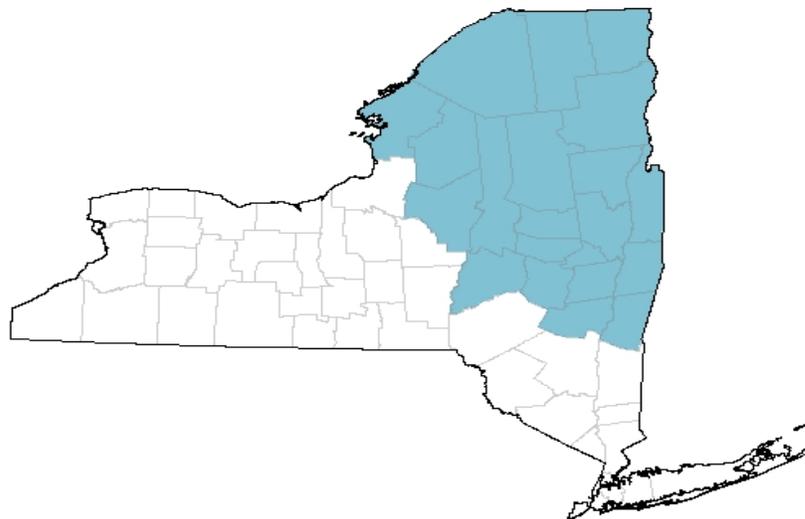




# **New York State Green Jobs Survey**

## **Report for the Capital District/Mohawk Valley/North Country Combined Region**



**New York State Department of Labor  
Division of Research & Statistics**



## New York State Green Jobs Survey

### Capital District/Mohawk Valley/North Country

#### *Introducing the Green Jobs Study*

As part of the American Recovery and Reinvestment Act of 2009, the New York State Department of Labor was awarded a \$1.1 million grant from the United States Department of Labor to conduct research on the green labor market in New York State.

This research goes hand-in-hand with New York State’s commitment to increasing energy efficiency and maximizing growth in its clean energy sector, in keeping with the Energy Efficiency Portfolio Standard; the Renewable Portfolio Standards; the Regional Greenhouse Gas Initiative; and the State Energy Plan.

As one part of the study, the New York State Department of Labor and its research partners surveyed 20,000 businesses in late 2010 to determine the number and types of green jobs in the State. Five thousand three hundred and fifty of those businesses were in the combined Capital District/Mohawk Valley/North Country region.



#### *Questions Answered*

Policymakers, researchers and the public have a variety of questions about the green labor market across New York State. To get answers, the Department of Labor surveyed businesses in industry clusters where green jobs were likely to be found. The Department of Labor sought out companies that produce goods or deliver services that increase energy efficiency or generate renewable energy. The resulting information was used to develop answers to the questions below.



- [How many firms in this region have green jobs?](#) .....4
- [How many workers in this region have green jobs?](#) .....5
- [Do firms expect their green employment to change?](#) .....6
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## Defining Green

While “green” touches nearly every sector of the economy (such as agriculture, education, energy, transportation, etc.), New York State’s Green Jobs Survey focused on two spheres of green economic activity: **Renewable Energy** and **Energy Efficiency**.

Here are a few definitions used in the New York State Green Jobs Survey:

- **Green economic activities:** Activities that produce goods or deliver services that increase energy efficiency or generate renewable energy.
- **Green employer:** An employer engaged in a targeted green economic activity, such as retrofitting buildings or generating power from wind energy.
- **Green employee:** A worker primarily engaged in producing green products or services, such as a photovoltaic installer, an insulation worker or a wind turbine assembler.

Future research may include other green sectors such as pollution abatement or waste remediation, which would require more expansive green definitions.

## Industry Spotlight

The Green Jobs Survey was sent to firms in several industry clusters. Its findings focus on the following clusters that reported a significant green component:

- ✓ **Construction Trades**
- ✓ **Building Services**
- ✓ **Component Manufacturing**
- ✓ **Professional Services**

## Research Partners

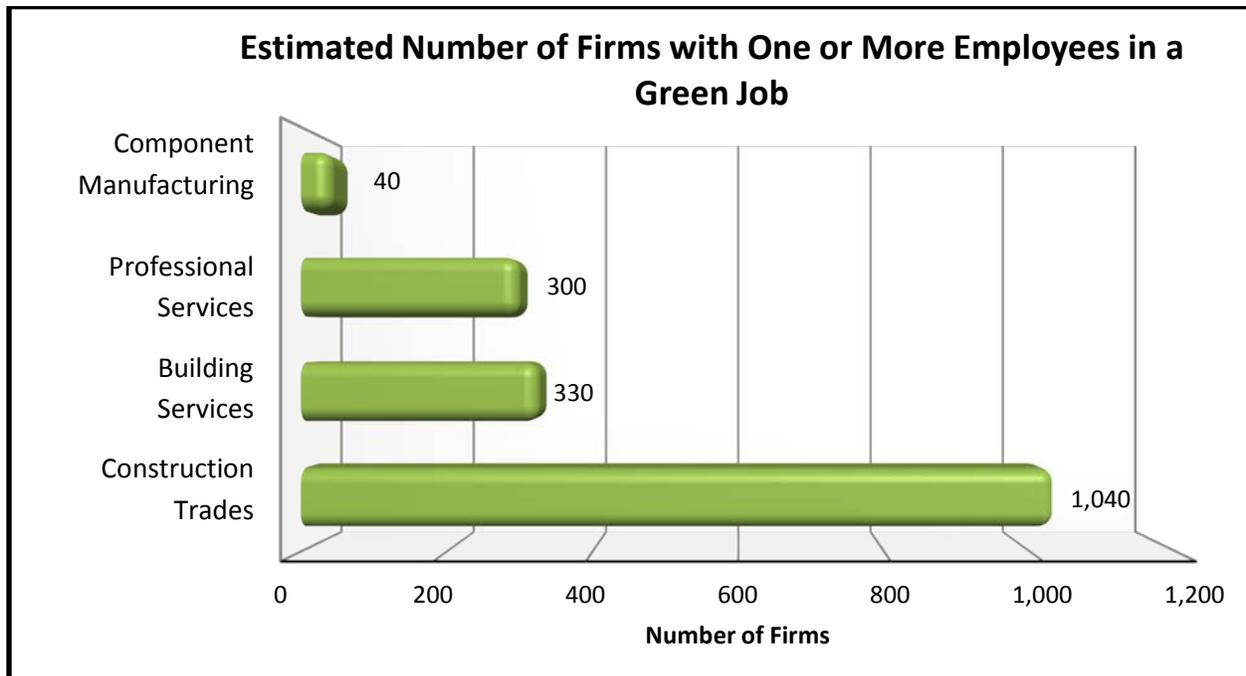
- ***The City University of New York’s Graduate Center’s New York City Labor Market Information Service (NYCLMIS)***
- ***The University at Albany’s College of Nanoscale Science and Engineering’s Energy and Environmental Technology Applications Center (E2TAC)***
- ***Stony Brook University’s Advanced Energy Center (AEC)***

## Survey Conventions

While every effort was made to ensure that the survey findings are representative, please note:

- As with all surveys, results are subject to sample and non-sample sources of error
- Estimates are based on employer self-identification and have not been independently verified
- Adding regional firm and employment estimates may not equal state totals
- Firm and employment estimates are rounded to the nearest ten
- Percentages are calculated from unrounded data and rounded to the nearest percentage point

**New York State Green Jobs Survey Finding  
In the Capital District/Mohawk Valley/North Country Region,  
How Many Firms Have Green Jobs?**



<b>Regional Firms</b>	<b>Component Manufacturing</b>	<b>Professional Services<sup>1</sup></b>	<b>Building Services</b>	<b>Construction Trades</b>
Number with Green Jobs	40	300	330	1,040
Number in Cluster	200	950	1,250	2,850
<b>Percent with Green Employees<sup>2</sup></b>	<b>20%</b>	<b>31%</b>	<b>26%</b>	<b>36%</b>

In the combined Capital District, Mohawk Valley and North Country region, in these four clusters alone there are approximately 1,700 firms that have one or more employees primarily engaged in producing goods or delivering services that increase energy efficiency or generate renewable energy.

