

Second Regular Session  
Sixty-seventh General Assembly  
STATE OF COLORADO

**PREAMENDED**

*This Unofficial Version Includes Committee  
Amendments Not Yet Adopted on Second Reading*

LLS NO. 10-0385.03 Duane Gall

**HOUSE BILL 10-1001**

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**HOUSE SPONSORSHIP**

Tyler,

**SENATE SPONSORSHIP**

Schwartz and Whitehead,

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**House Committees**

Transportation & Energy  
Appropriations

**Senate Committees**

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**A BILL FOR AN ACT**

101      **CONCERNING INCENTIVES FOR THE INSTALLATION OF NEW**  
102            **DISTRIBUTED RENEWABLE ENERGY GENERATION FACILITIES IN**  
103            **COLORADO, AND, IN CONNECTION THEREWITH, INCREASING THE**  
104            **TARGET PERCENTAGES UNDER THE ELECTRIC UTILITY**  
105            **PORTFOLIO STANDARD TO ENCOURAGE COLORADO UTILITIES TO**  
106            **GENERATE THREE PERCENT OF THEIR RETAIL ELECTRICITY**  
107            **SALES FROM DISTRIBUTED RENEWABLE SOURCES BY THE YEAR**  
108            **2020, AND ADOPTING STANDARDS FOR THE INSTALLATION OF**  
109            **DISTRIBUTED SOLAR ELECTRIC GENERATION EQUIPMENT.**

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**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*

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

*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://www.leg.state.co.us/billsummaries>.)*

Existing law creates a renewable energy portfolio standard (RPS) under which certain electric utilities are required to generate an increasing percentage of their electricity from renewable sources, in a series of increments from 3% in 2007 to 20% in 2020 and thereafter. The bill boosts these RPS percentages to achieve 30% renewable generation by 2020 and requires a portion of the RPS to be met through a subset of renewable generation, "distributed generation" (DG), which does not require additional transmission facilities to connect to the grid.

**Section 1** of the bill directs the Colorado public utilities commission (PUC) to consider employment and economic factors when evaluating proposed new electric generation resource acquisitions by utilities, including the use of "best value" employment metrics such as the availability of training programs and the wages, health benefits, and pensions that workers will earn.

**Section 2** defines terms, increases the RPS percentages, and, within each RPS percentage, replaces an existing carve-out for solar generation with a larger carve-out for DG (which includes customer-sited solar generation). Section 2 also directs the PUC to monitor compliance with the DG carve-out by issuing a new series of renewable energy credits (RECs) and by redesignating RECs already earned, when appropriate. Finally, section 2 limits the existing 1.25 multiplier for in-state renewable electric generation to utility-scale projects only.

**Section 3** gives the PUC discretion to incrementally reduce the existing standard rebate offer (which utilities must pay as an incentive for new customer-sited renewable generation facilities such as rooftop solar panels) from \$2 to some lesser amount if the PUC finds that the market no longer requires this level of subsidy. In addition, section 3 requires that the rebate offer for DG systems decline based on market conditions, as determined by the PUC, but allows the PUC to adopt performance-based incentives for DG systems.

**Section 4** allows a utility to develop and own, as part of its rate base, up to 50% of the DG capacity it acquires from power purchase agreements and new construction if the cost is reasonably comparable to current market cost. Section 4 also requires the PUC to allow a utility cost recovery for the construction of new DG on a par with the cost recovery allowed for new coal-fired facilities.

For large DG facilities of one megawatt or more, section 4 directs the PUC to require registration with a regional system for tracking renewable energy generation. Effective January 1, 2012, sections 4 and 7 require new DG installations funded wholly or partly through ratepayer incentives and rebates to be installed by licensed electricians or

apprentices, where appropriate, and supervised by persons who are certified by the North American board of certified energy practitioners (NABCEP) or another nationally recognized organization designated by the PUC. Finally, section 4 specifies that DG program expenditures be allocated 10% to wholesale and 90% to retail, with residential and nonresidential retail receiving a proportionate share based on the utility's customer profile. The utility may retain its costs of administering DG programs, not to exceed 5% annually.

**Section 5** expressly authorizes any committee formed by executive order for the purpose of studying the desirability of regulating solar installers to submit a request for sunrise review by the department of regulatory agencies under the state's sunrise and sunset law.

