HOUSE COMMITTEE ON APPROPRIATIONS

2009-10 Legislative Session

FISCAL NOTE

HOUSE BILL: 2405 **PRINTER'S NO:** 3866 **PRIME SPONSOR:** DePasquale

FISCAL IMPACT SUMMARY	FY 2008/09	FY 2009/10
***Estimated* Expenditure Increase/(Decrease):**		
Commonwealth funds	$0	$0[a]
Political Subdivision funds	$0	$0[a]
Public utilities restricted revenue account in the General Fund (from utility company assessments)	$0	$260,000
Carbon Dioxide Indemnification Fund	$0	See Analysis
***Estimated* Revenue Increase/(Decrease):**		
General Fund	$0	See Analysis
Environmental Stewardship Fund	$0	See Analysis
Carbon Dioxide Indemnification Fund	$0	See Analysis

[a]See analysis for long-term impact.

OVERVIEW:

House Bill 2405 amends the Alternative Energy Portfolio Standards (AEPS) Act of 2004 (P.L.1672, No. 213), as amended, including the following: (1) it allows utility poles and railroad ties as a source for biomass generation; (2) it further defines advanced coal combustion with limited carbon emissions as a Tier II alternative energy source and provides for carbon dioxide sequestration facilities and carbon dioxide transportation pipelines on Commonwealth lands, including State Forest lands, and related conditions; and it subjugates entities transporting carbon dioxide by pipeline or conduit for compensation to the regulations of the PUC; (3) it expands the force majeure provision to include consideration of price; (4) it increases the amount of alternative energy resources required to be sold to retail electric; (5) it expands solar-generated power to include solar thermal and requires solar powered electricity sold to retail customers to be generated within the Commonwealth; (6) it allows electric companies to bank energy credits for longer periods; (7) it expands the responsibility of the Public Utility Commission (PUC) to promote market development and competitiveness of the alternative energy markets and long-term procurement contracting; (8) it redefines alternative compliance payments for solar energy; (9) it imposes solar power installation standards to qualify for solar energy alternative credits, (10) it expands items to be included in the annual report to the General Assembly, (11) it requires the Department of Environmental Protection (DEP), the PUC, and the Consumer Advocate to analyze the costs and benefits of AEPS, (12) requires the PUC to develop a page insert on the costs and benefits of AEPS to be distributed by the electric companies;, and (13) it gives the PUC limited powers to modify or disallow alternative energy credit contracts.

1. Waste Utility Poles and Railroad Ties as Biomass

The bill allows waste utility poles and railroad ties as a source of biomass energy as long as the facilities in operation comply with emission controls pursuant to the Air Pollution Control Act (1959 P.L. 2119, No. 787).

2. Advanced Coal Combustion and Carbon Dioxide Sequestration

The bill adds "advanced coal combustion with limited carbon emissions" as a Tier II alternative energy source (capped at 3%) and provides for carbon dioxide sequestration facilities and carbon dioxide transportation pipelines on Commonwealth lands, including State Forest lands, with the following provisions:

- No person may operate a carbon dioxide sequestration facility without a permit from the Department of Conservation and Natural Resources (DCNR).
- The Environmental Quality Board shall establish regulations and conditions under which a carbon dioxide sequestration facility may be located, developed, and operated.
- DCNR shall have the 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. Carbon dioxide sequestration facility operators shall have the same rights and be subject to the same penalties as provided by the Solid Waste Management Act; however, no violation shall exceed $50,000 per day per violation.
- Criteria are provided in the bill related to the title to carbon dioxide, immunity, and transfer of liability.
- The Carbon Dioxide Indemnification Fund shall be established and shall be used by DCNR to monitor and maintain carbon dioxide sequestration facilities after final closure and to take remedial actions, if necessary, after final closure. Money collected from fees assessed for every ton of carbon dioxide accepted by a sequestration facility, as well as money collected via fines, civil penalties, and permit fees under Section 8.1 (Sequestration Facility Permitting) are appropriated to DCNR to carry out the purposes of Section 8.1.
- 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, for the development and operation of a carbon dioxide sequestration facility and carbon dioxide transportation pipeline necessary to deliver carbon dioxide to the facility. All rents and other payments from any lease of State forest land for such purposes shall be deposited into the Environmental Stewardship Fund.
- The bill provides for long-term contracts for advanced coal combustion generation facilities.
- The bill defines carbon dioxide pipelines as public utilities under Title 66, Pa.C.S. This gives the Public Utility Commission regulatory power over these pipelines and will require the Commission to inspect them.

