REGIONAL BUSINESS SURVEY, 2009

INTRODUCTION

In the spring of 2009, as the recession was deepening in Vermont, the Workforce Investment Boards representing Bennington, Upper Valley, Rutland and Connecticut River Valley collaborated to survey a sampling of companies in their regions. The purpose was to determine two things.

1. First, what *will be* the priority skills needed as they come out of the recession and begin hiring again, so that we could ensure that the right training is available for displaced workers.
2. Second, we wanted to learn how the trend towards the "green economy" will impact the companies. Will new jobs be created for this industry? If so, what skills will be needed?

We included a wide range of businesses, most of them in the small and medium size category in terms of employment.

Nearly all companies have recently downsized their workforce due to the economic conditions and are not yet at the point of forecasting when the recession will end for their segment of the marketplace.

We wish to thank the participants in this survey for their time with us and for the candor of their responses.

Background on the Green Economy

In preparation for conducting the surveys, some research on the green economy was undertaken. The following pages summarize some key information.

Vermont's Green Economy Strategy is adopted from a study conducted by the UCLA School of Public Affairs. The primary goal is to "transition from a net importer of green goods and services to a net exporter of green goods and services." Vermont has limited resources and must focus its attention on components of the Green Economy that we can realistically grow in our state.

A "green collar job" is defined by Van Jones in his book **The Green Collar Economy,** as follows: "a family-supporting, career-track job that directly contributes to preserving or enhancing environmental quality."

Most green collar jobs are middle-skill jobs, requiring up to two years of post-secondary education. Across the nation, commonly recognized examples of the work of the green collar economy are in the following areas:

- Weatherizing millions of buildings
- Installing millions of solar panels
- Manufacturing wind turbine parts
- Planting and caring for millions of trees
- Building millions of hybrid vehicles
- Constructing solar, wind and wave farms
- Managing materials reuse and recycling
- Water management
- Local and organic food production
- Mass transportation

From this list, Vermont would exclude the building of hybrid vehicles as activities that are suited for our region.

In his book, **Strategies for the Green Economy,** Joel Makower provides many examples of how corporate America is embracing the trend to "green". Driven initially by the need for efficiencies, many are now seeing the potential profitability of the revenue side of the green equation.

"The greening of business is a bell that cannot be un-rung. As companies squeeze out the waste and inefficiency, the carbon and energy intensity, the toxicity, the over packaging, and the nonrenewable resources, they aren't likely to revert to old, wasteful ways when energy prices ease or public attention gets diverted elsewhere. The greening of the economy represents an undeniable and indelible revolution."

He cites 10 trends that he believes lead to the sustainability of the greening movement.

1. The problems aren't getting any better. Climate, availability of water, toxic ingredients in consumer products, the rampant growth of electronic waste—will continue to plague companies and society for decades.

2. The political will is finally emerging.

3. Consumers are waking up. The pipeline of greener products from major consumer brands is filling up. The stream could become a gusher.

4. The supply chain is gaining power. Wal-Mart is one big reason.

5. The environment has become a fiduciary issue. There is pressure on companies from stockholders, pension funds, etc.

6. The bar keeps moving. While there are not "standards" in place, the bar continues to float higher.

7. Companies are moving beyond "sustainability." The leading edge is moving farther out...The real leaders will have focused their sights on being *restorative*—for example, not being merely *carbon-neutral*, but being *carbon-negative*."

8. More companies are telling their stories.

9. Clean technology is changing the game. We are on the cusp of a new generation of clean-tech products and services.

10. There is money to be made. Addressing environmental concerns is now being seen increasingly as a potential value-add, not merely a cost to be minimized.

He also notes that small and mid-sized companies remain largely uninvolved. We have not reached the tipping point. There is lot's of room for growth. Using the analogy of the hockey stick curve, the US economy is at the juncture of the stick and the blade, ready to accelerate.