**Sections 5 and 6** require that for projects funded by federal or state grants or by clean energy loans made through the state's clean energy finance program, the licensing and NABCEP requirements apply beginning July 1, 2011.

**Section 8** defines special terms used in sections 4 to 7.

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

2 **SECTION 1.** The introductory portion to 40-2-124 (1) and  
3 40-2-124 (1) (a), (1) (c) (I), (1) (c) (II), (1) (c) (III), (1) (c) (IV), and (1)  
4 (c) (VIII), Colorado Revised Statutes, are amended to read:

5 **40-2-124. Renewable energy standard - definitions - net**  
6 **metering - legislative declaration.** (1) Each provider of retail electric  
7 service in the state of Colorado, other than municipally owned utilities  
8 that serve forty thousand customers or ~~less~~ FEWER, shall be considered a  
9 qualifying retail utility. Each qualifying retail utility, with the exception  
10 of cooperative electric associations that have voted to exempt themselves  
11 from commission jurisdiction pursuant to section 40-9.5-104 and  
12 municipally owned utilities, shall be subject to the rules established under  
13 this article by the commission. No additional regulatory authority of the  
14 commission other than that specifically contained in this section is  
15 provided or implied. In accordance with article 4 of title 24, C.R.S., ~~on~~  
16 ~~or before October 1, 2007~~, the commission shall revise or clarify existing

1 rules to establish the following:

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

14 (I) "Biomass" means:

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

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

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

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

22 (A) RETAIL DISTRIBUTED GENERATION; AND

23 (B) WHOLESALE DISTRIBUTED GENERATION.

24 ~~(H)~~ (III) "Recycled energy" means energy produced by a  
25 generation unit with a nameplate capacity of not more than fifteen  
26 megawatts that converts the otherwise lost energy from the heat from  
27 exhaust stacks or pipes to electricity and that does not combust additional

1 fossil fuel. "Recycled energy" does not include energy produced by any  
2 system that uses energy, lost or otherwise, from a process whose primary  
3 purpose is the generation of electricity, including, without limitation, any  
4 process involving engine-driven generation or pumped hydroelectricity  
5 generation.

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

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

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

27 (c) Electric resource standards:

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

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

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

9 (C) ~~Ten~~ TWELVE percent of its retail electricity sales in Colorado  
10 for the years 2011 through 2014, WITH DISTRIBUTED GENERATION  
11 EQUALING AT LEAST ONE PERCENT OF ITS RETAIL ELECTRICITY SALES IN  
12 2011 AND 2012 AND ONE AND ONE-FOURTH PERCENT OF ITS RETAIL  
13 ELECTRICITY SALES IN 2013 AND 2014;

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

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

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

1 facilities RETAIL DISTRIBUTED GENERATION.

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

10 (C) DISTRIBUTED GENERATION AMOUNTS IN THE ELECTRIC  
11 RESOURCE STANDARD FOR THE YEARS 2015 AND THEREAFTER MAY BE  
12 CHANGED BY THE COMMISSION FOR THE PERIOD AFTER DECEMBER 31,  
13 2014, IF THE COMMISSION FINDS, UPON APPLICATION BY A QUALIFYING  
14 RETAIL UTILITY, THAT THESE PERCENTAGE REQUIREMENTS ARE NO LONGER  
15 IN THE PUBLIC INTEREST. IF SUCH A FINDING IS MADE, THE COMMISSION  
16 MAY SET THE LOWER DISTRIBUTED GENERATION REQUIREMENTS, IF ANY,  
17 THAT SHALL APPLY AFTER DECEMBER 31, 2014. IF THE COMMISSION FINDS  
18 THAT THE PUBLIC INTEREST REQUIRES AN INCREASE IN THE DISTRIBUTED  
19 GENERATION REQUIREMENTS, THE COMMISSION SHALL REPORT ITS  
20 FINDINGS TO THE GENERAL ASSEMBLY.

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

25 (IV) To the extent that the ability of a qualifying retail utility to  
26 acquire eligible energy resources is limited by a requirements contract  
27 with a wholesale electric supplier, the qualifying retail utility shall acquire

1 the maximum amount allowed by the contract. For any shortfalls to the  
2 amounts established by the commission pursuant to subparagraph (I) of  
3 this paragraph (c), the qualifying retail utility shall acquire an equivalent  
4 amount of either renewable energy credits; documented and verified  
5 energy savings through energy efficiency and conservation programs; or  
6 a combination of both. Any contract entered into by a qualifying retail  
7 utility after December 1, 2004, shall not conflict with this ~~article~~ SECTION.