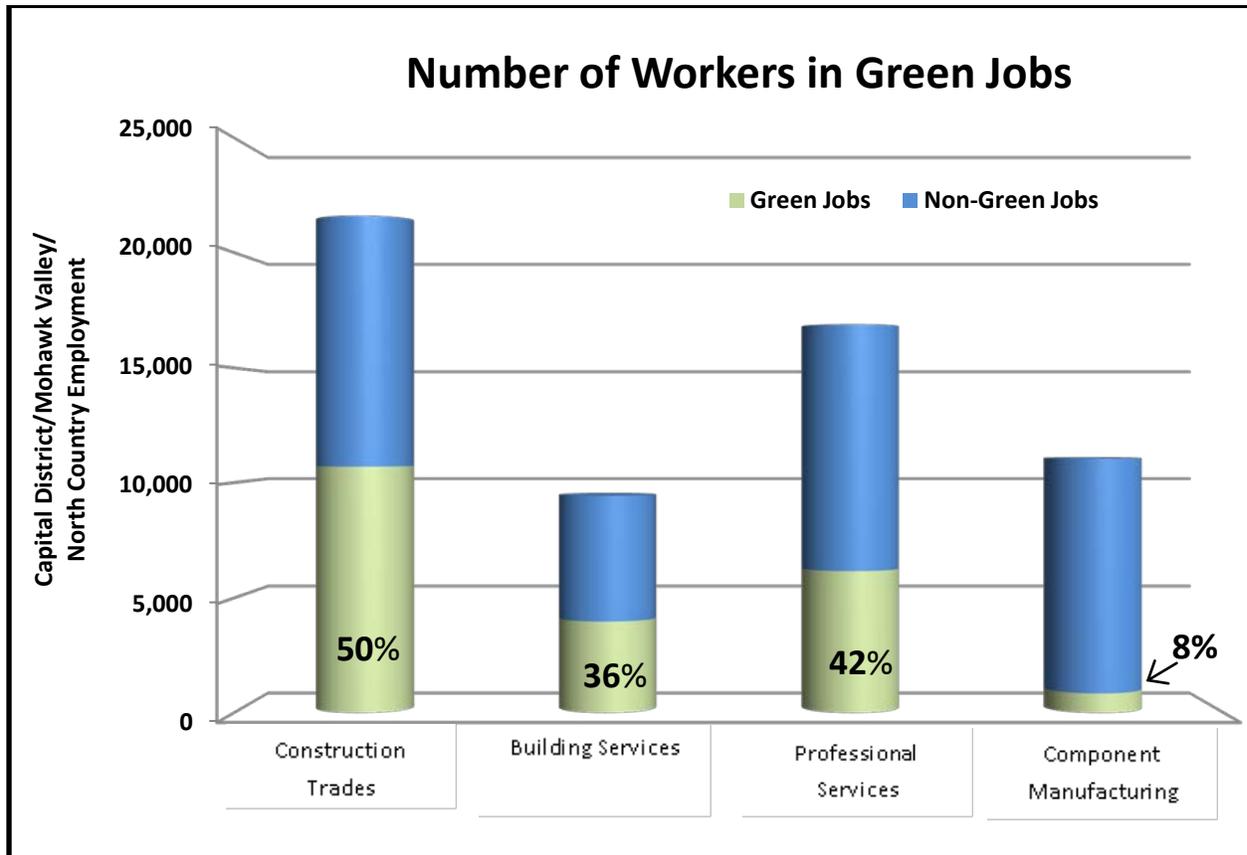
Construction Trades has the largest share of firms with green workers with 36%, while Professional Services is second with 31%. Building Services comes next with 26% and Component Manufacturing is last with 20% green employment.

The smallest industry cluster listed above – Component Manufacturing – also has the fewest firms with green employment (40 firms) whereas the largest – Construction Trades – has the most (1,040 firms). Building Services is the second largest cluster and has the second highest number of firms with green employment (330 firms), while Professional Services ranks third on both measures.

<sup>1</sup> The Professional Services industry cluster excludes legal services.

<sup>2</sup> Percentages are based on unrounded figures.

**New York State Green Jobs Survey Finding  
In the Capital District/Mohawk Valley/North Country Region,  
How Many Workers Have Green Jobs?**



Region	Construction Trades	Building Services	Professional Services	Component Manufacturing
Green Employment	10,700	3,980	6,150	850
Cluster Employment	21,600	9,430	16,900	11,040

In the combined Capital District, Mohawk Valley and North Country region, in these four clusters 22,000 workers are employed in green jobs; Construction Trades has the greatest number of workers (21,600), the largest number of workers in green jobs (10,700), and it has the largest occurrence of green employment (50%).

Workers engaged in green economic activity make up 36% (6,150) of Professional Services' total employment of 16,900 workers and 42% (3,980) of Building Services' total employment of 9,430.

Component Manufacturing ranks third in terms of total number of cluster employment (11,040 workers), however, it ranks fourth with green employment at 8% (850 workers).



**New York State Green Jobs Survey Finding  
In the Capital District/Mohawk Valley/North Country Region,  
Do Firms Expect their Green Employment to Change?**

**Expected Over-the-Year Change in Green Employment**

One Year Change	Building Services	Construction Trades	Component Manufacturing	Professional Services
<b>For firms with green jobs, what is their expected change in green employment?</b>				
Grow Larger	43%	27%	73%	49%
Unchanged	51%	52%	17%	26%
Become Smaller	0%	4%	0%	3%
Don't Know	6%	17%	10%	23%
<b>Number of Firms</b>	<b>330</b>	<b>1,040</b>	<b>40</b>	<b>300</b>
<b>For firms without green jobs, do they expect to have green employment?</b>				
Yes	4%	4%	3%	0%
No	77%	60%	67%	80%
Don't Know	20%	36%	29%	20%
<b>Number of Firms</b>	<b>920</b>	<b>1,810</b>	<b>160</b>	<b>650</b>

Firms with green jobs were asked if they anticipated their number of green jobs to change in the next year (grow larger, become smaller, remain unchanged). Firms which did not have green jobs were asked if they anticipate creating any green jobs in the upcoming year.

Among the combined Capital District, Mohawk Valley and North Country region businesses with green jobs, Component Manufacturing firms are most likely to expect a growth in their green employment, with 73% predicting growth in the next year. Forty-nine percent of Professional Services firms expect growth in the next year, followed by Building Services with 43%, and Construction Trades with 27%.

Although the Construction Trades has the smallest percentage of firms predicting an increase in green employment, it has the largest number of firms reporting an increase (280 firms). While Component Manufacturing has the largest percentage of firms reporting an increase in green workers (73%), that percentage amounts to only 30 firms.

The least common prediction among green firms in all four industry clusters was for a 'smaller' green workforce; less than 5% of the combined Capital District, Mohawk Valley and North Country green firms in any cluster anticipate a loss of green jobs.



## New York State Green Jobs Survey Finding What are the Most Common Credentialing Agencies Preferred by Employers for their Green Jobs?

### Leadership in Energy and Environmental Design (LEED)

Leadership in Energy and Environmental Design (LEED) is administered by the U.S. Green Building Council (USGBC). LEED offers certification for buildings and credentials for individuals. The Green Building Certification Institute (GBCI) administers LEED professional credentials in green building design, construction and maintenance, and neighborhood development. For more information about LEED credentials, visit [www.gbci.org](http://www.gbci.org).

