

115TH CONGRESS  
1ST SESSION

# H. R. 2746

To amend title VI of the Public Utility Regulatory Policies Act of 1978 to establish a Federal renewable electricity standard for retail electricity suppliers and a Federal energy efficiency resource standard for electricity and natural gas suppliers, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

MAY 25, 2017

Mr. WELCH (for himself and Mr. BEN RAY LUJÁN of New Mexico) introduced the following bill; which was referred to the Committee on Energy and Commerce

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## A BILL

To amend title VI of the Public Utility Regulatory Policies Act of 1978 to establish a Federal renewable electricity standard for retail electricity suppliers and a Federal energy efficiency resource standard for electricity and natural gas suppliers, 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 “American Renewable  
5 Energy and Efficiency Act”.

1 **SEC. 2. FEDERAL RENEWABLE ELECTRICITY STANDARD.**

2 Title VI of the Public Utility Regulatory Policies Act  
3 of 1978 (16 U.S.C. 2601 et seq.) is amended by adding  
4 after section 609 (7 U.S.C. 918c) the following:

5 **“SEC. 610. FEDERAL RENEWABLE ELECTRICITY STANDARD.**

6 “(a) FINDINGS.—Congress finds that—

7 “(1) the Federal renewable electricity standard  
8 established by this section establishes a market-  
9 based policy to create ongoing competition among  
10 renewable electricity generators across the United  
11 States and provide the greatest quantity of clean  
12 electricity for the lowest price; and

13 “(2) the United States has vast wind, solar, hy-  
14 dropower, biomass, and geothermal resources that—

15 “(A) are renewable;

16 “(B) are dispersed widely across different  
17 regions of the United States; and

18 “(C) can be harnessed to generate a sig-  
19 nificant share of electricity in the United  
20 States.

21 “(b) DEFINITIONS.—In this section:

22 “(1) BROWNFIELD SITE GENERATION FACIL-  
23 ITY.—The term ‘brownfield site generation facility’  
24 means a facility that—

25 “(A) generates renewable electricity; and

1           “(B) occupies a brownfield site (as that  
2           term is defined in section 101 of the Com-  
3           prehensive Environmental Response, Compensa-  
4           tion, and Liability Act of 1980 (42 U.S.C.  
5           9601)).

6           “(2) DISTRIBUTED RENEWABLE GENERATION  
7           FACILITY.—The term ‘distributed renewable genera-  
8           tion facility’ means a facility that—

9                   “(A) generates renewable electricity;

10                   “(B) primarily serves one or more electric  
11           consumers at or near the facility site; and

12                   “(C) has not more than 2 megawatts in  
13           capacity.

14           “(3) FEDERAL RENEWABLE ELECTRICITY  
15           CREDIT.—The term ‘Federal renewable electricity  
16           credit’ means a credit, representing 1 megawatt  
17           hour of renewable electricity, issued pursuant to sub-  
18           section (f).

19           “(4) INDIAN LAND.—The term ‘Indian land’  
20           means—

21                   “(A) any land within the limits of any In-  
22           dian reservation, pueblo, or rancheria;

23                   “(B) any land not within the limits of any  
24           Indian reservation, pueblo, or rancheria, title to

1 which was on the date of enactment of this sec-  
2 tion held by—

3 “(i) the United States for the benefit  
4 of any Indian tribe or individual; or

5 “(ii) any Indian tribe or individual  
6 subject to restriction by the United States  
7 against alienation;

8 “(C) any dependent Indian community; or

9 “(D) any land conveyed under the Alaska  
10 Native Claims Settlement Act (43 U.S.C. 1601  
11 et seq.) to any Native Corporation (as that  
12 term is defined in section 3 of that Act (43  
13 U.S.C. 1602)).

14 “(5) INDIAN TRIBE.—The term ‘Indian tribe’  
15 means any Indian tribe, band, nation, or other orga-  
16 nized group or community (including any Native vil-  
17 lage, Regional Corporation, or Village Corporation  
18 (as those terms are defined in section 3 of the Alas-  
19 ka Native Claims Settlement Act (43 U.S.C. 1602)))  
20 that is recognized as eligible for the special pro-  
21 grams and services provided by the United States to  
22 Indians because of their status as Indians.

23 “(6) QUALIFIED HYDROPOWER.—The term  
24 ‘qualified hydropower’ means—

1           “(A) energy produced from increased effi-  
2           ciency achieved, or additions of capacity made,  
3           on or after January 1, 2001, at a hydroelectric  
4           facility that—

5                   “(i) was placed in service before that  
6                   date; and

7                   “(ii) does not include additional en-  
8                   ergy generated as a result of operational  
9                   changes not directly associated with effi-  
10                  ciency improvements or capacity additions;  
11                  or

12           “(B) energy produced from generating ca-  
13           pacity added to a dam on or after January 1,  
14           2001, if the Commission certifies that—

15                   “(i) the dam—

16                           “(I) was placed in service before  
17                           the date of enactment of this section;

18                           “(II) was operated for flood con-  
19                           trol, navigation, or water supply pur-  
20                           poses; and

21                           “(III) was not producing hydro-  
22                           electric power prior to the addition of  
23                           the capacity; and

24                   “(ii) the hydroelectric project installed  
25                  on the dam—

1 “(I) is licensed or is exempt from  
2 licensing by the Commission;

3 “(II) is in compliance with—

4 “(aa) the terms and condi-  
5 tions of the license or exemption;  
6 and

7 “(bb) other applicable legal  
8 requirements for the protection  
9 of environmental quality, includ-  
10 ing applicable fish passage re-  
11 quirements; and

12 “(III) is operated so that the  
13 water surface elevation at any given  
14 location and time that would have oc-  
15 curred in the absence of the hydro-  
16 electric project is maintained, subject  
17 to any license or exemption require-  
18 ments that require changes in water  
19 surface elevation for the purpose of  
20 improving the environmental quality  
21 of the affected waterway.

22 “(7) QUALIFIED RENEWABLE BIOMASS.—The  
23 term ‘qualified renewable biomass’ means renewable  
24 biomass that, when combusted, yields, on a weight-  
25 ed-average basis, a 50-percent reduction in lifecycle

1 greenhouse gas emissions (as defined in section 4(a)  
2 of the American Renewable Energy and Efficiency  
3 Act) per unit of useful energy, as compared to the  
4 operation of a combined cycle natural gas electric  
5 generating facility using the most efficient commer-  
6 cially available technology, when calculated over a  
7 20-year life cycle.

8 “(8) RENEWABLE BIOMASS.—The term ‘renew-  
9 able biomass’ means—

10 “(A) crop byproducts or crop residues har-  
11 vested from actively managed or fallow agricul-  
12 tural land that is cleared prior to the date of  
13 enactment of this section;

14 “(B) planted trees, brush, slash, and resi-  
15 dues from an actively managed tree farm dedi-  
16 cated to energy crop production and located on  
17 land cleared prior to the date of enactment of  
18 this section;

19 “(C) byproducts of wood or paper mill op-  
20 erations, including lignin in spent pulping liq-  
21 uors;

22 “(D) algae;

23 “(E) nonhazardous plant matter derived  
24 from waste—

1 “(i) including separated yard waste,  
2 landscape right-of-way trimmings, or food  
3 waste; but

4 “(ii) not including municipal solid  
5 waste, recyclable waste paper, painted,  
6 treated or pressurized wood, or wood con-  
7 taminated with plastic or metals; and

8 “(F) vegetative matter removed from with-  
9 in 200 yards of any man-made structure or  
10 campground for the purposes of hazardous fuels  
11 thinning.

12 “(9) RENEWABLE ELECTRICITY.—The term ‘re-  
13 newable electricity’ means electricity generated (in-  
14 cluding by means of a fuel cell) from a renewable en-  
15 ergy resource.

16 “(10) RENEWABLE ENERGY RESOURCE.—The  
17 term ‘renewable energy resource’ means each of the  
18 following:

19 “(A) Wind energy.

20 “(B) Solar energy.

21 “(C) Geothermal energy.

22 “(D) Qualified renewable biomass.

23 “(E) Biogas derived from qualified renew-  
24 able biomass.



1           “(F) Biofuels derived from qualified re-  
2           newable biomass.

3           “(G) Qualified hydropower.

4           “(H) Marine and hydrokinetic renewable  
5           energy (as defined in section 632 of the Energy  
6           Independence and Security Act of 2007 (42  
7           U.S.C. 17211)).

8           “(I) Landfill gas.

9           “(11) RETAIL ELECTRIC SUPPLIER.—

10           “(A) IN GENERAL.—The term ‘retail elec-  
11           tric supplier’ means, for any calendar year, an  
12           electric utility that sells not fewer than  
13           1,000,000 megawatt hours of electric energy to  
14           electric consumers for purposes other than re-  
15           sale during the preceding calendar year.

