

CINCINNATI GREEN WORKFORCE LANDSCAPE ANALYSIS

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INTRODUCTION



GREEN WORKFORCE LANDSCAPE ANALYSIS

The 2025 Green Workforce Landscape Analysis for the Cincinnati region was conducted by the Center for Research and Data at the Cincinnati Regional Chamber (The Center), with funding and support by Co-op Cincy, and support by the City of Cincinnati's Office of Environment and Sustainability. This report highlights the critical role a green transition can play in growing and strengthening the Cincinnati region's community and economy. Through an analysis of the City of Cincinnati's 2023 Green Cincinnati Plan, the Center for Research and Data estimated the required investments and their projected job creation and economic impacts. **Our analysis found that these investments could generate between 16,372 and 44,145 jobs and have an overall positive economic impact ranging from \$4.8 billion to \$11 billion on the regional economy.**

These jobs create a unique opportunity for the Cincinnati region to grow and upskill its workforce, distribute jobs more equitably, and emerge as a leader in green economic growth. The Cincinnati region has a geographic advantage in the coming years as climate change is likely to drive population shifts and forced migration. Although climate-driven migration presents challenges, it also offers Cincinnati an opportunity to attract new residents and workers. Becoming a region that embraces a green transition will position the Cincinnati region to attract migration and sustain long-term economic growth.

Even though Cincinnati already has a robust workforce development ecosystem, these investments present an opportunity to further grow, upskill, and diversify the region's workforce. With an estimated 11,856 to 22,647 quality jobs being created, this report presents a unique opportunity to distribute quality jobs equitably and begin to address the systemic inequalities that exist within the region's workforce. Cincinnati's green transition, as detailed in this report, could drive substantial economic growth, positioning the region as a leader in sustainability and innovation.



Executive Summary

The Center for Research and Data analyzed 799 occupations and created an initial list of 114 green jobs in the region. **Green jobs are defined as roles that produce goods or services that benefit the environment, conserve natural resources, or make production processes more environmentally friendly or less resource intensive.** Through in-depth analysis of these occupations in the Cincinnati region, defined here as the Cincinnati Metropolitan Statistical Area, the Center found that many of these jobs have low barriers to entry, with most not requiring degrees from a four-year institution or onerous work experience requirements. However, when analyzing these roles by race/ethnicity and gender, there is clearly homogeneity displayed in this workforce. Only 10% of green jobs in Cincinnati are held by women, and 20.3% are held by people of color, despite the region being about 25% non-white and 49% female. Through a threshold set by the Massachusetts Institute of Technology's Living Wage Calculator, the Center further determined that 89.4% of all green jobs in the region are quality jobs—defined here as jobs that pay a living wage, with a living wage being what one full-time worker must earn on an hourly basis to help cover the cost of their family's minimum basic needs where they live while still being self-sufficient. This presents a clear opportunity to more equitably distribute these new, quality jobs to unlock untapped talent throughout the region.

The Center used the City of Cincinnati's 2023 Green Cincinnati Plan as a benchmark for this work because of its status and national recognition as a comprehensive blueprint toward local sustainability goals. The analysis looked at the goals within each of its eight focus areas and determined the estimated investments needed to meet each goal. The focus areas and investments created to meet each goal are listed below.

These investments represent aggregate spending in the economy, not just investment from public sources.

- Buildings and Energy:** \$2.1 billion to \$4.4 billion
- City Operations:** \$54 million to \$144 million
- Community Activation:** \$20.5 million to \$71.3 million
- Food:** \$39 million to \$125 million
- Mobility:** \$209 million to \$386 million
- Natural Environment:** \$82 million to \$163 million
- Resilience and Climate Adaptation:** \$77.5 million to \$355 million
- Zero Waste:** \$28 million to \$72 million

Despite the significant investments detailed here, costs could be offset through strategic planning and economies of scale. For example, encouraging EV adoption will help meet Mobility goals, but would also improve air quality—a goal of the Natural Environment focus area.

Ultimately, these investments could create an estimated 16,372 to 44,145 total jobs and an economic impact of \$4.8 billion to \$11 billion for the region’s economy, in addition to the potential growth of migration that will likely occur in the coming years given the trajectory of climate change.

An analysis of these generated jobs showed that a majority have low barriers to entry with educational attainment and work experience requirements. Furthermore, most jobs generated, in both high and low estimates, were identified as quality jobs. The appendices at the end of this report detail the top occupations which will be affected, sorted by education requirements, work experience, wages, and workforce diversity to inform employers and workforce development professionals, highlight the occupations which have low barriers to entry and pay a living wage, and inform where diversification may be necessary. With an intentional focus, there is a significant opportunity to connect underrepresented communities to these new quality jobs.

This study further found that many of the jobs generated through green investments were those not initially deemed “green jobs.” In addition to occupations traditionally identified as green jobs, Cincinnati will need people in ancillary, roles like project managers or truck drivers, to further the green transition. This report’s recommendations emphasize the need for upskilling the current workforce that Cincinnati has, as well as partnering with universities and educational institutions to include green modules in their courses and programs to educate the workforce of the future. For example, rather than needing a specialized degree, a course on project management could simply add a module on sustainability. A coordinated approach—bringing together employers, workforce development professionals, and educational institutions—is essential for upskilling, recruitment, and tracking progress through a centralized data system.

While the estimated total investment of \$2.6 to \$5.7 billion is large, much of it will be borne by the private sector, and there are various additional funding opportunities for areas undergoing a green transition. The recommendations section of this report includes an initial list of funding opportunities. These include federal and state government sources, and private and non-profit partnerships.

CURRENT GREEN WORKFORCE LANDSCAPE

Current Green Workforce Landscape

This section will illustrate the current landscape of green jobs in the Cincinnati region. It will examine these jobs based on racial and gender demographics, earnings, workplace conditions, and employment data. It will then identify which of these jobs are quality jobs. Identifying the current workforce demographics is key in informing future efforts for workforce development and green job access. Unless otherwise noted, the job and occupation data in this report come from Lightcast and are based primarily on the Quarterly Census of Employment and Wages (QCEW) from the Bureau of Labor Statistics (BLS).

Determining Quality Jobs

The Center utilized a threshold of \$41,161 in annual wages as its standard for job quality. This was determined by utilizing MIT's Living Wage Calculator and after consulting with partners at the Chamber's Workforce Innovation Center and the Brookings Institution, allowing this analysis to align with thresholds of similar projects. This assumes an hourly wage of at least \$19.78 for full-time, year-round work—or 2,080 hours annually. While some definitions of a quality job include other variables such as benefits, scheduling, and workplace safety, this report will use only wages as the determinant of a quality job, because this metric is consistent across all occupations. Other conditions depend on employers and extend beyond the scope of this study.

WHAT IS A JOB VERSUS AN OCCUPATION?

A job is a specific role within a company, while an occupation is a general field of work that can encompass many jobs. For example, a job title might be "Green Building Consultant," and the SOC code would be 19-2041 for "Environmental Scientists and Specialists."

Green Jobs

Using a combination of resources and analyses from the Occupational Information Network (O*NET), the U.S. Bureau of Labor Statistics (BLS), and green workforce landscape analyses from peer cities, the Center identified 114 green jobs in the region. This identification was conducted by examining each of the 799 total occupations at the 5-digit Standard Occupational Classification (SOC) code level. These codes are the federal standard used to classify workers.

Furthermore, 637 additional occupations will experience job growth, both directly and indirectly, due to green investments. This means that in total, out of 799 total occupations, about 94% will be affected by green-investment driven growth. Of these affected occupations, 437 will see directly created jobs, representing a majority of occupations. A full list of the identified green jobs can be found in [Appendix I](#). It should be noted that in some cases, actual job titles in the field may not line up perfectly with SOC titles. For example, someone with the job title of energy auditor would fall under the SOC code for construction and building inspectors. However, every job has been categorized into one of these standardized categories. Despite the investment model basis for this report, it is worth noting that there is a significant existing demand and open jobs for many of the occupations listed in this report.

The State of Ohio Governor's Office of Workforce Transformation has a [Top Jobs List](#) which displays in-demand and critical jobs by region and job category. In-demand jobs in the Southwest Ohio Region with over 300 open positions that overlap with identified green jobs are: Heavy and Tractor-Trailer, Maintenance and Repair Workers (general), Construction Laborers, Carpenters, Electricians, Automotive Service Technicians, Plumbers, Pipe Fitters, and Steam Fitters, and First-Line Supervisors of Construction Trades and Extraction Workers. Additional investments will compound upon the existing demand of these jobs.

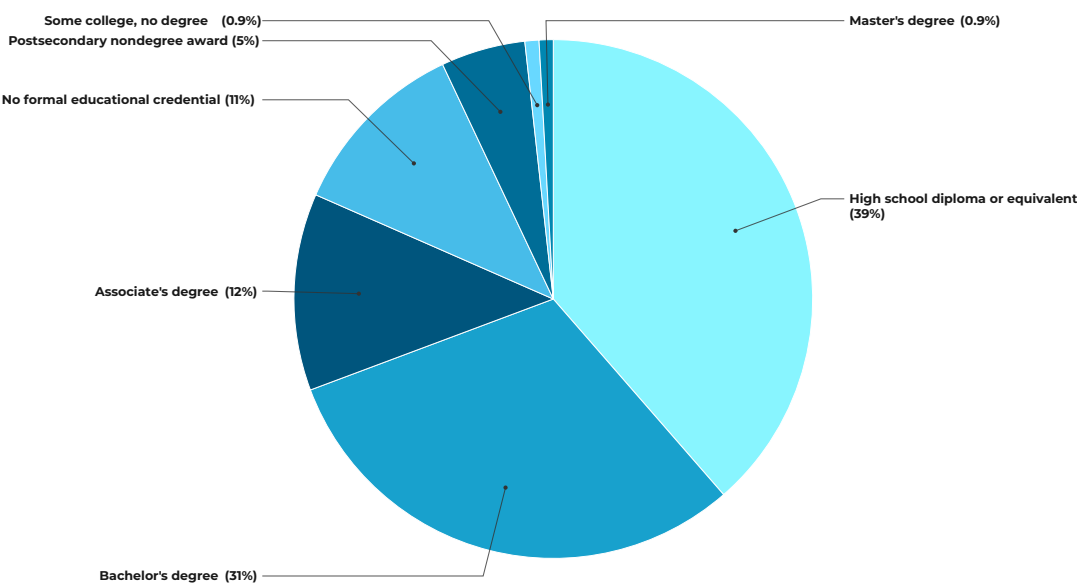
Baseline Jobs

This report will highlight the need for significant job growth in our region to meet the goals of the 2023 Green Cincinnati Plan and further a successful green transition. The Cincinnati region currently has 217,700 workers employed in green jobs. However, the occupations needed to meet these goals will need to extend far beyond the scope of a green job, as traditionally defined. 637 additional occupations will be needed, and of these ancillary roles, 912,649 additional workers are employed in the Cincinnati workforce. Together, they make up 1,130,349 of the jobs in the region's workforce, which has a total of 1,134,998 jobs by 2023 measures. Therefore, successfully addressing a green transition will need more than just growth in green roles, but overall growth in nearly the entire regional workforce.

Typical Entry Level Education

Of the 114 green occupations, the majority do not require a bachelor's degree, and less than 1% have a master's degree as the typical entry-level education, meaning jobseekers have relatively low barriers to entry for these occupations. Nearly 40% of these occupations list high school diploma or equivalent as typical entry level education.

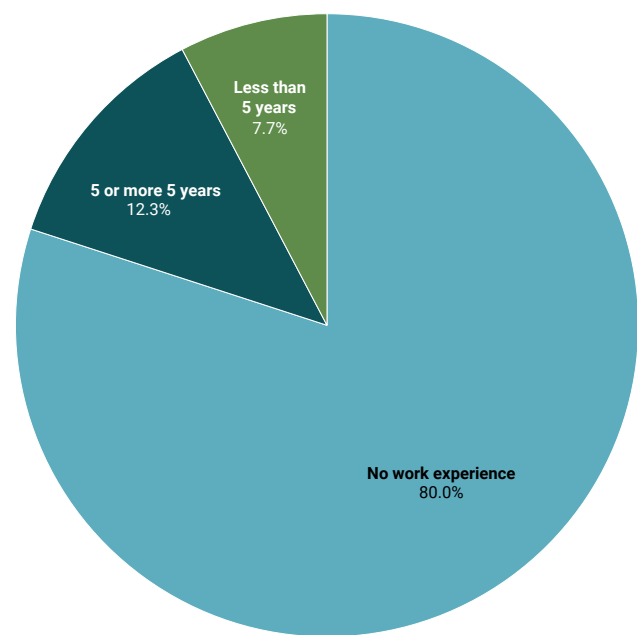
Figure 1. Current Green Workforce Typical Entry Level Education



Work Experience

Among occupations that don't typically require a college degree upon entry (no formal education or only a high school diploma), 52 occupations require no prior work experience. Of all occupations, only eight require five or more years of experience. Among these eight positions, six typically require bachelor's degrees, and the remaining two typically require high school degrees.

Figure 2. Current Green Workforce Typical Entry Level Experience



Thanapat Vichitchot, FUSE Executive Fellow

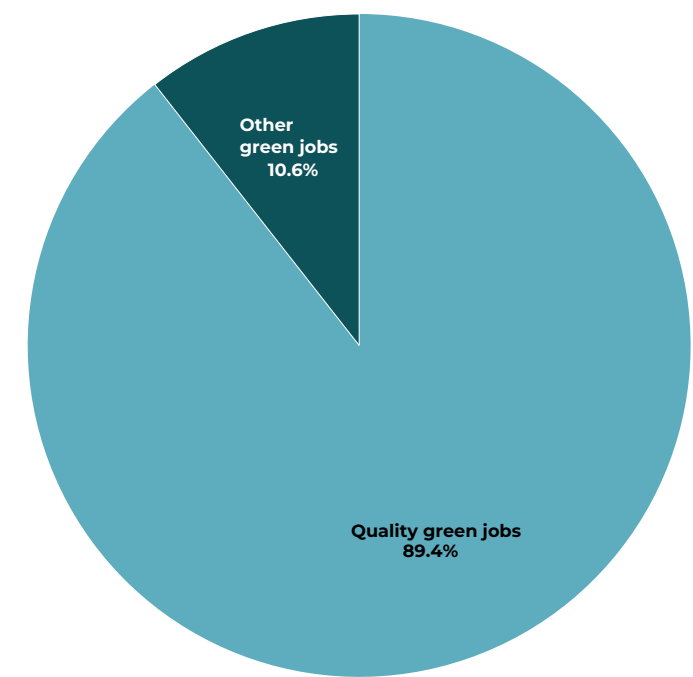
Quality Green Jobs emerged as the top cross-cutting theme in the 2023 Green Cincinnati Plan (GCP) public engagement process, leading to a goal of training 4,000 individuals for green economy jobs by 2028. To explore opportunities and challenges, the City's Office of Environment and Sustainability partnered with FUSE Corps. Thanapat Vichitchot, a FUSE Executive Fellow, led a listening tour and engaged workforce stakeholders. He identified limited awareness of green jobs, high labor competition, sector gaps, and insufficient training capacity. His first year focused on assessing the green workforce ecosystem, fostering partnerships with employers and training providers, connecting them to resources, supporting coalitions, leading innovation with 20+ partners, and developing communications to raise awareness. Early progress includes a Green Jobs website, an expanding partner network, upskilling for car mechanics, and new coalitions. The collaboratively developed Green Workforce Landscape Analysis Report, informed by Thanapat's work, will guide future strategies such as new training programs, resources, funding, and innovation labs.



Quality Jobs

As previously defined, this analysis used a threshold of \$41,161 for annual full-time salary to identify quality jobs, with inputs from MIT's Living Wage Calculator. Based on this threshold, 101 out of 114 green jobs qualify as quality jobs, which represents approximately 82% of green jobs. In comparison, across all 799 total occupations, 475, or about 60%, meet this threshold—meaning green jobs provide a higher likelihood of jobseekers finding a quality job. Identifying quality jobs is an essential step for guiding workforce development investments to maximize their impact, enhance worker outcomes, reduce employee turnover, and promote the highest quality of life across the community.

Figure 3. Quality Green Jobs



Workforce Diversity

While most green occupations are quality jobs by living wage standards, they are predominantly held by white men. In fact, only 10% of the workforce in these occupations is female.

