

# Ohio Clean Energy Business Association Report

## Executive Summary

### *Growing a diverse and sustaining energy economy that improves the quality of life for Ohio citizens – Mission Statement of Ohio Clean Energy Business Association*

Ten Ohio firms in the business of “clean energy” convened as an Association to formulate a concise policy statement on how the Buckeye State can efficiently and economically stimulate renewable energy development.

Clean or renewable energy is an Ohio natural resource derived from solar, wind, biomass, fuel cells and low-impact hydro sources, or hydrogen derived from biomass or water using energy from solar, wind, or fuel cells.

After defining its mission statement, the Association set its *Goals and Objectives* to

#### **Enhance Ohio’s economic development by commercializing sustainable, clean energy**

- Create clean energy jobs
- Position Ohio as a clean energy technology and manufacturing leader
- Accelerate Ohio’s clean energy export capability

#### **Educate public and government decision-makers and improve the quality of life for Ohioans**

- Promote energy efficiency
- Promote renewable and alternative energy
- Define the value of renewables
- Develop school curriculum on renewable energy and energy efficiency
- Develop funding initiatives to achieve this goal

#### **Propose concise policy changes that economically stimulate renewable energy growth**

- Encourage purchases of clean energy by the State of Ohio
- Stimulate the state’s System Benefit Charge to create clean energy grants
- Remove barriers to interconnection of distributed generation to the electric grid
- Propose a Renewable Energy Standard

#### **Engage other Ohio businesses to form a clean energy economic agenda**

- Establish a trade association of Clean Energy Businesses in Ohio
- Create a Directory of Ohio Clean Energy Business

#### **Move toward energy independence essential to national security**

- Diversify Ohio’s energy mix by increasing use of Ohio-made clean energy
- Partner for the nation’s common interest in the environment and security

## Learning Clean Energy Lessons for Ohio's Future

As part of the move toward deregulating or “restructuring” the electric industry, Ohio lags other states in providing substantial incentives to harness renewable energy. Sustainable, clean power is available each day from the sun, wind, biomass, and hydro sources using commercial equipment or services that are made or installed by Ohioans today – not to mention promising new Ohio technologies such as fuel cells.

No single group in Ohio knows the comparative advantage of the state better than its own clean energy businesses. These Ohio firms manufacture or deliver clean energy to markets in all of the United States and around the globe.

The Ohio Clean Energy Business Association represents almost all aspects of clean energy; manufacturers of solar electricity or photovoltaics, fuel cells, advanced batteries, power conversion electronics, low-impact hydroelectric systems, methane gas biomass plants, marketing of renewable energy as “green power,” retail installers of small-scale renewable energy systems using solar and wind technologies and a maker of fuel cells and hydrogen storage. The Association participants are:

**Advanced Distributed Generation**, *John Witte*, Vice Pres., Maumee, Ohio;  
**Bio-Gas Technologies**, *James Hiendlmayr*, Westlake, Ohio;  
**Dovetail Solar**, *Matthew Bennett*, Glouster, Ohio;  
**Energy Conversion Devices**, *Nancy Bacon*, Vice Pres., Rochester Hills, Michigan and its affiliate **Texaco Ovonic Battery Systems, LLC**, Springboro, Ohio  
**First Solar, LLC**, *Chip Hambro*, President, Perrysburg, Ohio;  
**Green Mountain Energy Co.**, *Paul Markovich*, Midwest President, Dublin, Ohio;  
**Technology Management Inc.**, *Benson Lee*, President, Cleveland, Ohio;  
**Third Sun Solar & Wind Power**, *Geoff Greenfield*, Millfield, Ohio;  
**Universal Electric Power Corp.**, *Ron Feltenberger*, Vice Pres., Akron, Ohio, and:  
**Vanner, Inc.**, *John Stahura*, President, Hilliard, Ohio.

The Association began November 20, 2002 in Dublin, Ohio – the day after 350 Ohioans gathered for the state’s first ever Ohio Wind Power Conference. The group was assembled by the statewide non-profit organization Green Energy Ohio which provided staff and business advisors along with staff and advisors from the Ohio Department of Development, Office of Energy Efficiency.

The first order of business was to hear from nationally-known clean energy expert Ryan Wisner from the Lawrence Berkeley National Laboratory. His extensive presentation on “*State Renewable Energy Policies: Experiences Gained, Lessons Learned*,” concluded that, “Multiple approaches may be necessary to simultaneously spur both ‘grid supply’ and ‘customer-sited’ development. . . optimal mix will depend substantially on the context of any individual state.” The Association pursued this policy advice in framing its findings and recommendations.