### The Building Performance Institute, Inc. (BPI)

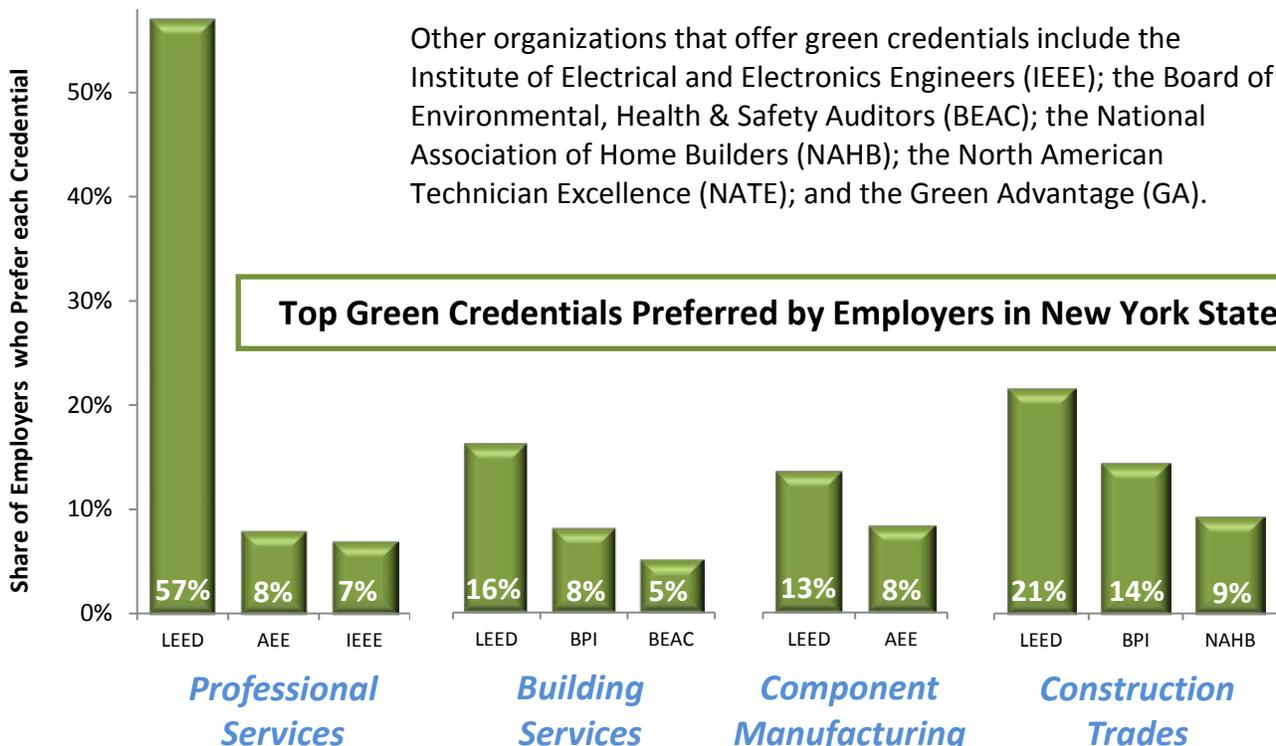
The Building Performance Institute, Inc. (BPI) is an independent non-profit organization that develops industry standards for residential energy efficiency retrofits and weatherization. BPI offers company accreditations and professional credentialing. Many professional certification types are available, including building envelope, manufactured housing, and multifamily. For more information, see [www.bpi.org](http://www.bpi.org).

### The Association of Energy Engineers (AEE)

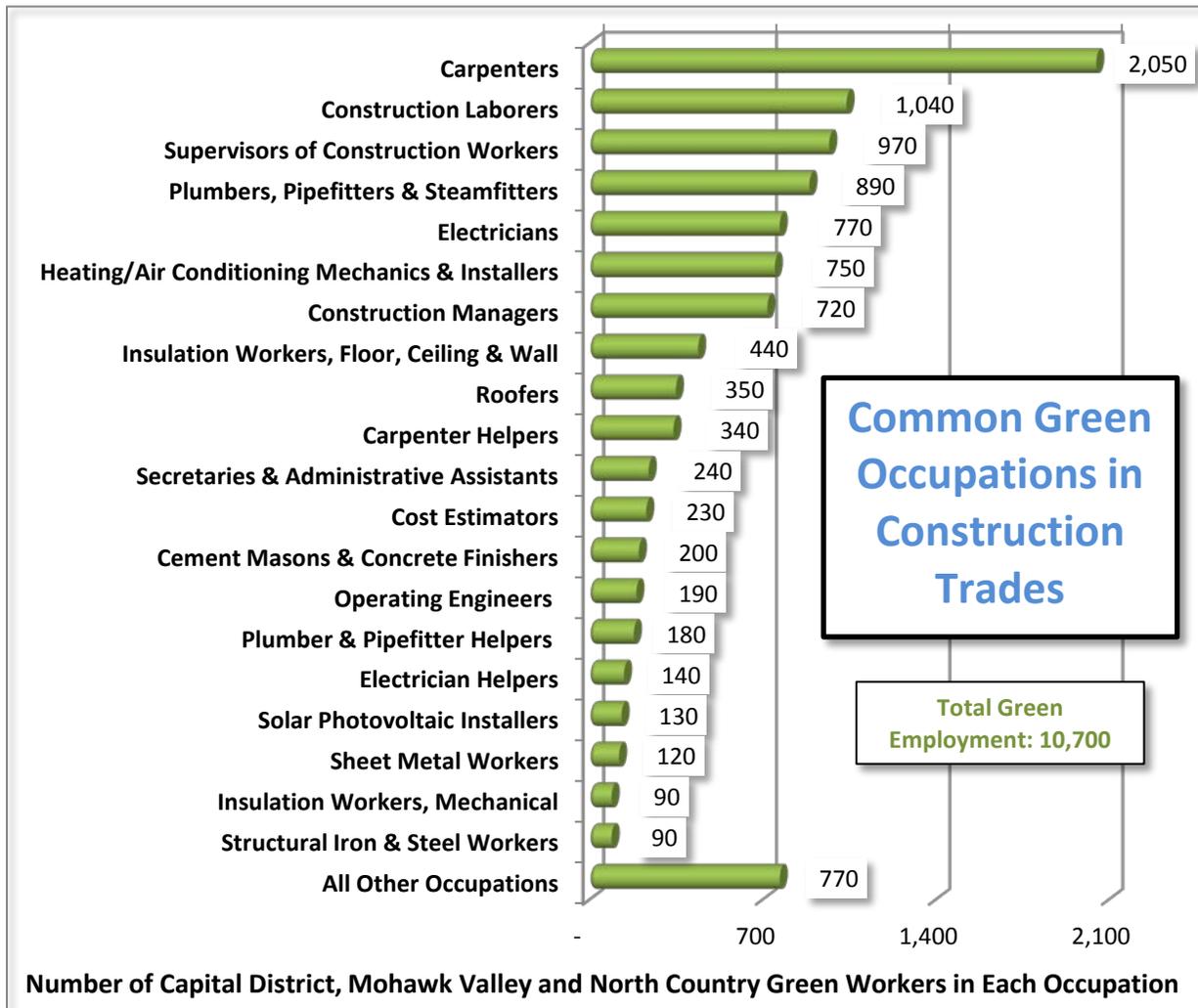
The Association of Energy Engineers (AEE), a non-profit professional society with over 14,000 members, offers a broad range of professional certifications in the energy industry. AEE certification programs require candidates to pass written examinations as well as meet specific educational and/or experience criteria. To learn more, go to [www.aeecenter.org](http://www.aeecenter.org).