Resources:

Promoting and Fostering the Green Economy in Vermont: A Strategic Plan for a Green Future, 2008, Vermont Agency of Commerce and Community Development

Job Opportunities for the Green Economy: A State by State Picture of Occupations that Gain From Green Investments, June 2008, Robert Pollin & Jeannette Wicks-Lim, Political Economy Research Institute (PERI) of University of Massachusetts, Amherst

The Green Collar Economy: How One Solution Can Fix Our Two Biggest Problems, Van Jones, 2008, HarperCollins Publishers

Strategies for the Green Economy: Opportunities and Challenges In The New World of Business, Joel Makower, 2009, McGraw-Hill Companies

Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value, and Build Competitive Advantage, Daniel Esty and Andrew Winston, Yale University Press, 2006

News Release, "National Studies Show Green Building as Key Part of America's Economic Future", Washington D.C., Jan. 13, 2009

Resources for Finding and Working with Home Energy Auditors and Home Performance Contractors, Redbarn Design and Build LLC, Steven Spatz, Rutland County

Key Themes from Business Study, 2009

The business study had two primary thrusts.

First, knowing that companies have had to downsize their workforce during this economic crisis, we wanted to learn if this experience has changed how they plan for the future in terms of workforce skills. When business begins to strengthen, will companies be looking for new or different skills?

The second line of questioning was how the "green economy" would impact their business, if at all. Did the company see the "green trend" as a potential revenue generator and job creator, or as an operational change for efficiency or cost savings?

A. WORKFORCE SKILLS

1. Computer Skills are now a prerequisite:

The world of work has definitely reached the point where <u>all</u> employees need at least the ability to use a messaging system, find information online, and manage some simple tasks (such as updates and changes to benefit plans) electronically. Candidates who cannot do those things on a computer will be significantly disadvantaged in the job search, even for the most basic entry-level positions.

From that baseline expectation, employers voiced needs for a wide range of sophistication that frequently included expertise in using the Internet for marketing purposes (graphic design, web development, data market research, data mining, etc.)

Another application is the interaction and management of databases residing on enterprise resource systems. These internal enterprise systems are increasing the demands on the professional staff and their computer skills.

- Employees at all levels of the organization need to remain up to date on new programs and applications.
- The need for keyboarding accuracy and documentation is greater than ever before.
- The challenge is typically greater for the more mature workers.

2. Certifications:

Nearly all employers interviewed specified ***certifications*** among the list of needs. The particular type of certifications varied with the industry, but the trend is to have verifiable documentation of knowledge and skill.

This trend is very supportive of Vermont's new Career Readiness Certification.

The fact that employers are valuing certifications is also evident in the candidates for programs such as Rutland's Manufacturing Technology Program offered through Stafford Technical Center's Adult Education Program. Candidates this year were strong in their previous manufacturing experience, but recognized that they needed to document their skills and, frequently needed to add computer skills to their resume.

Certifications will be a factor in the green economy, as they are required for many of the installations for alternative energy solutions.

3. **Work ethic, soft skills and customer service:**

This area tied for the third most frequently cited need. Soft skills and customer service are closely linked in the respect that workers are representatives of their employer, and if there is any contact with customers, it reflects on the overall experience between the employer and the customer. If you are a construction worker, you might not think of yourself as a customer service representative, but your timeliness in getting to the work site, the focus and effort you exert on the job, the efficiency with which you work, your appearance and communication skills all contribute to the feeling of professionalism (or lack there of) in the clients' eyes.

4. **Manufacturing Industry:**

Highly skilled technicians for positions such as Industrial Electricians, Industrial Maintenance, Industrial Energy Auditors, Mechanical and Electronic Technicians were mentioned as being particularly hard to find.

Once again, computer skills are a baseline prerequisite, along with flexibility, commitment to ongoing learning and problem solving.

