
THE GENERAL ASSEMBLY OF PENNSYLVANIA

HOUSE BILL

No. 2405 Session of
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INTRODUCED BY DePASQUALE, VITALI, ROSS, PAYTON, FREEMAN, BRIGGS,
MUNDY, SANTARSIERO, M. O'BRIEN, BELFANTI, BRADFORD,
CALTAGIRONE, D. COSTA, EVERETT, GALLOWAY, HORNAMAN, HOUGHTON,
JOSEPHS, McILVAINE SMITH, MOUL, SHAPIRO, R. TAYLOR, THOMAS
AND WAGNER, APRIL 23, 2010

REFERRED TO COMMITTEE ON ENVIRONMENTAL RESOURCES AND ENERGY,
APRIL 23, 2010

AN ACT

1 Amending the act of November 30, 2004 (P.L.1672, No.213),
2 entitled, "An act providing for the sale of electric energy
3 generated from renewable and environmentally beneficial
4 sources, for the acquisition of electric energy generated
5 from renewable and environmentally beneficial sources by
6 electric distribution and supply companies and for the powers
7 and duties of the Pennsylvania Public Utility Commission,"
8 further providing for definitions and for alternative energy
9 portfolio standards; providing for solar photovoltaic and
10 solar thermal energy system requirements; further providing
11 for interagency responsibilities; providing for sequestration
12 facility permitting and for title to carbon dioxide, immunity
13 and transfer of liability; establishing the Carbon Dioxide
14 Indemnification Fund; providing for carbon dioxide
15 sequestration facility and transportation pipeline on
16 Commonwealth State forest lands; and providing for
17 application of the Public Utility Code to transporters of
18 carbon dioxide.

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

21 Section 1. The definitions of "alternative energy sources"
22 and "force majeure" in section 2 of the act of November 30, 2004
23 (P.L.1672, No.213), known as the Alternative Energy Portfolio
24 Standards Act, amended July 17, 2007 (P.L.114, No.35), are

1 amended, the definition of "Tier II alternative energy source"
2 is amended by adding paragraphs and the section is amended by
3 adding definitions to read:

4 Section 2. Definitions.

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

8 * * *

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

12 (1) Solar photovoltaic or other solar electric energy.

13 (2) Solar thermal energy.

14 (3) Wind power.

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

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

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

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

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

1 (iv) protects against erosion; and

2 (v) protects cultural and historic resources.

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

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

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

17 (ii) any solid nonhazardous, cellulosic waste
18 material that is segregated from other waste materials,
19 such as waste pallets, waste utility poles and railroad
20 ties used by facilities in operation within this
21 Commonwealth as of the effective date of this act, so
22 long as the facility employs the best available
23 technology to reduce or control emissions of air
24 pollutants under the act of January 8, 1960 (1959
25 P.L.2119, No.787), known as the Air Pollution Control
26 Act, crates and landscape or right-of-way tree trimmings
27 or agricultural sources, including orchard tree crops,
28 vineyards, grain, legumes, sugar and other crop by-
29 products or residues.

30 (8) Biologically derived methane gas, which shall

1 include methane from the anaerobic digestion of organic
2 materials from yard waste, such as grass clippings and
3 leaves, food waste, animal waste and sewage sludge. The term
4 also includes landfill methane gas.

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

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

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

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

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

30 (ii) load management or demand response

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

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

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

13 (14) Advanced coal combustion with limited carbon
14 dioxide emissions, which means the production of electric
15 power from a generation facility that is fueled by coal,
16 waste coal or gas derived from an advanced coal gasification
17 plant or a plant that is retrofitted to capture carbon
18 dioxide that:

19 (i) Begins commercial operation after January 1,
20 2009, and captures, either in the advanced coal
21 gasification plant or in the electrical generation
22 facility, and delivers to a carbon dioxide sequestration
23 facility in this Commonwealth for permanent
24 sequestration, at least the following amounts of all
25 carbon dioxide produced:

26 (A) 40% from June 1, 2020, to May 31, 2024.

27 (B) 60% from June 1, 2024, to May 31, 2029.

28 (C) 90% from June 1, 2029, and thereafter.

29 (D) The requirement under clause (C) shall be
30 waived if commercially proven and project-financeable

1 technology is not available as determined by the
2 department.

3 (ii) Has been designed to accommodate the required
4 additional processing equipment to produce power with a
5 maximum of 1,000 pounds of carbon dioxide emissions per
6 megawatt hour or begins commercial operation before
7 January 1, 2009, and captures and delivers to a carbon
8 dioxide sequestration facility in this Commonwealth for
9 permanent sequestration no less than the following amount
10 of carbon dioxide produced:

11 (A) 40% from June 1, 2020, to May 31, 2024.

12 (B) 60% from June 1, 2024, to May 31, 2029.

13 (C) 90% from June 1, 2029, and thereafter. The
14 requirement under this clause shall be waived if
15 commercially proven and project-financeable
16 technology is not available, as determined by the
17 department.

18 * * *

19 "Carbon dioxide." Anthropogenically generated carbon dioxide
20 of sufficient purity and quality as to not compromise the
21 ability of the carbon dioxide transportation pipeline or
22 sequestration facility to safely and effectively transport and
23 sequester the carbon dioxide.

