POLICY POINTS

from the COMMONWEALTH FOUNDATION — November 2009

Alternative Energy Mandates

Pennsylvania law requires utility companies to produce a certain percentage of their electricity from alternative sources in future years. Proposed legislation would increase this percentage and require new carbon sequestration practices. Both the current mandate and the proposed change will make electricity more expensive for Pennsylvanians.

BACKGROUND

- In 2004, Pennsylvania passed the Alternative Energy Portfolio Standards Act (AEPS).
- AEPS requires retail energy suppliers to produce a percentage of their electricity from alternative energy sources, such as wind and solar. AEPS categorizes alternative energy by tier. There is also a separate mandate for solar photovoltaic (PV) energy.
  - ⇨ Tier I sources include: solar thermal, wind power, low-impact hydropower, geothermal energy, biologically derived methane gas, fuel cells, biomass energy, coal mine methane, black liquor (PA only), and large-scale hydropower.
  - ⇨ Tier II sources include: waste coal, large-scale hydropower, municipal solid waste, integrated combined coal gasification technology, utilizing wood pulping, employing distribution generation systems, and demand-side management use.
- House Bill 80 would: 1) **increase the AEPS mandate that utility companies must meet by 83%**; and 2) set aside an additional 3% of Tier II sources for plants that utilize Carbon Capture and Storing technologies.

Percentage of Power Produced from Alternative Energy

	Tier I	Tier II	Solar (PV)	Total
Current Production (2007)	1.5%	4.2%	0.0018%	5.7%
2004 AEPS Requirements (by 2021)	8.0%	10.0%	0.5%	18.0%
HB 80 Requirements (by 2024)	20.0%	13.0%	3.0%	33.0%

TOO EARLY TO EVALUATE IMPACT OF CURRENT AEPS

- Electric utility companies still operating under generation rate caps are exempt from AEPS until January 1, 2011 (PPL's rate caps will expire on January 1, 2010).
- In May 2008, the Pennsylvania Public Utility Commission (PUC) released its latest report on the AEPS and concluded that, due to the limited data, "there should be **no changes** or improvements to the program at this time."
  - ⇨ In 2007 only two of eleven electric utility companies were required to meet AEPS mandates.
  - ⇨ The PUC estimates the annual cost of ownership for solar energy per kWh is over **700% more expensive than the cost of coal**; wind is almost **23%** more expensive than coal. Retail energy suppliers will inevitably pass the additional costs on to the consumers as they are required to use more expensive alternative sources.
- The PUC will release another study on the AEPS with current targets and recommendations to the General Assembly by 2010.

Renewable Energies are Dependent on Government Subsidies

- Over the last 30 years, solar and wind have received about **$20 billion in federal funding**.
- The Pennsylvania Department of Environmental Protection provides annually over $20 million in grants for alternative energy projects, along with loans and grants from the Department of Community and Economic Development.
- In 2008, Gov. Rendell signed the Alternative Energy Investment Act, which **provides $650 million in subsidies** for alternative energy and conservation projects.

Mandates Increase Consumer Costs

- As shown above, alternative energy produced only 5.7% of Pennsylvania's power while 56% of Pennsylvania's electricity comes from coal, requiring more electricity to come from more expensive resources will inevitably raise prices.
- Initial estimates predict House Bill 80 will increase Pennsylvania utility bills by $8 billion-$9 billion.[1] **This would equate to approximately $1,600-$1,800 per household**.
- Solar and wind, which are intermittent energy resources, require back-up generation when either wind levels or cloud-cover reduce production capacity. Solar PVs only operate 13% of the time; wind energy is available only 35% of the time.
  - ⇨ **It is misleading to say that wind and solar energy cost "nothing" to produce**; it takes resources to construct and install turbines and panels, add new transmission lines, perform maintenance, and simultaneously require back-up energy sources.

Clean Coal Mandates

- House Bill 80 mandates use of Carbon Capture and Storing (CCS) as a means of producing "clean coal".
- CCS would capture most of the carbon dioxide (CO_2) produced when coal is used for electricity, and the CO_2 would then be transported and stored. CCS technology for large scale commercial use is still in the beginning stages; and the economic and environmental impacts of it remain unclear.
- Clean Coal development will get **$2.4 billion in federal stimulus money**.
- Recent estimates indicate clean coal will cost twice the rate of coal electricity.

Green Jobs Myth

- Supporters claim these stringent mandates will bring more private investments for green energy to Pennsylvania and stimulate the creation of "green jobs," but numerous studies have found this assertion false.
  - ⇨ Literature citing the creation of thousands new green jobs is often very misleading because the numbers **do not take into account the jobs that are lost due to new regulations**.[2] One study found that 2.2 jobs were lost for every one green job created.[3]
- **Jobs that depend on government subsidies are simply not a sustainable way to stimulate the economy.**
  - ⇨ It is estimated that if the investment tax credits for solar PV development and production tax credits for wind energy in the United States were not continued in 2009, these established industries would lose 77% of their employees.[4]

Endnotes:

1. Memorandum by Robert Godshall to all House Members, "House Bill 80 – Response to Secretary Hanger's Memo, July 8th 2009.
2. PERC Policy Series, "7 Myths about Green Jobs." 2009.
3. Universidad Rey Juan Carlos, "Study of the Effects on Employment of Public Aid to Renewable Energy Resources. 2008.
4. PERC Policy Series, "7 Myths about Green Jobs." 2009.