



Department of  
Job and Family Services

# Ohio Green Industries

A horizontal bar composed of three segments: a dark grey segment on the left, a lime green segment in the middle, and a dark red segment on the right.

Workforce Skills and Training Needs  
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Wright State University

# Survey of Ohio's Small to Medium-size Employers

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## Survey Information

- A stratified random sample representing Ohio's private employers was used
- Employers were classified according to 6 "Green Industry Sectors" and 4 employment sizes
- These preliminary results represent findings for firms with 5-99 employees
- 7,079 employers were sampled from a total 12,460 private firms having fewer than 100 employees
- 1,825 employers indicated whether or not they are green, equating to a 26% response rate

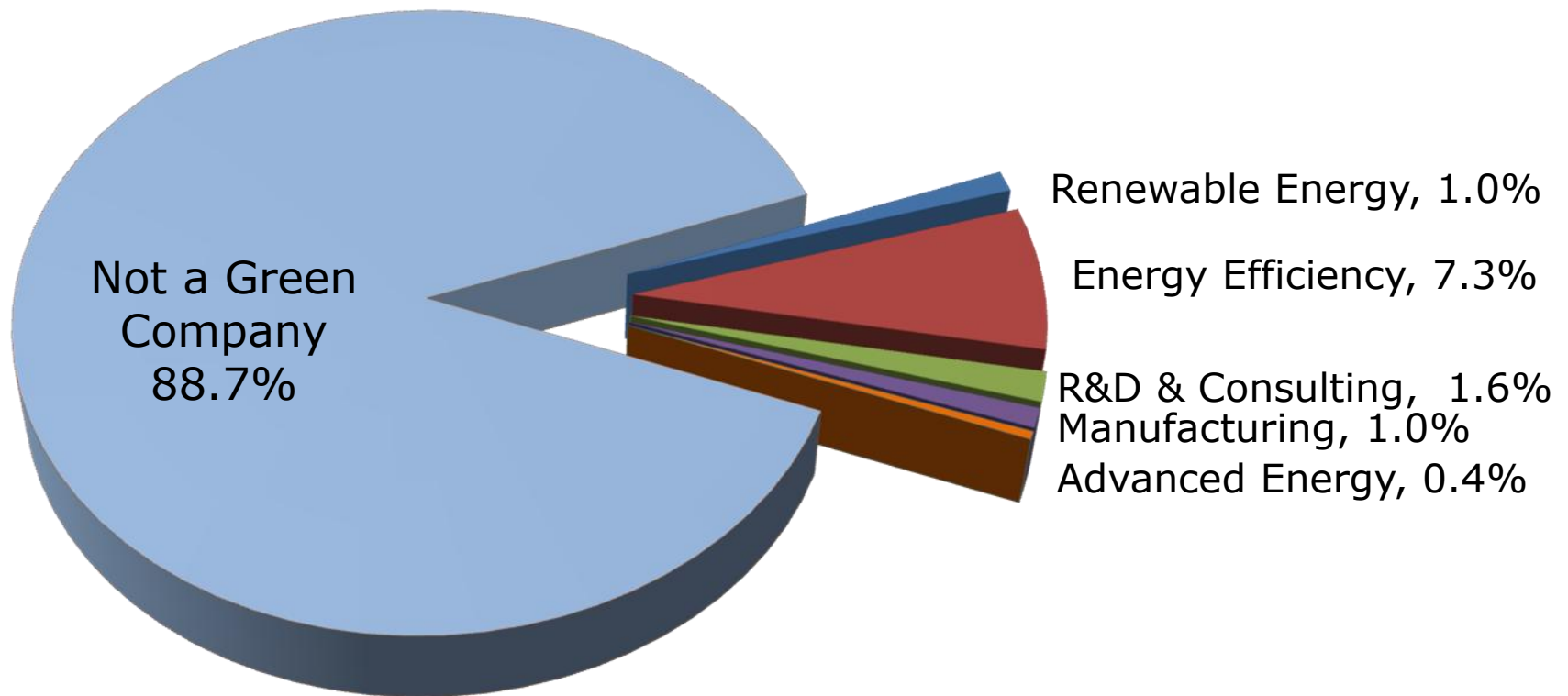
# Research into Industry Sectors

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- ❑ **Renewable Energy and Alternative Fuels-** developing and using energy sources like solar, wind, geothermal, and landfill gas.
- ❑ **Energy Efficiency-** increasing energy efficiency (broadly defined), such as LEED certified design/construction and smart grid.
- ❑ **Research, Design and Consulting Services-** energy consulting or R&D in the fields of biotechnology, engineering, and physical and life sciences, e.g., related to reducing dependence on fossil fuels.
- ❑ **Biosciences-** processing agricultural products into biofuels and manufacturing products from organic materials.
- ❑ **Manufacturing Green Products and/or Green Technology -** producing goods used in renewable power generation like turbines, and, e.g., producing energy controls and testing equipment.
- ❑ **Advanced Energy-** Replacement or modification of equipment that increases generation output without increasing carbon dioxide emissions; clean coal; advanced nuclear energy; etc.

# Industry Sector—Self Reported as Green

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# Advanced Energy Example

