112TH CONGRESS
2D SESSION

S. 2146

To amend the Public Utility Regulatory Policies Act of 1978 to create a market-oriented standard for clean electric energy generation, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 1, 2012

Mr. BINGAMAN (for himself, Mr. WYDEN, Mr. SANDERS, Mr. UDALL of Colorado, Mr. FRANKEN, Mr. COONS, Mr. KERRY, Mr. WHITEHOUSE, and Mr. UDALL of New Mexico) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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A BILL

To amend the Public Utility Regulatory Policies Act of 1978 to create a market-oriented standard for clean electric energy generation, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Clean Energy Standard Act of 2012''.

SEC. 2. FEDERAL CLEAN ENERGY STANDARD.

Title VI of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2601 et seq.) is amended by adding at the end the following:

"SEC. 610. FEDERAL CLEAN ENERGY STANDARD.

''(a) PURPOSE.—The purpose of this section is to create a market-oriented standard for electric energy generation that stimulates clean energy innovation and promotes a diverse set of low- and zero-carbon generation solutions in the United States at the lowest incremental cost to electric consumers.

''(b) DEFINITIONS.—In this section:

''(1) CLEAN ENERGY.—The term 'clean energy' means electric energy that is generated—

''(A) at a facility placed in service after December 31, 1991, using—

''(i) renewable energy;

''(ii) qualified renewable biomass;

''(iii) natural gas;

''(iv) hydropower;

''(v) nuclear power; or

''(vi) qualified waste-to-energy;

''(B) at a facility placed in service after the date of enactment of this section, using—

''(i) qualified combined heat and power; or

''(ii) a source of energy, other than biomass, with lower annual carbon intensity than 0.82 metric tons of carbon dioxide equivalent per megawatt-hour;

''(C) as a result of qualified efficiency improvements or capacity additions; or

''(D) at a facility that captures carbon dioxide and prevents the release of the carbon dioxide into the atmosphere.

''(2) NATURAL GAS.—

''(A) INCLUSION.—The term 'natural gas' includes coal mine methane.

''(B) EXCLUSIONS.—The term 'natural gas' excludes landfill methane and biogas.

''(3) QUALIFIED COMBINED HEAT AND POWER.—

''(A) IN GENERAL.—The term 'qualified combined heat and power' means a system that—

''(i) uses the same energy source for the simultaneous or sequential generation of electrical energy and thermal energy;

''(ii) produces at least—

''(I) 20 percent of the useful energy of the system in the form of electricity; and

''(II) 20 percent of the useful energy in the form of useful thermal energy;

''(iii) to the extent the system uses biomass, uses only qualified renewable biomass; and

''(iv) operates with an energy efficiency percentage that is greater than 50 percent.

''(B) DETERMINATION OF ENERGY EFFICIENCY.—For purposes of subparagraph (A), the energy efficiency percentage of a combined heat and power system shall be determined in accordance with section 48(c)(3)(C)(i) of the Internal Revenue Code of 1986.

''(4) QUALIFIED EFFICIENCY IMPROVEMENTS OR CAPACITY ADDITIONS.—

''(A) IN GENERAL.—Subject to subparagraphs (B) and (C), the term 'qualified efficiency improvements or capacity additions' means efficiency improvements or capacity additions made after December 31, 1991, to—

"(i) a nuclear facility placed in service on or before December 31, 1991; or

"(ii) a hydropower facility placed in service on or before December 31, 1991.

"(B) EXCLUSION.—The term 'qualified efficiency improvements or capacity additions' does not include additional electric energy generated as a result of operational changes not directly associated with efficiency improvements or capacity additions.

"(C) MEASUREMENT AND CERTIFICATION.—In the case of hydropower, efficiency improvements and capacity additions under this paragraph shall be—

"(i) measured on the basis of the same water flow information that is used to determine the historic average annual generation for the applicable hydroelectric facility; and

"(ii) certified by the Secretary or the Commission.

