

**Committee on Environmental Resources & Energy  
Committee on Consumer Protection & Professional Licensure  
Pennsylvania Senate  
Testimony on Governor Edward G. Rendell's Energy Independence Strategy  
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**Introduction**

Chairwoman White, Chairman Tomlinson, Chairwoman Boscola, Chairman Musto and members of the Committees, thank you for the opportunity to appear before you today to discuss the very real energy supply and affordability issues facing all Pennsylvanians, and the tremendous economic opportunities presented by Governor Rendell's Energy Independence Strategy.

Pennsylvania has been a significant producer of energy and fuels from the very earliest days of this country's history. Our coal, oil and natural gas has heated homes, fired furnaces and generated electricity, providing good jobs and building an industrial economy that made America a world power.

The world now faces a new energy economy, one dominated by imported fuels that each year drains billions of dollars from Pennsylvania, gives little back to support our communities and leaves us vulnerable to severe weather events and political upheavals in an unstable world.

Affordable, reliable, and sustainable energy has been on the minds of many Americans since petroleum and natural gas prices began their steady climb at the beginning of the decade. In the fall of 2005, Hurricane's Rita and Katrina further exacerbated the long-term trend of rising fossil fuels prices by disrupting domestic oil production, exposing the fragile balance between energy supply and demand as energy prices from gasoline to electricity skyrocketed across the country.

These natural and political events intensify the impacts of our energy dependence, and long-term energy price and supply trends should tell us that it's time for a fundamental rethinking of our energy policies. As a result, Gov. Rendell has proposed the Energy Independence Strategy.

**Governor Rendell's Energy Independence Strategy**

The Energy Independence Strategy has three key goals:

- **Save consumers \$10 billion in energy costs over the next 10 years;**

- **Reduce Pennsylvania’s reliance on foreign fuels and increase Pennsylvania’s clean energy production capacity; and**
- **Expand Pennsylvania’s energy production and energy technology sectors to create more jobs.**

There are three components to the Energy Independence Strategy:

- **Energy Legislation** that will allow electric utilities to enter into long-term contracts for their customers; empower consumers to adjust usage to take advantage of lower, off-peak rates; encourage energy efficiency and new, clean electricity generation; and ensure that the benefits of the Alternative Energy Portfolio Standards Act’s are maximized.
- **The Energy Independence Fund** that will invest \$850 million in development of advanced and clean energy technologies to put Pennsylvania at the forefront of global energy innovation and investment.
- **The PennSecurity Fuels Initiative** that will enable the domestic annual production of one billion gallons of renewable fuels in the next ten years to equal the total amount of transportation fuels imported annually from the Persian Gulf.

## **Petroleum and Natural Gas**

In 1978, just before the Iranian Revolution, and the beginning of the second OPEC-induced oil crisis, the United States imported approximately 25% of its petroleum. Today, imports of foreign petroleum have soared to approximately 60%.

This disturbing trend mirrors a similar trend in the electricity generation sector. The United States, and Pennsylvania in particular, produces over half of its electricity with domestically available resources, particularly coal. However, in the 1990’s most newly constructed power plants used natural gas as their primary fuel source. At the time those plants were built natural gas cost around \$2.00 per million Btu and the federal Energy Information Administration (EIA) was predicting plentiful supplies of natural gas in North America, especially in Canada. The combination of new power plant development and faulty estimates of natural gas supplies, actually much less than EIA originally thought, has combined to push up the cost of natural gas.

Over the past year, the price of natural gas has risen as high as \$9.00 per million Btu, and in the months immediately following Hurricane Katrina, the price jumped to \$13.00 per million Btu. Today, the price of natural gas stands at \$7.68 per million Btu, and as you will see in the following pages, this rise in natural gas prices fundamentally affects the cost of electricity.

This also affects the cost of home heating. Approximately five million Pennsylvania homes are heated by natural gas, and as the prices for natural gas rises, so does the cost to

Pennsylvania consumers of heating their homes. But, more fundamentally, as natural gas demand increases relative to domestic supply so does the pressure to begin importing liquefied natural gas.

