

**Green Energy Ohio**  
**William A. Spratley, Executive Director**

Now entering our 4<sup>th</sup> year of operation as an educational, non-profit organization, **Green Energy Ohio (GEO)**, is dedicated to promoting environmentally and economically sustainable energy policies and practices in Ohio.

Our state's grass roots movement to adopt clean energy is best illustrated by the **2003 Ohio Solar Tour Renewable Energy Resource Guide** provided to show where solar, wind, biomass and low-impact hydro is taking hold as this Solar Century begins.

What GEO has learned the past 3 years about clean energy in Ohio, we share with you today with reference to more details in the **Resource Guide** or our extensive web site at **<www.GreenEnergyOhio.org>**. We hope our findings will help the **Task Force** and policy-makers to envision and activate an Ohio that is friendlier to clean energy.

Overall, this **Resource Guide** shows the progress of GEO, governments, and clean energy businesses and public interest groups to increase sustainable energy supplies. Strikingly, individual consumers are at the heart of this clean energy movement. Ohioans are increasingly choosing to build renewable energy systems or buy green power from utility-scale generators. They are often motivated to produce or purchase clean electricity to improve the quality of the environment – **Confronting Global Warming in Ohio – p. 61**. Other Ohioans, after this summer's power outages, seek out clean energy technologies to provide their home or business with a secure back-up power supply.

**Here are a few highlights we point out to the Task Force:**

☒ **Interest and activities in clean energy is growing everywhere in Ohio.**

The **Resource Guide** identifies over 130 renewable energy installations showcased in the 5 regions of the state for the first-ever **Ohio Solar Tour** conducted on October 4, 2003.

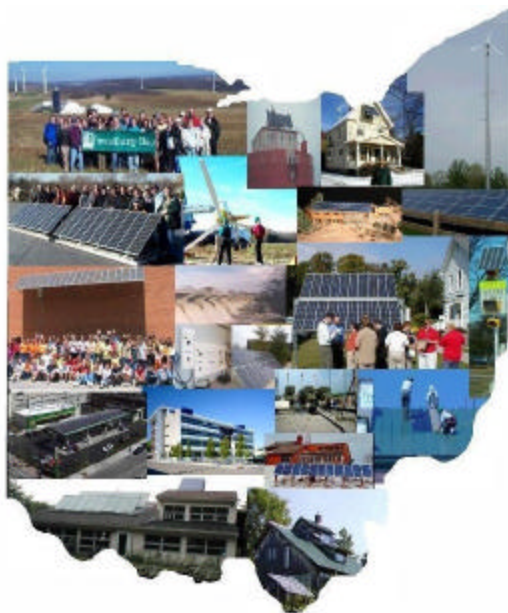
**Northeast Ohio - pp. 14 - 29**

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✧ **Consumer demand for renewable energy links to energy efficiency measures and existing State incentives to save money before investing or as part of investing in distributed energy systems using solar, wind, or other clean technologies. – Energy Efficiency – Back to Basics – pp. 9 -11.** While GEO serves as a statewide clearinghouse on renewable energy systems, the **Ohio Department of Development’s Office of Energy Efficiency** provides a roadmap to State government energy efficiency measures and existing State incentives to promote clean energy including the :

- **Energy Loan Fund**
- **Ohio Air Quality Development Authority Financing**
- **Conversion Facilities Tax Exemption**
- **Net Metering/Interconnection - Ohio Energy Office Resources – p. 51**

✧ **Ohio’s clean energy business, government and educational community are working to build critical infrastructure for expanded markets.** Educating consumers on how to install a renewable energy system or buy green power requires a robust and sustainable Ohio industry to provide the services and capital. GEO assisted in the formation of the **Ohio Clean Energy Business Association (OCEBA)** in 2003. The training of Ohio solar electric installers in 2002 spearheaded by GEO is now being carried forward by **Owens Community College.** *See GEO web site under Economics*

✧ **Effective government policy is vital to growing Ohio’s clean energy industry.** While individual Ohioans and firms pioneered clean energy, the State’s policy to promote small-scale renewable energy systems has flowered using very limited financial incentives. Despite its limitations compared to other states, Ohio is viewed as an early leader in the development of **Solar Schools – Ohio Schools Going Solar – pp. 57, 64-65.**

Another example of the emerging market response to clean energy, are the grants from the State in the 26 projects receiving one-time funding from the **Distributed Energy Resources RFP** in July 2003 after 56 proposals were received altogether. *See Renewable Energy Demonstration Projects Funded – pp. 62-63.* Ohioans are ready, willing and able to invest in clean energy when government provides policy direction and leadership.