24 "Carbon dioxide sequestration facility." The term shall
25 include the following:

26 (1) geological subsurface formations within this
27 Commonwealth with suitable cap rock, sealing faults and
28 anticline for the permanent storage of carbon dioxide from
29 advanced coal combustion with limited carbon dioxide
30 emissions plants or other sources within this Commonwealth

1 along with the facilities necessary to transport the carbon
2 dioxide from the surface to the subsurface formations and
3 monitor the permanent storage of the carbon dioxide in
4 subsurface formations; or

5 (2) facilities that convert captured carbon dioxide to a
6 stable form that will safely and permanently sequester the
7 carbon dioxide; or

8 (3) other capture and sequestration processes that
9 permanently sequester carbon dioxide.

10 The term shall not include use of the carbon dioxide for
11 enhanced resource recovery or the carbon dioxide transportation
12 pipelines used to transport the carbon dioxide to the
13 sequestration facility.

14 "Carbon dioxide transportation pipeline." A pipeline within
15 this Commonwealth used to transport carbon dioxide from a
16 facility within this Commonwealth to a carbon dioxide
17 sequestration facility.

18 * * *

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

21 * * *

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

26 "Force majeure." Upon its own initiative or upon a request
27 of an electric distribution company or an electric generator
28 supplier, the Pennsylvania Public Utility Commission, within 60
29 days, shall determine if alternative energy resources are
30 reasonably available in the marketplace in sufficient quantities

1 for the electric distribution companies and electric generation
2 suppliers to meet their obligations for that reporting period
3 under this act. The commission shall declare a force majeure for
4 any reporting period if it determines the price of available
5 alternative energy credits exceeds the cost of applicable
6 alternative energy compliance payments established under this
7 act. The commission shall not declare a force majeure for any
8 reporting period based solely on the price of alternative energy
9 credits if the alternative energy credit prices are less than
10 the cost of applicable alternative compliance payments
11 established under this act. In making this determination, the
12 commission shall consider whether electric distribution
13 companies or electric generation suppliers have made a good
14 faith effort to acquire sufficient alternative energy to comply
15 with their obligations. Such good faith efforts shall include,
16 but are not limited to, banking alternative energy credits
17 during their transition periods, seeking alternative energy
18 credits through competitive solicitations and seeking to procure
19 alternative energy credits or alternative energy through long-
20 term contracts. In further making its determination, the
21 commission shall assess the availability of alternative energy
22 credits in the Generation Attributes Tracking System (GATS) or
23 its successor and the availability of alternative energy credits
24 generally in Pennsylvania and other jurisdictions in the PJM
25 Interconnection, L.L.C. regional transmission organization (PJM)
26 or its successor. The commission may also require solicitations
27 for alternative energy credits as part of default service before
28 requests of force majeure can be made. If the commission further
29 determines that alternative energy resources are not reasonably
30 available in sufficient quantities in the marketplace for the

1 electric distribution companies and electric generation
2 suppliers to meet their obligations under this act, then the
3 commission shall modify the underlying obligation of the
4 electric distribution company or electric generation supplier or
5 recommend to the General Assembly that the underlying obligation
6 be eliminated. Commission modification of the electric
7 distribution company or electric generation supplier obligations
8 under this act shall be for that compliance period only.
9 Commission modification shall not automatically reduce the
10 obligation for subsequent compliance years. If the commission
11 modifies the electric distribution company or electric
12 generation supplier obligations under this act, the commission
13 may require the electric distribution company or electric
14 generation supplier to acquire additional alternative energy
15 credits in subsequent years equivalent to the obligation reduced
16 due to a force majeure declaration if the commission determines
17 that sufficient alternative energy credits exist in the
18 marketplace.

19 * * *

20 "Person." An individual, corporation, partnership,
21 association or other entity recognized by law as the subject of
22 rights, duties or obligations. The term includes the United
23 States, a Federal agency, the Commonwealth, an agency or
24 instrumentality of the Commonwealth and a political subdivision.

25 * * *

26 "Solar thermal energy." Technology utilizing solar energy
27 for water heating or for generating energy.

28 * * *

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

30 * * *

1 (8) Advanced coal combustion with limited carbon dioxide
2 emissions.

3 * * *

4 Section 2. Section 3(a), (b), (c), (e)(6), (7) and (12),
5 (f), (g) and (h) of the act, amended July 17, 2007 (P.L.114,
6 No.35), are amended and the section is amended by adding
7 subsections to read:

8 Section 3. Alternative energy portfolio standards.

9 (a) General compliance and cost recovery.--

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

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

25 (3) All costs for:

26 (i) the purchase of electricity generated from
27 alternative energy sources, including the costs of the
28 regional transmission organization, in excess of the
29 regional transmission organization real-time locational
30 marginal pricing, or its successor, at the delivery point

1 of the alternative energy source for the electrical
2 production of the alternative energy sources; and

3 (ii) payments for alternative energy credits, in both
4 cases that are voluntarily acquired by an electric
5 distribution company during the cost recovery period on
6 behalf of its customers shall be deferred as a regulatory
7 asset by the electric distribution company and fully
8 recovered, with a return on the unamortized balance,
9 pursuant to an automatic energy adjustment clause under
10 66 Pa.C.S. § 1307 (relating to sliding scale of rates;
11 adjustments) as a cost of generation supply under 66
12 Pa.C.S. § 2807 (relating to duties of electric
13 distribution companies) in the first year after the
14 expiration of its cost-recovery period. After the cost-
15 recovery period, any direct or indirect costs for the
16 purchase by electric distribution of resources to comply
17 with this section, including, but not limited to, the
18 purchase of electricity generated from alternative energy
19 sources, payments for alternative energy credits, cost of
20 credits banked, payments to any third party
21 administrators for performance under this act and costs
22 levied by a regional transmission organization to ensure
23 that alternative energy sources are reliable, shall be
24 recovered on a full and current basis pursuant to an
25 automatic energy adjustment clause under 66 Pa.C.S. §
26 1307 as a cost of generation supply under 66 Pa.C.S. §
27 2807.

