

CHICAGOLAND
GREEN COLLAR JOBS
INITIATIVE



Chicagoland Green Collar Jobs Initiative

Building a Green Collar Workforce in Chicagoland

October 2009

TABLE OF CONTENTS

INTRODUCTION 3

THE CHICAGOLAND GREEN ECONOMY IS GROWING 5

POLICY OPPORTUNITIES 8

GREEN WORKFORCE STRATEGIES 10

RECOMMENDATIONS AND CONCLUSION 13

ACKNOWLEDGEMENTS, PHOTO CREDITS 16

ENDNOTES 17

APPENDICES 18

INTRODUCTION

Against the backdrop of challenging economic times, the emerging green economy holds the promise that growth in green collar job opportunities will provide a way to put Chicagoland residents back to work while simultaneously making our communities cleaner, healthier places to live and the world a more sustainable place. The Chicagoland Green Collar Jobs Initiative (the Initiative) was founded with the intent of organizing stakeholders in the Chicagoland region around the opportunities and resources available through green collar jobs.

The Initiative has built a regional approach because the Chicagoland region is the third largest metropolitan region in the United States, where two-thirds of Illinoisans

The emerging green economy holds the promise that growth in green collar job opportunities will provide a way to put Chicagoland residents back to work.

live and work. It is home to major business headquarters, a hub of innovation, and the gateway for trade and commerce. The economy, the workforce and the environment are all regional. Despite current economic challenges, the region will continue to drive the Midwestern economy, as well as remain an internationally recognized region that continues to grow, attract people, and support thriving industries.

In contrast to many new green jobs-related organizations that focus either on workforce development or environmental impact, the Initiative works at the intersection

of workforce development, economic development, and environmental sustainability. The Initiative is guided by a Steering Committee of 14 organizations¹ and managed by the Chicago Jobs Council.² It is a multi-organizational collaborative of partners from labor groups, community organizations, businesses, education, sustainability organizations, and environmental and workforce development non-profits. Rather than focusing only within the geographic boundaries of Chicago, the Initiative was designed as a regional effort that engages stakeholders from the broader Chicagoland area.

The Initiative's mission is to **facilitate the development of a skilled workforce that is ready to meet employer demands in the emerging green economy and to capture new employment opportunities for Chicagoland workers.** This will be accomplished through the development and promotion of a green collar workforce system that integrates green business growth, innovative workforce development strategies, and emerging environmental practices and policies into a vibrant regional economy.

Since its creation, the Initiative's work has been guided by the following priorities:

- Connecting diverse stakeholders to jointly pursue the expansion of green collar jobs in the Chicagoland region;
- Identifying employment and job training opportunities to prepare Chicagoland workers for emerging green collar jobs;
- Improving access to green collar careers for populations historically left out of the labor market;



- Fostering the creation of appropriate training programs to enable disadvantaged job-seekers to enter into green collar jobs; and
- Ensuring that new green collar jobs are quality jobs with career advancement potential.

ABOUT GREEN COLLAR JOBS

As defined by the Apollo Alliance and Green for All, green collar jobs are “well-paid, career track jobs that contribute directly to preserving or enhancing environmental quality. Like traditional blue collar jobs, green collar jobs range from low-skill, entry-level positions to high-skill, higher paid jobs, and include opportunities for advancement in both skills and wages. Green collar jobs tend to be local because many involve work transforming and upgrading the immediate built and natural environment – work such as retrofitting buildings, installing solar panels, constructing transit lines, and landscaping.” They emphasize that “spurring the creation of green collar jobs...means building a sustainable economy, where environmental goals go hand in hand with social and economic goals.”³

The Initiative has incorporated the key elements of this description into its definition of green collar jobs, which is: Green collar jobs have a positive influence on the environment and provide workers with a family sustaining income with benefits or a pathway to it, including training, upward mobility, and multiple entry points on the career pathway. They are accessible for individuals with significant barriers to employment, but not limited to them. They include local, jobs in renewable energy, al-

ternative transportation, energy efficiency, water conservation, green building, material reuse, sustainable local food systems, recycling, and others.⁴

ABOUT THIS REPORT

There is a growing body of research that explores which sectors could potentially create green collar jobs (see *Appendix A for an annotated selection of recent green jobs-related research*). To contextualize this research to the Chicagoland area, this report discusses:

- The **context for green collar jobs in the Chicago region**, highlighting estimates of the number and types of jobs that may be created or transformed, and the reported needs of local employers;
- Potential local, state, and federal **policy opportunities** that may provide openings to grow the number of green collar jobs in the Chicagoland region;
- The current structure and capacity of Chicagoland’s green collar **workforce preparation** system; and
- **Recommendations** to enhance the region’s systems to better meet the needs of employers and job seekers in emerging green collar fields.

As the field of green collar jobs is continually emerging, this paper reflects the policy and economic environment today and should serve as a tool for decision making about the future of the green collar economy. It is designed to provide insight into the opportunities to build a strong green collar economy in our region.

THE CHICAGOLAND GREEN ECONOMY IS GROWING

Several recent reports have examined the supply and demand context for green jobs in the Chicago area and across Illinois. Each has used a different methodology for estimating the potential impact of green jobs and/or green economic development. Taken together they present an informative perspective on the potential for job creation in this emerging field. In 2006, the **U.S. Conference of Mayors** ranked the Chicago Metropolitan Region the sixth largest green job center in the nation with just over 16,000 people employed in green industries.⁵ A study released in June 2009 by the **Pew Charitable Trusts** determined that Illinois had more than 2,000 green businesses, nearly 30,000 green workers in 2007, and attracted over \$108 million in clean energy-related venture capital between 2006 and 2008.⁶ **Political Economy Research Institute and Center for American Progress** report that if \$100 billion were invested nationally in green economic development over a two year period, that Illinois could expect to receive approximately \$4.4 billion. This could lead to a net creation of 83,710 jobs across the state.⁷ In addition to these estimates, additional investments from the federal, state, and local levels could potentially lead to even more significant numbers of jobs being created or transformed.

Locally, there has been more detailed analysis regarding potential green job creation within Chicago through the implementation of the Chicago Climate Action Plan (CCAP). The CCAP outlines five strategies through which Chicago can reduce its greenhouse gas emissions and prepare for the inevitable effects of climate change.⁸ Implementation of the strategies in the CCAP is expected to create new green jobs.

The Center for Urban Economic Development (CUED) at the University of Illinois at Chicago analyzed the potential employment impacts of the CCAP.⁹ More specifically, CUED used a model developed by the Center on Wisconsin Strategy and the Powell Center for Building and the Environment at the University of Florida, to estimate the number of jobs created per dollar invested in energy efficiency retrofits. The model estimates that each \$1 million investment would yield approximately 8.3 full-time year-long jobs for single-family residential retrofits. This model also approximates the distribution of jobs by level, with 66% attributed to entry-level or semi-skilled posi-

The types of occupations with the most growth

potential in the short term are energy efficiency

measure installers and energy efficiency auditors.

tions. Overall, through the implementation of the CCAP, the model predicts a demand for approximately 2,500 new weatherization workers (2,000 energy efficiency measure installers and 400-500 energy auditors). Though the number of auditors needed is smaller in nominal terms, in relative terms the impact of CCAP on this occupation will be significant because there are currently very few certified auditors in the greater Chicago area.