A second expert at the first Association meeting was John Moore, attorney for the Chicago-based Environmental Law & Policy Center of the Midwest (ELPC). He provided the Association with a pre-release look at the findings from the "Job Jolt - The Clean Energy Development Plan For The Heartland" report. This study on the job creation potential from renewable energy and energy efficiency focuses on Ohio and 9 other Midwest States (Illinois, Michigan, Indiana, Minnesota, Wisconsin, Iowa, North Dakota, South Dakota and Nebraska). This jobs report bears special study.

**Job Jolt for Ohio & Midwest from Growing Renewables & Energy Efficiency**

The *Job Jolt* report released in early 2003 shows that the Midwest stands to gain significant jobs and income by switching to renewable energy and increasing energy efficiency. The report shows a real boost for the Midwest: **up to 210,000 new jobs and \$20 billion in additional economic output across the 10-state Midwest region by the year 2020.**

The *Job Jolt* report projects **the Ohio potential for clean energy will produce as many as 26,000 net new jobs by 2010 and 39,000 net new jobs by 2020 with \$2.6 billion in increased economic impact by 2010 and \$4.5 billion by 2020.**

Clean energy from Ohio's solar, wind, biomass and clean efficient uses of natural gas focused on combined heat & power applications can represent 11% of Ohio's generation mix by 2010 and 31% by 2020 according to the report. This results in **a \$1 billion renewable energy industry in Ohio with the potential for net new employment created from Ohio renewable energy use as 7,160 jobs by 2010 and 13,090 jobs by 2020.** Specific net new Ohio employment from renewable energy use is estimated in annual economic activity in 2001 dollars as:

Economic Sector	Cumulative Jobs		Annual Economic Output	
	2010	2020	2010	2020
Agriculture/mining	760	1,490	\$ 21 Million	\$ 45 Million
Construction/manufacturing	1,920	2,690	\$302 Million	\$468 Million
Utilities/transport/communications	690	2,230	\$ 76 Million	\$177 Million
Wholesale/retail trade	620	1,010	\$ 35 Million	\$ 55 Million
Services/government:	3,270		\$171 Million	\$300 Million
<b>TOTAL</b>	<b>7,160</b>	<b>13,450</b>	<b>\$604 Million</b>	<b>\$1.0 Billion</b>

Even more jobs, a cleaner environment and a larger economic development impact also flow from **Ohio investing in energy efficiency yielding 18,889 jobs by 2010 and 25,462 by 2020 with economic outputs of \$2 billion by 2010 and \$3.4 billion by 2020.** Ohio would also realize \$1.5 billion in annual net electricity savings by 2020 from energy efficiency which will be spent by businesses and consumers to bolster the state's economy.

The Regional Economic Applications Laboratory at the University of Illinois worked with ELPC on this report using data and assumptions from the 2002 *Repowering the Midwest* report on the potential for clean energy in the region.

After considering the expert reports in late 2002, the Association developed its own mission statement, goal and objectives with additional research information provided by members, staff and advisors.

One immediate spin-off of bringing Ohio's clean energy businesses together for the Association were joint ventures created by firms as they learned about each other as well as the public policy benefits from stimulating renewable energy markets.

Based on the Association deliberations these four Findings and Recommendations are offered to Ohio policymakers:

## **Findings & Recommendations**

### **1 - State Procurement Policy**

#### ***Findings:***

- The Ohio Clean Energy Business Association believes that energy leadership belongs in the State government. The State of Ohio can stimulate the commercialization of renewable energy technologies through its state funded building programs, energy purchases and as a consumer. Taking a leadership role in their development will position Ohio and its businesses to participate in worldwide growth in these areas which will lead to economic, environmental and security benefits - particularly safe and reliable energy systems that will improve Homeland Security.
- By generating electricity on-site at state facilities, Ohio has the opportunity to educate the public about diverse sources of distributed and renewable energy.
- Already, the following States in our region have mandated state renewable energy purchase commitments:
  - New York – 20%;
  - New Jersey –12%;
  - Maryland - 6%;
  - Pennsylvania – 5%; and,
  - Tennessee –2%.

#### ***Recommendations:***

- All construction projects receiving state funds must meet or exceed Energy Star standards.
- State procurement policy should include a minimum of 1% renewable energy by 2005 and increase by:
  - at least 1% per year for the first 2 years and
  - at least 2% per year for the next four years, (for a minimum of 11% by 2011).
- The state should demonstrate on site renewable energy production by funding projects.

