

112TH CONGRESS
1ST SESSION

H. R. 1598

To amend the Public Utility Regulatory Policies Act of 1978 to promote energy independence and self-sufficiency by providing for the use of net metering by certain small electric energy generation systems, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

APRIL 15, 2011

Mr. CARDOZA (for himself and Mr. LUJÁN) introduced the following bill; which was referred to the Committee on Energy and Commerce, and in addition to the Committees on Oversight and Government Reform, Financial Services, and Transportation and Infrastructure, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To amend the Public Utility Regulatory Policies Act of 1978 to promote energy independence and self-sufficiency by providing for the use of net metering by certain small electric energy generation systems, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Solar Opportunity and
5 Local Access Rights Act”.

1 **SEC. 2. NET METERING AND INTERCONNECTION STAND-**
2 **ARDS.**

3 (a) IN GENERAL.—Section 113 of the Public Utility
4 Regulatory Policies Act of 1978 (16 U.S.C. 2623) is
5 amended by adding at the end the following:

6 “(d) NET METERING.—

7 “(1) DEFINITIONS.—In this subsection and
8 subsection (e):

9 “(A) CUSTOMER-GENERATOR.—The term
10 ‘customer-generator’ means the owner or oper-
11 ator of a qualified generation unit.

12 “(B) ELECTRIC GENERATION UNIT.—The
13 term ‘electric generation unit’ means—

14 “(i) a qualified generation unit; and

15 “(ii) any electric generation unit that
16 qualifies for net metering under a net me-
17 tering tariff or rule approved by a State.

18 “(C) LOCAL DISTRIBUTION SYSTEM.—The
19 term ‘local distribution system’ means any sys-
20 tem for the distribution of electric energy to the
21 ultimate consumer of the electricity, whether or
22 not the owner or operator of the system is a re-
23 tail electric supplier.

24 “(D) NET METERING.—The term ‘net me-
25 tering’ means the process of—

1 “(i) measuring the difference between
2 the electricity supplied to a customer-gen-
3 erator and the electricity generated by the
4 customer-generator that is delivered to a
5 local distribution system at the same point
6 of interconnection during an applicable
7 billing period; and

8 “(ii) providing an energy credit to the
9 customer-generator in the form of a kilo-
10 watt-hour credit for each kilowatt-hour of
11 energy produced by the customer-generator
12 from a qualified generation unit.

13 “(E) QUALIFIED GENERATION UNIT.—The
14 term ‘qualified generation unit’ means an elec-
15 tric energy generation unit that uses as the en-
16 ergy source of the unit solar energy to generate
17 electricity to heat or cool that—

18 “(i) has a generating capacity of not
19 more than 5,000 kilowatts;

20 “(ii) is located on premises that are
21 owned, operated, leased, or otherwise con-
22 trolled by the customer-generator;

23 “(iii) operates in parallel with the re-
24 tail electric supplier; and

1 “(iv) is intended primarily to offset all
2 or part of the requirements of the cus-
3 tomer-generator for electric energy.

4 “(F) RETAIL ELECTRIC SUPPLIER.—The
5 term ‘retail electric supplier’ means any electric
6 utility that sells electric energy to the ultimate
7 consumer of the energy.

8 “(2) ADOPTION.—Not later than 1 year after
9 the date of enactment of this subsection, each State
10 regulatory authority (with respect to each electric
11 utility for which the State regulatory authority has
12 ratemaking authority), and each nonregulated elec-
13 tric utility, shall—

14 “(A) provide public notice and conduct a
15 hearing with respect to the standards estab-
16 lished under paragraph (3); and

17 “(B) on the basis of the hearing, adopt the
18 standard.

19 “(3) ESTABLISHMENT OF NET METERING
20 STANDARD.—

21 “(A) IN GENERAL.—Each retail electric
22 supplier shall offer to arrange (either directly or
23 through a local distribution company or other
24 third party) to make net metering available, on
25 a first-come, first-served basis, to each of the

1 retail customers of the retail electric supplier in
2 accordance with the requirements described in
3 subparagraph (B) and other provisions of this
4 subsection.