28 (b) Tier I and solar photovoltaic and solar thermal energy
29 shares.--

30 (1) [Two years after the effective date of this act, at

1 least 1.5% of the electric energy sold by an electric
2 distribution company or electric generation supplier to
3 retail electric customers in this Commonwealth shall be
4 generated from Tier I alternative energy sources. Except as
5 provided in this section, the minimum percentage of electric
6 energy required to be sold to retail electric customers from
7 alternative energy sources shall increase to 2% three years
8 after the effective date of this act. The minimum percentage
9 of electric energy required to be sold to retail electric
10 customers from alternative energy sources shall increase by
11 at least 0.5% each year so that at least 8% of the electric
12 energy sold by an electric distribution company or electric
13 generation supplier to retail electric customers in that
14 certificated territory in the 15th year after the effective
15 date of this subsection is sold from Tier I alternative
16 energy resources.] The minimum percentage of electric energy
17 required to be sold to retail electric customers from Tier I
18 alternative energy sources is:

19 (i) 1.5013% for June 1, 2006, through May 31, 2007.

20 (ii) 1.503% for June 1, 2007, through May 31, 2008.

21 (iii) 2.0063% for June 1, 2008, through May 31,
22 2009.

23 (iv) 2.512% for June 1, 2009, through May 31, 2010.

24 (v) 3.0203% for June 1, 2010, through May 31, 2011.

25 (vi) 3.5504% for June 1, 2011, through May 31, 2012.

26 (vii) 4.0752% for June 1, 2012, through May 31,
27 2013.

28 (viii) 4.6218% for June 1, 2013, through May 31,
29 2014.

30 (ix) 5.4516% for June 1, 2014, through May 31, 2015.

1 (x) 6.05% for June 1, 2015, through May 31, 2016.

2 (xi) 6.66% for June 1, 2016, through May 31, 2017.

3 (xii) 7.25% for June 1, 2017, through May 31, 2018.

4 (xiii) 7.87% for June 1, 2018, through May 31, 2019.

5 (xiv) 8.75% for June 1, 2019, through May 31, 2020.

6 (xv) 9.72% for June 1, 2020, through May 31, 2021.

7 (xvi) 10.85% for June 1, 2021, through May 31, 2022.

8 (xvii) 12.15% for June 1, 2022, through May 31,
9 2023.

10 (xviii) 13.45% for June 1, 2023, through May 31,
11 2024.

12 (xix) 15.00% for June 1, 2024, and thereafter.

13 (1.1) The commission shall comply with the requirements
14 of 66 Pa.C.S. § 2814 (relating to additional alternative
15 energy sources) by annually increasing the percentage share
16 of Tier I alternative energy sources required to be sold by
17 an electric distribution company or electric generation
18 supplier under paragraph (1) to reflect any new alternative
19 energy source provided for by 66 Pa.C.S. § 2814. Any annual
20 increase will be applied to the next compliance year
21 requirement.

22 (2) The total percentage of the electric energy sold by
23 an electric distribution company or electric generation
24 supplier to retail electric customers in this Commonwealth
25 that must be sold from solar photovoltaic and solar thermal
26 energy technologies is:

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

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

29 (iii) 0.0063% for June 1, 2008, through May 31,
30 2009.

- 1 (iv) 0.0120% for June 1, 2009, through May 31, 2010.
2 (v) 0.0203% for June 1, 2010, through May 31, 2011.
3 [(vi) 0.0325% for June 1, 2011, through May 31,
4 2012.
5 (vii) 0.0510% for June 1, 2012, through May 31,
6 2013.
7 (viii) 0.0840% for June 1, 2013, through May 31,
8 2014.
9 (ix) 0.1440% for June 1, 2014, through May 31, 2015.
10 (x) 0.2500% for June 1, 2015, through May 31, 2016.
11 (xi) 0.2933% for June 1, 2016, through May 31, 2017.
12 (xii) 0.3400% for June 1, 2017, through May 31,
13 2018.
14 (xiii) 0.3900% for June 1, 2018, through May 31,
15 2019.
16 (xiv) 0.4433% for June 1, 2019, through May 31,
17 2020.
18 (xv) 0.5000% for June 1, 2020, and thereafter.]
19 (vi) 0.0504% for June 1, 2011, through May 31, 2012.
20 (vii) 0.0752% for June 1, 2012, through May 31,
21 2013.
22 (viii) 0.1218% for June 1, 2013, through May 31,
23 2014.
24 (ix) 0.2016% for June 1, 2014, through May 31, 2015.
25 (x) 0.3% for June 1, 2015, through May 31, 2016.
26 (xi) 0.41% for June 1, 2016, through May 31, 2017.
27 (xii) 0.5% for June 1, 2017, through May 31, 2018.
28 (xiii) 0.62% for June 1, 2018, through May 31, 2019.
29 (xiv) 0.75% for June 1, 2019, through May 31, 2020.
30 (xv) 0.97% for June 1, 2020, through May 31, 2021.

1 (xvi) 1.35% for June 1, 2021, through May 31, 2022.

2 (xvii) 1.9% for June 1, 2022, through May 31, 2023.

3 (xviii) 2.45% for June 1, 2023, through May 31,
4 2024.

5 (xix) 3% for June 1, 2024, and thereafter.