"(5) QUALIFIED RENEWABLE BIOMASS.—The term 'qualified renewable biomass' means renewable biomass produced and harvested through land management practices that maintain or restore the com-

position, structure, and processes of ecosystems, including the diversity of plant and animal communities, water quality, and the productive capacity of soil and the ecological systems.

''(6) QUALIFIED WASTE-TO-ENERGY.—The term 'qualified waste-to-energy' means energy produced—

''(A) from the combustion of—

''(i) post-recycled municipal solid waste;

''(ii) gas produced from the gasification or pyrolization of post-recycled municipal solid waste;

''(iii) biogas;

''(iv) landfill methane;

''(v) animal waste or animal byproducts; or

''(vi) wood, paper products that are not commonly recyclable, and vegetation (including trees and trimmings, yard waste, pallets, railroad ties, crates, and solid-wood manufacturing and construction debris), if diverted from or separated from other waste out of a municipal waste stream; and

''(B) at a facility that the Commission has certified, on an annual basis, is in compliance with all applicable Federal and State environmental permits, including—

''(i) in the case of a facility that commences operation before the date of enactment of this section, compliance with emission standards under sections 112 and 129 of the Clean Air Act (42 U.S.C. 7412, 7429) that apply as of the date of enactment of this section to new facilities within the applicable source category; and

''(ii) in the case of a facility that produces electric energy from the combustion, pyrolization, or gasification of municipal solid waste, certification that each local government unit from which the waste originates operates, participates in the operation of, contracts for, or otherwise provides for recycling services for residents of the local government unit.

''(7) RENEWABLE ENERGY.—The term 'renewable energy' means solar, wind, ocean, current, wave, tidal, or geothermal energy.

''(c) CLEAN ENERGY REQUIREMENT.—

"(1) IN GENERAL.—Effective beginning in calendar year 2015, each electric utility that sells electric energy to electric consumers in a State shall obtain a percentage of the electric energy the electric utility sells to electric consumers during a calendar year from clean energy.

"(2) PERCENTAGE REQUIRED.—The percentage of electric energy sold during a calendar year that is required to be clean energy under paragraph (1) shall be determined in accordance with the following table:

"Calendar year	Minimum annual percentage
2015	24
2016	27
2017	30
2018	33
2019	36
2020	39
2021	42
2022	45
2023	48
2024	51
2025	54
2026	57
2027	60
2028	63
2029	66
2030	69
2031	72
2032	75
2033	78
2034	81
2035	84.

"(3) DEDUCTION FOR ELECTRIC ENERGY GENERATED FROM HYDROPOWER OR NUCLEAR

POWER.—An electric utility that sells electric energy to electric consumers from a facility placed in service in the United States on or before December 31, 1991, using hydropower or nuclear power may deduct the quantity of the electric energy from the quantity to which the percentage in paragraph (2) applies.

''(d) MEANS OF COMPLIANCE.—An electric utility shall meet the requirements of subsection (c) by—

''(1) submitting to the Secretary clean energy credits issued under subsection (e);

''(2) making alternative compliance payments of 3 cents per kilowatt hour in accordance with subsection (i); or

''(3) taking a combination of actions described in paragraphs (1) and (2).

''(e) FEDERAL CLEAN ENERGY TRADING PROGRAM.—

''(1) ESTABLISHMENT.—Not later than 180 days after the date of enactment of this section, the Secretary shall establish a Federal clean energy credit trading program under which electric utilities may submit to the Secretary clean energy credits to certify compliance by the electric utilities with subsection (c).

''(2) CLEAN ENERGY CREDITS.—Except as provided in paragraph (3)(B), the Secretary shall issue to each generator of electric energy a quantity of clean energy credits determined in accordance with subsections (f) and (g).

''(3) ADMINISTRATION.—In carrying out the program under this subsection, the Secretary shall ensure that—

''(A) a clean energy credit shall be used only once for purposes of compliance with this section; and

''(B) a clean energy credit issued for clean energy generated and sold for resale under a contract in effect on the date of enactment of this section shall be issued to the purchasing electric utility, unless otherwise provided by the contract.

