Appendix B. Proposed Clean Energy Portfolio Standard

Clean Energy Portfolio Standard

SEC. —. CLEAN ENERGY PORTFOLIO.

Title VI of the Public Utility Regulatory Policies Act of 1978 is amended by adding at the end the following:

"SEC. 609. CLEAN ENERGY PORTFOLIO STANDARD.

"(a) Findings.— Congress finds that

"(1) The development of the country's clean energy resources is a high priority. A Federal clean energy portfolio standard will help improve the the nation's air quality by increasing the use of technologies to generate electricity without the production of sulfur dioxide, nitrous oxide, mercury and other emissions.

"(2) Nearly one-half of all States have implemented or are in the process of implementing programs, including Renewable Portfolio Standard ("RPS") programs, intended to diversify the mix of fuels used in the generation of electricity by requiring that a percentage of electricity sold, generated or otherwise supplied to end users be generated from designated renewable energy resources, or otherwise have programs in effect that encourage the generation of renewable or inherently clean sources of electricity.

“(3) These programs have been developed on a state-by-state basis in recognition of specific state and regional needs, interests, and resource availability.

“(4) On a national basis, the diversification of the electricity generation base will help to insure our national energy and economic security, while producing environmental improvements and advancing the introduction of new energy technologies.

“(5) Reduction of consumer demand for electricity through deployment of energy efficient technologies in the residential, business and commercial sector; implementation of demand response, smart metering and other programs that give end users tools to reduce energy consumption; and greater use of on site generating technologies, including solar, photovoltaic, combined heat and power, and fuel cells, also will contribute to national energy and economic security, environmental improvement and market opportunities for advanced technologies.

“(6) A clean energy portfolio standard can help diversify fuel sources used for electricity generation, encourage conservation, promote renewable generation resources, and significantly reduce future CO2 emissions.

“(7) The proliferation of various state programs addressing carbon emissions from the electric generation sector threatens efficiencies, generation fuel diversification and consumer electricity prices.

“(8) To ensure the most effective use of existing resources and facilities,and to ensure that a signficant portion of the increased future demand

for electricity is served by clean energy resources, a Federal clean energy porfolio standard should be applied to the a retail electric supplier's total electric sales to consumers.

"(b) Minimum Renewable Generation Requirement.— For each calendar year beginning in calendar year 2015,each retail electric supplier shall submit to the Secretary, not later than April 1 of the following calendar year, clean energy credits in an amount equal to the required annual percentage specified in subsection (c) of the retail electric supplier's total retail electric sales, except that a retail electric supplier shall not be required to submit clean energy credits in an amount greater than its incremental electric sales to electric consumers in excess of the retail electric supplier's base amount.

"(c) Required Annual Percentage.— The required annual percentage submitted in a calendar year shall be not less than the amount specified in the following table:

Calendar year:	**Minimum annual percentage**
2015-2019	10%
2020-2024	15%
2025 and thereafter	20%

"(d) Clean Energy Credits.— (1) A retail electric supplier may satisfy the requirements of subsection (b) through the submission of clean energy credits--

"(A) issued to the retail electric supplier under subsections (e) and (g);

"(B) obtained by purchase or exchange under subsection (f);

"(C) borrowed under subsection (h); or

“(D) purchased from the Secretary under subsection (i).

“(2) No more than 10% of a retail electric supplier’s obligation under subsection (b) may be satisfied through use of credits issued under subsection (e)(3)(B) (credits associated with sequestration or retrofit technologies).

"(3) A clean energy credit may be counted toward compliance with subsection (b) only once.

"(e) Issuance of Credits.— (1) The Secretary shall establish by rule, not later than 1 year after the date of enactment of this section, a program to issue, monitor the sale or exchange of, and track clean energy credits.

"(2) Under the program established under this section, an entity that generates electric energy through the use of a clean energy resource may apply to the Secretary for the issuance of clean energy credits. If the electricity is generated outside the United States, the applicant must demonstrate to the Secretary that the electricity is sold for ultimate consumption in the United States. The application shall indicate--

"(A) the type of clean energy resource used to produce the electricity,

"(B) the location where the electric energy was produced, and

"(C) any other information the Secretary determines to be appropriate.

