

**TESTIMONY OF**  
**ROBERT THELEN**  
**CHIEF TRAINING OFFICER**  
**CAPITAL AREA MICHIGAN WORKS**  
**AT THE HEARING BEFORE THE**  
**SELECT COMMITTEE ON ENERGY INDEPENDENCE AND GLOBAL WARMING**  
**ENTITLED**  
**ECONOMIC IMPACT OF GLOBAL WARMING: GREEN COLLAR JOBS**  
**May 22, 2007**

Chairman Markey, Ranking Member Sensenbrenner and distinguished members of the committee, I am Bob Thelen, Chief Training Officer at Capital Area Michigan Works! (CAMW!) in Lansing, Michigan. Our mission is: To enhance the quality and productivity of people and businesses by providing a world class workforce. CAMW!, is the agent for delivering state and federally-funded programs for employment, training, and economic development systems in the Mid-Michigan region. In my capacity at CAMW! I coordinate training with employers in our region. In addition, I train counselors and workforce development professionals in Michigan to become certified as Career Development Facilitators.

Our CAMW! Service Center has been recognized nationally as a state-of-art, one-stop center. We are recognized as the #1 Leader in Workforce Development in the region by the business community and have been awarded the *Collaborative Partnership Award* by the Michigan Department of Education.

My career, which spans over 35 years, includes a focus on Economic and Workforce Development programs. I was the director of Career and Workforce Programs at a Regional Technical Center in Michigan for 30 years. In 1996 we were named by the Governor as the Outstanding

Education and Training Provider. In addition, I operated a Statewide Career Information System for ten years which provided career and labor market information to youths and adults in Michigan.

### **What is the potential for green collar jobs in the United States?**

A new and emerging focus on environmental issues is changing the way businesses operate internally, in the products they create and in the jobs that they provide. These changes are resulting in the evolution of some jobs to include a new environmental consciousness. They are also resulting in increased focus for some jobs on highlighting and targeting environmental aspects within the corporations. It's also changing the products that some companies produce, and how they produce them.

An environmentally conscious population is looking for responsible corporations who reduce, reuse and recycle; they want to give these corporations their business. As a result, businesses are enjoying gains in brand name recognition and consumer confidence. As world recognition increases the need for environmentally friendly lifestyles, many businesses are realizing that staying in business has much to do with environmental responsiveness for consumers who are supporting products/services they deem as being environmentally friendly.

Businesses are finding out that environmentally friendly practices are good for the bottom line. These practices also increase companies' reputation for environmental action. Businesses are employing more people to research and develop methods for internal energy and waste reduction resulting in billions of dollars in savings. Jobs are growing in the area of monitoring a company's energy and material waste as well as the environmental impacts of their internal processes.

Examples of company waste reduction include utilizing new packaging designs where materials are being recycled instead of discarded. New environmentally sensitive and recyclable packaging materials are being developed for less impact on landfills. Companies are looking at new

ways to reduce energy and material waste used in product manufacturing and also in the company's business operations.

For example, companies are installing energy-efficient lighting and reducing/recycling most of their paper and raw material waste. Jobs are needed in the areas of research and design of new energy efficient systems as well as jobs that help us understand ways to recycle many of the materials that are commonly discarded in our current era of planned product obsolescence. It also means an increase in jobs for manufacturing companies who create products from recycled goods.

Automakers and other manufacturers are hiring people who know how to view products from the angle of recyclables. Recyclable parts in cars can include everything from the tires and glass to the plastics and fuels. In another business, Nike employees are designing shoes that can be disassembled easily and the pieces ground up to make playground surfaces. Starbucks is increasing their use of recycled materials for their cups.

All these changes mean that new green collar jobs are emerging within industries committed to creating and supplying these recycled goods.