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- Dayton Power & Light, recently acquired by AES Corp, may be part of a coming consolidation trend. Factors pressing utilities to merge include:
  - Uncertainty surrounding climate change and EPA regulations.
  - New generation assets including solar, wind, biomass, etc, requiring large amounts of capital and engineering expertise.
- DP&L recently built the largest solar facility in Southwest Ohio. At a cost of \$5 million, it generates enough electricity to power the equivalent of 150 homes a year.

# Energy Efficiency Example

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- Headquartered in MA, with an office in Columbus, Ohio, Ameresco delivers Energy Conservation, Energy Infrastructure Outsourcing, Power Generation & Energy Supply & Risk Management.
- The Akron Metropolitan Housing Authority initiated a conservation program with Ameresco.
  - The contract includes water conservation and lighting improvements for 4,423 units in 50 properties.
  - The contract is expected to result in savings up to \$760,000 annually.
- Funding for the project is financed by Fifth Third Bank, made possible by a conservation incentive program offered by H.U.D.

# Green Manufacturing Example

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- ❑ Chicago-based Environmental Law & Policy Center (ELPC) ranked Ohio as the No. 2 state for wind turbine manufacturing behind CA.
- ❑ Ohio has 106 wind power and 63 solar power supply chain businesses that account for 7,500 and 1,500 manufacturing jobs, respectively (ELPC).
- ❑ Outside Cleveland, Cardinal Fastener's wind parts division accounts for 40% of the firm's \$10 million revenues. The line is part of the production of hot forged bolts used to build oil rigs, bridges, trains and construction machinery. (Reuters, March 4, 2011).
- ❑ In Toledo, a hub for glass and plastic film manufacturers, many firms are now using their know-how for photovoltaic (PV) solar panels. Research programs at UT helped enable the industry in NW region.

