



Vermont's Environmental Sector: Identifying Green Workforce Training Needs and Opportunities

Presented By

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What was the purpose of the survey?

- Establish **current conditions** of environmental business education and training needs
- Understand workforce training **opportunities and resources** available in VT
- Understand **sustainability practices** of businesses and educational institutions in Vermont's environmental sector
- What is the value of **VEC** to members and potential members



How Did We Define VT's Environmental Sector?

FIRMS (for-profit, non-profit, government entities) *that are engaging in activities which decrease the use of fossil fuels, promote sustainability and protect our natural environment*

To define the sub-sectors we looked at clusters of the environmental sector that are *specific to Vermont* and have **export potential**

Vermont's Environmental Sub-Sectors

Energy Efficiency

Environmental Consulting

Environmental Education

Environmental Regulation

Green Building

Green Financing

Green Products

Renewable Energy

Smart Growth

Sustainable Agriculture & Sustainable Forestry

Waste Management

Who did we survey?

250 Firms across Vermont's environmental sector

100 Educational and Training institutions

How Many People Does the Sector Employ?

of Employees

0-7	60%
10-24	13%
25-49	7%
50-100	7%
>100	13%

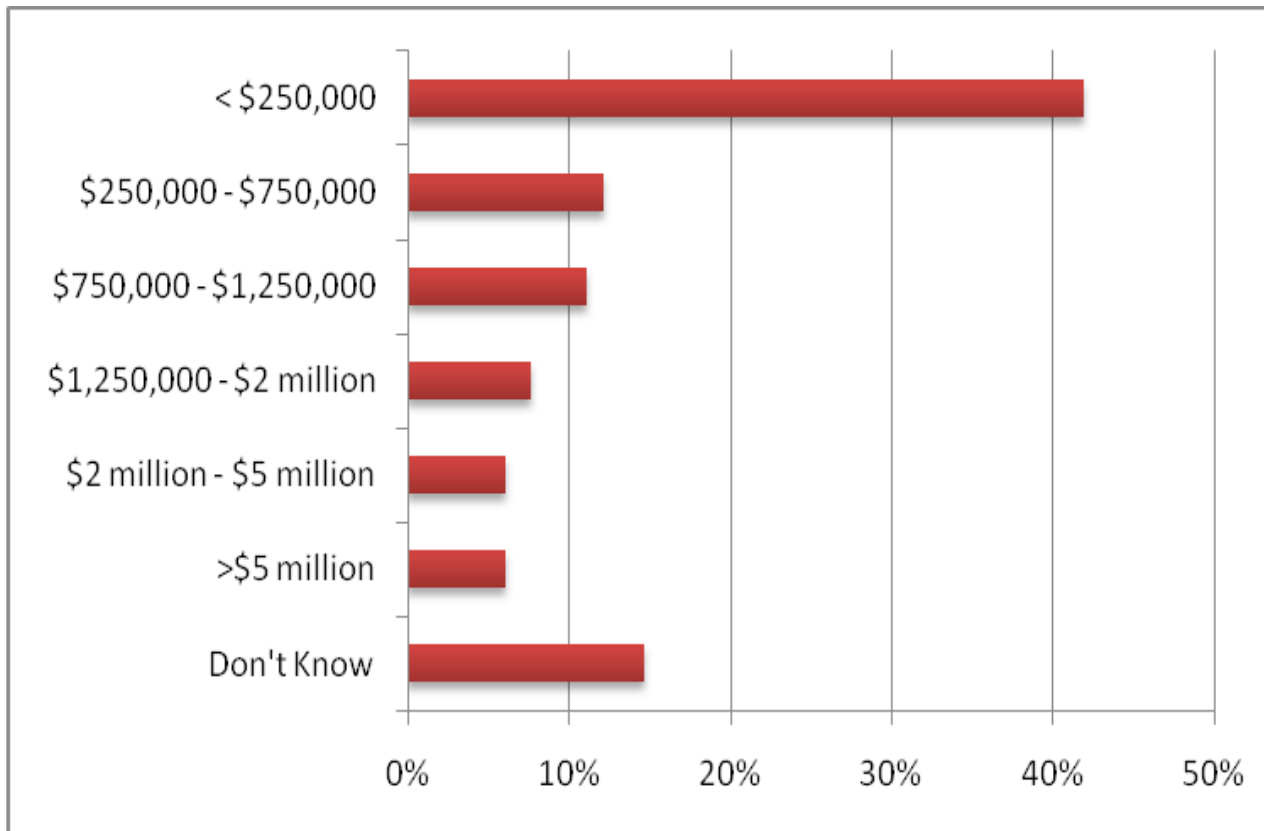
210 survey
respondents
reported:

19,370
employees

How Much Revenue Does the Sector Produce?

40% of firms report annual revenue is < \$250,000

12% of firms report annual revenue is \$2 million or greater

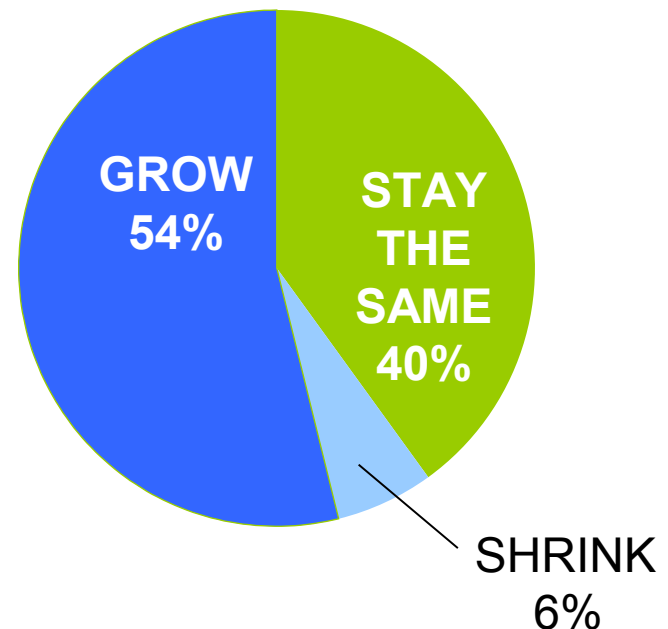


What is the Growth Potential?

60% of firms provide goods or services outside of VT

20% of firms provide goods or services outside of the U.S.

In the next 5 years,
Firms expect to:



Impact of lack of access to specialized employees

>50% of firms report that lack of access to **specialized employees** limits the growth of their firm.

Only **2%** of firms are Extremely Satisfied with their ability to recruit specialized staff.

What Types of Positions do VT Firms Have Trouble Filling?

Positions Have Trouble Filling

Project Manager	22%
Field Technician	16%
Administration	10%
Sales	6%
Program Manager	2%
Other*	45%

*CNC Lathe Operator, Energy Modeler, Land Use Planner, Spray Foam Operator

Key Skills Required (Top 6)

Problem Solving	69%
Industry Specific Technical Skills*	64%
Communication Skills	62%
Job Readiness	59%
Basic Literacy	56%
Basic Math	51%

*Accounting, CNC Machining, HVAC Systems Design, Organic Dairy Farming Production

What Types of Training Are Needed?

1/3 of respondents reported **68** different types of training that would be useful to them that they have been unable to find in VT

Examples of trainings identified

Alternative Energy

Geothermal Installation

Biofuels

Hydrology

Building Performance

National and VT Legislation

Crop Erosion Control

Solar (Installation & Operation)