16           “(B) INCLUSIONS AND LIMITATIONS.—For  
17           purposes of determining whether an electric  
18           utility qualifies as a retail electric supplier  
19           under subparagraph (A)—

20           “(i) the sales made by any affiliate of  
21           the electric utility to electric consumers,  
22           other than sales to lessees or tenants of  
23           the affiliate, for purposes other than resale  
24           shall be considered to be sales made by the  
25           electric utility; and

1                   “(ii) sales made by the electric utility  
2                   to an affiliate, lessee, or tenant of the elec-  
3                   tric utility shall not be treated as sales to  
4                   electric consumers.

5                   “(C) AFFILIATE.—In this paragraph, the  
6                   term ‘affiliate’ when used in relation to a per-  
7                   son, means another person that directly or indi-  
8                   rectly owns or controls, is owned or controlled  
9                   by, or is under common ownership or control  
10                  with, that person, as determined under regula-  
11                  tions promulgated by the Commission.

12                  “(12) RETAIL ELECTRIC SUPPLIER’S BASE  
13                  QUANTITY.—The term ‘retail electric supplier’s base  
14                  quantity’ means the total quantity of electric energy  
15                  sold by the retail electric supplier, expressed in  
16                  megawatt hours, to electric customers for purposes  
17                  other than resale during the relevant calendar year,  
18                  excluding—

19                         “(A) electricity generated by a hydro-  
20                         electric facility, other than qualified hydro-  
21                         power; and

22                         “(B) electricity generated by the combus-  
23                         tion of municipal solid waste.

24                         “(13) RETIRE AND RETIREMENT.—The terms  
25                         ‘retire’ and ‘retirement’ with respect to a Federal re-

1       newable electricity credit, mean to disqualify the  
2       credit for any subsequent use under this section, re-  
3       gardless of whether the use is a sale, transfer, ex-  
4       change, or submission in satisfaction of a compliance  
5       obligation.

6       “(c) ANNUAL COMPLIANCE OBLIGATION.—Except as  
7       otherwise provided in subsection (g), for each of calendar  
8       years 2019 through 2042, not later than March 31 of the  
9       following calendar year, each retail electric supplier shall  
10      submit to the Commission a quantity of Federal renewable  
11      electricity credits that is equal to at least the annual tar-  
12      get of the retail electric supplier under subsection (e).

13      “(d) ESTABLISHMENT OF PROGRAM.—

14             “(1) IN GENERAL.—Not later than 1 year after  
15      the date of enactment of this section, the Commis-  
16      sion shall promulgate regulations to implement and  
17      enforce the requirements of this section.

18             “(2) CONSIDERATIONS.—In promulgating regu-  
19      lations under paragraph (1), the Commission shall,  
20      to the maximum extent practicable—

21                “(A) preserve the integrity and incorporate  
22                best practices of existing State and tribal re-  
23                newable electricity programs;

24                “(B) rely on existing and emerging State,  
25                tribal, or regional tracking systems that issue

1 and track non-Federal renewable electricity  
2 credits; and

3 “(C) cooperate with States and Indian  
4 tribes—

5 “(i) to facilitate coordination between  
6 State, tribal, and Federal renewable elec-  
7 tricity programs; and

8 “(ii) to minimize administrative bur-  
9 dens and costs to retail electric suppliers.

10 “(e) ANNUAL COMPLIANCE REQUIREMENT.—

11 “(1) ANNUAL TARGETS.—For each of calendar  
12 years 2019 through 2042, the annual target of a re-  
13 tail electric supplier shall be equal to the product ob-  
14 tained by multiplying—

15 “(A) the required annual percentage for  
16 that calendar year under paragraph (2); and

17 “(B) the retail electric supplier’s base  
18 quantity for that calendar year.

19 “(2) REQUIRED ANNUAL PERCENTAGE.—

20 “(A) CALENDAR YEARS 2019 THROUGH  
21 2042.—Subject to subparagraph (B), for each of  
22 calendar years 2019 through 2042, the required  
23 annual percentage shall be as follows:

<b>“Year:</b>	<b>Required annual percentage:</b>
2019 .....	10.0
2020 .....	11.0
2021 .....	12.0
2022 .....	13.5
2023 .....	15.0
2024 .....	17.0
2025 .....	19.0
2026 .....	21.0
2027 .....	23.0
2028 .....	25.0
2029 .....	27.5
2030 .....	30.0
2031 .....	32.5
2032–2042 .....	35.0.

1                   “(B) INCREASE AUTHORIZED FOR CAL-  
2                   NDAR YEARS 2032 THROUGH 2042.—The Com-  
3                   mission may issue orders increasing the re-  
4                   quired annual percentage amounts for each of  
5                   calendar years 2032 through 2042 to reflect the  
6                   maximum achievable level of renewable elec-  
7                   tricity generation potential, taking into account  
8                   regional resource availability, economic feasi-  
9                   bility, and technological capability.

10           “(f) FEDERAL RENEWABLE ELECTRICITY CRED-  
11   ITS.—

12           “(1) IN GENERAL.—

13                   “(A)           ISSUANCE;           TRACKING;  
14                   VERIFICATION.—The regulations promulgated  
15                   under this section shall include provisions gov-  
16                   erning the issuance, tracking, and verification  
17                   of Federal renewable electricity credits.

1           “(B) CREDIT RATIO.—Except as provided  
2           in paragraphs (2) through (4), the Commission  
3           shall issue to each generator of renewable elec-  
4           tricity, 1 Federal renewable electricity credit for  
5           each megawatt hour of renewable electricity  
6           generated by the generator after December 31,  
7           2018.

8           “(C) SERIAL NUMBER.—The Commission  
9           shall assign a unique serial number to each  
10          Federal renewable electricity credit.

11          “(2) GENERATION FROM CERTAIN STATE RE-  
12          NEWABLE ELECTRICITY PROGRAMS.—

13               “(A) IN GENERAL.—If renewable elec-  
14               tricity is generated with the support of pay-  
15               ments from a retail electric supplier pursuant  
16               to a State renewable electricity program  
17               (whether through State alternative compliance  
18               payments or through payments to a State re-  
19               newable electricity procurement fund or entity),  
20               the Commission shall issue Federal renewable  
21               electricity credits to the retail electric supplier  
22               for the portion of the relevant renewable elec-  
23               tricity generation that is attributable to pay-  
24               ments made by the retail electric supplier, as

1 determined pursuant to regulations promul-  
2 gated by the Commission.

3 “(B) REMAINING PORTION.—For any re-  
4 maining portion of the relevant renewable elec-  
5 tricity generation, the Commission shall issue  
6 Federal renewable electricity credits to the gen-  
7 erator, as provided in paragraph (1), except  
8 that not more than 1 Federal renewable elec-  
9 tricity credit shall be issued for the same mega-  
10 watt hour of electricity.

11 “(C) STATE GUIDANCE.—In determining  
12 how Federal renewable electricity credits will be  
13 apportioned among retail electric suppliers and  
14 generators under this paragraph, the Commis-  
15 sion shall consider information and guidance  
16 issued by the applicable one or more States.

17 “(3) CERTAIN POWER SALES CONTRACTS.—Ex-  
18 cept as otherwise provided in paragraph (2), if a  
19 generator has sold renewable electricity to a retail  
20 electric supplier under a contract for power from a  
21 facility placed in service before the date of enact-  
22 ment of this section, and the contract does not pro-  
23 vide for the determination of ownership of the Fed-  
24 eral renewable electricity credits associated with the  
25 generation, the Commission shall issue the Federal

1 renewable electricity credits to the retail electric sup-  
2 plier for the duration of the contract.

3 “(4) CREDIT MULTIPLIERS.—

4 “(A) IN GENERAL.—Except as provided in  
5 subparagraph (B), the Commission shall  
6 issue—

7 “(i) not more than 3 Federal renew-  
8 able electricity credits for each megawatt  
9 hour of renewable electricity generated by  
10 a distributed renewable generation facility;

11 “(ii) not more than 2 Federal renew-  
12 able electricity credits for each megawatt  
13 hour of renewable electricity generated on  
14 Indian land; and

15 “(iii) not more than 2 Federal renew-  
16 able electricity credits for each megawatt  
17 hour of renewable electricity generated by  
18 a brownfield site generation facility.

19 “(B) ADJUSTMENT.—Except as provided  
20 in subparagraph (C), not later than January 1,  
21 2021, and not less frequently than every 4  
22 years thereafter, the Commission shall review  
23 the effect of this paragraph on the aggregate  
24 quantity of renewable electricity produced under  
25 the standard and shall, as necessary and after



1 providing 1 year of notice, reduce the number  
2 of Federal renewable electricity credits per  
3 megawatt hour issued under this paragraph for  
4 any given energy source or facility, but not  
5 below one, to ensure that the number is no  
6 higher than the Commission determines is nec-  
7 essary—

8 “(i) to incentivize incremental renew-  
9 able energy generation on Indian land and  
10 brownfield sites; and

11 “(ii) to make distributed renewable  
12 generation facilities cost competitive with  
13 other sources of renewable electricity gen-  
14 eration.