# Research Design & Consulting

## Example

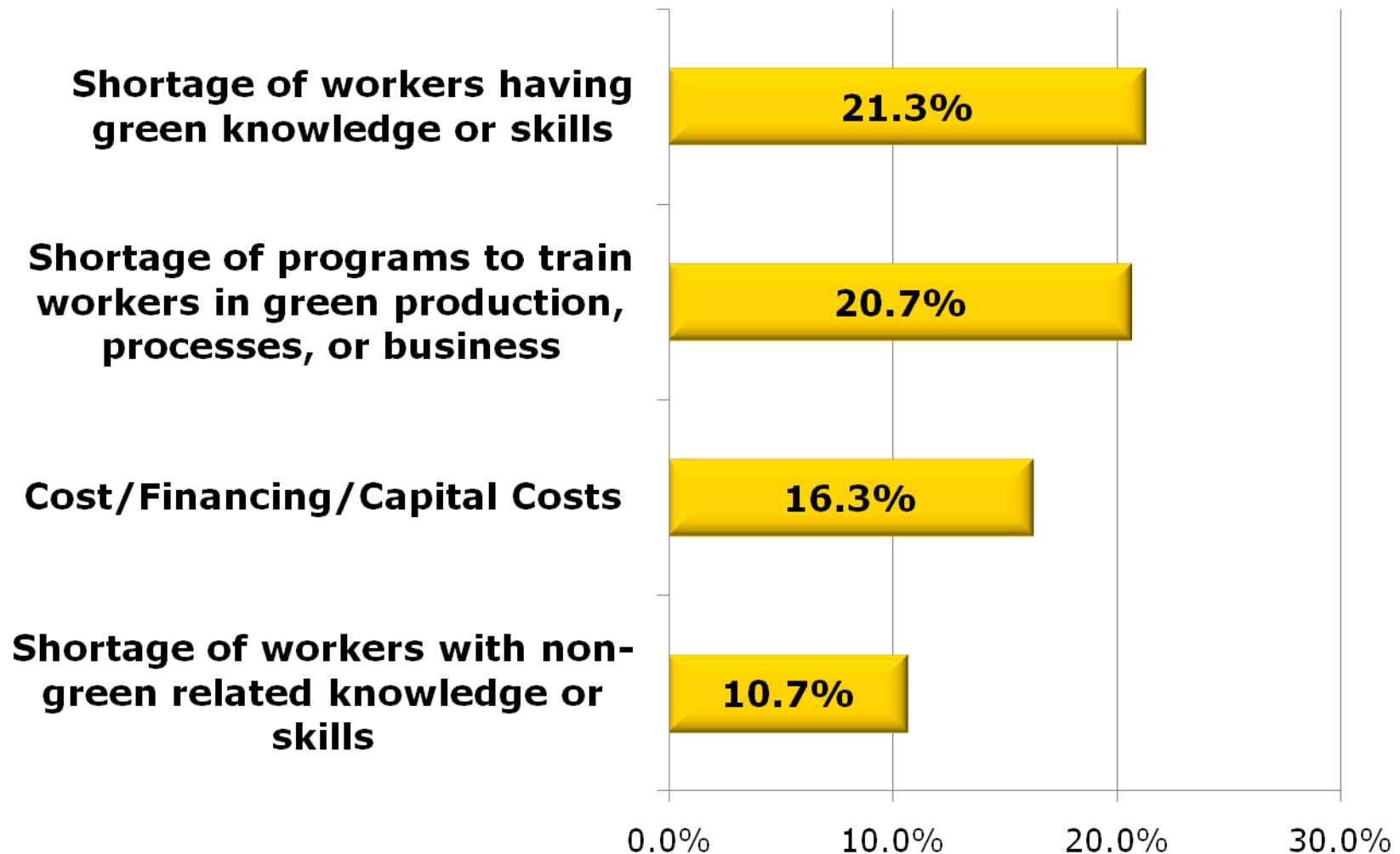
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- ❑ Kleingers & Associates is a full-service civil engineering & surveying company with 90+ associates, including LEED (Leadership in Energy & Environmental Design).
- ❑ Located in Cincinnati, Columbus, & Dayton, Ohio and Sierra Vista, Arizona
- ❑ Founded in 1993 with just 5 employees
- ❑ Recently won the Urban Cooperator Award. This award is given to companies that conserve natural resources.



