



# Ohio Energy Office

## Ohio – Energy Intensive Economy

- 26<sup>th</sup> largest economy in the world
- 5<sup>th</sup> largest energy user in the nation
- 90% electric generation is from coal
- \$30 billion energy expense annually
- Import from other states or nations
  - 97% of its Oil and Petroleum
  - 89% of its Natural Gas
  - 62% of its Coal


## Ohio Energy Office

- Growing Ohio's economy
  - Connecting companies and communities
    - Financial resources
    - Technical resources
  - Deploying advanced energy technologies and energy efficiency
- 
- A light gray map of the state of Ohio is centered in the background. Overlaid on the map are several white circles of varying sizes, some of which are overlapping, representing energy-related locations or projects across the state.

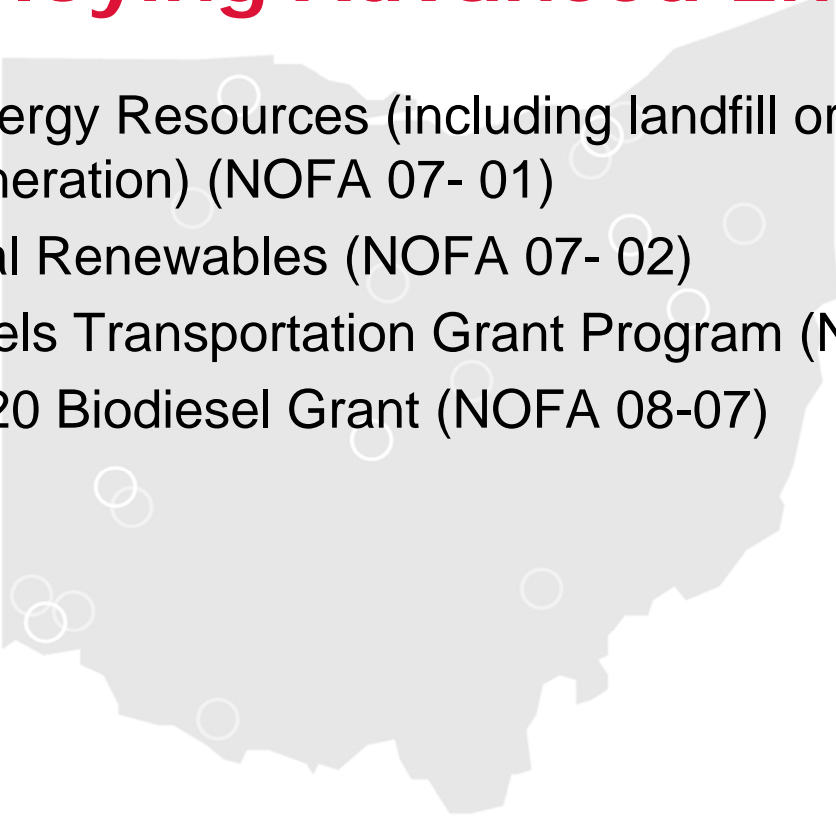
## Connecting Companies

- To each other –
    - Supply chain development
    - Identifying components makers and connecting to OEMs
  - To Ohio's resources and strengths
    - Research
    - Innovation
    - Work ethic
    - Manufacturing legacy
  - To local and state efforts formulating energy strategy
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## To Financial and Technical Resources

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- A light gray map of the state of Ohio is positioned in the background. It features several white circles of varying sizes scattered across the state, representing the locations of various financial and technical resources mentioned in the list.
- Federal Resources
    - Save Energy Now
  - State Resources
    - Advanced Energy - Incentives
    - Distributed Energy - Incentives
    - Industrial Efficiency
      - EnVinta One – 2 Five
    - Ohio Small Business Energy Saver

## Deploying Advanced Energy

- Distributed Energy Resources (including landfill or biomass methane for electric generation) (NOFA 07- 01)
  - Non-residential Renewables (NOFA 07- 02)
  - Alternative Fuels Transportation Grant Program (NOFA 07-08)
  - School Bus B20 Biodiesel Grant (NOFA 08-07)
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## Deploying Advanced Energy-Renewable

Non-Residential Renewable Energy Incentives (NOFA 07-02)