Also on the local level, the Initiative has gathered information regarding business trends and employment opportunities in the region. In partnership with the Chicago Sustainable Business Alliance, **the Initiative** conducted research on green businesses in Cook, Lake, and DuPage Counties. This information was gathered to assess how



businesses believe the “green movement” is affecting them, determine the business sectors with unmet labor needs, and to assess what types of job-training programs may need to be developed to meet their needs.¹⁰

Businesses point to a number of factors that contribute to their relative levels of success in the emerging green economy. Results from the employer survey indicate that businesses with fewer than 50 employees are the ones earning the majority of their profit through green products and services. Increased public awareness of sustainability and green issues, public programs, and governmental support were all seen as dominant factors influencing business growth. The results also indicate the myriad ways that the “green movement” is affecting businesses across multiple sectors and the potential types of jobs they may need to fill as a result (see the following page for further discussion of employers’ responses to the emerging green economy).

The research conducted by CUED coupled with the information gathered from local employers suggests the types of occupations with the most growth potential. Specifically, the greatest potential in the short term is for energy efficiency measure installers and energy efficiency auditors (see sidebar at right for more details about the types of job projected to grow within the energy efficiency retrofitting sector).

This is important to bear in mind as we consider the supply of workers available to fill these occupations. To effectively meet employer demands in the occupations projected to grow or be transformed through the growing green economy, the Chicago region will need to tap into one of its most valuable assets – its residents and workers.

Job implications of expanded energy efficient retrofitting work

As public and private investments in energy efficiency retrofitting expand, the industry overall will grow. This will lead to the creation of new occupations as well as the transformation of existing ones. The types of occupations associated with this work are described below. As identified by the Initiative, the two particular occupations with the most growth potential are **assessors / auditors and energy efficiency measure installers / laborers**.

- A **certified assessor / auditor** performs diagnostic tests and makes observations on buildings to determine what remedial actions need to be taken to improve the energy performance of the building. This person returns after completion of the weatherization work to evaluate the quality of the remedial activity.
- A **contractor** is hired to do the work prescribed by the assessor.
- A **site supervisor**, likely an employee of the contractor, manages the workforce and materials within the facility.
- The **energy efficiency measure installers or laborers** do the remedial work (insulation, air sealing, window/door replacement, etc.).

Business perspectives and responses to the emerging green economy

As reported by employers who responded to the Initiative's survey, the "green movement" presents significant potential opportunities for small businesses and entrepreneurs. Below are illustrative responses from selected employers.

- The "green movement" has increased the attention paid to efficiency and has created more interest in the clean energy we produce.
- The "green movement" brings us clients looking for the most sustainable printing options. It has definitely increased our business. In past years we have had to explain sustainability to clients, now they are familiar with the term.
- Although most clients are still interested in bright green grass and "neat" looking yards, we have seen increased interest in native plants, organic lawns, and open natural space. People are more aware of their environmental footprint on all levels and this affects business in a positive way.
- The trend in the construction industry toward green buildings has pushed us to become educated on this issue and develop strategies for this type of construction. It is the future of the construction business.
- In general, there is higher public awareness about environmental issues, which creates more business opportunities in the green economy.

More specifically, businesses highlighted many areas of potential job growth, which may indicate fields in which new training programs should be developed. Some of the green collar jobs in which the businesses surveyed project labor shortages are:

- Construction engineers
- Machinery operators
- Technicians trained to integrate efficiency improvements within existing building systems
- Energy auditors
- Specialty installers, designers, and subcontractors trained in green materials application and installation (such as HVAC, Windows, and Roofing Systems)

The following are examples of emerging and growing businesses that form the expanding network of Chicago-land's green economy:

- The **ReBuilding Exchange** is dedicated to diverting construction waste, providing low-cost building materials to Chicago residents, creating living-wage green collar jobs, protecting natural resources, reducing pollution, and creating healthy and sustainable communities. This is accomplished by providing a marketplace for the donation and re-sale of used building materials and by creating a community center where residents can learn about re-use and participate in job-training programs and a range of community service projects.
- **Solar Service** primarily focuses on solar/thermal systems which provide hot water to homes and assist in space heating. As residential usage of solar and green technologies are becoming more mainstream and there are incentives for consumers to install such systems, Solar Service finds itself well positioned to respond to increased demand from consumers.
- **Stinnette & Brown, LLC** is a minority and women-owned enterprise that strives to "green" urban communities in the Chicago area while also creating green collar jobs. They operate in four core areas: 1) real estate development, 2) real estate construction, 3) green consulting, and 4) green property management. And, they provide their clients with access to a diverse and well trained workforce.
- **Earth Wind and Solar Energy, LLC** uses multiple forms of renewable energy to develop customized systems to meet their clients' needs. This small business anticipates future growth as long as consumers' demand for using renewable energy continues to increase. They currently have the greatest need for photovoltaic and thermal system installers and offer a range of in-house trainings to prepare workers for these jobs.

Emerging climate legislation and policy; funding for environmental programs; and higher environmental standards are all policy opportunities to accelerate green collar jobs growth.

POLICY OPPORTUNITIES

Three areas of policymaking—emerging climate legislation and policy; increased funding for environmental programs; and higher environmental standards—will continue to have an impact on the growth and transformation of green collar jobs, as well as the demand for workforce education and training to prepare people for them. These areas all build on the progress that has resulted from Illinois’ national leadership in establishing strong electric and natural gas energy efficiency portfolio standards for the state’s utilities. These standards have already resulted in new investments that encourage industry and job growth.

EMERGING CLIMATE LEGISLATION AND POLICY

Federal energy policy is shifting away from incentivizing energy sources that rely on fossil fuels and is moving towards investment in renewable energy sources and efficiency strategies. The proposed American Clean Energy and Security Act (ACES) is a major step toward policies that encourage a transition to a clean energy economy. ACES includes: a cap-and-trade program to reduce greenhouse gas emissions 17 percent by 2020; energy efficiency incentives for buildings; and new renewable energy requirements for utilities. The legislation has already passed the U.S. House of Representatives and is currently under consideration by the U.S. Senate.

NEW RESOURCES FOR ENVIRONMENTAL PROGRAMS

Investing in green programs and initiatives has become a priority at the federal and state level in recent months. When Congress passed the American Recovery and Reinvestment Act of 2009 (ARRA) in February, it included nearly \$43 billion for investments in energy programs. These included: a twenty-fold increase in funding for the

federal Weatherization Assistance Program; funding for energy efficiency retrofits to federal buildings; significant resources for research and development for renewable energy; and resources to modernize the country’s electric grid. In addition, the Illinois General Assembly recently passed a \$31 billion capital investment program that includes a number of green investments. They include a new Urban Weatherization Initiative; investments in clean water; new funding for public and sustainable transit; and investments in land clean up and conservation. These planned investments total nearly \$6 billion and are detailed below.

