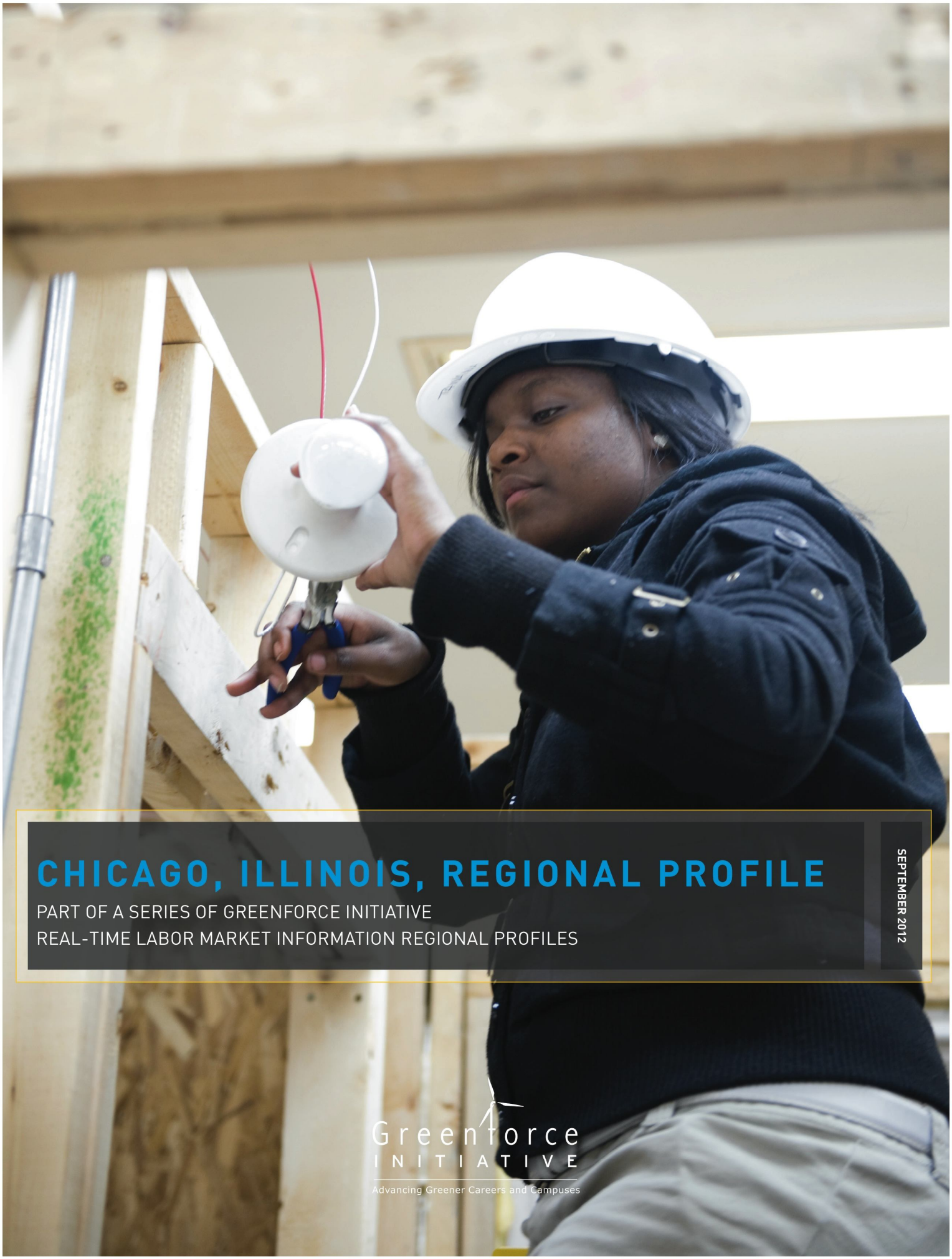

CHICAGO, ILLINOIS, REGIONAL PROFILE

PART OF A SERIES OF GREENFORCE INITIATIVE
REAL-TIME LABOR MARKET INFORMATION REGIONAL PROFILES

SEPTEMBER 2012

Greenforce
INITIATIVE
Advancing Greener Careers and Campuses

Jobs for the Future (JFF) and National Wildlife Federation (NWF) are partners in the **Greenforce Initiative™**, an effort to strengthen the capacity of community colleges to green the skills of our modern workforce.

