

**Second Regular Session  
Sixty-seventh General Assembly  
STATE OF COLORADO**

**REREVISED**

*This Version Includes All Amendments  
Adopted in the Second House*

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**

Local Government and Energy  
Appropriations

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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,        ADOPTING STANDARDS FOR THE INSTALLATION OF**  
109             **DISTRIBUTED SOLAR ELECTRIC GENERATION EQUIPMENT, AND**  
110             **MAKING AN APPROPRIATION THEREFOR.**

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**Bill Summary**

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.*

SENATE  
3rd Reading Unamended  
March 5, 2010

SENATE  
Amended 2nd Reading  
March 4, 2010

HOUSE  
3rd Reading Unamended  
February 12, 2010

HOUSE  
Amended 2nd Reading  
February 11, 2010

*(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://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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*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

1 provided or implied. In accordance with article 4 of title 24, C.R.S., ~~on~~  
2 ~~or before October 1, 2007~~, the commission shall revise or clarify existing  
3 rules to establish the following:

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

16 (I) "Biomass" means:

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

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

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

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

24 (A) RETAIL DISTRIBUTED GENERATION; AND

25 (B) WHOLESALE DISTRIBUTED GENERATION.

26 ~~(H)~~ (III) "Recycled energy" means energy produced by a  
27 generation unit with a nameplate capacity of not more than fifteen

1 megawatts that converts the otherwise lost energy from the heat from  
2 exhaust stacks or pipes to electricity and that does not combust additional  
3 fossil fuel. "Recycled energy" does not include energy produced by any  
4 system that uses energy, lost or otherwise, from a process whose primary  
5 purpose is the generation of electricity, including, without limitation, any  
6 process involving engine-driven generation or pumped hydroelectricity  
7 generation.

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

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

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

1     RETAIL DISTRIBUTED GENERATION.

2             (c) Electric resource standards:

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

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

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

11            (C) ~~Ten~~ TWELVE percent of its retail electricity sales in Colorado  
12    for the years 2011 through 2014, WITH DISTRIBUTED GENERATION  
13    EQUALING AT LEAST ONE PERCENT OF ITS RETAIL ELECTRICITY SALES IN  
14    2011 AND 2012 AND ONE AND ONE-FOURTH PERCENT OF ITS RETAIL  
15    ELECTRICITY SALES IN 2013 AND 2014;

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

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

25            (II) (A) Of the amounts OF DISTRIBUTED GENERATION in  
26    SUB-SUBPARAGRAPHS (C), (D), AND (E) OF subparagraph (I) of this  
27    paragraph (c), at least ~~four percent shall be derived from solar electric~~

1 ~~generation technologies. At least one-half of this four percent shall be~~  
2 ~~derived from solar electric technologies located on-site at customers'~~  
3 ~~facilities~~ RETAIL DISTRIBUTED GENERATION.

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

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

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

27 (IV) To the extent that the ability of a qualifying retail utility to

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

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

14 **SECTION 2.** The introductory portion to 40-2-124 (1) and  
15 40-2-124 (1) (e) (I), Colorado Revised Statutes, are amended, and the said  
16 40-2-124 (1) (e) is further amended BY THE ADDITION OF THE  
17 FOLLOWING NEW SUBPARAGRAPHS, to read:

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



1 provided or implied. In accordance with article 4 of title 24, C.R.S., ~~on~~  
2 ~~or before October 1, 2007~~, the commission shall revise or clarify existing  
3 rules to establish the following:

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

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

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

1 utility's compliance with this article.

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

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

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

25 (f) Policies for the recovery of costs incurred with respect to these  
26 standards for qualifying retail utilities that are subject to rate regulation  
27 by the commission. These policies shall provide incentives to qualifying

1 retail utilities to invest in eligible energy resources in the state of  
2 Colorado. Such policies shall include:

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

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

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

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

20 (g) Retail rate impact rule:

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

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

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

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

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

1 for each customer.

