

Second Regular Session
Sixty-seventh General Assembly
STATE OF COLORADO

INTRODUCED

LLS NO. 10-0385.03 Duane Gall

HOUSE BILL 10-1001

HOUSE SPONSORSHIP

Tyler,

SENATE SPONSORSHIP

(None),

House Committees

Transportation & Energy

Senate Committees

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 FIVE PERCENT OF THEIR RETAIL ELECTRICITY SALES**
107 **FROM DISTRIBUTED RENEWABLE SOURCES BY THE YEAR 2020,**
108 **AND ADOPTING STANDARDS FOR THE INSTALLATION OF**
109 **DISTRIBUTED SOLAR ELECTRIC GENERATION EQUIPMENT.**

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.

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

2 **SECTION 1.** 40-2-123, Colorado Revised Statutes, is amended
3 BY THE ADDITION OF A NEW SUBSECTION to read:

4 **40-2-123. New energy technologies - consideration by**
5 **commission - incentives - demonstration projects - definitions -**
6 **legislative declaration - repeal.** (3.2) WHEN EVALUATING NEW
7 COMPETITIVELY BID RESOURCE ACQUISITIONS UNDER THIS SECTION, THE
8 COMMISSION SHALL CONSIDER FACTORS THAT AFFECT EMPLOYMENT AND
9 THE LONG-TERM ECONOMIC VIABILITY OF COLORADO COMMUNITIES. TO
10 THIS END, THE COMMISSION SHALL REQUIRE UTILITIES TO ANALYZE "BEST
11 VALUE" EMPLOYMENT METRICS SUCH AS THE AVAILABILITY OF TRAINING
12 PROGRAMS, INCLUDING TRAINING BY REGISTERED APPRENTICESHIP
13 PROGRAMS; EMPLOYMENT OF COLORADO WORKERS AS COMPARED TO
14 IMPORTATION OF OUT-OF-STATE WORKERS; LONG-TERM CAREER
15 OPPORTUNITIES; AND INDUSTRY- STANDARD WAGES, HEALTH CARE, AND
16 PENSION BENEFITS.

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

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

17 (a) Definitions of eligible energy resources that can be used to
18 meet the standards. "Eligible energy resources" means recycled energy
19 and renewable energy resources. ~~"Renewable energy resources" means~~
20 ~~solar, wind, geothermal, biomass, new hydroelectricity with a nameplate~~
21 ~~rating of ten megawatts or less, and hydroelectricity in existence on~~
22 ~~January 1, 2005, with a nameplate rating of thirty megawatts or less.~~ The
23 commission shall determine, following an evidentiary hearing, the extent
24 to which such electric generation technologies utilized in an optional
25 pricing program may be used to comply with this standard. A fuel cell
26 using hydrogen derived from an eligible energy resource is also an
27 eligible electric generation technology. Fossil and nuclear fuels and their

1 derivatives are not eligible energy resources. For purposes of this section:

2 (I) "Biomass" means:

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

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

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

8 (II) "DISTRIBUTED RENEWABLE ELECTRIC GENERATION" OR
9 "DISTRIBUTED GENERATION" MEANS RENEWABLE ENERGY RESOURCES
10 FROM WHICH ELECTRICITY CAN BE CONNECTED TO THE EXISTING
11 TRANSMISSION OR DISTRIBUTION GRID WITHOUT THE NEED FOR NEW
12 SUBSTATION OR TRANSMISSION FACILITIES OTHER THAN AN INVERTER,
13 METER, TRANSFORMER, OR ASSOCIATED CABLE CONNECTIONS.

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

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

1 (V) "RETAIL DISTRIBUTED GENERATION" MEANS RENEWABLE
2 ELECTRIC GENERATION THAT IS INTERCONNECTED ON THE CUSTOMER'S
3 SIDE OF THE UTILITY METER AND PROVIDING ELECTRIC ENERGY PRIMARILY
4 TO SERVE THE CUSTOMER'S LOAD.

5 (VI) "UTILITY-SCALE ELIGIBLE ENERGY RESOURCES" MEANS
6 ELIGIBLE ENERGY RESOURCES THAT DO NOT QUALIFY AS EITHER
7 WHOLESALE DISTRIBUTED GENERATION OR RETAIL DISTRIBUTED
8 GENERATION.