5 “(B) REQUIREMENTS.—The requirements
6 referred to in subparagraph (A) are, with re-
7 spect to a retail electric supplier, that—

8 “(i) rates and charges and contract
9 terms and conditions for the sale of electric
10 energy to customer-generators shall be the
11 same as the rates and charges and con-
12 tract terms and conditions that would be
13 applicable if the customer-generator did
14 not own or operate a qualified generation
15 unit and use a net metering system; and

16 “(ii) each retail electric supplier shall
17 notify all of the retail customers of the re-
18 tail electric supplier of the standard estab-
19 lished under this paragraph as soon as
20 practicable after the adoption of the stand-
21 ard.

22 “(4) NET ENERGY MEASUREMENT.—

23 “(A) IN GENERAL.—Each retail electric
24 supplier shall arrange to provide to customer-
25 generators who qualify for net metering under

1 subsection (b) an electrical energy meter capa-
2 ble of net metering and measuring, to the max-
3 imum extent practicable, the flow of electricity
4 to or from the customer, using a single meter
5 and single register.

6 “(B) IMPRACTICABILITY.—In a case in
7 which it is not practicable to provide a meter to
8 a customer-generator under subparagraph (A),
9 a retail electric supplier (either directly or
10 through a local distribution company or other
11 third party) shall, at the expense of the retail
12 electric supplier, install 1 or more of those elec-
13 tric energy meters for the customer-generators
14 concerned.

15 “(5) BILLING.—

16 “(A) IN GENERAL.—Each retail electric
17 supplier subject to subsection (b) shall calculate
18 the electric energy consumption for a customer
19 using a net metering system in accordance with
20 subparagraphs (B) through (D).

21 “(B) MEASUREMENT OF ELECTRICITY.—
22 The retail electric supplier shall measure the
23 net electricity produced or consumed during the
24 billing period using the metering installed in ac-
25 cordance with paragraph (4).

1 “(C) BILLING AND CREDITING.—

2 “(i) BILLING.—If the electricity sup-
3 plied by the retail electric supplier exceeds
4 the electricity generated by the customer-
5 generator during the billing period, the
6 customer-generator shall be billed for the
7 net electric energy supplied by the retail
8 electric supplier in accordance with normal
9 billing practices.

10 “(ii) CREDITING.—

11 “(I) IN GENERAL.—If electric en-
12 ergy generated by the customer-gener-
13 ator exceeds the electric energy sup-
14 plied by the retail electric supplier
15 during the billing period, the cus-
16 tomer-generator shall be billed for the
17 appropriate customer charges for that
18 billing period and credited for the ex-
19 cess electric energy generated during
20 the billing period, with the credit ap-
21 pearing as a kilowatt-hour credit on
22 the bill for the following billing period.

23 “(II) APPLICATION OF CRED-
24 ITS.—Any kilowatt-hour credits pro-
25 vided to a customer-generator under

1 this clause shall be applied to cus-
2 tomer-generator electric energy con-
3 sumption on the following billing pe-
4 riod bill (except for a billing period
5 that ends in the next calendar year).

6 “(III) CARRYOVER OF UNUSED
7 CREDITS.—At the beginning of each
8 12-month period, any unused kilo-
9 watt-hour credits remaining from the
10 preceding year will carry over to the
11 new 12-month period.

12 “(D) USE OF TIME-DIFFERENTIATED
13 RATES.—

14 “(i) IN GENERAL.—Except as pro-
15 vided in clause (ii), if a customer-generator
16 is using a meter and retail billing arrange-
17 ment that has time-differentiated rates—

18 “(I) the kilowatt-hour credit shall
19 be based on the ratio representing the
20 difference in retail rates for each
21 time-of-use rate; or

22 “(II) the credits shall be reflected
23 on the bill of the customer-generator
24 as a monetary credit reflecting retail
25 rates at the time of generation of the

1 electric energy by the customer-gener-
2 ator.