JOBS FOR THE FUTURE

Jobs for the Future aligns education with today's high-demand careers. With its partners, JFF develops policy solutions and new pathways leading from college readiness to career advancement for struggling and low-income populations in America.

WWW.JFF.ORG

National Wildlife Federation has a 20-year history of working with colleges and universities through its Campus Ecology program to improve their overall green educational programming and onsite sustainability. Its student outreach programs, campus consulting, climate action competition, and educational events and resources reach about 1,000 campuses each year.

WWW.NWF.ORG

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CHICAGO, ILLINOIS, REGIONAL PROFILE

PART OF A SERIES OF GREENFORCE INITIATIVE REAL-TIME LABOR MARKET INFORMATION REGIONAL PROFILES

Connecting individuals to promising jobs is a complex task. The ability to access actionable current labor market information is critical to designing and strengthening training programs that lead to employment. This profile presents labor market information for the **CHICAGO-JOLIET-NAPERVILLE METROPOLITAN STATISTICAL AREA,** covering Cook County, IL; DeKalb County, IL; DuPage County, IL; Grundy County, IL; Kane County, IL; Kendall County, IL; Lake County, IL; McHenry County, IL; Will County, IL; Jasper County, IN; Lake County, IN; Newton County, IN; Porter County, IN; and Kenosha County, WI.

Included here are basic demographic, workforce, and employment indicators for the region. Using the U.S. Department of Labor's green definitions and Standard Occupational Codes, the report also shows occupational projections and job postings activity for the "green" sector. The Bureau of Labor Statistics and O*NET define the green economy as 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. O*NET describes the "greening" of occupations as the extent to which green economy activities and technologies increase the demand for existing occupations, shape the work and worker requirements needed for occupational performance, and generate unique work and worker requirements.

This report is part of a series of regional profiles prepared for the Greenforce Initiative, a two-year project of the National Wildlife Federation and Jobs for the Future to spur innovation in the role of community colleges to meet the demand for a skilled workforce with sustainability skills in key career and technical occupations. The reports are intended to spur discussions about industry sectors that should be considered for program development, while demonstrating areas of reasonable opportunities. With support from the Bank of America Charitable Foundation, the Greenforce Initiative:

- Strengthens workforce development through sustainability skills education and practices at community colleges;

- Enables lower-skilled and other adults to advance their sustainability and science, technology, engineering, and math (STEM) skills; and
- Assists adults in accessing jobs and career pathways in high-demand occupations within their local communities.

More than 100 community college partners in Illinois, Michigan, North Carolina, Texas, Virginia, and Washington are serving an estimated 8,000 lower-skilled and nontraditional workers.

This report is based upon data from multiple sources. For designing workforce development programs, it is important to use a mix of data to identify growth opportunities. Still, inherent risks exist in the attempt to draw inferences from mixed data sets, so it is critical that readers use this report as a resource and context for deeper engagement with education and workforce partners, especially employers and industry representatives. It is not intended to resolve all questions.

Ongoing monitoring of labor trends is one step toward finding jobs for unemployed workers and students. Data-driven decisions can help improve program outcomes and employability. Because green jobs occur across many industries, it is beneficial to consider the largest bases of opportunity in "traditional" jobs and sectors, and to think about how to enhance sustainability skills training for those jobs and sectors in a manner that increases the marketability of program completers.

A SNAPSHOT OF THE REGION

Table 1 provides basic demographic information about the region. The Chicago MSA grew by nearly 5 percent since the 2000 census and by 16 percent since 1990. There were 9.5 million people in the area in 2011, with 4.8 million actively participating in the labor force and an average annual unemployment rate of 9.8 percent. The economic downturn makes it especially important to monitor the effects of key demographic drivers and shifts, such as income distribution, aging population, educational attainment rates, and migration patterns.

Table 1.
Basic Demographic Information:
People and Income Overview, Chicago-Joliet-Naperville

Population, 2011	9,504,753
Growth since 2000	4.50%
Growth since 1990	16.20%
Land Area	7,196.9 square miles
Population Density, 2011	1,320.7
% Reporting One Race Only*	97.60%

% Reporting Only African American*	17.40%
% Reporting Hispanic (of any race)*	20.70%
Households*	3,475,726
Labor Force, 2011	4,831,445
Unemployment Rate, 2011	9.80%
Per Capita Personal Income, 2010	$44,344
10-year Growth in Per Capita Personal Income, adjusted for inflation	0.20%
Poverty Rate, 2010	13.70%
High School Diploma or More, Adults 25+*	85.80%
Bachelor's Degree or More, Adults 25+*	33.40%

* U.S. Bureau of the Census, American Community Survey five-year estimate
Source: *Stats Indiana, 2012*

Table 2 provides a regional industry overview, displaying all industries in the MSA by size, growth, and earnings.