Figure 4.
Current Green Workforce Gender Diversity

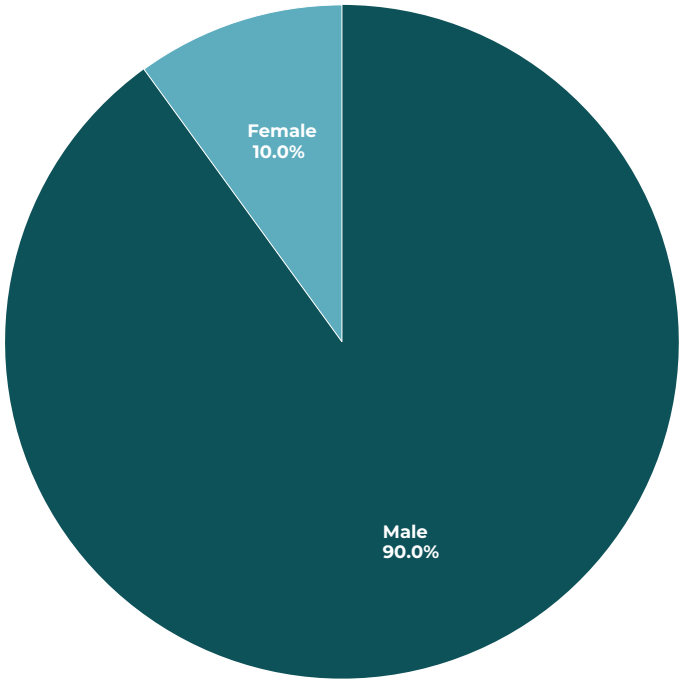
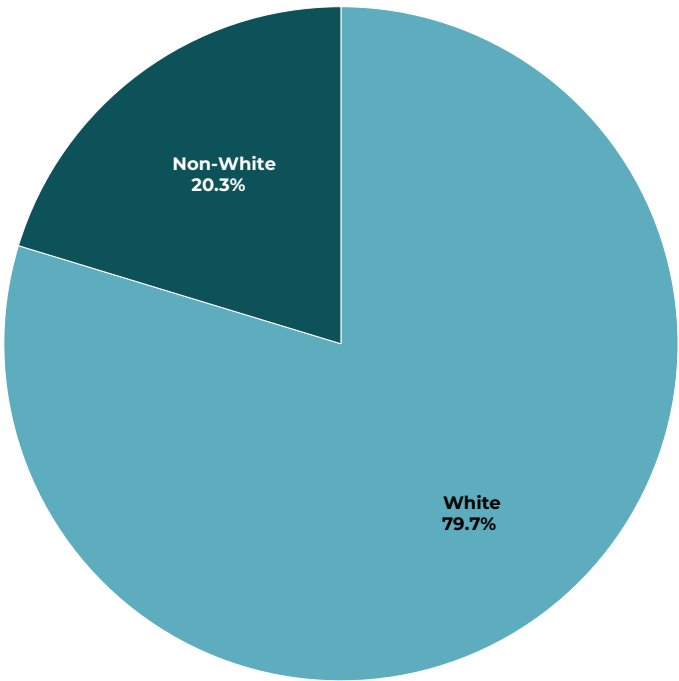


Figure 5.
Current Green Workforce Racial Diversity



The green workforce as a whole is less racially diverse than the region’s population demographics. Non-white workers make up 20.3% of the green workforce, compared to the Cincinnati Metropolitan Statistical Area’s non-white population of 24.3%. Of the 20.3% of non-white populations in green occupations, the largest are Hispanic and Black, making up 34.8% and 50.9% of the non-white green workforce, respectively.

Certain green occupations are even less demographically diverse. For example, in the occupation of farmers, ranchers, and other agricultural managers, the workforce is approximately 95.6% white. These metrics are crucial for guiding future efforts during the green transition. As new jobs emerge, employers and workforce development organizations can use these statistics to target and attract diverse talent to these occupations.

Skills Needed

The Center analyzed the 114 identified occupations to see what skills are most needed among this workforce. According to Lightcast, as of February 2025, the most sought-after skills among these occupations are listed in descending order below.

- 1. Warehousing
- 2. Project Management
- 3. Machinery
- 4. Continuous Improvement Process
- 5. HVAC
- 6. Hand Tools
- 7. Forklift Truck
- 8. Construction
- 9. Auditing
- 10. Plumbing
- 11. Power Tool Operation
- 12. Housekeeping
- 13. Preventative Maintenance
- 14. Process Improvement
- 15. Computer Science

Some of these skills, like plumbing or HVAC, are very specific to particular occupations—but many, like hand and power tool operation, project management, and process improvement, apply to many of the 114 occupations. The following table drills down to just “necessary skills”—those that Lightcast has defined as building blocks for these occupations. These necessary skills provide the foundation for further skill development. The table also notes the number of job postings for each skill in the Cincinnati MSA in 2024, and whether the need for the skill is growing.

Figure 6. Top Necessary Skills by Demand

SKILL	Job Postings Requesting	Growth Relative to Market
Valid Driver’s License	8,075	Stable
Warehousing	5,666	Growing
Project Management	5,073	Rapidly Growing
Forklift Truck	3,953	Stable
Machinery	3,797	Stable
Continuous Improvement Process	3,560	Rapidly Growing
Hand Tools	3,527	Stable
HVAC	3,310	Stable
Auditing	3,228	Rapidly Growing
Construction	2,984	Growing

Cincinnati’s Green Workforce System

A local workforce development system includes organizations and initiatives that equip individuals for employment, support career advancement, and maintain a skilled workforce. Public workforce agencies, education institutions, community colleges, community-based organizations, unions and trade associations, and employers combine to form this complex system.

Quality green jobs was the top cross-cutting theme in the 2023 Green Cincinnati Plan (GCP) public engagement process. This theme led to the creation of the education goal of 4000 individuals trained for green economy jobs by 2028. To better understand the opportunities and challenges, the City’s Office of Environment and Sustainability, which leads the GCP, partnered with Fuse Corps. An Executive Fellow from FUSE, a national non-profit, conducted a listening tour and engaged workforce system stakeholders.

The green workforce development system lies within the existing Greater Cincinnati regional workforce system and aims to bring together individuals and organizations that are or want to train or employ individuals in quality jobs that will positively impact the environment. To better demonstrate Cincinnati’s workforce system, the outline below is based on “Understanding Local Workforce Systems”, by the Urban Institute and lists at least one organization in each category. Additionally, workforce system organizations will be listed with more detailed descriptions and offerings to the green economy in [Appendix VII](#).

Government and Public Sector

American Job Centers – Ohio Means Jobs Cincinnati-Hamilton County is the one-stop serving jobs seekers and employers

Workforce Development Boards – Workforce Council of Southwest Ohio provides oversight of the WIOA to our Area 13 region

Public Libraries – Cincinnati Public Library

Public Social Service Agencies – Hamilton County Jobs and Family Services

Economic Development Agencies – REDI Cincinnati, JobsOhio

Elected Officials – Council Member Meeka Owens, Chair of the Climate, Environment and Infrastructure Committee

Local, State, And Federal Governments – City of Cincinnati, Hamilton County, OKI Regional Council of Governments, State of Ohio Office of Workforce Transformation, Department of Labor

Nonprofit and Collaborative Entities

Community and Faith-Based Organizations – Green Umbrella, SonLight Power, Faith Communities Go Green

Foundations & Philanthropic Organizations – Greater Cincinnati Foundation, United Way of Greater Cincinnati

Workforce Service Providers - Urban League of Greater Southwest Ohio, Groundwork Ohio River Valley, Habitat for Humanity Greater Cincinnati, Building Value

Workforce Intermediaries – Talent Collaborative of Greater Cincinnati

Employers, Industry and the Workforce

Business And Trade Associations – Cincinnati Regional Chamber, Independent Electrical Contractors (IEC) of Greater Cincinnati

Industry Organizations – Allied Construction Industries, Advanced Manufacturing Industry Partnership (AMIP) Cincy, Supply Chain Ohio, Kentucky, Indiana (OKI)

Employers – People Working Cooperatively, Sustainergy

Labor Unions – American Federation of Labor and Congress of Industrial Organizations (AFL-CIO), International Brotherhood of Electrical Workers (IBEW) - National Electrical Contractors Association (NECA)

Education and Training Providers

K-12 Public School Districts – Cincinnati Public Schools

Two-Year Colleges - Cincinnati State Technical and Community College

Four-Year Colleges And Universities - University of Cincinnati and Xavier University

Nondegree Education And Training Providers – Southern Ohio Technical Institute

Adult Education Providers – Great Oaks, Butler Tech

Credentials and Certifications:

Due to the number of green occupations, there could be several credentials and certificates per occupation, which would be a list of several hundred, so this section highlights some useful tools and resources.

[Careeronestop](#), a Certification Finder tool sponsored by the Department of Labor, allows for searches by certification name, organization, industry, or occupation.

The Ohio Department of Education and Workforce has industry recognized credentials by industry, top aligned industries are [Construction](#) and [Agriculture and Environmental Systems](#)

Barriers to Entry into the Green Workforce

Below is a collection of key workforce and contractor barriers to getting into or providing green jobs in the Greater Cincinnati region. These barriers represent a priority list of challenges that must be addressed to support skilled workforce growth.

Lack of Awareness of Green Jobs and Green Job Pathways

Many individuals, even those already engaged in the workforce, had limited or varying understandings of what constitutes a “green job.” There was a general lack of awareness about the wide range of green jobs available, how these jobs are defined, and what pathways exist to access them. In many cases, green jobs are not entirely new occupations but existing roles adapted to support sustainability goals. With the 2023 Green Cincinnati Plan aiming to achieve carbon neutrality by 2050, the city’s priority areas include electrification, energy efficiency, and the transition to zero-emission and renewable energy sources.

Low Unemployment and High Competition for Job Seekers

Unemployment rates remain low, providing job seekers with a wide array of employment opportunities. At the same time, there has been a growing shift toward gig and freelance work due to the flexibility it offers. This trend contributes to heightened competition for talent across all sectors, making it more challenging to attract and retain workers in traditional employment roles.

Barriers to Employment

Many individuals seeking employment or job training face significant barriers, especially those with limited financial resources. Common challenges include lack of transportation, unaffordable or unavailable childcare, unstable housing, limited education or skills, criminal records, and the inability to pass drug screenings. These obstacles can prevent individuals from participating in workforce training programs or securing stable employment.

Driver’s License and Transportation Challenges

A valid driver’s license is often a requirement for many jobs, training programs, and apprenticeships. However, there has been a notable decline in the number of individuals holding valid licenses, which creates additional hurdles for workforce participation. This trend, coupled with ongoing transportation challenges, disproportionately impacts low-income job seekers who may not have access to a reliable vehicle or public transit options.

Math Skills as a Barrier

Basic math proficiency remains a significant barrier for some individuals, particularly when applying to Electrician Apprenticeship programs, which require passing a math aptitude test as part of the eligibility criteria. Many applicants struggle to meet this requirement, limiting their access to these skilled trade opportunities.

Contractor Perceptions

Fifteen small contractors in the green construction industry were interviewed by Co-op Cincy (solar installers, energy efficiency installers, electricians, HVAC contractors and general contractors). When looking at the next 3-5 years, the limiting factor to growth for construction contractors is not opportunity, access to capital, or access to materials, instead it is access to a qualified workforce.

Here are some representative comments regarding the barriers and challenges associated with the workforce:

“We have to hire constantly. We are a member of an electrical apprentice program that helps facilitate finding and hiring those new to the electrical trade. Skilled labor with experience is very hard to find. We have an internal program and process for training new employees in the Photovoltaic field.” - Solar Installer

“It’s a physical job, and it’s pretty much exclusively outdoors; being in the elements can be too much for many people.” - Solar Installer

“We try to target diverse applicants, including [returning / formerly incarcerated citizens], however we can’t be picky - we take who we can get.” - Solar Installer

“Diversity is something we can’t even begin to think about because it’s so hard to find talent of any kind in first place.” - Energy Efficiency Contractor

“Training programs do not exist.” - Residential Energy Efficiency Contractor

“Training programs for residential solar installers do not exist.” - Solar Installer

“Many potential candidates for this work have other barriers—driver’s license, childcare, housing, addiction/recovery to start and grow in a career.” - Energy Efficiency Contractor

“There’s not much training available that is affordable. It is hard to invest training into a worker who might not work for me for longer than a year. Qualified tradesmen are especially hard to find.” - General Contractor



CONTRACTOR PERCEPTIONS BY THE NUMBERS

On average, respondents indicated that they will need to grow their workforce by 59% over the next 12 to 24 months.

Which of the following opportunities would most support your company in achieving its goals over the next three to five years?

Out of six options including “Access to capital” and “Increased Revenue”

- **100%** respondents selected Access to Qualified Job Seekers.

When asked to rank five objectives or opportunities in order of which would most enable them to offer higher wages and/or better benefits for their employees

- **36%** of respondents ranked “Improved Access to Qualified Job Seekers” as number one.
- **79%** of respondents ranked “Improved Access to Qualified Job Seekers” in the top two.

Which of the following pain points or challenges pose the greatest risk to your company in achieving its goals over the next three to five years?

Out of six options including “Keeping up with Market Demand”, “Maintaining Positive Cash Flow” and “New Compliance Responsibilities”

- **100%** respondents selected Retaining and Managing Workforce.

When asked to rank five challenges in order of which would most prevent them to offer higher wages and/or better benefits for their employees

- **50%** of respondents ranked “Improved Access to Qualified Job Seekers” in the top two.

CAPITAL INVESTMENTS TO DRIVE CINCINNATI'S GREEN ECONOMY

Capital Investments to Drive Cincinnati’s Green Economy

To calculate the number of green jobs Cincinnati will need moving forward, this report analyzed the focus areas identified within the [2023 Green Cincinnati Plan](#). Specifically, what investments will need to be made to achieve the goals of the plan and drive Cincinnati’s economy forward as a sustainable and climate-resilient community?

Unless otherwise specified, it is envisioned that these investments will be made by 2030, though significant public investment would accelerate the timeline and lack of public investment could extend the timeline. The following is a brief summary of each of the focus areas and the projected investments necessary to achieve the goals within them, and full references for these calculations are provided at the end of this report. Please see the [2023 Green Cincinnati Plan](#) for a more detailed description of the goals in each focus area. For comprehensive charts of investment calculations for each focus area, see [Appendix VII](#).

What do we mean by investments?

The analysis in this report is based on a metric of “needed investments.” The Center analyzed the 2023 Green Cincinnati Plan and its focus areas to come up with estimated investments for each area. It is important to note that this analysis is not intended to mean that all this investment will come from the public sector.

The figures presented are aggregate investments, which include both public and private sector spending. While public sector investment will help accelerate the attainment of these goals, some of these investments would be made regardless. For example, an increase in electric vehicle adoption rates, with or without public investment, would create new private investment from many individual actors. The same can be said for home electrification or solar panel adoption, to name a few other examples.

Buildings and Energy Focus Area

The Buildings and Energy focus area has the most substantial financial requirement, with estimated total costs ranging from approximately \$2 billion to \$4.36 billion. Key initiatives include electrifying 20,000 buildings, reducing energy poverty, increasing clean energy utilization, and enhancing energy efficiency in existing structures. Electrification alone is projected to cost between \$275 million and \$950 million, while additional measures collectively add another \$1.82 billion to \$3.41 billion. These investments will be instrumental to achieving the targeted 30% reduction in building emissions by 2030.

City Operations Focus Area

The City Operations focus area aims to reduce emissions and operational costs through electrification and efficiency upgrades. This area requires investments of \$54 million to \$144 million. Key actions include purchasing 400 electric vehicles (EVs), installing charging infrastructure, ensuring sustainable transportation options for city employees, and improving energy efficiency in city facilities.

Community Activation Focus Area

Investments in the Community Activation focus area are focused on supporting the community’s access to outdoor learning spaces and workforce development. Total costs are projected between \$20.5 million and \$71.3 million. This includes providing safe and accessible outdoor learning environments at public schools and training 4,000 individuals for jobs in the green economy.

Food Focus Area

The Food focus area emphasizes local food production, food security, and job creation in the agriculture sector. Total costs to achieve these goals range from \$39 million to \$125 million. Specific actions include expanding urban farms, eliminating food deserts, and reducing food waste through composting infrastructure and food recovery programs.

Mobility Focus Area

Investments in the Mobility focus area are aimed at promoting public transit, zero-emission vehicles, and safe bike and pedestrian infrastructure. The total estimated cost is between \$209 million and \$386 million. Efforts to increase the number of passenger miles traveled on public transit and promote zero-emission vehicle adoption are key strategies for reducing transportation-related emissions. Additionally, investments in protected bike lanes, sidewalks, and crosswalks support equitable and sustainable mobility options for residents.

Natural Environment Focus Area

The Natural Environment focus area requires \$82 million to \$163 million in investment to maintain and expand Cincinnati’s tree canopy, improve air quality, and increase access to greenspaces. Tree canopy expansion alone requires \$42 million to \$55 million, while air quality improvements and greenspace access initiatives will cost between \$11 million to \$23 million and \$30 million to \$85 million, respectively. These efforts will contribute to healthier living conditions and provide equitable access to natural environments.

Resilience and Climate Adaptation Focus Area

The Resilience and Climate Adaptation focus area requires total investment between \$77.5 million and \$355 million. This includes the implementation of 25 green infrastructure projects to manage stormwater and reduce heat, as well as revitalizing 24 contaminated industrial properties in the lower Mill Creek valley. By building climate-resilient infrastructure, Cincinnati can mitigate the impacts of extreme weather events and improve the city’s ability to recover from climate shocks.

Zero Waste Focus Area

The Zero Waste focus area targets waste diversion, organics collection, and reducing illegal dumping. Estimated costs range from \$28 million to \$72 million. Key strategies include expanding curbside and drop-off recycling, developing composting infrastructure, and supporting public education campaigns to encourage recycling and waste reduction. Achieving a 50% reduction in food waste sent to landfills is a major goal that will require substantial investment in infrastructure and public engagement.

Conclusion

The total financial commitment ranges from approximately \$2.6 billion to \$5.7 billion across the eight focus areas. While these costs are certainly substantial, the potential benefits include job creation, reduced energy costs, increased community resilience, and improved public health outcomes. By investing in sustainable infrastructure, Cincinnati can position itself as a leader in the green economy, ensuring long-term economic and environmental health for its residents. The following chapter will outline the jobs created by these investments and illustrate this historic opportunity for economic growth.

CINCINNATI’S
GREEN
WORKFORCE
NEEDS ANALYSIS

Cincinnati’s Green Workforce Needs Analysis

Having calculated the total investment needed to meet the goals outlined in the 2023 Green Cincinnati plan, this report uses an economic input-output model to calculate the total number of jobs needed for each focus area. This analysis includes both directly created jobs and induced jobs that are created by the additional economic activity generated through the green investments. The model uses a multiplier assigned to every industry in the Cincinnati MSA to produce a predicted number of jobs based on the new spending in the economy. The analysis also details the results based on the Center’s identified green jobs, as well as jobs that have not been identified as green jobs. Finally, the analysis includes both the low and high capital investment scenarios identified in the capital investments section of this report.



Co-op Cincy

Co-op Cincy supports a resilient network of worker-owned businesses in Greater Cincinnati and received a U.S. Department of Labor grant to center worker needs in the transition to a green economy. They launched a Good Green Jobs Steering Committee with representatives from five working groups: Green Construction Industry, Labor & Workforce, Procurement Policy, Project Pipeline, and Local, State & Federal Incentives. The coalition focused on diversifying green jobs and building pipelines to family-sustaining careers, prioritizing worker voice and ownership. This report serves as the capstone of the Department of Labor planning grant, with many results emerging from this collaborative effort.

