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THE GENERAL ASSEMBLY OF PENNSYLVANIA

HOUSE BILL

No. 2277 Session of 2024

INTRODUCED BY OTTEN, HOWARD, SAPPEY, SCHLOSSBERG, KINSEY, HOHENSTEIN, MALAGARI, HILL-EVANS, FIEDLER, DONAHUE, KRUEGER, D. WILLIAMS, ABNEY, DALEY, CEPEDA-FREYTIZ, BENHAM, GIRAL, FRIEL, ROZZI, TAKAC, ISAACSON, PASHINSKI, PROKOPIAK, FRANKEL, WAXMAN, KIM, VITALI, GUENST, SALISBURY, BRIGGS, SHUSTERMAN, WEBSTER, YOUNG, SIEGEL, KRAJEWSKI, CIRESI, HADDOCK, CONKLIN, MUNROE, McNEILL, SANCHEZ, DAWKINS, O'MARA, BOROWSKI, PIELLI, BOYD, KINKEAD, SCOTT, N. NELSON, T. DAVIS, MULLINS, KHAN, HANBIDGE, BRENNAN, GREEN, SCHWEYER, STEELE, MADDEN, WARREN, McCLINTON, FREEMAN, BRADFORD, HARRIS AND BIZZARRO, MAY 8, 2024

REFERRED TO COMMITTEE ON ENVIRONMENTAL RESOURCES AND ENERGY, MAY 8, 2024

AN ACT

Amending the act of November 30, 2004 (P.L.1672, No.213), entitled "An act providing for the sale of electric energy generated from renewable and environmentally beneficial sources, for the acquisition of electric energy generated from renewable and environmentally beneficial sources by electric distribution and supply companies and for the powers and duties of the Pennsylvania Public Utility Commission," further providing for definitions; providing for force majeure; further providing for alternative energy portfolio standards, for portfolio requirements in other states, for health and safety standards and for interagency responsibilities; providing for zero emission credits; and making editorial changes.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. Sections 1 and 2 of the act of November 30, 2004 (P.L.1672, No.213), known as the Alternative Energy Portfolio Standards Act, are amended to read:

Section 1. Short title.

This act shall be known and may be cited as the [Alternative Energy Portfolio] Pennsylvania Reliable Energy Sustainability Standards Act.

Section 2. Definitions.

The following words and phrases when used in this act shall have the meanings given to them in this section unless the context clearly indicates otherwise:

"Advanced reactor. A nuclear fission reactor consistent with the definition of "advanced nuclear reactor" in 42 U.S.C. § 16271 (relating to nuclear energy). The term includes a small modular reactor.

["Alternative energy credit." A tradable instrument that is used to establish, verify and monitor compliance with this act. A unit of credit shall equal one megawatt hour of electricity from an alternative energy source. The alternative energy credit shall remain the property of the alternative energy system until the alternative energy credit is voluntarily transferred by the alternative energy system. (Def. amended July 17, 2007, P.L.114, No.35)

"Alternative energy portfolio standards." Standards establishing that a certain amount of energy sold from alternative energy sources is included as part of the sources of electric generation by electric utilities within this Commonwealth.

"Alternative energy sources." The term shall include the following existing and new sources for the production of electricity:

(1) Solar photovoltaic or other solar electric energy.

(2) Solar thermal energy.

(3) Wind power.

(4) Large-scale hydropower, which shall mean the production of electric power by harnessing the hydroelectric potential of moving water impoundments, including pumped storage that does not meet the requirements of low-impact hydropower under paragraph (5).

(5) Low-impact hydropower consisting of any technology that produces electric power and that harnesses the hydroelectric potential of moving water impoundments, provided such incremental hydroelectric development:

(i) does not adversely change existing impacts to aquatic systems;

(ii) meets the certification standards established by the Low Impact Hydropower Institute and American Rivers, Inc., or their successors;

(iii) provides an adequate water flow for protection of aquatic life and for safe and effective fish passage;

(iv) protects against erosion; and

(v) protects cultural and historic resources.

(6) Geothermal energy, which shall mean electricity produced by extracting hot water or steam from geothermal reserves in the earth's crust and supplied to steam turbines that drive generators to produce electricity.

(7) Biomass energy, which shall mean the generation of electricity utilizing the following:

(i) organic material from a plant that is grown for the purpose of being used to produce electricity or is protected by the Federal Conservation Reserve Program (CRP) and provided further that crop production on CRP lands does not prevent achievement of the water quality

protection, soil erosion prevention or wildlife enhancement purposes for which the land was primarily set aside; or

(ii) any solid nonhazardous, cellulosic waste material that is segregated from other waste materials, such as waste pallets, crates and landscape or right-of-way tree trimmings or agricultural sources, including orchard tree crops, vineyards, grain, legumes, sugar and other crop by-products or residues.

(8) Biologically derived methane gas, which shall include methane from the anaerobic digestion of organic materials from yard waste, such as grass clippings and leaves, food waste, animal waste and sewage sludge. The term also includes landfill methane gas.

(9) Fuel cells, which shall mean any electrochemical device that converts chemical energy in a hydrogen-rich fuel directly into electricity, heat and water without combustion.

(10) Waste coal, which shall include the combustion of waste coal in facilities in which the waste coal was disposed or abandoned prior to July 31, 1982, or disposed of thereafter in a permitted coal refuse disposal site regardless of when disposed of, and used to generate electricity, or such other waste coal combustion meeting alternate eligibility requirements established by regulation. Facilities combusting waste coal shall use at a minimum a combined fluidized bed boiler and be outfitted with a limestone injection system and a fabric filter particulate removal system. Alternative energy credits shall be calculated based upon the proportion of waste coal utilized to produce electricity at the facility.

(11) Coal mine methane, which shall mean methane gas emitting from abandoned or working coal mines.

