



# **Ohio's Resources for Manufacturers**

# Ohio Manufacturing Statistics

- 5<sup>th</sup> in the country for Gross Domestic Product derived from Manufacturing
- Ranked 5<sup>th</sup> overall for the production of industrial machinery
- 3<sup>rd</sup> in the country for the number of employees in manufacturing
- 2<sup>nd</sup> in the production of primary metals, plastics and rubber products, and electrical equipment and appliances
- 3<sup>rd</sup> in the production of motor vehicles and parts as well as fabricated metal products

## SB 315: Ohio's Energy Policy

The Governor's 21st Century Energy and Economic Summit was held in September 2011, and out of that summit came ideas and strategies the governor's policy team used to build a comprehensive energy policy that rests on 10 pillars.

The pillars were translated into legislation – Senate Bill 315 – that supports a diverse mix of reliable, low-cost energy sources that meet Ohio's continuing job-creation needs.

# Ohio's Energy Policy

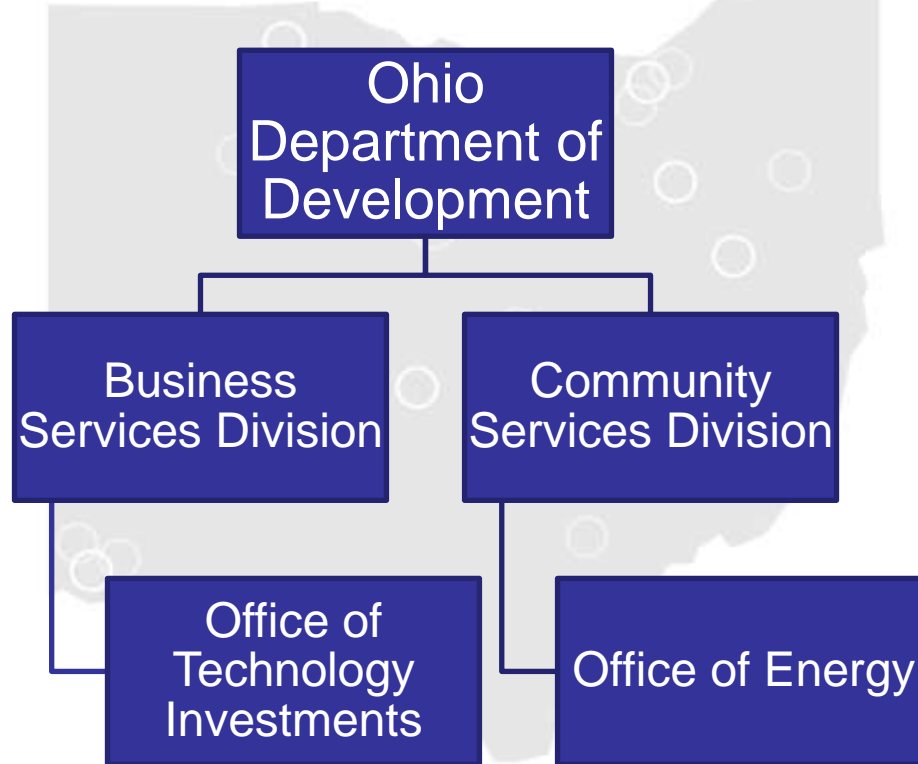
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- Pillar 1 – Shale
  - Pillar 2 – Generation
  - Pillar 3 – Electricity Transmission & Distribution
  - Pillar 4 – Cogeneration / Waste Heat Recovery
  - Pillar 5 – Workforce Training
  - Pillar 6 – CNG / Alternative Fuels
  - Pillar 7 – Energy Efficiency
  - Pillar 8 – Coal
  - Pillar 9 – Regulatory Reform
  - Pillar 10 - Renewables

# Ohio Department of Development

Working with our partners across business, state and local governments, academia, and the nonprofit sector, the **Ohio Department of Development** works to support business attraction and retention efforts by providing targeted investments that assist in job creation, as well as provides assistance and services to Ohio's communities and individuals.

Engaged every day in marketing, innovating, investing, and collaborating, the **Ohio Department of Development** works to accelerate and support the teamwork that is necessary for success by providing financial, informational, and technical assistance to those making an investment in Ohio's future.