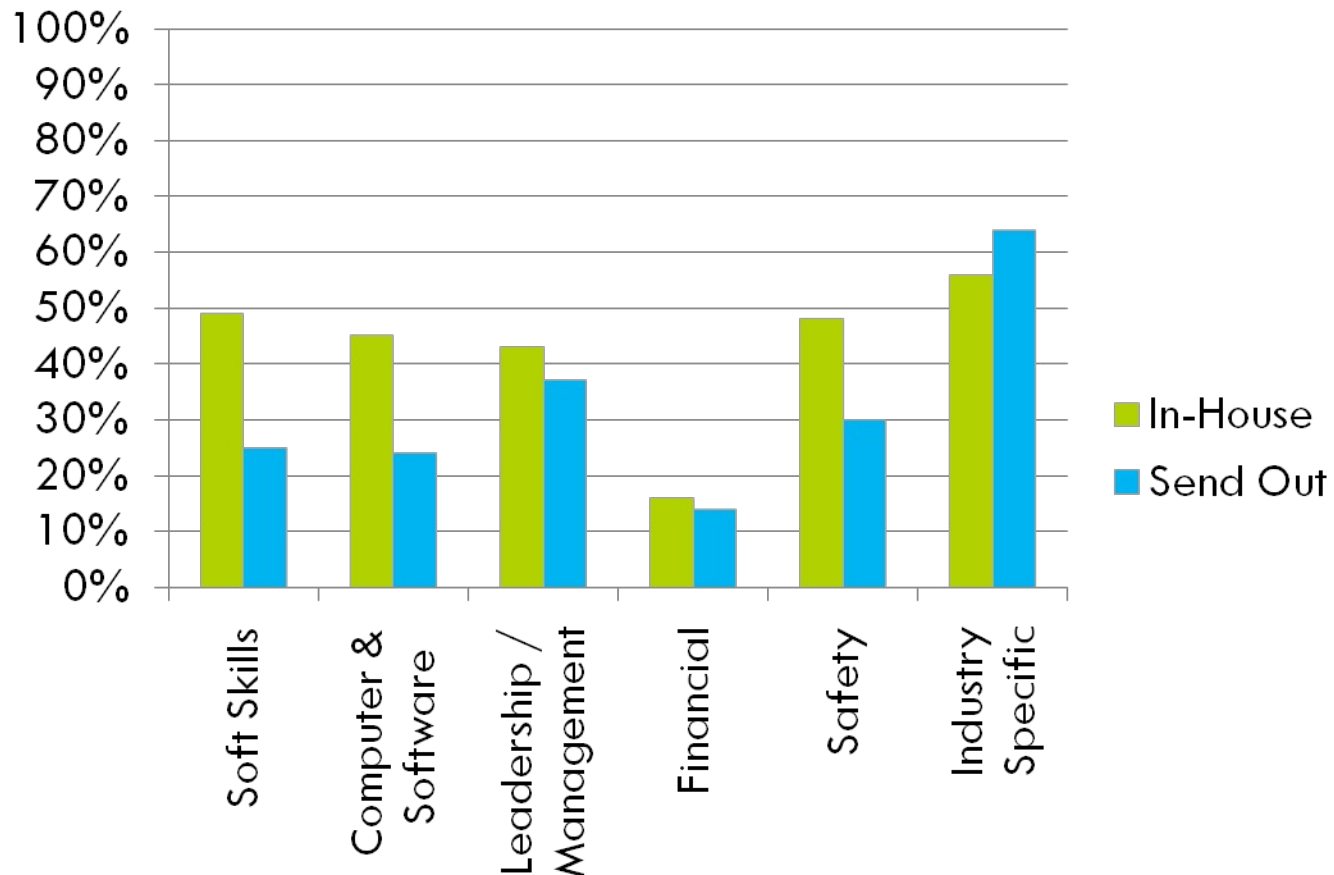
Energy Modeling

Solid Fuels

Where Do Firms Obtain Employee Training?

71% of firms provide in-house training for their staff

61% send staff out to be trained





Is There Collaboration Between Educational Institutions & Env. Firms?

78% of Technical High Schools reported that they have collaborated with a VT environmental business to develop courses or training

23% of Colleges and Universities reported that they have collaborated with a VT environmental business to develop courses or training

35% of “Other” education & training providers reported that they have collaborated with a VT environmental business to develop courses or training

Examples of “Other” include small businesses, solid waste districts and non-profit organizations providing education or environmental awareness