Table 2.
Regional Industry Overview

	2011 JOBS	2016 JOBS	5-YEAR CHANGE	2011 EARNINGS
Educational Services	176,244	206,190	17%	$46,425
Health Care and Social Assistance	613,619	687,419	12%	$51,269
Finance and Insurance	375,174	418,421	12%	$90,651
Professional, Scientific, and Technical Services	435,728	480,805	10%	$91,085
Administrative and Support and Waste Management and Remediation Services	408,317	448,178	10%	$35,763
Arts, Entertainment, and Recreation	117,910	129,892	10%	$28,064
Real Estate and Rental and Leasing	225,194	246,450	9%	$35,042
Accommodation and Food Services	349,374	376,267	8%	$22,968
Other Services (except Public Administration)	277,000	297,342	7%	$36,732
Transportation and Warehousing	255,860	271,465	6%	$59,757
Management of Companies and Enterprises	84,817	89,511	6%	$135,392
Construction	240,860	250,072	4%	$66,683
Government	577,414	591,065	2%	$69,715
Retail Trade	504,935	508,907	1%	$31,649
Wholesale Trade	246,094	248,092	1%	$88,563
Information	91,195	90,959	0%	$82,670
Mining, Quarrying, and Oil and Gas	2,055	2,029	(1%)	$71,322

Extraction				
Utilities	14,758	13,776	(7%)	$129,895
Manufacturing	425,258	390,660	(8%)	$80,097
Agriculture, Forestry, Fishing, and Hunting	13,549	12,377	(9%)	$37,206

Source: EMSI

Industries projected to grow fastest over five years:

- Educational services (17%)
- Health care and social assistance (12%)
- Finance and insurance (12%)

Largest Industries, 2011:

- Health care and social assistance (613,619 jobs)
- Government (577,414 jobs)
- Retail trade (504,935 jobs)

Industries with the highest average earnings:

- Management of companies and enterprises ($135,392)
- Utilities ($129,895)
- Professional, scientific, and technical services ($91,085)

JOB POSTINGS FOR THE GREEN SECTOR

Employers posted 494,632 jobs between July 1, 2011 and June 30, 2012. Of these, 7,624 (1.54 percent) were green jobs. The following charts present summary information for green opportunities in the region.

Table 3 demonstrates that most green job ads during the period of analysis were concentrated in professional, scientific, and technical services (16.88 percent); no other industry provided more that 4 percent of green occupations.

Table 3.
Distribution of Green Job Postings by Industry, July 2011 – June 2012

	JOB OPENINGS	% OF TOTAL GREEN JOBS
Professional, Scientific, and Technical Services	1,287	16.88%
Educational Services	290	3.80%
Utilities	289	3.79%
Administrative and Support Services	204	2.68%
Chemical Manufacturing	180	2.36%
Computer and Electronic Product Manufacturing	169	2.22%
Real Estate	166	2.18%
Electrical Equipment, Appliance, and Component Manufacturing	163	2.14%
Food Manufacturing	163	2.14%
National Security and International Affairs	133	1.74%
Construction of Buildings	129	1.69%
Hospitals	128	1.68%
Specialty Trade Contractors	125	1.64%
Machinery Manufacturing	120	1.57%
Ambulatory Health Care Services	114	1.50%
Rail Transportation	113	1.48%
Waste Management and Remediation Services	98	1.29%
Support Activities For Transportation	96	1.26%
Religious, Grantmaking, Civic, Professional, and Similar Organizations	87	1.14%
Food Services and Drinking Places	81	1.06%
Executive, Legislative, and Other General Government Support	68	0.89%
Transportation Equipment Manufacturing	68	0.89%
Insurance Carriers and Related Activities	58	0.76%
Miscellaneous Manufacturing	51	0.67%

Source: Burning Glass Labor Insight

Table 4 breaks down green jobs by category. Nearly 40 percent of all green jobs posted are in the pollution reduction, removal, and remediation sectors, followed by energy efficiency and natural resource conservation.