Maximum \$150,000 per award

- Solar Electric
  - 1 kw to 10 kw
  - \$1.50-\$3.50 per watt
- Solar Thermal
  - Lesser of \$30 per kBtu/day or 50% of eligible cost
- Wind
  - \$2.50 per watt



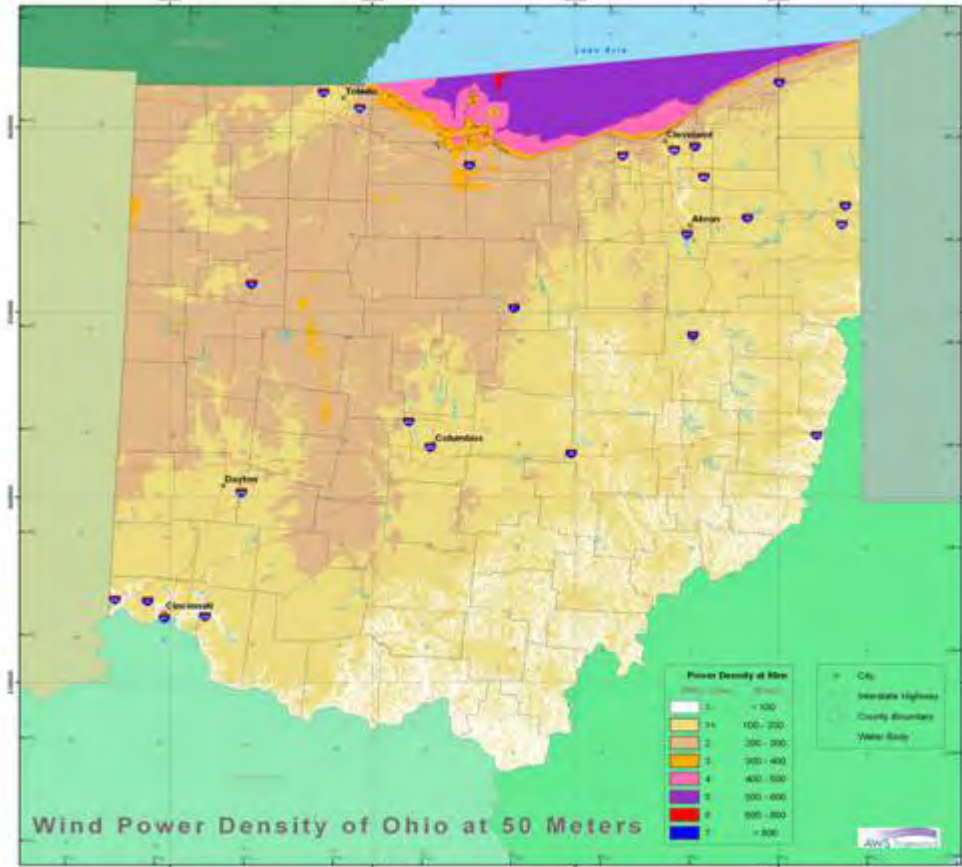
# Ohio's Wind Resource Map



Wind Resource Explorer



Bowling Green



## Deploying Advanced Energy – Alternative Fuel Infrastructure

- Bring ethanol and biodiesel to retail fuel stations throughout the state.
  - Conversion of retail facilities: up to \$5,000
  - New installation of retail facilities: up to \$20,000
  - Facilities may receive up to \$2,500 for promotional material and activities



## Deploying Industrial Energy Efficiency



■NOFA 07-01 Distributed energy  
- clean burning technologies for  
electric generation

- 25% project cost up to  
\$100,000

- Cogeneration/combined heat  
& power

- Microturbines

●NOFA 07-04 Efficiency

- 25% project cost up to  
\$50,000

- ELF Linked Deposit up to  
\$500,000

## Deploying Advanced Energy & Efficiency in Collaboration with Agriculture

- Collaboration on Biomass to Energy
- Efficiency
  - Farm energy audits
  - Grants for implementation-proposed
    - Supplement Grants received from Farm Bill, Section 9006
  - Administer program through Rural Conservation and Development Councils