Companies also cited the continuing need for engineers, and the difficulty in recruiting them to the area. **The higher tech firms noted that if we had regionally available programs for continuing adult education in the engineering disciplines it would make recruiting easier—young professionals want access to ongoing education and advanced degrees.**

5**. Health Care**:

The hospitals included in the study were consistent in stating that the hardest occupations to find are Physical Therapists, Occupational Therapists and Pharmacists.

The need for RN's is not as acute as it was five years ago, as Vermont has made significant strides to increase available training for that key position.

Another needed area is in the electronic medical records area. The required certifications are CPC (Certified Professional Coder) and CCS (Certified Coding Specialist).

6. **Marketing and Sales:**

These needs are sometimes articulated, but were just as often expressed indirectly. We observed that many of our smaller businesses have developed as product-driven organizations—the organization has developed to support the *product concept and expertise*. As they have developed, they have accessed support for improving the operational side of the business. (VMEC is doing a great job in getting out there and helping these companies.)

It was surprising how many reported that they rely on "word of mouth" for marketing their product or service. While some are hanging on during this downturn, it was striking to consider how they could potentially grow their business base through effective marketing strategies. Some were aware of this deficit, but many were not. If they had the "know how" to tap the Internet to drive customer demand, they could see gains in their revenue generation.

B. GREEN ECONOMY

Since most of our interviewed companies fall into the classification of small- medium size, we were surprised to learn that they are not on the sidelines as suggested by Joel Makower. Included in Attachment 2 are quotes that describe current state of the green economy in the Southern Vermont regions.

1. **Fifty-nine percent** of the companies interviewed have been addressing the operational side of the "green" trend. There is a clear sensitivity to environmental impacts of the work product and companies have clearly been going after the "low hanging fruit" such as recycling, lighting and other recommendations of Efficiency Vermont.

- Customers are cited as part of the driver for change. Those who deal with Wal-Mart, for example, are pushed to change packaging. Energizer was pushed to accelerate the development of batteries with reduced mercury.

- It also appears that we have moved beyond the tipping point in terms of consumer attitudes towards environmentally friendly products.

2. **Thirty-eight percent** of the companies saw revenue growth potential and had work underway to go after those opportunities.

3. **Twenty-seven percent** identified job creation potential. Those who did were in the business of developing or distributing solar products and efficient lighting. Electricians, plumbers and carpenters were the most frequently cited job opportunities as well as sales people with technical knowledge. Those electricians and plumbers included in the study have the certifications for that type of installation but are not seeing great demand at this time.

Nationally, there is a push to address the energy efficiency of our buildings, being fueled by the American Recovery and Reinvestment Act, better known as the stimulus package. Underlying that push is the data that indicates buildings are responsible for 36% of our energy use, 30% of greenhouse gas emissions and 30% of our waste production. In addition, *we have the technology* to remediate those buildings. The other benefit is that retrofit work trains low skill workers. In the longer term, workers from retrofit jobs can be transitioned into maintenance and construction jobs in both public and private sector. Those jobs cannot be outsourced and the construction industry provides career ladders.

In Vermont, during normal economic cycles, we are facing a shortage of workers interested in entering the construction trades. The challenge in taking advantage of the opportunity for retrofitting our building stock will be to find people interested in doing that work.

Recommendations

1. A basic computer skill set is the new baseline literacy. Each WIB region should ensure that training is locally available and economically accessible for displaced workers to get to a basic level of proficiency. Beyond that baseline level, the next steps would be proficiency in the Microsoft Business Suite—Work, Excel and Power Point. From that point, individuals should feel confident in taking courses through the regional technical high schools and community colleges if they wish to continue to build expertise into desktop publisher, on-line marketing, digital arts, etc. Computer skills are a definite enhancement to employability.

2. Support and advocate for the Career Readiness Certification program with regional employers. This program will address the desire for documentation of skills, especially in the areas of "soft skills". Vermont will benefit from an economic development perspective if we can get to a level of general "buy-in" and support from the business community.

3. Build support and demand within your regions for apprenticeships and other relevant certificate programs, especially in the "green economy" sectors and the medical career tracks.