15 “(C) FACILITIES PLACED IN SERVICE  
16 AFTER ENACTMENT.—

17 “(i) IN GENERAL.—For any renewable  
18 generation facility placed in service after  
19 the date of enactment of this section, sub-  
20 paragraph (B) shall not apply for the first  
21 10 years after the date on which the facil-  
22 ity is placed in service.

23 “(ii) INITIAL PERIOD.—For each year  
24 during the 10-year period described in  
25 clause (i), the Commission shall issue to

the facility the same number of Federal renewable electricity credits per megawatt hour as are issued to that facility in the year in which the facility is placed in service.

“(iii) SUBSEQUENT PERIOD.—After the 10-year period described in clause (i), the Commission shall issue Federal renewable electricity credits to the facility in accordance with subparagraph (B).

“(5) CREDITS BASED ON QUALIFIED HYDRO-POWER.—For purposes of this subsection, the number of Federal renewable electricity credits issued for qualified hydropower shall be calculated—

“(A) based solely on the increase in average annual generation directly resulting from the efficiency improvements or capacity additions described in subsection (b)(6)(A); and

“(B) using the same water flow information used to determine a historic average annual generation baseline for the hydroelectric facility, as certified by the Commission.

“(6) GENERATION FROM MIXED RENEWABLE AND NONRENEWABLE RESOURCES.—If electricity is generated using both a renewable energy resource

1 and an energy source that is not a renewable energy  
2 resource (such as cofiring of renewable biomass and  
3 fossil fuel), the Commission shall issue Federal re-  
4 newable electricity credits based on the proportion of  
5 the electricity that is attributable to the renewable  
6 energy resource.

7 “(7) PROHIBITION AGAINST DOUBLE-COUNT-  
8 ING.—The Commission shall ensure that—

9 “(A) no Federal renewable electricity cred-  
10 it is used more than once for compliance with  
11 this section; and

12 “(B) except as provided in paragraph (4),  
13 not more than 1 Federal renewable electricity  
14 credit is issued for any megawatt hour of re-  
15 newable electricity.

16 “(8) TRADING.—The lawful holder of a Federal  
17 renewable electricity credit may—

18 “(A) sell, exchange, or transfer the credit;

19 “(B) submit the credit for compliance  
20 under subsection (c); or

21 “(C) submit the credit for retirement by  
22 the Commission.

23 “(9) BANKING.—

24 “(A) IN GENERAL.—A Federal renewable  
25 electricity credit may be submitted in satisfac-

tion of the compliance obligation under subsection (c) for the compliance year in which the credit was issued or for any of the 3 immediately subsequent compliance years.

“(B) RETIREMENT.—The Commission shall retire any Federal renewable electricity credit that has not been retired by April 2 of the calendar year that is 3 years after the calendar year during which the credit was issued.

“(10) RETIREMENT.—The Commission shall retire a Federal renewable electricity credit immediately upon submission by the lawful holder of the credit, whether in satisfaction of a compliance obligation under subsection (c) or for another reason.

“(g) ALTERNATIVE COMPLIANCE PAYMENTS.—

“(1) IN GENERAL.—A retail electric supplier may satisfy the requirements of subsection (c) in whole or in part by submitting in accordance with this subsection, in lieu of each Federal renewable electricity credit that would otherwise be due, a payment equal to \$50, adjusted for inflation on January 1 of each year following calendar year 2019, in accordance with regulations promulgated by the Commission.

“(2) PAYMENT TO STATE FUNDS.—

1           “(A) IN GENERAL.—Except as otherwise  
2           provided in this paragraph, payments made  
3           under this subsection shall be made directly to  
4           one or more States in which the retail electric  
5           supplier sells electric energy, in proportion to  
6           the portion of the retail electric supplier’s base  
7           quantity that is sold within each applicable  
8           State, if—

9                   “(i) the payments are deposited di-  
10                  rectly into a fund of the State treasury es-  
11                  tablished for that purpose; and

12                  “(ii) the State uses the funds in ac-  
13                  cordance with paragraphs (3) and (4).

14           “(B) NONCOMPLIANCE.—If the Commis-  
15           sion determines that a State is in substantial  
16           noncompliance with paragraph (3) or (4), the  
17           Commission shall direct that any future alter-  
18           native compliance payments that would other-  
19           wise be paid to the State under this subsection  
20           shall instead be paid to the Commission and de-  
21           posited in the Treasury.

22           “(3) STATE USE OF FUNDS.—As a condition of  
23           receipt of alternative compliance payments under  
24           this subsection, a State shall use the payments ex-  
25           clusively for—

1           “(A) deploying technologies that generate  
2 electricity from renewable energy resources; or

3           “(B) implementing cost-effective energy ef-  
4 ficiency programs to achieve energy savings.

5           “(4) REPORTING.—

6           “(A) IN GENERAL.—As a condition of re-  
7 ceipt of alternative compliance payments pursu-  
8 ant to this subsection, a State shall submit to  
9 the Commission an annual report, in accord-  
10 ance with regulations promulgated by the Com-  
11 mission, containing a full accounting of the use  
12 of the payments, including a detailed descrip-  
13 tion of the activities funded by the payments  
14 and demonstrating compliance with the require-  
15 ments of this subsection.

16           “(B) DEADLINE.—A State shall submit a  
17 report under this paragraph—

18                   “(i) not later than 1 year after the  
19 date on which the first alternative compli-  
20 ance payment is received; and

21                   “(ii) every 1 year thereafter until all  
22 alternative compliance payments are ex-  
23 pended.

24           “(h) INFORMATION COLLECTION.—

1           “(1) IN GENERAL.—The Commission may re-  
 2       quire any retail electric supplier, renewable elec-  
 3       tricity generator, or any other entity that the Com-  
 4       mission determines appropriate, to provide any in-  
 5       formation the Commission determines appropriate to  
 6       carry out this section.

7           “(2) FAILURE TO SUBMIT; FALSE OR MIS-  
 8       LEADING INFORMATION.—Any entity required to  
 9       submit information under paragraph (1) that fails to  
 10      submit the information or submits false or mis-  
 11      leading information shall be in violation of this sec-  
 12      tion.

13       “(i) ENFORCEMENT AND JUDICIAL REVIEW.—

14           “(1) FAILURE TO SUBMIT CREDITS.—If any  
 15      person fails to comply with the requirements of sub-  
 16      section (c) or (g), the person shall be liable to pay  
 17      to the Commission a civil penalty equal to the prod-  
 18      uct obtained by multiplying—

19           “(A) double the alternative compliance  
 20      payment calculated under subsection (g)(1);  
 21      and

22           “(B) the aggregate quantity of Federal re-  
 23      newable electricity credits or equivalent alter-  
 24      native compliance payments that the person

1 failed to submit in violation of the requirements  
2 of subsections (e) and (g).

3 “(2) ENFORCEMENT.—The Commission shall  
4 assess a civil penalty under paragraph (1) in accord-  
5 ance with the procedures described in section 31(d)  
6 of the Federal Power Act (16 U.S.C. 823b(d)).

7 “(3) VIOLATION OF REQUIREMENT OF REGULA-  
8 TIONS OR ORDERS.—

9 “(A) IN GENERAL.—Any person who vio-  
10 lates or fails or refuses to comply with any re-  
11 quirement of a regulation promulgated or order  
12 issued under this section shall be subject to a  
13 civil penalty under section 316A(b) of the Fed-  
14 eral Power Act (16 U.S.C. 825o–1(b)).

15 “(B) ASSESSMENT.—The penalty under  
16 subparagraph (A) shall be assessed by the Com-  
17 mission in the same manner as in the case of  
18 a violation referred to in section 316A(b) of  
19 that Act.

20 “(4) JUDICIAL REVIEW.—

21 “(A) IN GENERAL.—Any person aggrieved  
22 by a final action taken by the Commission  
23 under this section, other than the assessment of  
24 a civil penalty under paragraphs (1) through  
25 (3), may use the procedures for review de-



1           scribed in section 313 of the Federal Power Act  
2           (16 U.S.C. 825*l*).

3           “(B) REFERENCE.—For purposes of this  
4           paragraph, references to an order in section  
5           313 of that Act shall be considered to refer also  
6           to all other final actions of the Commission  
7           under this section other than the assessment of  
8           a civil penalty under paragraphs (1) through  
9           (3).

