



E³ — TIMELY ISSUES ABOUT PENNSYLVANIA'S ENVIRONMENT, ENERGY & ECONOMY

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THE PROMISE

A mighty wind swept through Pennsylvania on November 20th. And with it came a new day with the promise of cleaner air and water for Pennsylvanians.

Thanks to the Pennsylvania General Assembly's passage of the Alternative Energy Portfolio Standards (AEPS) Act, Pennsylvania now has the tools to revolutionize how our electricity is made, create thousands of manufacturing and construction jobs, attract billions in private investment to Pennsylvania, stimulate local tax bases, help markedly clean our air and water, provide incentives to reclaim piles of coal waste at abandoned mines, spur energy conservation and actually lower electricity prices by creating a greater, more diverse supply of electricity.

The Alternative Energy Bill requires 18 percent of the electricity sold to retail customers in Pennsylvania to come from renewable and advanced energy sources within 15 years (for the full Act and materials on the Act, go to www.pennfuture.org). The bill sets up two categories of energy sources required to be used by all power companies selling electricity in Pennsylvania - Tier I energy sources including wind, solar, coal mine methane, incremental low-impact hydro, and biomass, and Tier II energy sources including energy saved from new energy efficiency measures, hydro, existing municipal solid waste plants, and coal waste. The Act further gives the Pennsylvania Department of Environmental Protection (DEP) authority to decide whether a resource meets the requirements of the Act.

Both utilities and competitive suppliers must obtain eight percent of the power that they sell to retail customers from Tier I resources that now provide less than one percent of Pennsylvania's electricity and 10 percent from Tier II resources. Properly implemented, the bill will lead to at least an eight-fold increase in the amount of electricity supplied to Pennsylvania's customers that come from Tier I technologies.

Tier II is bigger in percentage terms with its 10 percent requirement than Tier I. But the existing supply of electricity from the resources identified in Tier I is already at least 10 percent. Competition for inclusion in Tier II will be strong, probably intense.

Pennsylvania also became only the second state to make energy conservation or energy saved qualify for meeting the requirements of the Act. This provision breaks new ground and becomes the major incentive for energy conservation in Pennsylvania.

Independent analyses of the legislation's probable impact on Pennsylvania's economy are even better than supporters thought. The bill is truly good for the economy as well as the environment. According to research by Platts' Analytics group, Pennsylvania will develop 3,600 megawatts (MW) of new wind energy capacity to meet the Tier I requirements of the new standard. That is enough new wind energy to supply all the annual power needs for more than one million homes. The new wind capacity will join 129 MW of wind capacity already generating in Pennsylvania.

Platts anticipates that Pennsylvania will also develop smaller amounts of new landfill gas generation, animal waste-based generation, and low-impact hydro generation to meet the Tier I requirements of the standard. Platts states that Pennsylvania "is poised to become a major developer and exporter of renewable power."

The AEPS contains a solar share or a requirement that solar or photovoltaics (PV) provide 0.5 percent of Pennsylvania's electricity after 15 years. Pennsylvania is only the fifth state to include a solar share in its legislation. Estimates of how much PV development will result range from a low of 250 to a high of 800 megawatts.

Solar Energy Industries Association (SEIA), the national trade association of the solar energy industry, also praises the legislation, calculating that Pennsylvania's AEPS will result in 408 MW of solar electric generating capacity by 2015 - right now Pennsylvania has about one MW in the entire state. SEIA estimates that the AEPS will support over 14,000 jobs in the solar industry, with at least one-third held by Pennsylvania residents. "Because of this bill," the association says, "Pennsylvania citizens are going to benefit from clean energy, a healthier environment, and thousands of new solar industry jobs."

Traditional sources of electricity coming from outdated power plants spew large amounts of pollution that sicken our children and our parents and grandparents and that cause habitat destruction, global warming, and water pollution. So changing how electricity is made - and what electricity a customer buys - is the single most powerful action anyone can take to clean up the environment.

Thanks to the new law's requirement that more electricity come from renewable and cleaner electricity technologies, between 2005 and 2020, approximately 67 million tons of carbon dioxide (the equivalent of 25 million round trips by car between Philadelphia and Los Angeles), 59,000 tons of nitrogen oxide, and 589,000 tons of sulfur dioxide will be avoided. Each year after that, the bill will avoid approximately 11 million tons of carbon dioxide, 27 thousand tons of nitrogen oxide, and 100,000 tons of sulfur dioxide. This would go a long way towards making Pennsylvania's air cleaner and safer, and reducing the state's contribution to global warming.

Water clean-up may also come from provisions in Tier II, which includes using coal from abandoned coal piles to make electricity. Abandoned coal waste piles cause massive water pollution that is destroying nearly all aquatic life in 2,000 miles of our streams.

Plants that use coal waste to make electricity have air emissions that are about average for the electricity system. Today coal waste plants provide about eight percent of the electricity in Pennsylvania. The Act requires the use of certain technologies at coal waste plants to limit air emissions and encourages the use of abandoned coal piles as fuel.

Some environmental organizations opposed the whole bill as a result of the inclusion of coal waste in Tier II. In addition to a few environmental groups, the Pennsylvania Chamber of Business and Industry, the National Federation of Independent Businesses, an organization of industrial energy consumers, and chemical companies fought the bill strenuously. These business organizations sought the bill's defeat, and nearly succeeded at a couple points, as they mistakenly claimed the bill would raise electric prices more than a continuation of business as usual.

An authoritative study by the consulting company Black and Veatch demonstrated that fears of higher prices as a

result of energy portfolio standards in Pennsylvania were wrong. Indeed, this independent study predicted a law like AEPS would lower prices.

In fact, making electricity with Pennsylvania wind is cheaper than by burning gas whenever natural gas is at \$5.80 per thousand cubic feet. Over the last three years, gas has frequently crossed that price point. So AEPS will be a hedge against price volatility in fossil fuels and is a wise economic policy, to say nothing of the environmental and public health benefits.

The Pennsylvania General Assembly has never passed any legislation that will do more environmental good — if the Public Utility Commission (PUC) fully and faithfully implements it. The AEPS will protect public health, improve the lives of the more than one million Pennsylvanians who have respiratory problems and prevent substantial air and water pollution.

It is because this legislation is good for the environment, the economy and the public health that groups ranging from the Pennsylvania Council of Churches, to environmental organizations, to every wind and solar energy company working in the state, joined Governor Rendell and DEP Secretary McGinty, as well as a large bi-partisan group of legislators that were ably led by Senators Erickson, White, Musto as well as Representatives Ross, Adolph, Veon, and George in supporting this bill.

Now the work of implementation begins. The fathers and mothers of this legislation will be watching the PUC to make sure that it does not deliberately or inadvertently undermine the law's intended benefits. To that end, PennFuture will be holding an important conference, our Fifth Annual Getting to 10 Percent Conference, on May 25th, 2005. This year's conference will be devoted to the AEPS, its implementation, and next steps. Please join us.