''(4) DELEGATION OF MARKET FUNCTION.—

''(A) IN GENERAL.—In carrying out the program under this subsection, the Secretary may delegate—

''(i) to 1 or more appropriate market-making entities, the administration of a national clean energy credit market for purposes of establishing a transparent na-

tional market for the sale or trade of clean energy credits; and

"(ii) to appropriate entities, the tracking of dispatch of clean generation.

"(B) ADMINISTRATION.—In making a delegation under subparagraph (A)(ii), the Secretary shall ensure that the tracking and reporting of information concerning the dispatch of clean generation is transparent, verifiable, and independent of any generation or load interests subject to an obligation under this section.

"(5) BANKING OF CLEAN ENERGY CREDITS.—Clean energy credits to be used for compliance purposes under subsection (c) shall be valid for the year in which the clean energy credits are issued or in any subsequent calendar year.

"(f) DETERMINATION OF QUANTITY OF CREDIT.—

"(1) IN GENERAL.—Except as otherwise provided in this subsection, the quantity of clean energy credits issued to each electric utility generating electric energy in the United States from clean energy shall be equal to the product of—

"(A) for each generator owned by a utility, the number of megawatt-hours of electric energy sold from that generator by the utility; and

"(B) the difference between—

"(i) 1.0; and

"(ii) the quotient obtained by dividing—

"(I) the annual carbon intensity of the generator, as determined in accordance with subsection (g), expressed in metric tons per megawatt-hour; by

"(II) 0.82.

"(2) NEGATIVE CREDITS.—Notwithstanding any other provision of this subsection, the Secretary shall not issue a negative quantity of clean energy credits to any generator.

"(3) QUALIFIED COMBINED HEAT AND POWER.—

"(A) IN GENERAL.—The quantity of clean energy credits issued to an owner of a qualified combined heat and power system in the United States shall be equal to the difference between—

"(i) the product obtained by multiplying—

"(I) the number of megawatt-hours of electric energy generated by the system; and

"(II) the difference between—

"(aa) 1.0; and

"(bb) the quotient obtained by dividing—

"(AA) the annual carbon intensity of the generator, as determined in accordance with subsection (g), expressed in metric tons per megawatt-hour; by

"(BB) 0.82; and

"(ii) the product obtained by multiplying—

"(I) the number of megawatt-hours of electric energy generated by the system that are consumed onsite by the facility; and

"(II) the annual target for electric energy sold during a calendar

year that is required to be clean energy under subsection (c)(2).

''(B) ADDITIONAL CREDITS.—In addition to credits issued under subparagraph (A), the Secretary shall award clean energy credits to an owner of a qualified heat and power system in the United States for greenhouse gas emissions avoided as a result of the use of a qualified combined heat and power system, rather than a separate thermal source, to meet onsite thermal needs.

''(4) QUALIFIED WASTE-TO-ENERGY.—The quantity of clean energy credits issued to an electric utility generating electric energy in the United States from a qualified waste-to-energy facility shall be equal to the product obtained by multiplying—

''(A) the number of megawatt-hours of electric energy generated by the facility and sold by the utility; and

''(B) 1.0.

''(g) DETERMINATION OF ANNUAL CARBON INTENSITY OF GENERATING FACILITIES.—

''(1) IN GENERAL.—For purposes of determining the quantity of credits under subsection (f), except as provided in paragraph (2), the Secretary

shall determine the annual carbon intensity of each generator by dividing—

"(A) the net annual carbon dioxide equivalent emissions of the generator; by

"(B) the annual quantity of electricity generated by the generator.

"(2) BIOMASS.—The Secretary shall—

"(A) not later than 180 days after the date of enactment of this section, issue interim regulations for determining the carbon intensity based on an initial consideration of the issues to be reported on under subparagraph (B);

"(B) not later than 180 days after the date of enactment of this section, enter into an agreement with the National Academy of Sciences under which the Academy shall—

"(i) evaluate models and methodologies for quantifying net changes in greenhouse gas emissions associated with generating electric energy from each significant source of qualified renewable biomass, including evaluation of additional sequestration or emissions associated with changes in land use by the production of the biomass; and

"(ii) not later than 1 year after the date of enactment of this section, publish a report that includes—

"(I) a description of the evaluation required by clause (i); and

"(II) recommendations for determining the carbon intensity of electric energy generated from qualified renewable biomass under this section; and

"(C) not later than 180 days after the publication of the report under subparagraph (B)(ii), issue regulations for determining the carbon intensity of electric energy generated from qualified renewable biomass that take into account the report.