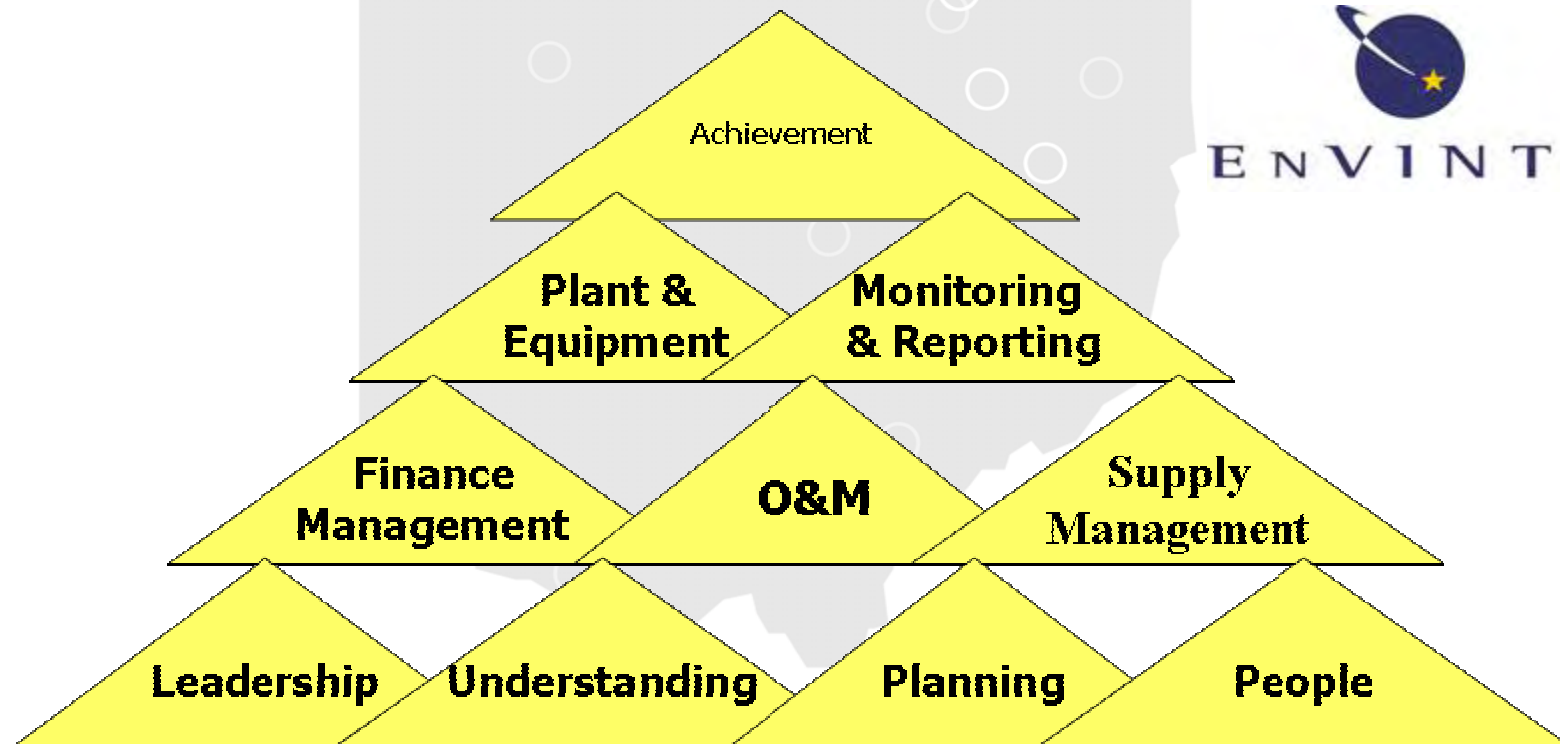


# Putting energy efficiency to work in Ohio industries

“Three-phase efficiency program”  
based on EnVinta One-2-Five



# Achievement Supported by Consistent Progress in Key Areas



## Ohio Energy Office “three-phase industrial efficiency program”

- EnVinta One-2-Five<sup>®</sup> Energy
- Software based – process based
- Senior managers
- Business approach to energy management
- Examines how energy is integrated with your business management systems