3 “(ii) DIFFERENT TARIFFS OR SERV-
4 ICES.—A retail electric supplier shall offer
5 a customer-generator the choice of a time-
6 differentiated energy tariff rate or a
7 nontime-differentiated energy tariff rate, if
8 the retail electric supplier offers the choice
9 to customers in the same rate class as the
10 customer-generator.

11 “(6) PERCENT LIMITATIONS.—

12 “(A) 8 PERCENT LIMITATION.—The stand-
13 ard established under this subsection shall not
14 apply for a calendar year in the case of a cus-
15 tomer-generator served by a local distribution
16 company if the total generating capacity of all
17 customer-generators with net metering systems
18 served by the local distribution company in the
19 calendar year is equal to or more than 8 per-
20 cent of the capacity necessary to meet the aver-
21 age forecasted aggregate customer peak de-
22 mand of the company for the calendar year.

23 “(B) 4 PERCENT LIMITATION.—The stand-
24 ard established under this subsection shall not
25 apply for a 12-month period in the case of a

1 customer-generator served by a local distribu-
2 tion company if the total generating capacity of
3 all customer-generators with net metering sys-
4 tems served by the local distribution company
5 in the calendar year using a single type of
6 qualified generation unit is equal to or more
7 than 4 percent of the capacity necessary to
8 meet the forecasted aggregate customer peak
9 demand of the company for the calendar year.

10 “(C) RECORDS AND NOTICE.—

11 “(i) RECORDS.—Each retail electric
12 supplier shall maintain, and make available
13 to the public, records of—

14 “(I) the total generating capacity
15 of customer-generators of the system
16 of the retail electric supplier that are
17 using net metering; and

18 “(II) the type of generating sys-
19 tems and energy source used by the
20 electric generating systems used by
21 the customer-generators.

22 “(ii) NOTICE.—Each such retail elec-
23 tric supplier shall notify the State regu-
24 latory authority and the Commission at
25 each time at which the total generating ca-

1 capacity of the customer-generators of the
2 retail electric supplier reaches a level that
3 equals or exceeds—

4 “(I) 75 percent of the limitation
5 specified in subparagraph (B); or

6 “(II) the limitation specified in
7 subparagraph (B).

8 “(7) OWNERSHIP OF CREDITS.—

9 “(A) IN GENERAL.—For purposes of Fed-
10 eral and State laws providing renewable energy
11 credits or greenhouse gas credits, a customer-
12 generator with a qualified generation unit and
13 net metering shall be treated as owning and
14 having title to the renewable energy attributes,
15 renewable energy credits and greenhouse gas
16 emission credits relating to any electricity pro-
17 duced by the qualified generation unit.

18 “(B) RETAIL ELECTRIC SUPPLIERS.—No
19 retail electric supplier shall claim title to or
20 ownership of any renewable energy attributes,
21 renewable energy credits, or greenhouse gas
22 emission credits of a customer-generator as a
23 result of interconnecting the customer-generator
24 or providing or offering the customer-generator
25 net metering.

1 “(8) SAFETY AND PERFORMANCE STAND-
2 ARDS.—

3 “(A) IN GENERAL.—A qualified generation
4 unit and net metering system used by a cus-
5 tomer-generator shall meet all applicable safety
6 and performance and reliability standards es-
7 tablished by—

8 “(i) the national electrical code;

9 “(ii) the Institute of Electrical and
10 Electronics Engineers;

11 “(iii) Underwriters Laboratories; or

12 “(iv) the American National Stand-
13 ards Institute.

14 “(B) ADDITIONAL CHARGES.—The Com-
15 mission shall, after consultation with State reg-
16 ulatory authorities and nonregulated local dis-
17 tribution systems and after notice and oppor-
18 tunity for comment, prohibit by regulation the
19 imposition of additional charges by retail elec-
20 tric suppliers and local distribution systems for
21 equipment or services for safety or performance
22 that are in addition to those necessary to meet
23 the standards and requirements referred to in
24 subparagraph (A) and subsection (e).

25 “(9) DETERMINATION OF COMPLIANCE.—

1 “(A) IN GENERAL.—Any State regulatory
2 authority (with respect to each electric utility
3 for which the authority has ratemaking author-
4 ity), and each nonregulated electric utility, may
5 apply to the Commission for a determination
6 that any State net metering requirement or reg-
7 ulations complies with this subsection.

