



Green Jobs Training: Funding, Implementing, Collaborating Fact Sheet

America's growing concern about energy, climate change, and the need to conserve resources is driving funding and collaboration to develop the green economy. Government and businesses have devoted a significant amount of money and effort to building clean energy industries and training the workforce needed to power them. The National Renewable Energy Laboratory affirmed that the greatest obstacle in building a clean energy economy is the absence of a skilled workforce to sustain it.ⁱ With the demand for such workers increasing, it is important that training dollars are used effectively, and that the appropriate training exists.

This fact sheet describes some of the investments made by the federal and state governments to build a green workforce; highlights different green job training programs available; and outlines what advocates and workforce development professionals can do in order to prepare women, especially low-income women, for green careers.

Public Investments in the Green Economy

Federal Investments. The American Recovery and Reinvestment Act (ARRA) devoted \$27.2 billion toward energy efficiency and renewable energy research and investment.ⁱⁱ This federal investment, combined with those of private investors, is generating major employment opportunities. One report projected that every \$1 million spent on clean energy investments creates 16.7 jobs.ⁱⁱⁱ ARRA designated approximately \$3.95 billion towards jobs training,^{iv} including \$750 million for a competitive grants program for training and placing workers in high growth and emerging industries. Of the \$750 million, \$500 million was designated specifically for projects that prepare workers for careers in the energy efficiency and renewable energy sectors. ^v The Department of Labor's fiscal year (FY) 2010 budget provided \$40 million for a Green Jobs Innovation Fund to help workers receive job training in green industry sectors and occupations, including pre-apprenticeship and registered apprenticeship. The FY 2010 budget also provided \$125 million for the Career Pathways Innovation Fund to support community colleges developing or expanding career pathways programs in partnership with education and training providers, employers, and the workforce system.

State Investments. A few states have begun implementing green economy initiatives of their own. California has taken the lead not only in developing clean energy industries, but also in developing the Clean Energy Workforce Training Program to provide a skilled workforce for these industries.^{vi} New Jersey has also begun a similar venture the Green Job Training Partnership Program. The New Jersey Department of Labor and Workforce Development, supported in part by a \$300,000 grant from the Conserve to Preserve Foundation of the New Jersey Resources Corporation, created the program to provide a pipeline of entry-level workers for the new jobs being created as a result of the energy-efficiency projects of the New Jersey Board of Public Utilities. The NJ Center for Energy and Environmental Training was created with technical assistance from several national organizations and state industry partners.^{vii} In 2007, Minnesota passed their own Green Jobs Act, which helped facilitate green industry development in the state while also creating green jobs.^{viii} Massachusetts, Pennsylvania, Vermont, and Washington have all enacted initiatives or passed legislation to spur green job creation or training.^{ix}

Funding and tax credits for green industries and job training represent the double-sided approach needed to fulfill this administration's commitment to building a clean energy economy, reducing carbon emissions, and offering workers new employment opportunities. Indeed, the convergence of our environmental and unemployment problems creates an opportunity for job training investments to simultaneously respond to both crises.

Variation in Green Jobs Training

"Green jobs" encompass many types of work, industries, and skill sets. According to the U.S. Bureau of Labor Statistics, green jobs include "jobs in businesses that produce goods or services that benefits the environment or conserves natural resources" and "jobs in which workers' duties involve making their establishment's production processes more environmentally friendly or use fewer natural resources."^x Such a range in green careers demands a similarly varied approach in preparing job seekers for these careers. The following section highlights two possible paths for green job training:

■ The College Route

- College coursework, resulting in a degree or industry-recognized credential, is a popular means for many job seekers to gain required knowledge and skills. Community colleges, boasting strong local connections and recognition, a national network, and often low costs, are a popular provider of green job training. Certifications and associate's degrees are offered, as are short-term basic training. The American Association of Community Colleges recently launched its Sustainability Education and Economy Development (SEED)



Center—a resource center and networking tool devoted to supporting community colleges in building quality green workforce development programs.^{xi} Universities offer degrees for many of the higher-skill green jobs, such as engineering and biology,