"(3) CONSULTATION.—The Secretary shall consult with—

"(A) the Administrator of the Environmental Protection Agency in determining the annual carbon intensity of generating facilities under paragraph (1); and

"(B) the Administrator of the Environmental Protection Agency, the Secretary of the Interior, and the Secretary of Agriculture in

issuing regulations for determining the carbon intensity of electric energy generated by biomass under paragraph (2)(C).

''(h) CIVIL PENALTIES.—

''(1) IN GENERAL.—Subject to paragraph (2), an electric utility that fails to meet the requirements of this section shall be subject to a civil penalty in an amount equal to the product obtained by multiplying—

''(A) the number of kilowatt-hours of electric energy sold by the utility to electric consumers in violation of subsection (c); and

''(B) 200 percent of the value of the alternative compliance payment, as adjusted under subsection (m).

''(2) WAIVERS AND MITIGATION.—

''(A) FORCE MAJEURE.—The Secretary may mitigate or waive a civil penalty under this subsection if the electric utility was unable to comply with an applicable requirement of this section for reasons outside of the reasonable control of the utility.

''(B) REDUCTION FOR STATE PENALTIES.—The Secretary shall reduce the amount of a penalty determined under para-

graph (1) by the amount paid by the electric utility to a State for failure to comply with the requirement of a State renewable energy program, if the State requirement is more stringent than the applicable requirement of this section.

''(3) PROCEDURE FOR ASSESSING PENALTY.—The Secretary shall assess a civil penalty under this subsection in accordance with section 333(d) of the Energy Policy and Conservation Act (42 U.S.C. 6303(d)).

''(i) ALTERNATIVE COMPLIANCE PAYMENTS.—An electric utility may satisfy the requirements of subsection (c), in whole or in part, by submitting in lieu of a clean energy credit issued under this section a payment equal to the amount required under subsection (d)(2), in accordance with such regulations as the Secretary may promulgate.

''(j) STATE ENERGY EFFICIENCY FUNDING PROGRAM.—

''(1) ESTABLISHMENT.—Not later than December 31, 2015, the Secretary shall establish a State energy efficiency funding program.

''(2) FUNDING.—All funds collected by the Secretary as alternative compliance payments under

subsection (i), or as civil penalties under subsection (h), shall be used solely to carry out the program under this subsection.

''(3) DISTRIBUTION TO STATES.—

''(A) IN GENERAL.—An amount equal to 75 percent of the funds described in paragraph (2) shall be used by the Secretary, without further appropriation or fiscal year limitation, to provide funds to States for the implementation of State energy efficiency plans under section 362 of the Energy Policy and Conservation Act (42 U.S.C. 6322), in accordance with the proportion of those amounts collected by the Secretary from each State.

''(B) ACTION BY STATES.—A State that receives funds under this paragraph shall maintain such records and evidence of compliance as the Secretary may require.

''(4) GUIDELINES AND CRITERIA.—The Secretary may issue such additional guidelines and criteria for the program under this subsection as the Secretary determines to be appropriate.

''(k) EXEMPTIONS.—

''(1) IN GENERAL.—This section shall not apply during any calendar year to an electric utility that

sold less than the applicable quantity described in paragraph (2) of megawatt-hours of electric energy to electric consumers during the preceding calendar year.

''(2) APPLICABLE QUANTITY.—For purposes of paragraph (1), the applicable quantity is—

''(A) in the case of calendar year 2015, 2,000,000;

''(B) in the case of calendar year 2016, 1,900,000;

''(C) in the case of calendar year 2017, 1,800,000;

''(D) in the case of calendar year 2018, 1,700,000;

''(E) in the case of calendar year 2019, 1,600,000;

''(F) in the case of calendar year 2020, 1,500,000;

''(G) in the case of calendar year 2021, 1,400,000;

''(H) in the case of calendar year 2022, 1,300,000;

''(I) in the case of calendar year 2023, 1,200,000;

"(J) in the case of calendar year 2024, 1,100,000; and

"(K) in the case of calendar year 2025 and each calendar year thereafter, 1,000,000.