10          “(j) ADMINISTRATION.—Nothing in this section—

11           “(1) diminishes or qualifies any authority of a  
12          State, a political subdivision of a State, or an Indian  
13          tribe—

14           “(A) to adopt or enforce any law or regula-  
15          tion respecting renewable electricity, including  
16          any law or regulation establishing requirements  
17          that are more stringent than those established  
18          by this section, provided that no such law or  
19          regulation may relieve any person of any re-  
20          quirement otherwise applicable under this sec-  
21          tion; or

22           “(B) to regulate the acquisition and dis-  
23          position of Federal renewable electricity credits  
24          by retail electric suppliers within the jurisdic-  
25          tion of the State, political subdivision, or Indian

1           tribe, including the authority to require the re-  
 2           tail electric supplier to acquire and submit to  
 3           the Commission for retirement Federal renew-  
 4           able electricity credits in excess of those sub-  
 5           mitted under this section; or

6           “(2) affects the application of or the responsi-  
 7           bility for compliance with any other provision of law  
 8           or regulation, including environmental and licensing  
 9           requirements.

10          “(k) SUNSET.—The authority provided by this sec-  
 11         tion expires on December 31, 2043.”.

12         **SEC. 3. CLARIFYING STATE AUTHORITY TO ADOPT RENEW-**  
 13                 **ABLE ENERGY INCENTIVES.**

14           Section 210 of the Public Utility Regulatory Policies  
 15         Act of 1978 (16 U.S.C. 824a–3) is amended by adding  
 16         at the end the following:

17           “(o) CLARIFICATION OF STATE AUTHORITY TO  
 18         ADOPT RENEWABLE ENERGY INCENTIVES.—

19           “(1) DEFINITION OF STATE-APPROVED PRO-  
 20         DUCTION INCENTIVE PROGRAM.—In this subsection,  
 21         the term ‘State-approved production incentive pro-  
 22         gram’ means a requirement imposed pursuant to  
 23         State law or by a State regulatory authority acting  
 24         within its authority under State law that an electric

1 utility purchase renewable energy (as defined in sec-  
2 tion 609(a)) at a specified rate.

3 “(2) STATE AUTHORITY TO ADOPT RENEWABLE  
4 ENERGY INCENTIVES.—Notwithstanding any other  
5 provision of this Act or the Federal Power Act (16  
6 U.S.C. 791a et seq.), a State legislature or regu-  
7 latory authority may set the rates for a sale of elec-  
8 tric energy by a facility generating electric energy  
9 from renewable energy sources pursuant to a State-  
10 approved production incentive program under which  
11 the facility voluntarily participates in the State-ap-  
12 proved production incentive program.”.

13 **SEC. 4. GUIDELINES FOR DETERMINING QUALIFIED RE-**  
14 **NEWABLE BIOMASS.**

15 (a) DEFINITIONS.—In this section:

16 (1) ADMINISTRATOR.—The term “Adminis-  
17 trator” means the Administrator of the Environ-  
18 mental Protection Agency.

19 (2) LIFECYCLE GREENHOUSE GAS EMIS-  
20 SIONS.—

21 (A) IN GENERAL.—The term “lifecycle  
22 greenhouse gas emissions” means the aggregate  
23 quantity of greenhouse gas emissions, adjusted  
24 to account for the relative global warming po-

1           tential of the emissions relative to all green-  
2           house gas emissions.

3                   (B) INCLUSIONS.—For purposes of sub-  
4           paragraph (A), the term “greenhouse gas emis-  
5           sions” includes—

6                           (i) direct emissions; and

7                           (ii) significant indirect emissions, in-  
8           cluding from—

9                                   (I) land use changes and tem-  
10           poral changes in forest carbon seques-  
11           tration;

12                                   (II) biomass harvests, regrowth,  
13           and avoided decomposition related to  
14           the full fuel life cycle, including all  
15           stages of fuel and feedstock produc-  
16           tion and distribution; and

17                                   (III) feedstock generation or ex-  
18           traction through the distribution and  
19           delivery of the finished fuel to the ul-  
20           timate consumer.

21           (b) GUIDELINES.—Not later than 1 year after the  
22   date of enactment of this Act, the Administrator shall, rec-  
23   ognizing the recommendations of and coordinating with  
24   the Scientific Advisory Board of the Environmental Pro-  
25   tection Agency regarding the accounting of biogenic car-

1 bon dioxide emissions and after notice and public com-  
 2 ment, issue guidelines for calculating lifecycle greenhouse  
 3 gas emissions for renewable biomass (as that term is de-  
 4 fined in section 610(b) of the Public Utility Regulatory  
 5 Policies Act of 1978).

6 **SEC. 5. ENERGY EFFICIENCY RESOURCE STANDARD FOR**  
 7 **RETAIL ELECTRICITY AND NATURAL GAS**  
 8 **SUPPLIERS.**

9 (a) IN GENERAL.—Title VI of the Public Utility Reg-  
 10 ulatory Policies Act of 1978 (16 U.S.C. 2601 et seq.) (as  
 11 amended by section 2) is amended by adding after section  
 12 610 the following:

13 **“SEC. 611. FEDERAL ENERGY EFFICIENCY RESOURCE**  
 14 **STANDARD FOR RETAIL ELECTRICITY AND**  
 15 **NATURAL GAS SUPPLIERS.**

16 “(a) FINDINGS.—Congress finds that—

17 “(1) the Federal energy efficiency resource  
 18 standard established by this section—

19 “(A) establishes nationwide minimum lev-  
 20 els of electricity and natural gas savings to be  
 21 achieved through utility efficiency programs,  
 22 building energy codes, appliance standards, and  
 23 related efficiency measures; and

24 “(B) rewards energy-saving improvements  
 25 achieved through—

1 “(i) end-use energy efficiency up-  
2 grades;

3 “(ii) reduced losses in transmission  
4 and distribution of energy; and

5 “(iii) fuel-switching, to the extent that  
6 the switching results in reduced primary  
7 energy use; and

8 “(2) in light of the cost-effective energy effi-  
9 ciency opportunities that exist across the United  
10 States in every sector of the economy, retail elec-  
11 tricity suppliers, retail natural gas suppliers, and  
12 States should—

13 “(A) consider energy efficiency as a re-  
14 source in utility planning and procurement ac-  
15 tivities; and

16 “(B) seek to achieve all energy efficiency  
17 that is available at lower cost than other energy  
18 supply options.

19 “(b) DEFINITIONS.—In this section:

20 “(1) AFFILIATE.—The term ‘affiliate’ when  
21 used in relation to a person, means another person  
22 that owns or controls, is owned or controlled by, or  
23 is under common ownership control with, that per-  
24 son, as determined under regulations promulgated  
25 by the Secretary.

1           “(2) ASHRAE, ANSI, AND IESNA.—The terms  
2           ‘ASHRAE’, ‘ANSI’, and ‘IESNA’ mean the Amer-  
3           ican Society of Heating, Refrigerating and Air-Con-  
4           ditioning Engineers, the American National Stand-  
5           ards Institute, and the Illuminating Engineering So-  
6           ciety of North America, respectively.

7           “(3) BASE QUANTITY.—

8           “(A) IN GENERAL.—The term ‘base quan-  
9           tity’, with respect to a retail electricity supplier  
10          or retail natural gas supplier, means, for each  
11          calendar year for which a performance standard  
12          is established under subsection (d), the average  
13          annual quantity of electricity or natural gas de-  
14          livered by the retail electricity supplier or retail  
15          natural gas supplier to retail customers during  
16          the 3 calendar years immediately preceding the  
17          year that compliance is required under sub-  
18          section (d)(1).

19          “(B) EXCLUSION.—The term ‘base quan-  
20          tity’, with respect to a retail natural gas sup-  
21          plier, does not include natural gas delivered for  
22          purposes of electricity generation.

23          “(4) CHP SAVINGS.—The term ‘CHP savings’  
24          means—

1           “(A) CHP system savings from a combined  
2           heat and power system that commences oper-  
3           ation after the date of enactment of this sec-  
4           tion; and

5           “(B) the increase in CHP system savings  
6           from upgrading or replacing, after the date of  
7           enactment of this section, a combined heat and  
8           power system that commenced operation on or  
9           before the date of enactment of this section.

10          “(5) CHP SYSTEM SAVINGS.—The term ‘CHP  
11          system savings’ means the electric output, and the  
12          electricity saved due to the mechanical output, of a  
13          combined heat and power system, adjusted to reflect  
14          any increase in fuel consumption by that system as  
15          compared to the fuel that would have been required  
16          to produce an equivalent useful thermal energy out-  
17          put in a separate thermal-only system, as deter-  
18          mined in accordance with regulations promulgated  
19          by the Secretary.

20          “(6) CODES AND STANDARDS SAVINGS.—

21                 “(A) IN GENERAL.—The term ‘codes and  
22                 standards savings’ means a reduction in end-  
23                 use electricity or natural gas consumption by a  
24                 retail electricity supplier or in the service terri-  
25                 tory of a retail natural gas supplier as a result



1 of the adoption and implementation, after the  
2 date of enactment of this section, of new or re-  
3 vised appliance and equipment efficiency stand-  
4 ards or building energy codes.