Missing Skills / Trainings

No Training or Continuing Education Providers

Dam Safety

E-Quest Energy Modeling

Licensed Lender Training

Professional Development in Hydrology

Transportation Best Practices

Utility Operations

Vacuum Technology

Missing Skills / Trainings

No Continuing Education Providers

Advanced Chemistry	Chemistry	Interior Design
Advanced Engineering Designs	Civil Engineering	Measurement & Verification
Aeronautics	Crop Erosion Control	Mechanical Inspection
Architectural Skills	Electrical Engineering	National Environmental Policy Act
ASTM Technical Courses	Electronics	Roofing
Automatic Gain Control	Environmental Design	Securing Green Financing
Brownfields	Facilities	Solid Fuels
Building Commissioning	Geology	Specialized Woodworking Equipment
Building Services	Green Technology	Sustainability Reporting
Business Brokerage	HRAI	Wind Analysis
Cell Biology	Hydrocarbon Fuels	



What Are the Support Services VT's Environmental Sector Needs?

Support Services Difficult to Find in VT (top8)

Access to Broadband 50%

I.T. Services 29%

Accounting / Finance 17%

Lab Services 17%

Testing Services 17%

Marketing / P.R. 14%

GIS / Mapping 12%

Other* 45%

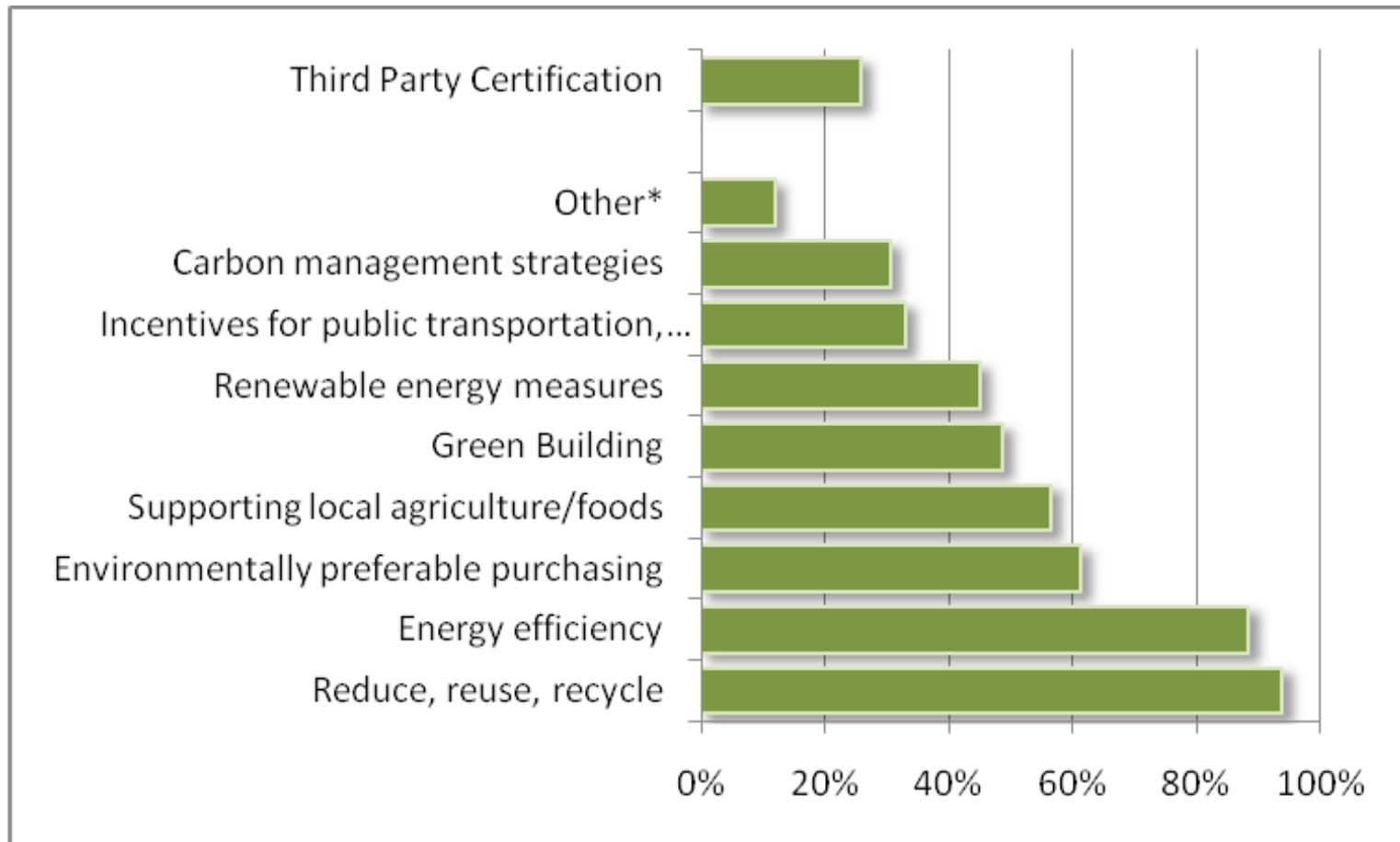
31% of firms report that they contract for support services outside of VT