9 (VII) "WHOLESALE DISTRIBUTED GENERATION" MEANS
10 RENEWABLE ELECTRIC GENERATION THAT DOES NOT REQUIRE NEW
11 TRANSMISSION FACILITIES, IS CONNECTED DIRECTLY TO THE DISTRIBUTION
12 NETWORK, AND PROVIDES WHOLESALE ENERGY TO AN ELECTRIC UTILITY
13 AT NORMAL DISTRIBUTION VOLTAGES.

14 (c) Electric resource standards:

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

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

21 (B) Five percent of its retail electricity sales in Colorado for the
22 years 2008 through 2010, OF WHICH ONE-TENTH, OR ONE-HALF PERCENT
23 OF TOTAL RETAIL ELECTRICITY SALES, SHALL BE DERIVED FROM
24 DISTRIBUTED RENEWABLE ELECTRIC GENERATION TECHNOLOGIES;

25 (C) ~~Ten~~ TWELVE percent of its retail electricity sales in Colorado
26 for the years 2011 through 2014, OF WHICH TWO PERCENT OF TOTAL
27 RETAIL ELECTRICITY SALES SHALL BE DERIVED FROM DISTRIBUTED

1 RENEWABLE ELECTRIC GENERATION TECHNOLOGIES;

2 (D) ~~Fifteen~~ TWENTY percent of its retail electricity sales in
3 Colorado for the years 2015 through 2019, OF WHICH THREE PERCENT OF
4 TOTAL RETAIL ELECTRICITY SALES SHALL BE DERIVED FROM DISTRIBUTED
5 RENEWABLE ELECTRIC GENERATION TECHNOLOGIES; and

6 (E) ~~Twenty~~ THIRTY percent of its retail electricity sales in
7 Colorado for the years 2020 and thereafter, OF WHICH THREE AND
8 ONE-HALF PERCENT OF TOTAL RETAIL ELECTRICITY SALES SHALL BE
9 DERIVED FROM DISTRIBUTED RENEWABLE ELECTRIC GENERATION
10 TECHNOLOGIES.

11 (II) (A) Of the amounts in subparagraph (I) of this paragraph (c),
12 ~~at least four percent shall be~~ THE PORTION derived from solar
13 DISTRIBUTED RENEWABLE electric generation technologies, ~~At least~~
14 ~~one-half of this four percent shall be derived from solar electric~~
15 ~~technologies located on-site at customers' facilities~~ ALSO REFERRED TO IN
16 THIS SUBPARAGRAPH (II) AS THE "DISTRIBUTED GENERATION CARVE-OUT",
17 SHALL BE MAINTAINED WITHIN EACH SEGMENT OF THE UTILITY'S MARKET,
18 INCLUDING ITS RESIDENTIAL RETAIL MARKET SEGMENT, ITS
19 NONRESIDENTIAL RETAIL MARKET SEGMENT, AND ITS WHOLESALE MARKET
20 SEGMENT, IF ANY. THE COMMISSION SHALL ENCOURAGE AND MONITOR
21 COMPLIANCE WITH THE DISTRIBUTED GENERATION CARVE-OUT WITHIN
22 MARKET SEGMENTS THROUGH THE ISSUANCE OF ONE OR MORE
23 SPECIFICALLY IDENTIFIED CATEGORIES OF TRADABLE RENEWABLE ENERGY
24 CREDITS AS AUTHORIZED BY PARAGRAPH (d) OF THIS SUBSECTION (1). THE
25 COMMISSION MAY RECATEGORIZE A UTILITY'S PREVIOUSLY ACQUIRED
26 RENEWABLE ENERGY CREDITS FOR PURPOSES OF THE DISTRIBUTED
27 GENERATION CARVE-OUT IF THE COMMISSION FINDS THAT THOSE CREDITS

1 REPRESENT ELECTRICITY DERIVED FROM DISTRIBUTED RENEWABLE
2 ELECTRIC GENERATION TECHNOLOGIES.

3 (A.5) THE GENERAL ASSEMBLY FINDS, DETERMINES, AND
4 DECLARES THAT THE PURPOSE OF THE DISTRIBUTED GENERATION
5 CARVE-OUT, AND THE DESIGNATION OF SPECIFIC CATEGORIES OF
6 TRADABLE RENEWABLE ENERGY CREDITS FOR MONITORING COMPLIANCE
7 WITH THE DISTRIBUTED GENERATION CARVE-OUT, IS TO MAXIMIZE AND
8 ACHIEVE ORDERLY ANNUAL GROWTH OF COLORADO'S INSTALLED
9 DISTRIBUTED RENEWABLE ELECTRIC GENERATION CAPACITY WITHIN THE
10 RESIDENTIAL, COMMERCIAL, AND WHOLESALE ENERGY MARKETS WHILE
11 MINIMIZING THE OVERALL COST TO COLORADO'S RATEPAYERS.