"(3) CALCULATION OF ELECTRIC ENERGY SOLD.—

"(A) DEFINITIONS.—In this subsection, the terms 'affiliate' and 'associate company' have the meanings given the terms in section 1262 of the Energy Policy Act of 2005 (42 U.S.C. 16451).

"(B) INCLUSION.—For purposes of calculating the quantity of electric energy sold by an electric utility under this subsection, the quantity of electric energy sold by an affiliate of the electric utility or an associate company shall be treated as sold by the electric utility.

"(l) STATE PROGRAMS.—

"(1) SAVINGS PROVISION.—

"(A) IN GENERAL.—Subject to paragraph (2), nothing in this section affects the authority of a State or a political subdivision of a State to adopt or enforce any law or regulation relating to—

"(i) clean or renewable energy; or

''(ii) the regulation of an electric utility.

''(B) FEDERAL LAW.—No law or regulation of a State or a political subdivision of a State may relieve an electric utility from compliance with an applicable requirement of this section.

''(2) COORDINATION.—The Secretary, in consultation with States that have clean and renewable energy programs in effect, shall facilitate, to the maximum extent practicable, coordination between the Federal clean energy program under this section and the relevant State clean and renewable energy programs.

''(m) ADJUSTMENT OF ALTERNATIVE COMPLIANCE PAYMENT.—Not later than December 31, 2016, and annually thereafter, the Secretary shall—

''(1) increase by 5 percent the rate of the alternative compliance payment under subsection (d)(2); and

''(2) additionally adjust that rate for inflation, as the Secretary determines to be necessary.

''(n) REPORT ON CLEAN ENERGY RESOURCES THAT DO NOT GENERATE ELECTRIC ENERGY.—

"(1) IN GENERAL.—Not later than 3 years after the date of enactment of this section, the Secretary shall submit to Congress a report examining mechanisms to supplement the standard under this section by addressing clean energy resources that do not generate electric energy but that may substantially reduce electric energy loads, including energy efficiency, biomass converted to thermal energy, geothermal energy collected using heat pumps, thermal energy delivered through district heating systems, and waste heat used as industrial process heat.

"(2) POTENTIAL INTEGRATION.—The report under paragraph (1) shall examine the benefits and challenges of integrating the additional clean energy resources into the standard established by this section, including—

"(A) the extent to which such an integration would achieve the purposes of this section;

"(B) the manner in which a baseline describing the use of the resources could be developed that would ensure that only incremental action that increased the use of the resources received credit; and

"(C) the challenges of pricing the resources in a comparable manner between orga-

nized markets and vertically integrated markets, including options for the pricing.

''(3) COMPLEMENTARY POLICIES.—The report under paragraph (1) shall examine the benefits and challenges of using complementary policies or standards, other than the standard established under this section, to provide effective incentives for using the additional clean energy resources.

''(4) LEGISLATIVE RECOMMENDATIONS.—As part of the report under paragraph (1), the Secretary may provide legislative recommendations for changes to the standard established under this section or new complementary policies that would provide effective incentives for using the additional clean energy resources.

''(o) EXCLUSIONS.—This section does not apply to an electric utility located in the State of Alaska or Hawaii.

''(p) REGULATIONS.—Not later than 1 year after the date of enactment of this section, the Secretary shall promulgate regulations to implement this section.

''SEC. 611. REPORT ON NATURAL GAS CONSERVATION.

''Not later than 2 years after the date of enactment of this section, the Secretary shall submit to Congress a report that—

''(1) quantifies the losses of natural gas during the production and transportation of the natural gas; and

''(2) makes recommendations, as appropriate, for programs and policies to promote conservation of natural gas for beneficial use.''.

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