"(3)(A) Except as provided in the subparagraphs that follow, the Secretary shall issue annually to each entity that generates electric energy one clean energy credit for each kilowatt hour of electric energy the entity generated in the prior calendar year through the use of clean energy.

“(B) The Secretary shall establish by rule, within one year after the date of enactment, a program for verifying the reduction of CO2 emissions into the atmosphere through permanent geological sequestration, bio-sequestration or through other verifiably permanent reductions in CO2 emissions from the retrofit of existing power plants with technology that permanently reduces CO2 emissions as related to net power output of the existing power plant or from the permanent reduction in CO2 emissions from industrial or other sources. The Secretary shall issue 1,000 credits for each ton of CO2 that has been verifiably and permanently sequestered, reduced or that verifiably has been sequestered through bio-sequestration. Credits issued under this subparagraph shall have the same value as credits issued under any other subparagraph of this subsection and may be used for purposes of complying with the minimum generation requirements under subsections (b) and (c) of this section, except as provided in subsection (d)(2). Projects eligible under this section shall include bio sequestration or other offset projects located outside the United States or verifiable carbon dioxide reductions obtained through international carbon dioxide trading markets.

"(C) The Secretary shall issue two clean energy credits for each kilowatt hour of electric energy generated and supplied to the grid in the prior calendar

year through the use of clean energy at a facility located on Indian land. For purposes of this paragraph, clean energy generated by biomass cofired with other fuels is eligible for two credits only if the biomass was grown on such land.

"(D) In the case of a retail electric supplier that is subject to a State renewable standard program that requires the generation or purchase of electricity from renewable energy; provides for alternative compliance payments in satisfaction of applicable State requirements under the program; provides for compliance through the acquisition of certificates or credits; provides for other financial compliance mechanisms; or imposes a penalty in the event of a failure to meet applicable requirements, the Secretary shall issue clean energy credits in an amount that corresponds to the kilowatt-hour obligation represented by the State alternative compliance payment, other financial compliance payment or penalty payment as though that payment had been made to the Secretary under subsection (i).

Such clean energy credits may be applied against the retail electric supplier's own required annual percentage under subsection (b) or may be transferred for use only by an associate company of the retail electric supplier. For purposes of this subsection, “associate company” shall have the meaning in Section 1262 of the Public Utility Holding Company Act of 2005.

“(E) In the case of a retail electric supplier that meets the criteria under subsections (n) (5) and (6), the Secretary shall issue clean energy credits in an amount that corresponds to the amount of expenditures on eligible demand side management products or services as though those expenditures had been

payments made to the Secretary under subsection (i). Such clean energy credits may be applied against the retail electric supplier's own required annual percentage or may be transferred for use only by an associate company of the retail electric supplier.

"(F) In the case of a new nuclear power facility qualifying as an inherently low emissions facility, the Secretary shall issue ½ credit for each kilowatt hour of production.

"(G) To be eligible for a clean energy credit, the unit of electric energy generated through the use of a clean energy resource must be either sold or used by the generator. If both a clean energy resource and a non-clean energy resource are used to generate the electric energy, the Secretary shall issue clean energy credits based on the proportion of the clean energy resources used. The Secretary shall identify clean energy credits by type and year of generation.

"(H) When a generator sells electric energy generated through the use of a clean energy resource to a retail electric supplier under a contract subject to section 210 of this Act or pursuant to a State net metering program, the retail electric supplier shall be treated as the generator of the electric energy for the purposes of this section for the duration of the contract.

"(I) The Secretary shall issue clean energy credits for electricity generated by an integrated gasification combined cycle generation facility or other generation facility that provides for carbon capture and sequestration in proportion to the fraction of carbon dioxide captured and sequestered. The Secretary shall calculate the amount of clean energy credits issued to such

facility by multiplying the kilowatt hours generated by the facility and supplied to the grid during the prior year by the ratio of the amount of carbon dioxide captured from the facility and sequestered to the sum of the amount of carbon dioxide captured from the facility and sequestered plus the amount of carbon dioxide emitted from the facility during the same year. Clean energy credits issued under this subsection are not subject to the limits set forth in subsection (d)(2).

