



# State Energy Office Role in Energy Investment and

## Economic Development



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PURE MICHIGAN

## *Michigan Energy Office* *Michigan Economic Development Corporation*



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PURE MICHIGAN®

## **MICHIGAN ECONOMIC DEVELOPMENT CORPORATION**

### **BUSINESS ATTRACTION**

### **BUSINESS AND COMMUNITY DEVELOPMENT**

### **ENTREPRENEURSHIP AND INNOVATION**

- Business Acceleration
- Centers of Energy Excellences
- 21st Century Job Fund
- Entrepreneurial Services
- Michigan Energy Office (Michigan Strategic Fund)
- Technology Development

### **FINANCIAL SERVICES**

### **TALENT ENHANCEMENT**

### **URBAN ECONOMIC DEVELOPMENT**

## MICHIGAN ENERGY OFFICE

### **Mission:**

Develop policies and programs that promote economic growth, increase energy efficiency in the public and private sectors, reduce the state's dependence on import energy, and create/retain jobs.

### **Organizational Structure:**

Public Buildings – E2, audits/retrofits, distributive energy generation, codes, etc.

Residential Program – Retrofit, Green Community Challenge, BetterBuildings, etc.

Consumer Education – Energy Demonstration Centers

Renewable Energy Policy – Wind, Solar, Biomass, etc.

Industrial - E2/Process Efficiency, Waste Heat Recovery, etc.

Retooling/Diversification – Clean Energy Advanced Manufacturing

Financial Assistance – Grants and Loans

## **CLEAN ENERGY ADVANCED MANUFACTURING PROGRAM:**

The program offers small manufacturing companies an opportunity to diversify into the renewable energy and energy efficiency space.

The program aims to:

- Build or increase production capacity of renewable energy systems (i.e. wind turbine systems, solar technology, bio-energy equipment, geothermal heating and cooling systems for deployment in MI.
- Build, or increase production capacity of energy efficiency technologies such as induction lighting, smart grid systems, mechanical systems (i.e. heating, cooling, and ventilation equipment), building control systems, etc for deployment in MI.

Major Partners:

Economic Development, NextEnergy, DOE (ORNL), Trade Associations, Industry, etc.

Opportunities:

Decrease MI's dependence on import energy, E2, RPS, and create jobs and markets for EERE deployment.

### **EERE REVOLVING LOAN PROGRAM:**

The program offers low interest loans to public and private entities for an energy efficiency and renewable energy projects such advanced manufacturing, retrofits, industrial/process improvements, distributive energy systems, performance contracting and HVAC systems.

#### Major Partners:

Economic Development, IAC, ORNL, RETAP, and NextEnergy.

#### Opportunities:

Provide bridge financing, and business attraction, and implementation of new commercialized technologies.

**CLEAN ENERGY ADVANCED MANUFACTURING PROGRAM - \$40M (GRANTS/LOANS):**

Amptech (\$573K) - Manufacture next generation smart combiner box for solar panels.

PowerPanel (\$800K) – Solar panels with photovoltaic and solar thermal capabilities.

LUMA Resources (\$750K) – Manufacture and Install solar shingles systems

Innotech (\$1.2M) - Manufacture PCB free LED integrated lighting panels.

Polar Seal (\$200K) - Manufacture a new energy efficient commercial window framing.

Heat Transfer International (\$2.75M) - Manufacturing biomass gasification power systems that generate over 62.5 MW of renewable energy.

First Class Tire (\$525K) – Produce tire derived fuel.

PEP Station (\$900K) – Assemble level 2 commercial charge stations capable of charging two electric vehicles simultaneously at 240v/30amp

Pleotint (\$1M) – Manufacture self-tinting films for use in commercial windows.

KTM Industries (\$128K) - Manufacture a cornstarch based commercial building thermal insulation material

The Power Alternative (\$124K) harvest mustard seed on 20 acres of urban and rural Michigan land to produce biodiesel fuel.

MSU (\$475K) - Biodiesel

Working Bugs (\$124K) - Manufacture bio-based n-butanol

### LOCAL WIND TURBINE SUPPLY CHAIN:

URV USA (\$4M) – Manufacture high-quality lightweight castings.

Astraeus Wind Energy (\$7.1M) – Multiple phase hub boring for blades and top/bottom

Energetx Composite (\$3.5M) – Manufacture blades, nacelle housings, and spinners blade.

