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THE GENERAL ASSEMBLY OF PENNSYLVANIA

SENATE BILL

No. 92 Session of 2009

INTRODUCED BY ERICKSON, MUSTO, O'PAKE, WOZNIAK, LEACH, ALLOWAY AND WONDERLING, MARCH 19, 2009

REFERRED TO ENVIRONMENTAL RESOURCES AND ENERGY, MARCH 19, 2009

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 and for alternative energy portfolio standards; and providing for carbon dioxide sequestration network.

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

Section 1. The definition of "alternative energy sources" and "Tier II alternative energy source" in section 2 of the act of November 30, 2004 (P.L.1672, No.213), known as the Alternative Energy Portfolio Standards Act, are amended by adding paragraphs and the section is amended by adding definitions to read:

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:

* * *

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

* * *

(14) Advanced coal combustion with limited carbon emissions, which means the production of electric power from a generation facility that:

(i) Is fueled by coal or gas derived from an advanced coal gasification plant.

(ii) Captures, either in the advanced coal gasification plant or in the electrical generation facility, and permanently sequesters at least the following amount of all carbon dioxide produced:

(A) 40% from June 1, 2015 to May 31, 2019.

(B) 60% from June 1, 2019 to May 31, 2024.

(C) 90% from June 1, 2024 and thereafter.

(D) The requirement under clause (C) shall be waived if commercially proven and project-financeable technology is not available.

(iii) Has been designed to accommodate the required additional processing equipment to produce power with a maximum of 1,000 pounds of carbon dioxide emissions per megawatt hour.

* * *

"Carbon dioxide sequestration network." Geological subsurface formations within this Commonwealth with suitable cap rock, sealing faults and anticline used by the Department of Conservation and Natural Resources for the permanent storage of carbon dioxide from advanced coal combustion with limited carbon

emissions plants or other sources within this Commonwealth along with the facilities necessary to transport the carbon dioxide from the surface to the subsurface formations and monitor the permanent storage of the carbon dioxide in subsurface formations. The term shall not include use of the carbon dioxide for enhanced resource recovery.

* * *

"DCNR." The Department of Conservation and Natural Resources of the Commonwealth.

* * *

"Enhanced resource recovery." The use of carbon dioxide injection or other techniques for increasing the amount of oil, natural gas or coal bed methane extracted from geologic formations.

* * *

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

* * *

(8) Advanced coal combustion with limited carbon emissions.

* * *

Section 2. Section 3(a),(b),(c), (f) and (g) of the act, amended July 17, 2007 (P.L.114, No.35), are amended and the section is amended by adding subsections to read:

Section 3. Alternative energy portfolio 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, 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 energy sources and in the percentage amounts as described under subsections [(b) and (c)] (b), (c) and (c.1).

(2) Electric distribution companies and electric generation suppliers shall satisfy both requirements set forth in subsections [(b) and (c)] (b), (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 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 energy source for the electrical production of the alternative 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 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 energy sources, payments for alternative 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 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, 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 energy sources. Except as provided in this section, the minimum percentage of electric energy required to be sold to retail electric customers from alternative 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 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 Tier I alternative

energy resources.

(1.1) After the 15th year of the effective date of this subsection, the minimum percentage of electric energy required to be sold to retail electric customers from Tier I alternative energy sources is:

(i) 10% for June 1, 2021, through May 31, 2022.

(ii) 12% for June 1, 2022, through May 31, 2023.

(iii) 14% for June 1, 2023, through May 31, 2024.

(iv) 16% for June 1, 2024, through May 31, 2025.

(v) 18% for June 1, 2025, through May 31, 2026.

(vi) 20% for June 1, 2026, and thereafter.

(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, 2021.

(xvi) 0.9000% for June 1, 2021, through May 31, 2022.

(xvii) 1.3000% for June 1, 2022, through May 31, 2023.

(xviii) 1.7000% for June 1, 2023, through May 31, 2024.

(xix) 2.1000% for June 1, 2024, through May 31, 2025.

(xx) 2.5000% for June 1, 2025, through May 31, 2026.

(xxi) 3.000% for June 1, 2026, and thereafter.