"(f) Clean Energy Credit Trading.— A clean energy credit may be sold, transferred or exchanged by the entity to whom issued or by any other entity who acquires the renewable energy credit, except for those clean energy credits issued pursuant to subsections (e)(3)(D) and (E). A clean energy credit for any year that is not used to satisfy the minimum renewable generation requirement of subsection (b) for that year may be carried forward for use within any subsequent year.

"(g) Early Action.-- A retail electric supplier generating electric energy through the use of a clean energy resource (except for an inherently low emissions facility), at any time after 2009 and before 2015, is eligible to receive credits from the Secretary, and the Secretary is directed to issue such credits, on the same basis as if the generation occurred in 2015 or thereafter. Such credits shall have the same value and may be used for any purpose authorized under this section.

"(h) Clean Energy Credit Borrowing.— At any time before the end of calendar year 2015 and any subsequent calendar year, a retail electric supplier

that has reason to believe it will not have sufficient clean energy credits to comply with subsection (b) may --

"(1) submit a plan to the Secretary demonstrating that the retail electric supplier will earn sufficient credits within the next 3 calendar years (or longer if the retail electric supplier intends to obtain credits for new nuclear power) which, when taken into account, will enable the retail electric supplier's to meet the requirements of subsection (b) for calendar year 2015 and the subsequent calendar years involved; and

"(2) upon the approval of the plan by the Secretary, apply clean energy credits that the plan demonstrates will be earned within the next 3 calendar years (or longer if the retail electric supplier intends to obtain credits for new nuclear power) to meet the requirements of subsection (b) for each calendar year involved.

"(i) Credit Cost Cap.— The Secretary shall offer clean energy credits for sale at 2.5 cents per kilowatt-hour beginning in 2015 and shall offer credits for sale in subsequent years at the same price after adjusting for inflation.

"(j) Enforcement.— The Secretary may assess a civil penalty on a retail electric supplier that does not comply with subsection (b), unless the retail electric supplier was unable to comply with subsection (b) for reasons outside of the supplier's reasonable control (including weather-related damage, mechanical failure, lack of transmission capacity or availability, strikes, lockouts, or actions of a governmental authority). A retail electric supplier who does not submit the required number of clean energy credits under subsection (b) shall be subject to

a civil penalty of not more 200 percent of the average market value of credits for the compliance period for each clean energy credit not submitted.

"(k) Information Collection.— The Secretary may collect the information necessary to verify and audit--

"(1) the annual electric energy generation and clean energy generation of any entity applying for clean energy credits under this section,

"(2) the validity of clean energy credits submitted by a retail electric supplier to the Secretary, and

"(3) the quantity of electricity sales of all retail electric suppliers.

"(l) Environmental Savings Clause.— Qualified hydropower production shall be subject to all applicable environmental laws and licensing and regulatory requirements.

"(m) Existing Programs.— (1) State Savings Clause.--This section does not preclude a State from imposing additional clean energy requirements in that State, including specifying eligible technologies under such State requirements.

“(2) Coordination. --In the rule establishing this program, the Secretary shall incorporate common elements of existing clean energy programs, including state programs, to ensure administrative efficiency, market liquidity and effective enforcement. The Secretary shall work with the States to minimize administrative burdens and costs and to avoid duplicating compliance charges to retail electric suppliers.

"(n) Definitions.— For purposes of this section:

"(1) Biomass.--The term `biomass' means any organic material that is available on a renewable or recurring basis, including dedicated energy crops, trees grown for energy production, wood waste and wood residues, plants (including aquatic plants, grasses, and agricultural crops), residues, fibers, animal wastes and other organic waste materials, and fats and oils, except that with respect to material removed from National Forest System lands the term includes only organic material from --

"(A) thinnings from trees that are less than 12 inches in diameter;

"(B) slash;

"(C) brush; and

"(D) mill residues.

“(2) Bio-sequestration.- The term ‘bio-sequestration’ means the capture and storage of carbon in biological organisms.