New Investments	Funding
Weatherization Assistance Program for Low-Income Persons (federal – ARRA)	\$242,526,619
Energy Efficiency and Conservation Block Program (federal – ARRA)	\$112,175,600
Building Energy Efficiency (state capital bill)	\$4,375,000,000
<ul style="list-style-type: none"> \$2.2 billion for state facilities construction and renovation, includes new LEED buildings and energy efficiency upgrades; \$1.7 billion for school construction, which must meet LEED Silver certification; \$425 million for a new Urban Weatherization Initiative; \$50 million for school energy efficiency grants 	
Sustainable Transportation (state capital bill)	\$864,000,000
Land Clean Up and Conservation (state capital bill)	\$201,000,000
Clean Water Projects (state capital bill)	\$160,000,000
Renewable Fuels (state capital bill)	\$25,000,000
Health and Well-Being (state capital bill)	\$15,000,000
<ul style="list-style-type: none"> Including lead abatement and fresh foods programs 	
TOTAL	\$5,994,702,219

CHANGES TO ENVIRONMENTAL STANDARDS

The state of Illinois, municipalities in the Chicago metropolitan area, and industry leaders are all implementing higher environmental standards that will impact multiple industries. Illinois is a national leader with strong electric and natural gas energy efficiency portfolio standards for the state's utilities. Illinois has also joined the ranks of states adopting the most up-to-date version of the model commercial and residential building codes. However, like most states that have adopted advanced building codes, a significant gap exists between adopting these policies and their effective implementation and enforcement.

In September 2008, the City of Chicago adopted the ambitious Chicago Climate Action Plan (CCAP) that outlines multiple strategies for the City, businesses, and residents to undertake to reduce carbon emissions across the city. Other governments and municipalities in the region have adopted similar plans. The City of Evanston approved a community-developed Climate Action Plan¹¹ in November 2008 and is currently considering a Green Building Ordinance that requires large commercial facilities to meet robust green building standards. In 2009, Lake County adopted the Strategy for a Sustainable Lake County¹² which includes both short- and long-term environmental

Each of these policy areas will result in job growth across multiple industries, transform existing occupations across a number of sectors, and have implications for the delivery of workforce education and training.

initiatives to address issues such as storm water management, land use planning, and economic development.

There are also public and private voluntary "beyond-code" initiatives. These include the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating systems; the ENERGY STAR® program run by U.S. Environmental Protection Agency and the U.S. Department of Energy (DOE); the U.S. DOE's Building America Program; and the National Association of Home Builders Green Building Standard. Additionally, organizations such as the Residential Energy Services Network (RESNET®) and the Building Performance Institute (BPI) specify guidelines for building-energy auditing. And, a

collaboration led by the U.S. Green Building Council – Chicago Chapter is in the process of collecting data regarding the post-occupancy performance of LEED projects to assess building performance and underscore the importance of tracking performance over time.

IMPLICATIONS FOR WORKFORCE DEVELOPMENT

Each of these policy areas will result in job growth across multiple industries, transform existing occupations across a number of sectors, and have implications for the delivery of workforce education and training. Already the state estimates that ARRA investments will create and save 148,000 jobs in Illinois over the next two years.¹³ In addition the state capital bill aims to create and save more than 400,000 jobs over the next six years. Both the federal and state investments include significant green provisions that will lead to an increase in the demand for a trained green collar workforce. If the American Clean Energy and Security Act (ACES) is ultimately signed into law, the job creation and transformation underway in our region will only increase in size and pace.

Local communities also influence the size and scope of the green collar economy in the region. For example, the CCAP promotes requirements that new or significantly renovated construction projects meet more stringent energy-efficient building codes. This can impact employment in the region as existing jobs will adapt to new strategies and techniques; new jobs will come on line as the market for these strategies and techniques expands; and a potential ripple effect could result from more spending by consumers who experience energy savings.

The change in required building standards combined with industry practices that go "beyond-code" will not only transform and grow jobs in these industries; they will also have a direct impact on the workforce development strategies necessary to prepare workers for those occupations.

Based on emerging climate legislation and policy, increased funding for environmental programs, and higher environmental standards, many jobs in multiple industries will be transformed over time. However, in the short term, the Initiative has identified energy efficiency measure installers / laborers and assessors / auditors as the two occupations with the most immediate growth potential.

Chicagoland is positioned to expand green workforce strategies by building on its current workforce development system and experience.

GREEN WORKFORCE STRATEGIES

As climate policy, energy funding, and environmental standards drive job creation and impact the workforce education and training resources, the Chicago metropolitan region is well-positioned to respond and meet the emerging challenges for effective green collar workforce preparation. Evidence of the region's ability to respond to emerging opportunities includes:

- **Strong regional workforce development infrastructure:** The region has a long history of strong workforce development organizations and collaborations. Eight workforce investment areas in the region collaborate as part of the Workforce Boards of Metropolitan Chicago. A number of the region's twenty community colleges have emerged as leaders in the Illinois Community College Sustainability Network.
- **Track record in developing sector-specific workforce strategies:** The region's workforce and education systems have a track record responding to industry-specific workforce needs through sectoral strategies. In the health care, manufacturing, and transportation industries, partnerships that include employers, educational institutions, community-based organizations, and local workforce investment boards have developed workforce development pipelines that provide growing businesses with skilled workers. Sector projects build strong, sector-specific workforces and identify the gaps in the workforce development infrastructure that require additional development.
- **Experience in green curriculum development:** Local community college leaders and Initiative Steering Committee members have collaborated with workforce development providers to determine the skills and knowledge necessary for jobs in weatherization. They have developed an open-source curriculum outline for these occupations. Subsequently, a local training entity received a federal grant to expand this work, which will result in open-source weatherization training curriculum materials for teachers and students (such as manuals and facilitator guides). These can continue to be built upon and piloted in the near future.
- **New resources coming into the Chicagoland region:** Stakeholders across the region are applying for federal green jobs-related grants through local, regional, and national partnerships that have the potential to bring new resources to the Chicagoland area. Illinois prioritized some ARRA funding for green collar workforce strategies and the new Urban Weatherization Initiative will include funding for workforce preparation and training. Locally, the City of Chicago has already set aside a significant portion of its ARRA funding for green workforce strategies.
- **Existing provider base for green workforce strategies:** There are many workforce education and training providers with programs to prepare workers for green-specific occupations and industries. *See sidebar C on the following page for a table highlighting some emerging programs. (See the following page for a table highlighting some emerging programs; see Appendix B for a more complete list of training programs in the Chicagoland region)*