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

12 **SECTION 2.** The introductory portion to 40-2-124 (1) and  
13 40-2-124 (1) (e) (I), Colorado Revised Statutes, are amended, and the said  
14 40-2-124 (1) (e) is further amended BY THE ADDITION OF THE  
15 FOLLOWING NEW SUBPARAGRAPHS, to read:

16 **40-2-124. Renewable energy standard - definitions - net**  
17 **metering - legislative declaration.** (1) Each provider of retail electric  
18 service in the state of Colorado, other than municipally owned utilities  
19 that serve forty thousand customers or ~~less~~ FEWER, shall be considered a  
20 qualifying retail utility. Each qualifying retail utility, with the exception  
21 of cooperative electric associations that have voted to exempt themselves  
22 from commission jurisdiction pursuant to section 40-9.5-104 and  
23 municipally owned utilities, shall be subject to the rules established under  
24 this article by the commission. No additional regulatory authority of the  
25 commission other than that specifically contained in this section is  
26 provided or implied. In accordance with article 4 of title 24, C.R.S., ~~on~~  
27 ~~or before October 1, 2007~~, the commission shall revise or clarify existing



1 rules to establish the following:

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

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

9 (B) ~~Such~~ THE STANDARD REBATE offer shall allow the customer's  
10 retail electricity consumption to be offset by the solar electricity  
11 generated. To the extent that solar electricity generation exceeds the  
12 customer's consumption during a billing month, such excess electricity  
13 shall be carried forward as a credit to the following month's consumption.  
14 To the extent that solar electricity generation exceeds the customer's  
15 consumption during a calendar year, the customer shall be reimbursed by  
16 the qualifying retail utility at its average hourly incremental cost of  
17 electricity supply over the prior twelve-month period unless the customer  
18 makes a one-time election, in writing, to request that the excess electricity  
19 be carried forward as a credit from month to month indefinitely until the  
20 customer terminates service with the qualifying retail utility, at which  
21 time no payment shall be required from the qualifying retail utility for any  
22 remaining excess electricity supplied by the customer. The qualifying  
23 retail utility shall not apply unreasonably burdensome interconnection  
24 requirements in connection with this standard rebate offer. Electricity  
25 generated under this program shall be eligible for the qualifying retail  
26 utility's compliance with this article.

27 (I.5) THE AMOUNT OF THE STANDARD REBATE OFFER SHALL BE

1 TWO DOLLARS PER WATT; EXCEPT THAT THE COMMISSION MAY SET THE  
2 REBATE AT A LOWER AMOUNT IF THE COMMISSION DETERMINES, BASED  
3 UPON A QUALIFYING RETAIL UTILITY'S RENEWABLE RESOURCE PLAN OR  
4 APPLICATION, THAT MARKET CHANGES SUPPORT THE CHANGE.

5 **SECTION 3.** The introductory portion to 40-2-124 (1) and  
6 40-2-124 (1) (f) (IV), (1) (g) (I), (1) (g) (III), (1) (g) (IV), and (1) (i),  
7 Colorado Revised Statutes, are amended, and the said 40-2-124 (1) (f) is  
8 further amended BY THE ADDITION OF A NEW SUBPARAGRAPH,  
9 to read:

10 **40-2-124. Renewable energy standard - definitions - net**  
11 **metering - legislative declaration.** (1) Each provider of retail electric  
12 service in the state of Colorado, other than municipally owned utilities  
13 that serve forty thousand customers or less FEWER, shall be considered a  
14 qualifying retail utility. Each qualifying retail utility, with the exception  
15 of cooperative electric associations that have voted to exempt themselves  
16 from commission jurisdiction pursuant to section 40-9.5-104 and  
17 municipally owned utilities, shall be subject to the rules established under  
18 this article by the commission. No additional regulatory authority of the  
19 commission other than that specifically contained in this section is  
20 provided or implied. In accordance with article 4 of title 24, C.R.S., ~~on~~  
21 ~~or before October 1, 2007~~, the commission shall revise or clarify existing  
22 rules to establish the following:

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

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

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

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

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

18 (g) Retail rate impact rule:

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

26 (B) If the retail rate impact does not exceed the maximum impact  
27 permitted by this paragraph (g), the qualifying utility may acquire more