Buildings and Energy Focus Area

To meet the goals of the Buildings and Energy focus area the total capital investment would need to be somewhere between \$2 billion and \$4.36 billion.

Jobs Created: Low Estimate

The low capital investment scenario of \$2 billion for the Buildings and Energy focus area would generate a total of 11,514 new jobs within the Cincinnati economy. Of these new jobs, 5,564 would be directly created, and 5,951 would be indirectly created. Of the new jobs that are created, 4,100 of them will be green jobs, while 7,415 of are jobs that have not previously been identified as green jobs. While more of the green jobs are created directly through the investments made, there are many additional jobs that have not been identified as green jobs that are created indirectly through the investments. Note that in all visualizations in this chapter, green jobs are represented with the color green, and other jobs are represented in blue.

Figure 7. Buildings and Energy Focus Area – Comparison of Direct, Indirect, and Total New Jobs – Low Estimate

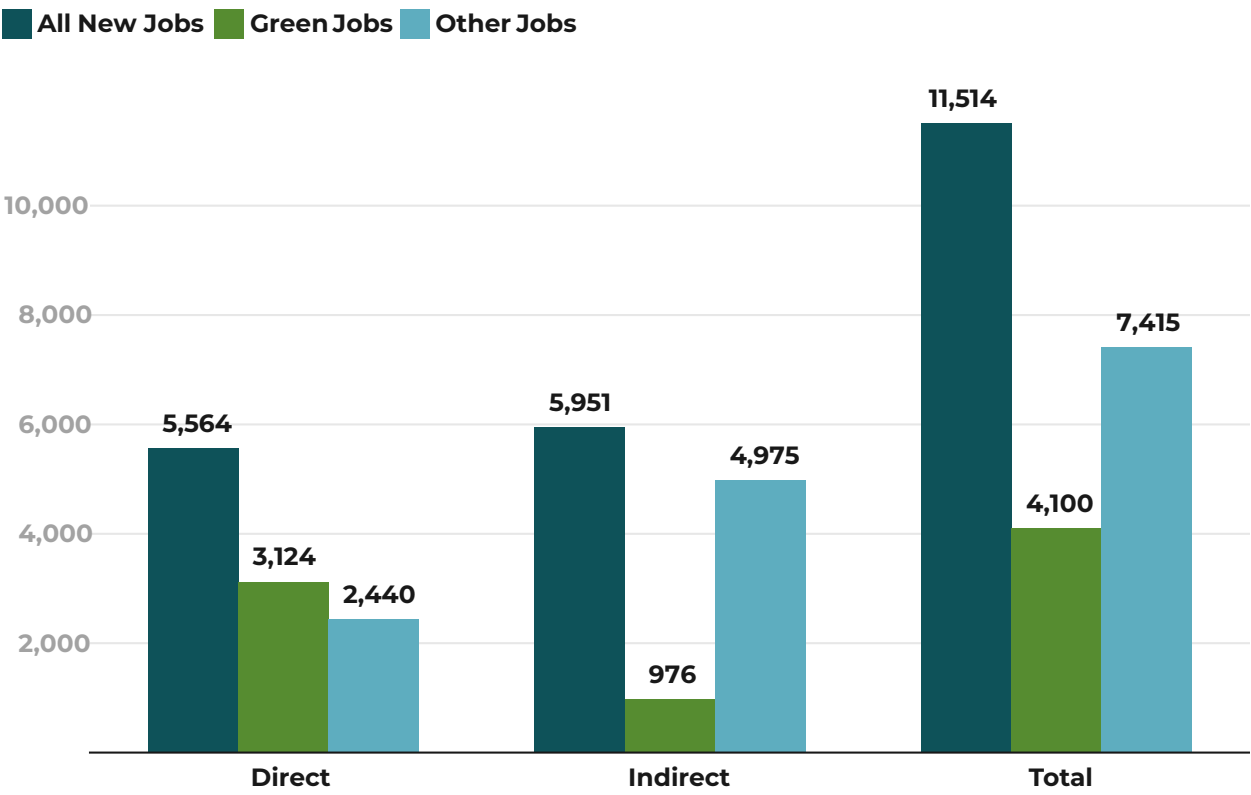


Figure 8. Buildings and Energy Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – Low Estimate

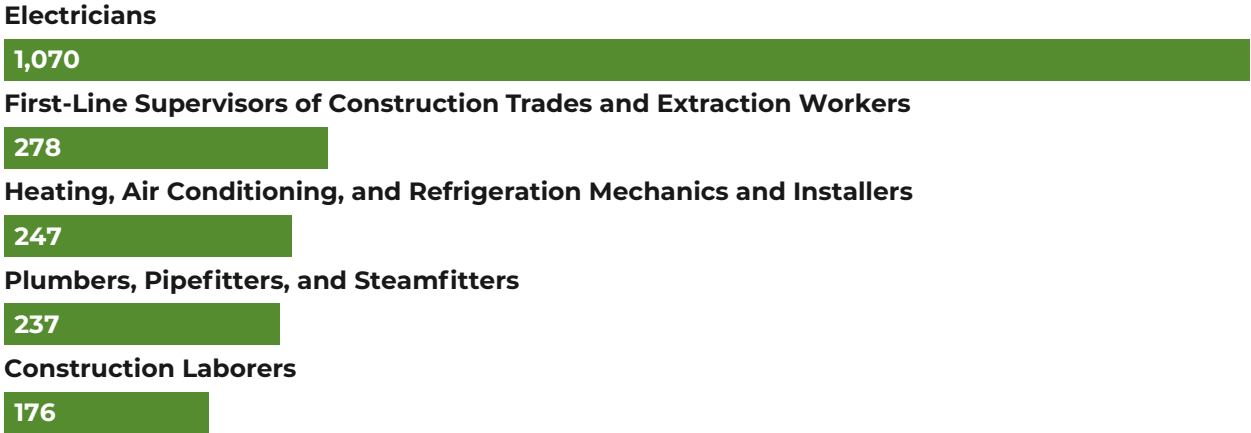


Figure 9. Buildings and Energy Focus Area – Top Ten Occupations by Total New Jobs – Low Estimate



Jobs Created: High Estimate

The high capital investment scenario of \$4.36 billion for the Buildings and Energy focus area would generate a total of 30,925 new jobs within the Cincinnati economy. Of these new jobs, 17,250 would be directly created, and 13,575 would be indirectly created. Of those new jobs that are created, 12,818 of them will be green jobs, while 18,107 of them will be other jobs. Again, there are more green jobs created directly through the investments, but there are many additional jobs that are not green jobs that are created indirectly.

Figure 10. Buildings and Energy Focus Area – Comparison of Direct, Indirect, and Total New Jobs – High Estimate

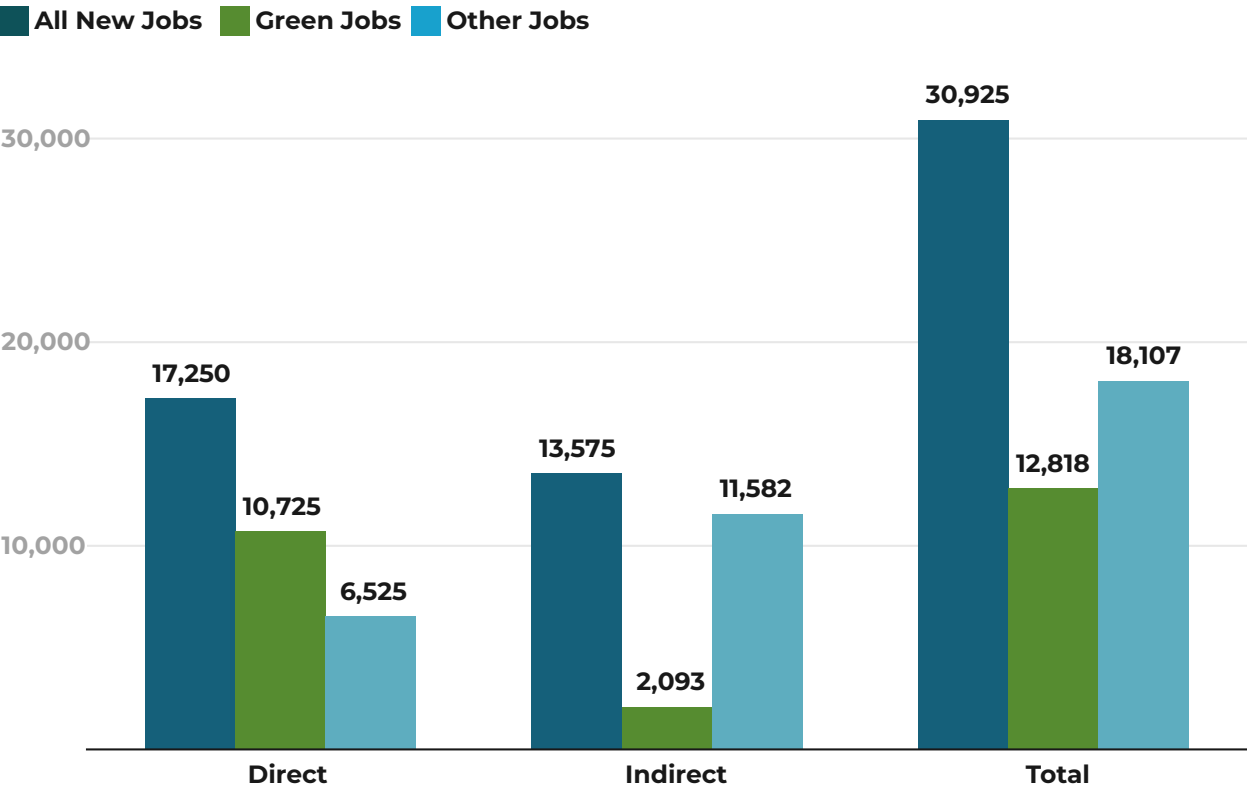


Figure 11. Buildings and Energy Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – High Estimate

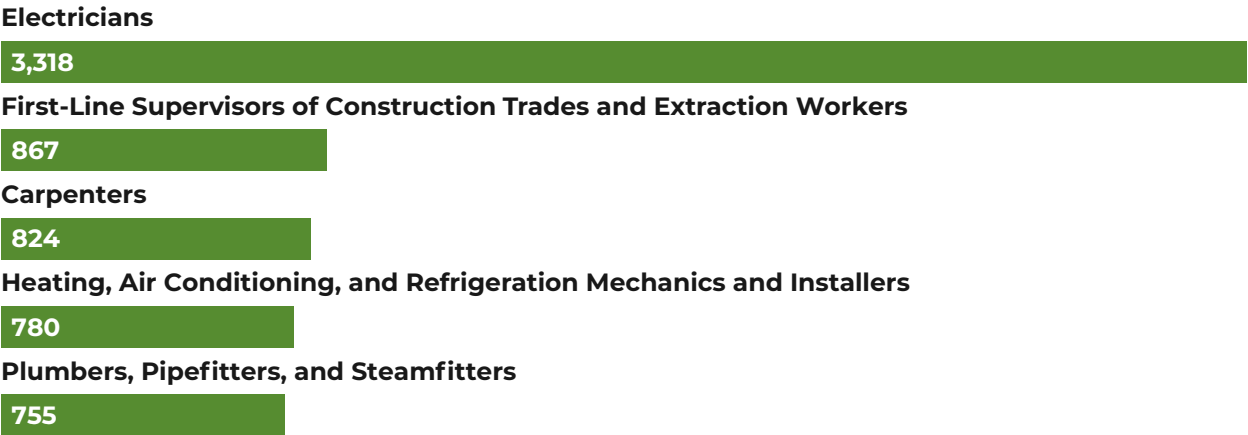
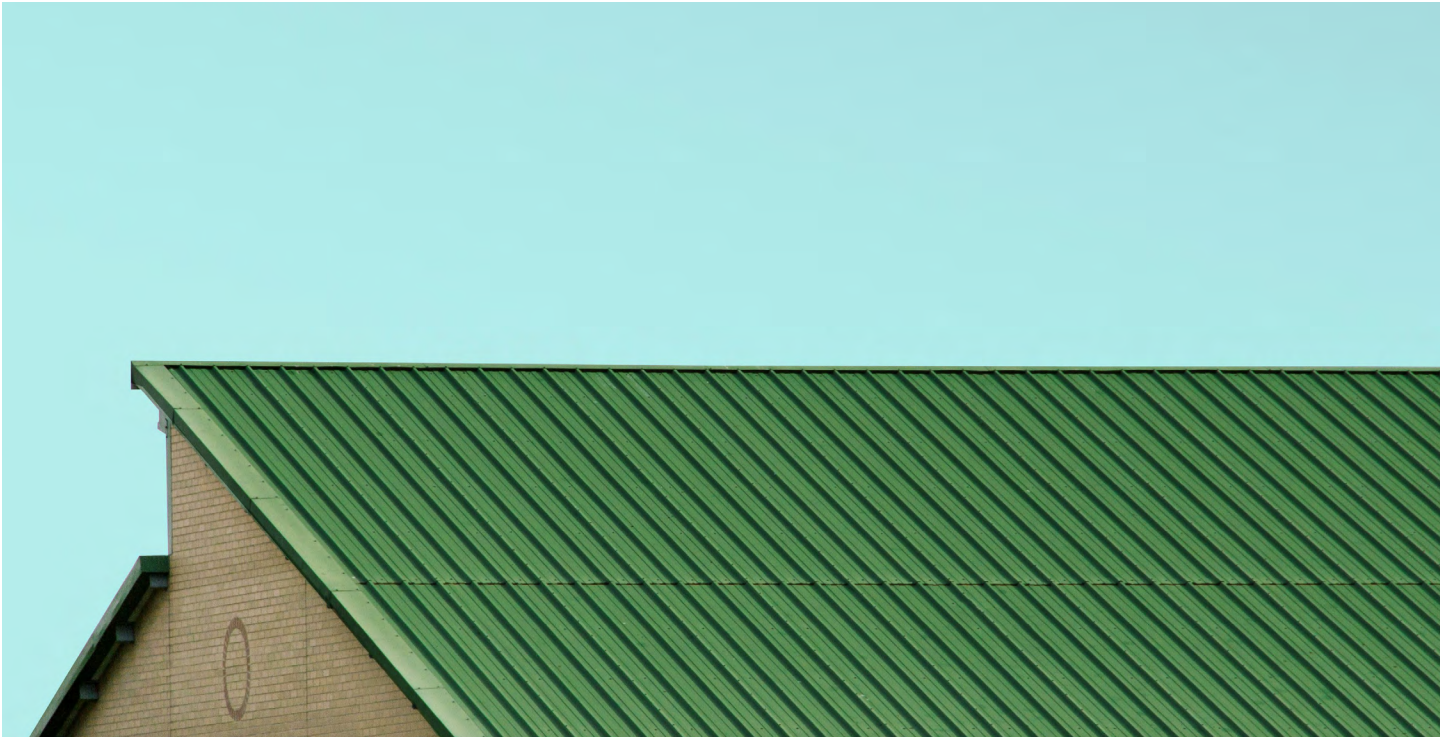


Figure 12. Buildings and Energy Focus Area – Top Ten Occupations by Total New Jobs – High Estimate



City Operations Focus Area

To meet the goals of the City Operations focus area this analysis calculated that the total capital investment would need to be somewhere between \$54 million and \$144 million.

Jobs Created: Low Estimate

The low capital investment scenario of \$54 million for the City Operations focus area would generate a total of 330 new jobs within the Cincinnati economy. Of these new jobs, 218 would be directly created, and 112 would be indirectly created. Green jobs make up 123 of these new jobs, while 207 of them will be other jobs.