# Department Structure



# Ohio Department of Development

Resources for Ohio Manufacturers:

- Ohio Third Frontier
- Ohio Manufacturing Extension Partnership
- Office of Energy Programs
- Ohio Center for Industrial Energy Efficiency



# Ohio Third Frontier

## Strategic Goals:

- Produce a high level of economic return for the state in quality jobs, company growth, and wealth creation
- Create sustainable engines of economic development activity in key areas of technology and industry strengths
- Reduce the risk of pursuing entrepreneurial, innovation and development activities in Ohio
- Sustain best practices and relationships that lead to efficient commercialization
- Increase the visibility and reputation of Ohio as an innovation and entrepreneurial destination to attract investment capital, companies, and talent



# Ohio Third Frontier

## Operational Focus

- **Faster ROI** – Target projects that produce a return-on-investment in three to five years.
- **Leverage Strengths** – Build on those areas where Ohio has a natural advantage or “leg up” in the market.
- **Maximize Impact** – Coordinate when appropriate with JobsOhio to maximize the impact of Third Frontier’s resources.
- **Accurately Measure Results** – Develop rigorous metrics that accurately reveal the impact of Third Frontier on commercialization, business development, and job creation.
- **Foster a Flexible Culture** – Develop a flexible culture in the Third Frontier to rapidly respond to high-impact, game-changing opportunities.
- **Sustainable Funding** – Where appropriate, make more Third Frontier funds available via loans instead of grants, which are then repaid and fund future additional Third Frontier efforts.

# Ohio Manufacturing Extension Partnership (MEP)

The Ohio MEP, is a state-wide organization under the leadership of the Ohio Department of Development in partnership with Edison Technology Centers and other government-funded entities.

- A state-wide organization with regional partnerships
- Offer general business assistance but also specialized assistance with technology and innovation
- For small manufacturers who need general assistance, Ohio's Manufacturing and Technology Small Business Development Centers provide low cost or free business consulting, market and product development, workshops and seminars, defense transition and commercialization, and resource referrals
- For larger manufacturers who need general assistance, MEP refers those in the northern part of Ohio to MAGNET and those in southern Ohio to TechSolve

# Edison Centers by Industry



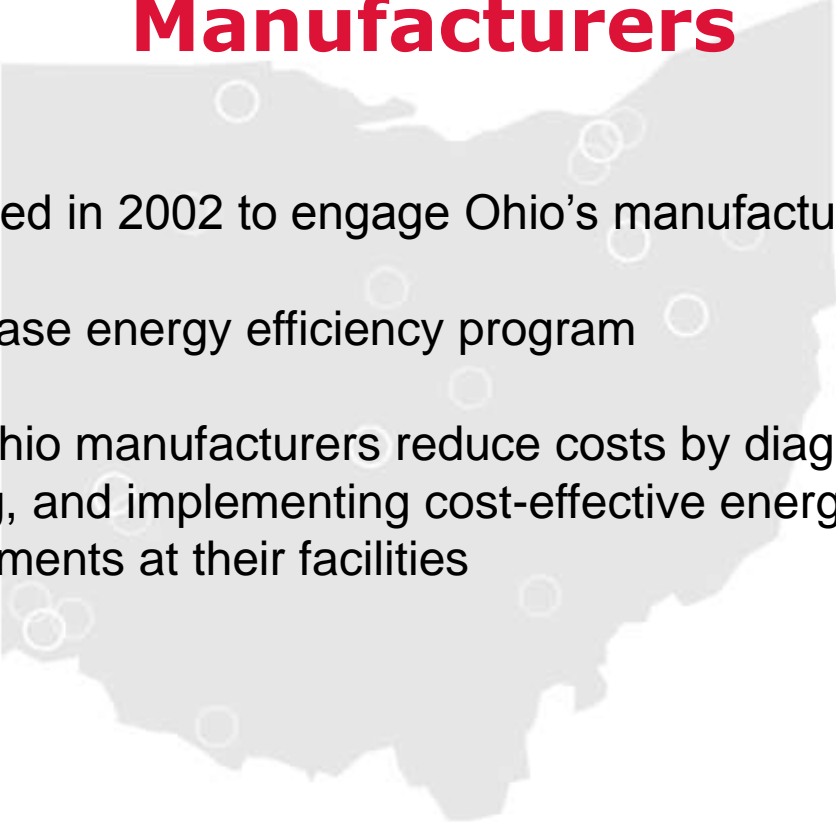
# Office of Energy

## **Mission Statement:**

The Office of Energy works to grow the economy of the state by connecting companies and communities to financial and technical resources to adopt energy efficiency and deploy advanced energy technologies.