8 “(B) ORDERS.—In the absence of a deter-
9 mination under subparagraph (A), the Commis-
10 sion, on the motion of the Commission or pur-
11 suant to the petition of any interested person,
12 may, after notice and opportunity for a hearing
13 on the record, issue an order requiring against
14 any retail electric supplier or local distribution
15 company to require compliance with this sub-
16 section.

17 “(C) ENFORCEMENT.—

18 “(i) IN GENERAL.—Any person who
19 violates this subsection shall be subject to
20 a civil penalty in the amount of \$500 for
21 each day that the violation continues.

22 “(ii) ASSESSMENT.—The penalty may
23 be assessed by the Commission, after no-
24 tice and opportunity for hearing, in the
25 same manner as penalties are assessed

1 under section 31(d) of the Federal Power
2 Act (16 U.S.C. 823b(d)).

3 “(e) INTERCONNECTION STANDARDS.—

4 “(1) MODEL STANDARDS.—

5 “(A) IN GENERAL.—Not later than 1 year
6 after the date of enactment of this subsection,
7 the Commission shall publish model standards
8 for the physical connection between local dis-
9 tribution systems and qualified generation units
10 and electric generation units that—

11 “(i) are qualified generation units (as
12 defined in subsection (d)(1)(E) other than
13 clause (ii) of subsection (d)(1)(E)); and

14 “(ii) do not exceed 5 megawatts of ca-
15 pacity.

16 “(B) PURPOSES.—The model standards
17 shall be designed to—

18 “(i) encourage the use of qualified
19 generation units; and

20 “(ii) ensure the safety and reliability
21 of the qualified generation units and the
22 local distribution systems interconnected
23 with the qualified generation units.

24 “(C) PROCEDURES.—

1 “(i) IN GENERAL.—The model stand-
2 ards shall have 2 separate procedures, in-
3 cluding—

4 “(I) a standard for inter-
5 connecting qualified generation units
6 of not more than 15 kilowatts; and

7 “(II) a separate standard that
8 expedites interconnection for qualified
9 generation units of more than 15 kilo-
10 watts but not more than 5 megawatts.

11 “(ii) BEST PRACTICES.—The proce-
12 dures shall be based on the best practices
13 that have been used in States that have
14 adopted interconnection standards.

15 “(iii) MODEL RULE.—In designing the
16 procedures, the Commission shall consider
17 Interstate Renewable Energy Council
18 Model Rule MR–I2005.

19 “(D) TIMELINE.—

20 “(i) IN GENERAL.—Not later than 2
21 years after the date of enactment of this
22 subsection, each State shall—

23 “(I) adopt the model standards
24 established under this paragraph, with
25 or without modification; and

1 “(II) submit the standards to the
2 Commission for approval.

3 “(ii) APPROVAL OF MODIFICATION.—
4 The Commission shall approve a modifica-
5 tion of the model standards only if the
6 Commission determines that the modifica-
7 tion is—

8 “(I) consistent with or superior
9 to the purpose of the standards; and

10 “(II) required by reason of local
11 conditions.

12 “(E) NONAPPROVAL OF STANDARDS FOR A
13 STATE.—If standards have not been approved
14 under this paragraph by the Commission for
15 any State during the 2-year period beginning
16 on the date of enactment of this subsection, the
17 Commission shall, by rule or order, enforce the
18 model standards of the Commission in the State
19 until such time as State standards are approved
20 by the Commission.

21 “(F) UPDATES.—

22 “(i) IN GENERAL.—Not later than 2
23 years after the date of enactment of this
24 subsection and after notice and oppor-
25 tunity for comment, the Commission shall

1 publish an update of the model standards,
2 after considering changes in the underlying
3 standards and technologies.

4 “(ii) AVAILABILITY.—The updates
5 shall be made available to State regulatory
6 authorities for the consideration of the au-
7 thorities.