Available Training

The following list is not an exhaustive listing of available training. It is included as an initial resource for those who want to know where they can find training. As new resources become known, this will be updated.

Vermont Technical College:

B. S. Sustainable Design and Technology

Associate Degree Applied Science

University of Vermont:

Green Building and Community Design

Ed2go/Gatlin Education Services online program, available through Vermont's Regional Technical Centers, offer the following:

- Senior Certified Sustainability Professional
- Certified Green supply Chain Professional
- Certified Indoor Air Quality Manager (CIAQM)
- Certified Indoor Environmentalist (CIE)
- Building Analyst Quick Start: BPI BA Certification
- Biofuel Production Operations
- Wind Energy Apprentice
- Natural Gas Plant Operations

Community College of Vermont in collaboration with Vermont Department of Labor:

Career Readiness Certification

Green Mountain College: Environmental liberal arts college, including the following:

- Farm and Food Program
- Sustainability Office
- Carbon Neutrality
- Emissions Inventory
- Chelsea Green Series

- **Business Study Participants**

Bank of Bennington	Jim Brown, President	Bennington
Central Vermont Public Service	Jamie Falco, Director HR	Rutland
Datamann	John Mann, Owner	Wilder
Energizer	John Hall, Plant Mgr.	Bennington
GE Aviation	Charlie Barker, Barry Varian, Glen Traverse	N. Clarendon
groSolar®	Rod Viens, VP Ops	White River Junction
Hemmings Motor News	Jim Menneto, Pres/Pub.	Bennington
IVEK	Mark Tanny, President	Springfield
Killington Resorts	Diane Davis, VP HR	Killington
Hennessey Electric	Larry Hennessey, Owner	Saxton's River
LED Dynamics	Cheryl Gilbert, CFO	Randolph
Bill Lohsen Heating and Plumbing	Bill Lohsen, Owner	Wallingford
Mack Molding,	Carl Bickford, Plant Manager	Arlington
Maponics	Steve Zuckerman, VP Ops	Norwich
M. E. Baker	Eric Roiter	Springfield
R. K. Miles	Joe Miles, Owner	Manchester
New England Precision	Bruce Urasye	Randolph
Omya, Inc	Liz Gregorek, HR Director	Florence
Orvis	Jim Evans, VP HR	Arlington
Plasan, USA	Tom Cooley, Plant Mgr.	Bennington
Plasan NA	Ann Thomeyer, Dir. HR	Bennington

Rutland Regional Medical Center	Robert Brown, HR Mgr. Anna White, Recruiter	Rutland
Solar Store	Dave Bonta, Owner	Springfield
Southwestern Vermont Health Center	Anne Hill, HR	Bennington
Springfield Hospital	Janet Lyle, HR Director	Springfield
The Vermont Country Store	Emily Treske, Dir. HR	Manchester
TPW Management	Paul Carroccio, Owner Laura Heinel, HR Director	Manchester
Vermont Hardwoods	David Waldmann, Owner	Chester
Wright Construction	Brett Wright, Owner	Mt. Holly

Attachment 1

Business Study Needs Identified:
Initial Summarization

Certifications:

- Plumbing—certifications are required for all aspects (gas, oil). Master plumber requires that but some people do not go for it. Now, will have to have it.
- HVAC
- Electrical Trades
- Medical Technologist, 4 year plus ASCP certification (3)
- LNA
- Welding AWSO 1.1
- Fire Alarm
- CPC -Certified professional coder
- CCS –Certified coding specialist
- Woodworking apprenticeship Program
- Apprenticeships for tool and die makers (referenced Connecticut model)

Computer Skills are Prerequisite (20)

- Keyboard, Excel, Power Point, and Managing E-Mail Accounts—must get more efficient. Accuracy in keyboarding. Data entry and documentation.
- Retraining executives and mature workers. (2)
- Advanced computer skills for web development, marketing, graphic design, Indesign, Photoshop. (4)
- Data market research
- Use of data and management of data base (enterprise resource system) (4)
- Internet marketing (5)
- Mapping, spatial data, GIS
- CNC Operators (2)
- Machining Center, autoclaves, basic data entry
- Controls all going digital. They are little computers. Need computer knowledge.