(12) Demand-side management consisting of the management of customer consumption of electricity or the demand for electricity through the implementation of:

(i) energy efficiency technologies, management practices or other strategies in residential, commercial, institutional or government customers that reduce electricity consumption by those customers;

(ii) load management or demand response technologies, management practices or other strategies in residential, commercial, industrial, institutional and government customers that shift electric load from periods of higher demand to periods of lower demand; or

(iii) industrial by-product technologies consisting of the use of a by-product from an industrial process, including the reuse of energy from exhaust gases or other manufacturing by-products that are used in the direct production of electricity at the facility of a customer.

(13) Distributed generation system, which shall mean the small-scale power generation of electricity and useful thermal energy.

"Alternative energy system." A facility or energy system that uses a form of alternative energy source to generate electricity and delivers the electricity it generates to the distribution system of an electric distribution company or to the transmission system operated by a regional transmission organization.]

"Biogas energy." The generation of electricity that uses:

(1) biogas resultant of anaerobic digestion of organic

material, including yard waste such as grass clippings and leaves, food waste, animal waste and sewage sludge; or

(2) landfill gas.

"Biomass energy." The generation of electricity that uses:

(1) organic material from a plant that is grown for the purpose of being used to produce electricity or is protected by the Federal Conservation Reserve Program (CRP), and provided that crop production on CRP lands does not prevent achievement of the water quality protection, soil erosion prevention or wildlife enhancement purposes for which the land is primarily set aside; or

(2) any solid nonhazardous, cellulosic waste material that is segregated from other waste material, such as waste pallets, crates and landscape or right-of-way tree trimmings or agricultural sources, including orchard tree crops, vineyards, grain, legumes, sugar and other crop by-products or residues.

"Clean hydrogen." Hydrogen produced through a process that results in a lifecycle greenhouse gas emissions rate of less than 0.45 kilograms of CO2e per kilogram of hydrogen.

"Coal mine fugitive emissions." Methane gas emitted from an abandoned or working coal mine.

"Combined heat and power system." A combined heat and power system installed on a commercial, institutional or industrial facility site within this Commonwealth that is a qualified facility under the Public Utility Regulatory Policies Act of 1978 (Public Law 95-617, 92 Stat. 3117) and has an annual operating efficiency of at least 60% with at least 25% of the total annual energy output being useful thermal energy. A combined heat and power system shall qualify as a Tier II PRESS

energy source for up to 25 megawatts of aggregate electric nameplate capacity on a site.

"Commission." The Pennsylvania Public Utility Commission.

["Cost-recovery period." The longer of:

(1) the period during which competitive transition charges under 66 Pa.C.S § 2808 (relating to competitive transition charge) or intangible transition charges under 66 Pa.C.S. § 2812 (relating to approval of transition bonds) are recovered; or

(2) the period during which an electric distribution company operates under a Pennsylvania Public Utility Commission-approved generation rate plan that has been approved prior to or within one year of the effective date of this act, but in no case shall the cost-recovery period under this act extend beyond December 31, 2010.]

"Customer-generator." A nonutility owner or operator of a net metered distributed generation system with a nameplate capacity of not greater than 50 kilowatts if installed at a residential service or not larger than 3,000 kilowatts at other customer service locations, except for customers whose systems are above three megawatts and up to five megawatts who make their systems available to operate in parallel with the electric utility during grid emergencies as defined by the regional transmission organization or where a microgrid is in place for the primary or secondary purpose of maintaining critical infrastructure, such as homeland security assignments, emergency services facilities, hospitals, traffic signals, wastewater treatment plants or telecommunications facilities, provided that technical rules for operating generators interconnected with facilities of an electric distribution company, electric

cooperative or municipal electric system have been promulgated by the Institute of Electrical and Electronic Engineers and the Pennsylvania Public Utility Commission.

"Demand-side management." The management of customer consumption of electricity or the demand for electricity through the implementation of:

(1) energy efficiency technologies, management practices or other strategies in residential, commercial, institutional or government customers that reduce electricity consumption by those customers;

(2) load management or demand response technologies, management practices or other strategies in residential, commercial, industrial, institutional and government customers that shift electric load from periods of higher demand to periods of lower demand; or

(3) industrial by-product technologies consisting of the use of a by-product from an industrial process, including the reuse of energy from exhaust gases or other manufacturing by-products that are used in the direct production of electricity at the facility of a customer.

"Department." The Department of Environmental Protection of the Commonwealth.

"Distributed generation system." Small-scale power generation of electricity, not including combined heat and power.

"Electric distribution company." The term shall have the same meaning given to it in 66 Pa.C.S. Ch. 28 (relating to restructuring of electric utility industry).

"Electric generation supplier." The term shall have the same meaning given to it in 66 Pa.C.S. Ch. 28 (relating to

restructuring of electric utility industry).

"Environmental justice area." A geographic area characterized by increased pollution burden and sensitive or vulnerable populations based on demographic and environmental data as identified by the department.

"Force majeure." [Upon its own initiative or upon a request of an electric distribution company or an electric generator supplier, the Pennsylvania Public Utility Commission, within 60 days, shall determine if alternative PRESS energy resources are reasonably available in the marketplace in sufficient quantities or are likely to be developed in sufficient quantities due to alternative compliance payments or economics for the electric distribution companies and electric generation suppliers to meet their obligations for that reporting period under this act. In making this determination, the commission shall consider whether electric distribution companies or electric generation suppliers have made a good faith effort to acquire sufficient PRESS alternative energy to comply with their obligations. Such good faith efforts shall include, but are not limited to, banking reliable alternative energy credits during their transition periods, seeking reliable alternative energy credits through competitive solicitations and seeking to procure reliable alternative energy credits or PRESS alternative energy through long-term contracts. In further making its determination, the commission shall assess the availability of alternative reliable energy credits in the Generation Attributes Tracking System (GATS) or its successor and the availability of reliable alternative energy credits generally in Pennsylvania and other jurisdictions in the PJM Interconnection, L.L.C. regional transmission organization (PJM) or its successor. The commission

may also require solicitations for reliable alternative energy credits as part of default service before requests of force majeure can be made. If the commission further determines that PRESS alternative energy resources are not reasonably available in sufficient quantities in the marketplace for the electric distribution companies and electric generation suppliers to meet their obligations under this act, then the commission shall modify the underlying obligation of the electric distribution company or electric generation supplier or recommend to the General Assembly that the underlying obligation be eliminated. Commission modification of the electric distribution company or electric generation supplier obligations under this act shall be for that compliance period only. Commission modification shall not automatically reduce the obligation for subsequent compliance years. If the commission modifies the electric distribution company or electric generation supplier obligations under this act, the commission may require the electric distribution company or electric generation supplier to acquire additional reliable alternative energy credits in subsequent years equivalent to the obligation reduced due to a force majeure declaration if the commission determines that sufficient reliable alternative energy credits exist in the marketplace.] The determination made by the commission under section 2.1.