(3) Upon commencement of the beginning of the 6th reporting year, and every five years thereafter, 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 energy technologies within this Commonwealth and the capacity to add additional alternative energy resources. The commission shall use the results of this review to recommend to the General Assembly additional compliance goals beyond year [15] 21. The commission shall work with the department in evaluating the future alternative energy resource potential.

(4) As of May 31, 2021, and thereafter, 50% of electric

energy from solar photovoltaic technologies supplied to retail customers shall be generated from solar photovoltaic systems located within this Commonwealth in meeting the requirements of paragraph (2).

(c) Tier II share.--Of the electrical energy required to be sold from alternative 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%] 11.2%.

(4) Years 15 and thereafter - [10.0%] 13.0%.

(c.1) Retail sales from advanced coal combustion.--The total electric energy sold by an electric distribution company or electric generation supplier to retail electric customers in this Commonwealth that shall be sold from advanced coal combustion with limited carbon emissions is all of the electric energy available from advanced coal combustion with limited carbon emissions up to a maximum of 3.0% of the total electric energy sold by an electric distribution company or electric generation supplier to retail electric customers in this Commonwealth for the reporting period which begins June 1, 2015, and for each reporting period thereafter pursuant to subsection (c). If at any time on or after June 1, 2015, the network provided for under section 8.1, or other network permitted to permanently sequester carbon dioxide, is not available to receive carbon dioxide for sequestration through no fault of an advanced coal combustion with limited carbon emissions facility, a facility need not sequester carbon dioxide in order to generate alternative energy credits provided the facility is capable of capturing to the department's satisfaction the amount

of carbon dioxide required by paragraph (14)(ii) of the definition of "alternative energy sources" in section 2.

(c.2) Force majeure.--On or after December 31, 2015, if the commission determines that construction of an advanced coal combustion with limited carbon emissions facility has not been commenced, this determination shall constitute force majeure, and electric distribution companies and electric generation suppliers shall be excused from all or part of their obligation under subsection (c.1), as determined by the commission.

(c.3) Long-term contracts.--Upon review and approval of the commission, an electric distribution company may enter into a long-term contract of up to 25 years to purchase the energy, capacity or alternative energy credits of an advanced coal combustion with limited carbon emissions facility. The contract shall provide for cost recovery of costs associated with carbon capture, including, but not limited to, any fees charged by the Department of Conservation and Natural Resources pursuant to section 8.1(b) with regard to the carbon dioxide sequestration network. The commission shall determine that the contract is reasonable, taking into consideration the following:

(1) The price of the energy purchased under the long-term contract.

(2) The price of capacity purchased under the long-term contract.

(3) The price of alternative energy credits, provided that the cost of an alternative energy credit purchased from advanced coal combustion with limited carbon emissions shall not exceed $45 per megawatt hour (MWh).

(4) Prior to the effective date of the contract, the value of any carbon emission credits or other credits that

the seller obtains from the advanced coal combustion with limited carbon emissions facility.

(5) After the effective date of the contract, the value of any additional Federal or State carbon credits, allowances or other financial benefits shall be reflected in the price of the resource in a manner which recognizes savings to customers and does not reduce the economic return to the seller, provided that the seller demonstrates that it has made a commercially reasonable effort to distribute any economic incentives it has realized to electric distribution companies. A contract approved by the commission under this subsection shall be deemed to meet the requirements of 66 Pa.C.S. § 2807(e) (relating to duties of electric distribution companies).

* * *

(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 energy acquisition.

(2) The commission shall conduct a review of each determination made under subsections [(b) and (c)] (b), (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)] (b), (c) and (c.1), the commission shall impose an alternative compliance payment on that company or supplier.

(3) The alternative compliance payment, with the exception of the solar photovoltaic share compliance

requirement set forth in subsection (b)(2), shall be $45 times the number of additional alternative energy credits needed in order to comply with subsection (b) or (c).

(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.] The alternative compliance payment for the solar photovoltaic alternative share shall be established by the commission in an amount and for a period of years necessary to promote the market for solar photovoltaic alternative energy credits. The alternative compliance payment for the solar photovoltaic share may vary over the time period established by the commission but shall be at least 200% of the average market value for solar photovoltaic alternative energy credits sold within the service region of the PJM Interconnection, L.L.C. transmission organization in the year prior to the establishment of the alternative compliance payment schedule. The commission shall review the solar photovoltaic alternative compliance payment schedule at least once per year and shall establish an alternative compliance payment schedule for additional years as needed to promote the market for solar photovoltaic alternative energy credits.