Figure 13. City Operations Focus Area – Comparison of Direct, Indirect, and Total New Jobs – Low Estimate

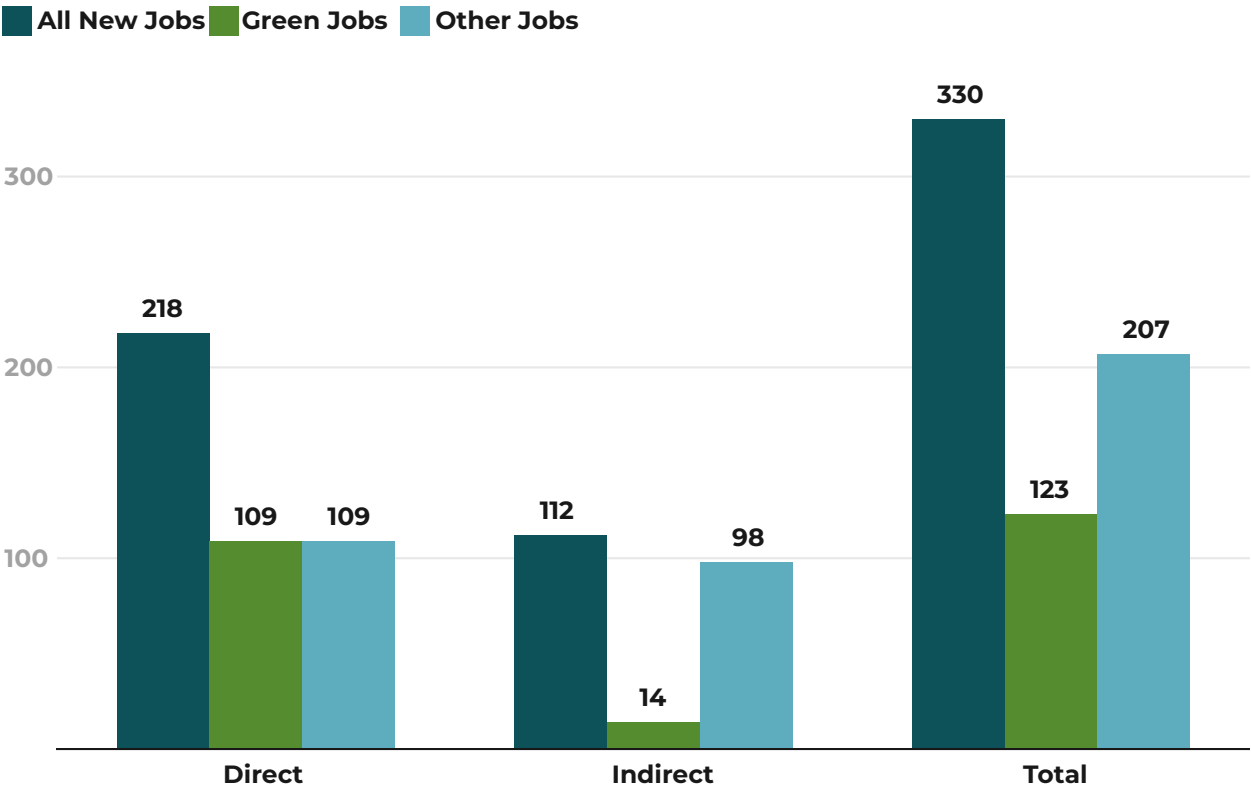
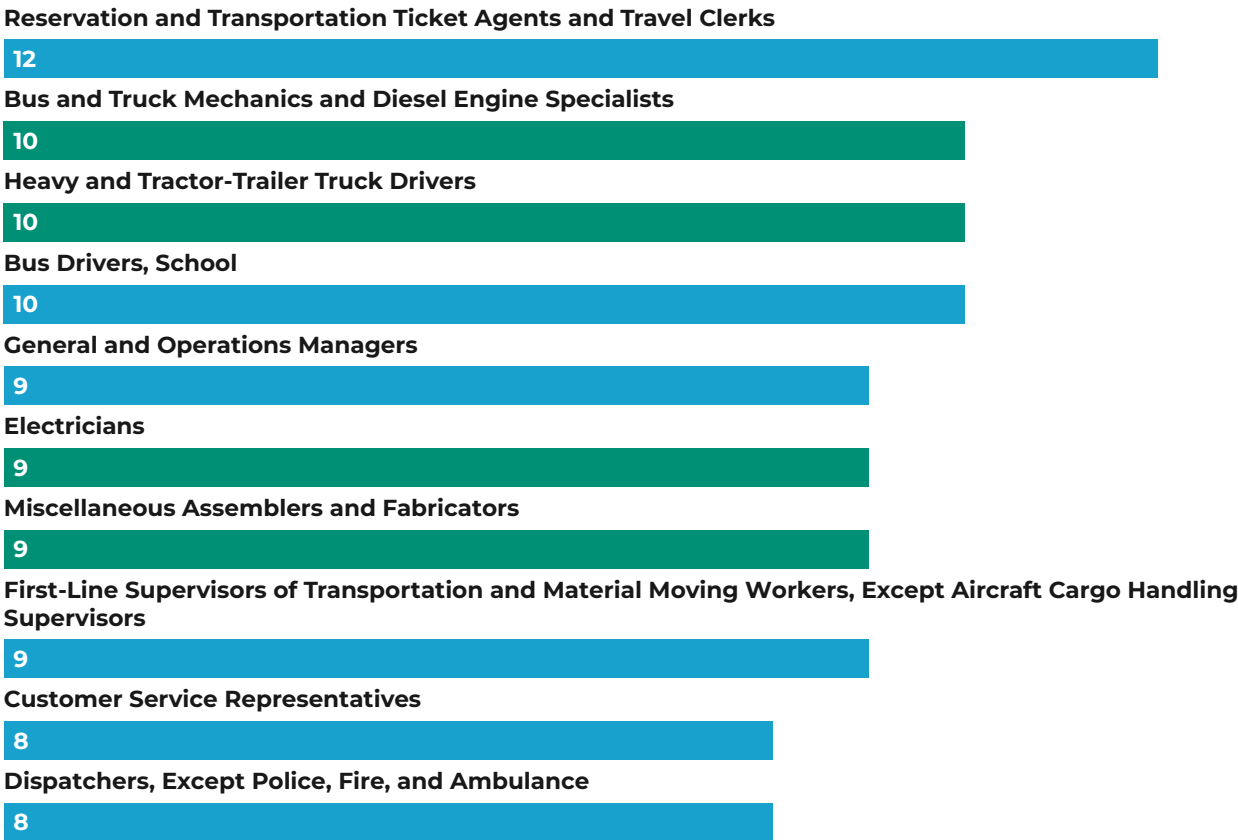


Figure 14. City Operations Focus Area – Top Five Occupations by Total New Jobs (Green Jobs)
– Low Estimate



Figure 15. City Operations Focus Area – Top Ten Occupations by Total New Jobs
– Low Estimate



Jobs Created: High Estimate

The high capital investment scenario of \$144 million for the City Operations focus area would generate a total of 938 new jobs within the Cincinnati economy. Of these new jobs, 578 would be directly created, and 360 would be indirectly created. Green jobs make up 350 of these new jobs, while 588 other jobs will also be created. The following charts summarize key data from the City Operations focus area, based on the high capital investment scenario.

Figure 16. City Operations Focus Area – Comparison of Direct, Indirect, and Total New Jobs
– High Estimate

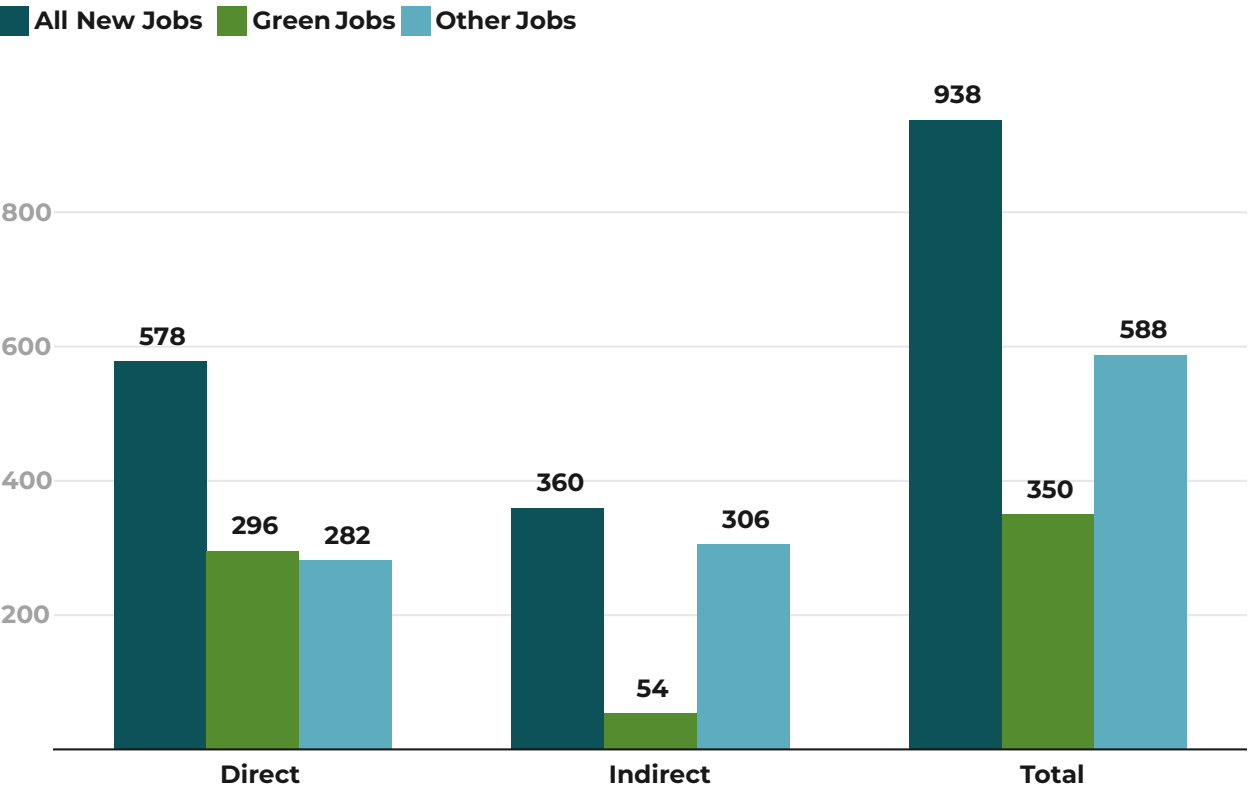


Figure 17. City Operations Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – High Estimate

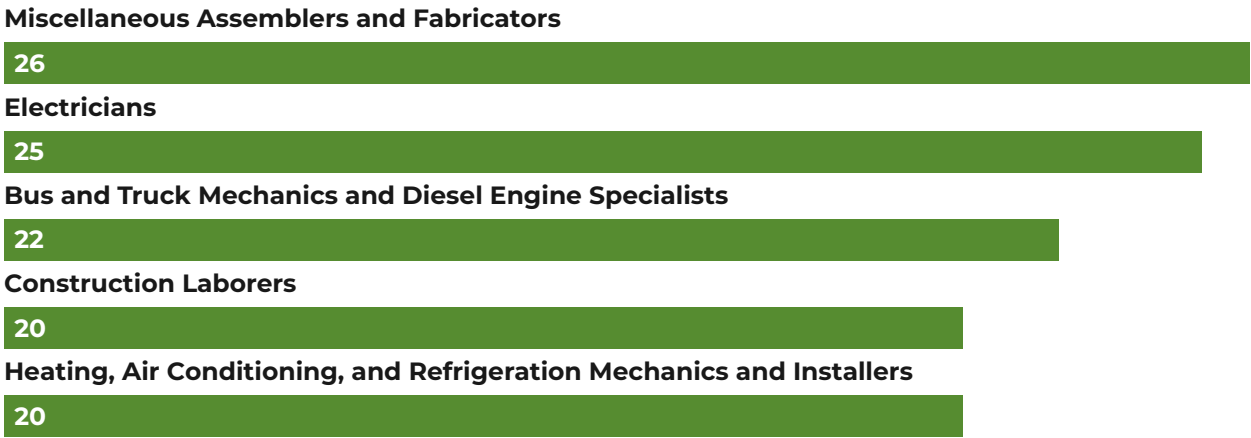
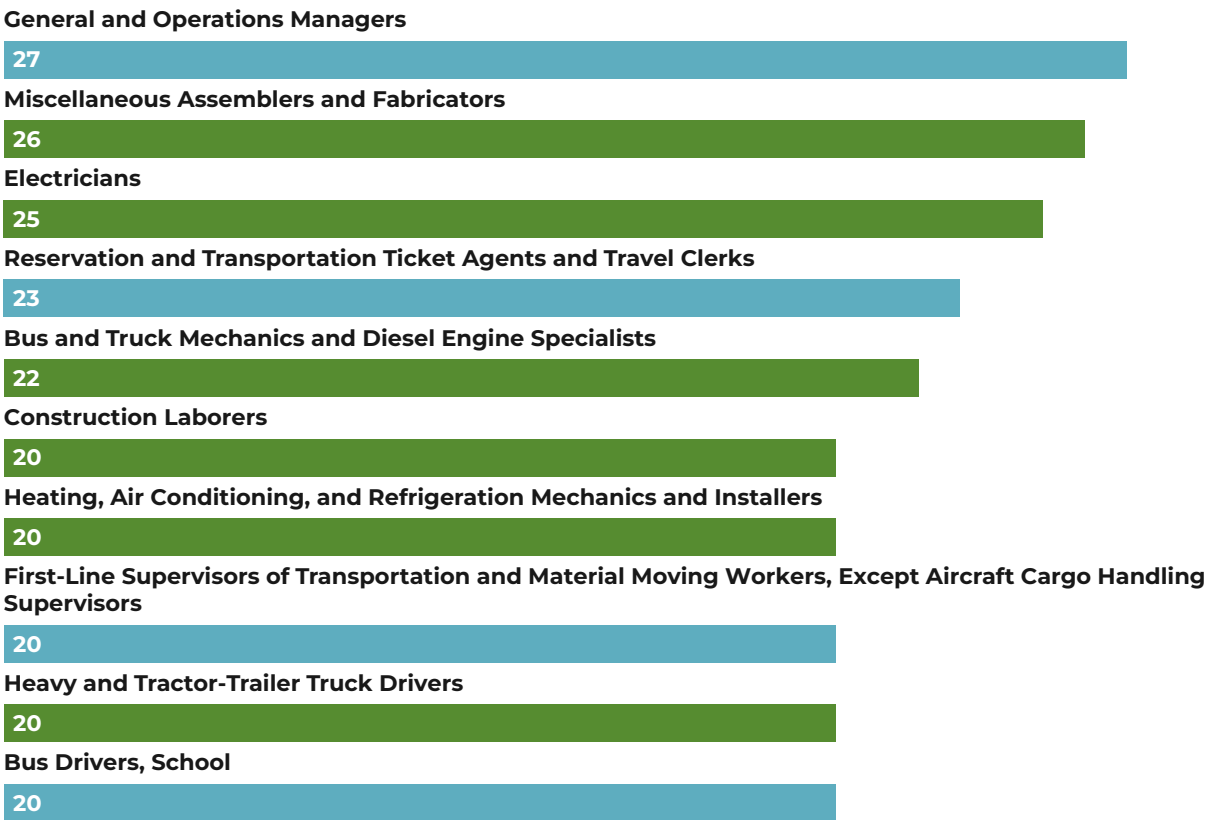


Figure 18. City Operations Focus Area – Top Ten Occupations by Total New Jobs – High Estimate



Community Activation Focus Area

To meet the goals of the Community Activation focus area, which included providing 100% of schools within Cincinnati Public Schools with safe and accessible outdoor learning spaces, and 4,000 individuals being trained for green economy jobs by 2028, The Center estimates that the total investment needed would be between \$20.5 million and \$71.3 million. It should be noted that the new jobs estimated in this section do not reflect the 4,000 individuals trained, but rather the jobs needed to train them.

Jobs Created: Low Estimate

The low capital investment scenario of \$20.5 million for the Community Activation focus area would generate a total of 368 new jobs within the Cincinnati economy. Of these new jobs, 323 would be directly created, and 45 would be indirectly created. Green jobs make up 86 of these new jobs, while 282 other jobs will also be created.

Figure 19. Community Activation Focus Area – Comparison of Direct, Indirect, and Total New Jobs – Low Estimate

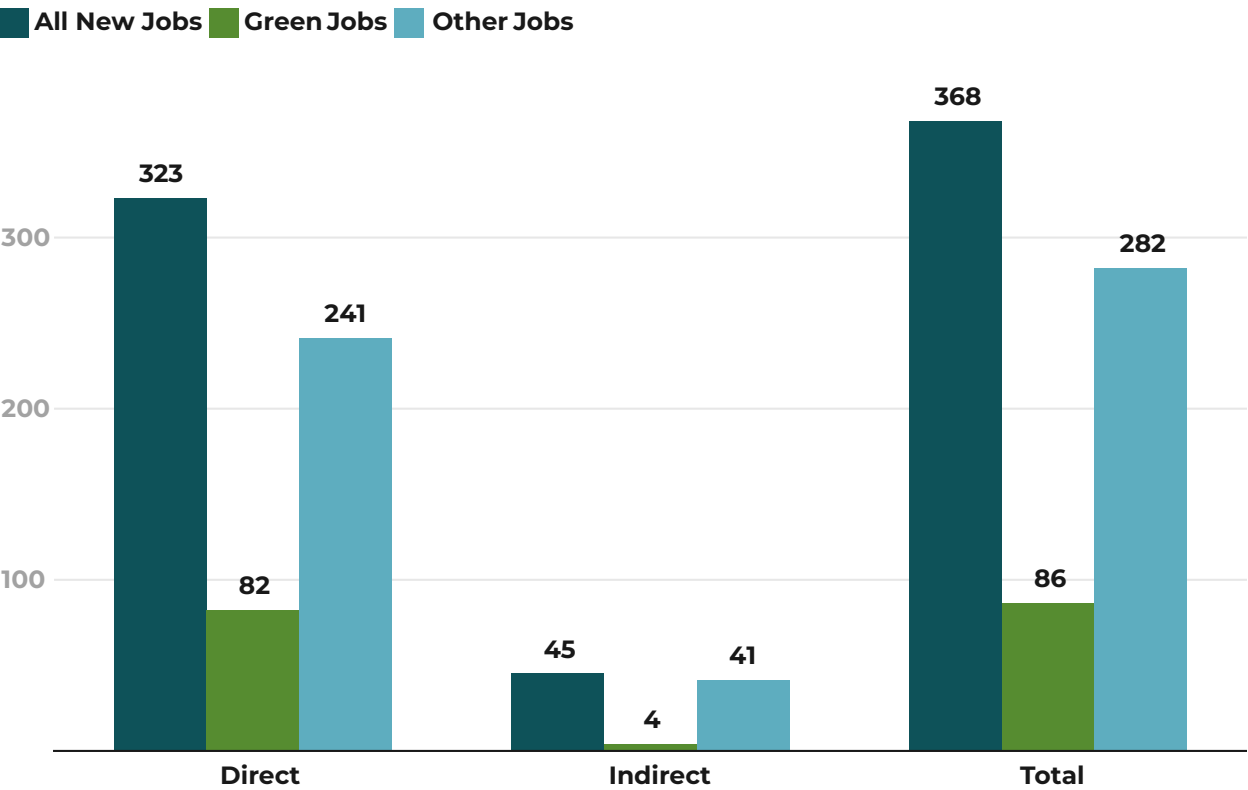


Figure 20. Community Activation Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – Low Estimate

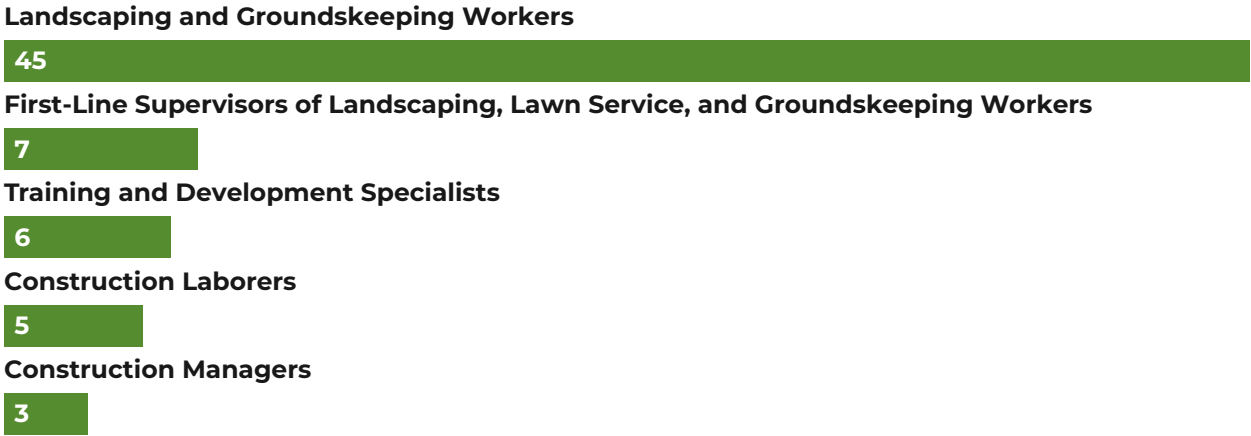


Figure 21. Community Activation Focus Area – Top Ten Occupations by Total New Jobs – Low Estimate



Jobs Created: High Estimate

The high capital investment scenario of \$71.3 million for the Community Activation focus area would generate a total of 1,531 new jobs within the Cincinnati economy. Of these new jobs, 1,311 would be directly created, and 220 would be indirectly created. Green jobs make up 306 of these new jobs, while 1,225 other jobs are also expected to be created.