3. Force Majeure To Include Price

The bill stipulates that the PUC shall declare a force majeure if it determines the price of available energy credits exceeds the cost of applicable energy compliance payments, but it may not declare a force majeure if the prices are lower than the applicable energy compliance payments.

4. Increased Alternative Energy Requirements

This bill increases required alternative energy consumption by adding graduated scales of minimum percentage electric energy sales for each Tier I alternative energy source, Tier II source, and solar photovoltaic technology, and also selectively increases minimum requirements.

The specific requirement for generating solar photovoltaic technology is expanded to include solar thermal energy technologies and changes minimum percentages of electricity sold to retail customers as follows:

Reporting Year	Time Period	**Current Law:** Photovoltaic only	**H.B.2405:** Photovoltaic, & *Solar Thermal*	Increase due to H.B.2405
1	June 1, 2006 to May 31, 2007	0.0013%	0.0013%	0.0000%
2	June 1, 2007 to May 30, 2008	0.0030%	0.0030%	0.0000%
3	June 1, 2008 to May 31, 2009	0.0063%	0.0063%	0.0000%
4	June 1, 2009 to May 31, 2010	0.0120%	0.0120%	0.0000%
5	June 1, 2010 to May 31, 2011	0.0203%	0.0203%	0.0000%
6	June 1, 2011 to May 30, 2012	0.0325%	0.0504%	0.0179%
7	June 1, 2012 to May 31, 2013	0.0510%	0.0752%	0.0242%
8	June 1, 2013 to May 31, 2014	0.0840%	0.1218%	0.0378%
9	June 1, 2014 to May 31, 2015	0.1440%	0.2016%	0.0576%
10	June 1, 2015 to May 30, 2016	0.2500%	0.3000%	0.0500%
11	June 1, 2016 to May 31, 2017	0.2933%	0.4100%	0.1167%
12	June 1, 2017 to May 31, 2018	0.3400%	0.5000%	0.1600%
13	June 1, 2018 to May 31, 2019	0.3900%	0.6200%	0.2300%
14	June 1, 2019 to May 30, 2020	0.4433%	0.7500%	0.3067%
15	June 1, 2020 to May 31, 2021	0.5000%	0.9700%	0.4700%
16	June 1, 2021 to May 31, 2022	0.5000%	1.3500%	0.8500%
17	June 1, 2022 to May 31, 2023	0.5000%	1.9000%	1.4000%
18	June 1, 2023 to May 30, 2024	0.5000%	2.4500%	1.9500%
19	June 1, 2024 & thereafter	0.5000%	3.0000%	2.5000%

The bill changes minimum percentages of electricity sold to retail customers from Tier I alternative sources, which includes the solar power enumerated above. In addition, the Commission is directed to increase Tier I percentages based on each additional alternative energy source provided for by §2814 of Title 66 (Public utilities), Pa.C.S., which are new biomass energy or low-impact hydropower resources. The following table details the differences:

Reporting Year	Time Period	**Current Law:** Tier I & Photovoltaic	**H.B.2205:** Tier I, Photovoltaic, & *Solar Thermal*	Increase due to H.B.2405
1	June 1, 2006 to May 31, 2007	1.5%	1.5013%	0.0013%
2	June 1, 2007 to May 30, 2008	1.5%	1.5030%	0.0030%
3	June 1, 2008 to May 31, 2009	2.0%	2.0063%	0.0063%
4	June 1, 2009 to May 31, 2010	2.5%	2.5120%	0.0120%
5	June 1, 2010 to May 31, 2011	3.0%	3.0203%	0.0203%
6	June 1, 2011 to May 30, 2012	3.5%	3.5504%	0.0504%
7	June 1, 2012 to May 31, 2013	4.0%	4.0752%	0.0752%
8	June 1, 2013 to May 31, 2014	4.5%	4.6218%	0.1218%
9	June 1, 2014 to May 31, 2015	5.0%	5.4516%	0.4516%
10	June 1, 2015 to May 30, 2016	5.5%	6.0500%	0.5500%
11	June 1, 2016 to May 31, 2017	6.0%	6.6600%	0.6600%
12	June 1, 2017 to May 31, 2018	6.5%	7.2500%	0.7500%
13	June 1, 2018 to May 31, 2019	7.0%	7.8700%	0.8700%
14	June 1, 2019 to May 30, 2020	7.5%	8.7500%	1.2500%
15	June 1, 2020 to May 31, 2021	8.0%	9.7200%	1.7200%
16	June 1, 2021 to May 31, 2022	8.0%	10.8500%	2.8500%
17	June 1, 2022 to May 31, 2023	8.0%	12.1500%	4.1500%
18	June 1, 2023 to May 30, 2024	8.0%	13.4500%	5.4500%
19	June 1, 2024 & thereafter	8.0%	15.0000%	7.0000%