Emerging workforce education and training programs

Organization (Program)	Program Description
Chicago Botanic Garden (Windy City Harvest)	Provides instruction in sustainable horticulture and urban agriculture to young adult residents of Chicago
Chicago Department of Environment (Greencorps)	Trainees receive a grounding in horticulture practices, carpentry, and equipment operation, as well as learning about specialized topics such as electronics recycling, environmental site remediation, and home weatherization through providing direct service to residents and communities throughout Chicago
PC Rebuilders and Recyclers (Computers for Schools)	Recycling business that hires formerly incarcerated individuals to sort, repair, and recycle unwanted electronics from homes and businesses
Growing Home	Develops innovative urban agriculture initiatives with economic development potential and stimulates economic opportunity via its organic agriculture social enterprise while providing job training and employment for individuals with multiple barriers to employment
Local Economic and Employment Development Council (Entry Level Industrial Skills Training)	Program includes math, precision measurement and blueprint reading, workplace safety, basic building trade skills in carpentry, electrical and plumbing, and maintenance and repair fundamentals – which are all taught with an environmental focus
Michael Barlow Center at St. Leonard's Ministries	Job training program for construction and building maintenance skills, with an emphasis on energy efficiency
Midwest Energy Efficiency Alliance (Building Operator Certification)	Training and certification program for operations and maintenance staff working in institutional, commercial, and industrial buildings; program covers topics relating to whole building systems, energy conservation, HVAC systems and controls, efficient lighting, environmental health and safety regulations, indoor air quality, and facility electrical systems
North Lawndale Employment Network (Sweet Beginnings)	Sweet Beginnings manufactures the Beeline brand of skin care products while providing on-the-job training in inventory control, basic sales and marketing skills, product manufacturing, and shipping and receiving
OAI, Inc. (Minority Worker Training)	Program targets historically under-represented minority adults who live in environmentally degraded communities
The Enterprising Kitchen	Provides a six-month program in which low-income women receive life skills seminars, computer literacy training, personal financial literacy, and individual career counseling, while working in all facets of the business, which manufactures natural soap and bath products
U.S. Green Building Council – Chicago Chapter (Nuts and Bolts for Contractors)	Training is designed to educate the construction community about green building procedures and strategies so they have the tools they need to build a LEED certified structure
Wilbur Wright College (Building Energy Technology)	This 6-course, 21-credit hour Certificate Program provides the student with background in both the concepts and the practical applications of energy efficiency, alternative energy, and system operations methods and technologies
WomanCraft	This social enterprise trains program participants to use recycled materials to create unique and sustainable paper products



As the region positions itself to implement new strategies and attract resources, a number of challenges to implementing effective workforce education and training have emerged. These include:

- Ensuring access and career advancement for low-skill, low-income workers: In order to be successful, green collar workforce strategies must include a continuum of services in order to reach low-skill, low-income residents. Policymakers can build from ARRA priorities that support strategies designed to bridge from entry-level, lower-skilled jobs to training in higher level skills that can eventually lead to high-skilled, middle-class jobs with benefits. Green collar workforce strategies must clearly outline the multiple-entry points and job types available in a particular field. Though not all people who participate in green collar job training will start at the lowest rung and proceed to the highest skilled jobs, this possibility must be available to provide opportunities for people at every skill level. *Examples of education and career path outlines for energy efficiency measure installers and auditors are included in Appendix C.*
- Understanding supply and demand: As with other industries, effective workforce development in emerging and changing green industries will depend upon having a clear understanding of the demand for new skills and new workers in order to prepare both existing skilled workers (both employed and unemployed), as well as new workers for new jobs. As well-developed sectoral workforce strategies have shown, aligning workforce supply and demand will ensure that new workforce programs go beyond recruitment strategies to include well-designed training and education components.
- Lack of comprehensive strategy for jobs and training in the weatherization industry: The Chicago region does not have a standardized workforce development strategy for retrofitting jobs, but a comprehensive strategy does not exist elsewhere either. Since it is a fast-growing segment within the construction and renovation industry, some level of coordination will be necessary in order to avoid the creation of multiple varied approaches for training, job placement, and supportive services.
- Limited attention to job quality: Policymakers must pay close attention to the quality of green collar jobs including wage standards, benefits, and health and safety conditions. Public investment in green economic and workforce development can be leveraged to advance a commitment that green collar jobs are good jobs. There is an opportunity to build on ARRA investments that require job quality standards in order to promote job quality across the industry. In addition, using a sectoral workforce development approach in green industries can provide an opportunity to address recruitment, job preparation, training quality, and job quality within a single initiative.

RECOMMENDATIONS AND CONCLUSION

Chicagoland Green Collar Jobs Initiative partners have worked to advance effective strategies to develop green collar jobs by using the collective resources of community colleges, government agencies, community-based organizations, economic development groups, environmental sustainability groups, and employers. The following recommendations – targeted to workforce development and environmental policy makers, industry experts, and other workforce and economic development stakeholders – highlight areas where action needs to be taken in order to strengthen the green collar workforce across the region. Though all of them are equally important, the Initiative will focus its efforts on achieving the first three. The final three recommendations will be supported by Initiative Steering Committee members and Partners, with the Initiative providing a venue for information sharing and discussion.

1. Prioritize collaboration and partnerships

Since the emerging green economy depends on strong economic and workforce development systems coupled with strong environmental standards and policy, collaboration and the use of partnerships will be a key to the region's success. Proceeding along parallel paths without meaningful collaborations will lead to the development of fragmented systems that are not well positioned to respond to the workforce development opportunities presented by the emerging green economy. Collaborations are an opportunity to avoid familiar challenges in

the workforce development system. For example, collaborative approaches can:

- Include different types of training providers—community colleges, community-based organizations, unions, and employers—avoiding unnecessary competition and duplication of services;
- Provide opportunities to align program development and leverage partner expertise;
- Coordinate to develop strategies that respond to both the training needs of individuals entering green collar employment as well as helping others to advance along a career path; and
- Build pathways for individuals who experience barriers to jobs and advancement opportunities in certain occupations or industries.

2. Create a process for ongoing standardization of curriculum for green training programs

The Initiative partners and other stakeholders have successfully begun a process to develop a standard curriculum for training individuals for the fast-growing weatherization industry. This process involves a range of stakeholders from the academic and workforce development fields as well as contractors who do residential retrofits. Involving contractors was a critical component of the process as it ensures that the standards adopted are in line with the skills that employers in the industry require of their work-



ers. As other green industries grow and new occupations emerge or are transformed, it will be important to have a focused and strategic approach to the development of new training curricula. We recommend taking what has been learned in the development of the standardized weatherization curriculum and building an ongoing process amongst key stakeholders, including employers, in each industry.

3. Ensure comprehensive workforce strategies to engage low-income, low-skill workers

Green workforce programs are no different than other workforce strategies and should be part of a broader effort to create career ladders. Emerging green collar occupations have great potential to integrate classroom and hands-on learning. In addition, utilizing an “earn and learn” approach that combines paid work experience with skill building is one of the best ways to engage low-income, low-skill individuals who need to continue to work while gaining new skills. At a minimum, the following key criteria for training must be considered in order to create successful workforce development strategies for the new green economy.