Figure 22. Community Activation Focus Area – Comparison of Direct, Indirect, and Total New Jobs – High Estimate

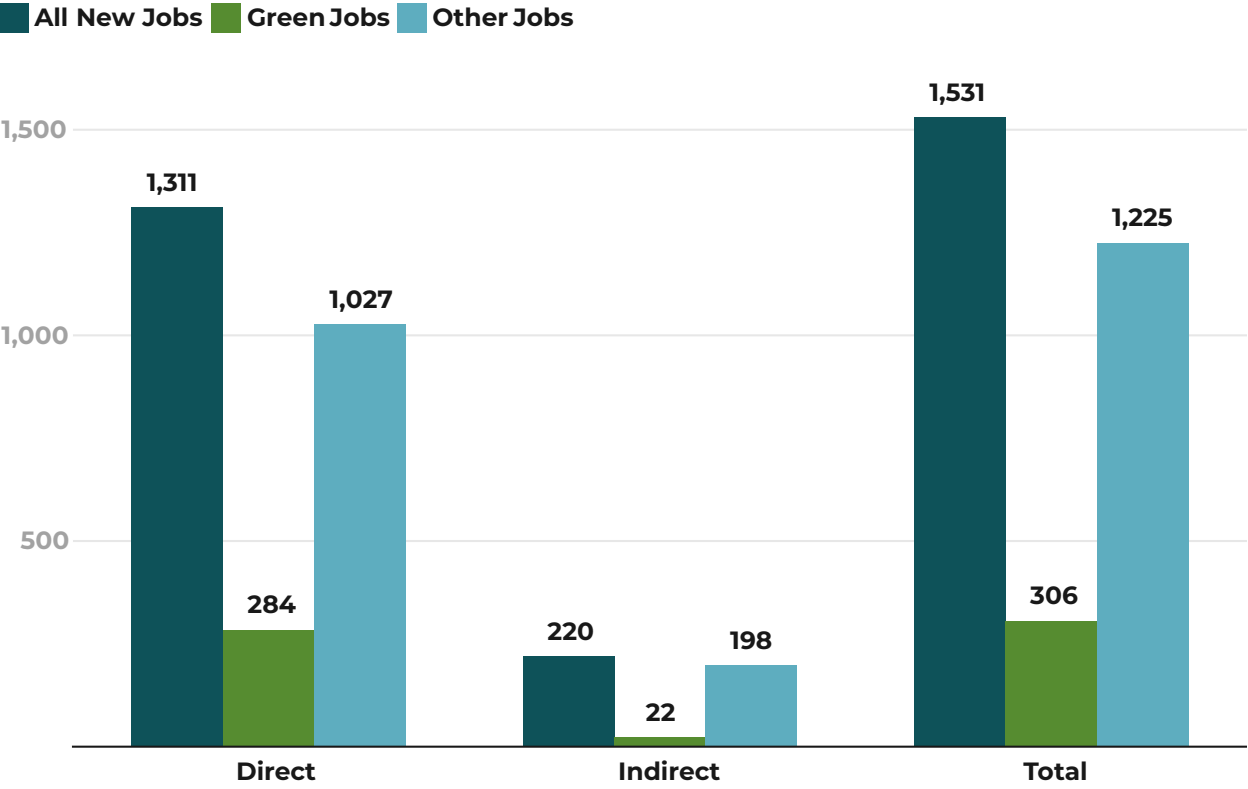


Figure 23. Community Activation Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – High Estimate

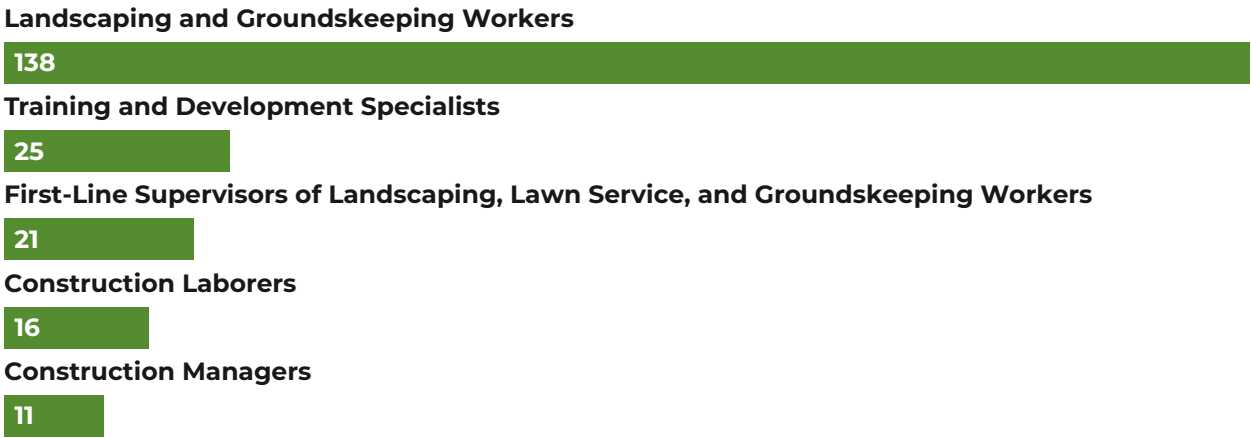
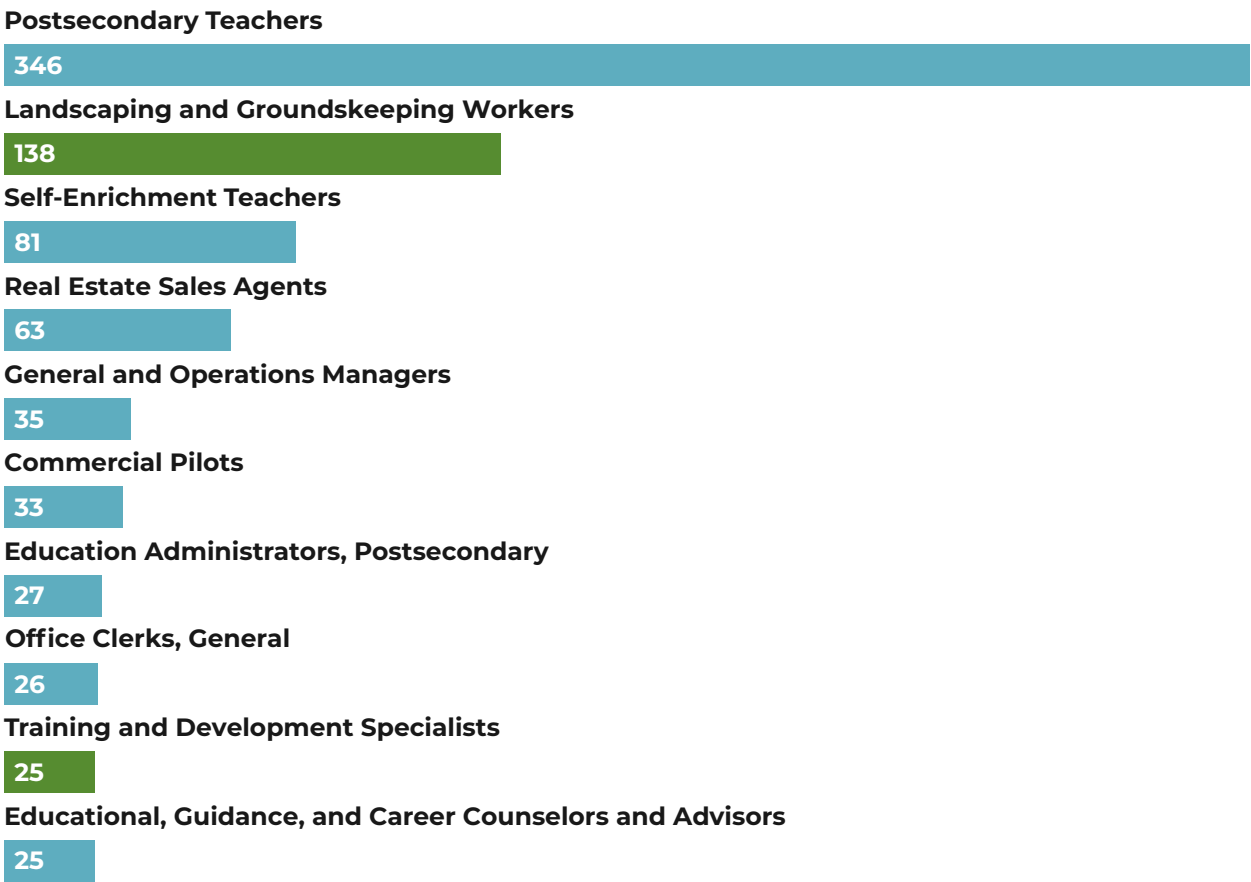


Figure 24. Community Activation Focus Area – Top Ten Occupations by Total New Jobs – High Estimate



Food Focus Area

To meet the goals of the Food focus area The Center estimate that the total investment needed would be between \$39 million and \$125 million. These investments included strategies to increase local food systems, eliminate food deserts, implement strategies of the Milan Urban Food Policy Pact (MUFPP), decrease food waste, and increase food and agriculture jobs locally.

Jobs Created: Low Estimate

The low capital investment scenario of \$39 million for the Food focus area would generate a total of 499 new jobs within the Cincinnati economy. Of these new jobs, 400 (80.2%) would be directly created, and 99 (19.8%) would be indirectly created. Green jobs make up 113 of these new jobs, while 386 of them will be other jobs.

Figure 25. Food Focus Area – Comparison of Direct, Indirect, and Total New Jobs – Low Estimate

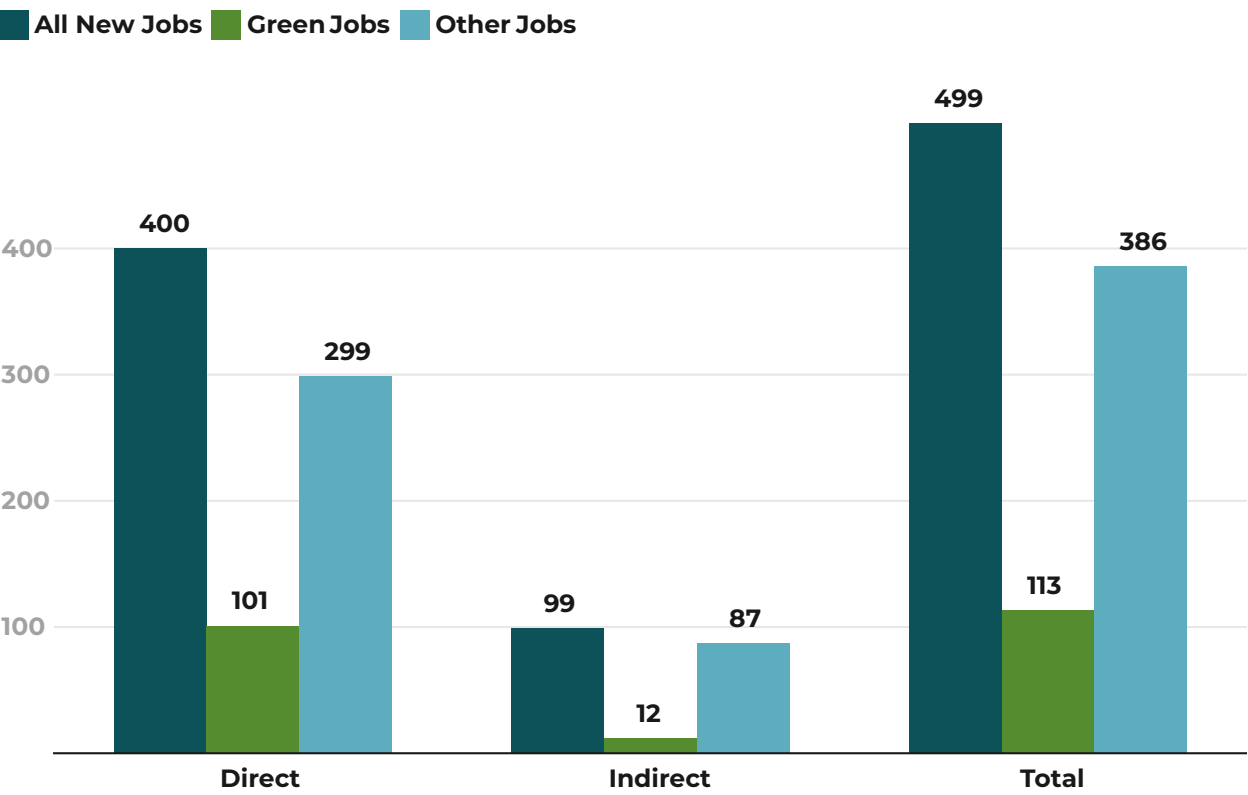
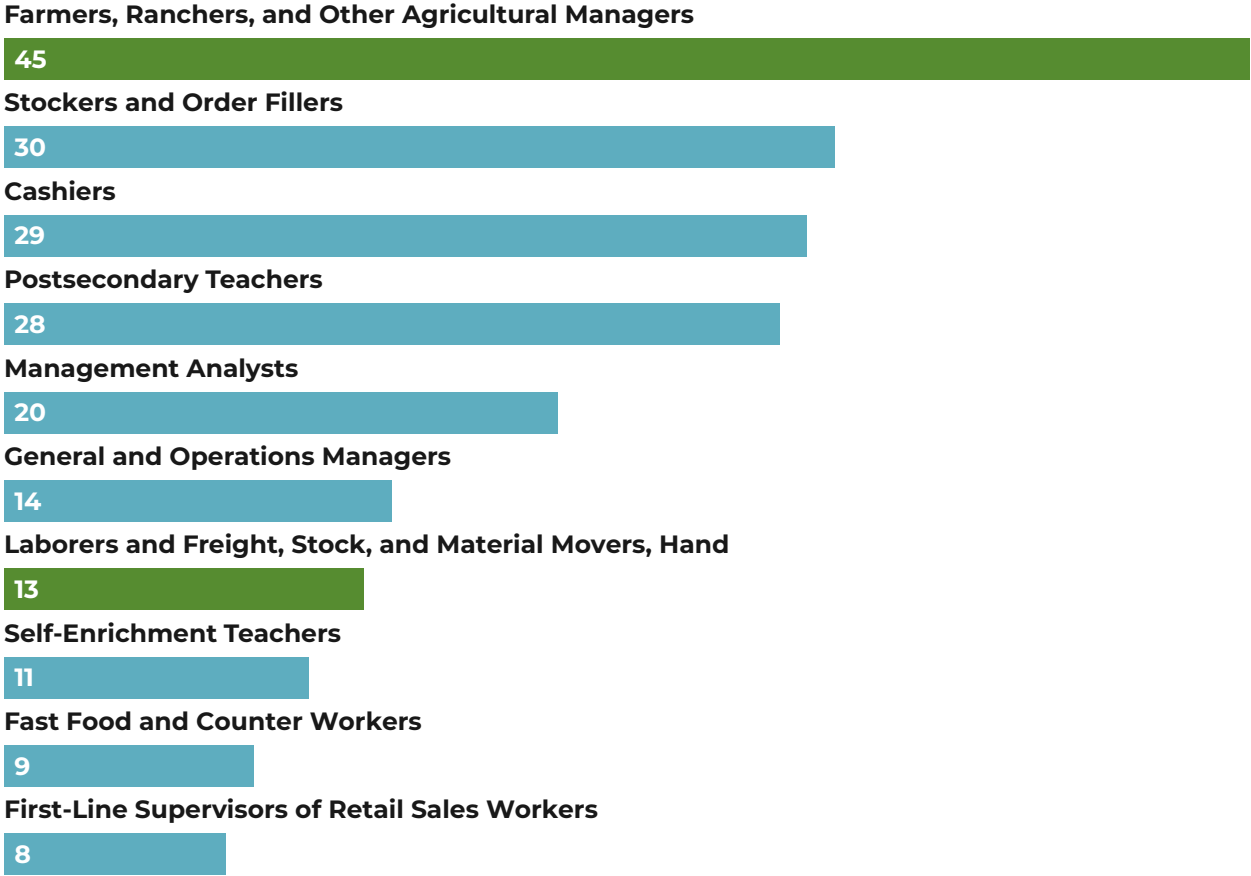


Figure 26. Food Focus Area – Top Five Occupations by Total New Jobs (Green Jobs)
– Low Estimate



Figure 27. Food Area – Top Ten Occupations by Total New Jobs
– Low Estimate



Jobs Created: High Estimate

The high capital investment scenario of \$125 million for the Food focus area would generate a total of 1,659 new jobs within the Cincinnati economy. Of these new jobs, 1,249 would be directly created, and 410 would be indirectly created. Green jobs make up 362 of these new jobs, while 1,297 other jobs will be created.