"Fuel cells." A device that converts chemical energy in a hydrogen-rich fuel directly into electricity, heat and water without combustion.

"Fusion energy." The product of fusion reactions inside a fusion device and used to generate electricity.

"Geothermal energy." The utilization of natural heat of the earth found below the surface of the earth, which is then used

to generate electricity. The term includes:

(1) A product of geothermal process such as heat, indigenous steam, pressure, hot water and hot brines, gases and byproducts.

(2) Energy from a geothermal heating and cooling system. The term does not include helium, oil, hydrocarbon gas or any other hydrocarbon substances.

"Geothermal heating and cooling system." A system that:

(1) Exchanges thermal energy from groundwater or a shallow ground source to generate thermal energy through an electric geothermal heat pump or a system of electric geothermal heat pumps interconnected with a geothermal extraction facility that:

(i) Is a closed loop or a series of closed loop systems in which fluid is permanently confined within a pipe or tubing.

(ii) Does not come in contact with the outside environment or an open loop system in which ground or surface water is:

(A) circulated in an environmentally safe manner directly into the facility; and

(B) returned to the same aquifer or surface water source.

(2) Meets or exceeds the current Federal Energy Star product specification standards.

(3) Replaces or displaces less efficient space or water heating systems, regardless of fuel type.

(4) Replaces or displaces less efficient space cooling systems that do not meet Federal Energy Star product specification standards.

(5) Does not feed electricity back to the grid.

"Hydropower." The production of electric power by harnessing the hydroelectric potential of moving water impoundments, including pumped storage that does not meet the requirements of low-impact hydropower.

"Low-impact hydropower." Technology that produces electric power and harnesses the hydroelectric potential of moving water impoundments, provided that the incremental hydroelectric development:

(1) Does not adversely change existing impacts to aquatic systems.

(2) Meets the certification standards established by the Low Impact Hydropower Institute and American Rivers, Inc., or its successors.

(3) Provides an adequate water flow for protection of aquatic life and for safe and effective fish passage.

(4) Protects against erosion.

(5) Protects cultural and historic resources.

"Lifecycle greenhouse gas emissions." The term shall have the same meaning as defined in 26 U.S.C. § 45V(c) (relating to credit for production of clean hydrogen).

"Municipal solid waste." This will include energy from existing waste to energy facilities which the Department of Environmental Protection has determined are in compliance with current environmental standards, including, but not limited to, all applicable requirements of the Clean Air Act (69 Stat. 322, 42 U.S.C. § 7401 et seq.) and associated permit restrictions and all applicable requirements of the act of July 7, 1980 (P.L.380, No.97), known as the Solid Waste Management Act.

"Net metering." The means of measuring the difference

between the electricity supplied by an electric utility and the electricity generated by a customer-generator when any portion of the electricity generated by the [alternative] PRESS energy [generating] system is used to offset part or all of the customer-generator's requirements for electricity. [Virtual] The term includes virtual meter aggregation on properties owned or leased and operated by a customer-generator and located within two miles of the boundaries of the customer-generator's property and within a single electric distribution company's service territory [shall be eligible for net metering].

"PRESS energy sources." The term shall include existing and new sources for the production of electricity including Tier I, Tier II and Tier III PRESS energy sources.

"PRESS energy system." A facility or energy system that uses a form of PRESS energy source to generate electricity and delivers the electricity generated to the distribution system of an electric distribution company or to the transmission system operated by a regional transmission organization.

"Regional transmission organization." An entity approved by the Federal Energy Regulatory Commission [(FERC)] that is created to operate and manage the electrical transmission grids of the member electric transmission utilities as required under [FERC] Federal Energy Regulatory Commission Order 2000, Docket No. RM99-2-000, [FERC] Federal Energy Regulatory Commission Chapter 31.089 (1999) or any successor organization approved by the [FERC] Federal Energy Regulatory Commission.

"Reliable energy credit." A tradable instrument that is used to establish, verify and monitor compliance with this act. A unit of credit shall equal one megawatt hour of electricity from a PRESS energy source. The reliable energy credit shall remain

the property of the reliable energy system until the reliable energy credit is voluntarily transferred by the reliable energy system.

"Reliable energy standards." Standards establishing that a certain amount of energy sold from PRESS energy sources is included as part of the sources of electric generation by electric utilities within this Commonwealth.

"Reporting period." The 12-month period from June 1 through May 31. A reporting year shall be numbered according to the calendar year in which it begins and ends.

"Retail electric customer." The term shall have the same meaning given to it in 66 Pa.C.S. Ch. 28 (relating to restructuring of electric utility industry).

"Small modular reactors." An advanced nuclear reactor with a rated capacity of less than 300 electrical megawatts that can be constructed and operated in combination with similar reactors at a single site.

["Tier I alternative energy source." Energy derived from:

(1) Solar photovoltaic and solar thermal energy.

(2) Wind power.

(3) Low-impact hydropower.

(4) Geothermal energy.

(5) Biologically derived methane gas.

(6) Fuel cells.

(7) Biomass energy.

(8) Coal mine methane.

"Tier II alternative energy source." Energy derived from:

(1) Waste coal.

(2) Distributed generation systems.

(3) Demand-side management.

(4) Large-scale hydropower.

(5) Municipal solid waste.

(6) Generation of electricity utilizing by-products of the pulping process and wood manufacturing process, including bark, wood chips, sawdust and lignin in spent pulping liquors.

(7) Integrated combined coal gasification technology.]