1 than the minimum amount of eligible energy resources and renewable  
2 energy credits required by this section. AT THE REQUEST OF THE  
3 QUALIFYING RETAIL UTILITY AND UPON THE COMMISSION'S APPROVAL, THE  
4 QUALIFYING RETAIL UTILITY MAY ADVANCE FUNDS FROM YEAR TO YEAR  
5 TO AUGMENT THE AMOUNTS COLLECTED FROM RETAIL CUSTOMERS UNDER  
6 THIS PARAGRAPH (g) FOR THE ACQUISITION OF MORE ELIGIBLE ENERGY  
7 RESOURCES. SUCH FUNDS SHALL BE REPAID FROM FUTURE RETAIL RATE  
8 COLLECTIONS, WITH INTEREST CALCULATED AT THE QUALIFYING RETAIL  
9 UTILITY'S AFTER-TAX WEIGHTED AVERAGE COST OF CAPITAL, SO LONG AS  
10 THE RETAIL RATE IMPACT DOES NOT EXCEED TWO PERCENT OF THE TOTAL  
11 ANNUAL ELECTRIC BILL FOR EACH CUSTOMER.

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

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

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

27 (B) NOTWITHSTANDING SUBPARAGRAPH (I) OF THIS PARAGRAPH

1 (g), THE COMMISSION MAY ENSURE THAT CUSTOMERS WHO INSTALL  
2 DISTRIBUTED GENERATION CONTINUE TO CONTRIBUTE, IN A  
3 NONDISCRIMINATORY FASHION, THEIR FAIR SHARE TO THEIR UTILITY'S  
4 RENEWABLE ENERGY PROGRAM FUND OR EQUIVALENT RENEWABLE  
5 ENERGY SUPPORT MECHANISM EVEN IF SUCH CONTRIBUTION RESULTS IN A  
6 CHARGE THAT EXCEEDS TWO PERCENT OF SUCH CUSTOMERS' ANNUAL  
7 ELECTRIC BILLS.

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

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

24 **40-2-128. Solar photovoltaic installations - supervision by**  
25 **certified practitioners - qualifications of electrical contractors.**  
26 (1) EFFECTIVE JANUARY 1, 2012, FOR ALL PHOTOVOLTAIC INSTALLATIONS  
27 FUNDED WHOLLY OR PARTIALLY THROUGH RATEPAYER-FUNDED

1 INCENTIVES AS PART OF THE RENEWABLE ENERGY STANDARD ADJUSTMENT  
2 ALLOWED UNDER SECTION 40-2-124:

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

23 (II) NEITHER THE COMMISSION NOR THE UTILITY SHALL HAVE  
24 RESPONSIBILITY FOR MONITORING OR ENFORCING COMPLIANCE WITH THIS  
25 SECTION. IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT TO OBTAIN  
26 THE INFORMATION REQUIRED BY SUBPARAGRAPH (I) OF THIS PARAGRAPH  
27 (a), AND IT SHALL BE THE RESPONSIBILITY OF THE QUALIFYING RETAIL

1 UTILITY TO OBTAIN FROM THE APPLICANT AND RETAIN, FOR AT LEAST ONE  
2 YEAR AFTER COMPLETION OF THE INSTALLATION, COPIES OF ALL  
3 DOCUMENTATION SUBMITTED BY THE APPLICANT IN CONNECTION WITH  
4 THE INSTALLATION.

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

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

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

25 (II) THERE SHALL BE AT LEAST ONE ON-SITE SUPERVISOR WHO IS  
26 CERTIFIED AS PROVIDED IN PARAGRAPH (a) OF THIS SUBSECTION (1)  
27 DURING THE FOLLOWING STAGES; EXCEPT THAT, IF AT ANY TIME DURING

1 ANY OF THE FOLLOWING STAGES, THERE ARE MORE THAN TWELVE PERSONS  
2 ON THE WORK SITE WHO ARE NEITHER LICENSED ELECTRICIANS NOR  
3 REGISTERED ELECTRICAL APPRENTICES AND WHO ARE NOT CERTIFIED AS  
4 PROVIDED IN PARAGRAPH (a) OF THIS SUBSECTION (1), THERE SHALL BE AT  
5 LEAST TWO PERSONS WHO ARE CERTIFIED AS PROVIDED IN PARAGRAPH (a)  
6 OF THIS SUBSECTION (1) PRESENT ON THE WORK SITE AND PROVIDING  
7 DIRECT SUPERVISION:

- 8 (A) THE INSTALLATION OF PHOTOVOLTAIC MODULES;
- 9 (B) THE INSTALLATION OF PHOTOVOLTAIC MODULE MOUNTING  
10 EQUIPMENT; AND
- 11 (C) ANY PHOTOVOLTAIC ELECTRICAL WORK.

