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,"
进一步提供定义和为替代能源
portfolio standards; providing for solar photovoltaic and
solar thermal energy system requirements; further providing
for interagency responsibilities; providing for sequestration
facility permitting and for title to carbon dioxide, immunity
and transfer of liability; establishing the Carbon Dioxide
Indemnification Fund; providing for carbon dioxide
sequestration facility and transportation pipeline on
Commonwealth State forest lands; and providing for
application of the Public Utility Code to transporters of
carbon dioxide.

The General Assembly of the Commonwealth of Pennsylvania

hereby enacts as follows:

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

is 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:

(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, waste utility poles and railroad ties used by facilities in operation within this Commonwealth as of the effective date of this act, so long as the facility employs the best available technology to reduce or control emissions of air pollutants under the act of January 8, 1960 (1959 P.L.2119, No.787), known as the Air Pollution Control Act, 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.

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

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

(A) 40% from June 1, 2020, to May 31, 2024.
(B) 60% from June 1, 2024, to May 31, 2029.
(C) 90% from June 1, 2029, and thereafter.
(D) The requirement under clause (C) shall be
waived if commercially proven and project-financeable
(ii) 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 or begins commercial operation before January 1, 2009, and captures and delivers to a carbon dioxide sequestration facility in this Commonwealth for permanent sequestration no less than the following amount of carbon dioxide produced:

(A) 40% from June 1, 2020, to May 31, 2024.
(B) 60% from June 1, 2024, to May 31, 2029.
(C) 90% from June 1, 2029, and thereafter. The requirement under this clause shall be waived if commercially proven and project-financeable technology is not available, as determined by the department.

* * *

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

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

(1) geological subsurface formations within this Commonwealth with suitable cap rock, sealing faults and anticline for the permanent storage of carbon dioxide from advanced coal combustion with limited carbon dioxide 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; or

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

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

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

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

* * *

"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.

"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 energy resources are
reasonably available in the marketplace in sufficient quantities.
for the electric distribution companies and electric generation
suppliers to meet their obligations for that reporting period
under this act. The commission shall declare a force majeure for
any reporting period if it determines the price of available
alternative energy credits exceeds the cost of applicable
alternative energy compliance payments established under this
act. The commission shall not declare a force majeure for any
reporting period based solely on the price of alternative energy
credits if the alternative energy credit prices are less than
the cost of applicable alternative compliance payments.
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 alternative energy to comply
with their obligations. Such good faith efforts shall include,
but are not limited to, banking alternative energy credits
during their transition periods, seeking alternative energy
credits through competitive solicitations and seeking to procure
alternative energy credits or alternative energy through long-
term contracts. In further making its determination, the
commission shall assess the availability of alternative energy
credits in the Generation Attributes Tracking System (GATS) or
its successor and the availability of 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 alternative energy credits as part of default service before
requests of force majeure can be made. If the commission further
determines that 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 alternative energy
credits in subsequent years equivalent to the obligation reduced
due to a force majeure declaration if the commission determines
that sufficient alternative energy credits exist in the
marketplace.

* * *

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

* * *

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

* * *

"Tier II alternative energy source." Energy derived from:
(8) Advanced coal combustion with limited carbon dioxide emissions.

** Section 2. Section 3(a), (b), (c), (e)(6), (7) and (12), (f), (g) and (h) 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

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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 and solar thermal energy
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.] The minimum percentage of electric energy
required to be sold to retail electric customers from Tier I
alternative energy sources is:

(i) 1.5013% for June 1, 2006, through May 31, 2007.
(ii) 1.503% for June 1, 2007, through May 31, 2008.
(iii) 2.0063% for June 1, 2008, through May 31, 2009.
(iv) 2.512% for June 1, 2009, through May 31, 2010.
(v) 3.0203% for June 1, 2010, through May 31, 2011.
(vi) 3.5504% for June 1, 2011, through May 31, 2012.
(vii) 4.0752% for June 1, 2012, through May 31, 2013.
(viii) 4.6218% for June 1, 2013, through May 31, 2014.
(ix) 5.4516% for June 1, 2014, through May 31, 2015.
(x) 6.05% for June 1, 2015, through May 31, 2016.
(xi) 6.66% for June 1, 2016, through May 31, 2017.
(xii) 7.25% for June 1, 2017, through May 31, 2018.
(xiii) 7.87% for June 1, 2018, through May 31, 2019.
(xiv) 8.75% for June 1, 2019, through May 31, 2020.
(xv) 9.72% for June 1, 2020, through May 31, 2021.
(xvi) 10.85% for June 1, 2021, through May 31, 2022.
(xvii) 12.15% for June 1, 2022, through May 31, 2023.
(xviii) 13.45% for June 1, 2023, through May 31, 2024.
(xix) 15.00% for June 1, 2024, and thereafter.