The bill changes minimum percentages of electricity sold to retail customers from Tier II alternative sources, which is expanded to include advanced coal combustion as discussed above, as follows:

Reporting Years	Time Period			Current Law: Tier II	H.B.2405: Tier II	Increase due to H.B.2405
1 to 4	June 1, 2006	to	May 31, 2010	4.2%	4.2%	0.0%
5 to 9	June 1, 2010	to	May 31, 2015	6.2%	6.2%	0.0%
10 to 14	June 1, 2015	to	May 30, 2020	8.2%	11.2%	3.0%
15 & after	June 1, 2020	&	thereafter	10.0%	13.0%	3.0%

The minimum alternative energy requirements in AEPS do not become effective until electric rate caps expire. Rate caps have already expired for the following electric distribution companies: GI Utilities Inc. - Electric Division, Pike County Light & Power Company, Citizens Electric of Lewisburg, Wellsboro Electric Company, Duquesne Light Company, Pennsylvania Power Company, and PPL Electric Utilities Inc. The rate caps for the following companies expire December 31, 2010: West Penn Power Company, Pennsylvania Electric Company, Metropolitan Edison Company, and PECO Energy Company.

5. Solar Power To Be Generated in Pennsylvania

For purposes of fulfilling required minimum generation of solar photovoltaic electric energy, this bill expands the definition to include solar thermal technology, but then limits such generation to that generated within the borders of the Commonwealth as of the effective date of the bill. However, credits purchased or contracted for from out-of-state sources prior to this change will still be valid.

6. Banking Alternative Energy Credits

This bill allows electric generation and distribution companies to bank energy credits for four years as opposed to two.

7. PUC Responsibility to Promote Market Development and Long-Term Contracting

The bill imposes new responsibilities on the PUC to adopt alternative energy credit procurement policies ensuring market diversity, competition, and a reliable supply of alternative energy credits. Winning bids shall be based on least cost alternative energy credits. The PUC shall determine that bids are competitive. It requires an initial procurement event within 180 days of the effective date of the act and another one-year thereafter. It specifies long-term contracts of at least ten years for Tier I equal to 25% of compliance year obligations with 120 days of the effective date and another 25% of at least ten-year contracts no later than December 31, 2011. Furthermore, it specifies long-term contracts of at least ten years for solar energy credits of:

- 55% within 120 days of the effective date for the first procurement,
- 45% before December 31, 2011, for the second procurement,
- 30% before December 31, 2012, for the third procurement,
- 25% before December 31, 2013, for the fourth procurement,
- 20% before December 31, 2014 for the fifth procurement, and
- 15% before each December 31 for each subsequent procurement.

Beginning on June 1, 2014, the PUC will be required to undertake a review of the procurement processes. The procurement of these alternative energy credits may not be used to satisfy long-term purchase contracts under §2807(E)(3.2)(iii) of Title 66.

8. Alternative Compliance Payments

AEPS allows the PUC to impose penalties known as "alternative compliance payments" on electric generation suppliers or electric distribution companies equal to 200% of the average market value of solar renewable energy credits if the PUC determines, after notice and hearing, the company did not meet its alternative energy goals set by AEPS. The bill sets those credits equal to $450 per megawatt hour (MWh) per year beginning January 1, 2011, and the amount will decrease by 3% each subsequent year.

9. Solar Installation Standards

In order for a solar system to qualify for solar alternative energy credits, it must be installed by an approved participating contractor or an approved subcontractor under the Department of Environmental Protection's (DEP) grant program pursuant to the Alternative Energy Investment Act (The Act of July 9, 2008, 1st Sp. Sess.., P.L. 1873, No. 1). Additionally, electrical work must be completed by a municipally licensed electrical contractor within those municipalities that require electrical contractors to be licensed. All work must be completed pursuant to applicable codes. The PUC in consultation with DEP shall develop a formula to calculate kilowatt hour equivalency of solar thermal energy.