# Barriers to Producing Green-related Products

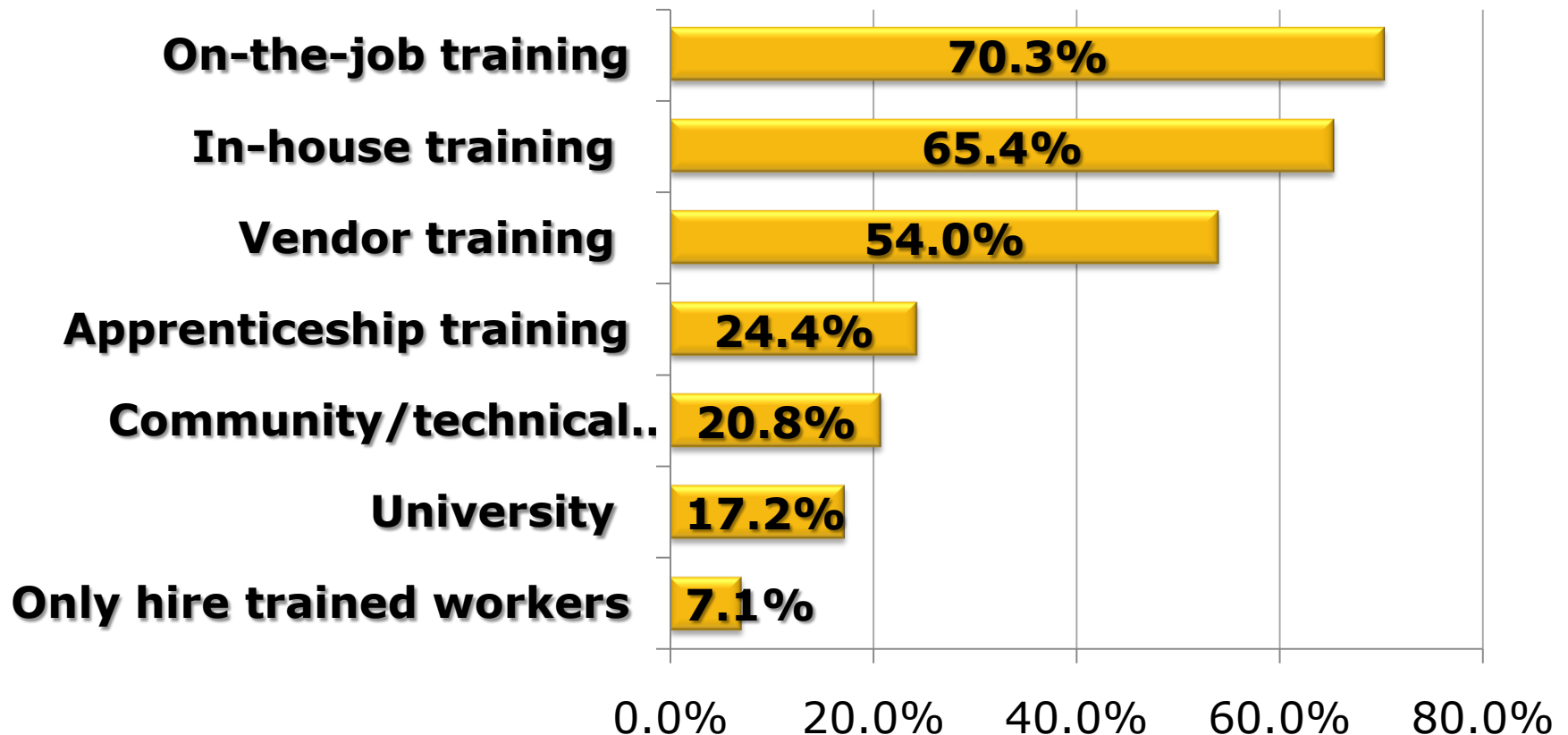
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# Training Sources