- Clear definition and understanding of job title and required skills
- Relevance of training curriculum for intended skill set and job type
- Inclusion of OSHA and environmental performance training

- Qualifications and experience of training instructors
- Opportunity for hands-on learning at training sites
- Social service support systems (transportation assistance, work readiness training, stipends, etc.) available to trainees
- Applicable certifications issued
- Explanation of a career ladder which articulates additional training available to advance trainee skills and career success

4. Establish a standard weatherization process

The weatherization industry is quickly growing and will further expand with the influx of new resources and the adoption of energy efficiency policies. A formalized structure for weatherization would better prepare this industry for success and lead to the long-term transformation of the construction market. It will also mean that jobs in the retrofit market will be filled with properly trained workers who can deliver the predicted energy savings identified through the building energy audit. The Initiative recommends using the model for a system of standardization that has been in place for asbestos and lead hazard deconstruction and renovation projects since the 1980s through the Asbestos Hazard Emergency Regulation Act. The intent of this system was to reduce, as far as possible, the risks to workers and building occupants of removal and repair of asbestos and lead containing materials by regulating the industry so that the work was done in a safe manner. The implementation has resulted in greatly reduced exposures to workers and building oc-



occupants from lead and asbestos hazards. See Appendix D for an outline of a standardized weatherization process based on this model.

5. Promote the development of integrated green workforce and economic development strategies

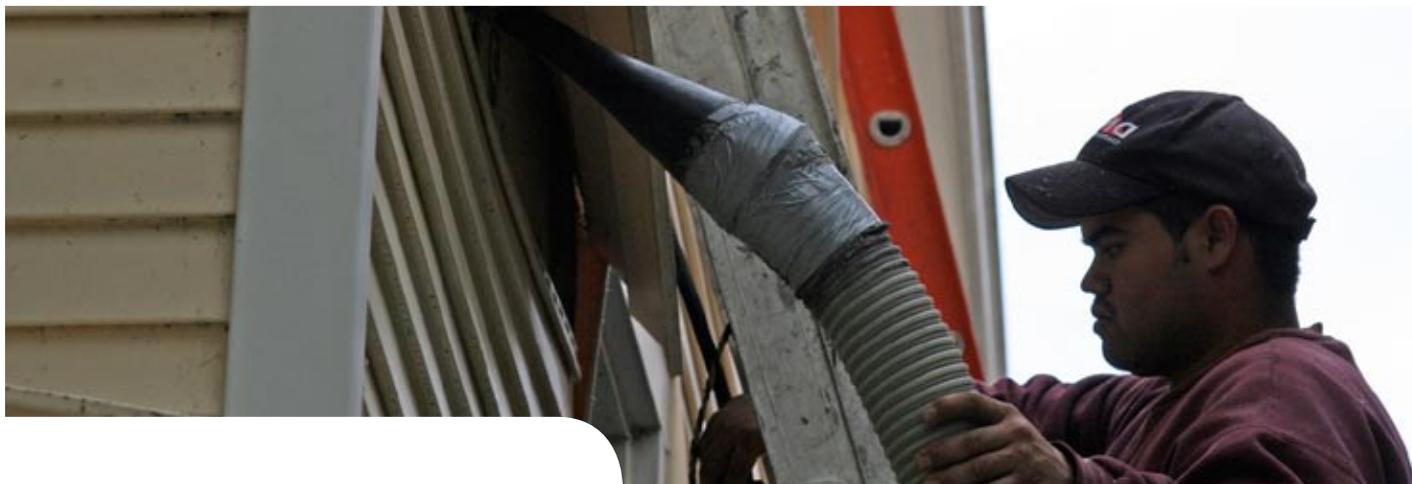
As policy opportunities accelerate demand for energy efficiency work and other green industries, we recommend both building workforce incentives into new environmental policy and investments, as well as prioritizing green industries for workforce development services. For example, policymakers should include resources for workforce development in new green development projects and prioritize those that have strong job creation potential. Resources can be deposited into the new *21st Century Workforce Development Fund* created by the legislature under HB 852. This fund prioritizes workforce development strategies for green industries.

6. Establish minimum common building standards

Building retrofits and the construction of new energy-efficient buildings will progress with or without standardization, but without high standards for performance and worker training there is also a danger that the work will not accomplish all possible energy savings. Given the current drive for weatherization of the built environment

through ARRA, the state capital bill, and local building standards there is a need to build common standards in order to avoid wasting resources, maximize efficiency improvements, and reduce risk to workers and building occupants.

The Chicagoland Green Collar Jobs Initiative will work with its Partners toward the implementation of these recommendations in order to continue building a green economy that is accessible to a range of workers.



ACKNOWLEDGEMENTS

The Initiative would like to thank its Steering Committee, Partners, and funders for their support and insight as this paper was drafted. The Initiative would like to offer a special thanks to Wilbur Wright College, under the guidance of Dr. Victoria Cooper, and the CAPSTONE team from the University of Illinois at Chicago (Danielle Cheatom, Bill Vassilkas, and Cassandra Fontina) who conducted the bulk of the interviews for the workforce inventory; and Adrian Esquivel who assisted with multiple aspects of researching and drafting this document. Finally, the Initiative would also like to thank the Grand Victoria Foundation and the Field Foundation of Illinois for their support of this report, especially Sherri Moses and Kim Riordan, for their insight and advice.

For more information or questions regarding this report, please contact either Jennifer Keeling (jennifer@cj.net) or Carrie Thomas (carrie@cj.net) at the Chicago Jobs Council.

PHOTO CREDITS

COVER: Greencorps (left and right), LEED Council (center)

PAGE 4: City Farm, Janet Dzieszinski

PAGE 6: LEED Council

PAGE 12: City Farm, Janet Dzieszinski

PAGE 14: Kevin Dick

PAGE 15: Building Materials Reuse Center, Dave Hampton

PAGE 16: Kevin Dick

PAGE 23: Greencorps

ENDNOTES

- ¹ BIG: Blacks in Green, Chicago Department of Environment, Chicago Federation of Labor Workers Assistance Committee, Chicago Jobs Council, Christy Webber Landscapes, Delta Institute, e-One, Local Economic and Employment Development Council, Midwest Energy Efficiency Alliance, North Lawndale Employment Network, OAI, Inc., Sierra Club – Illinois, U.S. Green Building Council – Chicago Chapter, and Wilbur Wright College.
- ² The Chicago Jobs Council is a 28-year old policy and advocacy organization that works with its members to ensure access to employment and career advancement opportunities for people living in poverty. For more information, go to www.cjc.net.
- ³ The Apollo Alliance and Green for All, *Green-collar Jobs in America's Cities: Building Pathways out of Poverty and Careers in the Clean Energy Economy*, 2008.
- ⁴ This definition was adapted from the North Lawndale Employment Network, an Initiative Steering Committee member and an organization that works to create environmentally sustainable and socially just communities.
- ⁵ Global Insight, *U.S. Metro Economies: Green Jobs in U.S. Metro Areas* (a report prepared for the United States Conference of Mayors and the Mayors Climate Protection Center), October 2008.
- ⁶ The Pew Charitable Trusts, *The Clean Energy Economy: Repowering Jobs, Business, and Investments across America*, June 2009.
- ⁷ Center for American Progress and Political Economy Research Institute, *Green Economic Recovery Program: Impact on Illinois*, September 2008.
- ⁸ For more information go to www.chicagoclimateaction.org.
- ⁹ Schrock, Greg and Sundquist, Eric, *Potential Workforce Impacts of the Chicago Climate Action Plan: Quantitative and Qualitative Assessments*, University of Illinois at Chicago, Center for Urban Economic Development, January 2009.
- ¹⁰ Quantitative and qualitative information was collected primarily through an online survey. This survey was one of convenience, with direct requests going out to businesses in the extended network of the Initiative. Additionally, phone conversations and email correspondences were conducted with approximately 40 businesses to gather follow-up information.
- ¹¹ www.cityofevanston.org/global/green/documents/ECAP_000.pdf
- ¹² www.lakecountyil.gov/AboutOurCounty/Environment/GoingGreen/Documents
- ¹³ www.recovery.illinois.gov

APPENDICES

APPENDIX A: SELECTED GREEN JOBS RELATED RESEARCH

The Apollo Alliance and Green for All, *Green-Collar Jobs in America's Cities, Building Pathways out of Poverty and Careers in the Clean Energy Economy*, 2008. Assuming that the United States' emerging green economy faces a potential shortage of labor in the near future, this report attempts to identify these gaps and presents strategies for communities to address these shortages. Highlighted are ways to link existing workforce development partnerships to newer greener job opportunities.