Table 4.
Green Jobs, by Category, July 2011 – June 2012

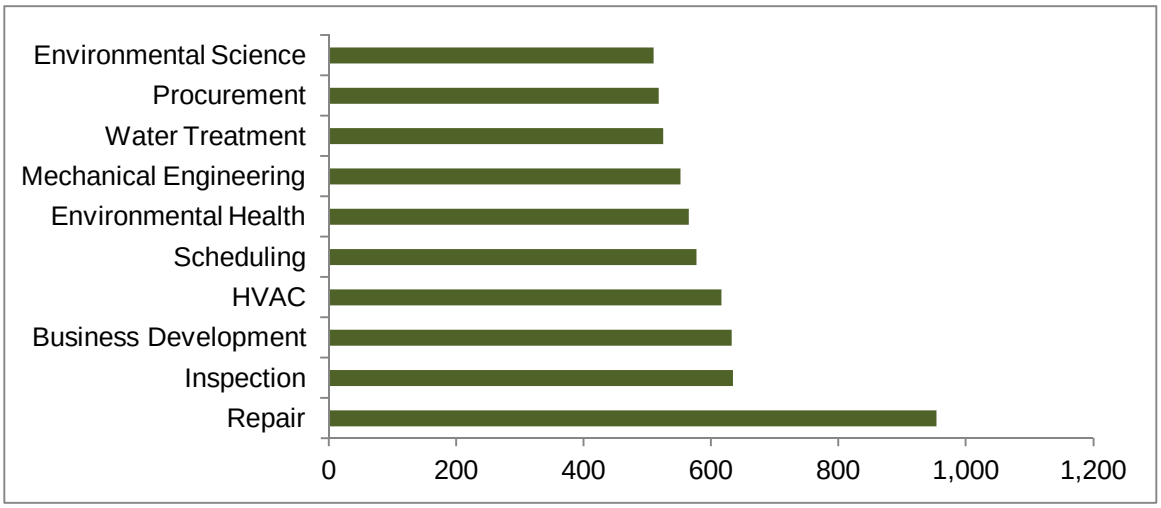
	JOB OPENINGS	% OF TOTAL GREEN JOBS
Pollution Reduction, Removal, and Remediation	2,909	38.16%
Energy Efficiency	1,769	23.20%
Natural Resource Conservation	1,024	13.43%
Environmental Regulation and Enforcement	795	10.43%
Renewable Energy: General	732	9.60%
Research and Development	631	8.28%
Environmental Regulation and Remediation	575	7.54%
Green Research	510	6.69%
Green Building and Installation	481	6.31%
Renewable Energy: Wind	147	1.93%
Renewable Energy: Solar	90	1.18%
Environmental Promotion and Advocacy: General	82	1.08%
Environmental Promotion and Advocacy: Green Energy Trading	55	0.72%
Environmental Promotion and Advocacy: Education and Training	37	0.49%

Source: Burning Glass Labor Insight

SUSTAINABILITY SKILLS MATTER

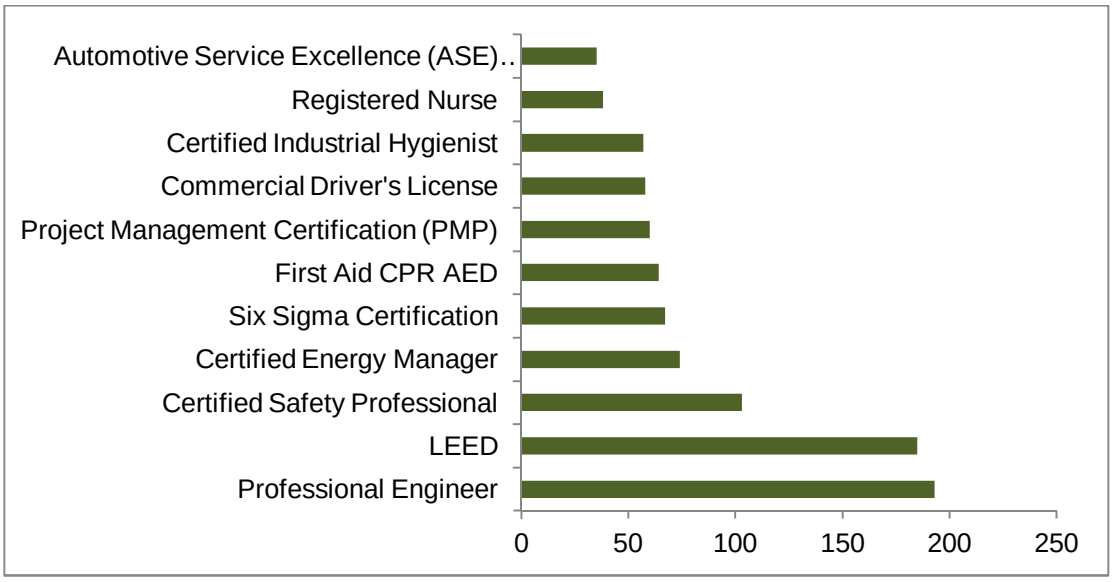
Skills and certifications associated with job openings can help demonstrate the background that companies expect successful job applicants to have when they apply for openings. These data provide critical insights for training investment decisions. The data suggest that employers in the region are requesting the following “green” skills:

Figure 1.
Top 10 "Green" Skills, July 2011-June 2012



Source: Burning Glass Labor Insight

Figure 2.
Top 10 "Green" Certifications, July 2011-June 2012

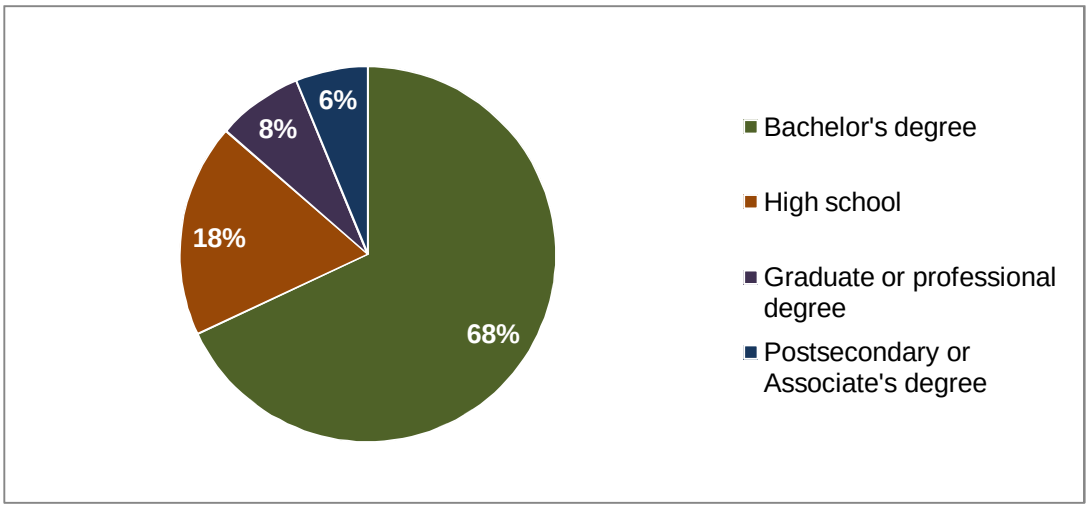


Source: Burning Glass Labor Insight

Data from job postings on education and experience requirements are critical complements to traditional labor market information data (Figures 3 and 4).

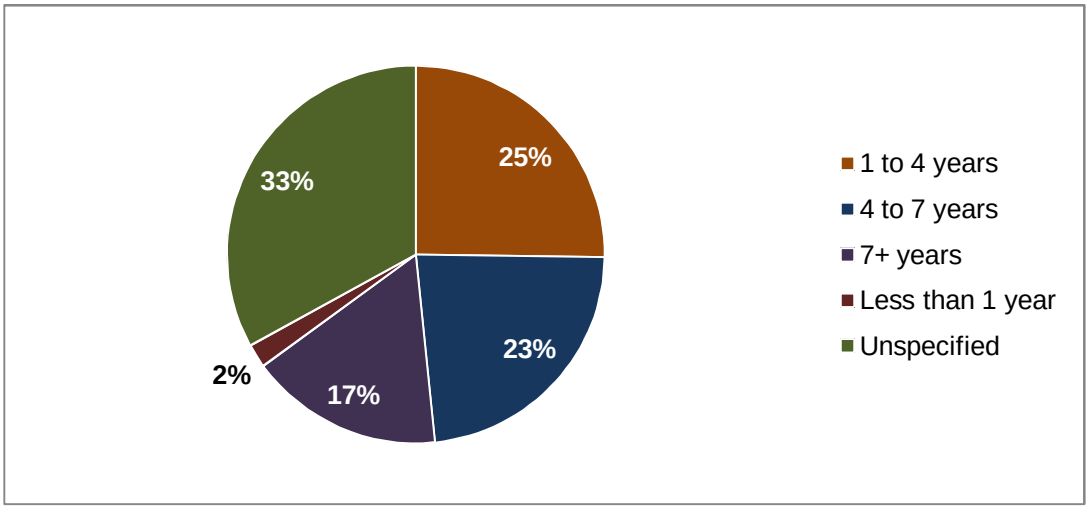
- √ In the Chicago MSA, 51 percent of jobs requested a Bachelor's degree, while 24 percent were unspecified in educational requirements. Just under 20 percent of positions required an Associate's degree or less.
- √ 33 percent of job postings specified no experience requirements, 25 percent required 1 to 4 years experience, and 23 percent required 4 to 7 years experience.