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

(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 and solar thermal energy 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.]
(vi) 0.0504% for June 1, 2011, through May 31, 2012.
(vii) 0.0752% for June 1, 2012, through May 31, 2013.
(viii) 0.1218% for June 1, 2013, through May 31, 2014.
(ix) 0.2016% for June 1, 2014, through May 31, 2015.
(x) 0.3% for June 1, 2015, through May 31, 2016.
(xi) 0.41% for June 1, 2016, through May 31, 2017.
(xii) 0.5% for June 1, 2017, through May 31, 2018.
(xiii) 0.62% for June 1, 2018, through May 31, 2019.
(xiv) 0.75% for June 1, 2019, through May 31, 2020.
(xv) 0.97% for June 1, 2020, through May 31, 2021.
(xvi) 1.35% for June 1, 2021, through May 31, 2022.
(xvii) 1.9% for June 1, 2022, through May 31, 2023.
(xviii) 2.45% for June 1, 2023, through May 31, 2024.
(xix) 3% for June 1, 2024, 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) Electric energy and alternative energy credits from solar photovoltaic and solar thermal energy technologies supplied to retail customers shall be generated from solar photovoltaic and solar thermal energy systems located within this Commonwealth in meeting the requirements of paragraph (2). This paragraph shall apply to all contracts or short-term purchases made after December 31, 2010.

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

(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 - 11.2%.
4. Years 15 and thereafter - 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 dioxide emissions is all of the electric energy available from advanced coal combustion with limited carbon dioxide 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, 2020, and for each reporting period thereafter pursuant to subsection (c). If at any time on or after June 1, 2020, a carbon dioxide sequestration facility permitted to permanently sequester carbon dioxide in this Commonwealth is not operating and capable of receiving carbon dioxide for sequestration through no fault of an advanced coal combustion with limited carbon dioxide emissions plant, then an advanced coal combustion with limited carbon dioxide emissions plant shall not be eligible to generate alternative energy credits. A coal combustion plant existing as of the effective date of this subsection, however, that has been retrofitted by installing carbon capture technology need not sequester carbon dioxide until the sequestration facility is capable of receiving carbon dioxide in order to generate alternative energy credits, provided that:
(1) The plant is capable of capturing the amount of carbon dioxide required by paragraph (14) of the definition of "alternative energy sources" in section 2.

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

(c.2) Force majeure.--On or after December 31, 2020, if the commission determines that an advanced coal combustion with limited carbon dioxide emissions plant is not operating and capable of capturing the amount of carbon dioxide required by paragraph (14) of the definition of "alternative energy sources" in section 2 during a reporting period, 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) during that reporting period, provided the requirements in the definition of "force majeure" in section 2 have been met, as determined by the commission. Should force majeure be declared pursuant to this subsection, then subsection (c.1)(2) shall remain in full force
and effect to the extent that any such credits remain available under this act.

(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 dioxide emissions plant. The contract shall provide for the recovery of costs associated with carbon capture, including, but not limited to, any fees charged by the owner or operator of the carbon dioxide sequestration facility or a carbon dioxide transportation pipeline. The commission shall determine whether the contract is reasonable, taking into consideration the following:

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

(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 dioxide emissions shall not exceed $45 per megawatt hour (MWh).

(4) Prior to the effective date of the contract, the value of any carbon dioxide emission credits or other credits that the seller obtains from the advanced coal combustion
with limited carbon dioxide emissions plant.

(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).