City of Chicago, *Chicago Climate Action Plan*, September 2008. Building on research over the last 15 years that has increased our understanding of global warming and the city's role in addressing it, the Chicago Climate Action Plan identifies five major strategies Chicago can take to cut its green house gas emissions.

The Delta Redevelopment Institute. *Green Economic Development Strategies for the Chicago Region*, June 2009. This report examines the potential that new policy developments and incentive programs have in the creation of jobs and private-sector investment in the Chicago region.

Durning, Alan and Langston, Jennifer, *Green-Collar Jobs Realizing the Promise*, Sightline, 2009. This primer explains what makes a job "green," how investment in clean energy creates jobs, and how leaders in the Northwest can foster a green-collar workforce in their region of the country.

Furrey, Laura A., Nadel, Steven, and Laitner, John A., *Laying the Foundation for Implementing a Federal Energy Efficiency Resource Standard*, American Council for an Energy-Efficient Economy, March 2009. Detailing the need and an implementation plan for an Energy Efficiency Resource Standard this report examines the importance of this mechanism to encourage investment in greater levels of energy efficiency.

Gereffi, Gary, Dubay, Kristen and Lowe, Marcy, *Manufacturing Climate Solutions, Carbon-Reducing Technologies and U.S. Jobs*, Center on Globalization, Governance & Competitiveness at Duke University, 2008. This study explores the supply chain of various industries, identified as beneficial towards the climate, and their potential for economic growth.

Global Insight, U.S. Metro Economies: *Green Jobs in U.S. Metro Areas*, October 2008. This paper establishes a current count of Green Jobs in the U.S. economy, looks at their distribution across metropolitan areas, outlines areas of potential future growth, and forecasts potential growth under a set of specific scenarios.

Good Jobs First, *High Road or Low Road? Job Quality in the New Green Economy*, February 2009. This report looks at the necessity to focus on quality of green jobs as the quantity of them increases. While there has been an assumption that green jobs will be good jobs, that theory is tested by exploring the traditional industry sectors that contain newer, greener jobs.

Keaton, Elise, Sundeen, Matt, and Leiker, Travis, *Developing Colorado's Green-collar Workforce*, Center for Policy Entrepreneurship. Understanding the trends towards greener economic development emerging across the country, this report explores Colorado's unique position for attracting new green investment. Specific recommendations for green workforce development are included.

***Living Cities, Green Cities: How Urban Sustainability Efforts Can and Must Drive America's Climate Change Policies*, May 2009.** This report showcases and supports the innovative ways that cities are creating an equitable green economy. It reviews what cities have accomplished and identifies areas in which their efforts have fallen short.

Minnesota Department of Commerce, *Green Economy Report to the Minnesota Legislature on State Loan and Grant Programs that Advance the Green Economy*, January 2009. The Minnesota Department of Commerce's Office of Energy Security with assistance from the Minnesota Department of Employment and Economic Development established guidelines used by state agencies to identify grant and loan programs that have potential to significantly advance the growth of the green economy.

The Pew Charitable Trusts, *The Clean Energy Economy: Repowering Jobs, Business, and Investments across America*, June 2009. This research shows that the emerging clean energy economy has grown considerably, extending to all 50 states. Looking forward, the clean energy economy has tremendous potential for growth, as investments continue to flow from both the government and private sector and federal and state policy makers increasingly push for reforms that will both spur economic renewal and sustain the environment.

Pinderhughes, Raquel, *Green Collar Jobs: An Analysis of the Capacity of Green Businesses to Provide High Quality Jobs for Men and Women with Barriers to Employment*, 2007. This report describes a category of jobs with potential to improve the lives of those facing poverty and unemployment: green collar jobs. It includes an assessment of the feasibility of these jobs in the Bay Area, along with transferable standards and potential job training and placement models.

Pollin, Robert, Garrett-Peltier, Heidi, Heintz, James, and Scharber, Helen, *Green Recovery: Program to Create Good Jobs and Building a Low-Carbon Economy*, Political Economy Research Institute and Center for American Progress, September 2008. This report examines the current slowdown of the economy and outlines a green economic strategy to respond to the rising prices of oil and unemployment rate. It outlines a green recovery program to strengthen then the United States economy.

Pollin, Robert, Garrett-Peltier, Heidi, Heintz, James, and Scharber, Helen, *Green Economic Recovery Program: Impact on Illinois*, Center for American Progress and Political Economy Research Institute, September 2008. This fact sheet details the impact on Illinois based on a national report that outlines a green economic recovery program to strengthen the U.S. economy over the next two years and leave it in a better position for sustainable prosperity.

Pollin, Robert and Wicks-Lim, Jeannette, Garrett-Peltier, Heidi, *Green Prosperity: How Clean-Energy Policies Can Fight Poverty and Raise Living Standards in the United States*, Political Economy Research Institute, June 2009. The report finds that investments in a clean energy economy can significantly drive down the unemployment rate and provide job opportunities to Americans across skill and education levels. Through increased employment and lower energy bills and transportation costs, the standard of living for low-income people in particular would rise.

Pollin, Robert and Wicks-Lim, Jeannette, *Job Opportunities for the Green Economy: A State-by-State Picture of Occupations that Gain from Green Investments*, Political Economy Research Institute, 2008. Focusing on six key strategies to tackle the problem of global warming, this report seeks to identify what types of jobs are needed to build the green economy in the U.S.

Scarpa, Juliet, *A Growing Green Economy: Opportunities of Tomorrow*, Seattle Jobs Initiative, March 2009. This report provides an overview of the current research on the green economy, including jobs, industries, and market outlook, with a particular focus on opportunities and obstacles in the Puget Sound region.

Schrock, Greg and Sundquist, Eric, *Potential Workforce Impacts of the Chicago Climate Action Plan: Quantitative and Qualitative Assessments*, University of Illinois at Chicago, Center for Urban Economic Development, January 2009. This report examines Chicago Climate Action Plan's five strategy areas to assess their respective job and workforce impacts. The purpose is to identify areas where an economic and workforce development strategy might be targeted to ensure a sufficient supply of skilled workers, and at the same time open up pathways to "green collar" jobs and careers for disadvantaged segments of the Chicago community.