### Other Green Groups

Other organizations that offer green credentials include the Institute of Electrical and Electronics Engineers (IEEE); the Board of Environmental, Health & Safety Auditors (BEAC); the National Association of Home Builders (NAHB); the North American Technician Excellence (NATE); and the Green Advantage (GA).

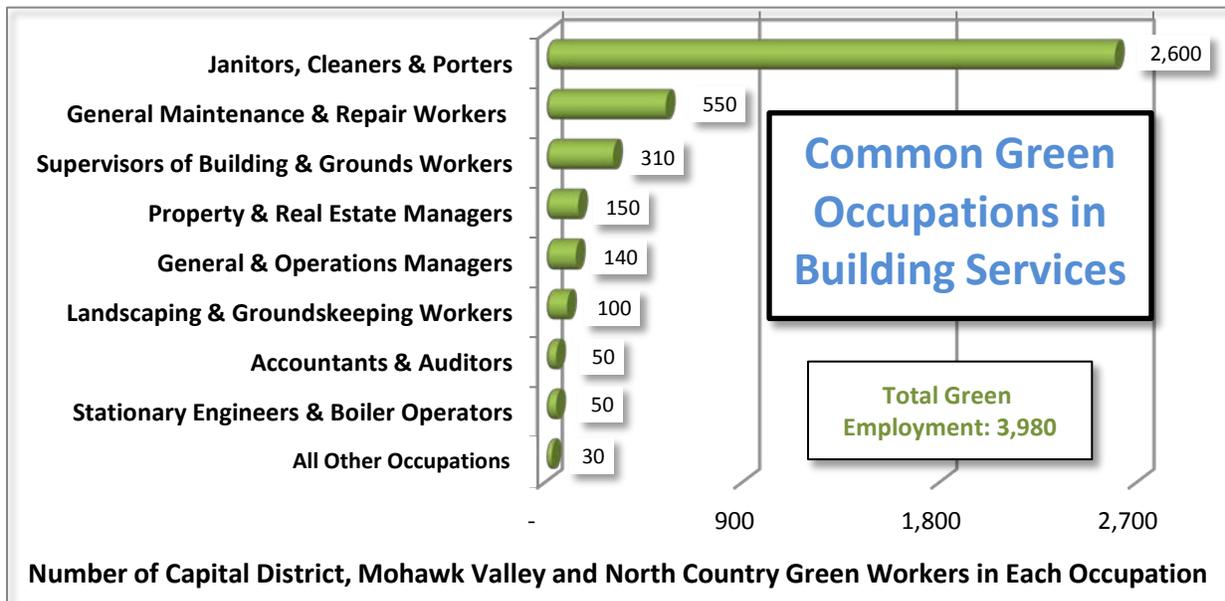


**New York State Green Jobs Survey Finding  
In the Capital District/Mohawk Valley/North Country Region,  
Which Occupations are Green, or Greening?**



In the combined Capital District, Mohawk Valley and North Country region, green employment in the Construction Trades is relatively dispersed among several occupations. The top five occupations – Carpenters; Construction Laborers, Supervisors of Construction Workers; Plumbers, Pipefitters, and Steamfitters; and Electricians– make up over 50% of green employment in the sector.

**New York State Green Jobs Survey Finding  
In the Capital District/Mohawk Valley/North Country Region,  
Which Occupations are Green, or Greening?**



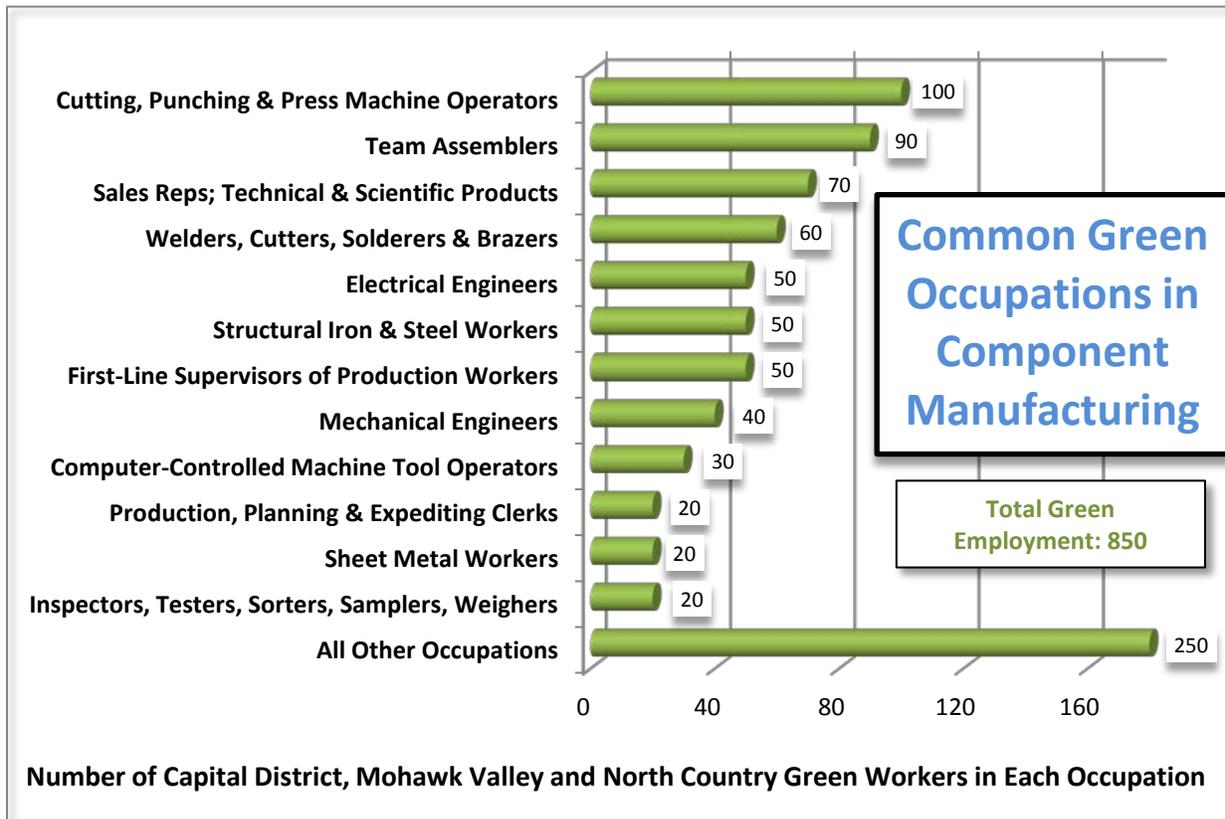
In the combined Capital District, Mohawk Valley and North Country region, green employment in the Building Services cluster is dominated by one occupation, Janitors, Cleaners, and Porters. It accounts for nearly two-thirds of the cluster’s green employment (2,600 workers).

The top five occupations in Building Services -- Janitors, Cleaners, and Porters; General Maintenance and Repair Workers; Supervisors of Building and Grounds Workers; Property and Real Estate Managers; and General and Operations Managers -- account for 94% of green employment in the sector.