"Tier I PRESS energy source." Electric energy derived from:

(1) Solar photovoltaic and solar thermal energy.

(2) Wind power.

(3) Low-impact hydropower.

(4) Geothermal energy.

(5) Advanced reactors.

(6) Fusion energy.

(7) Coal mine fugitive emissions.

(8) Biogas energy.

"Tier II PRESS energy source." Electric energy derived from:

(1) Natural gas or coal using 80% clean hydrogen co-fired blend or equivalent carbon intensity reduction technologies.

(2) Non-Tier I distributed generation systems.

(3) Demand-side management.

(4) Hydropower.

(5) Fuel cells.

(6) Biomass energy.

(7) Storage resources co-located with a Tier I PRESS energy source with 10% nameplate capacity available every hour for a 24-hour period.

(8) Combined heat and power.

(9) Tier I PRESS energy source that meets the

requirements of section 3(e)(16).

"Tier III PRESS energy source." Electric energy derived from:

(1) Natural gas or coal using 20% clean hydrogen co-fired blend or equivalent carbon reduction technologies.

(2) Waste coal.

(3) Municipal solid waste.

(4) Integrated combined coal gasification technology.

(5) Generation of electricity utilizing by-products of the pulping process, including bark, wood chips, sawdust and lignin in spent pulping liquors.

(6) Tier I PRESS energy source that meets the requirements of section 3(e)(16).

"True-up period." The period each year from the end of the reporting year until September 1.

"Virtual currency." A type of digital unit that is used as a medium of exchange or a form of digitally stored value. The term shall be broadly construed to include a digital unit of exchange that:

(1) has a centralized repository or administrator;

(2) is decentralized and has no centralized repository or administrator; or

(3) may be created or obtained by computing or manufacturing effort.

"Waste coal." The combustion of waste coal in a facility:

(1) In which the waste coal was disposed or abandoned prior to July 31, 1982, or disposed of thereafter in a permitted coal refuse disposal site regardless of when disposed of, and used to generate electricity, or such other waste coal combustion meeting alternate eligibility

requirements established by regulation.

(2) That uses at a minimum a combined fluidized bed boiler and is outfitted with a limestone injection system and a fabric filter particulate removal system.

Reliable energy credits shall be calculated based upon the proportion of waste coal utilized to produce electricity at the facility.

"ZEC." A zero emission credit authorized under section 8.1.

Section 2. The act is amended by adding a section to read:

Section 2.1. Force majeure.

(a) Determination of commission.--

(1) Upon its own initiative or upon a request of an electric distribution company or an electric generator supplier, the commission shall determine if PRESS energy resources are reasonably available in the marketplace in sufficient quantities or are likely to be developed in sufficient quantities due to alternative compliance payments or economics for the electric distribution companies and electric generation suppliers to meet their obligations for that reporting period under this act.

(2) In making the determination under paragraph (1), the commission shall consider whether electric distribution companies or electric generation suppliers have made a good faith effort to acquire sufficient PRESS energy to comply with their obligations. The good faith efforts shall include, but are not limited to, banking reliable energy credits during their transition periods, seeking reliable energy credits through competitive solicitations and seeking to procure reliable energy credits or PRESS energy through long-term contracts.

(3) In further making its determination, the commission shall assess the availability of reliable energy credits in the Generation Attributes Tracking System (GATS) or its successor and the availability of reliable energy credits generally in this Commonwealth and other jurisdictions in the PJM Interconnection, LLC, regional transmission organization (PJM) or its successor. The commission may also require solicitations for reliable energy credits as part of default service before requests of force majeure can be made.

(b) Modifications of obligations.--

(1) If the commission further determines that PRESS energy resources are not reasonably available in sufficient quantities in the marketplace for the electric distribution companies and electric generation suppliers to meet their obligations under this act, then the commission shall modify the underlying obligation of the electric distribution company or electric generation supplier or recommend to the General Assembly that the underlying obligation be eliminated.

(2) Commission modification of the electric distribution company or electric generation supplier obligations under this act shall be for that compliance period only. Commission modification shall not automatically reduce the obligation for subsequent compliance years.

(3) If the commission modifies the electric distribution company or electric generation supplier obligations under this act, the commission may require the electric distribution company or electric generation supplier to acquire additional reliable energy credits in subsequent years equivalent to the obligation reduced due to a force

majeure declaration if the commission determines that sufficient reliable energy credits exist in the marketplace.

Section 3. Sections 3, 4, 6 and 7 of the act are amended to read:

Section 3. [Alternative energy portfolio] Pennsylvania reliable energy sustainability standards.

(a) General compliance and cost recovery.--

(1) [From the effective date of this act through and including the 15th year after enactment of this act and each year thereafter,] Beginning February 28, 2005, the electric energy sold by an electric distribution company or electric generation supplier to retail electric customers in this Commonwealth shall be comprised of electricity generated from [alternative] PRESS energy sources and in the percentage amounts as described under subsections (b), [and] (c) and (c.1).

(2) Electric distribution companies and electric generation suppliers shall satisfy [both] requirements [set forth] specified in subsections (b), [and] (c) and (c.1), provided, however, that an electric distribution company or an electric generation supplier shall be excused from its obligations under this section to the extent that the commission determines that force majeure exists.

(3) All costs for:

(i) the purchase of electricity generated from [alternative] PRESS energy sources, including the costs of the regional transmission organization, in excess of the regional transmission organization real-time locational marginal pricing, or its successor, at the delivery point of the [alternative] PRESS energy source

for the electrical production of the [alternative] PRESS energy sources; and

(ii) [payments for alternative energy credits, in both cases that are voluntarily acquired by an electric distribution company during the cost recovery period on behalf of its customers shall be deferred as a regulatory asset by the electric distribution company and fully recovered, with a return on the unamortized balance, pursuant to an automatic energy adjustment clause under 66 Pa.C.S. § 1307 (relating to sliding scale of rates; adjustments) as a cost of generation supply under 66 Pa.C.S. § 2807 (relating to duties of electric distribution companies) in the first year after the expiration of its cost-recovery period. After the cost-recovery period,] any reasonable or prudent direct or indirect costs for the purchase by electric distribution of resources to comply with this section, including, but not limited to, the purchase of electricity generated from [alternative] PRESS energy sources, payments for [alternative] reliable energy credits, cost of credits banked, payments to any third party administrators for performance under this act and costs levied by a regional transmission organization to ensure that [alternative] PRESS energy sources are reliable, shall be recovered on a full and current basis pursuant to an automatic energy adjustment clause under 66 Pa.C.S. § 1307 as a cost of generation supply under 66 Pa.C.S. § 2807.