Figure 3.
Education Requirements, July 2011-June 2012



Source: Burning Glass Labor Insight

Figure 4.
Green Jobs Experience Requirements, July 2011-June 2012



Source: Burning Glass Labor Insight

POSITIONS TO WATCH: MORE TRAINING NEEDED

Tables 5 and 6 show the largest occupations and the fastest-growing ones. Based on this information, we can identify some occupations that have strong employment demand opportunities.

- √ The occupation of truck drivers, heavy and tractor-trailer, shows strong growth, as well as over 6,000 real-time job postings, compared with fewer than 3,000 regional completions.

- √ Construction laborers are a strong growth occupation, with 345 job postings and rapid growth.
- √ Plumbers, pipefitters, and steamfitters saw over 300 job postings. Data indicates only 81 completions in 2010, indicating potential training opportunities.
- √ Regulatory affairs specialist appears to be a growing occupation in all regions. There were 350 job postings in the studied period.
- √ However, even in these growth areas, program leaders should collect more detailed information from employer partners or other knowledgeable workforce actors about the training that is needed. Some of the positions, which are expected to expand longer term, might have more limited employment demand in the short term, given the current supply of trained workers. More data should be collected on trainings, given there were just over 300 completions for the more general "compliance officers" occupation.

Table 5.
Largest Green Occupations, 2016

	2011 JOBS	2016 JOBS	% CHANGE	JOB ADS	2011 MEDIAN HOURLY WAGE	REGIONAL COMPLETIONS (2010)	EDUCATION LEVEL	O*NET CATEGORY
Managers, all other	88,152	94,707	7%	N/A	$28.41	22,762	Work experience in a related field	Emerging Occupations
Truck drivers, heavy and tractor-trailer	61,164	67,098	10%	6,430	$19.16	2,951	Short-term on-the-job training	Enhanced Skills
Customer service representatives	76,556	81,587	7%	9,156	$16.09	3	Moderate-term on-the-job training	Increased Demand
Construction laborers	45,327	48,860	8%	345	$19.42	6	Moderate-term on-the-job training	Enhanced Skills
Automotive service technicians and mechanics	23,980	25,927	8%	912	$19.44	1,346	Postsecondary vocational award	Enhanced Skills
Plumbers, pipefitters, and steamfitters	16,483	18,237	11%	331	$32.17	81	Long-term on-the-job training	Enhanced Skills
Sales representatives, services, all other	21,534	22,929	6%	2,079	$23.68	287	Work experience in a related field	Emerging Occupations

Regulatory Affairs Specialist	6,725	7,602	13%	350	$21.64	303	Long-term on-the-job training	Emerging Occupations

Table 6.
Fastest Growing Green Jobs, 2011-2016

	2011 JOBS	2016 JOBS	% CHANGE	JOB ADS	2011 MEDIAN HOURLY WAGE	REGIONAL COMPLETIONS (2010)	EDUCATION LEVEL	O*NET CATEGORY
Aircraft structure, surfaces, rigging, and systems assemblers	136	162	19%	4	$13.94	6	Moderate-term on-the-job training	Enhanced Skills
Regulatory affairs specialists	6,725	7,602	13%	350	$21.64	303	Long-term on-the-job training	Emerging Occupations
Heating, air conditioning, and refrigeration mechanics and installers	5,785	6,464	12%	540	$23.09	1,264	Postsecondary vocational award	Increased Demand
Environmental science and protection technicians, including health	1,392	1,565	12%	132	$18.52	101	Associate's degree	Enhanced Skills
Environmental engineering technicians	810	905	12%	52	$22.49	76	Associate's degree	Enhanced Skills

Source: EMSI

Hottest Green Sub-Baccalaureate Prospects, Last 90 Days

The "hottest green" sub-baccalaureate prospects are jobs in demand in the region between June 16, 2012 and September 13, 2012. Listed are the top occupation titles that correspond to the Bureau of Labor Statistics Standard Occupation Codes, along with the number of job postings.