**How is Green Defined Differently in Building Services?**

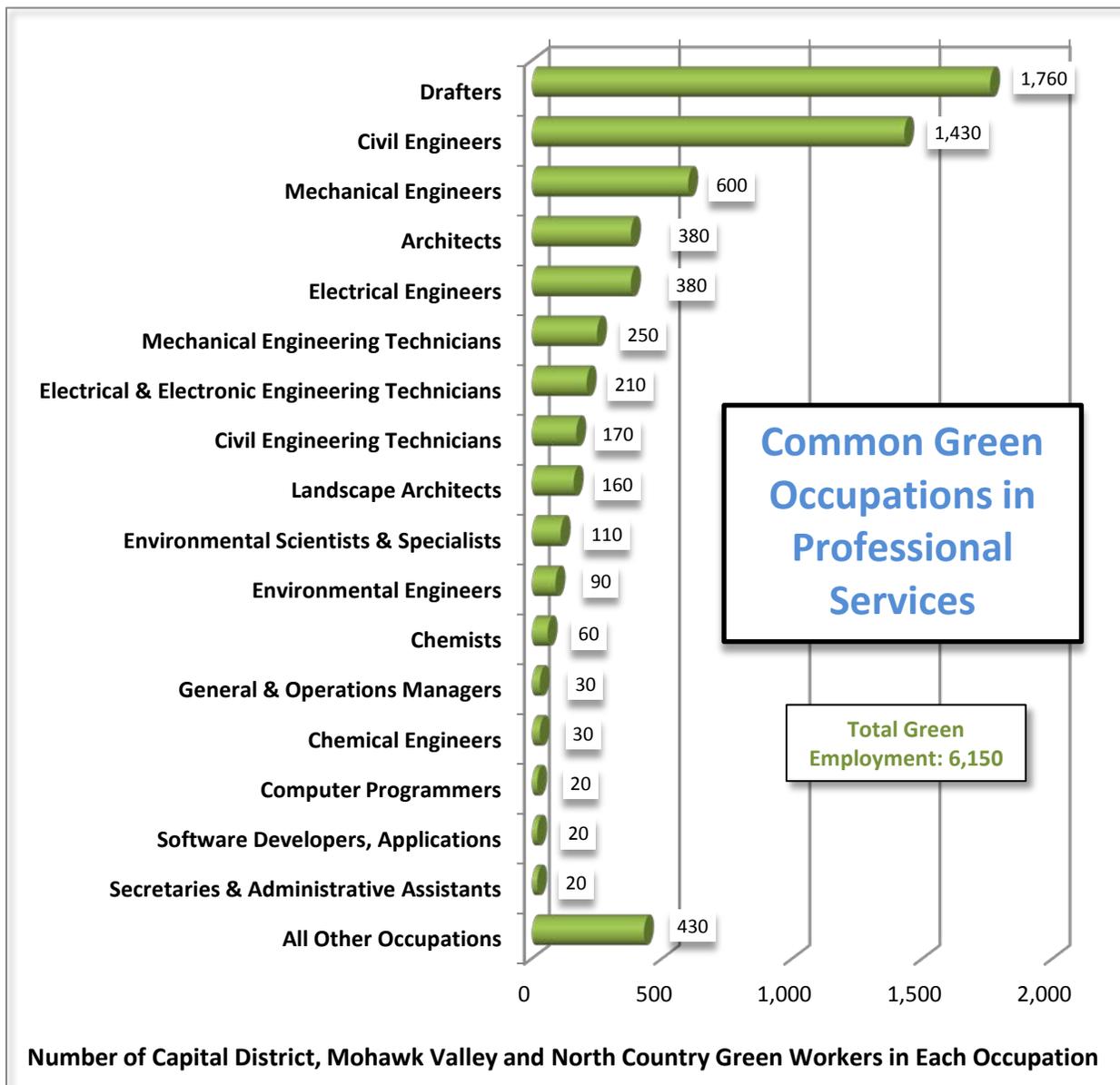
**In Building Services, green is defined as helping buildings and facilities achieve greater energy efficiency, use new energy technologies, or achieve other environmental sustainability goals. For this cluster, people engaged in recycling and green cleaning were counted as green workers in the Green Jobs Survey.**

**New York State Green Jobs Survey Finding  
In the Capital District/Mohawk Valley/North Country Region,  
Which Occupations are Green, or Greening?**



In the combined Capital District, Mohawk Valley and North Country region, green employment in Component Manufacturing is relatively dispersed among several occupations. The top five occupations – Cutting, Punching and Press Machine Operators; Team Assemblers; Sales Representatives of Technical and Scientific Products; Welders, Cutters, Solderers and Brazers; and Electrical Engineers – make up 45% of green employment in the sector.

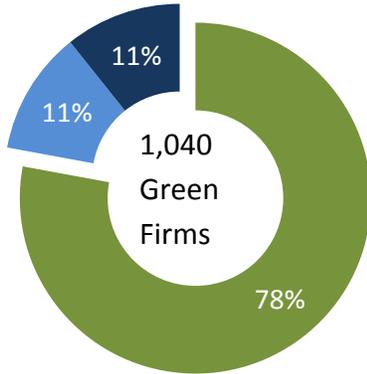
**New York State Green Jobs Survey Finding  
In the Capital District/Mohawk Valley/North Country Region,  
Which Occupations are Green, or Greening?**



In the combined Capital District, Mohawk Valley, and North Country region, green employment in the Professional Services cluster is concentrated in a few occupations. The five most common green occupations – Drafter, Civil Engineer, Mechanical Engineer, Architect and Electrical Engineer – account for three-fourths of the cluster’s green employment (4,550 workers). All of these occupations are involved in delivering energy efficiency products and services.

**New York State Green Jobs Survey Finding  
In the Capital District/Mohawk Valley/North Country Region,  
Are Firms Able to Fill All Their Green Jobs?**

**The short answer – “In most cases, there’s no problem.”  
In New York State, most businesses have little difficulty  
finding and hiring qualified employees for their green jobs.**

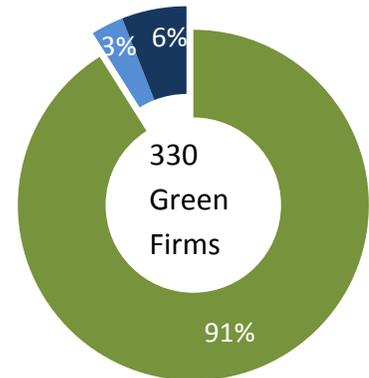


**Construction Trades**

Of the 1,040 green firms in Construction Trades in the combined Capital District, Mohawk Valley and North Country region, 22% (230) have difficulty recruiting qualified green workers. 11% have difficulty recruiting for more than one occupation.

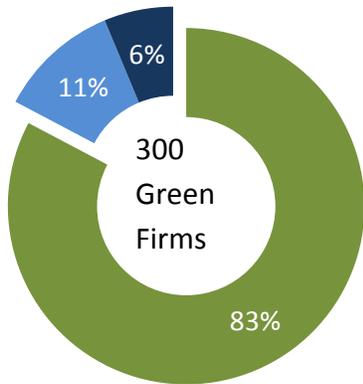
**Building Services**

Of the 330 green firms in Building Services in the combined Capital District, Mohawk Valley, and North Country region, 9% (30) have difficulty recruiting qualified green workers. 6% have difficulty recruiting for more than one occupation.



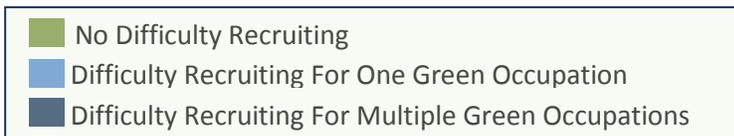
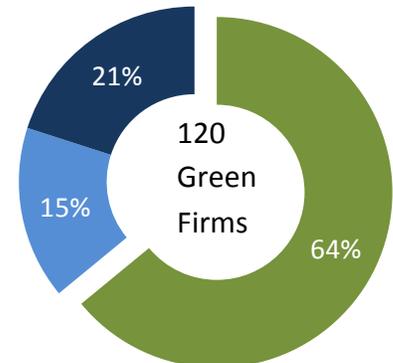
**Professional Services**

Of the 300 green firms in Professional Services in the combined Capital District, Mohawk Valley, and North Country region, 17% (50) have difficulty recruiting qualified green workers. 6% have difficulty recruiting for more than one occupation.