(b) Tier I and solar photovoltaic shares.--

(1) [Two years after the effective date of this act and through May 31, 2025,] Beginning February 28, 2007, through

May 31, 2025, at least 1.5% of the electric energy sold by an electric distribution company or electric generation supplier to retail electric customers in this Commonwealth shall be generated from Tier I [alternative] PRESS energy sources. Except as provided in this section, the minimum percentage of electric energy required to be sold to retail electric customers from [alternative] Tier I PRESS energy sources shall increase to 2% three years after the effective date of this act. The minimum percentage of electric energy required to be sold to retail electric customers from [alternative] PRESS energy sources shall increase by at least 0.5% each year so that at least 8% of the electric energy sold by an electric distribution company or electric generation supplier to retail electric customers in that certificated territory in the 15th year after the effective date of this subsection is sold from [alternative] Tier I PRESS energy resources.

(1.1) Beginning on June 1, 2025, at least 10.7% of electric energy sold by an electric distribution company or electric generation supplier to retail electric customers in this Commonwealth shall be generated from Tier I PRESS energy sources. Beginning on June 1, 2026, through May 31, 2035, the minimum percentage of electric energy required to be sold to retail electric customers from Tier I PRESS energy sources shall increase by at least 2.7% each year so that at least 35% of the electric energy sold by an electric distribution company or electric generation supplier to retail electric customers in that certificated territory is sold from Tier I PRESS energy resources by May 31, 2035.

(2) The total percentage of the electric energy sold by an electric distribution company or electric generation

supplier to retail electric customers in this Commonwealth that must be sold from solar photovoltaic technologies is:

(i) 0.0013% for June 1, 2006, through May 31, 2007.

(ii) 0.0030% for June 1, 2007, through May 31, 2008.

(iii) 0.0063% for June 1, 2008, through May 31, 2009.

(iv) 0.0120% for June 1, 2009, through May 31, 2010.

(v) 0.0203% for June 1, 2010, through May 31, 2011.

(vi) 0.0325% for June 1, 2011, through May 31, 2012.

(vii) 0.0510% for June 1, 2012, through May 31, 2013.

(viii) 0.0840% for June 1, 2013, through May 31, 2014.

(ix) 0.1440% for June 1, 2014, through May 31, 2015.

(x) 0.2500% for June 1, 2015, through May 31, 2016.

(xi) 0.2933% for June 1, 2016, through May 31, 2017.

(xii) 0.3400% for June 1, 2017, through May 31, 2018.

(xiii) 0.3900% for June 1, 2018, through May 31, 2019.

(xiv) 0.4433% for June 1, 2019, through May 31, 2020.

(xv) 0.5000% for June 1, 2020, [and thereafter] through May 31, 2030.

(3) Upon commencement of the beginning of the 6th reporting year, the commission shall undertake a review of the compliance by electric distribution companies and electric generation suppliers with the requirements of this act. The review shall also include the status of [alternative] PRESS energy technologies within this

Commonwealth and the capacity to add additional [alternative] PRESS energy resources. The commission shall use the results of this review to recommend to the General Assembly additional compliance goals beyond year 15. The commission shall work with the department in evaluating the future [alternative] PRESS energy resource potential.

(c) Tier II share.--Of the electrical energy required to be sold from [alternative] PRESS energy sources identified in Tier II, the percentage that must be from these technologies is for:

(1) Years 1 through 4 - 4.2%.

(2) Years 5 through 9 - 6.2%.

(3) Years 10 through 14 - 8.2%.

(4) Years 15 [and thereafter] through 19 - 10.0%.

(5) Beginning on June 1, 2025, through May 31, 2026, the electrical energy required to be sold from PRESS energy sources identified in Tier II, the percentage that shall be from these technologies is 6%.

(6) Beginning June 1, 2026, through May 31, 2034, the percentage that must be from these technologies shall increase by 0.5% each year so that at least 10% of the electric energy is sold from PRESS energy sources identified in Tier II by May 31, 2034, and each year thereafter.

(c.1) Tier III share.--Of the electrical energy required to be sold from PRESS energy sources identified in Tier III, the percentage that must be from these technologies is:

(1) June 1, 2025, through May 31, 2028 - 3.8%.

(2) June 1, 2028, through May 31, 2031 - 4.4%.

(3) June 1, 2031, and thereafter - 5%.

(d) [Exemption during cost-recovery period.--Compliance with subsections (a), (b) and (c) shall not be required for any

electric distribution company that has not reached the end of its cost-recovery period or for electric generation supplier sales in the service territory of an electric distribution company that has not reached the end of its cost-recovery period. At the conclusion of an electric distribution company's cost-recovery period, this exception shall no longer apply, and compliance shall be required at the percentages in effect at that time. Electric distribution companies and electric generation suppliers whose sales are exempted under this subsection and who voluntarily sell electricity generated from Tier I and Tier II sources during the cost-recovery period may bank credits consistent with subsection (e)(7).] (Reserved).

(e) [Alternative] Reliable energy credits.--

(1) The commission shall establish [an alternative] a reliable energy credits program as needed to implement this act. The provision of services pursuant to this section shall be exempt from the competitive procurement procedures of 62 Pa.C.S. (relating to procurement).

(2) The commission shall approve an independent entity to serve as the [alternative] reliable energy credits program administrator. The administrator shall have those powers and duties assigned by commission regulations. [Such] The powers and duties shall include, but not be limited to, the following:

(i) To create and administer [an alternative] a reliable energy credits certification, tracking and reporting program. [This program should] The program shall include, at a minimum, a process for qualifying [alternative] PRESS energy systems and determining the manner credits can be created, accounted for, transferred

and retired.