* * *

(e) Alternative energy credits.--

* * *

(6) An electric distribution company and electric generation supplier may bank or place in reserve alternative energy credits produced in one reporting year for compliance in [either or both] any or all of the [two] four subsequent reporting years, subject to the limitations set forth 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 electric distribution company and electric generation supplier shall demonstrate to the satisfaction of the commission that such credits:

(i) were in excess of the alternative energy credits needed for compliance in the year in which they were generated and that such excess credits have not
(ii) were produced by the generation of electrical energy by alternative 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] four reporting years following the conclusion of the cost-recovery period.

* * *

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

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

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

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

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

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

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

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

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

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

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

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

(ii) Aggregation of solar energy resources shall be used for solar energy systems with a nameplate capacity...
of no greater than 200 kilowatts and may be used for other resources.

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

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

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

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

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

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

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

(F) For each compliance year commencing with June 1, 2015, the procurement of at least 15% of the
compliance obligation under subsection (b) shall be conducted no later than December 31 of the year preceding that compliance year.

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

(6) The procurement of alternative energy credits under this act shall not be used to satisfy the requirements of a long-term purchase contract under 66 P.A.C.S. § 2807(E)(3.2) (III) (relating to duties of electric distribution companies).

[(f)] (g) 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) in the absence of force majeure, the commission shall impose an alternative
(3) The alternative compliance payment, with the exception of the solar photovoltaic and solar thermal energy 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 alternative share shall be set at $450 per megawatt hour (MWh) per year beginning January 1, 2011, and the amount shall be reduced by 3% each year thereafter.

(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)] (h) 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 within this Commonwealth that will increase the amount of electric energy generated from alternative energy resources within this Commonwealth for purposes of compliance with subsections [(b) and (c)] (b), (c) and (c.1).

[(h)] (i) 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 3. The act is amended by adding a section to read:

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

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

(1) A solar photovoltaic or solar thermal energy system shall be installed and completed by an approved participating contractor or a contractor who subcontracts with an approved participating contractor under the department’s grant program administered under section 306 of the act of July 9, 2008 (1st Sp.Sess., P.L.1873, No.1), known as the Alternative Energy Investment Act.

(2) If the solar photovoltaic or solar thermal energy system will be installed in a municipality that licenses electrical contractors or a municipality that requires an electrical contractor be licensed, the final electrical connection of a solar photovoltaic system shall be made by an electrical contractor licensed in that municipality or a person employed by the licensed electrical contractor. The electrical work on the installation shall be completed by an electrical contractor licensed in that municipality.

(3) The solar photovoltaic or solar thermal energy installation shall be completed in accordance with the applicable codes, including, but not limited to, those relating to structural integrity, electrical installation and electrical safety. Inspections, including electrical inspections, shall be performed in accordance with the act of November 10, 1999 (P.L.491, No.45), known as the Pennsylvania Construction Code Act. An electrical inspection shall be performed by an electrical inspector licensed in certification categories 10, 19 and 25. Copies of the required permits and inspection certificates shall be provided to the department.

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

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

Section 7. Interagency responsibilities.

* * *

(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.

The commission, in cooperation with the department, 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 energy on a per kilowatt hour basis for all alternative energy technology types.
3. Costs associated with the alternative energy credits program under this act, including the number of alternative compliance payments.
4. The status of the alternative energy marketplace within this Commonwealth.
5. Recommendations for program improvements.
6. The total megawatts installed and megawatt hours
generated by alternative energy systems a year prior to and since the effective date of this paragraph.

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

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

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

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

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

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

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

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

Section 8.1. Sequestration facility permitting.

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

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

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

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

(2) Sequestration facility performance standards.

(3) Monitoring, recordkeeping and reporting requirements.

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

(5) Public participation in the permitting process.

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

(d) Geologic carbon dioxide sequestration facilities.--For geologic carbon dioxide sequestration facilities the regulations required by subsection (b) shall include, but not be limited to,
(1) Geologic site characterization.

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

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

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

(5) Financial assurance requirements, including bonding or insurance, in amounts sufficient to ensure the carbon dioxide sequestration facility will be constructed, operated, closed and monitored during the postclosure period in accordance with regulations promulgated under this section, including those regulations designed to ensure the safe and environmentally protective operation of the facility. The operator of the sequestration facility shall provide financial assurance for mitigation of and compensation for any damage caused by the injection and storage of carbon dioxide or the escape, release or migration of carbon dioxide from the carbon dioxide sequestration facility.