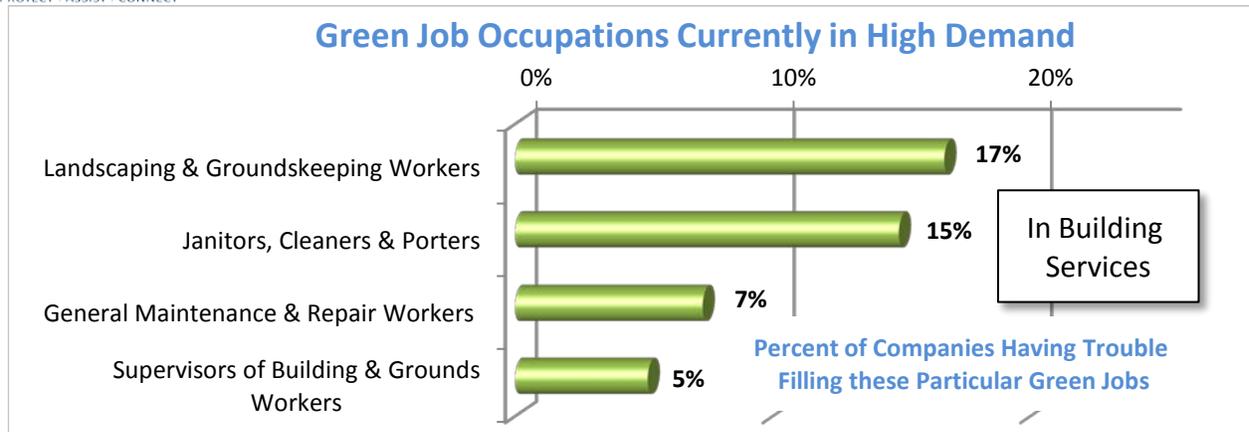


**Component Manufacturing**

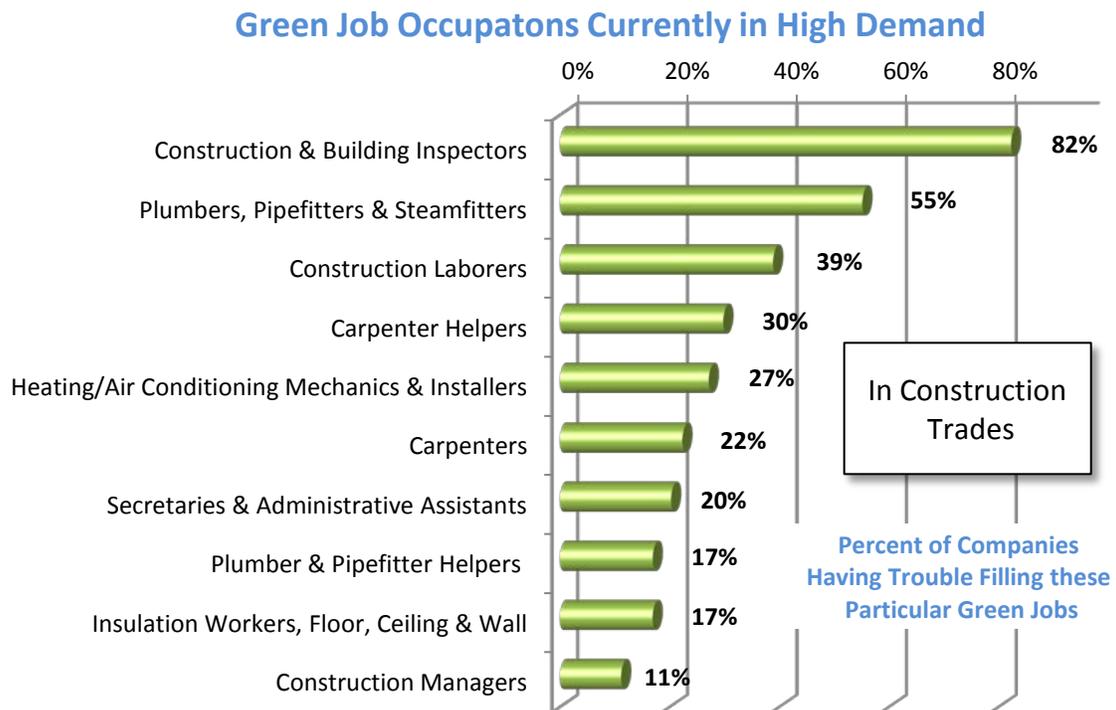
Of the 120 green firms in Component Manufacturing in Upstate New York (which includes the Capital District, Mohawk Valley, and North Country Region), 36% (40) have difficulty recruiting qualified green workers. 21% have difficulty recruiting for more than one occupation.



**New York State Green Jobs Survey Finding**  
**In the Capital District/Mohawk Valley/North Country Region,**  
**Which Green Job Occupations are in High Demand?**



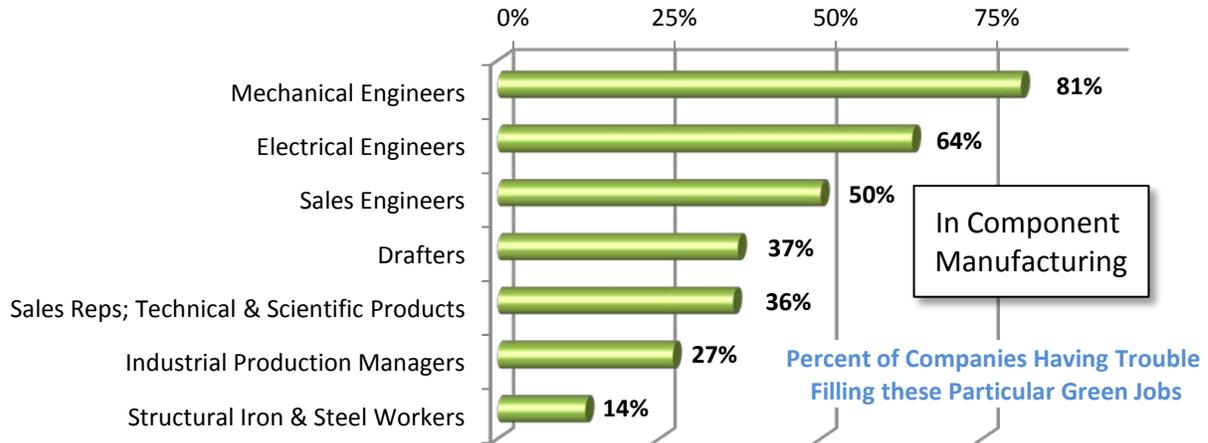
Of the Building Services companies in the combined Capital District, Mohawk Valley, and North Country region that employ or are looking to employ green Landscaping and Grounds-keeping Workers, 17% are having difficulty filling these positions. These workers landscape or maintain grounds of property using hand or power tools or equipment.



Eighty-two percent of the Construction Trades firms in the combined Capital District, Mohawk Valley and North Country region that employ or seek to employ green Construction and Building Inspectors have difficulty recruiting qualified green workers for these jobs.