Customer Service (9)

Carpentry skills with interest in electrical (solar)

Soft Skills, including how to dress and act in work environment. (10)

Supervisory Training (4)

Leadership Training (4)

Industrial Electrician (2)

Industrial Maintenance (2)

Industrial Energy Auditor

Mechanical Technicians

Project Managers (2)

Operations Manager

Engineering (IS, EE, ME, Environmental, Software)

CATIA, math based engineering program. Could use local training. Used by Vt. Composites, NSK, Plasan NA

Business

Sales (3)

Marketing (4)

Quality/Lean Manufacturing/Value Stream (6)

CDL Drivers Class B (2)

RN, especially ICU, Critical Care

Pharmacists (2)

Physical Therapists (3) Need doctorate by 2010

Occupational Therapists (2)

Opportunities for expansion at RRMC:

OB/GYN
Psychiatrics
General Surgery
Diagnostic Imaging
Allied Health

Electronic Medical Records—new information system.

Hiring fewer graduate nurses—filled the need for now.

We would like to see a formal learning process through established schools for solar hot water and photovoltaic applications—sustainability programs. (VTC is adding curriculum to the electrical apprenticeship program) groSolar®

Cardiac Ecosonographer

(In perfect world, VTC should offer 2-year technical programs. Cited Sanford Institute—nationwide except NE area. Offers 2-year technical programs.)

Fewer unskilled hourly workforce in favor of mid-skill hourly workforce. More engaged; do more processes with greater job diversity. Use robotics.

Really need computer skills, but other technical skills might be more relevant. However, not having computer skills puts a candidate at a disadvantage.

"There is a lack of technical training for adults in the Rutland area. We wish to see more programs available. The use of on-line webinars could meet some needs. Our younger professional workers want access to engineering programs. This is important for their career growth and as a result they tend to favor other locations over Rutland."

"Our equipment is specialized so our skilled workers still need to be trained on the equipment and the process. The training time is a minimum of a year. Generally it is 1 – 3 years to be a real contributor in operations and manufacturing equipment side. We don't have much turnover, however, we will be losing 400 – 500 workers in the next 5-10 years. Where are the 400 coming from?"

Attachment 2

Business Study Finding:
Green Economy Implications

"People are asking questions and weighing options about alternative energy systems. At this point, it is mostly cost driven and they end up choosing a high quality, efficient system. Geothermal and heat pumps—only very wealthy clients are considering these options. With most you need a back up system and that really drives the cost up." **Bill Lohsen, Bill Lohsen Plumbing and Heating**

"We really push setting the example on energy waste. Our 2020 sustainability project is intended to reduce our carbon footprint. We track conservation and measure it. We dedicate a set percentage of profit to conservation…we get college interns and applicants who apply for that reason." **Jim Evans, Orvis**

"We are a large consumer of electricity and fuel. We constantly are looking at ways to save. We recycle steam to get energy. We are constantly evaluating the environmental impacts from our industry. Our products are essentially "green". I don't see new job creation from the "green economy". **Liz Gregorek, Omya**

"Projects out for bid with LEED components require some experience and commitment. We are not developing the project—we can execute. If we were designing it, we would need to acquire LEED certification. **Brett Wright, Wright Construction**

"Diversifying our sources of power is a key business goal." **Jamie Falco, CVPSC**

"We are very conscious of the use of paper—re use recycled paper and ink in the magazines. At the same time, we produce a *magazine*. It is a terrible time for magazine or newspaper publishers. Newsstand sales are plummeting. The internet and web presence will grow and demand advanced technical skills on the computer." **Jim Menneto, Hemmings Motor News**

"We are doing some green product manufacturing at the present time and see it as an area of growth for us. Our business goals are to grow the medical devise business and the green products business." **Carl Bickford, Mack Molding**