(ii) To submit reports to the commission at such times and in such manner as the commission shall direct.

(3) All qualifying [alternative] PRESS energy systems [must] shall include a qualifying meter to record the cumulative electric production to verify the advanced energy credit value. Qualifying meters will be approved by the commission as defined in paragraph (4).

(4) (i) An electric distribution company or electric generation supplier shall comply with the applicable requirements of this section by purchasing sufficient [alternative] reliable energy credits and submitting documentation of compliance to the program administrator.

(ii) For purposes of this subsection, one [alternative] reliable energy credit shall represent one megawatt hour of qualified [alternative] electric generation, whether self-generated, purchased along with the electric commodity or separately through a tradable instrument and otherwise meeting the requirements of commission regulations and the program administrator.

(5) The [alternative] reliable energy credits program shall include provisions requiring a reporting period [as defined in section 2] for all covered entities under this act. The [alternative] reliable energy credits program shall also include a true-up period [as defined in section 2]. The true-up period shall provide entities covered under this act the ability to obtain the required number of [alternative] reliable energy credits or to make up any shortfall of the [alternative] reliable energy credits they may be required to obtain to comply with this act. A force majeure provision

shall also be provided for under the true-up period provisions.

(6) An electric distribution company and electric generation supplier may bank or place in reserve [alternative] reliable energy credits produced in one reporting year for compliance in either or both of the two subsequent reporting years, subject to the limitations [set forth] specified in this subsection and provided that the electric distribution company and electric generation supplier are in compliance for all previous reporting years. [In addition, the] The electric distribution company and electric generation supplier shall demonstrate to the satisfaction of the commission that [such] the credits:

(i) were in excess of the [alternative] reliable energy credits needed for compliance in the year in which they were generated and that [such] the excess credits have not previously been used for compliance under this act;

(ii) were produced by the generation of electrical energy by [alternative] PRESS energy sources and sold to retail customers during the year in which they were generated; and

(iii) have not otherwise been nor will be sold, retired, claimed or represented as part of satisfying compliance with alternative or renewable energy portfolio standards in other states.

[(7) An electric distribution company or an electric generation supplier with sales that are exempted under subsection (d) may bank credits for retail sales of electricity generated from Tier I and Tier II sources made

prior to the end of the cost-recovery period and after the effective date of this act. Bankable credits shall be limited to credits associated with electricity sold from Tier I and Tier II sources during a reporting year which exceeds the volume of sales from such sources by an electric distribution company or electric generation supplier during the 12-month period immediately preceding the effective date of this act. All credits banked under this subsection shall be available for compliance with subsections (b) and (c) for no more than two reporting years following the conclusion of the cost-recovery period.]

(8) The commission or its designee shall develop a registry of pertinent information regarding all available [alternative] reliable energy credits, credit transactions among electric distribution companies and electric generation suppliers, the number of [alternative] reliable energy credits sold or transferred and the price paid for the sale or transfer of the credits. The registry shall provide current information to electric distribution companies, electric generation suppliers and the general public on the status of [alternative] reliable energy credits created, sold or transferred within this Commonwealth.

(9) The commission may impose an administrative fee on [an alternative] a reliable energy credit transaction. The amount of this fee may not exceed the actual direct cost of processing the transaction by the [alternative] reliable energy credits administrator. The commission [is authorized to] may utilize up to 5% of the alternative compliance fees generated under subsection (f) for administrative expenses directly associated with this act.

(10) The commission shall establish regulations governing the verification and tracking of energy efficiency and demand-side management measures [pursuant to] under this act, which shall include benefits to all utility customer classes. When developing regulations, the commission [must] shall give reasonable consideration to existing and proposed regulations and rules in existence in the regional transmission organizations that manage the transmission system in any part of this Commonwealth. All verified reductions shall accrue credits starting with the [passage] enactment of this act.

(11) The commission shall [within 120 days of the effective date of this act] not later than March 30, 2005, develop a depreciation schedule for [alternative] reliable energy credits created through demand-side management, energy efficiency and load management technologies and shall develop standards for tracking and verifying savings from energy efficiency, load management and demand-side management measures. The commission shall allow for a 60-day public comment period and shall issue final standards within 30 days of the close of the public comment period.

(12) Unless a contractual provision explicitly assigns [alternative] reliable energy credits in a different manner, the owner of the [alternative] reliable energy system or a customer-generator owns any and all [alternative] reliable energy credits associated with or created by the production of electric energy by such facility or customer, and the owner or customer shall be entitled to sell, transfer or take any other action to which a legal owner of property is entitled to take with respect to the credits.

(13) No PRESS energy system shall be eligible to sell reliable energy credits associated with or created by the production of electric energy subsequently utilized to generate or produce virtual currency at a facility co-located with the PRESS energy system, or where a power purchase agreement commits the offtake of electric energy to a virtual currency generator or producer. Reliable energy credits may be sold based upon the proportion of electric energy at the facility that is not utilized to generate or produce virtual currency.

(14) An individual generating unit with a nameplate capacity over 150 megawatts must be located in this Commonwealth to be eligible for reliable energy credits. The commission may promulgate a regulation to change the nameplate capacity for purposes of this paragraph if the commission determines that a change to the nameplate capacity is necessary to prevent a force majeure event or the ongoing imposition of alternative compliance payments due to lack of availability of reliable energy credits.

(15) No PRESS energy source may be offered to meet the compliance requirements of more than one tier unless the source is owned or leased by and located on the grounds of a school district as defined in section 102 of the act of March 10, 1949 (P.L.30, No.14), known as the Public School Code of 1949. If a PRESS energy source is owned or leased by and located on the grounds of a school district, a school district may offer credits from a Tier I PRESS energy source to meet the compliance requirements of Tier I and either Tier II or Tier III. A school district may not offer credits to meet the compliance obligations of more than one tier in any

year in excess of the school district's requirement for electricity in the same year.