Russia, the Middle East, Africa, and the Caribbean are likely candidates to begin filling the U.S. demand for liquefied natural gas. Today, LNG, as it is known, makes-up about 3% of the nation's energy mix, but some estimates have this rising as high as 17% by 2020. Natural gas is an important fuel for both heating and electricity, and as we become more reliant on LNG our electricity sector will begin taking on the same dependency characteristics as the transportation sector. That is a dangerous recipe for America's energy future.

### **Electricity Generation and Rate Caps**

On January 1, 1997 the Electricity Generation and Customer Choice and Competition Act became effective, restructuring Pennsylvania's electricity market by allowing consumers to choose their electricity suppliers. The aim of electricity restructuring was to reduce electricity costs through competition and customer choice and to level the price disparity among Pennsylvania's utility service territories. The principle underlying the legislation was that once generators had to compete with each other for customers they would become far more efficient than under a regulated system in which their returns were guaranteed. By giving customers the ability to shop among generation suppliers, consumers in traditionally high-cost areas of the state could seek generation suppliers outside their traditional service territories, thereby lowering costs in higher priced areas of Pennsylvania.

Electricity restructuring has been successful in making power plants more efficient. As one example, nuclear power plants, which once operated 70 to 80 percent of the time are now easily achieving 90% plus operating records. However, due to a number of factors, electricity restructuring has not produced the results expected when it was launched in 1997.

To facilitate restructuring, Pennsylvania's electricity consumers have paid approximately \$8 billion in stranded costs to pay for the remaining capital costs of power plants formerly owned by regulated utilities. In compensation, electricity consumers received rate caps to ensure that the price they were paying for electricity did not rise above a certain level. The total stranded costs to be collected by the removal of rate caps is \$11.5 billion. The vast majority of electricity consumers in Pennsylvania are still protected by generation rate caps and will be through 2009, when the generation rate cap in the PPL service territory expires, and 2010 when the generation rate caps in the PECO, Met-Ed, Allegheny Energy and Penelec service territories end.

Portions of Pennsylvania where rate caps have ended have experience mixed results. The price of electricity for most consumers in the Duquesne service territory, with the important exception of large industrial consumers, has fallen while electricity consumers

in the UGI and Pike County service territories have seen price increases of 40% and 72% respectively.

Just last month, PPL Corporation revised earlier estimates that rates will increase by 20 percent to 30 percent in 2010 after the existing caps expire. Now, the company expects that increase to be 30 percent based on current electricity prices. With that said, any increase in the cost of electricity will drive up the cost to consumers beyond these most recent estimates.

Rising prices as rate caps expire are also shared by neighboring states such as Delaware and Maryland which saw electricity prices rise by 50% and 70%. Some states, such as Ohio, which feared the results of market-based prices resulting from the end of their caps have even extended the period of rate protection for their electricity customers.

It is important to remember that when the initial rate caps were set at the time of restructuring they were conceived of as a maximum price ceiling. Many restructuring advocates believed that prices would be lower than the caps and that competitive electricity suppliers would flourish and drive down prices still further. That has not happened and the capped rates have become the electricity rates offered to customers. As a result, there is virtually no shopping for electricity in service territories under generation rate caps as competitive suppliers have declined, or have been unable to beat capped prices.

In fact, if we take a retrospective look at the predicted electricity prices used to determine stranded cost payments, wholesale electricity prices were projected to grow from around \$22 per megawatt hour (Mwh) in 1999 to \$29 per Mwh in 2007. These same projections assumed a wholesale electricity price of \$37 per Mwh in 2016.

However, this is not what has occurred. The combination of higher fuel prices, combined with falling reserve margins and a reliance on expensive natural gas and oil to set wholesale electricity prices has driven up wholesale energy prices in Pennsylvania from under \$30 per Mwh in 2000 to a statewide average of \$58.14 per Mwh in 2005 (\$64.88 per Mwh for those living in the eastern part of the state).