The United States Conference of Mayors and the Mayors Climate Protection Center, *Current and Potential Green Jobs in the U.S. Economy*, 2008. This report examines the macro and micro level economic benefits of the "Green Economy" (economic activity which is devoted to the reduction of fossil fuels, the increase of energy efficiency, and the curtailment of greenhouse gas emissions).

White, Sarah and Walsh, Jason, *Greener Pathways: Jobs and Workforce Development in the Clean Energy Economy*, Center on Wisconsin Strategy (COWS), the Workforce Alliance and the Apollo Alliance, 2008. This report details current economic and workforce development opportunities in three industries: energy efficiency, wind, and biofuels and explores federal and state resources to capitalize on these incentives.

APPENDIX B: INVENTORY OF GREEN COLLAR TRAINING PROGRAMS

Organization names are hyperlinked for quick reference.

Organization	Program	Sector	Location
Angelic Organics	Farmer Training Program	UAH	Caledonia, IL and Chicago, IL
Bickerdike Redevelopment Corp/ Humbolt Construction Co	Construction apprenticeship program	BCOM	Chicago
Breaking Ground	Cleanstreet, Manufacturing Training Center, Contractor's Coop	BCOM/UAH	Chicago
Building & Construction Trades Council of Cook County	Apprenticeship programs (Heat & Frost, Iron Worker, Electrician, Painter/Decorator, Roofer, Carpenter, and more)	BCOM	Chicago and Cook County
Center for Employment Training	Building Maintenance and HVAC Training	BCOM	Chicago
Chicago Botanic Garden	Windy City Harvest/Sustainable Horticulture & Urban Agriculture Certificate Programs	UAH	Chicago
Chicago Botanic Garden	Horticulture Certificate Programs (8)	UAH	Cook County, IL
Chicago Christian Industrial League	Landscape Training Program	UAH	Chicago
Chicago Department of Environment	Greencorps	UAH; EE; BCOM	Chicago
Chicago Department of Environment	Chicago Center for Green Technology	BCOM; UAH; EE; AE; Env.	Chicago
Chicago Professional Center	HVAC and Electrical Training	BCOM; EE; AE	Lake County, IL
Chicago Women in Trades	Technical Opportunities Program	BCOM	Chicago
Coalition for United Community Action - ORTC Inc.	Carpentry Apprenticeship Preparedness Training Program	BCOM	Chicago
College of DuPage	Horticulture Certificates (6)	UAH	DuPage County, IL
College of Lake County	Horticulture Certificates (4)	UAH	Lake County, IL
College of Lake County	Workforce and Professional Development Institute/ Solar Thermal, PV and Wind Training	AE	Lake County, IL
Construction Careers Council of ACE Tech	New Skill Builders Program	BCOM	Chicago
Cook County POET	Boot Camp	BCOM	Chicago
Coyne American Institute	Training in HVAC, electrical construction and maintenance	BCOM	Chicago
Dawson Technical Institute (Kennedy-King College)	Construction Technology Center - Certificate Programs: HVAC; Electrical	BCOM	Chicago
Fuller Park Development Corporation	Training in construction and weatherization	EE; BCOM	Chicago
Gordie's Foundation Inc.	Carpentry and Home Improvement Techniques	BCOM	Chicago
Growing Home	Agriculture Training Program	UAH	Chicago
IBEW NECA Technical Institute	Journeyman Training in Renewable Energy	BCOM; AE	Cook County, IL
Illinois Department of Commerce and Economic Opportunity	Building Industry Training and Education Program	BCOM; EE; AE; Env.	Illinois
Illinois Solar Energy Association	Solar and wind training programs.	AE	Illinois

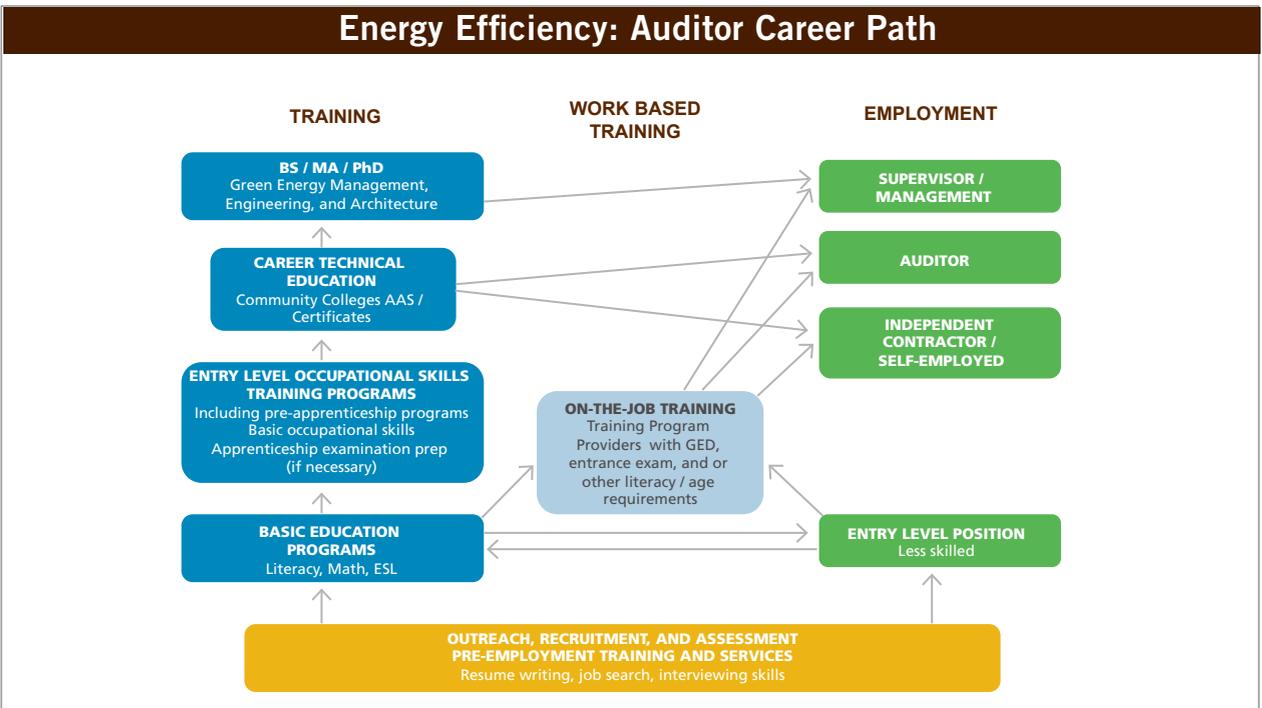
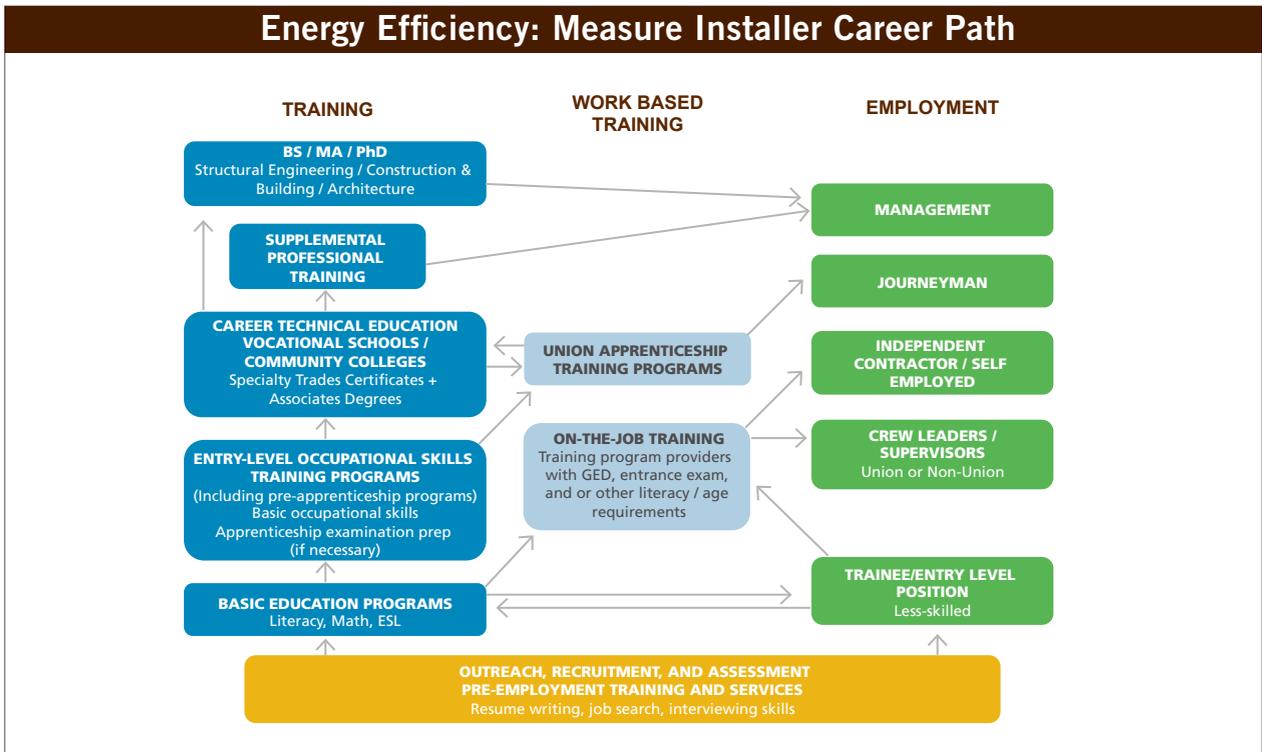
APPENDIX B: INVENTORY OF GREEN COLLAR TRAINING PROGRAMS (CONTINUED)