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

20 (III) Each kilowatt-hour of electricity generated from
21 UTILITY-SCALE eligible energy resources in Colorado shall be counted as
22 one and one-quarter kilowatt-hours for the purposes of compliance with
23 this standard.

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

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

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

11 **SECTION 3.** The introductory portion to 40-2-124 (1) and
12 40-2-124 (1) (e) (I), Colorado Revised Statutes, are amended, and the said
13 40-2-124 (1) (e) is further amended BY THE ADDITION OF THE
14 FOLLOWING NEW SUBPARAGRAPHS, to read:

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

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

2 (I) Each qualifying retail utility, except for cooperative electric
3 associations and municipally owned utilities, shall make available to its
4 retail electricity customers a standard rebate offer of a ~~minimum of two~~
5 ~~dollars~~ SPECIFIED AMOUNT per watt for the installation of eligible solar
6 electric generation on customers' premises up to a maximum of one
7 hundred kilowatts per installation. Such offer shall allow the customer's
8 retail electricity consumption to be offset by the solar electricity
9 generated. To the extent that solar electricity generation exceeds the
10 customer's consumption during a billing month, such excess electricity
11 shall be carried forward as a credit to the following month's consumption.
12 To the extent that solar electricity generation exceeds the customer's
13 consumption during a calendar year, the customer shall be reimbursed by
14 the qualifying retail utility at its average hourly incremental cost of
15 electricity supply over the prior twelve-month period unless the customer
16 makes a one-time election, in writing, to request that the excess electricity
17 be carried forward as a credit from month to month indefinitely until the
18 customer terminates service with the qualifying retail utility, at which
19 time no payment shall be required from the qualifying retail utility for any
20 remaining excess electricity supplied by the customer. The qualifying
21 retail utility shall not apply unreasonably burdensome interconnection
22 requirements in connection with this standard rebate offer. Electricity
23 generated under this program shall be eligible for the qualifying retail
24 utility's compliance with this article.

25 (I.5) THE AMOUNT OF THE STANDARD REBATE OFFER SHALL BE AT
26 LEAST TWO DOLLARS PER WATT; EXCEPT THAT THE COMMISSION MAY
27 REDUCE THIS AMOUNT INCREMENTALLY IF THE COMMISSION DETERMINES,

1 BASED ON A QUALIFYING RETAIL UTILITY'S RENEWABLE RESOURCE PLAN,
2 THAT THE MARKET NO LONGER REQUIRES THIS LEVEL OF SUBSIDY.

3 (IV) NOTWITHSTANDING SUBPARAGRAPH (I.5) OF THIS PARAGRAPH
4 (e), THE INCENTIVES FOR DISTRIBUTED RENEWABLE ELECTRIC GENERATION
5 SHALL DECLINE AT A RATE DEEMED APPROPRIATE BY THE COMMISSION
6 BASED ON MARKET CONDITIONS. THE COMMISSION SHALL DIRECT
7 QUALIFYING RETAIL UTILITIES TO NOTIFY THEIR CUSTOMERS OF THE
8 SCHEDULE OF DECLINING DISTRIBUTED GENERATION INCENTIVE LEVELS.

9 (V) THE COMMISSION SHALL ENCOURAGE, AND MAY REQUIRE,
10 PERFORMANCE-BASED INCENTIVES FOR DISTRIBUTED GENERATION
11 SYSTEMS OF ALL SIZES BASED UPON THEIR NET OUTPUT. IN DEVELOPING
12 SUCH PERFORMANCE-BASED INCENTIVES, THE COMMISSION MAY:

13 (A) APPLY THE INCENTIVES ONLY TO SPECIFIED MARKET
14 SEGMENTS OR CUSTOMER CLASSES DESIGNATED BY THE COMMISSION;

15 (B) DESIGN THE INCENTIVES SO THAT CUSTOMERS MAY RECEIVE
16 A HIGHER LEVEL OF INCENTIVES OVER THE LIFETIME OF A PROJECT THAN
17 UNDER INCENTIVES BASED ON INSTALLED ELECTRICAL CAPACITY; AND

18 (C) DEVELOP FINANCING OPTIONS THAT HELP OFFSET THE
19 INSTALLATION COSTS OF DISTRIBUTED GENERATION SYSTEMS, SO LONG AS
20 SUCH FINANCING IS ULTIMATELY REPAID IN FULL BY THE CONSUMER OR
21 THROUGH THE APPLICATION OF THE PERFORMANCE-BASED INCENTIVES.