(16) (i) PRESS energy sources eligible for compliance requirements in Tier II, Tier III and solar photovoltaic technologies eligible for compliance requirements under subsection (b)(2) must meet one of the following requirements:

(A) directly deliver the electricity generated to a retail customer of an electric distribution company or to the distribution system operated by an electric distribution company operating within this Commonwealth and obligated to meet the compliance requirements contained under this act;

(B) be directly connected to the electric system of an electric cooperative or municipal electric system operating within this Commonwealth;

(C) connect directly to the electric transmission system at a location that is within the service territory of an electric distribution company operating within this Commonwealth; or

(D) generate electricity at generation units whose construction and operation is subject to and complies with permits issued by the department under the act of January 8, 1960 (1959 P.L.2119, No.787), known as the Air Pollution Control Act, or the act of July 7, 1980 (P.L.380, No.97), known as the Solid Waste Management Act.

(ii) This paragraph shall not be construed to affect a binding written contract, entered into prior to the effective date of this paragraph, for the sale and

purchase of alternative energy credits derived from alternative energy sources until June 1, 2028.

(iii) Beginning June 1, 2030, 10% of the electric energy sold by an electric distribution company or electric generation supplier to retail electric customers in this Commonwealth and that is used to satisfy Tier I obligations shall be generated from Tier I PRESS energy sources that meet one of the requirements of subparagraph (i). The percentage shall increase by 1% in each subsequent compliance year through June 1, 2050.

(17) Energy from a geothermal heating and cooling system is eligible to sell reliable energy credits associated with or created by the production of energy of the system. Reliable energy credits from a geothermal heating and cooling system shall be created based on the amount of energy, converted from BTUs to kilowatt-hours, that is generated by a geothermal heating and cooling system for space heating and cooling or water heating. The commission shall determine the form and manner in which the reliable energy credits are verified.

(18) For binding written contracts for the sale and purchase of alternative energy credits derived from alternative energy sources entered into prior to the effective date of this paragraph, the following shall apply until June 1, 2028:

(i) A Tier I alternative energy source may be offered for compliance purposes as a Tier I PRESS energy source.

(ii) A Tier II alternative energy source may be offered for compliance purposes as a Tier II PRESS energy

source.

(f) Alternative compliance payment.--

(1) At the end of each program year, the program administrator shall provide a report to the commission and to each covered electric distribution company showing their status level of [alternative] reliable energy acquisition.

(2) The commission shall conduct a review of each determination made under subsections (b), [and] (c) and (c.1). If, after notice and hearing, the commission determines that an electric distribution company or electric generation supplier has failed to comply with subsections (b), [and] (c) and (c.1), the commission shall impose an alternative compliance payment on that company or supplier.

(3) [The] (i) Through May 31, 2025, the alternative compliance payment, with the exception of the solar photovoltaic share compliance requirement [set forth] specified in subsection (b)(2), shall be $45 times the number of additional [alternative] reliable energy credits needed in order to comply with subsection (b) or (c).

(ii) Subject to subparagraph (iii), beginning June 1, 2025, and continuing each year thereafter, the alternative compliance payment, with the exception of the solar photovoltaic share compliance requirement specified in subsection (b)(2), shall be $45 times the number of additional reliable energy credits needed in order to comply with subsection (b). The alternative compliance payment shall be $35 times the number of reliable energy credits needed in order to comply with subsection (c). The alternative compliance payment shall be $15 times the

number of reliable energy credits needed in order to comply with subsection (c.1).

(iii) Beginning June 1, 2030, and continuing each year thereafter, the commission may increase the alternative compliance payment amount applicable in any tier under this paragraph by up to 15% of the alternative compliance payment amount from the prior year if the commission finds that an increased alternative compliance payment amount would promote the installation of more PRESS energy systems.

(4) The alternative compliance payment for the solar photovoltaic share shall be 200% of the average market value of solar renewable energy credits sold during the reporting period within the service region of the regional transmission organization, including, where applicable, the levelized up-front rebates received by sellers of solar renewable energy credits in other jurisdictions in the PJM Interconnection, L.L.C. transmission organization (PJM) or its successor.

(5) The commission shall establish a process to provide for, at least annually, a review of the [alternative] PRESS energy market within this Commonwealth and the service territories of the regional transmission organizations that manage the transmission system in any part of this Commonwealth. The commission will use the results of this study to identify any needed changes to the cost associated with the alternative compliance payment program. If the commission finds that the costs associated with the alternative compliance payment program must be changed, the commission shall present these findings to the General Assembly for legislative enactment.

(g) Transfer to sustainable development funds.--

(1) Notwithstanding the provisions of 66 Pa.C.S. §§ 511 (relating to disposition, appropriation and disbursement of assessments and fees) and 3315 (relating to disposition of fines and penalties), alternative compliance payments imposed pursuant to this act shall be paid into Pennsylvania's Sustainable Energy Funds created under the commission's restructuring orders under 66 Pa.C.S. Ch. 28 (relating to restructuring of electric utility industry). Alternative compliance payments shall be paid into a special fund of the Pennsylvania Sustainable Energy Board, established by the commission under Docket M-00031715, and made available to the Regional Sustainable Energy Funds under procedures and guidelines approved by the Pennsylvania Energy Board.

(2) The alternative compliance payments shall be utilized solely for reliability projects that will increase the amount of electric energy generated from [alternative energy resources for purposes of compliance with subsections (b) and (c).]:

(i) geothermal energy;

(ii) storage resources co-located with a Tier I PRESS energy source with 10% nameplate capacity available every hour for a 24-hour period; or

(iii) a Tier I PRESS energy source owned or leased by and located on the grounds of a school district as defined in section 102 of the Public School Code of 1949.

(3) No less than 40% of funds shall be dedicated to reliability projects located in environmental justice areas under paragraph (2).

(h) Nonseverability.--The provisions of subsection (a) are

declared to be nonseverable. If any provision of subsection (a) is held invalid, the remaining provisions of this act shall be void.

Section 4. Portfolio requirements in other states.