Loc Performance Products (\$1.5M) – Manufacture planetary gears and gearboxes for utility scale wind turbines.

Great Lakes Industries (Cancelled) - Provide a domestic source for wind turbine gear boxes.

KC Jones Plating (\$300K) – Apply next generation surface finishing technology to wind turbine components to improve metal parts resistant to corrosion and decrease wear.

Ventower Industries (\$3.4M) – manufacture structural steel towers used to support commercial sized wind turbines.

Grid Logic, Inc. (\$6M) – Fault Current Limiters (FCLs), to be used by utility companies to improve the efficiency and performance of the electric grid and assist in the incorporation of alternative energy sources.

Merrill Technologies Group (\$3M) – Assemble 2.2 MW gearless wind turbine systems

ArborWind (\$744K) – Manufacture and deploy mid class wind turbines.

## **EERE TECHNOLOGY DEMONSTRATION PROGRAM WITH SHOWCASE- \$5M:**

The program offers small businesses the means of demonstrating innovative renewable energy and energy efficient technologies not yet widely adopted in Michigan.

The purpose for the demonstration program is to:

- Drive adoption of commercially available innovative technologies
- Conduct an in-depth review and document findings
- The viability and application of these technologies.

Major Partners:

DTE, ORNL, IAC, A123. Michigan Manufacturing Technology Center.

Opportunities:

Technology transfer, showcase innovative application of technologies and practices.



### **E3 INTERNSHIP PROGRAM: \$120K**

A corporative partnership with the U.S. EPA and the Economy, Energy and Environment (E3) Program currently underway in southeastern Michigan.

The E3 IP focuses on:

- Accelerate the adoption of E3 principles; facilitate the implementation of lean, energy efficiency, and environmental sound activities; and
- Provide students with the opportunity to extend their engineering studies beyond the class room.

Major Partners:

DTE, IAC, The University of Michigan, Wayne State University and Lawrence Institute of Technologies, Michigan Manufacturing Technology Center, USEPA, and DEQ

Opportunities:

Facilitate the adoption of energy conservation measures and renewable energy technologies.

### **AGRI-ENERGY PROGRAM - \$2.5M**

The program offers technical and financial assistance to small farms and agribusiness:

The Power Alternative, Inc (TPA) Biofuel Production and partnership with BioEnergy Crops 2 Fuels project (\$95,000 grant/\$124,400 loan)

Scope of Work: Recipient will grow mustard plants on urban lands and processed seeds into biodiesel.

Heat Transfer International, Inc. (\$2.2M grant/\$550K Loan) - Develop and manufacture biomass gasification power systems; utilizing waste biomass from agriculture, industrial, and municipal sources to expand renewable electricity and heat energy. Purchase additional capital equipment and substantially increase engineering and sales team staff to generate over 62.5 MW of renewable energy based capacity over next 3-5 years.

Farm To Food - Passive Solar Systems (PSS) Revolving Loan Fund (RLF) (\$800,000)

Loan Recipients: Family farms and non-profits.

Scope of Work: Provide capital to small business owners (family farms) and non-profits to purchase passive solar systems (aka hoopouses) for the purpose of extending the growing season.

**AGRI-ENERGY PROGRAM - \$2.5M**

Farm E Audit (\$300,000)

MSU – Biosystems Engineering

Product: 50 EE Audits, 15 RE Assessments and expand training sessions for dairy/grain dryers/greenhouses/irrigation/rural businesses

Farm E Audit Implementation Program (\$500,000)

Recipients: (Prerequisite: Farm E Audit/RE Assessment)

Scope of Work: Provide capital to small businesses including family farms to implement recommendations from a Farm E Audit/Assessment.

Green Meadow Farms, Inc (\$250k) - Upgrade Cooling & Water Heating System: Replace well water-glycol hybrid system and compressors with energy efficient triple compressor chiller with remote condensers, pumps and plate cooler; and reclaim heat to reduce hot water heating costs.

Denning Sons Farm (\$60k) - Install 20 kW ground mounted Solar PV panels

Blueberry Heritage Farm (~\$164k) - Upgrade refrigeration unit, condenser and coils, and install 20 kW ground mounted Solar PV panels.

## **CLEAN ENERGY ADVANCED MANUFACTURING**

[http://www.publicbroadcasting.net/wkar/news.newsmain?action=article&ARTICLE\\_ID=1825462](http://www.publicbroadcasting.net/wkar/news.newsmain?action=article&ARTICLE_ID=1825462)