22 **SECTION 4.** The introductory portion to 40-2-124 (1) and
23 40-2-124 (1) (f) (IV), (1) (g) (I), and (1) (g) (III), Colorado Revised
24 Statutes, are amended, and the said 40-2-124 (1) (f) is further amended
25 BY THE ADDITION OF THE FOLLOWING NEW
26 SUBPARAGRAPHS, to read:

27 **40-2-124. Renewable energy standard - definitions - net**

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

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

18 (IV) Considering, when the qualifying retail utility applies for a
19 certificate of public convenience and necessity under section 40-5-101,
20 rate recovery mechanisms that provide for earlier and timely recovery of
21 costs prudently and reasonably incurred by the qualifying retail utility in
22 developing, constructing, and operating the eligible energy resource, ON
23 TERMS NO LESS FAVORABLE TO THE UTILITY THAN THE COMMISSION
24 CURRENTLY ALLOWS FOR THE DEVELOPMENT, CONSTRUCTION, AND
25 OPERATION OF COAL-FIRED ELECTRIC GENERATING FACILITIES, including:

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

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

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

10 (VIII) EFFECTIVE JANUARY 1, 2012, A REQUIREMENT THAT FOR
11 ALL PHOTOVOLTAIC INSTALLATIONS FUNDED WHOLLY OR PARTIALLY
12 THROUGH INCENTIVES UNDER THIS SECTION:

13 (A) THE INSTALLATION OF PHOTOVOLTAIC SYSTEMS, INCLUDING
14 ALL PHOTOVOLTAIC ELECTRICAL WORK AND PHOTOVOLTAIC MODULE
15 MOUNTING EQUIPMENT, WILL BE SUPERVISED BY A PERSON CERTIFIED AS
16 A CERTIFIED ENERGY PRACTITIONER BY THE NORTH AMERICAN BOARD OF
17 CERTIFIED ENERGY PRACTITIONERS (NABCEP) OR ANOTHER NATIONALLY
18 RECOGNIZED PROFESSIONAL ORGANIZATION DESIGNATED BY THE
19 COMMISSION BY RULE. UPON THE INITIAL APPLICATION FOR FUNDING OR
20 IN THE INITIAL CONTRACT PROPOSAL, THE APPLICANT SHALL ASSUME
21 RESPONSIBILITY FOR HIRING A CERTIFIED SUPERVISOR. FINAL PAYMENT
22 FOR THE WORK SHALL BE CONDITIONED UPON THE APPLICANT'S SUPPLYING
23 THE NAME AND CERTIFICATION NUMBER OF THE PERSON OR PERSONS WHO
24 ACTUALLY SUPERVISED THE WORK.

25 (B) ALL ELECTRICAL WORK THAT IS SUBJECT TO THE NATIONAL
26 ELECTRICAL CODE WILL BE PERFORMED BY A LICENSED MASTER
27 ELECTRICIAN, JOURNEYMAN ELECTRICIAN, OR RESIDENTIAL WIREMAN, AS

1 APPROPRIATE, OR A REGISTERED APPRENTICE WORKING UNDER THE
2 SUPERVISION OF SUCH PERSON; AND

3 (C) THE RATIO OF THE NUMBER OF PERSONS WHO ARE PRESENT ON
4 THE PROJECT SITE AND WHO ARE NOT LICENSED OR CERTIFIED AS PROVIDED
5 IN SUB-SUBPARAGRAPH (A) OR (B) OF THIS SUBPARAGRAPH (VIII) TO THE
6 NUMBER OF PERSONS WHO ARE SO LICENSED OR CERTIFIED SHALL NEVER
7 EXCEED THREE TO ONE. A PERSON WHO IS BOTH LICENSED AND CERTIFIED
8 SHALL NOT COUNT DOUBLE FOR PURPOSES OF MEASURING THIS RATIO.