Another area that is providing these green collar jobs, is the energy field where a lot of media focus has been created. Jobs are emerging as more demand is focused on alternative energy sources such as wind, tidal and solar technologies. Jobs are emerging in areas intent on replacing carbon generating power as an energy source for powering vehicles, home and office environments. Emerging jobs in biofuels continue to expand as workers at all levels of the company with knowledge of environmentally friendly processes are being employed.

The construction industry is another example of a place where "green-collar workers" are needed. For example, designers are developing communities that allow residents to buy groceries and

other products within easy walking distances of their homes. Products and services in this industry are also focused on reducing the amount of energy needed to operate modern living environments.

Because of the systemic nature of the American economy, even jobs at investment firms are evolving to meet the demand for stock portfolios that include environmentally sensitive businesses. Determining how and in what way businesses are deemed environmentally sensitive is becoming part of the skill set needed in the financial world.

New farming jobs for organically grown products focus on how to best accomplish their goals. Pharmaceutical companies are challenging employees to find “green” solutions for more natural medicines.

These rapid changes are requiring all workers to be able to retool themselves, and apply knowledge from one business or industry to better meet the needs of a focus on environmental/green issues. This is done either internally in the business where they’ve worked for a number of years or in new and emerging businesses that demand workers who have a background of knowledge and a proven set of skills.

The employees that will keep America running in the future and that will be important to the bottom line of America’s corporations are those who have an understanding of environmental needs and specific business processes related to these needs. They will be workers who can think creatively about how to meet the demands of changing situations and create methods and processes to enhance business responsiveness to our changing world.

This creativity will also be needed by workers as the pace of change increases in the job market. Depending on the research you review, we know young adults entering the work force will potentially have 8-10 separate careers during their work life. In Michigan, we have also faced the difficult tasks of working with individuals who are being displaced from their current job—

particularly manufacturing jobs. Therefore it is vital that we understand the changes that constantly occur in the labor market and how we can prepare individuals to re-enter that labor market.

Many of these “green collar jobs” are being filled by individuals with an existing set of knowledge and skills who are able to apply their skills and knowledge to a new sector of the economy i.e. green industries. One could say that to be prepared for these new green collar jobs requires that you have a set of skills and knowledge that can easily be transitioned to the new green economy.

For example, I spent a week learning about ethanol and ethanol-related jobs in January 2007. Even though there may be debate concerning the benefits of ethanol, we all are aware of the focus of ethanol in this country—especially in the Mid-West. What I came to realize was that most of the jobs in ethanol facilities are not truly “ethanol jobs” that require new skills. Of the 38 typical jobs in an ethanol facility, 32 of them fall into traditional manufacturing job classifications of: Maintenance and Repair Workers, Equipment Operators and Transportation and Material Movers. The industries in which these individuals are applying their skills and knowledge may be new; however, the necessary knowledge and skills are not entirely new. People who have the prerequisite skill sets are now applying their skill sets in these new industries. One exception to this is that anybody who desires to work in an ethanol facility would need to learn some of the unique aspects of an ethanol facility.

If you examine the various job boards that post “green jobs.” Green Job Boards list careers in science and engineering, social sciences, humanities and the arts, the professions and business. For many of these traditional job classifications, people would need to apply their proven skills and abilities within a new industry. For example, there is a job posting for a chief financial officer. The job description includes the traditional activities we would expect of a CFO—budgeting, project financing, strategic planning etc. Other postings include corporate attorney and technical service

provider. I even noticed that the company I worked for in college as a tree trimmer is now listed under *Green Industry Jobs*.

In most cases we are not preparing people for green collar jobs; we are preparing people for jobs that, at this stage in their life, apply their set of skills to needs of industry that is focused on environmental considerations. As an example the lab technician, who today is working in a brewery may chose to apply his or her set of skills to an ethanol facility—true example!

With individuals who are in transition, it is tempting to encourage them to train for the next “hot job”—whether that is in health careers, informational technology or in this case green jobs. I think we do people a disservice when we initially focus only on a specific employment sector. We need to help individuals expand their ideas and become aware of all career opportunities, including the concept of related green collar jobs. Through career research, clients narrow down to those jobs within their interest area.