■ **Alternative Skill Training**

- **Community-based organizations**, devoted to helping underserved populations, are a popular entry point for many women into green occupations. They leverage local connections and reputations to conduct effective outreach and provide needed supportive services. These organizations best serve workers seeking entry-level jobs. Some of these organizations offer pre-apprenticeship training.
- **Apprenticeship programs** offer a unique and popular earn-while-you-learn model used by the trades for decades. Many of these programs have already responded to the growing green economy. The Employment and Training Administration (ETA) of USDOL published *The Greening of Registered Apprenticeship* in 2009, which examined the impact of green investments and growth on apprenticeship programs and the implications for workforce development professionals.^{xii} Apprenticeship programs allow workers to develop different skill sets as they move through the job education cycle.
- **Entrepreneurship training** may lead to a rewarding green career for some women. A survey of workforce investment board (WIB) administrators conducted as part of USDOL-funded research found that 87 percent of WIB administrators said entrepreneurship should be included as a career option for the unemployed, but only 43 percent said they "sometimes" consider entrepreneurship as equal to other career options.^{xiii} Women can build, and have built, successful entrepreneurial careers in green, so it is a training focus worth considering.

Making Training Programs Work

A successful training program is built on collaboration among the workforce system, educational system, and business. Programs must provide the job skills needed by local employers and the regional economy. To this end, it is critical that training program managers have a working knowledge of the existing and developing green industries in their region and a strong relationship with employers to ensure that women exiting training programs will find appropriate jobs. In addition, successful programs offer elements like hands-on learning, highly qualified and experienced instructors, connections to a career ladder, and training in safety and health.

Training programs can also partner with community-based organizations to provide additional support services to their students. Trained counselors and/or social workers may provide comprehensive case management to meet each trainee or worker's needs regarding such issues as transportation, mental health, housing, and child care.^{xiv}

In addition, women entering non-traditional green occupations and those who are primary care givers may face certain challenges. The following are just two of the unique obstacles that women may face in green jobs training:

- **Myths and stereotypes:** An earlier fact sheet and teleconference in this series, "Recruitment & Retention of Women in Green Jobs Training and Employment," outlined some of the social and cultural barriers that may deter women from entering green jobs training programs and career paths. The large percentage of green job growth is occurring in sectors where women are severely underrepresented in the workforce.^{xv} Training programs must be sensitive to stereotypes and ensure that sexism and discrimination in any form are absent from the program and the workplace. Efforts to retain women, including preparing them to handle challenges should they arise, are an important part of any green training program.
- **Work-life balance:** To increase women's participation in green jobs training, consider offering flexible schedules and child care. Women who work while attending training or who have responsibilities for children or other dependents may need a variety of training options and support services.

Role of Workforce Professionals, Training and Education Providers, and Advocates

The following recommendations highlight how workforce development professionals can help support and implement green training programs:

- **Provide a range of green career and job training options to job seekers.** Green jobs come in many forms, and there are a variety of training programs available. By understanding the job seeker's current qualifications and how they may be tinted green, workforce development professionals can recommend appropriate training options. There are opportunities for women of all skill and educational levels in the green economy.
- **Push workers to good jobs.** Not all green jobs are good jobs.^{xvi} Workforce development professionals can encourage job seekers to pursue careers which offer family-supporting wages and a career future.^{xvii} Non-traditional jobs often provide better pay and benefits than occupations typically held by women.



- **Work closely with employers in the area to understand their hiring needs and plans for growth or expansion.** Initiate one-on-one discussions with employers in your local area to understand their plans for the future, including their corporate projections for hiring. Supplementing labor market projections with interviews will provide a much more solid foundation from which to evaluate career options.
- **Respond to the needs of women entering the green workforce.** Workforce development professionals can understand obstacles women may face in entering green training and employment and provide access to resources to ease their transition. Help women define a training and education plan in the context of their family needs and encourage programs to understand and address support needs.
- **Incorporate entrepreneurship into WIA-supported training activities.** Entrepreneurship training positions women to not only fulfill their own employment needs, but to become job creators. Professionals in workforce development can craft programs that assist women in understanding this option, gaining the skills needed to be successful, and even in moving to a next stage in business growth, such as by adding green products or services to existing ones. Partnering with economic development entities and professionals in this work can be especially beneficial.
- **Match current skills to occupational opportunities.** Assess job seeker skills for those that are transferable to green jobs. See the mySkills myFuture Web site (<http://www.myskillsmyfuture.org/>) from the U.S. Department of Labor for matches to new occupations based on previous experience and links to job openings.