- ✓ Installation, Maintenance, and Repair Workers (19)
- ✓ First-Line Supervisors of Production and Operating Workers (15)
- ✓ General and Operations Managers (9)
- ✓ Biological Technicians (15)
- ✓ Construction Managers (11)
- ✓ Architectural and Engineering Managers (9)
- ✓ Inspectors, Testers, Sorters, Samplers, and Weighers (13)

- ✓ Chemists (9)
- ✓ Energy Engineers (8)
- ✓ Environmental Science and Protection Technicians, Including Health (7)

POSITIONS TO WATCH: MORE CAUTION URGED

Table 7 shows occupations that are projected to decline between 2011 and 2016. Although these occupations are shrinking in the Chicago MSA they continue to show strong posting numbers, with more than 100 job postings, July 2011-June 2012. This suggests that, while training in these occupations might continue in the short-term, the demand in these occupations should be watched closely and programs should likely be scaled down over time.

- √ Drilling and boring machine tool setters, operators, and tenders, metal and plastic
- √ Electrical and electronic equipment assemblers
- √ Cutting, punching, and press machine setters, operators, and tenders, metal and plastic

In addition, our analysis above suggests that training in several other occupations should also be scaled down due to an apparent overabundance of trained jobseekers. This training may be better redirected elsewhere.

- √ Heating, air conditioning, and refrigeration mechanics and installers: While significant numbers of positions are posted (over 500), there were already a significant number of completions (over 1,200 completions in 2010).
- √ Automotive service technicians and mechanics: With 912 postings in the last year, there were over 1300 completions in 2010.
- √ Environmental engineering technicians: With 52 postings in the last year, there were over 70 completions in 2010.
- √ Plant and system operators, all other: Despite being a declining occupation (-10 percent over five years), significant training is still talking place for these positions, which did not offer many green job postings. (*See Table 7.*)

Table 7.
Declining Green Jobs, 2011-2016

DESCRIPTION	2011 JOBS	2016 JOBS	% CHANGE	JOB ADS	2011 MEDIAN HOURLY WAGE	REGIONAL COMPLETIONS (2010)	EDUCATION LEVEL	O*NET CATEGORY
Drilling and boring machine tool setters, operators, and tenders, metal and plastic	1,703	1,369	(20%)	111	$13.86	75	Moderate-term on-the-job training	Increased Demand
Chemical plant and system operators	1,245	1,046	(16%)	2	$25.73	0	Long-term on-the-job training	Increased Demand
Electrical and electronic equipment assemblers	7,810	6,875	(12%)	106	$11.29	68	Short-term on-the-job training	Increased Demand
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	9,085	7,982	(12%)	341	$13.92	83	Moderate-term on-the-job training	Increased Demand
Plant and system operators, all other	238	214	(10%)		$27.46	231	Long-term on-the-job training	Emerging Occupations

HOW COMMUNITY COLLEGE PROGRAMS CAN USE THIS INFORMATION

This report indicates that sustainability skills matter for employers. It is worthwhile and relevant for community college career and technical programs to consider how they might integrate such skills into occupations with demand in their regions. Students can also benefit from understanding how their chosen profession is both affected by and impacts sustainability concerns (e.g. waste reduction, cost and resource efficiencies, etc.). To aid in this integration, community college programs might use the information in this report to:

- √ Assess your programs against the demand data provided to determine if there is still opportunity or if you should consider scaling back your training.
- √ Engage with employers and other workforce actors to determine if this data reflects the current reality as they see it and explore opportunities for collaboration to strengthen program alignment with regional demand.

- √ Conduct a dynamic skills audit to determine if your career pathways are addressing all the skills, competencies and certifications that employers are seeking.

Through our Champion Networks, the Greenforce Initiative will be working with community college partners in our selected regions to address these key areas of focus and assist with the use of this information in the high demand occupations noted above. If you are interested in being a part of this network, please contact us for more information.

DATA NOTES

Completers data in this report come from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

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