Int'l Union of Operating Engineers Local 399	Wind Technology Technician Training Program	BCOM; EE; AE	Chicago
Jane Addams Resource Corporation	Metalworking Skills Program/Careers in Manufacturing Program	BCOM	Chicago
LEED Council	ELIST program, Weatherization Training	BCOM	Chicago
Michael Barlow Center/St Leonard's Ministries	Green Building Maintenance Training	BCOM	Chicago
Midwest Energy Efficiency Alliance	Building Operator Certification	EE; BCOM	Illinois
Moraine Valley Community College	RESNET Training	EE	Cook County, IL
Morton Arboretum	Home Landscape Certificate Program	UAH	DuPage County, IL
North Lawndale Employment Network	Sweet Beginnings -- Urban Agriculture	UAH	Chicago
North Lawndale Employment Network	Building Beyond -- Green Pathways to Success	OTHER: basic "green"-related education	Chicago
OAI, Inc.	PACT (Pathways to Apprenticeships in Construction Trades)	BCOM	Chicago
OAI, Inc.	Environmental Remediation Training	BCOM	Chicago
Oakton College	Offers courses in: Building Energy Systems; Energy Management; and Environmental Management for Business	BCOM; EE	Cook County, IL
PC Rebuilders and Recyclers	Computers for Schools	Env.	Chicago
Renacer Westside Community Network	Renacer Weatherization Training Program	BCOM; EE	Chicago
The Cara Program	Cleanslate	GPS	Chicago
The Enterprising Kitchen		OTHER: natural soap product manufacturing	Chicago
The Resource Center	City Farm	UAH	Chicago
Triton College	Offers courses in: Basic Energy Management; Energy Conservation; Energy Auditing	BCOM; EE	Cook County, IL
US Green Building Council - Chicago Chapter	Green Building Nuts & Bolts for Contractors/Various Trainings	BCOM; EE; AE; Env.	Chicago
Wilbur Wright College	Offers: Building Energy Technologies Certificate; Environmental Technology AAS degree; and Environmental Technology Certificate	BCOM; EE; AE	Chicago
WomanCraft		OTHER: sustainable paper product manufacturing	Chicago

SECTOR KEY:

UAH: Urban Ag/Horticulture
 EE: Energy Efficiency
 BCOM: Building Construction, Operations, Maint.
 Env: Environmental Training (air, land, water, pollution prevention)
 AE: Alternative Energy
 Other: program type specified above

APPENDIX C: EDUCATION AND CAREER PATH OUTLINES FOR ENERGY EFFICIENCY MEASURE INSTALLERS AND AUDITORS





APPENDIX D: A MODEL FOR A STANDARDIZED WEATHERIZATION PROCESS

A model for a system of standardization for asbestos and lead hazard deconstruction provides a framework for the weatherization process. Because the industry is expected to quickly expand and because there will be new contractors that enter the market, a standard process can help reduce a variety of safety hazards for both workers and building occupants. The process of weatherization can result in exposures to toxins including asbestos, lead, and mold in buildings, as well as other hazards that are inherent in working in confined spaces, with electrical systems, scaffolding, and tools. The weatherization process itself poses hazards related to improper air circulation if the process does not conform to safety standards. A standardized system could work as follows:

- A certified and licensed assessor / inspector evaluates the scope of work, based on an inspection of the facility, for every structure to be weatherized. The same person functions as the building owner representative and provides pre-weatherization inspection and post-weatherization quality control.
- A contractor is identified through a bidding process and would be expected to do the work according to the requirements specified by the inspector. Contractors doing weatherization with public funds would be licensed through state agencies. To receive such a license the contractor would be required to demonstrate participation in a state approved training program and demonstrate proper insurance and performance bonds.
- Contractors would be required to assign a licensed supervisor to each job site to be the responsible party on the job site.
- Each contractor would be required to hire individuals trained through state-approved training programs. At a minimum state approval would require demonstrated competencies of program instructors and the availability of hands-on training facilities. Each state-approved training program could issue certificates to successful graduates. The certificate would represent that the holder had demonstrated the appropriate skills and knowledge of proper work practices for weatherization work.

Chicagoland Green Collar Jobs Initiative
c/o Chicago Jobs Council
29 East Madison Street, Suite 1700
Chicago, IL 60602
P: 312.252.0460
info@greencollarchicago.org

www.greencollarchicago.org