10. Annual Report

The items to be included in the annual report are expanded to include data on megawatt and megawatt hour of installed alternative energy systems, transmission and distribution infrastructure needs, and an analysis of the costs and benefits of alternative energy (see below).

11. Cost and Benefits Analysis of AEPS

The PUC, the Consumer Advocate, and DEP shall analyze the cost and benefits of AEPS with respect to ratepayers, the cost of compliance to each electric distribution company and generation company, quantification of price suppression effects on the wholesale electricity market, reduction of pollution, and private investment leveraged by compliance costs.

12. Ratepayer Notification of Costs and Benefits.

The PUC shall annually prepare a one-page summary on the cost and benefits analysis described above. Electric Distribution Companies and Electric Generation Suppliers are mandated to distribute the summary to their customers.

13. PUC Powers to Modify or Disallow Alternative Energy Credit Contracts.

The bill provides that the PUC may modify contracts or disallow costs of alternative energy credit contracts only after holding a hearing, and the party seeking recovery is found to be at fault for not complying with commission-approved alternative energy credit procurement policies or fraud, collusion, or market manipulation.

Effective Date

This act shall take effect immediately.

ANALYSIS:

1. Waste Utility Poles and Railroad Ties as Biomass

This provision has no fiscal impact.

2. Advanced Coal Combustion and Carbon Dioxide Sequestration

DCNR does not anticipate any negative fiscal impact in meeting the requirements of this legislation. The department would be responsible for monitoring and maintaining carbon dioxide sequestration facilities after final closure and to take remedial actions, if necessary, after final closure. However, the department is authorized to use the Carbon Dioxide Indemnification Fund (see above) to recover any costs sustained as a result of this bill. Any revenues to or expenditures from the Carbon Dioxide Indemnification Fund is presently unquantifiable because there is not enough information to determine the number of potential operators, the quantity of carbon dioxide to be sequestered, the number of fines and penalties to be assessed, number of acres to be leased, etc.

Adding advanced coal combustion with limited carbon emissions as a Tier II alternative energy source will not adversely impact energy prices because the technology will compete with the seven other Tier II sources enumerated in AEPS and the bill. There is no mandate the advanced coal combustion be purchased vis-à-vis the other sources.

The Commission already inspects pipelines. Its current year budget, for example, includes $586,000 in state funds for inspecting natural gas pipelines, and it will likely be matched with $1.5 million in Federal funds. Adding this new responsibility for carbon dioxide pipelines will likely increase its inspection costs. The PUC is unlikely to realize any cost increase in FY 2010/11 because the timeframe is too short to establish a working carbon sequestration system. In future years, however, the PUC will incur inspection costs assuming carbon sequestration pipelines are built. Without knowing the extent of such future systems, it is not possible to forecast such costs.

The Commission receives assessments from the utilities it regulates, and it would assess the electric industry for any costs related to inspection of carbon dioxide pipelines. The U.S. Department of Transportation also provides some funding to the Commission for inspection of natural gas and hazardous materials pipelines, and it is possible in future years that the cost could be partially offset by Federal grants if Congress appropriates more funds for pipeline inspection and the U.S. Department of Transportation defines carbon dioxide as a hazardous substance. Such federal reimbursements are not guaranteed.

3. Force Majeure To Include Price

The change in the force majeure provision would act as a check on price increases due to alternative energy sources if those sources exceed the cost of applicable energy compliance payments. According to the PUC website, the current alternative compliance payments are $550.15 for solar and $45 for Tier I and Tier II.

4. Increased Alternative Energy Requirements

This bill increases minimum percentage requirements as follows:

Reporting Year	Time Period	Tier I	Solar	Tier II
1	June 1, 2006 to May 31, 2007	0.0013%		
2	June 1, 2007 to May 30, 2008	0.0030%		
3	June 1, 2008 to May 31, 2009	0.0063%		
4	June 1, 2009 to May 31, 2010	0.0120%		
5	June 1, 2010 to May 31, 2011	0.0203%		
6	June 1, 2011 to May 30, 2012	0.0504%	0.0179%	
7	June 1, 2012 to May 31, 2013	0.0752%	0.0242%	
8	June 1, 2013 to May 31, 2014	0.1218%	0.0378%	
9	June 1, 2014 to May 31, 2015	0.4516%	0.0576%	
10	June 1, 2015 to May 30, 2016	0.5500%	0.0500%	3.0%
11	June 1, 2016 to May 31, 2017	0.6600%	0.1167%	3.0%
12	June 1, 2017 to May 31, 2018	0.7500%	0.1600%	3.0%
13	June 1, 2018 to May 31, 2019	0.8700%	0.2300%	3.0%
14	June 1, 2019 to May 30, 2020	1.2500%	0.3067%	3.0%
15	June 1, 2020 to May 31, 2021	1.7200%	0.4700%	3.0%
16	June 1, 2021 to May 31, 2022	2.8500%	0.8500%	3.0%
17	June 1, 2022 to May 31, 2023	4.1500%	1.4000%	3.0%
18	June 1, 2023 to May 30, 2024	5.4500%	1.9500%	3.0%
19	June 1, 2024 & thereafter	7.0000%	2.5000%	3.0%

Because state government and political subdivisions purchase electricity, which is part of its operating costs, any impact on electric prices, negatively or positively, will likewise impact operating costs.

The increased Tier I requirement will immediately impact customers of Electric Division, Pike County Light & Power Company, Citizens Electric of Lewisburg, Wellsboro Electric Company, Duquesne Light Company, Pennsylvania Power Company, and PPL Electric Utilities Inc. Customers of West Penn Power Company, Pennsylvania Electric Company, Metropolitan Edison Company, and PECO Energy Company will be impacted on January 1, 2011.

According to the 2007 Annual Report of the AEPS, the most recent available, most Tier I sources, except for geothermal and biomass energy, are more expensive than traditional sources. Traditional sources are coal (44.9% of total electric generation), natural gas (22.2%), and nuclear power (20.3%). The increased requirements may cause electricity prices to increase. If prices of traditional sources rise and prices of alternative sources continue to come down, however, the additional Tier I provision may not impact prices, or possibly, allow prices to fall.

The increased solar requirements, in combination with the proposed change in the alternative compliance payments, will apply upward pressure on electricity prices starting in 2011 in comparison to current law. The fundamental reason for this is that solar energy, according to energy experts in industry, government, and academia, is still considerably more expensive than other alternative energy sources. Studies also have indicated that solar thermal power is not yet, and will not be in the near future, economically feasible for Pennsylvania. Adding solar thermal power, therefore, would not likely add to the supply of solar power. The $450 per MWh alternative compliance payment in H.B. 2405, which is reduced each year by 3%, however, might work as a price cap on electricity prices but solar energy credits have generally been selling for less within the last year, and given the force majeure provisions, it is unlikely that it will come into play.

The current solar alternative compliance payment is $550.15 per MWh, which is calculated by doubling the average wholesale market for solar, and the weighted average price is $260.19 for 2008/09. By a matter of comparison, the current average wholesale cost of electricity averaged $44.14 per MWh thus far this year according to the *State of the PJM Market: January through April 2010* report, produced by Monitoring Analytics for PJM Interconnection, the regional transmission organization that coordinates the movement of wholesale electricity in the District of Columbia and all or parts of 13 states, including Pennsylvania (except for Pike County Electric and Penn Power, serving Butler County).

There are too many variables to accurately forecast the impact of the solar provisions of the bill on electric prices, but the following scenarios may be helpful in understanding the dynamics. Assuming the unlikely scenario that the price of solar power and traditional sources remain static, the impact on electricity prices from the solar component of H.B. 2405 will increase overall electric prices by 0.105% in 2011, 0.143% in 2012, 0.223% in 2013, 0.339% in 2014, and 0.295% in 2015. These increases would continue until 2024 where the price increase would be 14.73%. If, however, solar energy credit prices drop, which most energy analysts expect, the amount of the increase will diminish. For example, if solar energy credits drop to $150 per MWh and traditional sources remain the same, then the price increases would be reduced as follows: 0.061% in 2011, 0.082% in 2012, 0.129% in 2013, 0.196% in 2014, and 0.170% in 2015, –and by 2024, 8.5%. Furthermore, if solar energy prices drop to $150 and traditional sources double to $88, then the price increases would be even lower: 0.031% in 2011, 0.041% in 2012, 0.064% in 2013, 0.098% in 2014, and 0.085% in 2015, –and by 2024, 4.26%. In conclusion, the impact on future electricity prices due to the solar provisions of the bill will depend significantly on how high the cost of traditional sources rise relative to how far solar prices fall, which is not possible to predict with any degree of certainty.

