 111-5, SHALL BE SUBJECT TO THE REQUIREMENTS SET FORTH IN SECTION 40-2-128, C.R.S.

(2) IF THE GOVERNOR, BY EXECUTIVE ORDER, APPOINTS A COMMITTEE TO STUDY THE DESIRABILITY OF CREDENTIALING OF SOLAR INSTALLERS, THE COMMITTEE, OR THE GOVERNOR'S ENERGY OFFICE ON THE COMMITTEE'S BEHALF, IS SPECIFICALLY AUTHORIZED TO SUBMIT A PROPOSAL FOR SUCH CREDENTIALING TO THE DEPARTMENT OF REGULATORY AGENCIES PURSUANT TO SECTION 24-34-104.1 (2). IN ADDITION, THE COMMITTEE MAY STUDY AND MAKE RECOMMENDATIONS CONCERNING THE SCOPE-OF-WORK PROVISIONS OF SECTION 40-2-128, C.R.S., SPECIFICALLY INCLUDING ENFORCEMENT OF THE SUPERVISION AND WORKER RATIO REQUIREMENTS OF SECTION 40-2-128 (1) (c) AND (1) (d), C.R.S.

SECTION 6. 24-38.7-104, Colorado Revised Statutes, is amended BY THE ADDITION OF A NEW SUBSECTION to read:

24-38.7-104. Program administrator - training and certification of contractors - reporting. (2.5) (a) EFFECTIVE JULY 1, 2011, THE ISSUANCE OF A CLEAN ENERGY LOAN UNDER THIS ARTICLE FOR THE INSTALLATION OF SOLAR PHOTOVOLTAIC EQUIPMENT SHALL BE CONDITIONED UPON THE BORROWER'S CERTIFICATION THAT:

(I) THE PERFORMANCE OF ALL PHOTOVOLTAIC ELECTRICAL WORK, THE INSTALLATION OF PHOTOVOLTAIC MODULES, AND THE INSTALLATION OF PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT SHALL BE SUBJECT TO ON-SITE SUPERVISION BY A CERTIFIED PHOTOVOLTAIC ENERGY PRACTITIONER AS DESIGNATED BY THE NORTH AMERICAN BOARD OF CERTIFIED ENERGY PRACTITIONERS (NABCEP) OR ANOTHER NATIONALLY RECOGNIZED PROFESSIONAL ORGANIZATION DESIGNATED BY THE COLORADO STATE ELECTRICAL BOARD BY RULE. UPON THE INITIAL APPLICATION FOR FUNDING OR IN THE INITIAL CONTRACT PROPOSAL, THE APPLICANT SHALL ASSUME RESPONSIBILITY FOR EMPLOYING OR CONTRACTING WITH ONE OR MORE CERTIFIED ENERGY PRACTITIONERS TO SUPERVISE THE INSTALLATION AND AS NECESSARY TO MAINTAIN THE THREE-TO-ONE RATIO REQUIRED BY SUBPARAGRAPHS (II) AND (III) OF THIS PARAGRAPH (a), INCLUDING DURING ANY OFF-SITE, PRE-INSTALLATION ASSEMBLY. FINAL PAYMENT FOR THE WORK SHALL BE CONDITIONED UPON THE APPLICANT'S SUPPLYING THE NAME AND CERTIFICATION NUMBER OF EACH CERTIFIED ENERGY PRACTITIONER WHO ACTUALLY PROVIDED ON-SITE SUPERVISION OR WAS PRESENT TO MAINTAIN THE THREE-TO-ONE RATIO REQUIRED BY SUBPARAGRAPHS (III) AND (IV) OF THIS SUBSECTION (2.5).

(II) ALL WORK PERFORMED ON THE ALTERNATING-CURRENT SIDE OF THE INVERTER WILL BE PERFORMED BY AN ELECTRICAL CONTRACTOR WHO EMPLOYS A LICENSED JOURNEYMAN ELECTRICIAN OR A LICENSED RESIDENTIAL WIREMAN WHO WILL PERFORM THE WORK. ALL ELECTRICAL WORK THAT PERTAINS TO ARTICLE 23 OF TITLE 12, C.R.S., WILL BE PERFORMED BY AN ELECTRICAL APPRENTICE REGISTERED WITH THE APPROPRIATE STATE REGULATORY AGENCY, A LICENSED JOURNEYMAN ELECTRICIAN, OR A LICENSED RESIDENTIAL WIREMAN. THE APPROPRIATE RATIO OF NO LESS THAN ONE JOURNEYMAN OR RESIDENTIAL WIREMAN FOR EVERY THREE ELECTRICAL APPRENTICES WILL BE MAINTAINED.