So how do we address the need for these new “green jobs?”

- We must first understand, via a task analysis, what information and skills these green collar jobs require.
- If these are totally new careers, we need to determine what specific new skill sets are needed for these employees to succeed. This will naturally be dependent upon the industry sector.
- What policies are needed to steer our workforce development and educational communities?

To answer this, one of the major issues we need to address is how we inform teachers and counselors working in public schools, as well as work force development agencies, to understand these new opportunities. For example, when working with displaced workers, a key activity is helping these

workers discover how their existing skills can transfer to new jobs. For example, how does a maintenance worker in an automotive facility apply their set of skills within a “green job” market? Most work force development counselors want to ensure that clients are prepared for their next job. They achieve this by helping their clients understand their unique interests, values and aptitudes. If we are to help clients explore new and emerging green jobs, it will require quality career information which includes information we would find on O\*NET, the Occupation Outlook Handbook and other career or labor market information available through government publications. From my experience the best career information is not promotional material put out by associations related to a specific industry. We need to have quality career material developed by nonbiased professionals who understand how to analyze and describe new or emerging jobs. This information is vital whether we counsel clients in transition, high school students or college students.

With students who are currently in high school or college the time frame for understanding career possibilities is longer and the sense of urgency is not as great as with displaced workers. Many students naturally want to be involved in environmentally friendly careers. To ensure these students have as many options open as possible, when they transition to the work environment, the best we can do as educators is to provide our students with strong information on how the academics they study are used by real workers in various industries. It will be imperative that teachers learn to merge career information and experiences into traditional academic courses so that all students understand the relevance of how their academics connect with real workplace experiences. Academic relevance will help more students graduate and fill emerging and in-demand careers. Relevance will help high-achieving students select excellent in-demand opportunities. All students need a complete set of academic and technical skills before they leave our high schools and colleges.

All students need to be given opportunities to use creativity in a variety of contexts in order to be able to adapt to new and emerging jobs in a quickly changing global economy. Even the technical jobs in the sciences and engineering will require a Bachelors or advanced degrees or the completion of an apprenticeship program. Hence, for students to be successful in any career, we need to ensure that knowledge about careers and project-based experiences are included along with academic skills as a strong focus in all schools.

As stated earlier, our students will see many career changes in their lifetime. We also know, and it has been painful for us to see in Michigan, the days of working for one employer for 30 years is long past. So, along with strong skills in Math, Science and English, our students need quality career information. High academic standards are forcing traditional college track vs. vocational track students toward an all-students on academic track approach.

Often, students as well as their parents, read about “hot jobs” on a website and assume that is what their son or daughter should pursue—without regard for their interest or abilities. So, in addition to strong academic skills and knowledge of employers’ systems, we also need to ensure that quality career and labor market information is available. Developing and publishing these documents has long been the responsibility of the U.S. Department of Labor. Maintaining and updating such documents as the Occupational Outlook Handbook and the Occupational Information Network Resource Center (O\*NET) are critical if counselors are to obtain current and reliable information on these new and emerging green collar careers.

In closing I would like to reflect on what a 16 year old student told me over 35 years ago when I asked him what he wanted to do. What he said to me is as appropriate today as it was then—***“Don’t ask me what I want to do until you show me what there is to do!”***



Our responsibility is to help students connect academic studies with real jobs in today's businesses. This is especially true of new or emerging occupations, including green collar jobs. Again, that is only achieved with quality career information spelling out the skills, knowledge and abilities to be successful. Counselors and workforce development professionals are dedicated to helping our youth and adults develop their full potential and realize their personal dreams. Strong academic standards must also include components for connecting academics to the real world application of information for all students.

I would like to thank the chairman and the ranking member for recognizing the importance of developing green collar jobs. I would be happy to answer any questions from the committee.