# Pennsylvania's Advanced Energy Portfolio Standard (AEPS) What Does It Really Mean? 1

*Q:* What is the Advanced Energy Portfolio Standard (AEPS)?

A. The new law, signed by the Governor on November 30, 2004, provides that:

All electricity suppliers in Pennsylvania must provide 18 percent of their energy from advanced energy sources within 15 years (2019-2020) — eight percent from Tier I and 10 percent Tier II

Tier I includes solar (has a guaranteed portion), wind, low-impact hydro, geothermal, fuel cells, biomass, coal mine methane

Tier II includes: demand-side management (energy conservation), distributed generation (personal power), large scale hydropower, waste coal, municipal solid waste (MSW), wood/pulp

Q: What are the benefits of the AEPS?

A: The new energy standard will:

- create thousands of manufacturing and construction jobs;
- attract billions in private investment to Pennsylvania;
- stimulate local tax bases;
- help clean our air and water;
- lower health risks by reducing toxic mercury, soot and smog from old outdated power plants:
- provide incentives to reclaim piles of coal waste, including those at abandoned mines;
- spur energy conservation; and
- actually lower electricity prices by creating a greater, more diverse supply of electricity.

#### Under its provisions:

- We will have eight times more green energy most of it wind power than we have right now. That's enough to power more than one million homes;
- There are guarantees for solar power enough to power about 300,000 average homes in Pennsylvania and support over 14,000 jobs in the solar industry, with at least one-third held by Pennsylvania residents;
- The bill calls for extensive energy efficiency and conservation measures, and it includes all electricity customers.

The Pennsylvania General Assembly has never	er enacted a law that did more to clean up the
environment and reduce air emissions.	

<sup>1</sup> Fact Sheet Current as of December, 2004

The energy standard will avoid the following pollution between now and 2015 (all numbers approximate):

- Sixty seven million (67,000,000) tons of carbon dioxide, the equivalent of 25 million round trips by car between Philadelphia and Los Angeles;
- Fifty nine thousand (59,000) tons of nitrogen oxide;
- Five hundred and eighty nine thousand (589,000) tons of sulfur dioxide.

Thereafter it will avoid approximately every year, the following pollution:

- 11,543,401 tons of carbon dioxide;
- 27,285 tons of nitrogen oxide; and
- 100,672 tons of sulfur dioxide.

Waste coal, which now supplies about eight percent of Pennsylvania's electricity supply, is eligible for inclusion in Tier II. Waste coal or any other technology is not guaranteed inclusion. And since the existing supply of electricity from Tier II already exceeds the mandate, competition for inclusion in Tier II will be strong, possibly intense. Waste coal produces air emissions that are approximately equal to system average, and Act requires the use of certain technologies at waste coal plants to limit air emissions. There will be no deterioration of air quality in Pennsylvania due to this provision.

Using and thus eliminating waste coal will mean measurable improvement in water quality. Water pollution from waste coal piles has for decades destroyed Pennsylvania's streams. **More than 2,000 miles of streams in 45 of 67 counties have been destroyed.** Many conservationists in Pennsylvania who are dealing with water pollution support waste coal plants as one tool to reduce water pollution from waste coal piles.

Q: What are people in the energy sector saying about Pennsylvania's AEPS?

- 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, enough to power more than one million homes. The new wind capacity will join 129 MW of wind capacity already generating in Pennsylvania. AEPS requires over 250 MW of new solar capacity by 2016, and 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, a division of The McGraw-Hill Companies, is the world leader in providing energy information.
- The Solar Energy Industries Association (SEIA), the national trade association of the solar energy industry, calculated that Pennsylvania's AEPS will result in even more —408 MW of solar electric generating capacity by 2015, or enough to power about 300,000 average homes in Pennsylvania. SEIA estimated that the AEP will support over 14,000 jobs in the solar industry, with at least one-third held by Pennsylvania residents.

*Q: How does Pennsylvania's standard compare to other states?* A·

Only Pennsylvania and one other state - Hawaii - include energy conservation as an eligible resource. Importantly, Pennsylvania put energy conservation in Tier II, making Tier II an important support for the cleanest electron...the one not used.

## Pennsylvania's Tier I percentage is the largest among the five states that have a tiered standard:

- Maryland Tier 1: 7.5 percent by 2019 (most industrial purchases exempt); the industrial customer exemption in Maryland reduces the mandate to about six percent of all load;
- Connecticut Class I: 7 percent by 2010;
- New York: 6 percent (net) by 2013...New York now has 19 percent hydro (and not all low-impact) and will go to 25 percent, resulting in a 6 percent increase, less than Pennsylvania's Tier I of eight percent
- New Jersey Class I: 3.84 percent by 2008;
- Pennsylvania: 8 percent by 2019

Pennsylvania's Tier I by itself is larger and more comprehensive that the standards of Maryland New York and New Jersey.

### Pennsylvania is one of only five states with a solar photovoltaic (PV) guarantee;

Pennsylvania has the third largest solar share in the nation.

- Nevada five percent each year
- New Jersey 0.16 percent by 2008
- Arizona .0066 percent from solar PV and solar thermal electric by 2004
- Pennsylvania 0.5 percent by 2019
- Colorado four percent

Besides Pennsylvania, seven other states with MSW in their standards:

Maine Hawaii
Nevada Minnesota
Maryland Connecticut

Massachusetts

Pennsylvania's law limits use of municipal solid waste to existing power plants only. No new plants would qualify.

Besides Pennsylvania, 10 other states with landfill gas/methane recovery as qualifying resource:

California Hawaii
Minnesota New Mexico
Maryland Connecticut
Massachusetts New Jersey
Iowa Texas

### *Q:* Can we improve the AEPS?

A: PennFuture will be working to raise the Tier I in the future. The current percentage of eight percent was strongly opposed by the Pennsylvania Chamber of Business, the National Federation of Business, Chemical Companies, Oil companies and others as TOO HIGH. Importantly, we now have a bi-partisan group of responsible legislators who are interested in future legislation to raise the percentages.

It must also be noted that Pennsylvania now gets about one percent of its electricity from Tier I resources. Going to eight percent means approximately an eight times increase, most of it in clean wind energy.