5 “(B) BASELINES.—In calculating codes  
6 and standards savings under subparagraph  
7 (A)—

8 “(i) the baseline for calculating sav-  
9 ings from building codes shall be the more  
10 stringent of—

11 “(I)(aa) the 2015 International  
12 Energy Conservation Code for resi-  
13 dential buildings; or

14 “(bb) the ASHRAE/ANSI/  
15 IESNA Standard 90.1–2013 for com-  
16 mercial buildings; or

17 “(II) the applicable State build-  
18 ing code in effect on the date of en-  
19 actment of this section; and

20 “(ii) the baseline for calculating sav-  
21 ings from appliance standards shall be the  
22 average efficiency of new appliances in the  
23 applicable one or more categories prior to  
24 the adoption and implementation of the  
25 new standard.

1           “(7) COMBINED HEAT AND POWER SYSTEM.—

2           The term ‘combined heat and power system’ means  
3           a system that uses the same energy source both for  
4           the generation of electrical or mechanical power and  
5           the production of steam or another form of useful  
6           thermal energy, if—

7                   “(A) the system meets any requirements  
8                   relating to efficiency and other operating char-  
9                   acteristics that the Secretary promulgates by  
10                  regulation; and

11                   “(B) the net wholesale sales of electricity  
12                  by a facility does not exceed 50 percent of total  
13                  annual electric generation by the facility.

14           “(8) COST-EFFECTIVE.—The term ‘cost-effec-  
15           tive’, with respect to an energy efficiency measure,  
16           means that the measure achieves a net present value  
17           of economic benefits over the life of the measure,  
18           both directly to the energy consumer and to the  
19           economy, that is greater than the net present value  
20           of the cost of the measure over the life of the meas-  
21           ure, both directly to the energy consumer and to the  
22           economy, using the societal benefit-cost test cal-  
23           culated using the lower of a utility weighted average  
24           cost of capital or a social discount rate of 3 percent.

1           “(9) CUSTOMER FACILITY SAVINGS.—The term  
2           ‘customer facility savings’ means a reduction in end-  
3           use electricity or natural gas consumption (including  
4           waste heat energy savings) at a facility of an end-  
5           use consumer of electricity or natural gas served by  
6           a retail electricity supplier or natural gas supplier,  
7           as compared to—

8                   “(A) in the case of a new facility, con-  
9                   sumption at a reference facility of average effi-  
10                  ciency;

11                  “(B) in the case of an existing facility,  
12                  consumption at the facility during a base period  
13                  of not less than 1 year;

14                  “(C) in the case of new equipment that re-  
15                  places existing equipment at the end of the use-  
16                  ful life of the existing equipment, consumption  
17                  by new equipment of average efficiency of the  
18                  same equipment type, except that customer sav-  
19                  ings under this subparagraph shall not be  
20                  counted towards customer savings under sub-  
21                  paragraph (A) or (B); and

22                  “(D) in the case of new equipment that re-  
23                  places existing equipment with remaining useful  
24                  life—

1                   “(i) consumption of the existing  
2                   equipment for the remaining useful life of  
3                   the equipment; and

4                   “(ii) thereafter, consumption of new  
5                   equipment of average efficiency.

6                   “(10) ELECTRICITY SAVINGS.—The term ‘elec-  
7                   tricity savings’ means reductions in electricity con-  
8                   sumption achieved through measures implemented  
9                   after the date of enactment of this section, as deter-  
10                  mined in accordance with regulations promulgated  
11                  by the Secretary, that are limited to—

12                  “(A) customer facility savings of elec-  
13                  tricity, adjusted to reflect any associated in-  
14                  crease in fuel consumption at the facility;

15                  “(B) reductions in distribution system  
16                  losses of electricity achieved by a retail elec-  
17                  tricity supplier, as compared to losses attrib-  
18                  utable to new or replacement distribution sys-  
19                  tem equipment of average efficiency, as defined  
20                  in regulations promulgated by the Secretary;

21                  “(C) CHP savings;

22                  “(D) codes and standards savings of elec-  
23                  tricity; and

24                  “(E) fuel switching energy savings that re-  
25                  sults in net savings of electricity.

1 “(11) FUEL SWITCHING ENERGY SAVINGS.—

2 “(A) IN GENERAL.—The term ‘fuel-switch-  
3 ing energy savings’ means net energy savings,  
4 calculated in accordance with subparagraph  
5 (B), from end-user switches from 1 energy  
6 source to another, as determined in accordance  
7 with regulations promulgated by the Secretary.

8 “(B) CALCULATION.—For purposes of cal-  
9 culating fuel-switching net energy savings—

10 “(i) electricity use shall be evaluated  
11 based on the average quantity of fuel  
12 burned at a new power plant taking into  
13 account existing and planned renewable en-  
14 ergy generators to provide each kilowatt  
15 hour of electricity;

16 “(ii) electricity and natural gas use  
17 shall include losses in the transmission and  
18 distribution system; and

19 “(iii) fuel-switching that is not cost-ef-  
20 fective to the end-user shall not be count-  
21 ed.

22 “(12) NATURAL GAS SAVINGS.—The term ‘nat-  
23 ural gas savings’ means reductions in natural gas  
24 consumption from measures implemented after the  
25 date of enactment of this section, as determined in

1 accordance with regulations promulgated by the Sec-  
2 retary, that are limited to—

3 “(A) customer facility savings of natural  
4 gas, adjusted to reflect any associated increase  
5 in electricity consumption or consumption of  
6 other fuels at the facility;

7 “(B) reductions in leakage, operational  
8 losses, and consumption of natural gas fuel to  
9 operate a gas distribution system, achieved by  
10 a retail natural gas supplier, as compared to  
11 similar leakage, losses, and consumption during  
12 a base period of not less than 1 year;

13 “(C) codes and standards savings of nat-  
14 ural gas; and

15 “(D) fuel switching energy savings that re-  
16 sults in net savings of natural gas.

17 “(13) POWER POOL.—The term ‘power pool’  
18 means an association of two or more interconnected  
19 electric systems that have entered into an agreement  
20 to coordinate operations and planning for improved  
21 reliability and efficiencies, including a Regional  
22 Transmission Organization or an Independent Sys-  
23 tem Operator, as determined by the Secretary.

24 “(14) REPORTING PERIOD.—The term ‘report-  
25 ing period’ means—

1 “(A) calendar year 2019; and

2 “(B) each successive 2-calendar-year pe-  
3 riod thereafter.

4 “(15) RETAIL ELECTRICITY SUPPLIER.—

5 “(A) IN GENERAL.—The term ‘retail elec-  
6 tricity supplier’ means, for any given calendar  
7 year, an electric utility that sells not less than  
8 1,000,000 megawatt hours of electric energy to  
9 electric consumers for purposes other than re-  
10 sale during the preceding calendar year.

11 “(B) INCLUSIONS AND LIMITATIONS.—For  
12 purposes of determining whether an electric  
13 utility qualifies as a retail electricity supplier  
14 under subparagraph (A)—

15 “(i) deliveries by any affiliate of an  
16 electric utility to electric consumers for  
17 purposes other than resale shall be consid-  
18 ered to be deliveries by the electric utility;  
19 and

20 “(ii) deliveries by any electric utility  
21 to a lessee, tenant, or affiliate of the elec-  
22 tric utility shall not be considered to be de-  
23 liveries to electric consumers.

24 “(16) RETAIL NATURAL GAS SUPPLIER.—

“(A) IN GENERAL.—The term ‘retail natural gas supplier’ means, for any given calendar year, a local distribution company (as defined in section 2 of the Natural Gas Policy Act of 1978 (15 U.S.C. 3301)), that delivered to natural gas consumers more than 5,000,000,000 cubic feet of natural gas for purposes other than resale during the preceding calendar year.

“(B) INCLUSIONS AND LIMITATIONS.—For purposes of determining whether a person qualifies as a retail natural gas supplier under subparagraph (A)—

“(i) deliveries of natural gas by any affiliate of a local distribution company to consumers for purposes other than resale shall be considered to be deliveries by the local distribution company; and

“(ii) deliveries of natural gas to a lessee, tenant, or affiliate of a local distribution company shall not be considered to be deliveries to natural gas consumers.

“(17) THIRD-PARTY EFFICIENCY PROVIDER.—The term ‘third-party efficiency provider’ means any retailer, building owner, energy service company, financial institution, or other commercial, industrial,



1 or nonprofit entity that is capable of providing elec-  
2 tricity savings or natural gas savings in accordance  
3 with subsections (e) and (f).

4 “(18) WASTE HEAT ENERGY SAVINGS.—

5 “(A) IN GENERAL.—The term ‘waste heat  
6 energy savings’ means a reduction in electricity  
7 or natural gas consumption that results from a  
8 modification of an industrial or commercial sys-  
9 tem that commenced operation before the date  
10 of enactment of this section, in order to recap-  
11 ture electrical, mechanical, or thermal energy  
12 that would otherwise be wasted, as determined  
13 in accordance with regulations promulgated by  
14 the Secretary.