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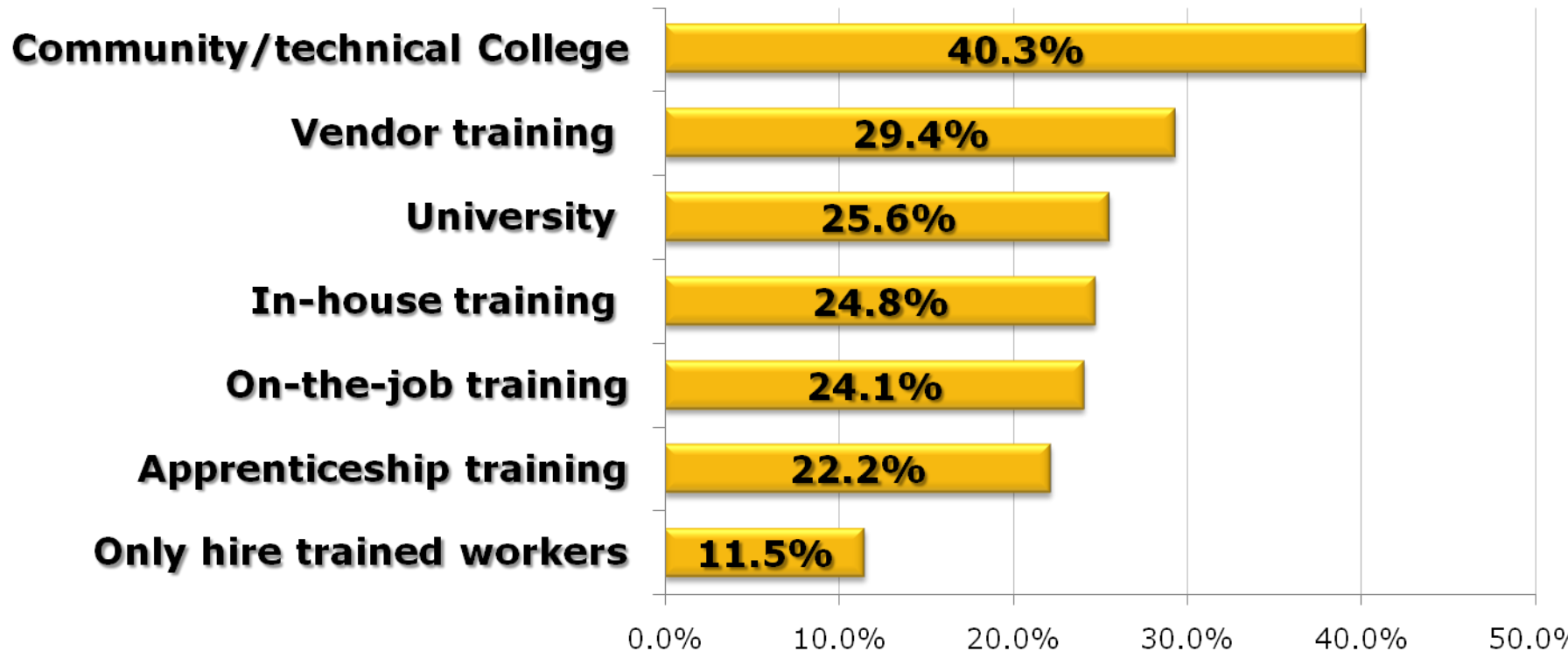
## Training providers or sources businesses use to prepare green workers