The Office of Energy is designated as the state's energy office by the State of Ohio and the U.S. Department of Energy, and is responsible for administering U.S. Department of Energy funding allocated to the state and for carrying out requirements in the Energy Policy Act.

# Energy Efficiency Program for Manufacturers

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- Developed in 2002 to engage Ohio's manufacturers
  - Multi-phase energy efficiency program
  - Helps Ohio manufacturers reduce costs by diagnosing, planning, and implementing cost-effective energy improvements at their facilities

# Energy Efficiency Program for Manufacturers



## Phase I

- Identification of energy cost saving actions
  - Company management team examines their energy use and identify five customized “Action Steps”

## Phase II

- Development of an energy plan that combines changes in business process methodologies with identification of cost-effective measures

## Phase III

- Implementation of energy cost savings measures identified in Phases I & II
  - Many companies are eligible for financing through the Office of Energy’s Energy Loan Fund

## Phase IV

- Measurement and verification of the energy cost saving measures

# Energy Efficiency Program for Manufacturers

## Energy Loan Fund

- Expected to result in Energy, Economic, and Environmental impacts that include:
  - A minimum of 15% energy use reduction from existing conditions
  - A return on investment that allows the loan to be paid back within a reasonable time period
  - Economic impact such as job creation or retention.
  - Improvement in environmental quality
- Eligible activities include energy efficiency retrofits, distributed generation, including combined heat and power systems, and traffic signals and street lighting.

## Future Resources

The Office of Energy will be incorporating additional programs into the Energy Efficiency Program for Manufacturers that will enhance energy performance even further.

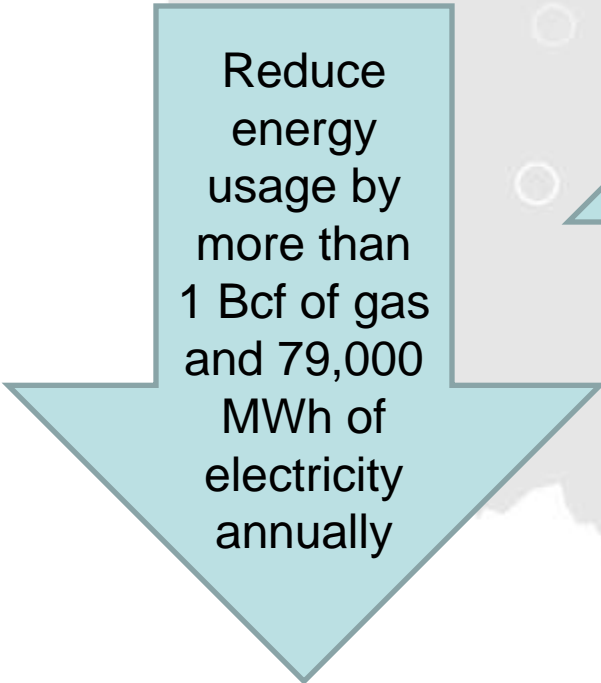
### **The Department of Energy's Superior Performance Program**

- Incorporates aspects of ISO 50,001, the energy module in the ISO standard
- The Office of Energy may provide match for the program
  - Manufacturers seeking Partner and Certified Partner designation may be eligible for funding