8 “(2) SAFETY, RELIABILITY, PERFORMANCE,
9 AND COST.—

10 “(A) IN GENERAL.—The standards under
11 this subsection shall establish such measures
12 for the safety and reliability of the affected
13 equipment and local distribution systems as are
14 appropriate.

15 “(B) ADMINISTRATION.—The standards
16 shall—

17 “(i) be consistent with all applicable
18 safety and performance standards estab-
19 lished by—

20 “(I) the national electrical code;

21 “(II) the Institute of Electrical
22 and Electronics Engineers;

23 “(III) Underwriters Laboratories;

24 or

1 “(IV) the American National
2 Standards Institute; and

3 “(ii) impose not more than such min-
4 imum cost and technical burdens to the
5 interconnecting customer generator as the
6 Commission determines, by rule, are prac-
7 ticable.

8 “(3) ADDITIONAL CHARGES.—The model stand-
9 ards under this subsection shall prohibit the imposi-
10 tion of additional charges by local distribution sys-
11 tems for equipment or services for interconnection
12 that are in excess of—

13 “(A) the charges necessary to meet the
14 standards; and

15 “(B) the charges and equipment require-
16 ments identified in the best practices of States
17 with interconnection standards.

18 “(4) RELATIONSHIP TO EXISTING LAW REGARD-
19 ING INTERCONNECTION.—Nothing in this subsection
20 affects the application of section 111(d)(15) relating
21 to interconnection.

22 “(5) CONSUMER-FRIENDLY CONTRACTS.—

23 “(A) IN GENERAL.—The Commission
24 shall—

1 “(i) promulgate regulations that en-
2 sure that simplified contracts will be used
3 for the interconnection of electric energy
4 by electric energy transmission or local dis-
5 tribution systems and generating facilities
6 that have a power production capacity of
7 not greater than 5,000 kilowatts; and

8 “(ii) consider the best practices for
9 consumer-friendly contracts that are used
10 by States or national associations of State
11 regulators.

12 “(B) LIABILITY OR INSURANCE.—The con-
13 tracts shall not require liability or other insur-
14 ance in excess of the liability or insurance that
15 is typically carried by customer-generators for
16 general liability.”.

17 (b) CONFORMING AMENDMENT.—Section 1262 of the
18 Public Utility Holding Company Act of 2005 (42 U.S.C.
19 16451) is amended by striking paragraph (5) and insert-
20 ing the following:

21 “(5) ELECTRIC UTILITY COMPANY.—

22 “(A) IN GENERAL.—The term ‘electric
23 utility company’ means any company that owns
24 or operates facilities used for the generation,

1 transmission, or distribution of electric energy
2 for sale.

3 “(B) EXCLUSION.—The term ‘electric util-
4 ity company’ does not include an electric gen-
5 eration unit (as defined in section 113(d) of the
6 Public Utility Regulatory Policies Act of
7 1978).”.

8 **SEC. 3. RELATIONSHIP TO STATE LAW.**

9 Section 117(b) of the Public Utility Regulatory Poli-
10 cies Act of 1978 (16 U.S.C. 2627(b)) is amended—

11 (1) by striking “Nothing” and inserting the fol-
12 lowing:

13 “(1) IN GENERAL.—Except as provided in para-
14 graph (2), nothing”; and

15 (2) by adding at the end the following:

16 “(2) NET METERING AND INTERCONNECTION
17 STANDARDS.—

18 “(A) IN GENERAL.—Subject to subpara-
19 graph (B), no State or nonregulated utility may
20 adopt or enforce any standard or requirement
21 concerning net metering or interconnection that
22 restricts access to the electric power trans-
23 mission or local distribution system by qualified
24 generators beyond those standards and require-
25 ments established under section 113.

1 “(B) EQUIVALENT OR GREATER ACCESS.—
2 Nothing in this Act precludes a State from
3 adopting or enforcing incentives or require-
4 ments to encourage qualified generation and net
5 metering that—

6 “(i) are in addition to or equivalent to
7 incentives or requirements under section
8 113; or

9 “(ii) afford greater access to the elec-
10 tric power transmission and local distribu-
11 tion systems by qualified generators (as
12 defined in section 113) or afford greater
13 compensation or credit for electricity gen-
14 erated by the qualified generators.”.