If an electric distribution supplier or electric generation company provider sells electricity in any other state and is subject to renewable energy portfolio requirements in that state, they shall list any such requirement and shall indicate how it satisfied those renewable energy portfolio requirements. To prevent double-counting, the electric distribution supplier or electric generation company shall not satisfy Pennsylvania's [alternative] reliable energy [portfolio] requirements using [alternative] PRESS energy used to satisfy another state's portfolio requirements or alternative energy credits already purchased by individuals, businesses or government bodies that do not have a compliance obligation under this act unless the individual, business or government body sells those credits to the electric distribution company or electric generation supplier. Energy derived from [alternative] PRESS energy sources inside the geographical boundaries of this Commonwealth shall be eligible to meet the compliance requirements under this act. Energy derived from [alternative] PRESS energy sources located outside the geographical boundaries of this Commonwealth but within the service territory of a regional transmission organization that manages the transmission system in any part of this Commonwealth shall only be eligible to meet the compliance requirements of electric distribution companies or electric generation suppliers located within the service territory of the same regional transmission organization. For purposes of compliance with this act, [alternative] PRESS energy sources

located in the PJM Interconnection, L.L.C. regional transmission organization (PJM) or its successor service territory shall be eligible to fulfill compliance obligations of all Pennsylvania electric distribution companies and electric generation suppliers. Energy derived from [alternative] PRESS energy sources located outside the service territory of a regional transmission organization that manages the transmission system in any part of this Commonwealth shall not be eligible to meet the compliance requirements of this act. Electric distribution companies and electric generation suppliers shall document that this energy was not used to satisfy another state's renewable energy portfolio standards.

Section 6. Health and safety standards.

The department shall cooperate with the Department of Labor and Industry as necessary in developing health and safety standards, as needed, regarding facilities generating energy from [alternative] PRESS energy sources. The department shall establish appropriate and reasonable health and safety standards to ensure uniform and proper compliance with this act by owners and operators of facilities generating energy from [alternative] PRESS energy sources [as defined in this act].

Section 7. Interagency responsibilities.

(a) Commission responsibilities.--The commission [will] shall carry out the responsibilities delineated within this act. The commission also shall, in cooperation with the department, conduct an ongoing [alternative] PRESS energy resources planning assessment for this Commonwealth. [This assessment will] The assessment shall, at a minimum, identify current and operating [alternative] PRESS energy facilities, the potential to add future [alternative] PRESS energy generating capacity and the

conditions of the [alternative] PRESS energy marketplace. The assessment [will] shall identify needed methods to maintain or increase the relative competitiveness of the [alternative] PRESS energy market within this Commonwealth.

(b) Department responsibilities.--The department shall ensure that all qualified [alternative] PRESS energy sources meet all applicable environmental standards and shall verify that [an alternative] a PRESS energy source meets the standards [set forth] specified in section 2.

(c) Cooperation between commission and department.--The commission and the department shall work cooperatively to monitor the performance of all aspects of this act and [will] shall provide an annual report to the chairman and minority chairman of the Environmental Resources and Energy Committee of the Senate and the chairman and minority chairman of the Environmental Resources and Energy Committee of the House of Representatives. The report shall include at a minimum:

(1) The status of the compliance with the provisions of this act by electric distribution companies and electric generation suppliers.

(2) Current costs of [alternative] PRESS energy on a per kilowatt hour basis for all [alternative] PRESS energy technology types.

(3) Costs associated with the [alternative] reliable energy credits program under this act, including the number of alternative compliance payments.

(4) The status of the [alternative] PRESS energy marketplace within this Commonwealth.

(5) Recommendations for program improvements.

Section 4. The act is amended by adding a section to read:

Section 8.1. Zero emissions credits.

(a) Beneficial nuclear facility.--A nuclear reactor that provides benefits to this Commonwealth may apply to the commission for ZECs.

(b) Duty of commission.--After notice and opportunity for a hearing, the commission shall approve or disapprove an application submitted under subsection (a) within nine months after the application is filed, provided that approval may be in whole or in part and may be subject to limitations and qualifications as may be deemed necessary and in the public interest. The limitations shall include, but are not limited to, a cap of 75,000,000 megawatt-hours of ZECs approved each year.

(c) Price of ZEC.--The price of a ZEC shall be the amount by which $9 per MWh exceeds 80% of the difference of the gross receipts of the nuclear reactor for the previous year expressed as a dollar per MWh, and $31 per MWh. The MWh dollar values shall be adjusted annually by the commission to reflect changes in the Consumer Price Index for All Urban Consumers (CPI-U) for the Pennsylvania, New Jersey, Delaware and Maryland area after 2032. The commission shall transmit a notice of the adjustment to the Legislative Reference Bureau for publication in the next available issue of the Pennsylvania Bulletin.

(d) Regulations.--Within 365 days prior to the expiration of the availability of zero-emission nuclear power production credits established under section 45U of the Internal Revenue Code of 1986 (26 U.S.C. § 45U), the commission shall promulgate regulations to implement the requirements of this section. The regulations shall include the following:

(1) data submission requirements necessary to evaluate projected environmental benefits and to verify annual gross

receipts;

(2) recapture of the allocation of any credit within the previous three years to a beneficial nuclear reactor that permanently terminates operations, except in the case of force majeure.

(e) Ineligibility.--A beneficial nuclear facility shall not be eligible to receive ZECs during any period in which they are receiving zero-emission nuclear power production credits established under section 45U of the Internal Revenue Code of 1986.

(f) Recovery of costs.--If the commission has approved ZECs under subsection (a) it shall allow the public utility to recover all prudent and reasonable costs associated with the credits, provided that the prudent and reasonable costs must be recovered in accordance with appropriate accounting principles.

(g) Expiration.--This section shall expire 10 years after the effective date of the regulations promulgated by the commission under subsection (d).

Section 5. A reference in statute or regulation to "Alternative Energy Portfolio Standards" shall be deemed a reference to "Pennsylvania Reliable Energy Sustainability Standards."

Section 6. This act shall take effect as follows:

(1) The addition of section 3(e)(16)(ii) and (18) of the act shall take effect immediately.

(2) This section shall take effect immediately.

(3) The remainder of this act shall take effect June 1, 2025.