"(3) Clean energy.--The term `clean energy' means electric energy generated by a clean energy resource.

"(4) Clean energy resource.--The term `clean energy resource' means solar (including solar water heating), wind, ocean, or geothermal energy, fuel cells (including zero emission regenerative fuel cell technology), biomass, solid waste (as defined in the Solid Waste disposal Act, 42 U.S.C. sec. 6901 et seq.), landfill gas, qualified hydropower production, as defined in section 45 (c)(8) of the Internal Revenue Code or an inherently low emissions facility.

“(5) Demand side management.- The term ‘demand side management’ means management of customer consumption of electricity or the demand for

electricity through the implementation of energy efficiency technologies, management practices or other measures relating to residential, commercial, industrial, institutional or government customers that reduce electricity consumption by those customers or industrial by-product technologies consisting of the use of a by-product from an industrial process, including the reuse of energy from exhaust gasses or other manufacturing by-products that are used in the direct production of electricity at the facility of a customer. Such term shall also include –

"(A) distributed generation technologies, including on-site renewable energy systems and fuel cells;

"(B) energy efficiency technologies, including generation technologies to improve efficiency and grid technologies to reduce line losses and otherwise improve transmission efficiency; and

"(C) demand management techniques or processes.

"(6) Expenditures on eligible demand side management products or services.- The term 'expenditures on eligible demand side management products or services' means expenditures incurred, including administration and overhead costs, for demand side management measures offered by a retail electric supplier pursuant to energy conservation, efficiency and/or demand side management plans and programs established under state law or regulation and approved by the appropriate state regulatory authorities.

"(7) Indian land.--The term `Indian land' means--

"(A) any land within the limits of any Indian reservation, pueblo, or rancheria,

"(B) any land not within the limits of any Indian reservation, pueblo, or rancheria title to which was on the date of enactment of this paragraph either held by the United States for the benefit of any Indian tribe or individual or held by any Indian tribe or individual subject to restriction by the United States against alienation,

"(C) any dependent Indian community, and

"(D) any land conveyed to any Alaska Native corporation under the Alaska Native Claims Settlement Act.

"(8) Indian tribe.--The term `Indian tribe' means any Indian tribe, band, nation, or other organized group or community, including any Alaskan Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

“(9) Inherently low emissions facility. The term ‘inherently low emissions facility’ means an integrated gasification combined cycle generation facility or other generation technology that provides for carbon capture and sequestration, or a new nuclear power facility.

“(10) New nuclear power. The term ‘new nuclear power’ means electric energy that is generated from a nuclear facility placed in service after January 1, 2015.

"(11) Retail electric supplier.--The term `retail electric supplier' means a person or entity that sold not less than 500,000 megawatt hours of electric energy to electric consumers for purposes other than resale in any calendar year before January 1, 2015, and a person or entity that first sold electric energy to electric consumers for purposes other than resale after January 1, 2015.

"(12) Retail electric supplier's base amount.--The term `retail electric supplier's base amount' means the average annual amount of electric energy sold by the retail electric supplier to electric consumers for purposes other than resale, expressed in terms of kilowatt hours, during calendar years 2008 to 2011 or as otherwise determined by the Secretary. The Secretary shall issue rules within two years of enactment of this Act to establish the calculation of the base amount for retail electric suppliers that initiate sales after January 1, 2010, and how adjustments will be made for material changes in marketing patterns or other unusual circumstances in or since the base period.

"(13) Retail electric supplier's incremental electric sales. The term 'retail electric supplier's incremental electric sales' means the difference between a retail electric supplier's sales to electric consumers in a given year and the retail electric supplier's base amount.

"(14) Retail electric supplier's total retail sales. The term "retail electric supplier's total retail sales" means the total sales made to consumers in the previous calendar year by a retail supplier but excluding sales associated with electricity generated by a hydro-electric facility (but excluding qualified hydropower production as defined by section 45 (c)(8) of the Internal Revenue Code).