15 “(B) INCLUSION.—Such savings shall be  
16 included as part of customer facility savings.

17 “(c) ESTABLISHMENT OF PROGRAM.—

18 “(1) REGULATIONS.—Not later than 1 year  
19 after the date of enactment of this section, the Sec-  
20 retary shall, by regulation, establish a program to  
21 implement and enforce the requirements of this sec-  
22 tion, including by—

23 “(A) establishing measurement and  
24 verification procedures and standards under  
25 subsection (f);

“(B) establishing requirements under which retail electricity suppliers and retail natural gas suppliers shall—

“(i) demonstrate, document, and report the compliance of the retail electricity suppliers and retail natural gas suppliers with the performance standards under subsection (d); and

“(ii) estimate the impact of the standards on current and future electricity and natural gas use in the service territories of the suppliers; and

“(C) establishing requirements governing applications for, and implementation of, delegated State administration under subsection (h).

“(2) COORDINATION WITH STATE PROGRAMS.—

In establishing and implementing this section, the Secretary shall, to the maximum extent practicable, preserve the integrity and incorporate best practices of existing State energy efficiency programs.

“(d) PERFORMANCE STANDARDS.—

“(1) COMPLIANCE OBLIGATION.—Not later than May 1 of the calendar year immediately following each reporting period—

1           “(A) each retail electricity supplier shall  
2           submit to the Secretary a report, in accordance  
3           with regulations promulgated by the Secretary,  
4           demonstrating that the retail electricity supplier  
5           has achieved cumulative electricity savings (ad-  
6           justed to account for any attrition of savings  
7           measures implemented in prior years) in each  
8           calendar year that are equal to the applicable  
9           percentage, established under paragraph (2),  
10          (3), or (4), of the base quantity of the retail  
11          electricity supplier; and

12          “(B) each retail natural gas supplier shall  
13          submit to the Secretary a report, in accordance  
14          with regulations promulgated by the Secretary,  
15          demonstrating that it has achieved cumulative  
16          natural gas savings (adjusted to account for  
17          any attrition of savings measures implemented  
18          in prior years) in each calendar year that are  
19          equal to the applicable percentage, established  
20          under paragraph (2), (3), or (4), of the base  
21          quantity of such retail natural gas supplier.

22          “(2) STANDARDS FOR 2019 THROUGH 2032.—  
23          For each of calendar years 2019 through 2032, the  
24          applicable percentages are as follows:

“Calendar Year	Cumulative Electricity Savings Percentage	Cumulative Natural Gas Savings Percentage
2019	1.00	0.50
2020	2.00	1.25
2021	3.00	2.00
2022	4.25	3.00
2023	5.50	4.00
2024	7.00	5.00
2025	8.50	6.00
2026	10.00	7.00
2027	11.50	8.00
2028	13.00	9.00
2029	14.75	10.00
2030	16.50	11.00
2031	18.25	12.00
2032	20.00	13.00

1 “(3) SUBSEQUENT YEARS.—

2 “(A) CALENDAR YEARS 2033 THROUGH  
3 2042.—Not later than December 31, 2030, the  
4 Secretary shall promulgate regulations estab-  
5 lishing performance standards (expressed as ap-  
6 plicable percentages of base quantity for both  
7 cumulative electricity savings and cumulative  
8 natural gas savings) for each of calendar years  
9 2033 through 2042.

10 “(B) SUBSEQUENT EXTENSIONS.—Except  
11 as provided in subparagraph (A), not later than  
12 December 31 of the penultimate reporting pe-  
13 riod for which performance standards have been

1 established under this paragraph, the Secretary  
2 shall promulgate regulations establishing per-  
3 formance standards (expressed as applicable  
4 percentages of base quantity for both cumu-  
5 lative electricity savings and cumulative natural  
6 gas savings) for the 10-calendar-year period fol-  
7 lowing the last calendar year for which perform-  
8 ance standards previously were established.

9 “(C) REQUIREMENTS.—The Secretary  
10 shall establish standards under this paragraph  
11 at levels reflecting the maximum achievable  
12 level of cost-effective energy efficiency potential,  
13 taking into account—

14 “(i) cost-effective energy savings  
15 achieved by leading retail electricity sup-  
16 pliers and retail natural gas suppliers;

17 “(ii) opportunities for new codes and  
18 standards savings;

19 “(iii) technology improvements; and

20 “(iv) other indicators of cost-effective  
21 energy efficiency potential.

22 “(D) MINIMUM PERCENTAGE.—In no case  
23 shall the applicable percentages for any cal-  
24 endar year be less than the applicable percent-  
25 ages for calendar year 2032 (including any in-

1           crease in the standard for calendar year 2032  
2           established pursuant to paragraph (4)).

3           “(4) MIDCOURSE REVIEW AND ADJUSTMENT OF  
4           STANDARDS.—

5                   “(A) IN GENERAL.—Not later than De-  
6           cember 31, 2025, and at 10-year intervals  
7           thereafter, the Secretary shall—

8                           “(i) review the most recent standards  
9                           established under paragraph (2) or (3);  
10                          and

11                           “(ii) increase the standards by regula-  
12                           tion if the Secretary determines that addi-  
13                           tional cost-effective energy efficiency po-  
14                           tential is achievable, taking into account  
15                           the requirements described in paragraph  
16                           (3)(C).

17                   “(B) LEAD TIME.—If the Secretary revises  
18           standards under this paragraph, the regulations  
19           shall provide adequate lead time to ensure that  
20           compliance with the increased standards is fea-  
21           sible.

22           “(5) DELAY OF SUBMISSION FOR FIRST RE-  
23           PORTING PERIOD.—

24                   “(A) IN GENERAL.—Notwithstanding  
25           paragraphs (1) and (2), for the 2019 reporting

1 period, the Secretary may accept a request from  
2 a retail electricity supplier or a retail natural  
3 gas supplier to delay the required submission of  
4 documentation of all or part of the required  
5 savings for up to 2 years.

6 “(B) PLAN FOR COMPLIANCE.—The re-  
7 quest for delay under subparagraph (A) shall  
8 include a plan for coming into full compliance  
9 by the end of the 2020–2021 reporting period.

10 “(6) APPLYING UNUSED SAVINGS TO FUTURE  
11 YEARS.—If savings achieved in a year exceed the  
12 performance standards specified in this subsection,  
13 any savings in excess of the performance standards  
14 may be applied toward performance standards speci-  
15 fied for future years.

16 “(e) TRANSFERS OF ELECTRICITY OR NATURAL GAS  
17 SAVINGS.—

18 “(1) BILATERAL CONTRACTS FOR SAVINGS  
19 TRANSFERS.—Subject to the limitations of this sub-  
20 section, a retail electricity supplier or retail natural  
21 gas supplier may use electricity savings or natural  
22 gas savings purchased pursuant to a bilateral con-  
23 tract from another retail electricity supplier or retail  
24 natural gas supplier, a State, or a third-party effi-

1       ciency provider to meet the applicable performance  
2       standard under subsection (d).

3           “(2) REQUIREMENTS.—Electricity savings or  
4       natural gas savings purchased and used for compli-  
5       ance under this subsection shall be—

6           “(A) measured and verified in accordance  
7       with subsection (f);

8           “(B) reported in accordance with sub-  
9       section (d); and

10          “(C) achieved within the same State as is  
11       served by the retail electricity supplier or retail  
12       natural gas supplier.

13          “(3) EXCEPTION.—Notwithstanding paragraph  
14       (2)(C), a State regulatory authority may authorize a  
15       retail electricity supplier or a retail natural gas sup-  
16       plier regulated by the State regulatory authority to  
17       purchase savings achieved in a different State, if—

18          “(A) the savings are achieved within the  
19       same power pool; and

20          “(B) the State regulatory authority that  
21       regulates the purchaser oversees the measure-  
22       ment and verification of the savings pursuant to  
23       the procedures and standards applicable in the  
24       State in which the purchaser is located.



1           “(4) REGULATORY APPROVAL.—Nothing in this  
2       subsection limits or affects the authority of a State  
3       regulatory authority to require a retail electricity  
4       supplier or retail natural gas supplier that is regu-  
5       lated by the State regulatory authority to obtain the  
6       authorization or approval of the State regulatory au-  
7       thority of a contract for transfer of electricity sav-  
8       ings or natural gas savings under this subsection.

9           “(5) LIMITATIONS.—To optimize the achieve-  
10      ment of cost-effective efficiency potential, the Sec-  
11      retary may prescribe such limitations as the Sec-  
12      retary determines appropriate with respect to the  
13      proportion of the compliance obligation of a retail  
14      electricity or natural gas supplier under the applica-  
15      ble performance standards under subsection (d) that  
16      may be met using electricity savings or natural gas  
17      savings that are purchased under this subsection.