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

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

(8) Public participation in the closure certification
process.

(e) Powers, duties and enforcement authority of department.--The department shall have the same powers, duties and enforcement authority provided by the act of July 7, 1980 (P.L.380, No.97), known as the Solid Waste Management Act, to carry out the purposes of this section. Operators of a carbon dioxide sequestration facility shall have the same rights and be subject to the same penalties as provided by the Solid Waste Management Act; however, an administrative penalty assessed by the department for a violation of this section shall not exceed $50,000 per day per violation.

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

(a) Title to carbon dioxide.--The right, title and interest in and to carbon dioxide delivered to a carbon dioxide sequestration facility by the advanced coal combustion with limited carbon dioxide emission plants that, individually or collectively, first meet the maximum requirements of section 3(c.1), as determined by the department, shall be transferred to the carbon dioxide sequestration facility and the facility shall accept and receive the right, title and interest in and to such carbon dioxide, including, but not limited to, 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).

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

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

Section 8.3. Carbon Dioxide Indemnification Fund ACCOUNT.

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

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

(A) ESTABLISHMENT.--THERE IS HEREBY ESTABLISHED IN THE
GENERAL FUND AN ACCOUNT TO BE KNOWN AS THE CARBON DIOXIDE
INDEMNIFICATION ACCOUNT.

(B) DEPOSITS.--DEPOSITS TO THE ACCOUNT SHALL INCLUDE ALL
REVENUES COLLECTED BY THE DEPARTMENT PURSUANT TO THE REGULATIONS
REQUIRED UNDER SECTION 8.1.

(C) USE OF FUNDS.--THE PER TON FEES COLLECTED UNDER SECTION
8.1(D)(6) SHALL BE USED BY THE DEPARTMENT ONLY TO MONITOR AND
MAINTAIN CARBON DIOXIDE SEQUESTRATION FACILITIES AFTER FINAL
CLOSURE AND TO TAKE REMEDIAL ACTIONS, IF NECESSARY, AFTER FINAL CLOSURE. ALL OTHER MONEYS IN THE ACCOUNT SHALL BE USED BY THE DEPARTMENT TO CARRY OUT THE ADMINISTRATIVE FUNCTIONS CONTAINED IN SECTION 8.1.

(D) APPROPRIATION.--ALL MONEYS IN THE ACCOUNT ARE HEREBY APPROPRIATED TO THE DEPARTMENT.

Section 8.4. Carbon dioxide sequestration facility and transportation pipeline on Commonwealth lands. The Commonwealth may lease Commonwealth-owned lands and DCNR may lease State forest land owned by the Commonwealth to any person, on terms and conditions as DCNR may consider appropriate, if the facility is consistent with and does not interfere with the uses and purposes of the Commonwealth-owned lands, as determined by the Department of General Services or as determined by DCNR if the facility is proposed to be located on State forest land, for the development and operation of a carbon dioxide sequestration facility and carbon dioxide transportation pipeline necessary to deliver carbon dioxide to the facility. In considering the potential lease of State forest land, DCNR shall review sites of interest to persons seeking to operate a carbon dioxide sequestration facility and shall complete an environmental review prior to offering a site for lease. A carbon dioxide sequestration facility or carbon dioxide transportation pipeline developed and operated on Commonwealth State forest lands shall only be utilized to store carbon dioxide generated within this Commonwealth. All rents and other payments from any lease of Commonwealth State forest land under this section shall be deposited into the Environmental Stewardship Fund established in 27 Pa.C.S. § 6104 (relating to fund).
Section 8.5. Application of the Public Utility Code to transporters of carbon dioxide.

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

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

Section 7. Repeals are as follows:

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

(2) Section 3.1 of the act of July 17, 2007 (P.L.114, No.35), entitled "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 the definitions of 'alternative energy credit,' 'customer-generator,' 'force majeure,' 'net metering,' and 'Tier I alternative energy source,' for alternative energy portfolio standards, for portfolio requirements in other states and for interconnection standards for customer-generator facilities,"
Section 8. The following shall apply:

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

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

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

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

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

Section 9. This act shall take effect immediately.