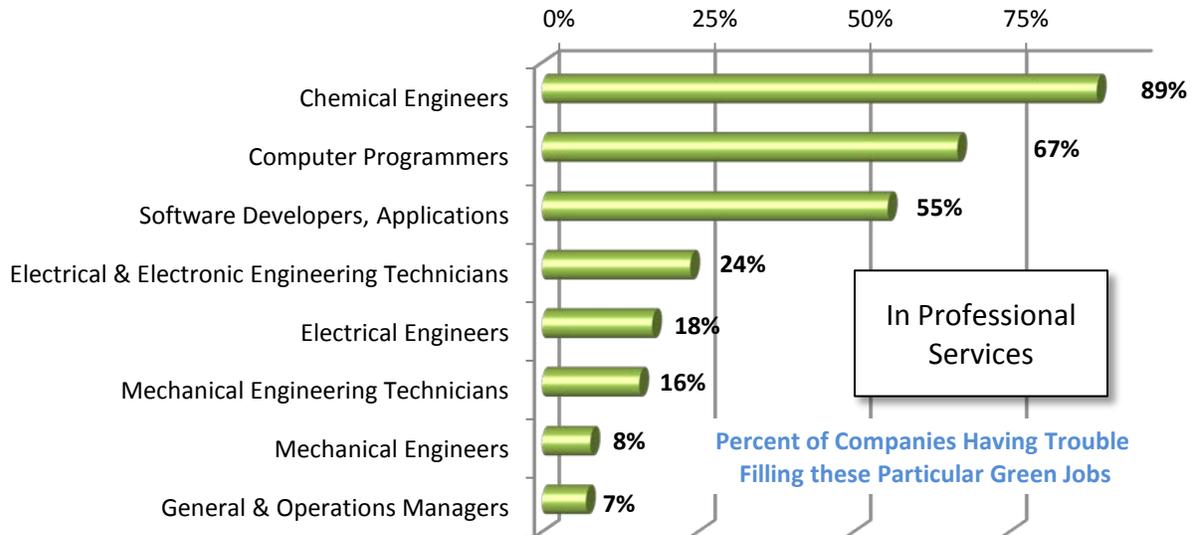
**New York State Green Jobs Survey Finding**  
**In the Capital District/Mohawk Valley/North Country Region,**  
**Which Green Job Occupations are in High Demand?**

**Green Job Occupations Currently in High Demand**



Eighty-one percent of Component Manufacturing firms in this combined region employing or seeking to employ green Mechanical Engineers are having trouble filling these positions. These workers perform engineering duties in planning and designing tools, engines, machines, and other mechanically functioning equipment.

**Green Job Occupations Currently in High Demand**

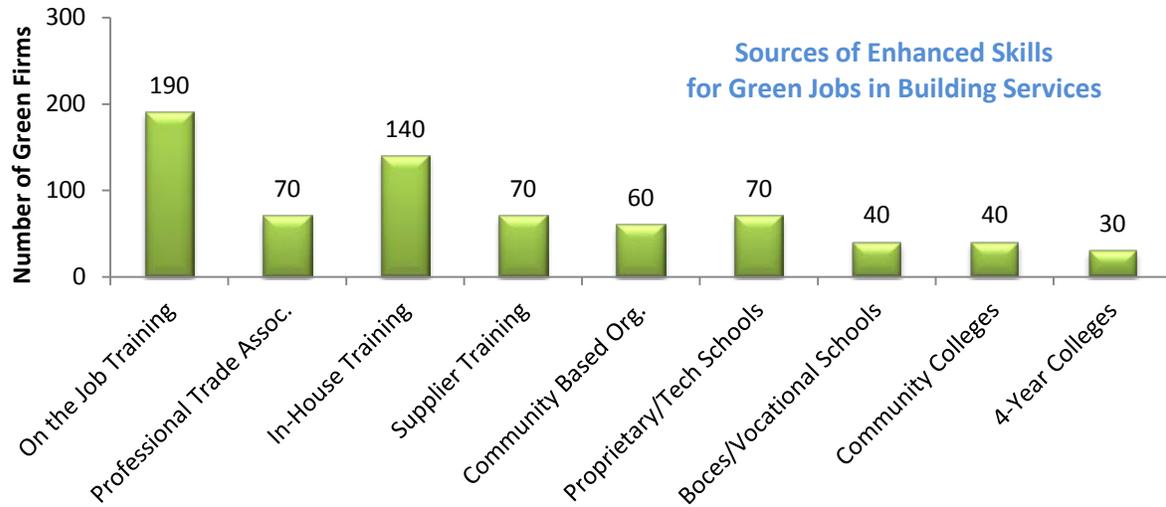


Of the Professional Services companies in the combined Capital District, Mohawk Valley and North Country region that employ or are looking to employ green Chemical Engineers, 89% are having difficulty filling these positions. These workers design chemical plant equipment and devise processes for manufacturing chemicals and products, such as gasoline, synthetic rubber, plastics, detergents, cement, paper, and pulp, by applying principles and technology of chemistry, physics, and engineering.

**New York State Green Jobs Survey Finding  
In the Capital District/Mohawk Valley/North Country Region,  
What is the Need for Additional Training?**

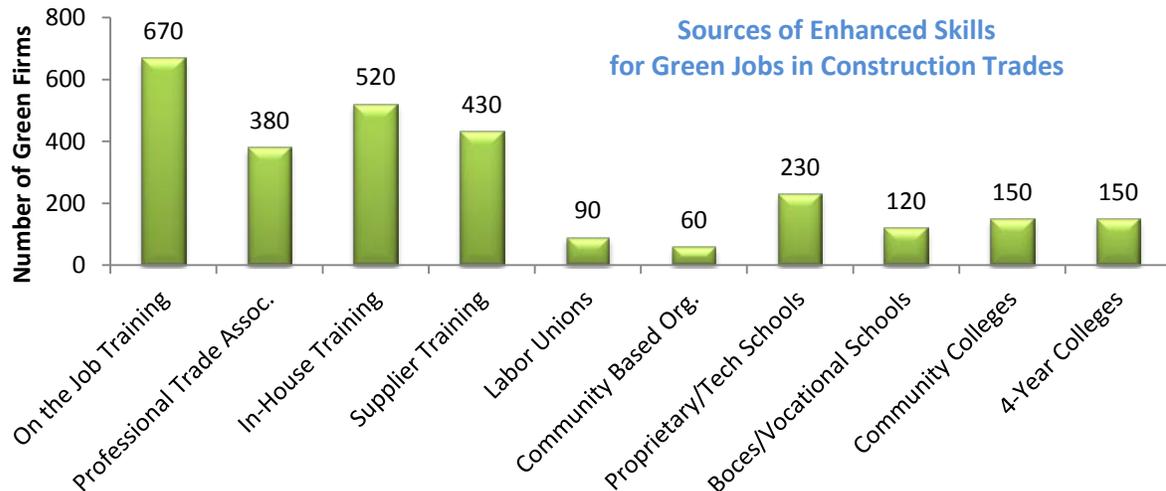
**Building Services**

In Building Services, 76% (250) of green firms require that their employees have some form of enhanced skills to deliver green services in the combined Capital District, Mohawk Valley and North Country region. To train their employees, firms most often utilize on-the-job training and/or in-house training programs.