GEO brings together, on its Board and through its activities, Ohio citizen volunteers and business people to build a vibrant renewable energy industry. We believe the market for renewable energy in Ohio can grow more jobs, if only we can educate consumers and develop the infrastructure to support, supply and maintain it. Many states provide incentives for renewable energy and we hope this **Task Force** will consider adopting new ways to encourage continued growth of a viable industry for sustainable energy in Ohio.

Efforts of GEO volunteers to test wind resources in Ohio hastened completion of Ohio’s **first commercial wind farm near Bowling Green – GEO web site under Utility-Scale Wind.** The first-ever **Ohio Wind Power Conference** in 2002 helped lead to a revised **Ohio Wind Resource Map, Ohio Wind Working Group** and the **second Ohio Wind Power Conference** – all set for 2004 – *See GEO web site under Wind Energy.*

**Green Energy Ohio** is committed to move clean energy from an “alternative” to a “conventional” power source in this state – **GEO: Your Clean Energy Resource – pp. 6-8.**

## GREEN ENERGY OHIO POLICY RECOMMENDATIONS

(presented at the January 16, 2004 Task Force Hearing by GEO Board Member & Board Policy & Program Committee Chair, Attorney **Janine Migden**. She also submitted her presentation on **Interconnection Standards** [see below] prepared for the April 22, 2003 **Ohio On-Site Energy Options Seminar**)

Recently, Green Energy Ohio created a policy committee as another vehicle to promote the development of clean energy in Ohio. Working with other environmental organizations, we developed a short list of objectives, which we believe would help Ohio's Energy future:

**State Purchasing Practices** – The State should set the example by increasing the purchases of renewable energy as part of its energy supply portfolio and by maximizing the use of energy efficiency to save taxpayer dollars.

**Distributed Generation** – Distributed Generation provides opportunities for fuel diversity and energy efficiency and increases reliability. Yet there are many impediments to their development, which must be eliminated. Interconnection standards for large distributed generation need to be enacted. Section 4926.11 ORC mandates the removal of barriers to new technologies and the development of interconnection standards. To date this has only been done for small, net-metered facilities. The Public Utilities Commission of Ohio should be encouraged to promulgate rules for larger sized distribution generation facilities.

**Energy Efficiency and Renewables Grant Fund** – We commend the legislature for passing HB 133, which permits ten percent of the funds in the energy efficiency loan fund program to now be used for grants. The legislature should consider increasing the percentage set aside for grants as well as extending the loan fund beyond its sunset date.

**Appliance Efficiency Standards** – The State of Ohio should adopt appliance efficiency standards for a set of appliances not already covered by federal statutes.

**Renewable Energy Portfolio Standard** – The legislature should adopt a reasonable Renewable Energy Portfolio Standard that helps to create a market for renewable energy, thereby contributing to fuel diversity and reliability.

## **Interconnection Standards Presentation**

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### DISTRIBUTED GENERATION SPEECH – OFFICE OF ENERGY & EFFICIENCY

#### **I. Benefits of Distributed Generation**

- While Distributed Generation (DG) has the possibility to make a significant contribution to this nation's energy portfolio, it remains an under-utilized technology.
- Improvements in efficiency and flexibility of Distributed Generation technology result in increased interest in interconnection and parallel operations where DG can:
  - Operate as a peak shaving device to meet consumers' base load or follow load
  - Can be dispatched by someone else, or the utility.
- DG contributes to national energy security by decentralizing power.
- Distributed Generation increases price competitiveness and reduces market power of centralized systems.
- On site Distributed Generation allows consumers to control their energy use, lower cost, enhance power quality and reliability.
- DG produces lower emissions
- DG improves the utility distribution system through reduced distribution loss, better voltage support and power quality.

## II. Regulatory Barriers

If Distributed Generation is so good, why is it not more prolific. The answer is regulatory barriers.