(5) The commission shall establish a process to provide for, at least annually, a review of the alternative 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 projects that will increase the amount of electric energy generated from alternative energy resources for purposes of compliance with subsections [(b) and (c)] <u>(b), (c) and (c.1)</u>.

* * *

Section 3. The act is amended by adding a section to read:

<u>Section 8.1. Carbon dioxide sequestration network.</u>

(a) Establishment of network.--DCNR shall develop and operate a carbon dioxide sequestration network utilizing appropriate geologic formations and facilities on State forest land or as otherwise acquired by DCNR for the purposes set forth in this subsection. DCNR may acquire, on behalf of the Commonwealth, geologic formations and facilities required for the carbon dioxide sequestration network by purchase, gift, lease or condemnation. The carbon dioxide sequestration network shall only be utilized to store carbon dioxide generated within this Commonwealth.

(b) Fees.--DCNR shall collect reasonable fees from entities that transport to or through, deposit in or otherwise utilize the carbon dioxide sequestration network. DCNR shall enter into agreements with the entities establishing the terms and conditions for use of the carbon dioxide sequestration network and the payment of appropriate fees prior to the transport of any carbon dioxide into the carbon dioxide sequestration network. Fees shall be established to recover the total cost, less any nonreimbursable Federal funding, of developing and operating the carbon dioxide sequestration network. Recoverable costs shall include, but are not limited to, the cost to acquire or obtain the right to use geologic formations or facilities required for the carbon dioxide sequestration network, construction costs, insurance costs and other costs to operate and maintain the network.

(c) Establishment of fund.--There is established in the State Treasury a Carbon Sequestration Fund. The Carbon Sequestration Fund shall be a nonlapsing fund and the money deposited into this fund is specifically appropriated to DCNR to carry out the purposes of this section at the discretion of the

Secretary of Conservation and Natural Resources.

(d) Permitting requirements.--The department shall develop regulations necessary to permit the siting and operation of the carbon dioxide sequestration facility authorized by this section. The regulations shall include, but not be limited to, the following:

(1) Risk assessment.

(2) Geologic site characterization including, but not limited to, modeling and verification of fluid movement.

(3) Corrective action.

(4) Well construction, operation and mechanical integrity testing.

(5) Monitoring and site closure.

No carbon dioxide may be accepted for sequestration until all applicable permits have been approved.

(e) Operation.--

(1) DCNR may enter into contracts for the development and operation of the carbon dioxide sequestration network. DCNR or its contractor shall evaluate the requirements for safe operation of the carbon dioxide sequestration network including, but not limited to, geologic site characterization, modeling and verification of fluid movement, well construction, mechanical integrity testing, monitoring, corrective action and site closure. No carbon dioxide may be accepted for sequestration until all applicable permits have been approved.

(2) Prior to commencement of operation of the carbon dioxide sequestration network and periodically thereafter, DCNR or its contractor shall assess the risks associated with the operation. DCNR and the Department of General Services

shall determine the appropriate method to insure the operation of the carbon dioxide sequestration network and shall insure the operation as deemed appropriate.

(f) Title to carbon dioxide and immunity.--

(1) All right, title and interest in and to carbon dioxide delivered to the property line of the Commonwealth-owned lands or other lands upon which the Commonwealth's carbon dioxide sequestration network is located by the advanced coal combustion with limited carbon emission facilities that, individually or collectively, first meet the maximum requirements of section 3(c.1) as determined by the department, shall be transferred to the Commonwealth and the Commonwealth shall accept and receive all the right, title and interest in and to such carbon dioxide, including, but not limited to, any liabilities associated with the carbon dioxide, current or future environmental benefits, marketing claims, associated voluntary or compliance-based emissions allocations or offsets, but not alternative energy credits provided by section 3(e).

(2) Upon and after transfer and conveyance of carbon dioxide as provided under paragraph (1), the owner of an advanced coal combustion plant with limited carbon emissions shall be immune from liabilities regarding the storage of carbon dioxide within and the release, escape or migration of carbon dioxide from the Commonwealth's carbon dioxide sequestration network and subsurface storage site.

Section 4. This act shall take effect immediately.