Customers living under generation rate caps have not felt the impact of these increases, but as rate caps expire, rising wholesale prices will be passed on to electricity consumers unless comprehensive, strategic action is taken to address the root causes of rising prices.

In all competitive markets, the fundamentals of supply and demand determine price. The challenge for Pennsylvanians is that the fundamentals of the electricity market that serves the vast majority of Pennsylvanians are pointing towards ever increasing prices.

Perhaps the most important thing to understand about wholesale electricity pricing is the concept of marginal pricing. Marginal pricing refers to the economic model in which the price paid for every electron generated is set by the cost of the highest priced electron. This means that if a utility buys 10 electrons from generators and nine of those electrons

are relatively low-cost coal and nuclear electrons, but the last electron comes from a high-priced natural gas power plant, then all 10 electrons receive the same price as the natural gas-produced electron.

Electricity in Pennsylvania and much of the mid-Atlantic region is provided to consumers through a consortium of electricity distribution and generation companies known as PJM Interconnection. In PJM there is also a locational component to marginal pricing in which an additional layer of cost, based on transmission constraints, is added to the price of electricity. This locational marginal pricing is the fundamental basis by which the price of electricity is determined in Pennsylvania. Both the Midwestern Independent System Operator and the New York Independent System Operator, of which the Penn Power service territory in northwestern Pennsylvania and the Pike County Power and Light service territory in northeastern Pennsylvania are members, use locational marginal pricing to determine the wholesale cost of energy.

In PJM's wholesale market the lowest cost power plants are used first to meet demand. As demand for electricity grows, increasingly higher cost power plants are brought on line to balance supply and demand. As these plants are put into operation, prices for all electrons increase based on the cost of the last power plant brought online. In the eastern part of Pennsylvania, where demand is highest but where it is difficult to transmit high volumes of electricity across the state on high-demand days, prices tend to be even higher because of transmission constraints.

Unfortunately, the underlying dynamics of this wholesale electricity market point to ever-higher prices for Pennsylvania unless we adopt a progressive energy strategy. In just the last two years, peak electricity demand in PJM has soared 13% and PJM expects peak demand to rise nearly 17% over the next ten years, further eroding electricity capacity reserves.

This past summer PJM set a record for summer demand and recently set the winter demand record. This means that more expensive power plants need to be brought on-line for more hours in the year, leading to higher prices for electricity customers. For example, in 1998, there were only 50 hours in which the wholesale price of electricity was over \$100 per Mwh. In 2005, there were 1,102 hours in which the cost of electricity exceeded \$100 per Mwh.

To mitigate rising prices, several things must be done. Reducing the demand for electricity, especially during peak periods when prices are highest can have a major impact on reducing prices.

Additionally, decreasing overall electricity demand at all hours also lowers the supply curve and reduces the number of hours that more expensive power plants need to be brought online. Establishing new generation that is less costly than existing power plants is also critical as new less-costly generation also shifts the supply curve lower.

Electricity restructuring was supposed to address these challenges, as competitive electricity suppliers would invest in new power plants or new transmission as electricity prices began to rise. This has not happened. Nor has electricity restructuring created a robust market for energy efficiency. PJM has developed a demand response program to reduce electricity use during peak periods that is working, but much more can be done.

PJM has also developed a program to encourage new generation, called the Reliability Pricing Model (RPM), which provides funding to the owners of power plants to encourage new investment. However, this program is fundamentally flawed in that it provides payments to the owners of generation without requiring them to invest it in new generating capacity. As a result, RPM will cost Pennsylvania's ratepayers over \$1 billion in four years beginning July 1 without any guarantee that new generation will be built.

Without intervention, Pennsylvania's electricity consumers are faced with difficult choices – paying to build new power plants close to high-demand centers, paying to construct new high-voltage transmission lines across the state to import electricity from Indiana, West Virginia and Ohio, or paying higher prices to operate expensive and inefficient power plants, and possibly all of the above.