It is notable that there are currently only about 7,400 farmers, ranchers, and other agricultural managers in the Cincinnati region, compared to almost 24,000 cashiers and over 30,000 stockers and order fillers. As a result, the 92 new farmers, ranchers, and other agricultural managers would represent a larger percentage increase in the number of people employed in that occupation.

Figure 28. Food Focus Area – Comparison of Direct, Indirect, and Total New Jobs
– High Estimate

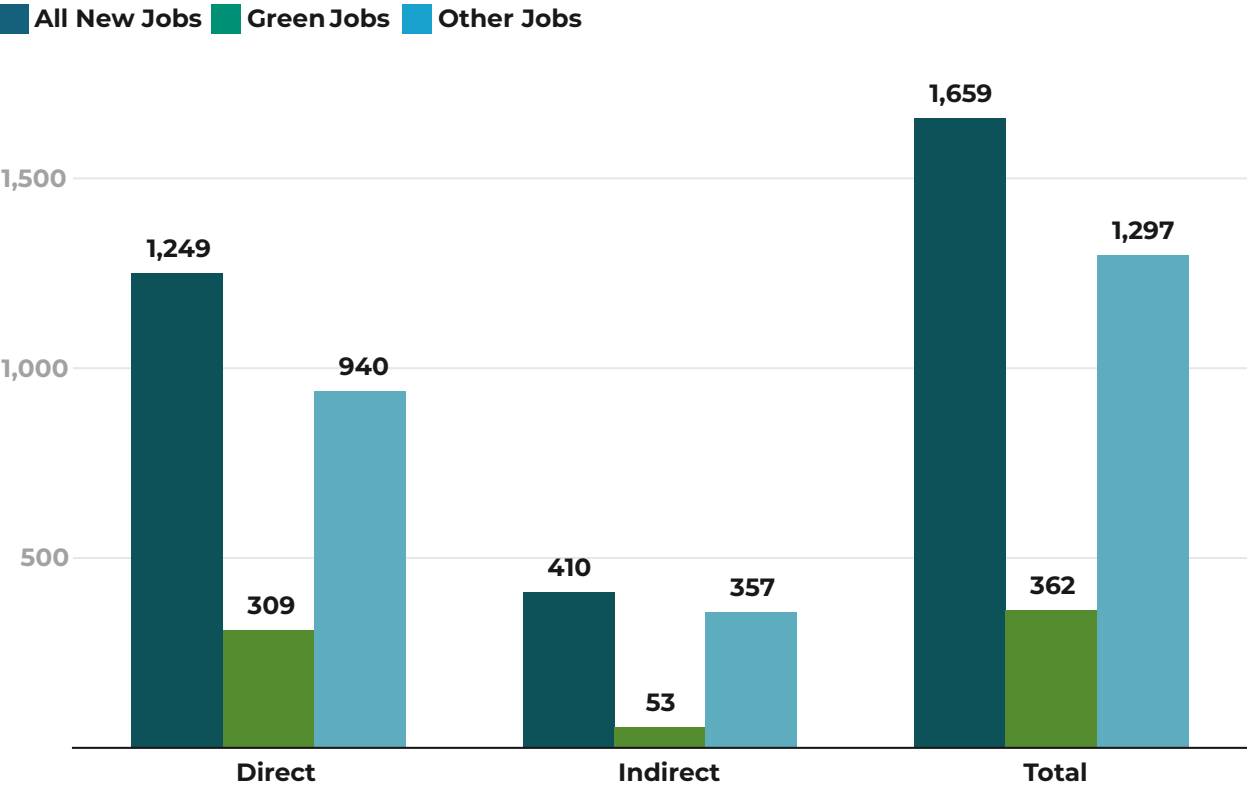


Figure 29. Food Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – High Estimate

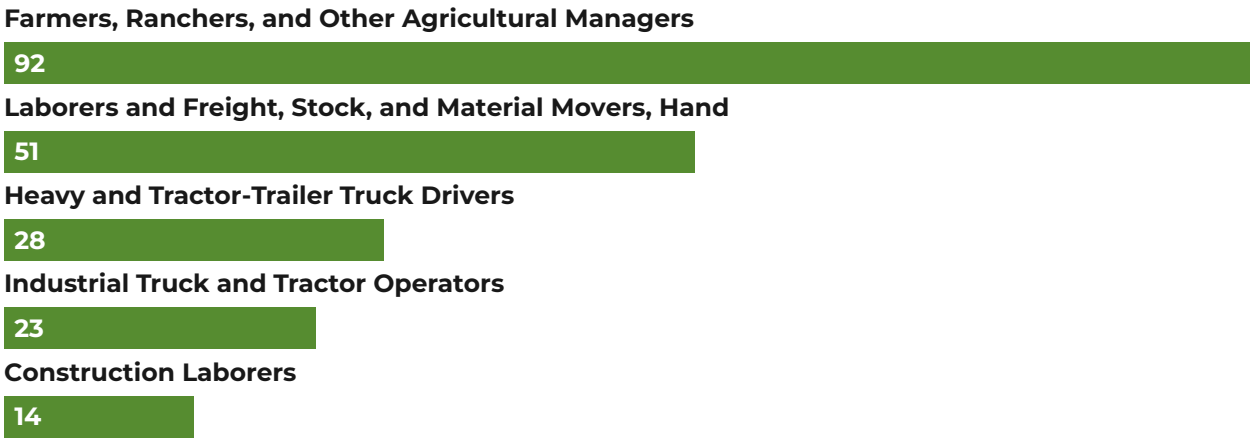
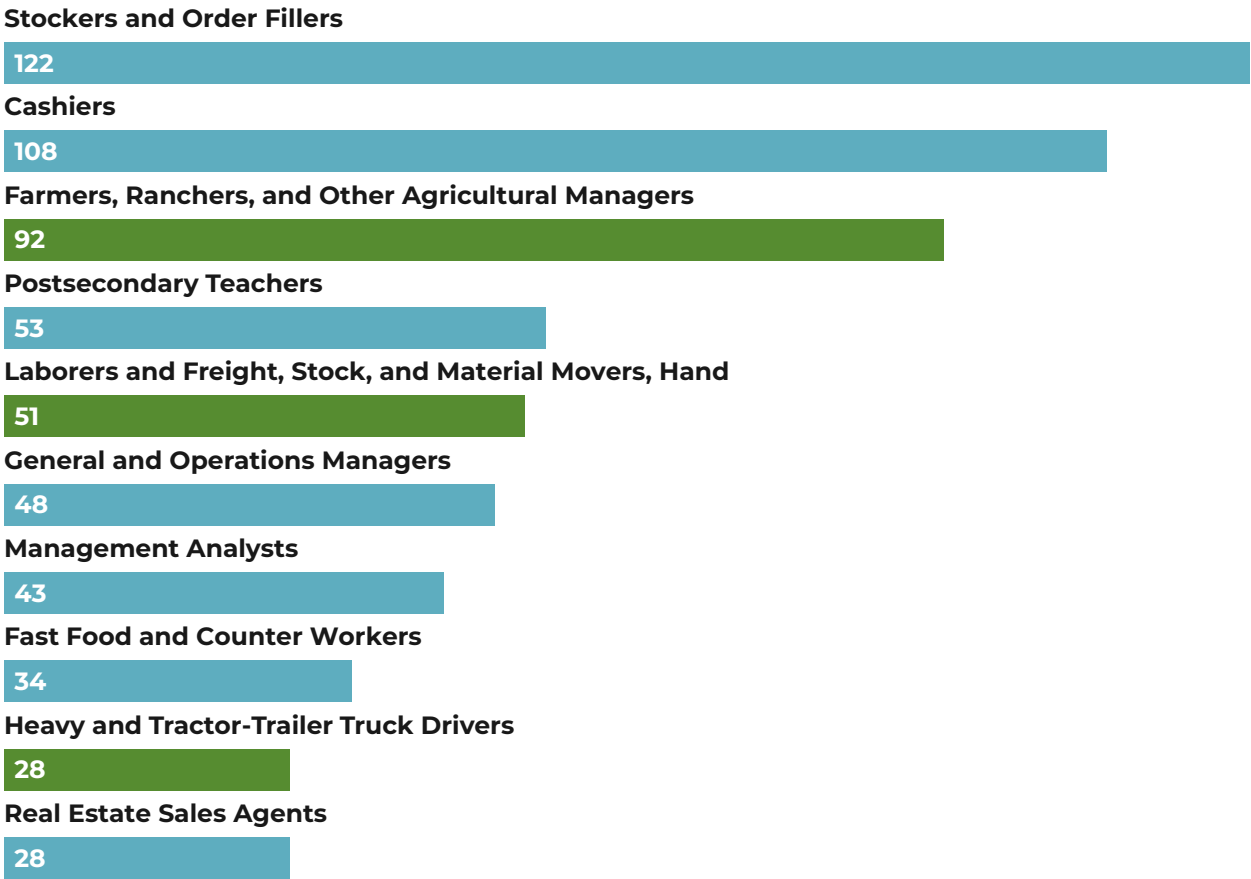


Figure 30. Food Focus Area – Top Ten Occupations by Total New Jobs – High Estimate



Mobility Focus Area

The total investment needed to meet the goals of the Mobility focus area is estimated to be between \$209 million and \$386 million. These investments included strategies to increase public transit and zero emission vehicle utilization, as well as create new bike and pedestrian infrastructure.

Jobs Created: Low Estimate

The low capital investment scenario of \$209 million for the Mobility focus area would generate 1,308 new jobs within the Cincinnati economy. Of these new jobs, 842 would be directly created, and 466 would be indirectly created. Green jobs make up 519 of these new jobs, while 789 of them will be other jobs.

Figure 31. Mobility Focus Area – Comparison of Direct, Indirect, and Total New Jobs – Low Estimate

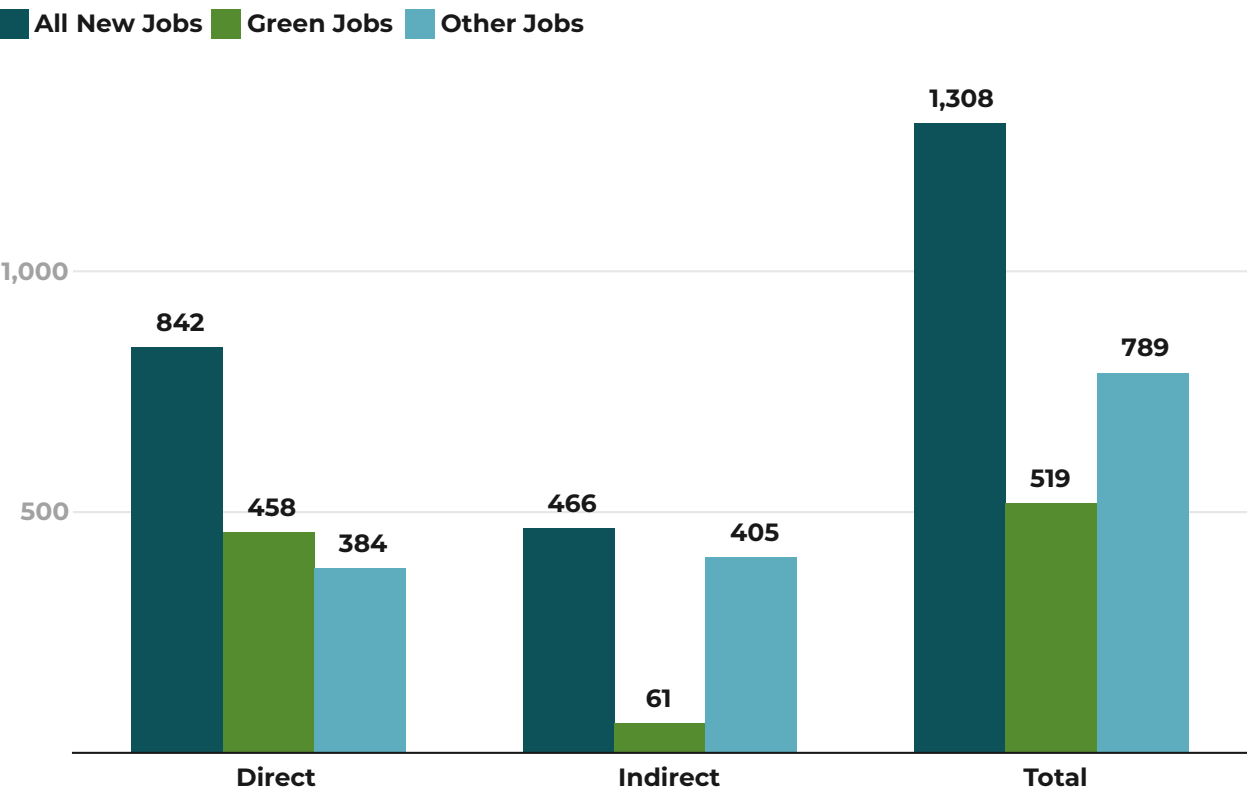


Figure 32. Mobility Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – Low Estimate

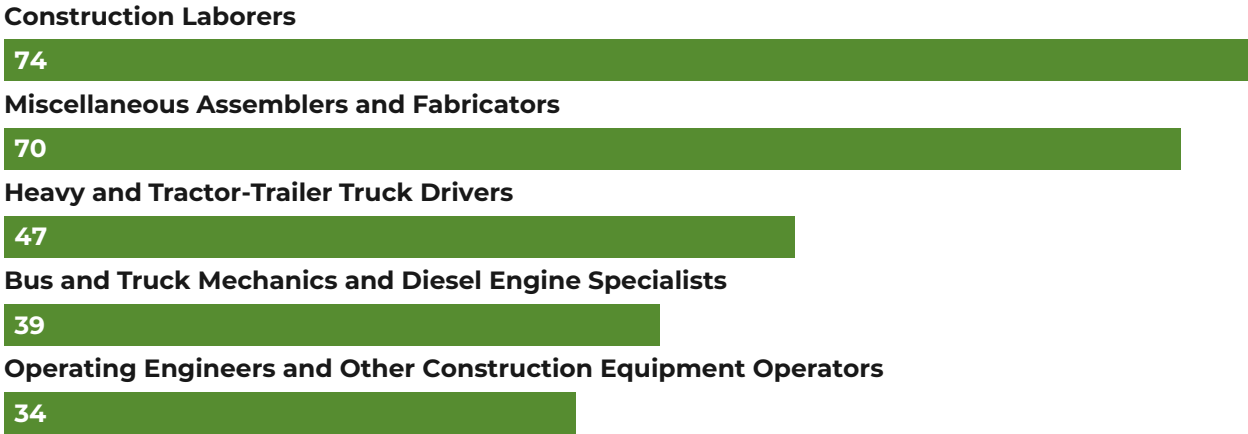
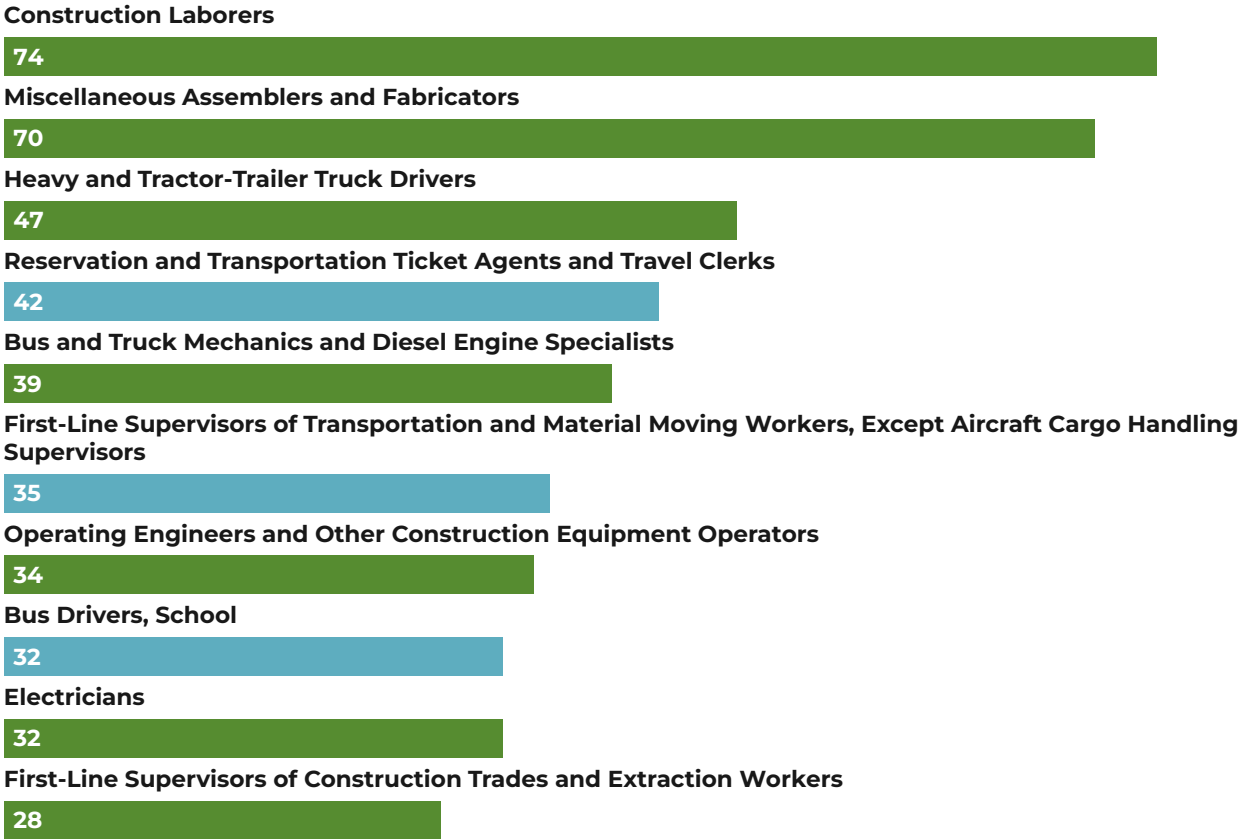


Figure 33. Mobility Focus Area – Top Ten Occupations by Total New Jobs – Low Estimate



Jobs Created: High Estimate

The high capital investment scenario of \$386 million for the Mobility focus area would generate 2,544 new jobs within the Cincinnati economy. Of these new jobs, 1,609 would be directly created, and 935 would be indirectly created. Green jobs make up 956 of these new jobs, while there would also be 1,588 other jobs created.

