

# Careers in the Green Economy

Governor's Workforce Investment Board • Issue Brief • [www.gwib.maryland.gov](http://www.gwib.maryland.gov)

Maryland and the nation are undergoing a shift in the way they produce, distribute, use, and conserve energy. Businesses, public institutions, communities, and local government are working to use energy more wisely and improve our environment. They are creating sustainability councils, adopting new, local public policies and practices, and developing community projects that use green/clean materials and technologies. These efforts are being supported with American Recovery and Reinvestment Act (ARRA) investments: \$92 billion in clean technology; nearly \$33 billion in clean energy, and \$27 billion in energy efficiency nationwide.

Studies forecast that investments in energy efficiency and clean energy could create as many as 100,000 green jobs in Maryland over the next twenty years. Much of ARRA funding coming to Maryland is funneled directly for job training to meet employment demands. There is no question that to stay viable in today's market, workers must understand how to compete in a new "green" world. The Governor's Workforce Investment Board (GWIB) designed the following brief to help job seekers become active participants in the new green economy.



## Opportunities Exist Within the Green Economy

While a large majority of green jobs and businesses are currently concentrated in manufacturing and construction, government policies along with consumer demand are spurring the growth of green products and services across a wide spectrum of industries. Consequently, there are employment opportunities for job seekers at every level of skill and education. Green job and business opportunities range from professional enterprises to skilled trades in areas such as deconstruction, building/energy inspectors, maintenance workers, weatherization contractors, engineers, recycling and waste management, and research and design of new technologies and products.

Regardless of the particular field, nearly every job in the future will integrate green practices into how work is conducted. Communities are enacting policies to reduce negative impacts on the environment and conserve energy, and private companies are recognizing that green, sustainable practices are in the best interest of their bottom line. Consequently, the path to a green job begins with developing a basic understanding and familiarity with concepts such as sustainability, green practices and technology, and product life cycles. Fortunately, there are many avenues for job seekers to gain such knowledge and information.



## Getting Up to Speed on Green

A host of information about energy efficiency, green building and green products is available on the Internet for job seekers interested in familiarizing themselves about green and energy efficient practices and clean and renewable energy. Sites such as [green.org](http://green.org) offer opportunities for green social networking, learning about green products and businesses, and how to integrate green practices into your lifestyle; National Geographic sponsors the Green Guide to Everyday Living at [www.thegreenguide.org](http://www.thegreenguide.org), and Grist.org offers information about green materials, job opportunities and articles related to climate change and green lifestyles.

Community Colleges, non-profit organizations, and government agencies sponsor trainings and classes to help individuals and businesses understand what it means to “go green” to increase their marketability. NeighborWorks America, a national nonprofit organization, and the Green Building Institute, a local nonprofit, offer a series of trainings that can help a job seeker get up to speed on green. Local jurisdictions, such as Montgomery County ([www.montgomerycounty.gov](http://www.montgomerycounty.gov)), feature information about sustainability and green practices on their websites. Numerous apprenticeship programs now integrate green practices into their training and education models.

\* See [www.nw.org/network/green/training.asp](http://www.nw.org/network/green/training.asp) and [www.greenbuildinginstitute.org/pages/courses.html](http://www.greenbuildinginstitute.org/pages/courses.html) for more information.

### What Makes a Job a “Green Job?”

While there is no clear, national standard that defines a “green job,” a commonly accepted definition is that a “green” job is any job that helps preserve or enhance the environment. If the job helps reduce the use of natural resources, such as oil and gas, improves energy efficiency, and/or lowers pollution, it is a green job. While many jobs relating to alternative energy sources such as solar and wind obviously fall into the “green” category, there are a multitude of other, traditional jobs that become “green” once a green lens or approach is applied. This means that many people with traditional workforce skills may only need to acquire additional knowledge about green practices or minimal training to become an active participant in the green economy.



## Certification Options

Although not all green jobs require certification, several certification programs have been created to ensure workers have a clear understanding of what it means to be green in their respective fields or to help make the transition into a green career. These programs target a variety of professions and require varying degrees of skills and education; all of them focus on building an individual’s green knowledge and expertise through education and/or hands-on training.

Some of the most recognized certifications and training programs are presented in the following table:



Certification	Program Description	Target Audience
<b>Green Advantage Environmental Certification</b> www.greenadvantage.org	Tests understanding and familiarity with the latest in “green” building practices, technologies and techniques.	Contractors and trades people
<b>LEED Green Associate</b> www.gbci.org	Tests knowledge and skills to support green design, construction, and operations. It is a precursor for professionals pursuing LEED AP.	Building related professionals: contractors, architects, planners, engineers, developers, inspectors.
<b>LEED Accredited Professional (AP)</b> www.gbci.org	Tests detailed knowledge of LEED certification process and command of integrated design principles. Exam measures proficiencies in sustainability and process for specific LEED project certifications (i.e., new construction, commercial interiors, etc).	Building related professionals: contractors, architects, planners, engineers, developers, inspectors. This is currently one of the only professional accreditations widely recognized in the green building field.
<b>Entry Level Photovoltaic (PV)/ Solar Thermal Certificate</b> www.nabcep.org/certificates	Tests basic knowledge, comprehension and application of key terms and concepts of Photovoltaic (PV) and Solar Thermal systems operations.	Construction / Skilled trades. Entry-level
<b>Certified Photovoltaic (PV) / Solar Thermal Installer</b> www.nabcep.org/certification	Tests knowledge of national standards for PV and Solar Thermal installation.	Individuals responsible for system installation (e.g., contractor, foreman, supervisor, or journeyman).
<b>Certified Energy Auditor</b> www.aeecenter.org/certification	Tests knowledge of the principles and practices of energy auditing and compliance with prescribed standards of performance and conduct.	Facility Managers, HVAC Installers and related alternate energy installers including geothermal.
<b>Certified Energy Manager (CEM)</b> www.aeecenter.org/certification	Tests and recognizes high levels of experience, competency, proficiency in the energy management profession as well as compliance with prescribed standards of performance and conduct.	Facility Managers, HVAC installers and related alternate energy installers including geothermal. Requires engineering degree and years in service OR sufficient years in service.
<b>Certified Sustainable Development Professional</b> www.aeecenter.org/certification	Tests knowledge and technical competency in energy management and environmental practices and compliance with prescribed standards of professional performance and conduct.	Facility Managers, HVAC installers and related alternate energy installers including geothermal. Requires engineering degree and years in service OR sufficient years in service.
<b>Certified Green Building Engineer</b> www.aeecenter.org/certification	Tests knowledge of the principles and practices of green building engineering, design and construction and compliance with standards of performance and conduct.	Requires professional Engineering License AND be a Certified Energy Manager.
<b>Certified Carbon Reduction Manager</b> www.aeecenter.org/certification	Tests knowledge of the principles and practices of carbon reduction and compliance with prescribed standards of professional performance and conduct.	Requires 4-Yr degree or CEM in good standing.
<b>Certified Lighting Efficiency Professional</b> www.aeecenter.org/certification	Tests knowledge of development and implementation of efficient lighting solutions within commercial, industrial, institutional and governmental buildings.	Facility Managers, Electricians Requires degree in Engineering or Architecture OR sufficient service years.
<b>Certified GeoExchange Designer</b> www.aeecenter.org/certification	Tests knowledge of the principles and practices of geothermal heat pump design and related disciplines.	Contractors, Geothermal Installers
<b>Certified Building Analyst</b> www.bpi.org/content/contractors	Written and field exam designed to test an individual's ability to conduct a thorough home performance evaluation, taking important characteristics into account.	Contractors and tradespeople
<b>Home Energy Rater</b> www.natresnet.org/	Tests knowledge and compliance with the Home Energy Rating System (HERS) to inspect and evaluate a home's energy features consistent with RESNET standards. Rater prepares home energy rating report and provides energy improvement recommendations.	Contractors and tradespeople
<b>Certified Green Professional</b>	Tests the knowledge and ability incorporate green building principles into housing development.	Builders, remodelers and other construction industry professionals
<b>Green Verifier</b>	Training and certification testing that complies with NAHB green standards.	Builders, remodelers and other construction industry professionals
<b>Green Certified Remodeling Professional</b>	NARI designation to promote the highest standards of green remodeling through green credentialing of remodeling professionals.	Builders, remodelers and other construction industry professionals

## Getting the Most out of the Green Economy

The green economy, even without government investment, grew considerably over the past several years, generating new employment opportunities and industries. According to a recent report by the Pew Charitable Trusts, green jobs and jobs in clean energy grew at a rate much faster than traditional jobs. Now, with funding from the federal stimulus and Governor O'Malley's drive to ensure that Maryland is at the forefront of the green economy through investment in clean and renewable energy and green jobs, the potential for growth is even greater. To be marketable and stay competitive, every job seeker must familiarize themselves with green practices and retool their skills as necessary. In some instances, it will simply involve learning more about what "green" means, in others it will mean training and certifications. The green economy is here to stay. The sooner job seekers make the transition to green, the greater their rewards and opportunities.

### Finding Green Jobs

- **Maryland Workforce Exchange**, helps job seekers with every aspect of the job search, from trainings to resume posting: [mwe.dllr.state.md.us](http://mwe.dllr.state.md.us)
- **Career Voyages**. Sponsored by the U.S. Department of Labor, features jobs and links to opportunities in the green economy: [www.careervoyages.gov/green-main.cfm](http://www.careervoyages.gov/green-main.cfm)
- **Planet Green** has developed a series designed to help individuals green their job search and workplace: [www.planetgreen.discovery.com/go-green/job-search](http://www.planetgreen.discovery.com/go-green/job-search)
- **Americangreenjobs.net** integrates information from government, business, academic, and nonprofit leaders involved in the green jobs arena with worker trainings. It allows users to share information and best practices, map data, exchange resources and ideas, and collaborate on new and existing projects.
- **Green Jobs Network** offers a listing of job boards that feature social or environmentally responsible job postings: [www.greenjobs.net](http://www.greenjobs.net)
- **Green Jobs Portal**, from Maryland's Department of Labor, Licensing and Regulation, provides information about key green growth sectors and links to green job opportunities: [www.dllr.maryland.gov/greenjobs/](http://www.dllr.maryland.gov/greenjobs/)
- Finally, local **One-Stop Workforce Centers** can provide invaluable assistance and counseling to help make the transition to a green job. The centers also can provide resources to tap into training programs and placement in a green career. Find your local One-Stop Workforce Center at: [www.dllr.state.md.us/county/](http://www.dllr.state.md.us/county/)

## The Governor's Workforce Investment Board

The Governor's Workforce Investment Board (GWIB) is Maryland's chief policy-making body on workforce development. Mandated by the Federal Workforce Investment Act, GWIB's mission is to guide a nationally recognized workforce development system aligned with the economic and educational goals of the state of Maryland that will result in a qualified workforce for Maryland employers.



### Governor's Workforce Investment Board

1100 North Eutaw Street, Room 108

Baltimore, MD 21201

410-767-2408 1-866-408-5487

[gwib@mdworkforce.com](mailto:gwib@mdworkforce.com)

[www.gwib.maryland.gov](http://www.gwib.maryland.gov)

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