### **Energy Independence Strategy to cut Electricity Costs**

The Energy Independence Strategy addresses these challenges in the following ways:

- Require utilities to acquire electricity through a least-cost portfolio of energy resources and provide electricity customers with more ability to negotiate the types of contracts they want. Other states have not necessarily required utilities to acquire a least cost portfolio, instead leaving it up to competitive suppliers to offer customers different products.

Gov. Rendell believes that for competition to truly succeed, the electricity price that competitors must aim to beat should be as low as possible to maximize consumer benefits. If Pennsylvania's 350 largest electricity customers saved just a quarter of a penny per kilowatt-hour on their electricity purchases through these provisions, they would collectively save \$50,000,000 annually. If all consumers saved even a tenth of penny on their electricity purchases they would collectively save \$150,000,000 annually.

- Give enactment of energy efficiency and demand response the same value as electricity so that utilities invest in energy efficiency projects instead of more expensive new generation in building their least cost portfolio for electricity consumers. Everyone agrees that energy efficiency and demand response are the most cost effective ways to meet our energy demands. However, the historic challenge with energy efficiency and demand response is that they require an up-front investment to realize future savings.

Gov. Rendell's plan addresses this by requiring utilities to make that up-front investment when the cost of energy efficiency and demand response are cheaper

than new generation. Energy efficiency projects are typically only one-eighth to one-quarter of the cost of building new power plants. If half of Pennsylvania's growing electricity demands over the next fifteen years were met by energy efficiency instead of new power plants, electricity consumers in Pennsylvania would forego the need for two to three new large-scale power plants saving themselves approximately \$5 billion.

Additionally, a five percent reduction in overall energy use resulting from these provisions will save consumers at least \$750 million in annual energy costs through lower electricity prices.

- Empower consumers to adjust their times of energy use by requiring the installation of "smart meters" that allow consumers to know exactly how much they are paying for electricity at certain times of the day. Since the cost of electricity during periods of high demand can be significantly higher, customers can choose to save money by doing energy intensive activities like laundry at times when energy is less costly.

Information is the key to any well functioning market. By giving customers the power to understand exactly how much their electricity costs, the Energy Independence Strategy gives consumers more choices. If even a modest number of consumers choose this option, all Pennsylvanians will save at least \$230 million per year through lower electricity prices.

In fact, PJM recently found that a \$5 million investment made in demand response in the summer of 2006 led to \$650 million in system-wide savings.

- Encourage the use of micro-grids by clarifying their legality as a matter of Pennsylvania law. A micro-grid is a small electricity system that provides electricity directly to customers without the need to use the interstate transmission system or the local grid. Not only does this benefit local customers that are part of the micro-grid, but it also provides a social benefit by reducing demand on the commodity grid, therefore increasing the reliability of the grid. The benefits from micro-grids can be significant. For example, if micro-grids reduced the demand for electricity from the commodity grid by only 5%, the resulting benefits would equal over \$500 million annually over the life of the micro-grids.
- Enable the direct sale of alternative methane gas from sources such as landfills, coal-bed methane, and coal mine methane. As with electricity, allowing the direct sale of alternative methane gas provides a public benefit by reducing the demand for commodity natural gas. This provision also has an environmental benefit as it encourages the capture and use of alternative methane gas rather than its release to the atmosphere. Methane gas is a potent greenhouse gas with 21 times the warming intensity of carbon dioxide.

- Promote the development of new clean-power plants. States that have restructured their electricity markets have struggled to attract investments in new power plants because large institutional investors will not finance power plants that do not have long-term power purchase agreements. In restructured electricity markets, the only electricity providers with enough guaranteed future demand to enter into long-term contracts are the default providers.

However, Pennsylvania law has been unclear as to whether default providers could enter into long-term contracts. This has created a dynamic in which institutional investors have avoided financing more efficient power plants at the same time that electricity prices have risen.