Figure 34. Mobility Focus Area – Comparison of Direct, Indirect, and Total New Jobs – High Estimate

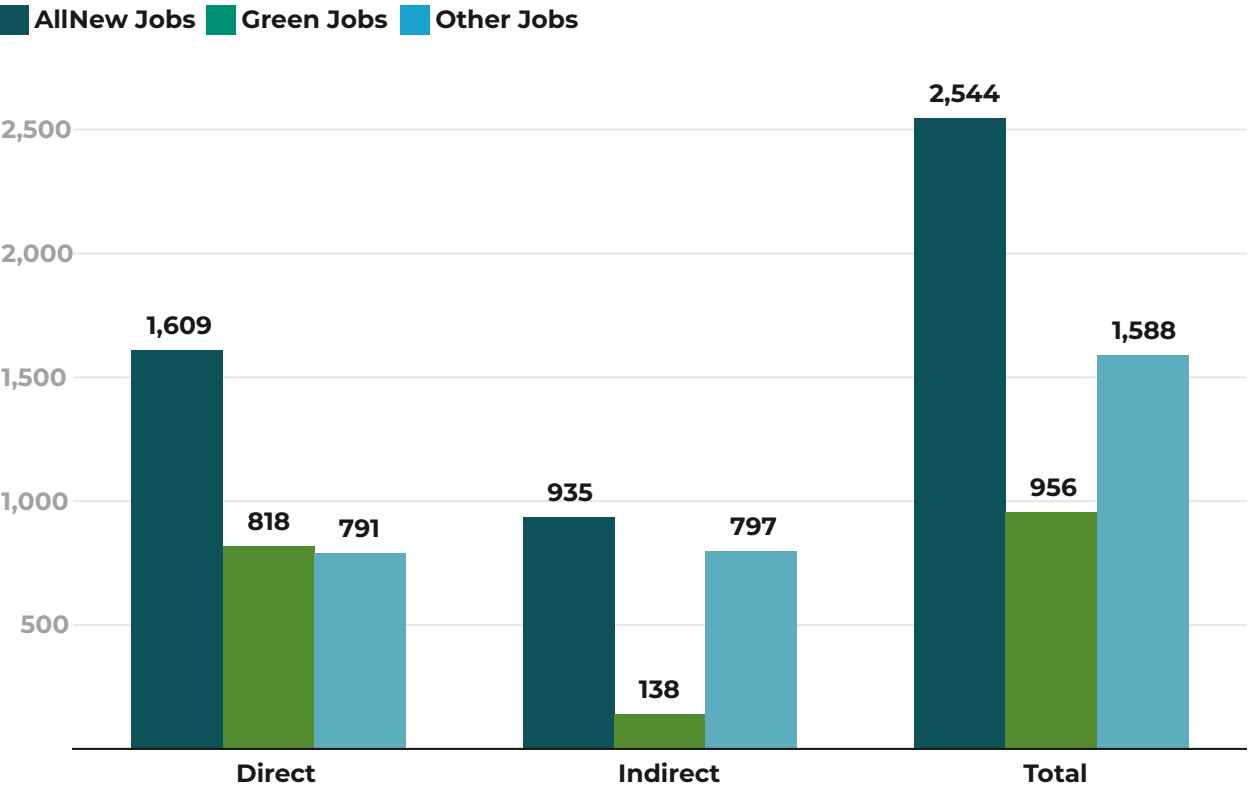


Figure 35. Mobility Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – High Estimate

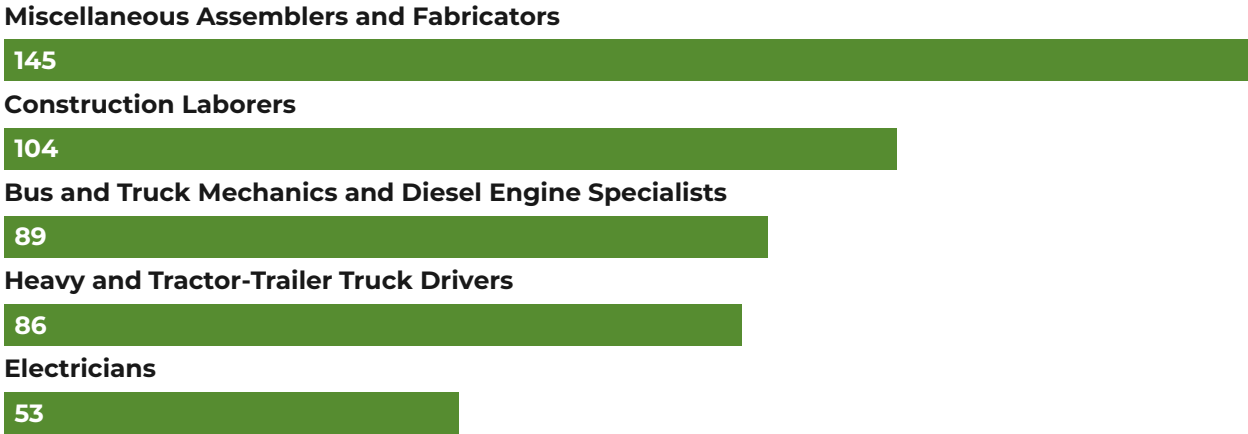
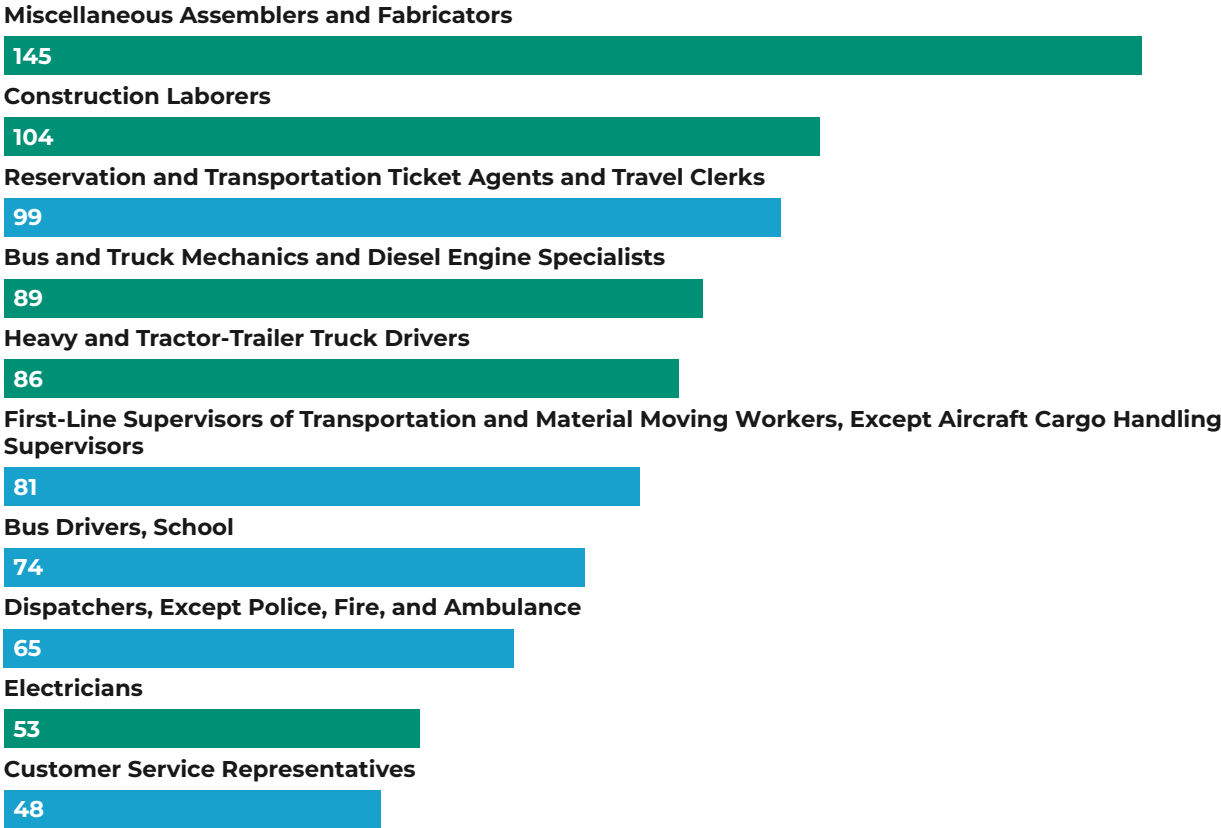


Figure 36. Mobility Focus Area – Top Ten Occupations by Total New Jobs – High Estimate



Natural Environment Focus Area

To achieve the goals of the Natural Environment focus area, this analysis estimated that the total investment would need to be between \$82 million and \$163 million. The strategies of this focus area included tree canopy expansion, improving air quality by investing in incentives for cleaner technology in the manufacturing and energy sectors, and utilizing vacant lots to develop small parks to link neighborhoods and more Cincinnati residents to greenspaces.

Jobs Created: Low Estimate

In a low capital investment scenario of \$82 million for the Natural Environment focus area, 1,018 new jobs would be created within the Cincinnati economy. Out of the 1,018 new jobs, 786 of these jobs would be directly created and 232 jobs would be indirectly created. Green jobs make up 582 of these new jobs, while 436 of the new jobs have not been previously identified as green jobs.

Figure 37. Natural Environment Focus Area – Comparison of Direct, Indirect, and Total New Jobs – Low Estimate

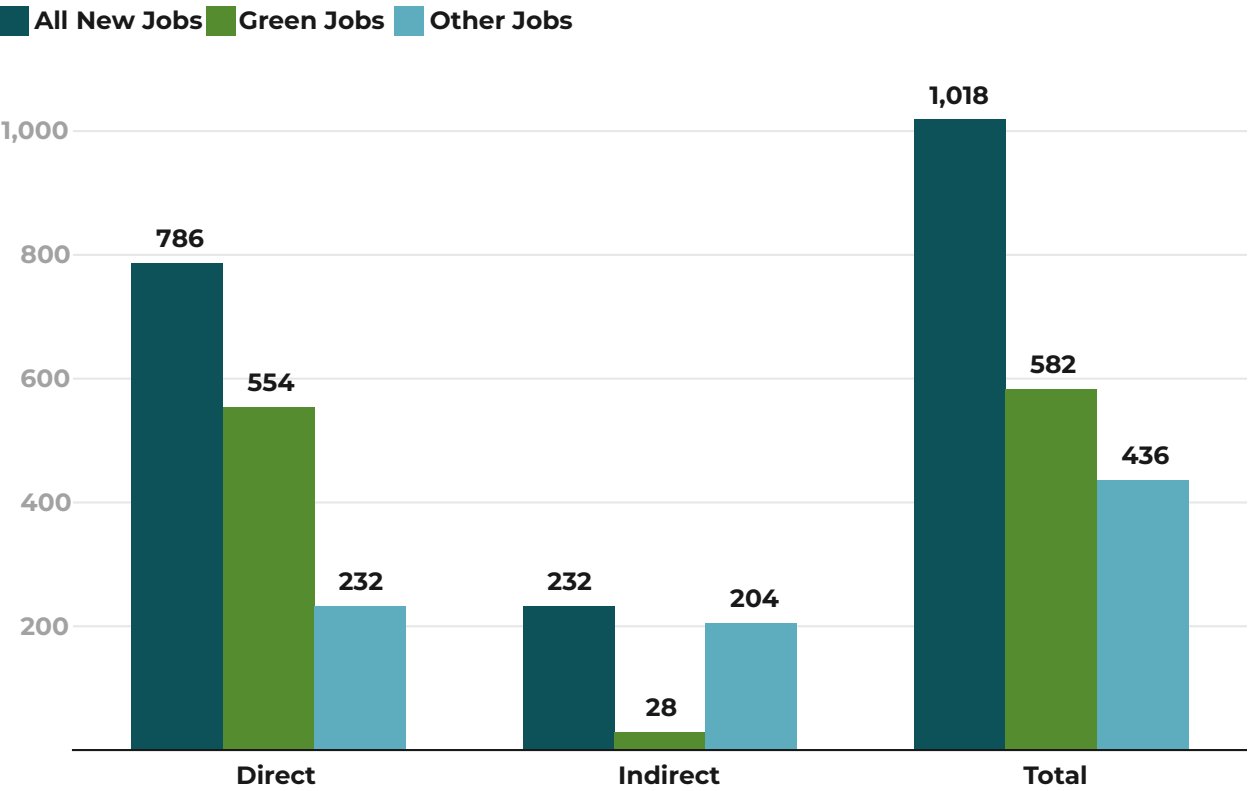


Figure 38. Natural Environment Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – Low Estimate

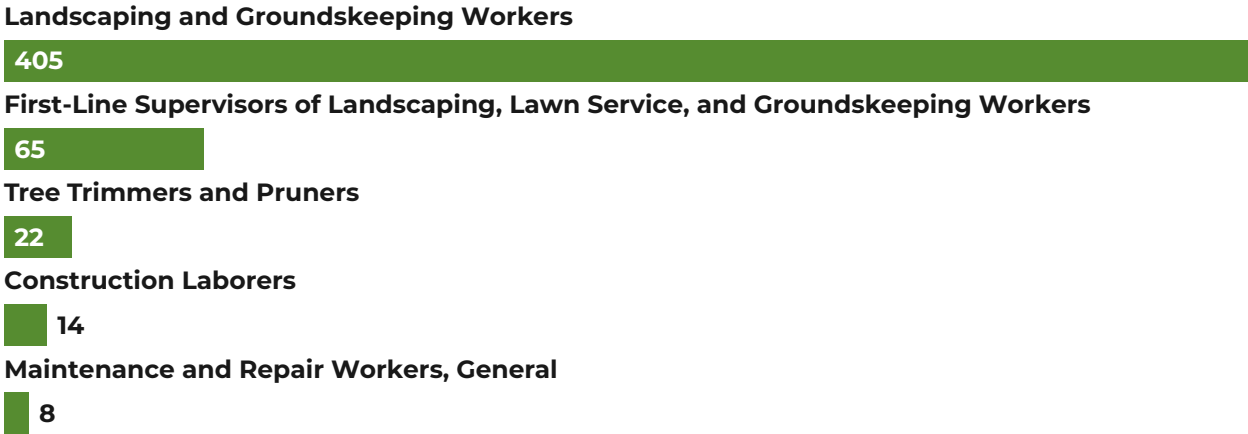
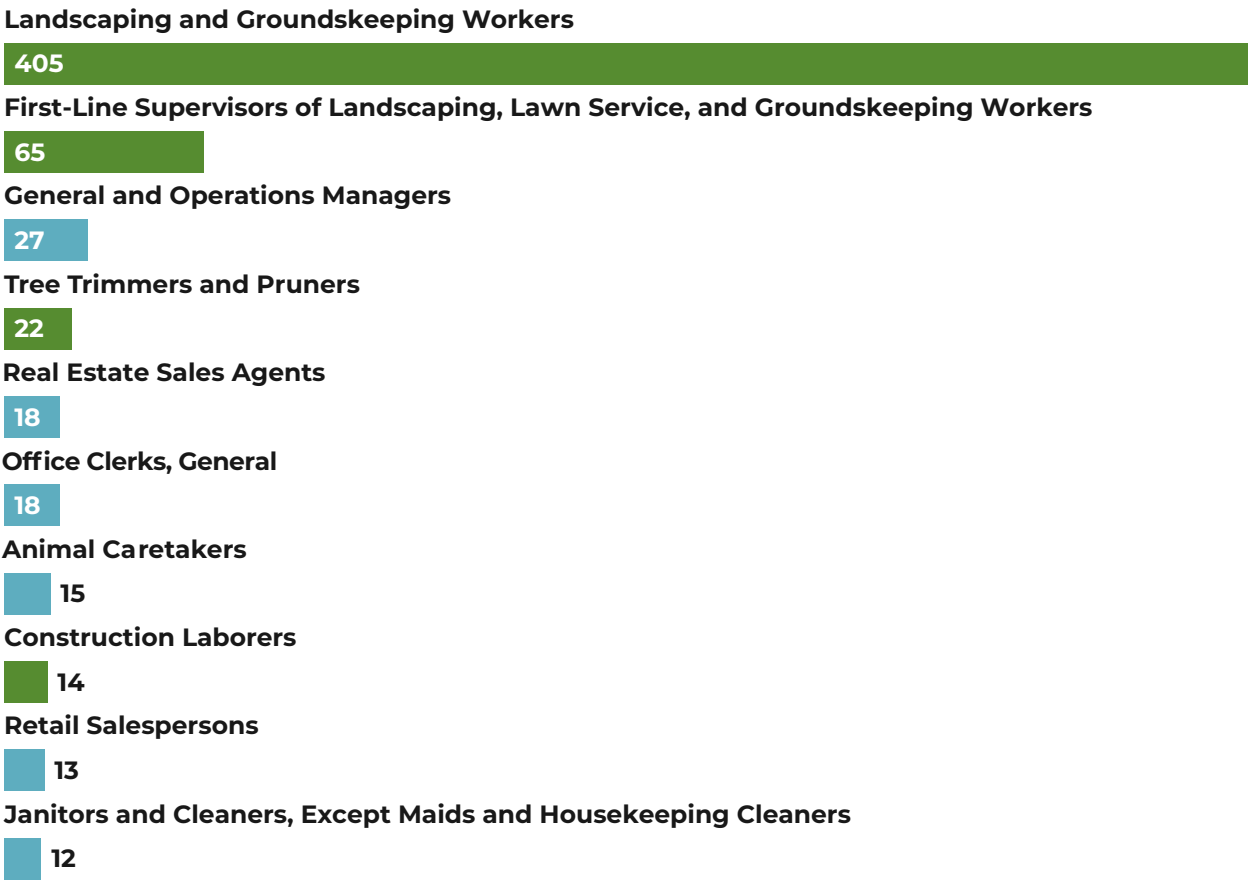


Figure 39. Natural Environment Focus Area – Top Ten Occupations by Total New Jobs – Low Estimate



Jobs Created: High Estimate

The high estimate capital investment scenario of \$163 million for the Natural Environment focus area would generate 2,082 new jobs within the Cincinnati economy. Of these new jobs, 1,561 would be directly created and 521 would be indirectly created. Green jobs make up 980 of these new jobs, while 1,102 other jobs would also be created.