## **2 - State Energy Grants**

### ***Findings:***

- The Business Association believes that incentives for renewable energy installations in Ohio must be available through grants and low interest loans.
- Renewable solutions will grow on their own merit after a seed base is funded.
- The visibility of these solutions combined with improved economic conditions and the removal of barriers to installation, will result in renewable energy becoming self-sustaining.

### ***Recommendations:***

- A more effective and efficient use of the State of Ohio Energy Loan Fund (ELF) would be as outlined in our proposal. Currently, the funds in the ELF are not benefiting the state to the fullest extent possible due to low participation by the banks.
- To ensure that funds are used to maximize the deployment of energy efficiency and renewable sources of production, the Business Association is recommending that the purpose for which the funds in the ELF can be used, be modified as follows:
  - Allocate ELF money to renewable energy and energy efficiency grants and loans.
  - Grants with a match by recipients should be favored but not required.
  - The grants provided to consumers should demonstrate sound residential and commercial installation practices.
- The current ELF is funded through a Systems Benefit Charge on electric utility bills of 1/10 of a mil per kilowatt-hour on all customer rate schedules. This charge should not be reduced after the established 2005 date but retained at its present level through at least 2010.
- The cap of \$100 million should be removed on the ELF.
- State funds for renewable energy and energy efficiency should be directed toward field demonstrations which meet established performance measures or create new ones. Specifically, these funds should not be used for research and development but for demonstration and deployment. Performance measures should include levels of workforce training, installation procedures, public awareness and administrative issues such as fire codes, insurance and safety.

### **3- Distributed Generation**

#### ***Findings:***

- Distributed generation offers the opportunity to diversify the sources of the State's energy supply to include onsite sources of power generation.
- Expansion of the number of distributed generating facilities in this State will result in the more efficient utilization of energy by promoting the use of renewable energy sources and technologies.
- This has the concomitant benefit of reducing air emissions and increasing public health.
- Because distributed generating facilities are smaller in size and may be strategically located in various parts of the state, these facilities can reduce transmission line congestion and contribute to Homeland Security.

#### ***Recommendations:***

- The Public Utilities Commission of Ohio should develop standardized rules for the interconnection of distributed generation projects to the utility grid whereby the standards would eliminate excessive fees and system impact studies, establish reasonable timelines and provide accountability to the process of requesting interconnection for all sizes of distributed generation.
- The Ohio General Assembly should require emissions standards for new distributed generation similar to those required by other deregulated states.

## **4- Renewable Energy Standard**

### ***Findings:***

- Ohio has the opportunity to join the growing trend of States adopting Renewable Energy Standards designed to improve its citizens' quality of life while promoting the development of high tech industries and creating jobs. This can be accomplished through the adoption of legislation creating Renewable Energy Standards that are non-disruptive to the fuel mix currently providing energy for the State of Ohio.
- This proposal was modeled after the Renewable Energy Standard that was implemented in the state of Texas. It has been hailed as the most successful and insightful standard to date.
- On January 8, 2003, New York Governor George Pataki mandated that the state obtain 25% of its energy from renewable energy sources, an 8% increase over the current 17%.

### ***Recommendations:***

- The minimum renewable energy milestones to be met are as follows:
  - 200 Megawatts by January 1, 2005
  - 400 Megawatts by January 1, 2006
  - 600 Megawatts by January 1, 2007
  - 800 Megawatts by January 1, 2008
  - 1000 Megawatts by January 1, 2009
  - 1200 Megawatts by January 1, 2010
  - 1400 Megawatts by January 1, 2011
  - 1600 Megawatts by January 1, 2012
  - 1800 Megawatts by January 1, 2013
- Note: 200 MW represents approximately .7% of Ohio energy demand.
- To ensure these milestones are met it is equally important the legislated standards include the following:
  - All the Electric generation service providers have the responsibility to meet the performance requirements above.
  - The Public Utilities Commission of Ohio (PUCO) will track compliance through tradable Renewable Energy Credits which allows flexibility to companies in meeting this legislative requirement.
  - The PUCO will define the sources that qualify as a renewable energy source.
- In meeting the standards outlined above, energy suppliers should have the flexibility of developing, purchasing, trading credits, or paying a penalty.
- Penalties should be used to supplement the funding of renewable energy grants in Ohio.