6 (3) Upon commencement of the beginning of the 6th
7 reporting year, and every five years thereafter, the
8 commission shall undertake a review of the compliance by
9 electric distribution companies and electric generation
10 suppliers with the requirements of this act. The review shall
11 also include the status of alternative energy technologies
12 within this Commonwealth and the capacity to add additional
13 alternative energy resources. The commission shall use the
14 results of this review to recommend to the General Assembly
15 additional compliance goals beyond year [15] 21. The
16 commission shall work with the department in evaluating the
17 future alternative energy resource potential.

18 (4) Electric energy and alternative energy credits from
19 solar photovoltaic and solar thermal energy technologies
20 supplied to retail customers shall be generated from solar
21 photovoltaic and solar thermal energy systems located within
22 this Commonwealth in meeting the requirements of paragraph
23 (2). This paragraph shall apply to all contracts or short-
24 term purchases made after December 31, 2010.

25 (5) Notwithstanding the other provisions of this act,
26 credits purchased or contracted for prior to the effective
27 date of this subsection may be used to demonstrate compliance
28 under this subsection.

29 (c) Tier II share.--Of the electrical energy required to be
30 sold from alternative energy sources identified in Tier II, the

1 percentage that must be from these technologies is for:

2 (1) Years 1 through 4 - 4.2%.

3 (2) Years 5 through 9 - 6.2%.

4 (3) Years 10 through 14 - [8.2%] 11.2%.

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

6 (c.1) Retail sales from advanced coal combustion.--The total
7 electric energy sold by an electric distribution company or
8 electric generation supplier to retail electric customers in
9 this Commonwealth that shall be sold from advanced coal
10 combustion with limited carbon dioxide emissions is all of the
11 electric energy available from advanced coal combustion with
12 limited carbon dioxide emissions up to a maximum of 3.0% of the
13 total electric energy sold by an electric distribution company
14 or electric generation supplier to retail electric customers in
15 this Commonwealth for the reporting period which begins June 1,
16 2020, and for each reporting period thereafter pursuant to
17 subsection (c). If at any time on or after June 1, 2020, a
18 carbon dioxide sequestration facility permitted to permanently
19 sequester carbon dioxide in this Commonwealth is not operating
20 and capable of receiving carbon dioxide for sequestration
21 through no fault of an advanced coal combustion with limited
22 carbon dioxide emissions plant, then an advanced coal combustion
23 with limited carbon dioxide emissions plant shall not be
24 eligible to generate alternative energy credits. A coal
25 combustion plant existing as of the effective date of this
26 subsection, however, that has been retrofitted by installing
27 carbon capture technology need not sequester carbon dioxide
28 until the sequestration facility is capable of receiving carbon
29 dioxide in order to generate alternative energy credits,
30 provided that:

1 (1) The plant is capable of capturing the amount of
2 carbon dioxide required by paragraph (14) of the definition
3 of "alternative energy sources" in section 2.

4 (2) The total value of the alternative energy credits
5 sold by the advanced coal combustion with limited carbon
6 dioxide emissions plant during times when the carbon dioxide
7 emissions from the plant are not sequestered shall not exceed
8 the costs that the plant incurred in installing carbon
9 capture equipment, equipment necessary to process coal for
10 carbon capture purposes, equipment necessary to transport the
11 carbon dioxide to the carbon dioxide sequestration facility
12 and costs incurred in connection with the operation of the
13 plant that are due to the capture and transportation of
14 carbon dioxide, as determined by the department. Costs
15 incurred by an advanced coal combustion with limited carbon
16 dioxide emissions plant shall not include Federal or State
17 financial assistance received by the plant.

18 (c.2) Force majeure.--On or after December 31, 2020, if the
19 commission determines that an advanced coal combustion with
20 limited carbon dioxide emissions plant is not operating and
21 capable of capturing the amount of carbon dioxide required by
22 paragraph (14) of the definition of "alternative energy sources"
23 in section 2 during a reporting period, this determination shall
24 constitute force majeure, and electric distribution companies
25 and electric generation suppliers shall be excused from all or
26 part of their obligation under subsection (c.1) during that
27 reporting period, provided the requirements in the definition of
28 "force majeure" in section 2 have been met, as determined by the
29 commission. Should force majeure be declared pursuant to this
30 subsection, then subsection (c.1)(2) shall remain in full force

1 and effect to the extent that any such credits remain available
2 under this act.

3 (c.3) Long-term contracts.--Upon review and approval of the
4 commission, an electric distribution company may enter into a
5 long-term contract of up to 25 years to purchase the energy,
6 capacity or alternative energy credits of an advanced coal
7 combustion with limited carbon dioxide emissions plant. The
8 contract shall provide for the recovery of costs associated with
9 carbon capture, including, but not limited to, any fees charged
10 by the owner or operator of the carbon dioxide sequestration
11 facility or a carbon dioxide transportation pipeline. The
12 commission shall determine whether the contract is reasonable,
13 taking into consideration the following:

14 (1) The price of the energy purchased under the long-
15 term contract. The contract shall provide that if the carbon
16 dioxide sequestration facility is not operating and capable
17 of receiving carbon dioxide for sequestration for a period of
18 no less than 90 days, the price of energy under the contract
19 shall be reduced to account for the advanced coal combustion
20 with limited carbon dioxide emissions plant's reduced
21 operating costs.

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

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

28 (4) Prior to the effective date of the contract, the
29 value of any carbon dioxide emission credits or other credits
30 that the seller obtains from the advanced coal combustion

1 with limited carbon dioxide emissions plant.