# Training Needs

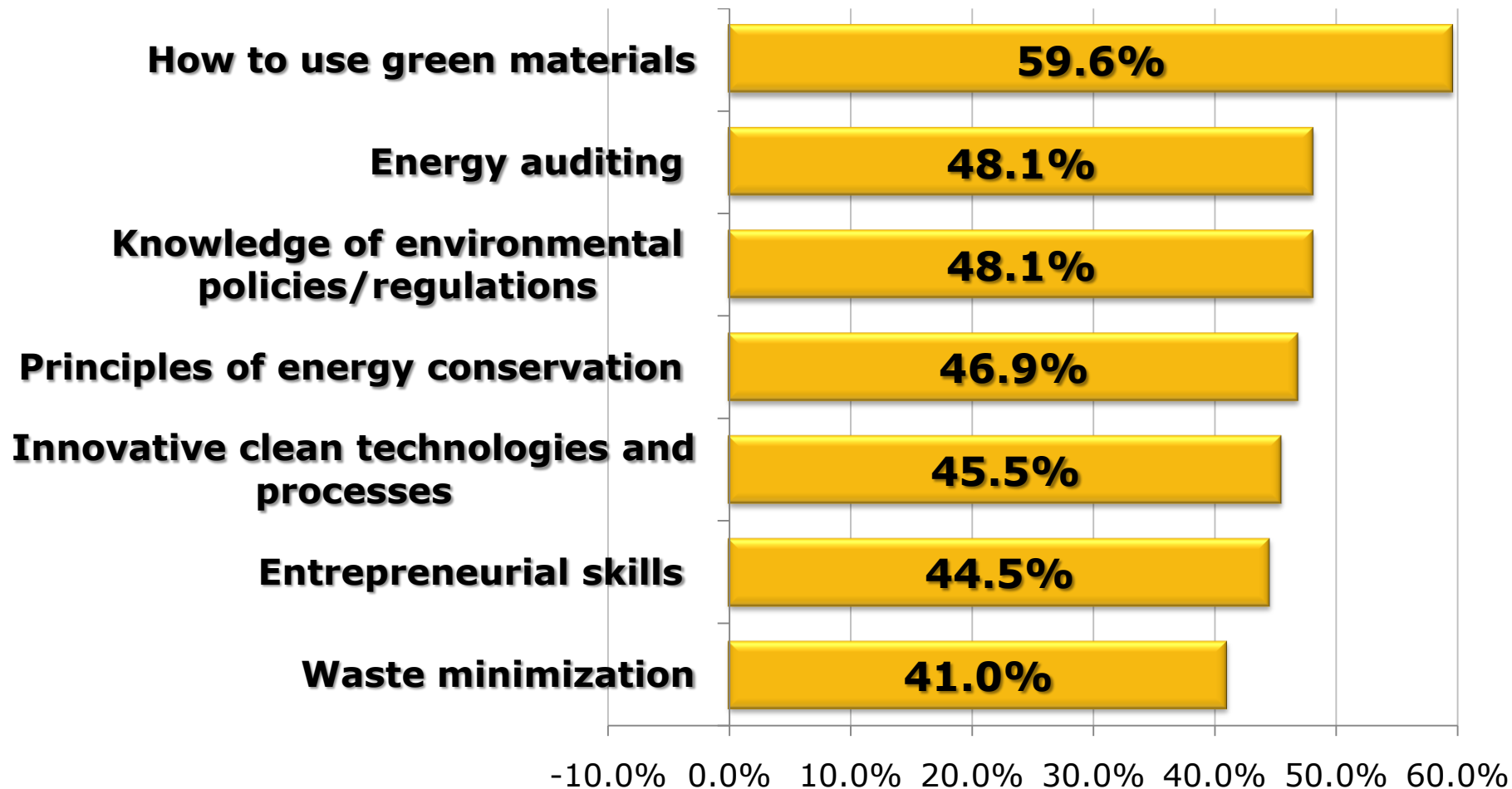
**21.6% of employers have training needs related to green knowledge or skills, wherein training is difficult to obtain or is currently unavailable**