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

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

- 21 (A) THE INSTALLATION OF PHOTOVOLTAIC MODULES;
- 22 (B) THE INSTALLATION OF PHOTOVOLTAIC MODULE MOUNTING  
23 EQUIPMENT; AND
- 24 (C) ANY PHOTOVOLTAIC ELECTRICAL WORK; AND

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



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

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

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

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

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

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

20 **40-2-129. New resource acquisitions - factors in determination**  
21 **- local employment - "best value" metrics.** WHEN EVALUATING  
22 ELECTRIC RESOURCE ACQUISITIONS, THE COMMISSION SHALL CONSIDER, ON  
23 A QUALITATIVE BASIS, FACTORS THAT AFFECT EMPLOYMENT AND THE  
24 LONG-TERM ECONOMIC VIABILITY OF COLORADO COMMUNITIES. TO THIS  
25 END, THE COMMISSION SHALL REQUIRE UTILITIES TO REQUEST THE  
26 FOLLOWING INFORMATION REGARDING "BEST VALUE" EMPLOYMENT  
27 METRICS: THE AVAILABILITY OF TRAINING PROGRAMS, INCLUDING

1 TRAINING THROUGH APPRENTICESHIP PROGRAMS REGISTERED WITH THE  
2 UNITED STATES DEPARTMENT OF LABOR, OFFICE OF APPRENTICESHIP AND  
3 TRAINING; EMPLOYMENT OF COLORADO WORKERS AS COMPARED TO  
4 IMPORTATION OF OUT-OF-STATE WORKERS; LONG-TERM CAREER  
5 OPPORTUNITIES; AND INDUSTRY- STANDARD WAGES, HEALTH CARE, AND  
6 PENSION BENEFITS. WHEN A UTILITY PROPOSES TO CONSTRUCT NEW  
7 FACILITIES OF ITS OWN, THE UTILITY SHALL SUPPLY SIMILAR INFORMATION  
8 TO THE COMMISSION.

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

11 **24-38.5-104. Photovoltaic installer qualifications - cooperation**  
12 **with department of regulatory agencies.** (1) EFFECTIVE JULY 1, 2011,  
13 ALL PHOTOVOLTAIC INSTALLATIONS FUNDED WHOLLY OR PARTIALLY  
14 THROUGH STATE OR FEDERAL GRANTS, INCLUDING GRANTS UNDER THE  
15 FEDERAL "AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009",  
16 PUB.L. 111-5, SHALL BE SUBJECT TO THE REQUIREMENTS SET FORTH IN  
17 SECTION 40-2-128, C.R.S.

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

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

3           **24-38.7-104. Program administrator - training and**  
4 **certification of contractors - reporting.** (2.5) (a) EFFECTIVE JULY 1,  
5 2011, THE ISSUANCE OF A CLEAN ENERGY LOAN UNDER THIS ARTICLE FOR  
6 THE INSTALLATION OF SOLAR PHOTOVOLTAIC EQUIPMENT SHALL BE  
7 CONDITIONED UPON THE BORROWER'S CERTIFICATION THAT:

8           (I) THE PERFORMANCE OF ALL PHOTOVOLTAIC ELECTRICAL WORK,  
9 THE INSTALLATION OF PHOTOVOLTAIC MODULES, AND THE INSTALLATION  
10 OF PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT SHALL BE SUBJECT TO  
11 ON-SITE SUPERVISION BY A CERTIFIED PHOTOVOLTAIC ENERGY  
12 PRACTITIONER AS DESIGNATED BY THE NORTH AMERICAN BOARD OF  
13 CERTIFIED ENERGY PRACTITIONERS (NABCEP) OR ANOTHER NATIONALLY  
14 RECOGNIZED PROFESSIONAL ORGANIZATION DESIGNATED BY THE  
15 COLORADO STATE ELECTRICAL BOARD BY RULE. UPON THE INITIAL  
16 APPLICATION FOR FUNDING OR IN THE INITIAL CONTRACT PROPOSAL, THE  
17 APPLICANT SHALL ASSUME RESPONSIBILITY FOR EMPLOYING OR  
18 CONTRACTING WITH ONE OR MORE CERTIFIED ENERGY PRACTITIONERS TO  
19 SUPERVISE THE INSTALLATION AND AS NECESSARY TO MAINTAIN THE  
20 THREE-TO-ONE RATIO REQUIRED BY SUBPARAGRAPHS (II) AND (III) OF THIS  
21 PARAGRAPH (a), INCLUDING DURING ANY OFF-SITE, PRE-INSTALLATION  
22 ASSEMBLY. FINAL PAYMENT FOR THE WORK SHALL BE CONDITIONED UPON  
23 THE APPLICANT'S SUPPLYING THE NAME AND CERTIFICATION NUMBER OF  
24 EACH CERTIFIED ENERGY PRACTITIONER WHO ACTUALLY PROVIDED  
25 ON-SITE SUPERVISION OR WAS PRESENT TO MAINTAIN THE THREE-TO-ONE  
26 RATIO REQUIRED BY SUBPARAGRAPHS (III) AND (IV) OF THIS SUBSECTION  
27 (1).

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

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

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

21 (B) THERE SHALL BE AT LEAST ONE ON-SITE SUPERVISOR WHO IS  
22 CERTIFIED AS PROVIDED IN SUBPARAGRAPH (I) OF THIS PARAGRAPH (a)  
23 DURING THE INSTALLATION OF PHOTOVOLTAIC MODULES, THE  
24 INSTALLATION OF PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT, AND  
25 ANY PHOTOVOLTAIC ELECTRICAL WORK; EXCEPT THAT, IF AT ANY TIME  
26 DURING ANY OF THESE STAGES, THERE ARE MORE THAN TWELVE PERSONS  
27 ON THE WORK SITE WHO ARE NEITHER LICENSED ELECTRICIANS NOR

1 REGISTERED ELECTRICAL APPRENTICES AND WHO ARE NOT CERTIFIED AS  
2 PROVIDED IN SUBPARAGRAPH (I) OF THIS PARAGRAPH (a), THERE SHALL BE  
3 AT LEAST TWO PERSONS WHO ARE CERTIFIED AS PROVIDED IN  
4 SUBPARAGRAPH (I) OF THIS PARAGRAPH (a) PRESENT ON THE WORK SITE  
5 AND PROVIDING DIRECT SUPERVISION:

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

8 (A) DURING THE INSTALLATION OF PHOTOVOLTAIC MODULES, THE  
9 INSTALLATION OF PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT, AND  
10 ANY PHOTOVOLTAIC ELECTRICAL WORK, THE RATIO OF THE NUMBER OF  
11 PERSONS WHO ARE ASSISTING WITH THE WORK AND WHO ARE NEITHER  
12 LICENSED ELECTRICIANS NOR REGISTERED ELECTRICAL APPRENTICES TO  
13 THE NUMBER OF PERSONS WHO ARE CERTIFIED AS PROVIDED IN PARAGRAPH  
14 (a) OF THIS SUBSECTION (1) SHALL NEVER EXCEED THREE TO ONE, AND A  
15 PERSON WHO IS BOTH LICENSED AND CERTIFIED SHALL NOT COUNT DOUBLE  
16 FOR PURPOSES OF MEASURING THIS RATIO; AND

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

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

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

26 **40-2-109.5. Incentives for distributed generation - definition.**

27 (3) EFFECTIVE JANUARY 1, 2012, ALL PHOTOVOLTAIC INSTALLATIONS

1 FUNDED WHOLLY OR PARTIALLY THROUGH FINANCIAL INCENTIVES UNDER  
2 THIS SECTION SHALL BE SUBJECT TO THE REQUIREMENTS SET FORTH IN  
3 SECTION 40-2-128.

4 **SECTION 8. Act subject to petition - effective date.** This act  
5 shall take effect at 12:01 a.m. on the day following the expiration of the  
6 ninety-day period after final adjournment of the general assembly (August  
7 11, 2010, if adjournment sine die is on May 12, 2010); except that, if a  
8 referendum petition is filed pursuant to section 1 (3) of article V of the  
9 state constitution against this act or an item, section, or part of this act  
10 within such period, then the act, item, section, or part shall not take effect  
11 unless approved by the people at the general election to be held in  
12 November 2010 and shall take effect on the date of the official  
13 declaration of the vote thereon by the governor.