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

14 * * *

15 (e) Alternative energy credits.--

16 * * *

17 (6) An electric distribution company and electric
18 generation supplier may bank or place in reserve alternative
19 energy credits produced in one reporting year for compliance
20 in [either or both] any or all of the [two] four subsequent
21 reporting years, subject to the limitations set forth in this
22 subsection and provided that the electric distribution
23 company and electric generation supplier are in compliance
24 for all previous reporting years. In addition, the electric
25 distribution company and electric generation supplier shall
26 demonstrate to the satisfaction of the commission that such
27 credits:

28 (i) were in excess of the alternative energy credits
29 needed for compliance in the year in which they were
30 generated and that such excess credits have not

1 previously been used for compliance under this act;

2 (ii) were produced by the generation of electrical
3 energy by alternative energy sources and sold to retail
4 customers during the year in which they were generated;
5 and

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

10 (7) An electric distribution company or an electric
11 generation supplier with sales that are exempted under
12 subsection (d) may bank credits for retail sales of
13 electricity generated from Tier I and Tier II sources made
14 prior to the end of the cost-recovery period and after the
15 effective date of this act. Bankable credits shall be limited
16 to credits associated with electricity sold from Tier I and
17 Tier II sources during a reporting year which exceeds the
18 volume of sales from such sources by an electric distribution
19 company or electric generation supplier during the 12-month
20 period immediately preceding the effective date of this act.
21 All credits banked under this subsection shall be available
22 for compliance with subsections (b) and (c) for no more than
23 [two] four reporting years following the conclusion of the
24 cost-recovery period.

25 * * *

26 (12) (i) Unless a contractual provision explicitly
27 assigns alternative energy credits in a different manner,
28 the owner of the alternative energy system or a customer-
29 generator owns any and all alternative energy credits
30 associated with or created by the production of electric

1 energy by such facility or customer, and the owner or
2 customer shall be entitled to sell, transfer or take any
3 other action to which a legal owner of property is
4 entitled to take with respect to the credits.

5 (ii) This paragraph shall apply to all alternative
6 energy credits created pursuant to this act.

7 (f) Market Development and Long-Term Contracting.--

8 (1) The commission shall promote the development of
9 alternative energy through the adoption of alternative energy
10 credit procurement rules that ensure market diversity,
11 competition and a reliable supply of alternative energy
12 credits to all electric distribution companies and electric
13 generation suppliers. These rules shall include, but are not
14 limited to, long-term contracts for alternative energy
15 credits and electric distribution company procurement of
16 alternative energy credits at the request of competitive
17 retail suppliers.

18 (2) These rules shall require that each winning bid be
19 selected solely on the least cost alternative energy credit
20 offered and shall award contracts on a pay-as-bid basis. For
21 purposes of this subsection, the term "pay-as-bid" shall mean
22 winning bidders are paid according to their bid price and not
23 a single clearing price.

24 (3) The commission shall determine that each procurement
25 under this subsection is competitive based on its standard
26 protocols for determining competitiveness. If it is
27 determined that a procurement event was not competitive, the
28 commission shall set a date for another procurement event
29 which, in the case of the first procurement event, shall take
30 place no later than 180 days after the initial procurement

1 event and, in the case of the second procurement event, shall
2 take place no later than one year after the initial
3 procurement event.

4 (4) The commission shall require procurement of
5 qualifying Tier I alternative energy credits, other than
6 solar energy credits, subject to the following terms:

7 (i) The first procurement for 25% of the following
8 compliance year obligations under subsection (b), for a
9 contract period of at least ten years, shall be conducted
10 no later than 120 days after the effective date of this
11 subsection.

12 (ii) The second procurement for an additional 25% of
13 the following compliance year obligations under
14 subsection (b), for a contract period of at least ten
15 years, shall be conducted no later than December 31,
16 2011.

17 (iii) Alternative energy credits from resources
18 eligible to participate under these procurement rules
19 shall have an in-service date as of the effective date of
20 this section or later and shall be located in this
21 Commonwealth.

22 (5) The commission shall require procurement of
23 qualifying solar energy alternative energy credits subject to
24 the following terms:

25 (i) The process shall recognize that different
26 procurement approaches are necessary based on the size of
27 the solar energy systems used to serve residential,
28 commercial and government customers.

29 (ii) Aggregation of solar energy resources shall be
30 used for solar energy systems with a nameplate capacity

1 of no greater than 200 kilowatts and may be used for
2 other resources.

3 (iii) Financial security requirements imposed on
4 solar developers and other sellers not render solar
5 energy projects financially infeasible.

6 (iv) Contract periods for procurement mandated under
7 this subsection shall be at least ten years and shall be
8 subject to the following:

9 (A) The first procurement for at least 55% of
10 the following compliance year obligation under
11 subsection (b) shall be conducted no later than 120
12 days after the effective date of this subsection.

13 (B) The second procurement for at least 45% of
14 the compliance obligation under subsection (b) for
15 the following compliance year shall be conducted no
16 later than December 31, 2011.

17 (C) The third procurement for at least 30% of
18 the compliance obligation under subsection (b) for
19 the following compliance year shall be conducted no
20 later than December 31, 2012.

21 (D) The fourth procurement for at least 25% of
22 the compliance obligation under subsection (b) for
23 the following compliance year shall be conducted no
24 later than December 31, 2013.

25 (E) The fifth procurement for at least 20% of
26 the compliance obligation under subsection (b) for
27 the following compliance year shall be conducted no
28 later than December 31, 2014.