15 **SEC. 4. CONTRACTS FOR RENEWABLE ENERGY FOR EXECU-**
16 **TIVE AGENCIES.**

17 Section 501(b)(1)(B) of title 40, United States Code,
18 is amended—

19 (1) by striking “A contract” and inserting the
20 following:

21 “(i) IN GENERAL.—Except as pro-
22 vided in clause (ii), a contract”; and

23 (2) by adding at the end the following:

24 “(ii) RENEWABLE ENERGY.—A con-
25 tract for renewable energy (as defined in

1 section 203(b) of the Energy Policy Act of
2 2005 (42 U.S.C. 15852(b)) may be made
3 for a period of not more than 30 years.”.

4 **SEC. 5. SOLAR ENERGY SYSTEMS BUILDING PERMIT RE-**
5 **QUIREMENTS FOR RECEIPT OF COMMUNITY**
6 **DEVELOPMENT BLOCK GRANT FUNDS.**

7 Section 104 of the Housing and Community Develop-
8 ment Act of 1974 (42 U.S.C. 5304) is amended by adding
9 at the end the following new subsection:

10 “(n) REQUIREMENTS FOR BUILDING PERMITS RE-
11 GARDING SOLAR ENERGY SYSTEMS.—

12 “(1) IN GENERAL.—A grant under section 106
13 for a fiscal year may be made only if the grantee
14 certifies to the Secretary that—

15 “(A) in the case of a grant under section
16 106(a) for any Indian tribe or insular area,
17 during such fiscal year the cost of any permit
18 or license, for construction or installation of any
19 solar energy system for any structure, that is
20 required by the tribe or insular area or by any
21 other unit of general local government or other
22 political subdivision of such tribe or insular
23 area, complies with paragraph (2);

24 “(B) in the case of a grant under section
25 106(b) for any metropolitan city or urban coun-

1 ty, during such fiscal year the cost of any per-
2 mit or license, for construction or installation of
3 any solar energy system for any structure, that
4 is required by the metropolitan city or urban
5 county, or by any other political subdivision of
6 such city or county, complies with paragraph
7 (2); and

8 “(C) in the case of a grant under section
9 106(d) for any State, during such fiscal year
10 the cost of any permit or license, for construc-
11 tion or installation of any solar energy system
12 for any structure, that is required by the State,
13 or by any other unit of general local govern-
14 ment within any nonentitlement area of such
15 State, or other political subdivision within any
16 nonentitlement area of such State or such a
17 unit of general local government, complies with
18 paragraph (2).

19 “(2) LIMITATION ON COST.—The cost of permit
20 or license for construction or installation of any
21 solar energy system complies with this paragraph
22 only if such cost does not exceed the following
23 amount:

1 “(A) RESIDENTIAL STRUCTURES.—In the
2 case of a structure primarily for residential use,
3 \$500.

4 “(B) NONRESIDENTIAL STRUCTURES.—In
5 the case of a structure primarily for nonresiden-
6 tial use, 1.0 percent of the total cost of the in-
7 stallation or construction of the solar energy
8 system, but not in excess of \$10,000.

9 “(3) NONCOMPLIANCE.—If the Secretary deter-
10 mines that a grantee of a grant made under section
11 106 is not in compliance with a certification under
12 paragraph (1)—

13 “(A) the Secretary shall notify the grantee
14 of such determination; and

15 “(B) if the grantee has not corrected such
16 noncompliance before the expiration of the 6-
17 month period beginning upon notification under
18 subparagraph (A), such grantee shall not be eli-
19 gible for 5 percent of any amounts awarded
20 under a grant under section 106 for the first
21 fiscal year that commences after the expiration
22 of such 6-month period.

23 “(4) SOLAR ENERGY SYSTEM.—For purposes of
24 this subsection, the term ‘solar energy system’
25 means, with respect to a structure, equipment that

1 uses solar energy to generate electricity for, or to
2 heat or cool (or provide hot water for use in), such
3 structure.”.