**Training businesses would consider to meet their green workforce needs**



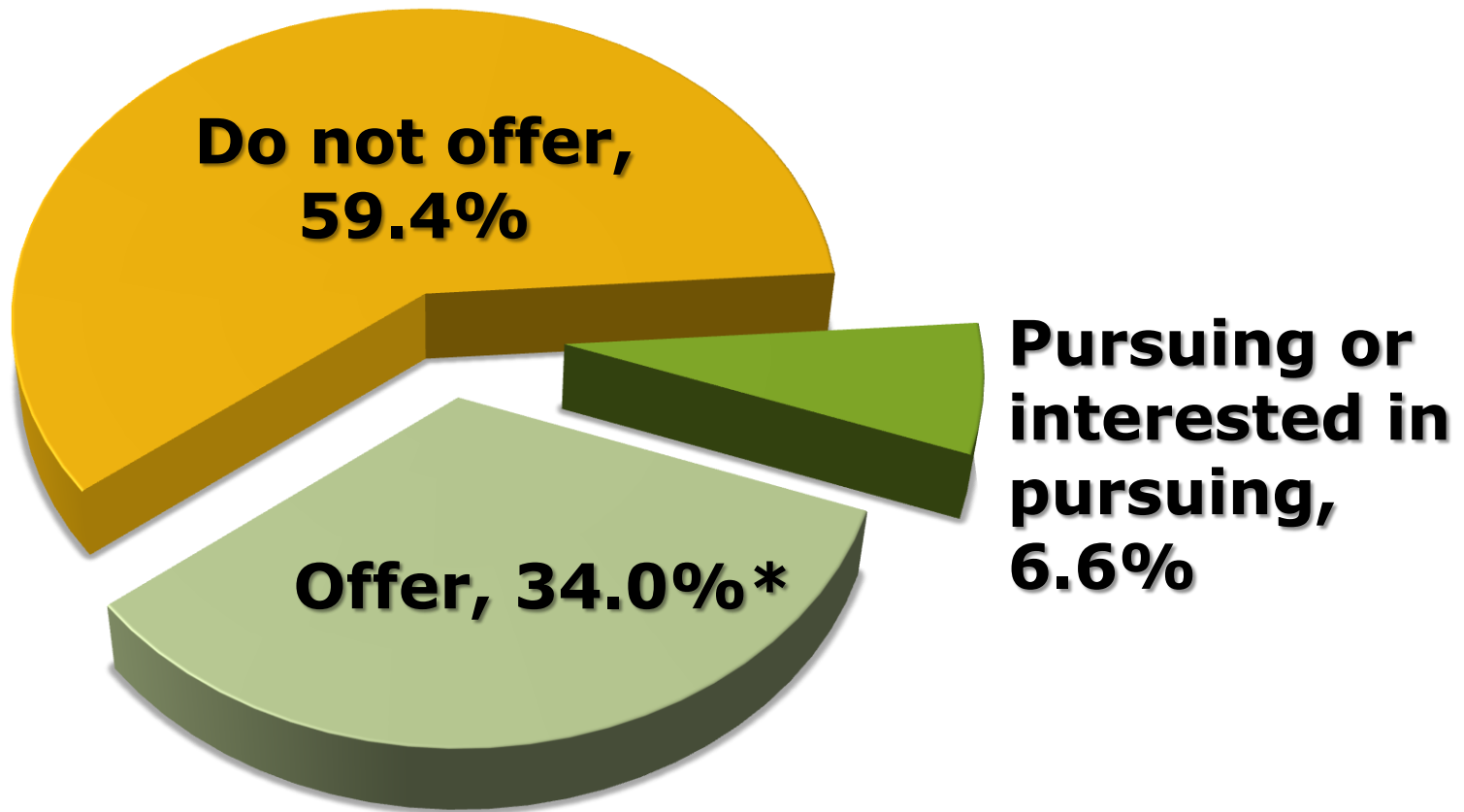
# Training Support and Needs

- **42.9% of employers are willing to support the cost of specialized off-site training**
- **49.9% are willing to support occupation-specific green certification programs**



# Internship & Coop Opportunities — Training a Future Workforce

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\*52.7% companies offer paid internships

# Top Certifications

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<b>Certification</b>	<b>Responses</b>	<b>Importance (1.0=Very Important)</b>	<b>Makes Job applicant attractive? (1.0=Strong Agreement)</b>
LEED (Leadership in Energy & Environmental Design)	1,131	1.98	1.21
ASHRAE (American Society of Heating, Refrigeration and Air Conditioning Engineers)	894	2.44	1.45
BPI (Building Performance Institute )	972	2.88	1.67
NAHB (National Association of Home Builders - Certified Green Professional)	870	2.89	1.72
ACCE (American Council for Construction Education)	803	2.85	1.68
NATE (North American Technician Excellence)	878	2.93	1.69

# Preliminary Job Vacancy Results

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<b>Job Title</b>	<b>Job Vacancies</b>
HVAC	228
Construction Laborers/Carpenters	184
Architects & Engineers	79
Plumbers, Pipefitters, and Steamfitters	73
Electricians	51

**Ohio**

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# For Green Jobs Report:

<http://ohiolmi.com/research/research.htm>



Questions?

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