29 (F) For each compliance year commencing with
30 June 1, 2015, the procurement of at least 15% of the

1 compliance obligation under subsection (b) shall be
2 conducted no later than December 31 of the year
3 preceding that compliance year.

4 (v) Upon commencement of the compliance year ending
5 May 31, 2015, and thereafter in conjunction with the
6 reviews required under subsection (b)(3), the commission
7 shall undertake a review of the procurement processes
8 under this subsection, the compliance by electric
9 distribution companies and electric generation suppliers
10 with the requirements of this act and the overall market
11 conditions. The commission shall use the results of this
12 review to determine whether to modify the procurement
13 processes established in accordance with this subsection.

14 [(f)] (g) Alternative compliance payment.--

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

19 (2) The commission shall conduct a review of each
20 determination made under subsections [(b) and (c)] (b), (c)
21 and (c.1). If, after notice and hearing, the commission
22 determines that an electric distribution company or electric
23 generation supplier has failed to comply with subsections
24 [(b) and (c)] (b), (c) and (c.1) in the absence of force
25 majeure, the commission shall impose an alternative
26 compliance payment on that company or supplier.

27 (3) The alternative compliance payment, with the
28 exception of the solar photovoltaic and solar thermal energy
29 share compliance requirement set forth in subsection (b)(2),
30 shall be \$45 times the number of additional alternative

1 energy credits needed in order to comply with subsection (b)
2 or (c).

3 (4) [The alternative compliance payment for the solar
4 photovoltaic share shall be 200% of the average market value
5 of solar renewable energy credits sold during the reporting
6 period within the service region of the regional transmission
7 organization, including, where applicable, the levelized up-
8 front rebates received by sellers of solar renewable energy
9 credits in other jurisdictions in the PJM Interconnection,
10 L.L.C. transmission organization (PJM) or its successor] The
11 alternative compliance payment for the solar alternative
12 share shall be set at \$450 per megawatt hour (MWh) per year
13 beginning January 1, 2011, and the amount shall be reduced by
14 3% each year thereafter.

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

26 [(g)] (h) Transfer to sustainable development funds.--

27 (1) Notwithstanding the provisions of 66 Pa.C.S. §§ 511
28 (relating to disposition, appropriation and disbursement of
29 assessments and fees) and 3315 (relating to disposition of
30 fines and penalties), alternative compliance payments imposed

1 pursuant to this act shall be paid into Pennsylvania's
2 Sustainable Energy Funds created under the commission's
3 restructuring orders under 66 Pa.C.S. Ch. 28 (relating to
4 restructuring of electric utility industry). Alternative
5 compliance payments shall be paid into a special fund of the
6 Pennsylvania Sustainable Energy Board, established by the
7 commission under Docket M-00031715, and made available to the
8 Regional Sustainable Energy Funds under procedures and
9 guidelines approved by the Pennsylvania Energy Board.

10 (2) The alternative compliance payments shall be
11 utilized solely for projects within this Commonwealth that
12 will increase the amount of electric energy generated from
13 alternative energy resources within this Commonwealth for
14 purposes of compliance with subsections [(b) and (c)] (b),
15 (c) and (c.1).

16 [(h)] (i) Nonseverability.--The provisions of subsection (a)
17 are declared to be nonseverable. If any provision of subsection
18 (a) is held invalid, the remaining provisions of this act shall
19 be void.

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

21 Section 3.1. Solar photovoltaic and solar thermal energy system
22 requirements.

23 In order for new or upgrades to existing solar photovoltaic
24 and solar thermal energy systems to qualify for solar
25 alternative energy credits the following requirements shall
26 apply:

27 (1) A solar photovoltaic or solar thermal energy system
28 shall be installed by an approved participating contractor or
29 a contractor who subcontracts with an approved participating
30 contractor under the department's grant program administered

1 under section 306 of the act of July 9, 2008 (1st Sp.Sess.,
2 P.L.1873, No.1), known as the Alternative Energy Investment
3 Act.

4 (2) If the solar photovoltaic or solar thermal energy
5 system will be installed in a municipality that licenses
6 electrical contractors or a municipality that requires an
7 electrical contractor be licensed, the final electrical
8 connection of a solar photovoltaic system shall be made by an
9 electrical contractor licensed in that municipality or a
10 person employed by the licensed electrical contractor.

11 (3) The solar photovoltaic or solar thermal energy
12 installation shall be completed in accordance with the
13 applicable codes, including, but not limited to, those
14 relating to structural integrity, electrical installation and
15 electrical safety. An electrical inspection shall be
16 performed by an electrical inspector licensed in
17 certification categories 10, 19 and 25. Copies of the
18 required permits and inspection certificates shall be
19 provided to the department.

20 (4) Credits generated from non-electricity-generating
21 solar thermal energy systems shall at a minimum be calculated
22 based upon a formula established by the commission in
23 consultation with the department and shall consider such
24 things as a standard BTU to kWh equivalency.

25 Section 4. Section 7(c) of the act is amended and the
26 section is amended by adding a subsection to read:

27 Section 7. Interagency responsibilities.

28 * * *

29 (c) Cooperation between commission and department.--The
30 commission and the department shall work cooperatively to

1 monitor the performance of all aspects of this act [and will].
2 The commission, in cooperation with the department, shall
3 provide an annual report to the chairman and minority chairman
4 of the Environmental Resources and Energy Committee of the
5 Senate and the chairman and minority chairman of the
6 Environmental Resources and Energy Committee of the House of
7 Representatives. The report shall include at a minimum:

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

11 (2) Current costs of alternative energy on a per
12 kilowatt hour basis for all alternative energy technology
13 types.