9 (g) Retail rate impact rule:

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

17 (B) If the retail rate impact does not exceed the maximum impact
18 permitted by this paragraph (g), the qualifying utility may acquire more
19 than the minimum amount of eligible energy resources and renewable
20 energy credits required by this section.

21 (C) EFFECTIVE JULY 1, 2010, THE COMMISSION SHALL DIRECT
22 THAT, OF THE AMOUNTS COLLECTED BY A QUALIFYING RETAIL UTILITY FOR
23 THE PURPOSE OF ACQUIRING NEW DISTRIBUTED RENEWABLE ELECTRIC
24 GENERATION AND AFTER DEDUCTION OF ADMINISTRATIVE COSTS, IT SHALL
25 SPEND, AS NEARLY AS PRACTICABLE, TEN PERCENT FOR WHOLESALE
26 DISTRIBUTED GENERATION AND NINETY PERCENT FOR RETAIL DISTRIBUTED
27 GENERATION. WITHIN EACH OF THESE CATEGORIES, AS BETWEEN

1 RESIDENTIAL AND NONRESIDENTIAL RETAIL DISTRIBUTED GENERATION,
2 THE COMMISSION SHALL DIRECT THE UTILITY TO ALLOCATE ITS
3 EXPENDITURES ACCORDING TO THE PROPORTION OF THE UTILITY'S
4 REVENUE DERIVED FROM EACH OF THESE MARKET SEGMENTS. THE
5 UTILITY MAY RETAIN AN AMOUNT REFLECTING ITS COSTS OF
6 ADMINISTRATION, NOT TO EXCEED FIVE PERCENT ANNUALLY, FROM
7 DISTRIBUTED GENERATION PROGRAM FUNDING.

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

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

15 **24-38.5-104. Photovoltaic installer qualifications - cooperation**
16 **with department of regulatory agencies.** (1) EFFECTIVE JULY 1, 2011,
17 ALL PHOTOVOLTAIC INSTALLATIONS FUNDED WHOLLY OR PARTIALLY
18 THROUGH STATE OR FEDERAL GRANTS, INCLUDING GRANTS UNDER THE
19 FEDERAL "AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009",
20 PUB.L. 111-5, SHALL BE SUBJECT TO THE REQUIREMENTS SET FORTH IN
21 SECTION 40-2-124 (1) (f) (VIII), C.R.S.

22 (2) IF THE GOVERNOR, BY EXECUTIVE ORDER, APPOINTS A
23 COMMITTEE TO STUDY THE DESIRABILITY OF REGULATION OF SOLAR
24 INSTALLERS, THE COMMITTEE, OR THE GOVERNOR'S ENERGY OFFICE ON THE
25 COMMITTEE'S BEHALF, IS SPECIFICALLY AUTHORIZED TO SUBMIT A
26 PROPOSAL FOR SUCH REGULATION TO THE DEPARTMENT OF REGULATORY
27 AGENCIES PURSUANT TO SECTION 24-34-104.1 (2).

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 FOR THE INSTALLATION OF
6 SOLAR PHOTOVOLTAIC EQUIPMENT SHALL BE CONDITIONED UPON THE
7 BORROWER'S CERTIFICATION THAT:

8 (I) THE INSTALLATION OF PHOTOVOLTAIC SYSTEMS, INCLUDING
9 ALL PHOTOVOLTAIC ELECTRICAL WORK AND PHOTOVOLTAIC MODULE
10 MOUNTING EQUIPMENT, WILL BE SUPERVISED BY A PERSON CERTIFIED AS
11 A CERTIFIED ENERGY PRACTITIONER BY THE NORTH AMERICAN BOARD OF
12 CERTIFIED ENERGY PRACTITIONERS (NABCEP) OR ANOTHER NATIONALLY
13 RECOGNIZED PROFESSIONAL ORGANIZATION DESIGNATED BY THE
14 COMMISSION BY RULE. UPON THE INITIAL APPLICATION FOR FUNDING OR
15 IN THE INITIAL CONTRACT PROPOSAL, THE APPLICANT SHALL ASSUME
16 RESPONSIBILITY FOR HIRING A CERTIFIED SUPERVISOR. FINAL PAYMENT
17 FOR THE WORK SHALL BE CONDITIONED UPON THE APPLICANT'S SUPPLYING
18 THE NAME AND CERTIFICATION NUMBER OF THE PERSON OR PERSONS WHO
19 ACTUALLY SUPERVISED THE WORK.