"Our company is a supplier for products used in remediation of energy loss issues. As such, the trend to greater energy efficiency will benefit us. We considered getting involved in energy audits but decided to stay out of that end of the business. I also see a trend to local farming as being a very positive opportunity for Vermont." **Joe Miles, R. K. Miles**

"Our environmental focus is very strong—part of our mission statement. Powdr (parent company) taxes 1% of our top line for an environmental fund. We can apply for grants to make improvements locally and have dozens of projects in the works. This is a real positive with customers and we are starting to promote that in our advertising." **Diane Davis, Killington Resorts**

"The green economy is primarily affecting us as we work to mitigate the environmental impact of our company. Our marketing is primarily a catalogue-based approach and we are changing our format to permit co-mailings (reducing paper and postage expense). We are also developing an on-line, web-based business. Finally, we do consider the environmental impact of products we offer and see that as still a largely untapped category." **Emily Treske, The Vermont Country Store**

"We are trying to be more energy efficient. Our challenge is that we have many old structures and expansions. The 'legacy systems' are not always compatible with those goals." **Anne Hill, SVHC**

"Environmental requirements cause operational changes. For example, our (vehicle) painting is done off shore**." Tom Cooley, Plasan USA**

"We have a significant 'sustainability' effort company wide. Typical goals include 50% reduction of water, 20% reduction in carbon emissions. Also customers are demanding change. For example, Wal-Mart demanded that we reduce mercury in our products, advancing the target date from 2011 to September 2009. They also specified changes in packaging. It is adding cost to the value chain." **Tom Hall, Energizer**

"The company has begun exploring strategic partnerships with utilizing their plating capacity in the production of solar panels. There is a potential expansion being considered which could significantly increase the needed square footage and employment base**." Eric Roiter, M. E. Baker**

"My opinion is that green initiatives will end up increasing costs (energy, taxes and government regulation). Our product is used for precision small volume dispensing of liquids and there may be an increase in demand." **Mark Tanny, IVEK**

"The biggest change is that we are more cost conscious and analytical around energy conservation. There is a corporate goal to reduce greenhouse gases to a certain metric. It is a year over year goal and drives improvement. We analyze each process and each piece of equipment to determine if it needs to be on or off...IT is a way of life. The culture change on the floor is big, with employees taking ownership and treating the plant like it was their own home. As an example of the pay off, we recently added a 30,000 square foot expansion and our energy costs today are less than before." **GE Aviation**

"In the next five years I expect to see more solar applications, more generators, more wind power, more florescent lighting and simple things like dimmers. It is critical to

stay up to date on new technology. The Vermont Electrical Contractors Association is very helpful in that regard." **Hennessey Electric**

"We will need to attract people to the trades. There will be a gap. Hopefully, the new technologies may attract young people." **Hennessey Electric**

"We serve communities that are primarily second home owners. As such, they are bottom line oriented. The tax credits and other incentives apply on primary residences, so there is not a lot of reaction yet." **TPW Management**

"I suspect the 'green economy' will be slow to come. It will take the economy to turn to really take off. It is also dependant on upgrades to the grid and the auto industry." **New England Precision**

"We make a lighting product that uses 80% less power to produce light than a standard florescent bulb, and has no hazardous waste with a 10 – 15 year lifetime. We have been growing at 35-45% until this year. Cash is restricting growth at this point. We need investors." **LED Dynamics**

"We are a support business to distributors of periodicals, newspapers, catalogs. It is paper intensive. We are feeling some pressure, but getting consumers to a total on-line experience is not as successful yet. But, the mindset is taking hold." **Datamann**

"We have been rapidly growing. A year ago we had 51 employees, now we have 182. Installers are not a problem. We hire people with carpentry skills who also have some knowledge of electricity. We would love to have a formal learning process through established schools for such things a solar hot water, photo voltaic systems"**. John Lent, groSolar**