14 (3) Costs associated with the alternative energy credits
15 program under this act, including the number of alternative
16 compliance payments.

17 (4) The status of the alternative energy marketplace
18 within this Commonwealth.

19 (5) Recommendations for program improvements.

20 (6) The total megawatts installed and megawatt hours
21 generated by alternative energy systems a year prior to and
22 since the effective date of this paragraph.

23 (7) The infrastructure needs associated with the
24 transmission and distribution of energy generated by
25 alternative energy systems within this Commonwealth.

26 (8) An analysis of ratepayer impacts developed in
27 cooperation with the commission, the department and the
28 Office of the Consumer Advocate. The analysis shall provide a
29 balanced assessment of the costs and benefits from this act
30 to ratepayers in this Commonwealth and shall include at a

1 minimum:

2 (i) The total cost of compliance incurred through
3 purchase of alternative energy credits and alternative
4 compliance payments by each electric distribution company
5 and electric generation supplier in this Commonwealth.

6 (ii) Quantification of the price suppression effects
7 on the competitive wholesale electricity market from
8 alternative energy generated for compliance with this
9 act.

10 (iii) The amount of air and water pollution reduced
11 and quantifications of any associated avoided cost of
12 compliance.

13 (iv) The amount of private investment in generation
14 leveraged by the compliance costs.

15 (d) Ratepayer notification.--The commission shall annually
16 provide a one-page ratepayer notification summary of the cost of
17 compliance with this act compared to the related benefits of
18 compliance with this act as determined in the analysis required
19 by subsection (c) (8). Electric distribution companies and
20 electric generation suppliers shall distribute the ratepayer
21 notification summary each year.

22 Section 5. The act is amended by adding sections to read:

23 Section 8.1. Sequestration facility permitting.

24 (a) Prohibition.--No person may operate a carbon dioxide
25 sequestration facility without a permit from the department.

26 (b) Facility sites.--The Environmental Quality Board shall,
27 by regulation, establish the conditions under which a carbon
28 dioxide sequestration facility may be located, developed and
29 operated. The regulations promulgated by the board shall provide
30 for the protection of public health, safety and environment.

1 (c) All carbon dioxide sequestration facilities.--For all
2 carbon dioxide sequestration facilities, the regulations
3 required by subsection (b) shall include, but not be limited to,
4 the following:

5 (1) Criteria used to determine that carbon dioxide has
6 been permanently sequestered.

7 (2) Sequestration facility performance standards.

8 (3) Monitoring, recordkeeping and reporting
9 requirements.

10 (4) Fees in an amount sufficient to recover the
11 department's cost of administering this section.

12 (5) Public participation in the permitting process.

13 (6) Other requirements necessary to evaluate the
14 proposed carbon dioxide sequestration facility and to ensure
15 safe and environmentally protective operation of the
16 facility.

17 (d) Geologic carbon dioxide sequestration facilities.--For
18 geologic carbon dioxide sequestration facilities the regulations
19 required by subsection (b) shall include, but not be limited to,
20 the following:

21 (1) Geologic site characterization.

22 (2) Well location restrictions and well construction
23 standards, including operation and mechanical integrity
24 testing.

25 (3) Risk assessment, corrective action and emergency
26 response requirements.

27 (4) Facility closure, postclosure and final closure
28 certification requirements.

29 (5) Financial assurance requirements, including bonding
30 or insurance, in amounts sufficient to ensure the carbon

1 dioxide sequestration facility will be constructed, operated,
2 closed and monitored during the postclosure period in
3 accordance with regulations promulgated under this section,
4 including those regulations designed to ensure the safe and
5 environmentally protective operation of the facility. The
6 operator of the sequestration facility shall provide
7 financial assurance for mitigation of and compensation for
8 any damage caused by the injection and storage of carbon
9 dioxide or the escape, release or migration of carbon dioxide
10 from the carbon dioxide sequestration facility.

11 (6) Fees for every ton of carbon dioxide accepted by a
12 carbon dioxide sequestration facility in an amount sufficient
13 to monitor and maintain the facility after final closure of
14 the facility and to take remedial actions if necessary after
15 final closure of the facility. The fees shall be paid by the
16 operator of a carbon dioxide sequestration facility to the
17 department on a quarterly basis.

18 (7) Public notice requirements, including notification
19 of a release.

20 (8) Public participation in the closure certification
21 process.

22 (e) Powers, duties and enforcement authority of
23 department.--The department shall have the same powers, duties
24 and enforcement authority provided by the act of July 7, 1980
25 (P.L.380, No.97), known as the Solid Waste Management Act, to
26 carry out the purposes of this section. Operators of a carbon
27 dioxide sequestration facility shall have the same rights and be
28 subject to the same penalties as provided by the Solid Waste
29 Management Act; however, an administrative penalty assessed by
30 the department for a violation of this section shall not exceed

1 \$50,000 per day per violation.

2 Section 8.2. Title to carbon dioxide, immunity and transfer of
3 liability.

4 (a) Title to carbon dioxide.--The right, title and interest
5 in and to carbon dioxide delivered to a carbon dioxide
6 sequestration facility by the advanced coal combustion with
7 limited carbon dioxide emission plants that, individually or
8 collectively, first meet the maximum requirements of section
9 3(c.1), as determined by the department, shall be transferred to
10 the carbon dioxide sequestration facility and the facility shall
11 accept and receive the right, title and interest in and to such
12 carbon dioxide, including, but not limited to, liabilities
13 associated with the carbon dioxide, current or future
14 environmental benefits, marketing claims, associated voluntary
15 or compliance-based emissions allocations or offsets, but not
16 alternative energy credits provided by section 3(e).