The Energy Independence Strategy rectifies this problem by clarifying in law that default providers can enter into long-term contracts with developers of resources that are eligible under Pennsylvania's Alternative Energy Portfolio Standard or, pending a determination from the PUC, for the purposes of ensuring electricity reliability. This vital change to the Electricity Generation and Customer Choice and Competition Act encourages investments in new, clean, reliable and affordable power plants in Pennsylvania, and ensures that the commonwealth will have enough power to meet current and future demand. And, unlike PJM's Reliability Pricing Model these provisions of the Energy Independence Strategy provide a direct incentive to developers to invest in construction of new, clean generation in the Commonwealth of Pennsylvania.

- In addition, should electricity prices still rise, the Energy Independence Strategy requires utilities to phase-in any rate increases over a three-year period so that consumers do not face the same rate shocks that have been experienced in Maryland and Delaware.
- Create a Public Benefits Charge of \$0.0005 cent per kilowatt-hour on electricity sold in the Commonwealth of Pennsylvania to finance the Energy Independence Fund. The goal of the Energy Independence Fund is to create 13,000 jobs while generating \$3.5 billion in new investment that are critical to establishing and keeping Pennsylvania at the forefront of the multi-billion dollar global advanced energy market place.

Governor Rendell's electricity proposals present significant price stabilization and reduction potential, conservatively estimated at \$1 billion per year in direct benefits to consumers. The average residential customer is expected to save \$73 per year, the average commercial customer \$425 per year, and the average industrial customer \$10,500 per year.

These are only the direct benefits of the Governor's electricity proposals. Additional benefits also including foregoing investments in additional power plants and high-voltage transmission lines.

The largest indirect benefit for consumers will come in the form of reduced natural gas demand for electricity generation, which will limit the number of hours when natural gas is the price setter for electricity. This offers enormous benefits for electricity consumers by lowering LMP's across PJM. But it has the added co-benefit of making more natural gas available for home-heating customers, thereby creating a more favorable supply-demand balance for heating customers who use natural gas, which will lower prices.

And as domestic demand for LNG is reduced, the need to import LNG will also decrease.

### **The Energy Independence Fund**

The Energy Independence Fund is essential for Pennsylvania fully to realize the benefits created by Gov. Rendell's policy proposals. The fund will invest in companies that want to take advantage of the market opportunities presented by the increased demand for energy efficiency, demand response and new alternative energy generation.

The energy industry is one of the fastest growing investment sectors in the country. Investors have pumped \$24 billion into clean energy projects in the last five years – a two fold increase from previous investment levels.

Pennsylvania's current energy investment programs have created over 2,500 jobs, but since funding is limited, the commonwealth is able to support only 10 percent of the annual requests for energy investments, therefore missing out on at least \$100 million in potential investments every year.

The Energy Independence Fund is also essential in financing the continuing transformation of Pennsylvania's economy from a fossil-fuel energy producer to a world leader in the manufacturing of sustainable energy systems. Under Governor Rendell's leadership, the commonwealth has attracted some of the world's largest international alternative energy firms including Gamesa, Iberdrola, BioEnergy, and Conergy. The combination of the Energy Independence Fund and the progressive policy initiatives set forth by Gov. Rendell will make Pennsylvania even more attractive to growing alternative energy companies looking to expand their businesses.

While the Energy Independence Strategy is designed to head-off coming price and supply concerns in the electricity sector, it also will enable us to make significant progress toward securing our energy future.

Significant funding opportunities under the Energy Independence Fund include:

- **The Energy Independence Greenhouse** will provide \$56 million to fund translational research, access to experienced executives, incubator support and early stage funding to emerging energy technology companies. This program will allow emerging technologies to enter the marketplace. The Ben Franklin Technology Development Authority will administer Energy Independence Greenhouse funds.

- **Clean Energy Venture Capital** will provide \$50 million in capital to grow and sustain clean energy companies by providing investment capital to venture capital partnerships focused on clean energy technologies located in or committed to investment in Pennsylvania.
  
- **Energy Independence Site Preparation Grants and Loans** will stimulate the development of clean energy business sites or business sites incorporating LEED-standard buildings, including renewable energy and conservation features in PA by offering grants and low-interest financing to projects which will renovate existing buildings and prepare sites for the construction of buildings that further the objective of the program  
Companies, non-profit organizations, and local governmental entities will be eligible to apply for Energy Independence Site Preparation Grants and Loans.
  
