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Welcome to *Why Green Is Your Color: A Woman's Guide to a Sustainable Career!*

Since 1920, the Women's Bureau of the U.S. Department of Labor has been conducting research and developing policies and standards to safeguard the interests of working women; advocating for equality and economic security for women and their families; and promoting quality work environments. In support of Secretary of Labor Hilda L. Solis' vision of "Good Jobs for Everyone," the Women's Bureau is working to ensure that women are key participants in the growth of the green economy in the coming decades.

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These are challenging times for many women seeking stable jobs with wages and benefits that will support a family. These are also times of economic opportunity for women, especially in green industries. As Secretary Solis has emphasized, green jobs are the jobs of the future and will play an important role in our economic recovery.¹

As I travel across the country, I meet many business people who are creating new green technology enterprises or updating outmoded companies to 21st century innovation centers. And it's not just about doing good. These companies do well. They are creating green jobs today because that is where the future is, and they are looking to stay competitive in the global economy.

I've traveled from Los Angeles and Tucson to New York and Miami and 45 cities and towns in between. I've met employers, community organizers, elected officials, students, educators, and activists. And I've seen, heard, and felt their hope and optimism. I've been to a factory that used to make car windshields in Michigan. Now it makes solar panels. I've been to another in Ohio where the workers literally turn remnants of old homes into beautiful, modern furniture. I've met workers who have re-invented themselves for 21st century jobs. That is the face of the future.²

Good green jobs help workers and their families. They increase incomes, narrow the wage gap, allow workplace flexibility, and are safe, secure, sustainable, and innovative.³ They enable people with different backgrounds and skills to build career paths and achieve economic self-sufficiency.

“Green jobs can help women increase their income and we must make sure that women are adequately represented in the ranks of workers in green jobs.”

— Women's Bureau Director Sara Manzano-Díaz

WHAT ARE GREEN JOBS?

Green jobs can be broadly defined as jobs that restore, protect, or conserve the natural environment. Green jobs are found across a range of industries and occupations. Examples of green jobs include renewable energy engineers and technicians, weatherization contractors, green landscapers, recycling and waste management workers, environmental chemists, hazardous material removal workers, conservation policy analysts, and designers of new green technologies and products.

The U.S. Department of Labor's Bureau of Labor Statistics has finalized a definition of green jobs for use in *measuring* green goods and services jobs.⁴

The *green economy* encompasses economic activity related to reducing the use of fossil fuels, decreasing pollution and greenhouse gas emissions, increasing the efficiency of energy usage, recycling materials, and developing and adopting renewable sources of energy.⁵

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MYTH: Green jobs are all in construction or the building trades.

FACT: Green jobs do exist in the building trades and in construction, but there are many other occupations that support the green economy. For instance, there are manufacturers that produce earth-friendly products, designers of energy-efficient technologies, and investors that trade carbon credits.⁷

New jobs are appearing and many old jobs are changing in response to the green economy. The “greening of occupations” refers to the extent to which green economy activities and technologies increase the demand for existing occupations, shape the work and worker requirements needed for performance of the occupation, or generate unique work and worker requirements.⁸ There are three categories of green occupations as outlined by the National Center for O*NET Development:⁹

- ***Green Increased Demand Occupations.*** These are occupations that already existed prior to the green economy but now are more in demand. There are no significant changes in the work and worker requirements. Examples include electricians, logger supervisors, wildlife biologists, and chemical engineers.
- ***Green Enhanced Skills Occupations.*** These are occupations that already existed prior to the green economy but have undergone significant changes in work and worker requirements to include new tasks, skills, knowledge, and credentials. Demand for workers may or may not have increased. Examples include construction managers, heating and air conditioning mechanics, transportation managers, and environmental engineers.
- ***Green New and Emerging Occupations.*** These are occupations with unique work and worker requirements relating to the green economy. They may be entirely new or “born” from an existing occupation. Examples include biomass plant engineers, climate change analysts, geothermal technicians, and logistics managers.