18      “(f) MEASUREMENT AND VERIFICATION OF SAV-  
19      INGS.—The regulations promulgated pursuant to sub-  
20      section (c) shall include—

21           “(1) procedures and standards for defining and  
22      measuring electricity savings and natural gas sav-  
23      ings that can be counted towards the performance  
24      standards established under subsection (d), that  
25      shall—

1           “(A) specify the types of energy efficiency  
2           and energy conservation measures that can be  
3           counted;

4           “(B) require that energy consumption esti-  
5           mates for customer facilities or portions of fa-  
6           cilities in the applicable base and current years  
7           be adjusted, as appropriate, to account for  
8           changes in weather, level of production, and  
9           building area;

10          “(C) account for the useful life of meas-  
11          ures;

12          “(D) include assigned savings values for  
13          specific, commonly used measures;

14          “(E) allow for savings from a program to  
15          be estimated based on extrapolation from a rep-  
16          resentative sample of participating customers;

17          “(F) include procedures for calculating and  
18          documenting CHP savings, fuel-switching en-  
19          ergy savings, and waste heat energy savings;

20          “(G) establish methods for calculating  
21          codes and standards energy savings, including  
22          the use of verified compliance rates;

23          “(H) include procedures for calculating  
24          and documenting—

1 “(i) customer facility savings and re-  
2 ductions in distribution system losses of  
3 electricity and natural gas that are  
4 achieved as a result of smart grid deploy-  
5 ment, as described in section 1301 of the  
6 Energy Independence and Security Act of  
7 2007 (42 U.S.C. 17381); and

8 “(ii) reductions in natural gas dis-  
9 tribution system losses attributable to pipe-  
10 line repair and replacement programs;

11 “(I) count only measures and savings that  
12 are additional to business-as-usual customer  
13 purchase practices;

14 “(J) ensure that the retail electricity sup-  
15 plier or retail natural gas supplier claiming the  
16 electricity savings or natural gas savings, in-  
17 cluding codes and standards savings, played a  
18 significant role in achieving the savings (includ-  
19 ing through the activities of a designated agent  
20 of the supplier or through the purchase of  
21 transferred electricity savings or natural gas  
22 savings);

23 “(K) avoid double-counting of savings used  
24 for compliance with this section, including  
25 transferred savings;

1           “(L) include electricity savings or natural  
2           gas savings from programs administered by the  
3           retail electric supplier or natural gas supplier  
4           that are funded by Federal, State, or other  
5           sources;

6           “(M) credit large customer self-directed  
7           electricity savings or natural gas savings to the  
8           retail electricity supplier or the retail natural  
9           gas supplier if the large customers receive in-  
10          centives or rate reductions from the retail sup-  
11          plier for self-directed energy efficiency improve-  
12          ments;

13          “(N) include procedures for counting elec-  
14          tricity savings and natural gas savings achieved  
15          by solar heating and cooling technologies, solar  
16          light pipe technology, geothermal heat pumps,  
17          and other technologies utilizing renewable re-  
18          sources that do not produce electricity or gas-  
19          eous fuel but that reduce on-site energy use;

20          “(O) in any State in which the State regu-  
21          latory authority has designated one or more en-  
22          tities to administer electric ratepayer-funded ef-  
23          ficiency programs approved by the State regu-  
24          latory authority, provide that electricity savings  
25          and natural gas savings achieved through the

1 programs shall be distributed proportionally  
2 among retail electric suppliers and retail nat-  
3 ural gas suppliers; and

4 “(P) include guidance for utilities to cal-  
5 culate and document business-as-usual con-  
6 sumption projections; and

7 “(2) procedures and standards for third-party  
8 verification of reported electricity savings or natural  
9 gas savings.

10 “(g) ENFORCEMENT AND JUDICIAL REVIEW.—

11 “(1) REVIEW OF RETAIL SUPPLIER REPORTS.—

12 “(A) IN GENERAL.—The Secretary shall  
13 review each report submitted to the Secretary  
14 by a retail electricity supplier or retail natural  
15 gas supplier under subsection (d) to verify that  
16 the applicable performance standards under  
17 subsection (d) have been met.

18 “(B) EXCLUSION.—In determining compli-  
19 ance with the applicable performance standards  
20 under subsection (d), the Secretary shall ex-  
21 clude reported electricity savings or natural gas  
22 savings that are not adequately demonstrated  
23 and documented, in accordance with the regula-  
24 tions promulgated under this section.

1           “(2) PENALTY FOR FAILURE TO DOCUMENT  
 2           ADEQUATE SAVINGS.—If a retail electricity supplier  
 3           or a retail natural gas supplier fails to demonstrate  
 4           compliance with an applicable performance standard  
 5           under subsection (d), or to pay to the State an ap-  
 6           plicable alternative compliance payment under sub-  
 7           section (h)(4), the Secretary shall assess against the  
 8           retail electricity supplier or retail natural gas sup-  
 9           plier a civil penalty for each failure in an amount  
 10          equal to, as adjusted for inflation in accordance with  
 11          such regulations as the Secretary may promulgate—

12                 “(A) \$100 per megawatt hour of electricity  
 13                 savings or alternative compliance payment that  
 14                 the retail electricity supplier failed to achieve or  
 15                 make, respectively; or

16                 “(B) \$10 per million Btu of natural gas  
 17                 savings or alternative compliance payment that  
 18                 the retail natural gas supplier failed to achieve  
 19                 or make, respectively.

20          “(3) OFFSETTING STATE PENALTIES.—The  
 21          Secretary shall reduce the amount of any penalty  
 22          under paragraph (2) by the amount paid by the rel-  
 23          evant retail electricity supplier or retail natural gas  
 24          supplier to a State for failure to comply with the re-  
 25          quirements of a State energy efficiency resource

1 standard during the same compliance period, if the  
2 State standard—

3 “(A) is comparable in type to the Federal  
4 standard established under this section; and

5 “(B) is more stringent than the applicable  
6 performance standards under subsection (d).

7 “(4) ENFORCEMENT PROCEDURES.—The Sec-  
8 retary shall assess a civil penalty, as provided under  
9 paragraph (2), in accordance with the procedures  
10 described in section 333(d) of the Energy Policy and  
11 Conservation Act (42 U.S.C. 6303(d)).

12 “(5) JUDICIAL REVIEW.—

13 “(A) IN GENERAL.—Any person adversely  
14 affected by a final action taken by the Sec-  
15 retary under this section, other than the assess-  
16 ment of a civil penalty, may use the procedures  
17 for review described in section 336(b) of the  
18 Energy Policy and Conservation Act (42 U.S.C.  
19 6306(b)).

20 “(B) REFERENCE.—In this paragraph,  
21 references to a rule in section 336(b) of the En-  
22 ergy Policy and Conservation Act (42 U.S.C.  
23 6306(b)) shall be considered to refer also to all  
24 other final actions of the Secretary under this

1 section other than the assessment of a civil pen-  
2 alty.

3 “(h) STATE ADMINISTRATION.—

4 “(1) IN GENERAL.—Upon receipt of an applica-  
5 tion from the Governor of a State (including the  
6 Mayor of the District of Columbia), the Secretary  
7 may delegate to the State responsibility for admin-  
8 istering this section within the territory of the State  
9 if the Secretary determines that the State will imple-  
10 ment an energy efficiency program that meets or ex-  
11 ceeds the requirements of this section, including—

12 “(A) achieving electricity savings and nat-  
13 ural gas savings that are at least as great as  
14 those required under the applicable performance  
15 standards established under subsection (d);

16 “(B) reviewing reports and verifying elec-  
17 tricity savings and natural gas savings achieved  
18 in the State (including savings transferred from  
19 outside the State); and

20 “(C) collecting any alternative compliance  
21 payments under paragraph (4) and using the  
22 payments to implement cost-effective efficiency  
23 programs.

24 “(2) SECRETARIAL DETERMINATION.—Not  
25 later than 180 days after the date on which a com-



plete application is received by the Secretary, the Secretary shall make a substantive determination approving or disapproving a State application, after public notice and comment.

“(3) ALTERNATIVE MEASUREMENT AND VERIFICATION PROCEDURES AND STANDARDS.—As part of an application submitted under paragraph (1), a State may request to use alternative measurement and verification procedures and standards from the procedures and standards described in subsection (f), if the State demonstrates that the alternative procedures and standards provide a level of accuracy of measurement and verification that are at least equivalent to the Federal procedures and standards under subsection (f).

“(4) ALTERNATIVE COMPLIANCE PAYMENTS.—

“(A) IN GENERAL.—As part of an application submitted under paragraph (1), a State may permit retail electricity suppliers or retail natural gas suppliers to pay to the State, by not later than May 1 of the calendar year immediately following the applicable reporting period, an alternative compliance payment in an amount equal to, as adjusted for inflation in ac-

1 cordance with such regulations as the Secretary  
2 may promulgate, not less than—

3 “(i) \$50 per megawatt hour of elec-  
4 tricity savings needed to make up any def-  
5 icit with regard to a compliance obligation  
6 under the applicable performance stand-  
7 ard; or

8 “(ii) \$5 per million Btu of natural gas  
9 savings needed to make up any deficit with  
10 regard to a compliance obligation under  
11 the applicable performance standard.