ENVINTA

## Phased Approach to Industrial Energy Efficiency

- Phase I
  - Using diagnostic software to promote change and convince management of importance of energy opportunities
  - Establishes a management framework for energy control
  - Defines critical actions
  - Results in tool for measuring progress
- Phase II
  - Technical feasibility study
  - Technical plan
- Phase III
  - Implement equipment and process improvements



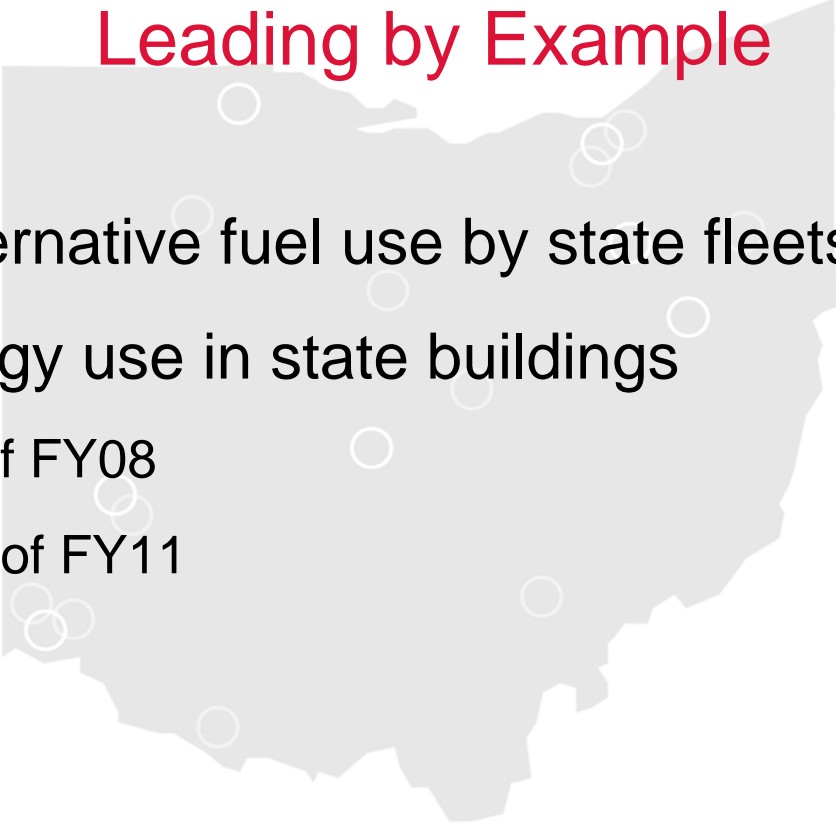
## Projects to Date

- 170 Ohio manufacturers
- Nearly \$36 million in energy savings
- Invested approximately \$710,000 in 26 projects in FY 2007 alone