- **The Energy Independence Capital Assistance Program** will provide grant funding for the acquisition, construction, and improvement of regional clean-energy projects. For-profit entities, non-profit organizations, and local governmental entities will be eligible to apply for EICAP.
  
- **The Cool Appliance Swap** will provide \$100 rebates to Pennsylvania consumers and small businesses to replace old, inefficient room air conditioners and refrigerators with new, high-efficiency units. Replacing these obsolete appliances will reduce energy use on the hottest summer days when electricity use is at its highest and most expensive. This program will result in an annual energy savings of \$13 million, a reduction of 100,000 tons of CO2 and will eliminate the need for 126,000 kW of peak demand capacity. This program will be available through Pennsylvania retailers that sell these appliances and provide delivery and installation services.
  
- **The Pennsylvania Sunshine Solar Initiative** offers specific benefits to manufacturers, small businesses and homeowners and will provide production grants and rebates to jumpstart the use of solar energy and attract solar manufacturing companies to PA.  
Manufacturers of solar panels will be eligible for production grants for solar panels manufactured and installed in Pennsylvania and sold at reasonable prices. This will provide an incentive for solar manufacturers to establish operations in Pennsylvania.  
Homeowners and small business owners will be eligible for rebates of up to 50 percent of the cost of a solar system installed at their home or business.

### **PennSecurity Fuels Initiative**

The PennSecurity Fuels Initiative is a legislative package that will, in ten years, support the construction and expansion of new facilities that will produce one billion gallons of homegrown, renewable transportation fuels annually, which is equal to the amount of fuel

currently imported each year from the Persian Gulf. This one billion gallon target will directly benefit Pennsylvania's farmers, create new jobs, and dramatically reduce our reliance on imported oil.

In his State of the Union address President Bush set a production target of 35 billion gallons of renewable fuels in 10 years, which is equal to approximately 15% of the U.S. gasoline supply. The PennSecurity Fuels Initiative ensures that Pennsylvania farmers and businesses will fully realize the benefits of this national program.

PennSecurity sets production and use requirements for biodiesel and ethanol. The requirements phase-in the use of these renewable fuels based on their in-state production capacity.

For biodiesel, all diesel fuel sold in the commonwealth must have a minimum renewable content of 2% once annual in-state biodiesel production reaches 30 million gallons. That content requirement increases to 5% once production reaches 75 million gallons per year, 10% after production reaches 150 million gallons annually, and 20 percent when in-state production of biofuels reaches 300 million gallons per year.

Coal, long the mainstay of Pennsylvania's energy economy, is not excluded from the opportunities presented here. No-sulfur diesel fuel derived from coal may also be used to meet these commitments provided the producer captures or offsets the carbon emissions generated during the production of coal-derived fuel.

The PennSecurity Fuels Initiative also mandates the statewide use of 10% ethanol in all gasoline sold in the commonwealth once annual in-state production capacity reaches 200 million gallons.

Since ethanol cannot be transported through interstate pipelines due to corrosion issues, rail infrastructure that is capable of moving the volumes of ethanol required to meet the 10% requirement must be installed. Therefore, PennSecurity requires the Pennsylvania Departments of Transportation and Environmental Protection to make a determination that the infrastructure necessary to support the 10% ethanol mandate is in place before the requirement becomes effective. This provision will ensure continuity in the transportation fuel supply chain.

The 10% ethanol (E10) requirement would be equal to approximately 500 million gallons of ethanol at current fuel consumption rates. The five county Philadelphia area already uses gasoline blends containing 10% ethanol, which equals approximately 120 million gallons of annual consumption, and areas of the state served by Sunoco, including the Pennsylvania Turnpike, have ethanol blended into gasoline. Sunoco gas stations in Central Pennsylvania have been selling gasoline containing 10% ethanol for several years. Neither vehicles nor gasoline pumps need to be modified in any way to run on 10% ethanol blends.