\$10,000 - \$50,000 was the median spent by firms on out-of-state contracting

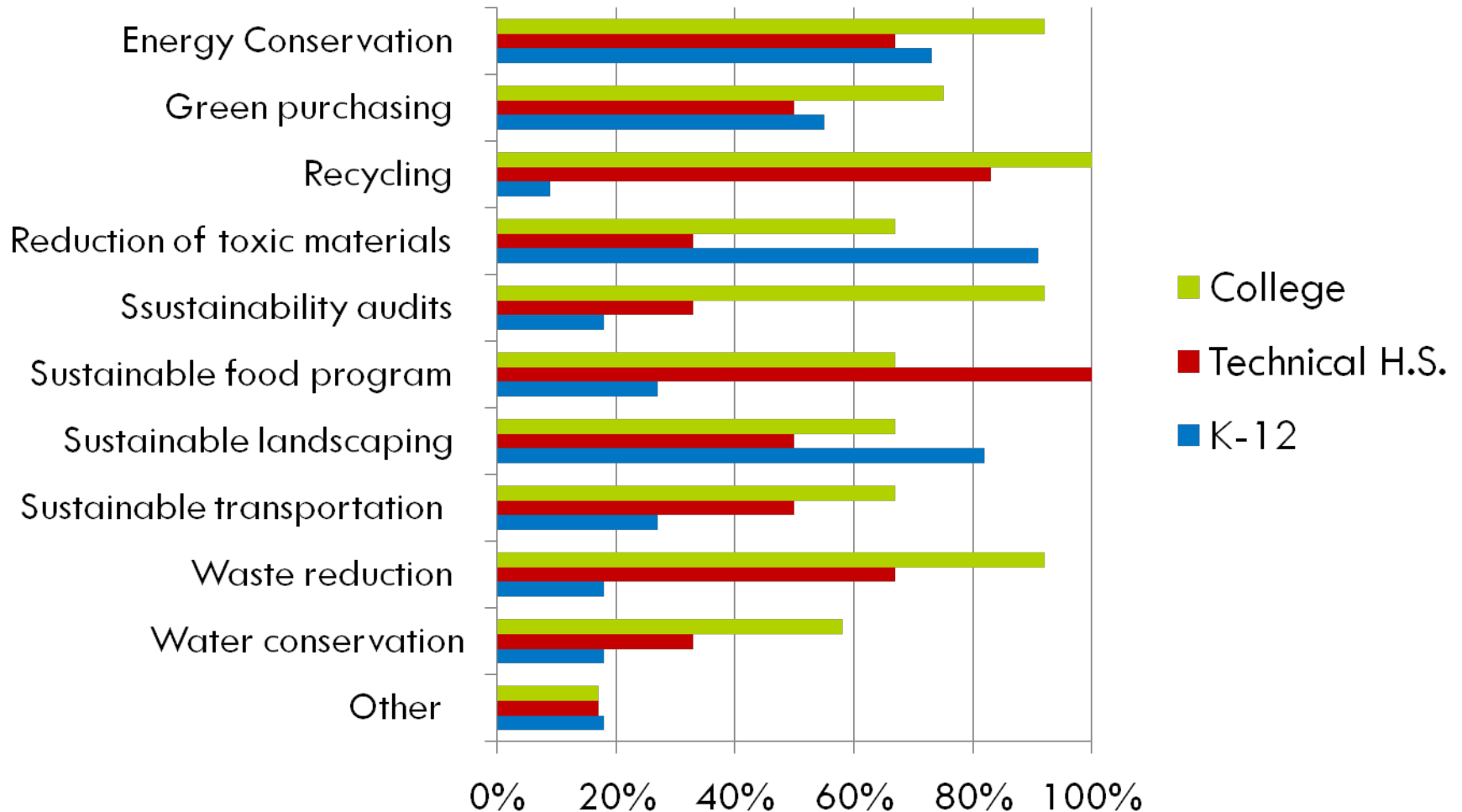
*Alternative energy financing, Cell phone service, Market Specific Data