End Notes

- ⁱ Margolis R. and J. Zuboy, *Nontechnical Barriers to Solar Energy Use: Review of Recent Literature*, National Renewable Energy Laboratory, 2006. <http://www.nrel.gov/docs/fy07osti/40116.pdf>.
- ⁱⁱ Utah Clean Energy, "American Recovery and Reinvestment Act of 2009: Summary of Clean Energy Stimulus Funds," 2009. http://utahcleanenergy.org/policies_and_issues/arra_clean_energy_stimulus_summary#RE_Production.
- ⁱⁱⁱ Pollin, Robert, James Heintz, and Heidi Garrett-Peltier, "Clean Energy Investments Create Jobs in Every State," Center for American Progress, 2009. http://www.americanprogress.org/issues/2009/06/clean_energy_factsheets.html.
- ^{iv} Center on Budget and Policy Priorities, "Training and Employment Services," <http://www.cbpp.org/files/1-22-09bud-te.pdf>.
- ^v U.S. Department of Labor, "Information Related to the American Recovery and Reinvestment Act 2009," <http://www.dol.gov/recovery/implement.htm>.
- ^{vi} The California Energy Commission, "Clean Energy Workforce Training Program," <http://www.energy.ca.gov/cleanenergyjobs/index.html>.
- ^{vii} Department of Labor and Workforce Development, State of New Jersey, "Green Job Training Partnership Program," http://lwd.dol.state.nj.us/labor/employer/training/Green_Page.html.
- ^{viii} Green For All, "Summary of Minnesota Green Jobs Act (2007)," 2010, <http://www.greenforall.org/resources/summary-of-minnesota-green-jobs-act-2007>.
- ^{ix} Green For All, "Policy and Legislation," 2010, <http://www.greenforall.org/resources/policy-legislation/>.
- ^x Green Jobs, Bureau of Labor and Statistics, "Measuring Green jobs," , <http://www.bls.gov/green>.
- ^{xi} The SEED Center, American Association of Community Colleges <http://www.theSEEDCenter.org>.
- ^{xii} *The Greening of Registered Apprenticeships*, U.S. Department of Labor Employment and Training Administration, 2010. http://www.doleta.gov/oa/pdf/Greening_Apprenticeship.pdf.
- ^{xiii} No respondents said they always considered this an equal alternative. Ashmore, Cathy, Ph.D., *Think Entrepreneurs: A Call to Action*, Consortium for Entrepreneurship Education, 2009, 197. http://wdr.doleta.gov/research/FullText_Documents/Think%20Entrepreneurs%20A%20Call%20to%20Action%20-%20Integrating%20Entrepreneurship%20into%20the%20Public%20Workforce%20System%20Throughout%20America.pdf.
- ^{xiv} Green-Collar Jobs Campaign, Ella Baker Center Initiative, "Making Green Work: Best Practices in Green Collar Job Training," 2010 <http://www.ellabakercenter.org/makinggreenwork/>.
- ^{xv} "Women and the Green Economy," Wider Opportunities for Women, 2009, <http://www.wowonline.org/publicpolicy/documents/GreenJobsFactSheetReformatteddfeb05.pdf>.
- ^{xvi} Office of the Vice President of the United States, *Green Jobs: A Pathway to a Strong Middle Class*, Middle Class Task Force Staff Report, 2009, http://www.whitehouse.gov/assets/documents/mctf_one_staff_report_final.pdf.
- ^{xvii} Mattera, Phil et al., "High Road or Low Road? Job Quality in the New Green Economy," Good Jobs First, 2009, <http://www.goodjobsfirst.org/pdf/gjfgreenjobsrpt.pdf>, 27.

