



HARRISBURG *Report*

Jobs and Economy Update

From State Senator
Stewart J. Greenleaf

SPRING 2012

Emerging High Tech Industries

While Pennsylvania's unemployment rate has fallen, economic recovery has been sluggish in Southeastern Pennsylvania. Property values have declined, many mortgages are underwater, and banks are reluctant to lend. We should not only be thinking of creating jobs for the immediate future, but state government and regional leaders should work to attract and help establish industries that will carry our economy far into the future.

Knowledge- and technology-based industries such as biotechnology, nanotechnology and pharmaceuticals are creating thousands of jobs in the Philadelphia region and promise continued growth. Pennsylvania is already emerging as a world leader in life science research and medical technology. In the Philadelphia region, a thriving life science business community has formed, drawing on the

talent pool and resources of the region's many world-renowned universities. Entrepreneurship is thriving in this sector and our region is becoming known globally as a hotbed of innovation and investment opportunity. It is imperative that the state continue to invest in these fields to help incubate new businesses, and also protect the intellectual property that these companies are built on.

Biotechnology companies work in the life sciences to produce medicine, perform cancer and disease research, and engineer a variety of devices and processes to enhance quality of life. The Commonwealth is home to nearly 1,900 bioscience establishments that directly employ more than 80,000 people. This industry serves as an economic anchor that purchases products and services, having an overall employment impact of about 354,000 jobs. Pennsylvania is considered a world

leader in biotech, and many new companies are growing.

The Pennsylvania Department of Community and Economic Development (DCED) has invested over

\$1 million since 2004 in the University City Science Center, a large facility in Philadelphia that provides start-up biotech companies with lab space and business training.

Nanotechnology is the development of high performance materials that are lighter, smaller and stronger with advanced properties that can be used to create new products or improve existing ones. This technology is especially applicable to energy production, manufacturing and medicine.

DCED recently announced the approval of \$3.15 million in funding to support energy, advanced materials, and nanotechnology research activities. From 1999 to 2012, the state has invested more than \$88 million in nanotechnology initiatives, leveraging an additional \$676 million in private, university, and federal funding.

Public-private partnerships have formed between state government, private companies, and the state's many universities to continue research, prepare the workforce, and help commercialize new products. Pennsylvania is projected to

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Senator Greenleaf, visiting the Hepatitis B Foundation/Institute for Hepatitis and Virus Research, watches as a Proteomics 2d dimension gel is prepared for cancer research.



Emerging High Tech Industries (cont.)

produce at least \$7.75 billion worth of nanotechnology products by 2015.

To sustain this growth, government must recognize that each of these knowledge-based industries in the life sciences, medicine, and nanotechnology is vulnerable to intellectual property theft—the stealing of ideas or technology produced by a company or an individual and reproducing it for a profit. It is estimated that Intellectual property (IP) theft is responsible for over \$200 billion in economic loss to the United State's economy each year. The theft of intellectual property by foreign competitors threatens the competitiveness of U.S. companies in the global marketplace.

In 2008, I sponsored legislation in the Senate to increase criminal penalties for producing counterfeit goods that may re-

sult in bodily harm such as prescription medications. In 2010, I helped pass similar legislation that created tougher criminal penalties for counterfeit products.

These industries are strengthening both our regional and national economy and performing critical work for the future of humanity. I support additional investments and better protections for these fields that are sustainable and have endless potential.



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