ENVINTA

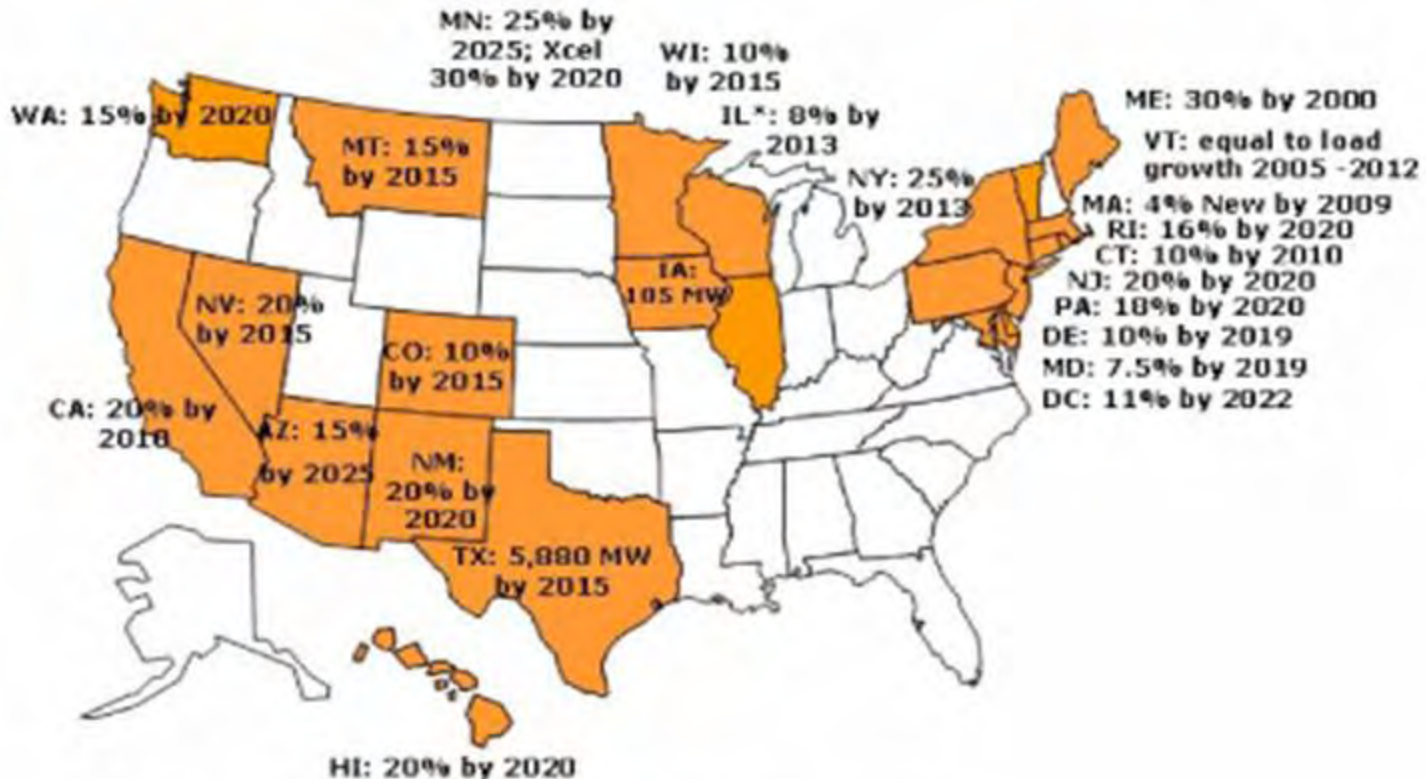
## Executive Order 2007 – 02S Leading by Example

- Goals for alternative fuel use by state fleets
  - Reduce energy use in state buildings
    - 5% by end of FY08
    - 15% by end of FY11
- 

## *Energy, Jobs & Progress*

- o Energy, Jobs & Progress Plan (SB 221) - Objectives
  - o Affordable and stable energy prices to protect Ohio consumers and existing Ohio jobs
  - o Attract energy jobs of the future through an Ohio Advanced Energy Portfolio Standard
  - o Safeguard Ohio families and businesses by modernizing Ohio's energy infrastructure
- o Passed Senate Energy and Utilities Committee
- o House Public Utilities and Energy Committee holding hearings through January

# Renewable (Advanced) Energy Portfolio Targets by State



\* IL implements its RPS through voluntary utility commitments

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## Ohio Energy Office - Industry Team

**Tony Sutor** ([asutor@odod.state.oh.us](mailto:asutor@odod.state.oh.us))

Industrial Efficiency, Distributed Generation,  
Interconnection, Fuel Cells

**Tom Maves** ([tmaves@odod.state.oh.us](mailto:tmaves@odod.state.oh.us)) Advanced  
Energy – Wind

**Manny Anunike** ([eanunike@odod.state.oh.us](mailto:eanunike@odod.state.oh.us))

Advanced Energy – Solar

**Jim Zuber** ([jzuber@odod.state.oh.us](mailto:jzuber@odod.state.oh.us))

Advanced Energy – Biomass, Bio-fuels, Agricultural  
Energy Efficiency

# Ohio Energy Office

**Sherry Hubbard**

[shubbard@odod.state.oh.us](mailto:shubbard@odod.state.oh.us)

77 S. High St., 26th Floor

P.O. Box 1001

Columbus, OH 43216-1001

(614) 466-8463

[www.odod.state.oh.us/cdd/oeo/](http://www.odod.state.oh.us/cdd/oeo/)