Jobs in these occupations require different kinds of training and work experience. In some cases, women may be certified for an occupation by taking a single course/exam, and/or on-the-job training may be available through an employer, apprenticeship, or internship. In other cases, the path to a green occupation may require an associate degree, bachelor’s degree, or more.

GREEN AREAS OF OPPORTUNITY

There are 12 key sectors of the green economy:⁶

1. Agriculture and forestry
2. Energy and carbon capture
3. Energy efficiency
4. Energy trading
5. Environmental protection
6. Governmental and regulatory administration
7. Green construction
8. Manufacturing
9. Recycling and waste reduction
10. Renewable energy generation
11. Research, design, and consulting services
12. Transportation

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THE GROWING GREEN ECONOMY

Business practices, consumer choices, and the world's available resources are changing, and with these changes, the demand for workers in green industries is expected to increase.

Experts predicted world energy consumption will grow by 49 percent from 2007 to 2035.¹⁰ In the U.S., increasing demand for electricity to support new technology means a greater demand for methods to efficiently produce and transport energy.¹¹

Leading scientists are warning that everyone must find new ways to reduce carbon emissions worldwide in the face of global warming and climate change.¹² This effort will require a transition from fossil fuels to renewable energy sources, including wind and solar energy. Being good environmental caretakers means looking for more ways to reduce waste, reuse materials when possible, and stop practices that have negative effects on the environment.

Environmental issues are of growing importance to businesses across America. Some are already adopting a “triple bottom line” philosophy that emphasizes economic, ecological, and social values. Many consumers are eager to do business with enterprises that are responsible in how they treat their workers, customers, and the environment.

The green economy rewards innovation, creativity, and entrepreneurship. New ways of thinking about everyday products, processes, and services make for great opportunities for women to not only find new jobs, but also turn their ideas into businesses and create jobs for others.

As the green economy grows, our country needs workers for a variety of green jobs. The number and types of green jobs are growing rapidly.

With the publication of this guide, the Women's Bureau aims to help women like you prepare for good jobs in green industries.

HOW TO USE THIS GUIDE

This guide will provide an overview of the types of green jobs that are available and the skills needed to get them. It will show you how to identify training opportunities, give you suggestions about how to pay for training, and describe how to start your own green business. The guide will point out common barriers to career advancement and offer tips to overcoming them, and showcase the success stories of women who have already joined the green economy.

There are special features throughout the guide to help you separate fact from fiction about women and green jobs and to give you perspectives from women working in green industries. A glossary defines terms that might be unfamiliar to you. There are also worksheets to help you plan your own green career.

You don't need to read this guide from cover to cover. It has been designed as an easy-to-use reference. It is divided into nine chapters, and the parts you use will vary depending on your interests, your needs, and your level of experience.

At the end of each chapter, you'll find many resources available online or in print that can help you learn more about a particular topic. You may find additional sources of information in your state or local community. More information about green jobs and the green economy becomes available every day, so look often for new articles, reports, and websites.

ADDITIONAL RESOURCES

You may find these resources helpful in planning for a green career. Web links can change, so you may need to do Internet searches to find the latest information.