"(o) Recovery of Costs.— Any costs that will be incurred by a retail electric supplier in order to comply with the requirements of this section shall be deemed necessary and reasonable costs and shall be fully and contemporaneously recoverable in all jurisdictions. Costs necessary to comply with this section include, but are not limited to, the costs of purchase of clean energy credits and any associated energy, the costs of generation of clean energy credits, and the costs of firming, shaping, balancing, backup and delivery services prudently incurred to maintain a reliable and well-functioning electric

system that incorporates energy from clean energy resources. A retail electric supplier whose sales of electric energy are subject to any form of rate regulation, including any utility whose rates are regulated by the Commission and any State regulated electric utility, shall not be denied the opportunity to recover the full amount of the prudently incurred incremental cost of energy obtained to comply with the requirements of subsection (b) for sales to electric customers which are subject to any form of rate regulation, notwithstanding any other law, regulation, rule, administrative order or any agreement between the electric utility and either the Commission or a State regulatory authority. For the purpose of this subsection, the term `incremental cost of energy' means--

"(1) the cost to the electric utility for the purchase of energy associated with the acquisiton of clean energy credits or for the generation of energy to satisfy the minimum clean energy generation requirement of subsection (b), including any costs incurred by the electric utility to receive such energy on its system and deliver such energy to its retail loads either over existing transmission facilities or newly constructed transmission facilities. Receipt and delivery costs include transmission and distribution costs or charges, any losses and associated ancillary service charges assessed by any applicable transmission provider or provided for pursuant to an electric utility's own Commission-accepted open access transmission tariff, and any firming, shaping, backup or delivery services necessary to balance clean energy; and

"(2) the cost to the electric utility for acquiring renewable energy credits to satisfy the minimum clean energy- generation requirement of subsection (b),

including the costs for alternative compliance payments, credit or certificate purchases and other financial compliance payments made to states.

“(p) Program Review.— The Secretary shall conduct a comprehensive evaluation of all aspects of the Clean Energy Standard program within 10 years of enactment of this section and every 5 years thereafter. The study shall include an evaluation of --

“(1) The effectiveness of the program in increasing the market penetration and lower the cost of the eligible renewable technologies,

“(2) The opportunities for any additional technologies emerging since enactment of this section,

“(3) The impact on the regional diversity and reliability of supply sources, including the power quality benefits of distributed generation,

“(4) The regional resource development relative to renewable potential and reasons for any under investment in renewable resources,

“(5) The net cost/benefit of the clean energy standard to the national and state economies, including retail power costs, economic development benefits of investment, avoided costs related to environmental and congestion mitigation investments that would otherwise have been required, impact on natural gas demand and price, effectiveness of green marketing programs at reducing the cost of renewable resources, and

“(6) The flexibility granted to any State under subsection (r).

The Secretary shall transmit the results of the program review and any recommendations for modifications and improvements to the program to Congress not later than January 1, 2019.

"(q) Program Improvements.— Using the results of the review under subsection (p), the Secretary shall by rule, within 6 months of the completion of the review, make such modifications to the program as may be necessary to improve the efficiency of the program and maximize the use of clean energy under the program. In making such rule, the Secretary shall be authorized to expand the definition of clean energy resource in subsection (m)(4) or inherently low emissions facility in subsection (m)(10) to include new technologies the Secretary determines have characteristics in common with other energy resources listed in those subsections.

"(r) State Flexibility.— Within one year of enactment of this Section, any State that has reason to believe that the cost of complying with the requirements of this section shall cause undue economic hardship to the ultimate purchasers of electricity in that State, including manufacturing and industrial users of electricity, may petition the Secretary to grant a waiver from the requirements of this section for retail electric suppliers selling electricity to end use customers in that State. The Secretary shall grant such a waiver if he finds that the requirements of this section are likely to cause undue economic hardship to ultimate purchasers of electricity in that State. In making a determination on a State petition under this paragraph, the Secretary shall take into account (a) the adequacy of commercially available clean energy resources within the State, (b)

the potential clean energy resources available within the region and (c) the cost of developing those resources at current and reasonably expected levels of technology, including the cost and availability of existing and needed transmission facilities to transmit electric energy from such clean energy resources to customers within the State, and (d) the economic and related impacts of such costs on ultimate purchasers within the State.