20 (II) ALL ELECTRICAL WORK THAT IS SUBJECT TO THE NATIONAL
21 ELECTRICAL CODE WILL BE PERFORMED BY A LICENSED MASTER
22 ELECTRICIAN, JOURNEYMAN ELECTRICIAN, OR RESIDENTIAL WIREMAN, AS
23 APPROPRIATE, OR A REGISTERED APPRENTICE WORKING UNDER THE
24 SUPERVISION OF SUCH PERSON; AND

25 (III) THE RATIO OF THE NUMBER OF PERSONS WHO ARE PRESENT ON
26 THE PROJECT SITE AND WHO ARE NOT LICENSED OR CERTIFIED AS PROVIDED
27 IN PARAGRAPH (a) OR (b) OF THIS SUBSECTION (2.5) TO THE NUMBER OF

1 PERSONS WHO ARE SO LICENSED OR CERTIFIED SHALL NEVER EXCEED
2 THREE TO ONE. A PERSON WHO IS BOTH LICENSED AND CERTIFIED SHALL
3 NOT COUNT DOUBLE FOR PURPOSES OF MEASURING THIS RATIO.

4 (b) AS USED IN THIS SUBSECTION (2.5), THE TERMS
5 "PHOTOVOLTAIC ELECTRICAL WORK", "PHOTOVOLTAIC LIGHT, HEAT, AND
6 POWER", "PHOTOVOLTAIC MODULE", AND "PHOTOVOLTAIC MODULE
7 MOUNTING EQUIPMENT" SHALL HAVE THE MEANINGS SET FORTH IN
8 SECTION 40-2-124 (1.7), C.R.S.

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

11 **40-2-109.5. Incentives for distributed generation - definition.**

12 (3) EFFECTIVE JANUARY 1, 2012, ALL PHOTOVOLTAIC INSTALLATIONS
13 FUNDED WHOLLY OR PARTIALLY THROUGH INCENTIVES UNDER THIS
14 SECTION SHALL BE SUBJECT TO THE REQUIREMENTS SET FORTH IN SECTION
15 40-2-124 (1) (f) (VIII).

16 **SECTION 8.** 40-2-124, Colorado Revised Statutes, is amended
17 BY THE ADDITION OF A NEW SUBSECTION to read:

18 **40-2-124. Renewable energy standard - definitions - net**
19 **metering - legislative declaration.** (1.7) AS USED IN SUBPARAGRAPH
20 (VIII) OF PARAGRAPH (f) OF SUBSECTION (1) OF THIS SECTION, UNLESS THE
21 CONTEXT OTHERWISE REQUIRES:

22 (a) "PHOTOVOLTAIC ELECTRICAL WORK" MEANS WIRING FOR,
23 INSTALLING, AND REPAIRING ELECTRICAL APPARATUS AND EQUIPMENT FOR
24 PHOTOVOLTAIC LIGHT, HEAT, AND POWER.

25 (b) "PHOTOVOLTAIC LIGHT, HEAT, AND POWER" MEANS THE
26 STANDARD TYPES OF ELECTRICITY THAT ARE SUPPLIED BY PHOTOVOLTAIC
27 SYSTEMS, REGARDLESS OF WHETHER THE SOURCE IS ONE OR MORE

1 PHOTOVOLTAIC MODULES OR ONE OR MORE INVERTER OUTPUT CIRCUITS
2 OF A PHOTOVOLTAIC SYSTEM.

3 (c) "PHOTOVOLTAIC MODULE" MEANS THE MODULE, PANEL, OR
4 DEVICE THAT GENERATES PHOTOVOLTAIC LIGHT, HEAT, AND POWER.

5 (d) "PHOTOVOLTAIC MODULE MOUNTING EQUIPMENT" MEANS THE
6 RACKING, MOUNTING, APPARATUS, EQUIPMENT, OR STRUCTURE THAT
7 IMMEDIATELY SUPPORTS AND SECURES ONE OR MORE PHOTOVOLTAIC
8 MODULES IN PLACE OR TO A ROOF, WALL, FOUNDATION, OR PEDESTAL.

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