**Construction Trades**

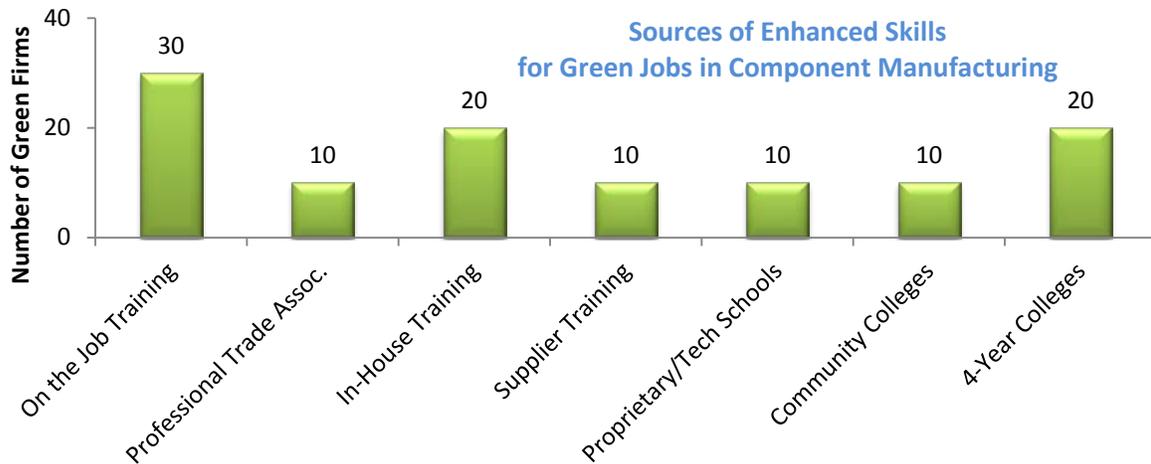
Approximately 78% (810) of green firms in Construction Trades require employees to have enhanced skills in order to produce green products or services. In the combined Capital District, Mohawk Valley, and North Country region, firms most often utilize on-the-job training, in-house training and/or supplier based programs.



**New York State Green Jobs Survey Finding  
In the Capital District/Mohawk Valley/North Country Region,  
What is the Need for Additional Training?**

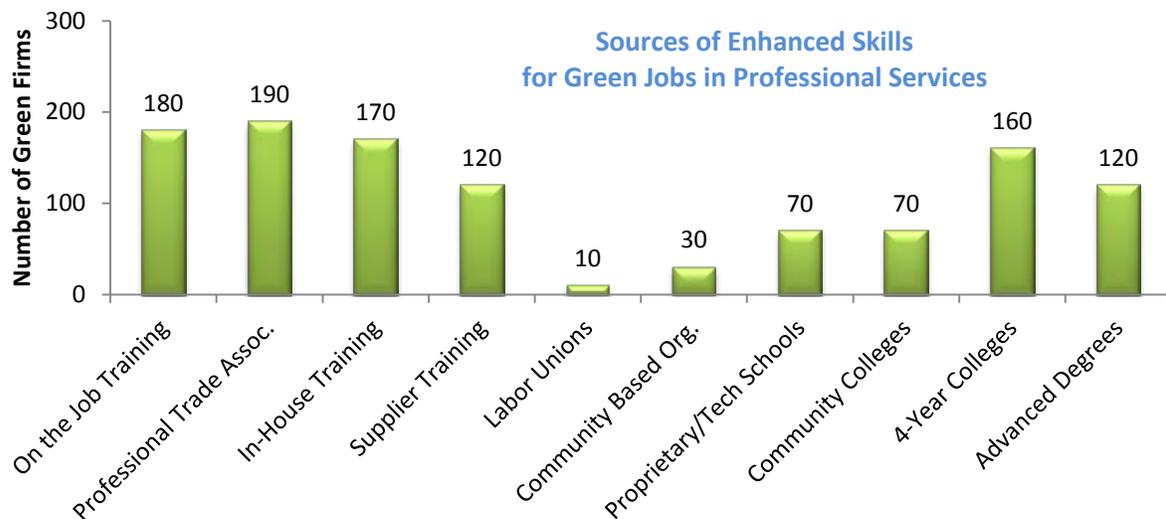
**Component Manufacturing**

The share of green Component Manufacturing firms in the combined Capital District, Mohawk Valley and North Country region requiring that employees have enhanced skills to produce green products or services is 77% (30). To train their employees, firms most often utilize on-the-job training.



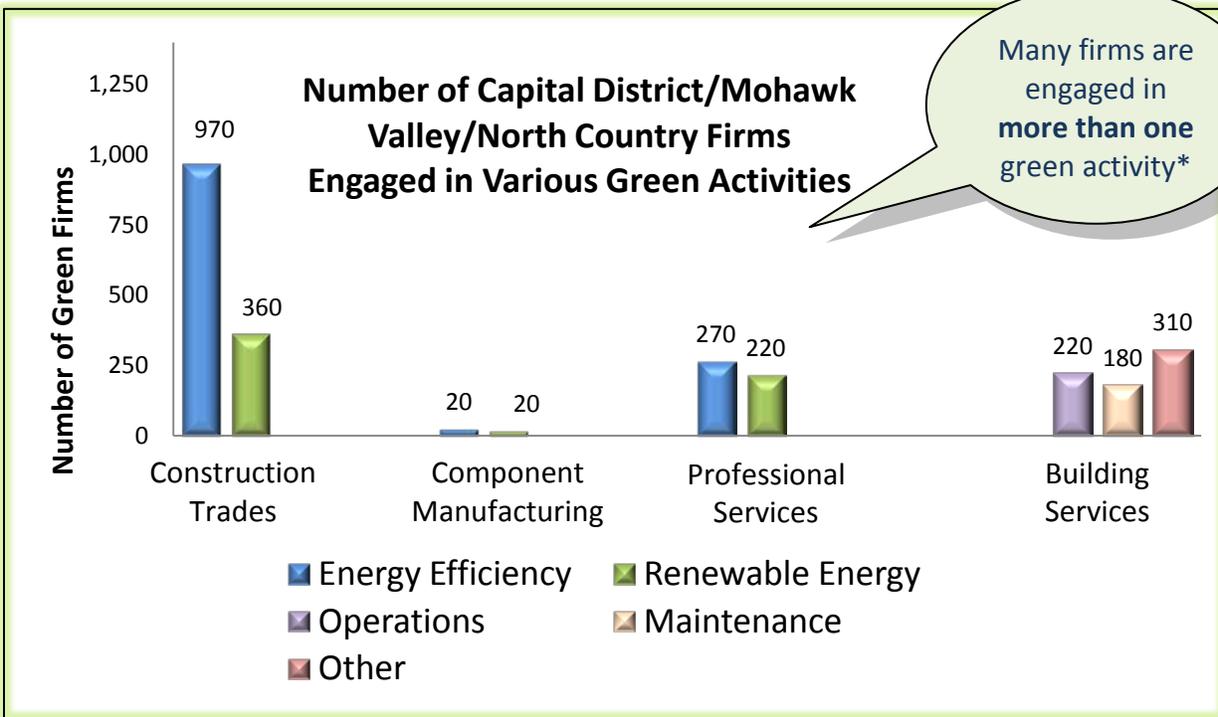
**Professional Services**

Ninety-two percent (270) of green employers in Professional Services require that employees have enhanced skills to produce green products or services. In the combined Capital District, Mohawk Valley, North Country region, firms most often utilize professional trade associations, on-the-job training, or in-house training programs.



**New York State Green Jobs Survey Finding  
In the Capital District/Mohawk Valley/North Country Region,  
Which Green Activities are Businesses Engaging In?**

Companies may participate in a wide variety of green activities, even within the same industry cluster. Of the 1,040 Construction firms in the combined Capital District, Mohawk Valley and North Country region with green jobs (see page 4), the overwhelming majority are engaged in energy efficiency (970).



\*Since the categories are not mutually exclusive (some workers fall into both the Energy Efficiency and Renewable Energy categories), the green firm counts cannot be added together to get a total employment figure for an occupation. Rather, the sum of the green firm counts would overestimate the total number of green firms.

**Green Activity Groups and Subgroups**

**Energy Efficiency** includes Retrofitting and/or New Construction.

**Renewable Energy** includes Solar PV, Solar Thermal, Wind, Biomass, Geothermal and Hydro.

**Operations** include Meter Reading/Reporting, Performance Monitoring/Optimization, Retro-Commissioning and New Technologies.

**Maintenance** includes Renewable Energy Systems, Green Roofs/Landscaping and Indoor Air Quality.

**Green Cleaning & Recycling** has Green Cleaning and Recycling as distinct subgroups.