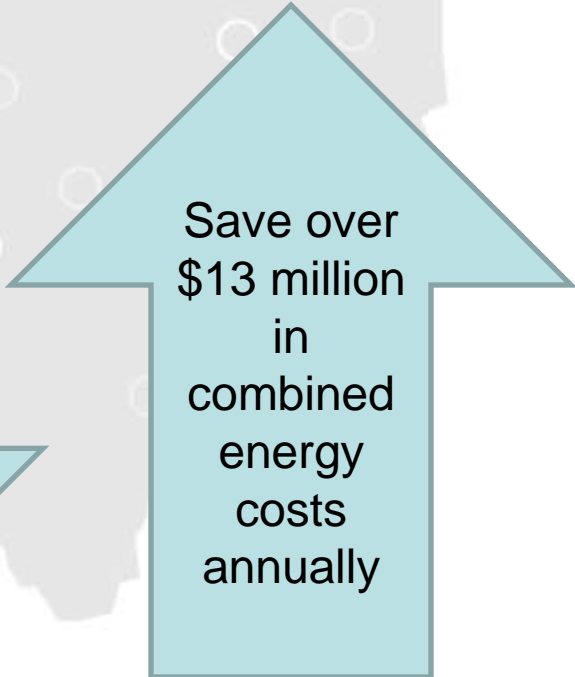


# Energy Efficiency Program for Manufacturers

To date, the program has invested more than \$25 million to:



Reduce  
energy  
usage by  
more than  
1 Bcf of gas  
and 79,000  
MWh of  
electricity  
annually



Save over  
\$13 million  
in  
combined  
energy  
costs  
annually

# Ohio Center for Industrial Energy Efficiency

The Ohio Department of Development, working in conjunction with Energy Industries of Ohio (EIO), have been addressing industrial energy efficiency work, primarily focused on the major energy consuming sectors in the state since 2001.

The U.S. Department of Energy funds this effort that enables the Office of Energy and EIO to continue their successful working relationship by establishing the Ohio Center for Industrial Energy Efficiency. This Center will integrate state and federal programs into a seamless program for industrial participants and develop the infrastructure needed to deliver U.S. DOE Save Energy Now products and services in a cost effective manner to Ohio companies.

# Ohio Center for Industrial Energy Efficiency



## Mission:

- Promote Ohio's energy efficiency programs as well as DOE's Better Plants and Superior Energy Performance Efforts to the major energy consuming industries in the state.
- Conduct BestPractices, ISO 50001 and CPEnMS Training Sessions.
- Identify and train Envinta and ESA assessors to conduct EEPM Phase II energy assessments.
- Support the activities of Energy Industries of Ohio in establishing demonstration tests of the high temperature alloys identified in its Advanced Ultrasupercritical Boiler and Turbine projects.

## Success Stories

### American Trim

American Trim is a component manufacturer for the appliance and transportation markets. The company began in 1951 as a tool and die company, then expanded to produce range handles for the appliance industry.

- Ohio Third Frontier – \$1 million grants in 2007, 2008 and 2011 for research and development of high velocity metal forming involved in producing fuel cell stacks.
- Ohio MEP – Provided consulting services to help move forward the commercialization process of the new coating line.
- Office of Energy – Participated in the Energy Efficiency Program for Manufacturers program to develop a new Selective Protective Mask coating cured with UV light. The updated line to coat parts reduces energy consumption by 95% compared to the old coating process, and produces zero air or water emissions.

## Success Stories

### Process Technology

Process Technology is a leading manufacturer of electric immersion heaters, heating and cooling coils, controls, instantaneous heaters, liquid level controls, over-temperature protection systems and accessories.

- Ohio Third Frontier – \$357,713 grant for commercialization of Inline Heater for use in Photovoltaic Solar Manufacturing.
- Ohio MEP – Received financial information and resources from a Manufacturing and Technology Small Business Development Center.
- Office of Energy – Participating in the Energy Efficiency Program for Manufacturers program, replaced aging HID lighting with energy efficient fluorescent lighting, reducing energy consumption by 57%.

## Success Stories

### EchoGen

EchoGen is a technology development company in Akron focused on developing innovative heat-to-electricity power generation systems that use supercritical fluids to transform waste heat into usable power without creating new emissions.

- Ohio Third Frontier – \$4.3 million investment to develop and commercialize the Thermafficient<sup>®</sup> system, including the development of advanced ceramic materials and nanoscale coatings, which can withstand extremely harsh environments.
- Ohio MEP – Sponsored with a technology membership at EWI, during which time they received engineering consultation, plan review, trouble shooting, access to OEM's.
- Office of Energy – Opportunity to apply to the Energy Loan Fund for waste heat recovery projects.

# Questions?

Chad Smith, Deputy Chief  
Office of Energy

77 S. High Street, 26<sup>th</sup> Floor  
Columbus, OH 43216

614-466-6797

[energy@development.ohio.gov](mailto:energy@development.ohio.gov)

[www.energy.development.ohio.gov](http://www.energy.development.ohio.gov)