- A. Reasonable back-up rates by utilities are needed
  - Back up rates and/or demand charges assume all Distributed Generators go off line at the same time and impose peak demand on the system
  - Often, incremental system benefits are not acknowledged in rate design.
  - Over-priced back up rates create barriers that skew the economic analysis and cost benefit ratios of installing distributed generation
  - Distributed Generators should only pay for actual energy used and should be allowed to acquire back-up from competitive sources where there is retail choice.
  - The Public Utilities Regulatory Policies Act (PURPA) requires the assumption that not all Distributed Generators fail at the same time.
- B. To promote Distributed Generation, regulators should encourage utilities to issue RFPs so that competitive suppliers can respond to distribution and transmission upgrades through distributed generation applications.
  - Regulators should give incentives to utilities to contract for Distributed Generation Services including using them for the purchase of ancillary services to enhance system-wide reliability in a competitive, cost-effective manner.
  - Distribution system planning should recognize Distributed Generation as a demand-side management tool.
- C. Interconnection
  1. Time and Cost Must be Reasonable
    - Fees and charges that act like penalties should be eliminated
    - Penalties should apply to utilities for time delays in interconnection. (There should be firm timelines, adhered to.)
  2. All investors in Distributed Generation should have the right to sell the output on the wholesale market (the “negawatt” concept).
  3. Investors in Distributed Generation must have open non-discriminatory access to distribution wires.

### III. Federal And State Governments Must Adopt Uniform Technology Requirements For Interconnection Of Distribution Generation.

1. California, Texas, New York adopted standards. Ohio adopted a law, Sec. 4928.11 of the Ohio Rev. Code which states:

For the protection of consumers in this state, the public utilities commission shall establish uniform interconnection standards to ensure transmission and distribution system safety and reliability and shall otherwise provide for high quality, safe, and reliable electric services; shall include standards for operation, reliability, and safety during periods of emergency and disaster; and shall include voltage standards for efficient operation of single-phase motors. The rules regarding interconnection shall seek to prevent barriers to new technology and shall not make compliance unduly burdensome or expensive. When questions arise about specific equipment to meet interconnection standards, the commission shall initiate proceedings open to the public to solicit comments from all interested parties. Additionally, rules under this division shall include nondiscriminatory metering standards.

2. PUCO Workshop resulted in simple form interconnection for:

- Single Phase less than or equal to 25 kw
- Three Phase less than or equal to 300 kw

Ohio utilities filed sample interconnection agreements

PUCO needs to go to next step

Individual negotiation for larger Distributed Generation results in death by a thousand cuts.

3. **Net-Metering**

A recent Supreme Court ruling held that First Energy (FE) was not required to credit customers with net-metering for any charges but generation. As a result, a credit for transmission, distribution, stranded costs and other surcharges were not required. Thus, as opposed to having each kilowatt hour flowing either from FE to the customer or from the customer to FE being valued the same, the kilowatt hour provided to FE from the customer will be priced at less than half of what the kilowatt hour from FE to the customer.

The results of this decision skews the economics of net metering and will have a chilling effect on the policy the legislature tried to promote. Without the higher level of compensation for kilowatt hours sold to the utility, net-metering becomes less economic.

#### 4. Uniform Standards

- a. Standard Form and Process
  - Impose time limits to shorten process
  - Eliminate excessive fees and impact studies
  - Reduce administrative costs
  - Treating each project as unique produces anticompetitive barriers.
- b. Technical Interface requirements will insure system safety and reliability.
  - Interconnection device must meet minimum standards with regard to performance, operation, testing, safety consideration and maintenance
  - IEEE standards should be adopted.
- c. Pre-certification ensures quality and reliability
  - Small factory-built units can be pre-certified to assure consistency in the interface and protection equipment
  - Pre-certified equipment tested and proven.
  - Standards from underwriters' laboratories or IEEE can be used to define required criteria.
- c. Metering and Power Control Technology Are Needed
  - Requirements of the utility and the Independent System Operator need to be coordinated to lower costs for metering and power control.
  - Distributed Generation investors need to have the option to invest in real-time communications and control devices in order to manage load demand and lower costs.
- e. Standardized Contractual Terms Should be Required
  - Reduce time and cost of negotiating complex contracts
  - Need expedited dispute resolution process for Distributed Generation.

#### **Conclusion**

Distributed Generation is in the public's interests and we need to remove barriers as discussed above.