



IOF-Tennessee Kick-Off
Conference

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What WV has done with IOF Program

- Started with carbon products as a cross cut technology for IOF
- Why does the IOF program make sense for West Virginia?

WV Industry Comparisons

Industry Sectors	Employment	GSP (\$M)
Primary Metals	11,645	813
Stone, Clay, & Glass	6,493	422
Chemicals & Allied Products	14,839	2,933
Lumber & Wood Products	12,422	453
Total for IOF-WV Sectors	45,399	4,621
Total for WV Manufacturing	86,461	6,673
IOF-WV % of Total Manuf.	53%	69%
State Totals	878,647	39,938

Source: U.S. Department of Commerce, Bureau of Labor Statistics, www.bea.doc.gov

TN Industry Comparisons

Industry Sectors	Employment	GSP (\$M)
Primary Metals	17,992	1,349
Stone, Clay, & Glass	16,872	1,204
Chemicals & Allied Products	35,205	3,355
Lumber & Wood Products	27,352	1,264
Total for IOF-TN Sectors	97,421	7,172
Total for TN Manufacturing	530,336	32,425
IOF-WV % of Total Manuf.	18%	22%
State Totals	3,371,586	159,575

Source: U.S. Department of Commerce, Bureau of Labor Statistics, www.bea.doc.gov

IOF-WV Successes

Aluminum

Potlining Additives

Funding: \$1,228,910 (3 years) U.S. DOE OIT,
\$526,680 Cost share

Principal partner: Century Aluminum of West Virginia Inc.

Intelligent Potroom Operation

Funding: \$1,800,000 (3 years) U.S. DOE OIT,
\$632,000 cost share

Principal partners: Applied Industrial Solutions LLC
Century Aluminum of West Virginia Inc.
West Virginia University

Steel

Hot Strip Mill Transfer Bar Rapidfire™ Edge Heat Project

Funding: \$400,000 (3 years) U.S. DOE OIT NICE³,
\$945,000 cost share

Principal partner: Weirton Steel Corporation

Improved Materials for Galvanizing Line Hardware

Funding: \$2,326,000 (3 years) U.S. DOE OIT,
\$2,326,000 cost share

Principal partners: Weirton Steel Corporation
10 other steel manufacturers suppliers
Oak Ridge National Laboratory
West Virginia University

Glass

Enhanced Cutting and Finishing of Handglass Using a CO₂ Laser

Funding: \$352,000 (3 years)U.S. DOE OIT,
176,000 cost share

Principal partners: U.S. DOE NETL
West Virginia University
Fenton Art Glass

Potential Commercial Demo Sites: PA, NC, WV

Metal Casting

Beneficial Re-use of Spent Foundry Sand

Principal partners: HK Casting Inc.
WV Department of Environmental Protection
West Virginia University

Chemicals/Polymers

IOF Plant-Wide Energy Efficiency Assessment at the New Martinsville Bayer Plant

Funding: \$100,000 (1 year) U.S. DOE OIT,
\$100,000 cost share

Principal partners: Bayer Corporation
West Virginia University

Separation and Recovery of Thermoplastics from Nylon Production Waste Streams

Funding: \$100,000 (9 months) STTR

Project partners: SDR Plastics Inc.
West Virginia University
Argonne National Laboratory

Wood/Forest Products

Reforestation of Abandoned Mine Land (Sustainable Forestry Initiative)

Funding: \$50,000 a year for 3 years, WVDO

Project partners: Westvaco
West Virginia University

Wood Industry Assistance Program

Funding: \$35,000 a year for 2 years, WVDO

Project partners: West Virginia wood products companies
West Virginia University

Mining

In-Mine Validation of Method Determining Characteristics of Coal Seam using Electromagnetic Transmission

Funding: \$40,304

Project partners: West Virginia University

Evaluation of Roof Bolting Requirements Based on In-Mine Roof Bolting Drilling Parameters

Funding: \$1,352,341

\$172,640 cost share

Project partners: JH Fletcher

Consol

Ohio Valley Coal

West Virginia University

SEP Awards

Industries of the Future – West Virginia Support Program

Funding: \$100,000 for 2 years, U.S. DOE OIT

Project partners: West Virginia University
West Virginia Development Office

Industries of the Future – West Virginia (IOF-WV)

Funding: \$150,000 U.S. DOE OIT

\$30,000 cost share

Project partners: West Virginia University
West Virginia Development Office

***Industries of the Future – West Virginia 1999 Special
Projects Submission***

Funding: \$185,000 U.S. DOE OIT
\$88,850 cost share

Project partners: West Virginia University
West Virginia Development Office

***Industries of the Future – West Virginia 2000 Special
Projects Submission***

Funding: \$200,000 U.S. DOE OIT
\$242,000 cost share

Project partners: West Virginia University
West Virginia Development Office

Total Funding on IOF-WV Related Projects

Total State & Federal Agency Funding: \$8,554,555

Total Cost Share: \$5,239,170

Total IOF-WV Related Funding: \$13,793,725

The Path Forward for State IOF Programs

- Working with the OIT is a pleasure and the various programs available are very helpful
- The OIT biannual symposia are great meetings

Resources...Innovation...Results

- A sample of issues discussed at the recent OIT EXPO (Besides energy and environment!):
 - e-business and impacts of IT on industry
 - skipping entire pilot and intermediate product development phases
 - squeezing more out of existing facilities – max return on assets
 - alarm over decline of manufacturing and exports in the U.S. (Finkleton talk – trade deficit ~ 4.5% of GDP in 2000, up from 3.6% in 1999.)
 - crisis in steel that could happen to any one of the other IOF sectors
 - deep concern over lack of engineers for the future – new \$500K prize
 - everything you build will be intelligent! – transistors and bandwidth are so miniature and so cheap!

- Coalition of states to help keep federal attention on needs of basic industries
 - IOF is a great model. We can build on it – a program that has broader impacts and addresses other manufacturing concerns?
 - The goal would still be to conduct R&D that brings new technologies and strategies to the basic manufacturing and production industry sectors
 - What about a BestPractices program for manufacturing and IT? For example, there could be audits and assessments that help a company prioritize IT investments

Closing Comments

- Two Visions of 2020 for traditional industries
 - Bleak vision of despair
 - Vision of hope and success

- Top recommendations –
 1. Do what makes sense for your state. Develop a good fit with the needs and resources of the state - economic development interests, industry profiles, research team strengths, state energy and industry programs
 2. Build grass roots support and involvement with state companies and industry associations – plant visits, working group meetings, listen to their concerns and develop goals and action plans. Above all get them involved in proposals and projects
 3. Use the OIT resources – people, programs, and solicitations