4 **SEC. 6. PROHIBITION OF RESTRICTIONS ON RESIDENTIAL**
5 **INSTALLATION OF SOLAR ENERGY SYSTEM.**

6 (a) REGULATIONS.—Within 180 days after the enact-
7 ment of this Act, the Secretary of Housing and Urban
8 Development, in consultation with the Secretary of En-
9 ergy, shall issue regulations—

10 (1) to prohibit any private covenant, contract
11 provision, lease provision, homeowners’ association
12 rule or bylaw, or similar restriction, that impairs the
13 ability of the owner or lessee of any residential
14 structure designed for occupancy by 1 family to in-
15 stall, construct, maintain, or use a solar energy sys-
16 tem on such residential property; and

17 (2) to require that whenever any such covenant,
18 provision, rule or bylaw, or restriction requires ap-
19 proval for the installation or use of a solar energy
20 system, the application for approval shall be proc-
21 essed and approved by the appropriate approving en-
22 tity in the same manner as an application for ap-
23 proval of an architectural modification to the prop-
24 erty, and shall not be willfully avoided or delayed.

1 (b) CONTENTS.—The regulations required under sub-
2 section (a) shall provide that—

3 (1) such a covenant, provision, rule or bylaw, or
4 restriction impairs the installation, construction,
5 maintenance, or use of a solar energy system if it—

6 (A) unreasonably delays or prevents instal-
7 lation, maintenance, or use;

8 (B) unreasonably increases the cost of in-
9 stallation, maintenance, or use; or

10 (C) precludes use of such a system; and

11 (2) any fee or cost imposed on the owner or les-
12 see of such a residential structure by such a cov-
13 enant, provision, rule or bylaw, or restriction shall
14 be considered unreasonable if—

15 (A) such fee or cost is not reasonable in
16 comparison to the cost of the solar energy sys-
17 tem or the value of its use; or

18 (B) treatment of solar energy systems by
19 the covenant, provision, rule or bylaw, or re-
20 striction is not reasonable in comparison with
21 treatment of comparable systems by the same
22 covenant, provision, rule or bylaw, or restric-
23 tion.

24 (c) SOLAR ENERGY SYSTEM.—For purposes of this
25 section, the term “solar energy system” means, with re-

1 spect to a structure, equipment that uses solar energy to
2 generate electricity for, or to heat or cool (or provide hot
3 water for use in), such structure.

4 **SEC. 7. CENTER FOR ADVANCED SOLAR RESEARCH.**

5 (a) ESTABLISHMENT.—The Secretary of Energy
6 shall establish a Center for Advanced Solar Research and
7 Development within the Office of Energy Efficiency and
8 Renewable Energy to carry out an advanced solar research
9 and development program to coordinate and promote the
10 further development of solar technologies. This program
11 shall include a competitive grant program for academia
12 and private research in solar technologies. The Center
13 shall serve as a clearinghouse for United States solar re-
14 search and development, supporting research, develop-
15 ment, and demonstration of advanced solar energy sys-
16 tems. The Center shall advance—

17 (1) performance, reliability, environmental im-
18 pact, and cost-competitiveness of solar thermal and
19 photovoltaic technologies;

20 (2) large-scale photovoltaic and solar thermal
21 power plants;

22 (3) thermal and electricity storage technologies
23 to enhance the dispatchability of solar energy;

24 (4) fuel production technologies using solar en-
25 ergy;

1 (5) innovation in manufacturing techniques and
2 processes for solar energy systems;

3 (6) materials and devices to improve photo-
4 voltaic conversion efficiencies and reduce costs;

5 (7) policy analysis aimed at increasing use of
6 solar energy technologies, and monitoring the effec-
7 tiveness of existing policies; and

8 (8) comprehensive solar systems integration.

9 (b) AUTHORIZATION OF APPROPRIATIONS.—There
10 are authorized to be appropriated to the Secretary of En-
11 ergy for carrying out this section \$25,000,000 for each
12 of the fiscal years 2012 through 2016, to remain available
13 until expended.

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