To listen to the teleconference that accompanies this fact sheet, and for further information about "A Woman's Guide to Green Jobs" and other Women's Bureau initiatives supporting green jobs, including Women and Green Jobs Roundtables and green training projects, please visit the USDOL Women's Bureau Web site at: <http://www.dol.gov/wb/>.



Additional Resources

The list below provides additional resources. The list is not exhaustive, and inclusion on this list does not represent an endorsement of any institution or program. As Web links can change, further Internet searches may be necessary to find the latest information.

Green Jobs Information

Government Resources

- National Center for O*NET Development. The Center researched green economic sectors, demand occupations, enhanced skills occupations, and new and emerging occupations, which have been added to the O*NET system. <http://www.onetcenter.org/green.html> and <http://online.onetcenter.org/help/bright/>
- Career Information Delivery System (CIDS). State systems for information on employment opportunities. CIDS may be found at community colleges, universities, or employment offices.
- CareerOneStop. This site provides an outline of green careers. <http://www.careeronestop.org/GreenCareers/GreenCareers.aspx>
- Green Jobs, Workforce³One Communities. This site compiles an ongoing list of training programs, evaluations, and other green economy information. Workforce³One also hosts regular webinars on workforce development practices. <http://greenjobs.workforce3one.org/page/resources/1000916955604530872>
- U.S. Department of Labor, Bureau of Labor Statistics is working with agencies across the Department to produce green jobs data. See: <http://www.bls.gov/green/home.htm>
- Green For All. This site offers a collection of news and industry information for policymakers and job seekers. <http://www.greenforall.org/>
- Veterans Green Jobs. Information on training programs, connecting veterans to job prospects, connecting employers to qualified workers, news and information related to veterans. <http://veteransgreenjobs.org/>
- Beacon Hill Institute at Suffolk University. "Green Collar" Job Creation: A Critical Analysis." This report reviews three studies predicting green jobs growth including reports from the U.N. Environment Programme, the Center for American Progress, and the U.S. Conference of Mayors. <http://www.beaconhill.org/BHISTudies/GreenJobs09/BHIGreenCollarJobCritique090625.pdf>
- American Association of Community College's SEED Initiative. The SEED Center provides information about green jobs curricula, training, and growth projections. www.theSEEDCenter.org.
- NTAR Leadership Center. "Using Labor Market Data to Improve the Job Prospects of People with Disabilities," *In Brief* Issue 4. Offers sources for labor market data, advising job seekers, and other important considerations. http://www.dol.gov/odep/documents/NTAR_Issue_Brief_4_Labor_Market_Data.pdf

Non-Government Resources

- Council on Competitiveness. "Drive: Private Sector Demand for Sustainable Energy Solutions." A policy paper on the need for sustainable energy in the United States. Includes a section on the workforce needed to support growth. <http://www.compete.org/publications/detail/1125/drive/>
- Green Collar Blog. Information on green jobs, training programs, career events, industry information and news. <http://www.greencollarblog.org/green-job-training-and-education.html>

Collaboration in Workforce Development

Non-Government Resources

- Council on Competitiveness. *Collaborate: Leading Regional Innovation Clusters*, June 2010. Offers insights on effective leadership at a regional level through case studies, research, and interviews. http://www.compete.org/images/uploads/File/PDF%20Files/Final_Collaborate.pdf

This fact sheet was produced by Public Policy Associates, Incorporated, in partnership with Wider Opportunities for Women, as part of the U.S. Department of Labor, Women's Bureau's "A Woman's Guide to Green Jobs" publication series designed to aid in increasing women's access to high-growth and emerging industry occupations in the green jobs sector nationwide. This report was funded through Contract Number DOLJ099429561 from the U.S. Department of Labor, Women's Bureau. The materials referenced and the opinions expressed in this product do not necessarily reflect the position of the U.S. Department of Labor, Women's Bureau, and no official endorsements by that agency should be inferred.