**Ohio Clean Energy  
Business Association  
(OCEBA) Members**

(April 2003)

**Advanced Distributed  
Generation**

**John Witte**

Vice President Operations

**Mark Tuttle**

Vice President Financial

1331 Conant Street #107

Maumee, Ohio 43537

(419) 893-8565 voice

(419) 893-0006 fax

[jwitte@advanced-dg.com](mailto:jwitte@advanced-dg.com)

[mtuttle@advanced-dg.com](mailto:mtuttle@advanced-dg.com)

**Bio-Gas Technologies**

**James Hiendlmayr**

Bio-Gas Technologies

26945 Rose Road

Westlake, Ohio 44145

(800) 854-1699 voice

(440) 899-0068 fax

[bgtjimh@aol.com](mailto:bgtjimh@aol.com)

<http://www.biogastech.com/>

**Dovetail Solar**

**Matthew Bennett**

Dovetail Solar

10760 Hooper Ridge

Glouster, Ohio 45732

(740) 448-4800 voice

(740) 448-4500 fax

[www.dovetailsolar.com](http://www.dovetailsolar.com)

[matt@dovetailsolar.com](mailto:matt@dovetailsolar.com)

**Energy Conversion Devices**

**Nancy M. Bacon**

Senior Vice President

Energy Conversion Devices

2956 Waterview Drive

Rochester Hills, Michigan 48309

(248) 293-0440 voice

(248) 844-1214 fax

[nbacon@ovonic.com](mailto:nbacon@ovonic.com)

[www.ovonic.com](http://www.ovonic.com)

**First Solar, LLC**

**Chip Hambro**

President & General Manager

First Solar, LLC

28101 Cedar Park Blvd.

Perrysburg, Ohio 43551

(419) 662-7527 voice

(419) 662-8525 fax

[chambro@firstsolar.com](mailto:chambro@firstsolar.com)

[www.firstsolar.com](http://www.firstsolar.com)

**Chris Bowen**

Director of Market Development

First Solar, LLC

4050 East Cotton Center, Suite 68

Phoenix, Arizona 85040

(602) 414-7527 voice

(602) 414-9416 fax

[cbowen@firstsolar.com](mailto:cbowen@firstsolar.com)

[www.firstsolar.com](http://www.firstsolar.com)

**Green Mountain Energy  
Company**

**Paul N. Markovich**

President, Midwest Office

Green Mountain Energy Company

5450 Frantz Road

Suite 240

Dublin, Ohio 43016

[paul.markovich@greenmountain.com](mailto:paul.markovich@greenmountain.com)

[www.greenmountain.com](http://www.greenmountain.com)



**Green Mountain Energy  
Company**

**Jim Gravelle**

Director of Communications  
Midwest Division  
Green Mountain Energy Company  
5450 Frantz Road  
Suite 240  
Dublin, Ohio 43016  
(614) 761-8701 voice  
(614) 761-9583 fax  
[jim.gravelle@greenmountain.com](mailto:jim.gravelle@greenmountain.com)  
[www.greenmountain.com](http://www.greenmountain.com)

**Technology Management,  
Inc. (TMI)**

**Benson Lee**

President  
9718 Lake Shore Blvd.  
Cleveland, Ohio 44108  
(216) 541-1000 voice  
(216) 541-1000 fax  
[tmi@stratos.net](mailto:tmi@stratos.net)

**Third Sun Solar & Wind  
Power**

**Geoff Greenfield**

Third Sun Solar & Wind Power  
16751 Hooper Ridge Road  
Millfield, Ohio 45761  
(740) 448-3111 voice  
(740) 448-6103 fax (call first)  
[geoff@third-sun.com](mailto:geoff@third-sun.com)  
[www.third-sun.com](http://www.third-sun.com)

**Universal Electric Power  
Corp.**

**Bruce D. Feltenberger**

President & CEO

**Ronald S. Feltenberger**

Executive Vice President  
Universal Electric Power Corp.  
1145 Highbrook Street  
Akron, Ohio 44301  
(800) 766-9398 voice  
(330) 535-7250 fax  
[bdf@neo.rr.com](mailto:bdf@neo.rr.com)  
[rsf@neo.rr.com](mailto:rsf@neo.rr.com)  
[www.uepholdings.com](http://www.uepholdings.com)

**Vanner, Inc.**

**John Stahura**

President  
Vanner, Inc.  
4282 Reynolds Drive  
Hilliard, Ohio 43026  
(614) 771-2718 voice  
(614) 771-4904 fax  
[johns@vanner.com](mailto:johns@vanner.com)  
[www.vanner.com](http://www.vanner.com)