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

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

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

26 **40-2-128. Solar photovoltaic installations - supervision by**  
27 **certified practitioners - qualifications of electrical contractors.**

1 (1) EFFECTIVE JANUARY 1, 2012, FOR ALL PHOTOVOLTAIC INSTALLATIONS  
2 FUNDED WHOLLY OR PARTIALLY THROUGH RATEPAYER-FUNDED  
3 INCENTIVES AS PART OF THE RENEWABLE ENERGY STANDARD ADJUSTMENT  
4 ALLOWED UNDER SECTION 40-2-124:

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

25 (II) NEITHER THE COMMISSION NOR THE UTILITY SHALL HAVE  
26 RESPONSIBILITY FOR MONITORING OR ENFORCING COMPLIANCE WITH THIS  
27 SECTION. IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT TO OBTAIN

1 THE INFORMATION REQUIRED BY SUBPARAGRAPH (I) OF THIS PARAGRAPH  
2 (a), AND IT SHALL BE THE RESPONSIBILITY OF THE QUALIFYING RETAIL  
3 UTILITY TO OBTAIN FROM THE APPLICANT AND RETAIN, FOR AT LEAST ONE  
4 YEAR AFTER COMPLETION OF THE INSTALLATION, COPIES OF ALL  
5 DOCUMENTATION SUBMITTED BY THE APPLICANT IN CONNECTION WITH  
6 THE INSTALLATION.

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

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

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

27 (II) THERE SHALL BE AT LEAST ONE ON-SITE SUPERVISOR WHO IS

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

10 (A) THE INSTALLATION OF PHOTOVOLTAIC MODULES;

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

13 (C) ANY PHOTOVOLTAIC ELECTRICAL WORK.

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

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

23 (A) THE INSTALLATION OF PHOTOVOLTAIC MODULES;

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

26 (C) ANY PHOTOVOLTAIC ELECTRICAL WORK; AND

27 (II) THERE SHALL BE, AT ALL TIMES, AT LEAST ONE ON-SITE



1 SUPERVISOR WHO IS CERTIFIED AS PROVIDED IN PARAGRAPH (a) OF THIS  
2 SUBSECTION (1).

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

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

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

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

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

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

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

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

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

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

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

1 SPECIFICALLY INCLUDING ENFORCEMENT OF THE SUPERVISION AND  
2 WORKER RATIO REQUIREMENTS OF SECTION 40-2-128 (1) (c) AND (1) (d).

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

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

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

1 RATIO REQUIRED BY SUBPARAGRAPHS(III) AND (IV) OF THIS SUBSECTION  
2 (1).

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

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

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

23 (B) THERE SHALL BE AT LEAST ONE ON-SITE SUPERVISOR WHO IS  
24 CERTIFIED AS PROVIDED IN SUBPARAGRAPH (I) OF THIS PARAGRAPH (a)  
25 DURING THE INSTALLATION OF PHOTOVOLTAIC MODULES, THE  
26 INSTALLATION OF PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT, AND  
27 ANY PHOTOVOLTAIC ELECTRICAL WORK; EXCEPT THAT, IF AT ANY TIME

1 DURING ANY OF THESE 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 SUBPARAGRAPH (I) OF THIS PARAGRAPH (a), THERE SHALL BE  
5 AT LEAST TWO PERSONS WHO ARE CERTIFIED AS PROVIDED IN  
6 SUBPARAGRAPH (I) OF THIS PARAGRAPH (a) PRESENT ON THE WORK SITE  
7 AND PROVIDING DIRECT SUPERVISION:

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

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

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

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

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

1           **40-2-109.5. Incentives for distributed generation - definition.**

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

6           **SECTION 8. Appropriation.** In addition to any other  
7 appropriation, there is hereby appropriated, out of any moneys in the  
8 fixed utility fund created in section 40-2-114, Colorado Revised Statutes,  
9 not otherwise appropriated, to the department of regulatory agencies, for  
10 allocation to the public utilities commission, for the fiscal year beginning  
11 July 1, 2010, the sum of fifty-one thousand four hundred forty dollars  
12 (\$51,440) cash funds and 0.5 FTE, or so much thereof as may be  
13 necessary, for the implementation of this act.

14           **SECTION 9. Act subject to petition - effective date.** This act  
15 shall take effect at 12:01 a.m. on the day following the expiration of the  
16 ninety-day period after final adjournment of the general assembly (August  
17 11, 2010, if adjournment sine die is on May 12, 2010); except that, if a  
18 referendum petition is filed pursuant to section 1 (3) of article V of the  
19 state constitution against this act or an item, section, or part of this act  
20 within such period, then the act, item, section, or part shall not take effect  
21 unless approved by the people at the general election to be held in  
22 November 2010 and shall take effect on the date of the official  
23 declaration of the vote thereon by the governor.