(III) ON A SYSTEM WITH A DIRECT CURRENT DESIGN CAPACITY OF MORE THAN

FIVE HUNDRED KILOWATTS:

(A) DURING ANY PHOTOVOLTAIC ELECTRICAL WORK, THE RATIO OF THE NUMBER OF PERSONS WHO ARE ASSISTING WITH THE WORK AND WHO ARE NEITHER LICENSED ELECTRICIANS NOR REGISTERED ELECTRICAL APPRENTICES TO THE NUMBER OF PERSONS WHO ARE CERTIFIED AS PROVIDED IN SUBPARAGRAPH (I) OF THIS PARAGRAPH (a) SHALL NEVER EXCEED THREE TO ONE, AND A PERSON WHO IS BOTH LICENSED AND CERTIFIED SHALL NOT COUNT DOUBLE FOR PURPOSES OF MEASURING THIS RATIO; AND

(B) THERE SHALL BE AT LEAST ONE ON-SITE SUPERVISOR WHO IS CERTIFIED AS PROVIDED IN SUBPARAGRAPH (I) OF THIS PARAGRAPH (a) DURING THE INSTALLATION OF PHOTOVOLTAIC MODULES, THE INSTALLATION OF PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT, AND ANY PHOTOVOLTAIC ELECTRICAL WORK; EXCEPT THAT, IF AT ANY TIME DURING ANY OF THESE STAGES, THERE ARE MORE THAN TWELVE PERSONS ON THE WORK SITE WHO ARE NEITHER LICENSED ELECTRICIANS NOR REGISTERED ELECTRICAL APPRENTICES AND WHO ARE NOT CERTIFIED AS PROVIDED IN SUBPARAGRAPH (I) OF THIS PARAGRAPH (a), THERE SHALL BE AT LEAST TWO PERSONS WHO ARE CERTIFIED AS PROVIDED IN SUBPARAGRAPH (I) OF THIS PARAGRAPH (a) PRESENT ON THE WORK SITE AND PROVIDING DIRECT SUPERVISION.

(IV) ON A SYSTEM WITH A DIRECT CURRENT DESIGN CAPACITY OF FIVE HUNDRED KILOWATTS OR LESS:

(A) DURING THE INSTALLATION OF PHOTOVOLTAIC MODULES, THE INSTALLATION OF PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT, AND ANY PHOTOVOLTAIC ELECTRICAL WORK, THE RATIO OF THE NUMBER OF PERSONS WHO ARE ASSISTING WITH THE WORK AND WHO ARE NEITHER LICENSED ELECTRICIANS NOR REGISTERED ELECTRICAL APPRENTICES TO THE NUMBER OF PERSONS WHO ARE CERTIFIED AS PROVIDED IN PARAGRAPH (a) OF THIS SUBSECTION (2.5) SHALL NEVER EXCEED THREE TO ONE, AND A PERSON WHO IS BOTH LICENSED AND CERTIFIED SHALL NOT COUNT DOUBLE FOR PURPOSES OF MEASURING THIS RATIO; AND

(B) THERE SHALL BE, AT ALL TIMES, AT LEAST ONE ON-SITE SUPERVISOR WHO IS CERTIFIED AS PROVIDED IN SUBPARAGRAPH (I) OF THIS PARAGRAPH (a).

(b) AS USED IN THIS SUBSECTION (2.5), THE TERMS "PHOTOVOLTAIC ELECTRICAL WORK" AND "PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT" SHALL HAVE THE MEANINGS SET FORTH IN SECTION 40-2-128, C.R.S.

SECTION 7. 40-2-109.5, Colorado Revised Statutes, is amended BY THE ADDITION OF A NEW SUBSECTION to read:

40-2-109.5. Incentives for distributed generation - definition. (3) EFFECTIVE JANUARY 1, 2012, ALL PHOTOVOLTAIC INSTALLATIONS FUNDED WHOLLY OR PARTIALLY THROUGH FINANCIAL INCENTIVES UNDER THIS SECTION SHALL BE SUBJECT TO THE REQUIREMENTS SET FORTH IN SECTION 40-2-128.

SECTION 8. Appropriation. In addition to any other appropriation, there is hereby appropriated, out of any moneys in the fixed utility fund created in section 40-2-114, Colorado Revised Statutes, not otherwise appropriated, to the department

of regulatory agencies, for allocation to the public utilities commission, for the fiscal year beginning July 1, 2010, the sum of fifty-one thousand four hundred forty dollars (\$51,440) cash funds and 0.5 FTE, or so much thereof as may be necessary, for the implementation of this act.

SECTION 9. Act subject to petition - effective date. This act shall take effect at 12:01 a.m. on the day following the expiration of the ninety-day period after final adjournment of the general assembly (August 11, 2010, if adjournment sine die is on May 12, 2010); 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 shall not take effect unless approved by the people at the general election to be held in November 2010 and shall take effect on the date of the official declaration of the vote thereon by the governor.

Approved: March 22, 2010