12 “(B) USE OF PAYMENTS.—Alternative  
13 compliance payments collected by a State under  
14 subparagraph (A) shall be used by the State to  
15 administer the delegated authority of the State  
16 under this section and to implement cost-effec-  
17 tive energy efficiency programs that—

18 “(i) to the maximum extent prac-  
19 ticable, achieve electricity savings and nat-  
20 ural gas savings in the State sufficient to  
21 make up the deficit associated with the al-  
22 ternative compliance payments; and

23 “(ii) can be measured and verified in  
24 accordance with the applicable procedures

1                   and standards under subsection (f) or  
2                   paragraph (3), as applicable.

3                   “(5) REVIEW OF STATE IMPLEMENTATION.—

4                   “(A) PERIODIC REVIEW.—Every 2 years,  
5                   the Secretary shall review State implementation  
6                   of this section for conformance with the re-  
7                   quirements of this section in approximately ½  
8                   of the States that have received approval under  
9                   this subsection to administer the program, so  
10                  that each State shall be reviewed at least every  
11                  4 years.

12                  “(B) REPORT.—To facilitate the review  
13                  under subparagraph (A), the Secretary may re-  
14                  quire the State to submit a report dem-  
15                  onstrating the conformance of the State with  
16                  the requirements of this section, including—

17                         “(i) reports submitted by retail elec-  
18                         tricity suppliers and retail natural gas sup-  
19                         pliers to the State demonstrating compli-  
20                         ance with applicable performance stand-  
21                         ards;

22                         “(ii) the impact of the standards on  
23                         projected electricity and natural gas de-  
24                         mand within the State;

1           “(iii) an accounting of the use of al-  
2           ternative compliance payments by the  
3           State and the resulting electricity savings  
4           and natural gas savings achieved; and

5           “(iv) any other information that the  
6           Secretary determines appropriate.

7           “(C) REVIEW UPON PETITION.—Notwith-  
8           standing subparagraph (A), upon receipt of a  
9           public petition containing credible allegation of  
10          substantial deficiencies, the Secretary shall  
11          promptly review the State implementation of  
12          delegated authority under this section.

13          “(D) DEFICIENCIES.—

14               “(i) IN GENERAL.—In completing a  
15               review under this paragraph, if the Sec-  
16               retary finds deficiencies, the Secretary  
17               shall—

18                       “(I) notify the State of the defi-  
19                       ciencies;

20                       “(II) direct the State to correct  
21                       the deficiencies; and

22                       “(III) require the State to report  
23                       to the Secretary on progress made by  
24                       not later than 180 days after the date

1 on which the State receives notice  
2 under subclause (I).

3 “(ii) SUBSTANTIAL DEFICIENCIES.—If  
4 the deficiencies are substantial, the Sec-  
5 retary shall—

6 “(I) disallow the reported elec-  
7 tricity savings or natural gas savings  
8 that the Secretary determines are not  
9 credible due to deficiencies;

10 “(II) re-review the State not  
11 later than 2 years after the date on  
12 which the original review was com-  
13 pleted; and

14 “(III) if substantial deficiencies  
15 remain uncorrected after the review  
16 provided for under subclause (II), re-  
17 voke the authority of the State to ad-  
18 minister the program established  
19 under this section.

20 “(6) CALLS FOR REVISION OF STATE APPLICA-  
21 TIONS.—As a condition of maintaining the delegated  
22 authority of a State to administer this section, the  
23 Secretary may require a State to submit a revised  
24 application under paragraph (1) if the Secretary  
25 has—

1           “(A) promulgated new or revised perform-  
2           ance standards under subsection (d);

3           “(B) promulgated new or substantially re-  
4           vised measurement and verification procedures  
5           and standards under subsection (f); or

6           “(C) otherwise substantially revised the  
7           program established under this section.

8           “(7) COST RECOVERY, FIXED COST RECOVERY  
9           AND SHAREHOLDER INCENTIVES.—State utility reg-  
10          ulatory commissions are encouraged to review the  
11          rules and regulations of the commission to ensure  
12          that utilities under the jurisdiction of the commis-  
13          sion can—

14               “(A) recover the direct costs of energy effi-  
15               ciency programs;

16               “(B) fully recover authorized fixed costs,  
17               including lost margins from lower annual sales  
18               due to energy efficiency programs; and

19               “(C) earn an incentive for shareholders if  
20               the energy efficiency standards are achieved.

21          “(i) INFORMATION AND REPORTS.—In accordance  
22          with section 13 of the Federal Energy Administration Act  
23          of 1974 (15 U.S.C. 772), the Secretary may require any  
24          retail electricity supplier, retail natural gas supplier, third-  
25          party efficiency provider, or any other entity that the Sec-

1 retary determines appropriate, to provide any information  
2 the Secretary determines appropriate to carry out this sec-  
3 tion.

4 “(j) STATE LAW.—Nothing in this section diminishes  
5 or qualifies any authority of a State or political subdivision  
6 of a State to adopt or enforce any law or regulation re-  
7 specting electricity savings or natural gas savings, includ-  
8 ing any law or regulation establishing energy efficiency re-  
9 quirements that are more stringent than those under this  
10 section, except that no State law or regulation shall relieve  
11 any person of any requirement otherwise applicable under  
12 this section.”.

13 **SEC. 6. PROGRAM REVIEW.**

14 (a) NATIONAL ACADEMY OF SCIENCES REVIEW.—  
15 The Secretary of Energy shall enter into a contract with  
16 the National Academy of Sciences under which the Acad-  
17 emy shall, not later than July 1, 2023, and every 10 years  
18 thereafter, submit to Congress, the Federal Energy Regu-  
19 latory Commission, and the Secretary of Energy a com-  
20 prehensive evaluation of all aspects of the programs estab-  
21 lished under sections 610 and 611 of the Public Utility  
22 Regulatory Policies Act of 1978 (as added by this Act),  
23 including—

24 (1) an evaluation of the effectiveness of the pro-  
25 grams, including the specific design elements of the

1 programs, in increasing the efficiency of retail nat-  
2 ural gas and electricity distribution and consumption  
3 and increasing the deployment of renewable elec-  
4 tricity capacity;

5 (2) the opportunities for additional technologies  
6 and sources of efficiency and renewable electricity  
7 that have emerged since the date of enactment of  
8 this Act;

9 (3) the impact of the programs on the reli-  
10 ability of electricity and natural gas supply;

11 (4) the net benefits or costs of the programs to  
12 the United States and the States, including—

13 (A) the effects on electricity and natural  
14 gas demand and prices;

15 (B) the economic development benefits of  
16 investment;

17 (C) environmental costs and benefits;

18 (D) the impacts on public health and  
19 health care costs; and

20 (E) avoided costs related to environmental  
21 and congestion mitigation investments that oth-  
22 erwise would have been required;

23 (5) an assessment of the benefits and costs of  
24 increasing the performance standards established



1 under section 611(d) of the Public Utility Regu-  
2 latory Policies Act of 1978 (as added by this Act);

3 (6) the feasibility, advantages, and disadvan-  
4 tages of alternative models for demonstrating com-  
5 pliance with a Federal energy efficiency resource  
6 standard, including—

7 (A) establishing a national trading system  
8 for energy efficiency credits; or

9 (B) demonstrating compliance through ac-  
10 tual reductions in delivery or sales of electricity  
11 and natural gas, rather than on program sav-  
12 ings; and

13 (7) recommendations regarding potential  
14 changes to the programs, including to regulations  
15 and procedures for implementing the programs, or  
16 to related public policies.

17 (b) RECOMMENDATIONS TO CONGRESS.—Not later  
18 than January 1, 2024, and every 10 years thereafter, the  
19 Secretary of Energy shall submit to the Committee on En-  
20 ergy and Commerce of the House of Representatives and  
21 the Committee on Energy and Natural Resources of the  
22 Senate a report making recommendations for modifica-  
23 tions and improvements to the programs established under  
24 sections 610 and 611 of the Public Utility Regulatory  
25 Policies Act of 1978 (as added by this Act), including an

1 explanation of the inconsistencies, if any, between the rec-  
2 ommendations of the Secretary of Energy and the rec-  
3 ommendations included in the evaluation of the National  
4 Academy of Sciences under subsection (a).

5 **SEC. 7. CONFORMING AMENDMENT.**

6       The table of contents of the Public Utility Regulatory  
7 Policies Act of 1978 (16 U.S.C. prec. 2601) is amended  
8 by adding at the end of the items relating to title VI the  
9 following:

“Sec. 609. Rural and remote communities electrification grants.

“Sec. 610. Federal renewable electricity standard.

“Sec. 611. Federal energy efficiency resource standard for retail electricity and  
natural gas suppliers.”.