17 (b) Immunity.--Upon and after transfer and conveyance of
18 carbon dioxide as provided under subsection (a), the owner of an
19 advanced coal combustion plant with limited carbon dioxide
20 emissions shall be immune from liabilities regarding the storage
21 of carbon dioxide within and the release, escape or migration of
22 carbon dioxide from the carbon dioxide sequestration facility.

23 (c) Transfer of liability.--Upon final closure of a carbon
24 dioxide sequestration facility, as determined by the department,
25 the right, title or interest in the carbon dioxide and liability
26 for any release from the facility shall be transferred to and
27 accepted by the Commonwealth provided the operator of the carbon
28 dioxide sequestration facility has paid the appropriate fees
29 under section 8.1.

30 Section 8.3. Carbon Dioxide Indemnification Fund.

1 (a) Establishment.--There is hereby established in the State
2 Treasury a nonlapsing fund to be known as the Carbon Dioxide
3 Indemnification Fund. Money collected by the department under
4 section 8.1(d)(6) shall be deposited in the fund and shall only
5 be expended by the department to monitor and maintain carbon
6 dioxide sequestration facilities after final closure and to take
7 remedial actions, if necessary, after final closure.

8 (b) Money collected under section 8.1.--Fines, civil
9 penalties and permit fees collected by the department under
10 section 8.1 are hereby appropriated to the department to carry
11 out the purposes of section 8.1.

12 Section 8.4. Carbon dioxide sequestration facility and
13 transportation pipeline on Commonwealth lands.

14 The Commonwealth may lease Commonwealth-owned lands and DCNR
15 may lease State forest land owned by the Commonwealth to any
16 person, on terms and conditions as DCNR may consider
17 appropriate, if the facility is consistent with and does not
18 interfere with the uses and purposes of the Commonwealth-owned
19 lands, as determined by the Department of General Services or as
20 determined by DCNR if the facility is proposed to be located on
21 State forest land, for the development and operation of a carbon
22 dioxide sequestration facility and carbon dioxide transportation
23 pipeline necessary to deliver carbon dioxide to the facility. In
24 considering the potential lease of State forest land, DCNR shall
25 review sites of interest to persons seeking to operate a carbon
26 dioxide sequestration facility and shall complete an
27 environmental review prior to offering a site for lease. A
28 carbon dioxide sequestration facility or carbon dioxide
29 transportation pipeline developed and operated on Commonwealth
30 State forest lands shall only be utilized to store carbon

1 dioxide generated within this Commonwealth. All rents and other
2 payments from any lease of Commonwealth State forest land under
3 this section shall be deposited into the Environmental
4 Stewardship Fund established in 27 Pa.C.S. § 6104 (relating to
5 fund).

6 Section 8.5. Application of the Public Utility Code to
7 transporters of carbon dioxide.

8 Entities transporting or conveying carbon dioxide by pipeline
9 or conduit for compensation under this act shall be considered a
10 public utility under 66 Pa.C.S. § 102 (relating to definitions)
11 and subject to the provisions of 66 Pa.C.S. (relating to public
12 utilities).

13 Section 6. The provisions of this act are severable. If any
14 provision of this act or its application to any person or
15 circumstance is held invalid, the invalidity shall not affect
16 other provisions or applications of this act which can be given
17 effect without the invalid provision or application.

18 Section 7. Repeals are as follows:

19 (1) The General Assembly declares that the repeal under
20 paragraph (2) is necessary to effectuate the amendment of
21 section 3(e)(12) of the act.

22 (2) Section 3.1 of the act of July 17, 2007 (P.L.114,
23 No.35), entitled "An act amending the act of November 30,
24 2004 (P.L.1672, No.213), entitled, 'An act providing for the
25 sale of electric energy generated from renewable and
26 environmentally beneficial sources, for the acquisition of
27 electric energy generated from renewable and environmentally
28 beneficial sources by electric distribution and supply
29 companies and for the powers and duties of the Pennsylvania
30 Public Utility Commission,' further providing for the

1 definitions of 'alternative energy credit,' 'customer-
2 generator,' 'force majeure,' 'net metering,' and 'Tier I
3 alternative energy source,' for alternative energy portfolio
4 standards, for portfolio requirements in other states and for
5 interconnection standards for customer-generator facilities,"
6 is repealed.

7 Section 8. The following shall apply:

8 (1) The amendment of section 3(e)(12) of the act shall
9 apply to all alternative energy credits created under the act
10 on or after the effective date of this section, regardless of
11 when any underlying contract for the purchase of electric
12 energy or other products from the generator that qualifies as
13 an alternative energy system was executed.

14 (2) Notwithstanding 66 Pa.C.S. §§ 508 (relating to
15 powers of the commission to vary, reform and revise
16 contracts) and 2102 (relating to approval of contracts with
17 affiliated interests), the commission may modify contracts or
18 disallow costs of alternative energy credit contracts under
19 this act only when the party seeking recovery of the costs of
20 these contracts is, after hearing, found to be at fault for
21 the following:

22 (i) not complying with the commission-approved
23 alternative energy credit procurement rules; or

24 (ii) fraud, collusion or market manipulation with
25 regard to these contracts.

26 (3) Notwithstanding the other provisions of this act,
27 alternative energy credits acquired or contracted for prior
28 to the effective date of this section may be used to
29 demonstrate compliance under this act.

30 Section 9. This act shall take effect immediately.