



Industries of the Future – West Virginia

Industrial Technology Partnerships

**Energy Smart America 2004: Tools and Solutions
for States and Communities**

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Partnerships – The WV Approach



WV Industry Comparisons (2001 data)*

Industry Sectors	GSP (\$M)	Employment	GSP/Emp
Primary Metals	602	9,276	\$68,899
Fabricated Metals	398	7,861	\$50,630
Stone, Clay, & Glass	284	5,901	\$48,127
Chemicals & Polymers	1,722	13,625	\$126,385
Rubber & Plastics	205	3,925	\$52,229
Lumber & Wood Products	573	9,067	\$63,196
Paper & Allied Products	68	946	\$71,882
Total for IOF-WV Sectors	3,852	50,601	\$76,125
Total for WV Manufacturing	5,249	75,142	\$69,854
IOF-WV % of Manufacturing	73%	67%	
Coal Mining	3,013	27,793	\$108,409
State Totals	42,368	890,010	\$47,604

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

IOF Industry Sectors

IOF Industries Percent of Total Manufacturing		
State	GSP	Employment
West Virginia	73%	67%
Wyoming	72%	50%
Pennsylvania	51%	44%
Maine	46%	41%
Indiana	43%	42%
Ohio	42%	45%
Tennessee	39%	38%
Iowa	39%	32%
North Carolina	38%	29%
Minnesota	34%	33%
New Hampshire	29%	35%

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

Industry Working Groups are the Heart of the Program

- University researchers with strong industry ties
- Enthusiastic industry contacts – (that provide cost share!)
- National lab expertise
- West Virginia Development Office – industry representatives, energy efficiency program, leadership
- Co-funding agencies and foundations

Solutions for WV Companies

- Targeted energy savings at Century Aluminum of \$15 million per year with new diagnostic and control system
- “Improved Materials for Galvanizing Line Hardware ” – goal of 10 X increase in lifetime of submerged hardware
- Permitting productive reuses of spent foundry sand has saved HK Casting \$657,000 to date
- \$1.48 million in energy saving opportunities at Bayer Chemical with a payback of < 12 months

Solutions for WV Companies (con'd)

- Laser glass cutting machine targeted to reduce waste in hand glass industry by 25%
- G+ project with Marble King and Oak Ridge National Laboratory
- Energy assessments have shown that West Virginia's wood/forest products industry could save more than 1.2 trillion BTUs per year equivalent to \$8.6 million and approximately 525 million pounds of CO₂ annually
- “Imagining Ahead of Mining” project led to implementation of new technologies for horizontal directional drilling

Outreach Activities

- Annual IOF-WV Symposia
- Annual IOF-WV Day at the State Capitol
- IOF-WV monthly *UpDate*
- Talks, exhibits, and consulting on the IOF-WV “journey”
- Newspaper and magazine articles
- Radio and television interviews
- IOF-WV Video

Barriers and Some Lessons Learned

- Companies preoccupied with business climate issues
- Research team overly focused on a particular technology
- Mismatch between industry priorities and agency co-funding priorities
- Cost-share commitments on proposals
- Extensive proposal and post-award requirements
- Downward pressure on ITP budget

Proposed FY 05 ITP Budget

	FY 2003 Actual	FY 2004 Budget	FY 2005 Proposed	% Change FY 05 vs. 04
Total ITP	97.8	93.1	58.1	(37.6)
IOF Crosscutting	33.5	39.9	31.9	(21.1)
IOF Specific	59.3	47.2	22.4	(52.6)
Forest Products	10.5	8.0	3.0	(62.6)
Steel	10.1	6.7	3.8	(43.6)
Aluminum	7.9	6.6	2.7	(58.9)
Metal Casting	5.2	4.1	2.0	(50.6)
Glass	4.5	3.3	1.8	(46.6)
Chemicals	14.1	13.2	7.1	(46.3)
Mining	5.5	4.7	1.4	(70.2)

Source: U.S. DOE FY 2004 Congressional Budget Request, page 433 and 443, February 2004
(<http://www.mbe.doe.gov/budget/05budget/>)

What's Next

- Challenges of the future for Industries of the Future
- Strong support across the U.S. for ITP programs.
- Partner with industries in your state and community – help define the next generation of industrial technologies and manufacturing
- Do what makes sense for your state and community
- Check out the national ITP at <http://www.eere.energy.gov/industry/>
- Check out the WV ITP at <http://iofww.nrcce.wvu.edu>