Environmental Firms & Sustainability?

71% of firms report sustainable practices are **VERY IMPORTANT**



Campus Sustainability



Value of VEC

How is VEC Currently Valuable?

Networking members with each other, potential clients, resources, and support services. 59%

Forging links among business, government, non-profits and higher education to promote research, education, training, and job creation. 56%

Advocating for and promoting Vermont's environmental business sector. 49%

How Could VEC be Valuable?

Holding sector-specific meetings/conferences. 56%

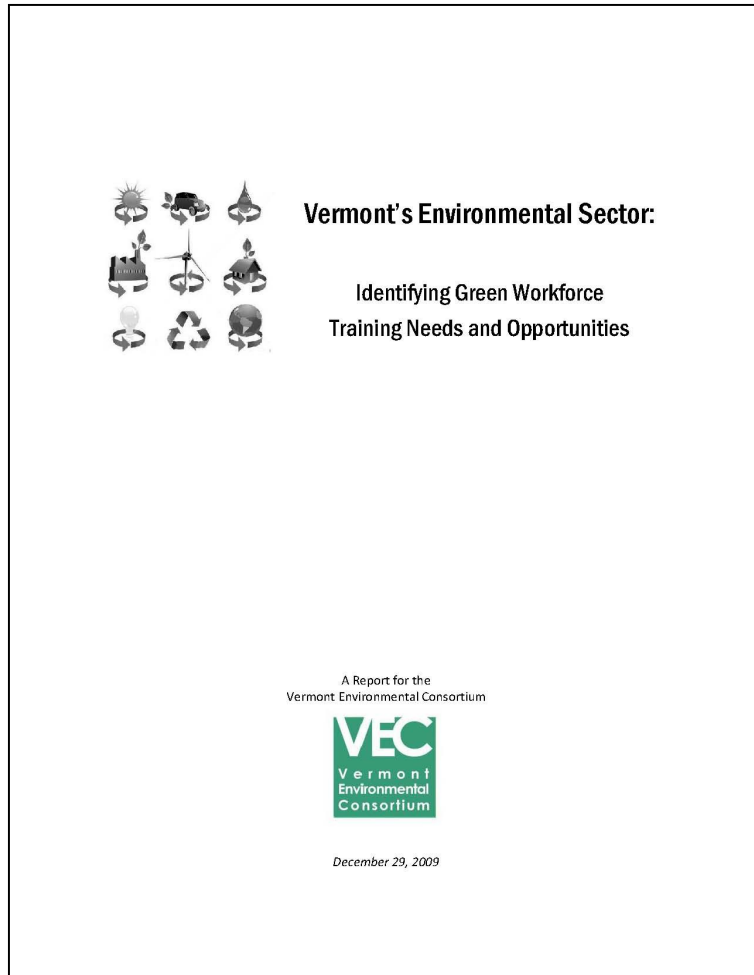
Sponsoring more training classes. 41%

Providing a service linking training needs with training providers. 32%

Providing tools for growing your firm. 32%

*Thank you for addressing the educational deficit
in the Green Revolution. There is no
"blooming just around the corner" if there are
no qualified boots on the ground to make it
happen. –Survey Respondent*

Full Report Available



www.vecgreenvalley.org

Customized data analysis is
available for a fee.



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Q u e s t i o n s ?