Gov. Rendell has committed \$30 million over the next five years from the Alternative Fuels Incentive Grant program to help implement the PennSecurity Fuels Initiative. Additionally, funding from the Energy Independence Fund will also be made available to support renewable fuels production and infrastructure.

A study commissioned for PennFuture by LECG LLC examined the benefits of offsetting 900 million gallons of petroleum-based transportation fuel with renewable and coal-derived fuels by 2017. The study concluded the following:

- The replacement of 900 million gallons of petroleum-based transportation fuel by 2017 with domestically-produced biofuels will add nearly \$1.5 billion (2006 dollars) to the Pennsylvania economy over the next decade. The Pennsylvania economy, measured by gross state product, will be \$14.8 billion (2006 dollars) larger by 2017 than would be the case without increased production and use of biofuels and coal derived fuels.
- New jobs are created as a consequence of increased economic activity generated by production of biofuels and coal derived liquid fuels. The increase in gross output (final demand) resulting from production and construction of new capacity will support the creation of as many as 25,775 new jobs in all sectors of the Pennsylvania economy by 2017.
- Increased economic activity and new jobs will generate additional income for Pennsylvania households. The production of biofuels and coal-derived fuels will put an additional \$6.6 billion (2006 dollars) into the pockets of Pennsylvanians over the next decade.
- The combination of increased higher personal and corporate income will generate additional revenue from personal and corporate sales and use, and income taxes. The full impact of the annual operations to produce biofuels and coal-derived transportation fuels and spending for new construction will add more than \$900 million (2006 dollars) of new tax revenue for Pennsylvania over the next decade.
- Pennsylvania farmers will benefit from expanded markets for their corn and soybeans that will be used as feedstock for ethanol and biodiesel. Increased demand can be expected to raise the statewide average price received by farmers by 10 to 20 cents per bushel, thereby increasing income from marketing. This will provide an incentive for farmers to bring additional land back into production in counties where planted area has declined due to poor profitability. Livestock, dairy, and poultry producers will benefit from increased supplies of medium-protein distiller's grains, a co-product of corn dry mill ethanol production, and soybean meal that will be produced as more soybeans are crushed for oil to produce biodiesel.

- Ethanol, biodiesel and coal-derived transportation fuels will displace imported oil and keep more money in the Commonwealth. The production and use of 900 million gallons of biofuels and other alternative by 2017 will mean that the U.S. will need to import 122 million fewer barrels of crude oil over the next decade. At current prices, this means that the \$6.8 billion that would be sent abroad to finance these imports will stay in the U.S. and Pennsylvania.

Putting a total price on inaction on energy policy is impossible, but the cost is certain to be immense including: further reliance on imports to support our transportation fuel needs; price volatility and uncertainty that comes with reliance on non-domestic fuel supplies; deepening reliance on foreign liquefied natural gas to support the needs of the electricity sector and home-heating customers; and the need for new power plants close to Pennsylvania's population centers or additional high-voltage transmission lines to move power from far away places to Pennsylvania's cities and towns.

None of these alternatives are promising or in anyway advance Pennsylvania's public interest. However, the most immediate issue is the higher electricity and natural gas prices that Pennsylvanians are sure to face in the next three years if we don't act quickly to change the way electricity is produced, regulated and consumed.

Gov. Rendell's Energy Independence Strategy offers a comprehensive set of solutions to our energy challenges. The Energy Independence Strategy will lower the price of electricity and natural gas, and reduce imports of transportation fuels by empowering Pennsylvania's consumers through enhanced customer choice, promoting energy efficiency and conservation, and encouraging the further growth and development of Pennsylvania's alternative energy sector.

The successful adoption of the Energy Independence Strategy will create a self-reliant, cleaner and economically dynamic Pennsylvania that will be home to affordable, reliable and secure sources of sustainable energy. The Energy Independence Strategy builds on the outstanding accomplishments of the General Assembly and Gov. Rendell over the past four years, and ensures a bright energy future for the Commonwealth of Pennsylvania.

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