



Fact Sheet

Commonwealth of Pennsylvania • Department of Environmental Protection

Pennsylvania's Industries of the Future Program

"The Future is Bright in Pennsylvania"

What is the "IOF" Industries of the Future Program?

The U.S. Department of Energy's (DOE) Industries of the Future (IOF) program was developed to support the implementation of advanced energy efficiency, renewable energy and pollution prevention technologies for industrial applications. The federal IOF program has been in existence since 1994.

State IOF Programs

Currently, 35 states have IOF programs.

The Pennsylvania Industries of the Future (PAIOF) was formed in 1999 and signed a partnership agreement with the DOE on June 20, 2000, to increase energy efficiency and reduce waste generation within the IOF industry sectors.

In order to succeed, a state IOF program must do the following:

- Conduct outreach activities to form partnerships between state government, industries, associations and universities;
- Identify academic, governmental and industrial champions who have an interest in sustaining industrial activities within the state;
- Hold forums to enable industry sector partners to create a vision document and a technology roadmap to highlight the technologies and processes needed to sustain the industry; and
- Initiate technology research and demonstration projects, and disseminate information on industrial best practices.

Pennsylvania's State IOF Goals

The goal of the PAIOF is to improve the competitiveness of its industries by delivering technical or financial assistance, and engaging in research and development activities. When creating an industry sector program, the PAIOF focuses on these important areas:

- **Energy and Process Efficiency:** The acceleration, development and adoption of energy-efficient

technologies and processes by working with industry, academia, federal laboratories, and other state and local research institutions. Significant opportunities exist to improve energy efficiency.

- **Materials:** The adoption of new approaches to achieve more efficient use of materials, which is vital to the efficient operation and production of manufacturing operations.
- **Environmental and Economic Performance:** The encouragement to collaborate on environmental challenges with industry, academia and laboratories in the most cost-effective manner.
- **Education and Awareness:** To increase the level of understanding in Pennsylvania regarding the PAIOF program and its benefits.

PAIOF Academic and Industry Champions

A PAIOF goal is to have each industry sector team with a Pennsylvania university, industry association(s), industry representatives and government organizations to form an industry sector advisory group. These advisory groups are charged with accomplishing the following tasks:

- Reviewing Pennsylvania's industrial base;
- Matching Pennsylvania industries with growth opportunities;
- Identifying specific key "change agents" in each industry;
- Matching industry opportunities with local level funding;
- Identifying trade associations and professional organizations which are active on a local level;
- Identifying local consultants, designers, and service providers; and
- Identifying research and development and invention and innovation opportunities.

Targeted Industries

The PAIOF currently has three active industrial sectors: metalcasting, aluminum and coal mining. These industries are focus points due to their present and future impact on Pennsylvania's economy.

Metalcasting

Penn State University has been leading the PAIOF metalcasting industry sector advisory group since 2001. Dr. Robert C. Voigt is the industry's academic champion. The metalcasting industry has completed its vision and is currently working on its roadmap.

Aluminum

Lehigh University's Institute of Metal Forming has been leading the PAIOF aluminum industry sector effort since March, 2002. Dr. Wojciech Misiolek is the industry's academic champion. The aluminum industry sector has started its visioning and roadmapping.

Coal Mining

DEP has selected the University of Pittsburgh's Dominion Center for Energy and the Environment to lead the creation of the coal mining industry sector. Dr. Frederick G. Pohland and Dr. Shiao-Hung Chiang are the sector's industry co-academic champions. The Pennsylvania Coal Association is serving as the chair of the coal mining advisory group.

Pennsylvania's Current IOF Program Initiatives

PAIOF's industry sector representatives have identified these areas as critical to growth in Pennsylvania:

- The improvement of competitiveness and profitability by increasing the energy efficiency, environmental

performance and productivity of industrial facilities, processes and operations;

- The removal of inefficiencies and materials waste that lower value to customers and reduce profit and reinvestment;
- The reduction of the impact on natural resources by lowering the risk of incorporating new materials and energy efficient technologies; and
- The formation of partnerships and alliances with DEP and within Pennsylvania.

PAIOF Web Site

The PAIOF website contains information on a wide variety of related topics:

- PAIOF activities
- Partners
- The IOF Plan
- Industries
 - Metalcasting
 - Aluminum
 - Coal Mining
- Best Practices
 - Steam
 - Air
 - Motors
 - Buildings
- News
- Calendar
- Solicitations
- Active Projects
- Contacts
- PAIOF Newsletter
- Links

You can find the PAIOF website by visiting the DEP website at www.dep.state.pa.us (directLINK "PAIOF")

This fact sheet and related environmental information are available electronically via Internet. For more information, visit us through the PA PowerPort at www.state.pa.us PA Keyword "PAIOF".



www.GreenWorks.tv - A web space dedicated to helping you learn how to protect and improve the environment. The site features the largest collection of environmental videos available on the Internet and is produced by the nonprofit Environmental Fund for Pennsylvania, with financial support from the Pennsylvania Department of Environmental Protection, 877-PA-GREEN.