House Rule 19(a) requires Fiscal Notes to forecast fiscal impact for five succeeding fiscal years, and the provisions for Tier II come into effect after 2015, which is beyond the scope of this note.

5. Solar Power To Be Generated in Pennsylvania

The limitation that solar photovoltaic and solar thermal generation must be within the borders of the Commonwealth to count toward AEPS will not have an immediate impact on prices because there is only one solar facility in operation supplying electricity to the grid, and that one is in Bucks County, Pennsylvania. It is owned by Morgan Stanley Capital, operated by Eupron, and the output is purchased by the Exelon Power Team for the PECO Energy Company. As out-of-state facilities come online, and there are such facilities being developed, this provision may increase the cost of electricity for the Commonwealth because it will limit competition when solar markets develop. This conclusion is based on basic microeconomic principles of supply and demand. When supply is limited, ceteris paribus, price increases.

6. Banking Alternative Energy Credits

According to the PUC, if there is a lag between when the credit requirements start to ramp up and when supply catches up to meet demand, the longer banking period could allow the electric distribution companies and electric generation suppliers to bank cheaper credits early in the process and use them for compliance when costs have gone up. If this scenario develops, this revision would likely have downward pressure on electric prices. Otherwise, this provision has no fiscal impact.

7. PUC Responsibility to Promote Market Development and Long-Term Contracting
This provision significantly increases responsibilities of the Public Utility Commission. It is difficult to estimate the costs for these new responsibilities considering it is a new activity for the Commission, and no similar provisions are known from other states. A preliminary analysis by the PUC suggested it may require two additional staff persons at $160,000. This estimate, however, is just preliminary, and the actually cost will likely be different.

8. Alternative Compliance Payments
Setting the alternative compliance payment for solar by law has no operational costs for the Commission. However, it might mitigate, under the right circumstances, any increase in electric prices due to the AEPS requirements for solar power. Please see the explanation above for *Increased Alternative Energy Requirements.*

9. Solar Installation Standards
According to DEP, the department already has staff and resources working on responsibilities pursuant to the Alternative Energy Investment Act of 2008, and these resources would be adequate to accomplish monitoring the solar installation standard provision of this bill.

10. Annual Report
With the exception of the Cost and Benefits Analysis (see below), the expansion of the items to be included in the annual report can be accomplished with current resources of the Commission and DEP.

11. Cost and Benefits Analysis of AEPS
The cost and benefits analysis required by this bill would likely require the PUC, the Consumer Advocate, and DEP to contract out to a Ph.D. economist or firm that regularly performs sophisticated computer-based energy economic models. The actual cost for the consultant is unknown, but the Office of the Consumer Advocate, who hires economic experts on a regular basis for rate cases, suggested that the cost would be in the ballpark of $100,000.

12. Ratepayer Notification of Costs and Benefits.
The cost for preparing a one page summary of the cost and benefits analysis (see above) will be negligible for the PUC.

13. PUC Powers to Modify or Disallow Alternative Energy Credit Contracts.
Because the PUC now monitors electric companies and alternative energy credits contracts, the Commission has resources available for any costs that may incur due to the new monitoring responsibilities from this provision.

In Summary
The fiscal cost to the Public Utility Commission will be approximately $260,000. This amount would not come out of the General Fund because the budget of the Commission is funded through assessment on the utilities. The impact on electricity prices will depend on future price trends of traditional energy sources versus alternative sources, as discussed above.

Sources:
The following sources were consulted in preparation of this fiscal note: Department of Conservation and Natural Resources, Department of Environmental Protection, Public Utility Commission, PJM Interconnection, Monitoring Analytics, Citizens for Pennsylvania's Future,

Pennsylvania Energy Association, PECO Energy Company, the U.S. Department of Energy, and the Center for the Study of Energy Markets, University of California Energy Institute.

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House Appropriations Committee, (D)

DATE: June 22, 2010

General Note and Disclaimer: *This Fiscal Note was prepared pursuant to House Rule 19(a), and the elements considered and reported above are required by Section 5 of the rule. Estimates are calculated using the best information available. Actual costs and revenue impact incurred may vary from estimates.*