GOVERNMENT RESOURCES

- U.S. Department of Labor (DOL). DOL has information about green jobs and green training grants through its Green Jobs Initiative. <http://www.dol.gov/dol/green>
 - Bureau of Labor Statistics (BLS). BLS provides green jobs information. <http://www.bls.gov/green> and http://www.bls.gov/green/wind_energy/home.htm
 - Employment and Training Administration, Office of Apprenticeship (OA). OA published the report *The Greening of Registered Apprenticeship*, an environmental scan of the impact of recent policies and investments supporting “green jobs” on current and potential Registered Apprenticeship and other labor-management training programs. http://www.doleta.gov/OA/pdf/Greening_Apprenticeship.pdf
 - Green Community of Practice (CoP). Sponsored by DOL, Green CoP provides current information related to the green economy as well as job search resources and information. Requires free registration. <http://greenjobs.workforce3one.org>
 - mySkills myFuture. This is an electronic tool developed by DOL’s Employment and Training Administration that enables previously-employed job seekers to match their occupational skills and experiences with the skills needed in other occupations. <http://www.myskillsmyfuture.org>
 - Occupational Information Network (O*NET). O*NET is a comprehensive, user-friendly career exploration tool created for DOL’s Employment and Training Administration with a special section on the green economy. <http://onetcenter.org/green.html>
 - Women’s Bureau (WB). WB provides information and tools for women seeking jobs and employment information. <http://www.dol.gov/wb>
- U.S. Energy Information Administration (EIA). EIA provides extensive information about energy use in the United States. http://tonto.eia.doe.gov/energyexplained/index.cfm?page=about_energy_efficiency
- U.S. Environmental Protection Agency (EPA). EPA provides information on protecting the environment and how you can help. <http://www.epa.gov/epahome/workplac.htm>
- The White House, Office of the Vice President, Middle Class Task Force. The task force produced a report titled *Green Jobs: A Pathway to a Strong Middle Class* (February 2009). http://www.whitehouse.gov/assets/documents/mctf_one_staff_report_final.pdf

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NON-GOVERNMENT RESOURCES

- National Labor College (NLC). NLC's *Green Labor Journal* is a monthly publication providing updates on green jobs policy, work concerns, and other relevant topics. <http://www.greenlaborjournal.org>
- Wider Opportunities for Women (WOW). WOW's fact sheet "Women and the Green Economy" describes how the green economy impacts women's employment, especially nontraditional occupations. <http://www.wowonline.org/publicpolicy/documents/GreenJobsFactSheetJuly2009.pdf>

This list is not exhaustive and inclusion on this list does not represent an endorsement of any institution or program. While all efforts are made to ensure that hyperlinks are working and the information contained at the referenced websites is useful, the authors do not endorse, take responsibility for, or exercise control over the websites or organizations, nor do they vouch for the accuracy or accessibility of the information contained on these sites. The authors also cannot authorize the use of copyrighted materials contained in these sites. Users must request such authorization from the sponsor of the website.

End Notes

¹Solis, Hilda. "Testimony of Secretary of Labor Hilda L. Solis Before the Committee on Education and Labor, U.S. House of Representatives," U.S. House of Representatives, Washington, D.C. (2010 Feb.). http://www.dol.gov/sec/media/congress/20100203_Education.htm

²Azcentral.com. "Live Talk: Hilda L. Solis, Secretary of Labor" (2010 Sept.). <http://www.azcentral.com/news/aztalk/forum/articles/live-talk-hilda-solis.html>

³Solis, "Testimony."

⁴Bureau of Labor Statistics. "Overview of the BLS Green Jobs Initiative." U.S. Department of Labor. <http://www.bls.gov/green/home.htm#overview>

⁵Ibid.

⁶Dierdorff, Erich C. et al. *Greening of the World of Work: Implications for O*Net-SOC and New and Emerging Occupations*. The National Center for O*NET Development (2009): 5. http://www.onetcenter.org/dl_files/Green.pdf

⁷Hendricks, Bracken, Andrew Light, and Benjamin Goldstein. "Seven Questions About Green Jobs: Why the Most Productive Jobs of the Future Will Be Green Jobs." Center for American Progress (2009). http://www.americanprogress.org/issues/2009/04/green_jobs_questions.html

⁸Dierdorff, *Greening*.

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¹⁰U.S. Energy Information Administration. *International Energy Outlook 2010*. U.S. Department of Energy (2010). <http://www.eia.doe.gov/oiaf/ieo/pdf/0484%282010%29.pdf>

¹¹U.S. Energy Information Administration. "Renewable Energy Explained" (2010). http://tonto.eia.doe.gov/energyexplained/index.cfm?page=renewable_home

¹²Goodstein, Eban, Frank Ackerman, and Kristen Sheeran. "We Can Afford to Save the Planet." *Washington Post* (2009 Oct.). <http://washingtonpost.com/wp-dyn/content/article/2009/10/22/AR2009102204193.html>



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