Figure 40. Natural Environment Focus Area – Comparison of Direct, Indirect, and Total New Jobs – High Estimate

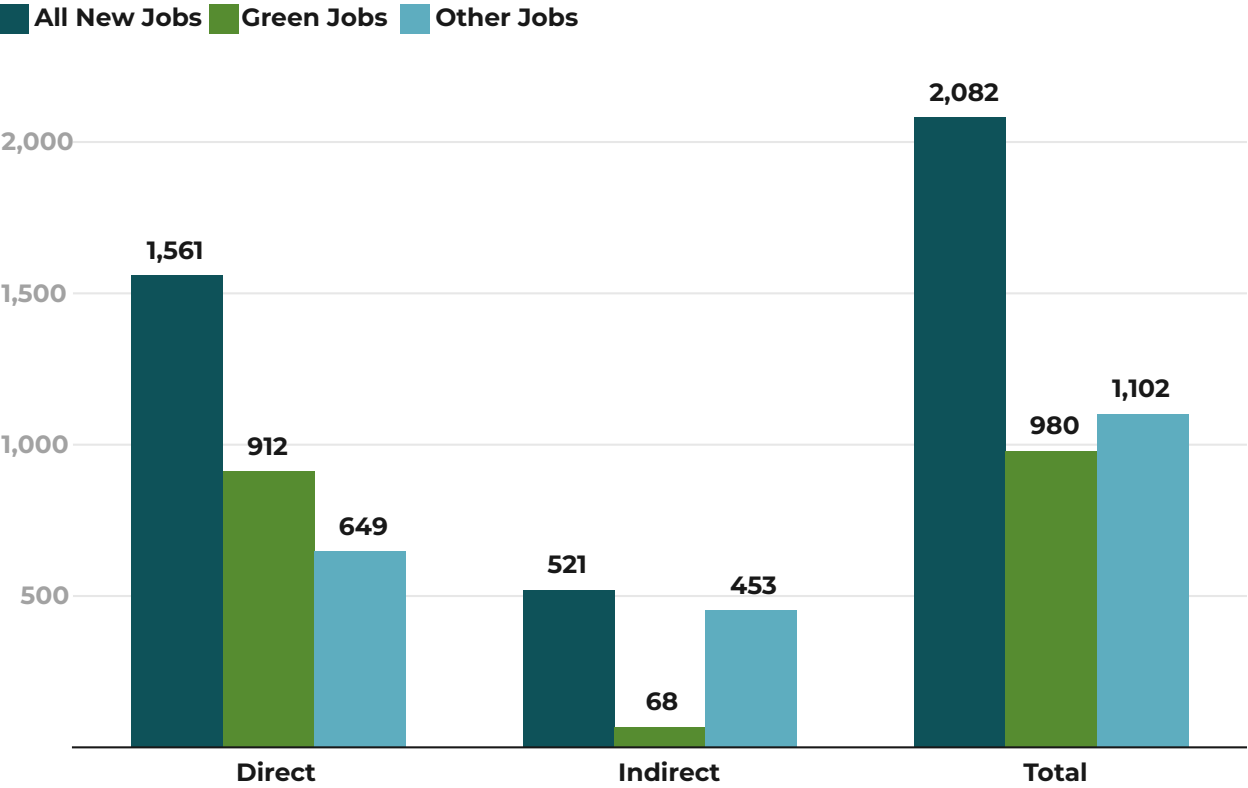


Figure 41. Natural Environment Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – High Estimate

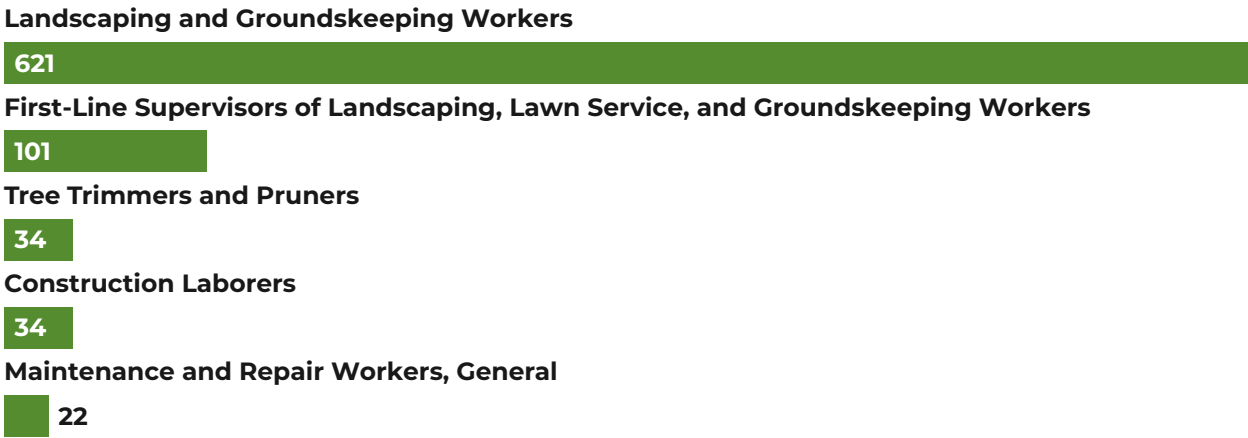
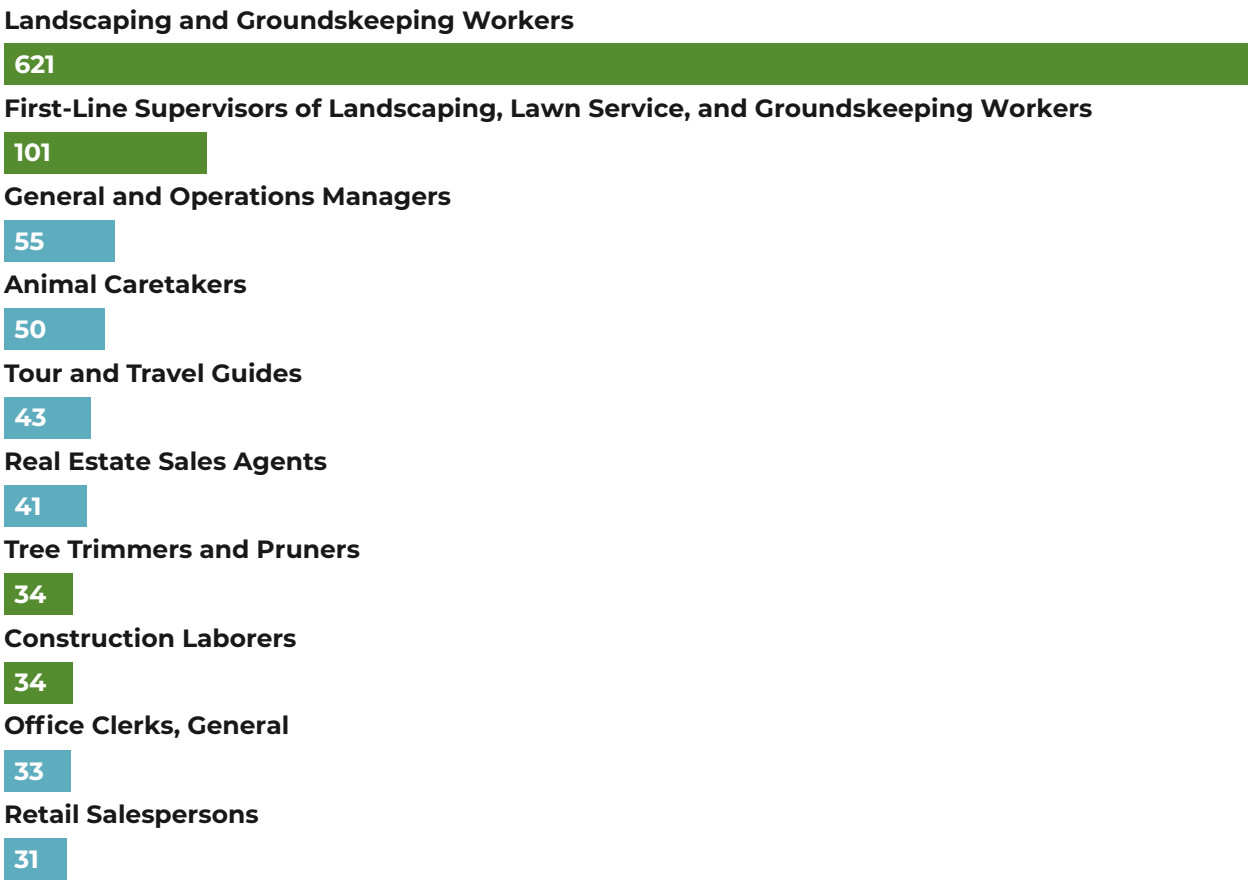


Figure 42. Natural Environment Focus Area – Top Ten Occupations by Total New Jobs – High Estimate



Resilience and Climate Adaptation Focus Area

To accomplish the goals set in the Resilience and Climate Adaptation focus area, the Center estimated that the total investment would need to be between \$77.5 million and \$335 million. This focus area recommended strategies like green infrastructure projects, climate adaptation projects, and the revitalization of brownfields. Green infrastructure and climate adaptation projects include rain gardens, permeable pavements, extreme heat mitigation, and a focus on flood defenses.

Jobs Created: Low Estimate

The low capital investment scenario of \$77.5 million for the Resilience and Climate Adaptation focus area would generate 590 new jobs within the Cincinnati economy. 385 of these jobs would be directly created and 205 of these jobs would be created indirectly. Out of the 590 total new jobs, 266 are identified as green jobs and 324 are not.

Figure 43. Resilience and Climate Adaptation Focus Area – Comparison of Direct, Indirect, and Total New Jobs – Low Estimate

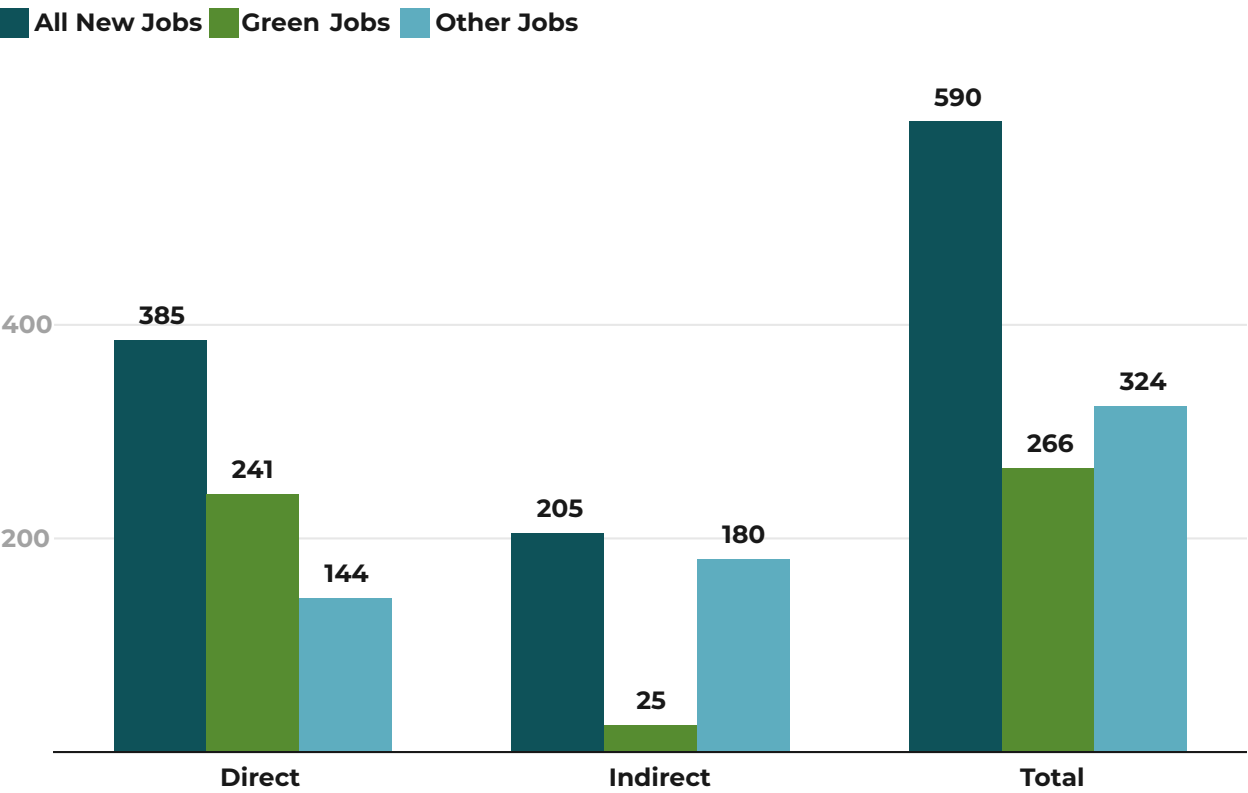
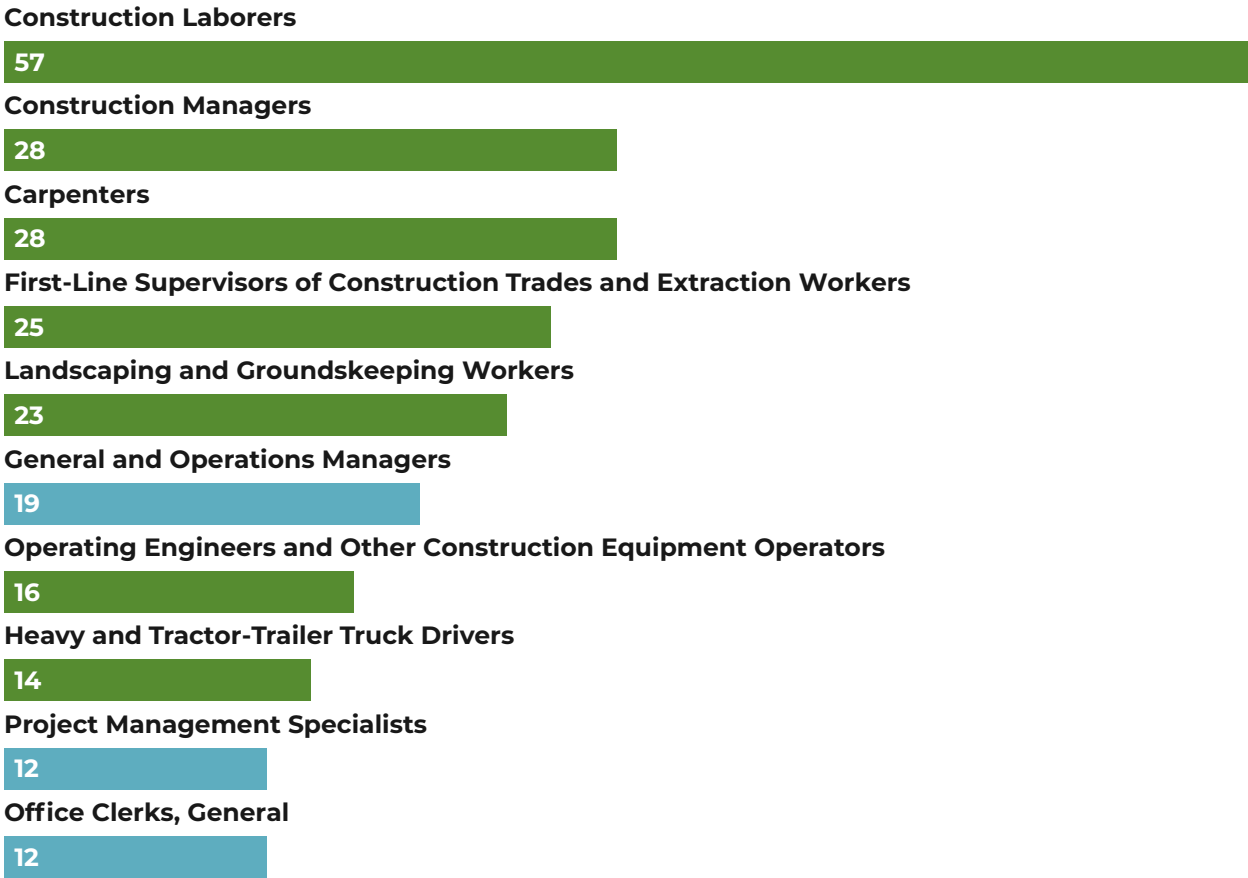


Figure 44. Resilience and Climate Adaptation Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – Low Estimate



Figure 45. Resilience and Climate Adaptation Focus Area – Top Ten Occupations by Total New Jobs – Low Estimate



Jobs Created: High Estimate

As a result of the high capital investment scenario of \$335 million for the Resilience and Climate Adaptation focus area, 2,948 total jobs are projected to be generated within the Cincinnati economy. Out of all jobs generated, 1,811 would be directly created and 1,137 would be indirectly created. Of the 2,948 jobs created, 1,270 jobs are considered green jobs, and 1,678 jobs are not considered green jobs.

Figure 46. Resilience and Climate Adaptation Focus Area – Comparison of Direct, Indirect, and Total New Jobs – High Estimate

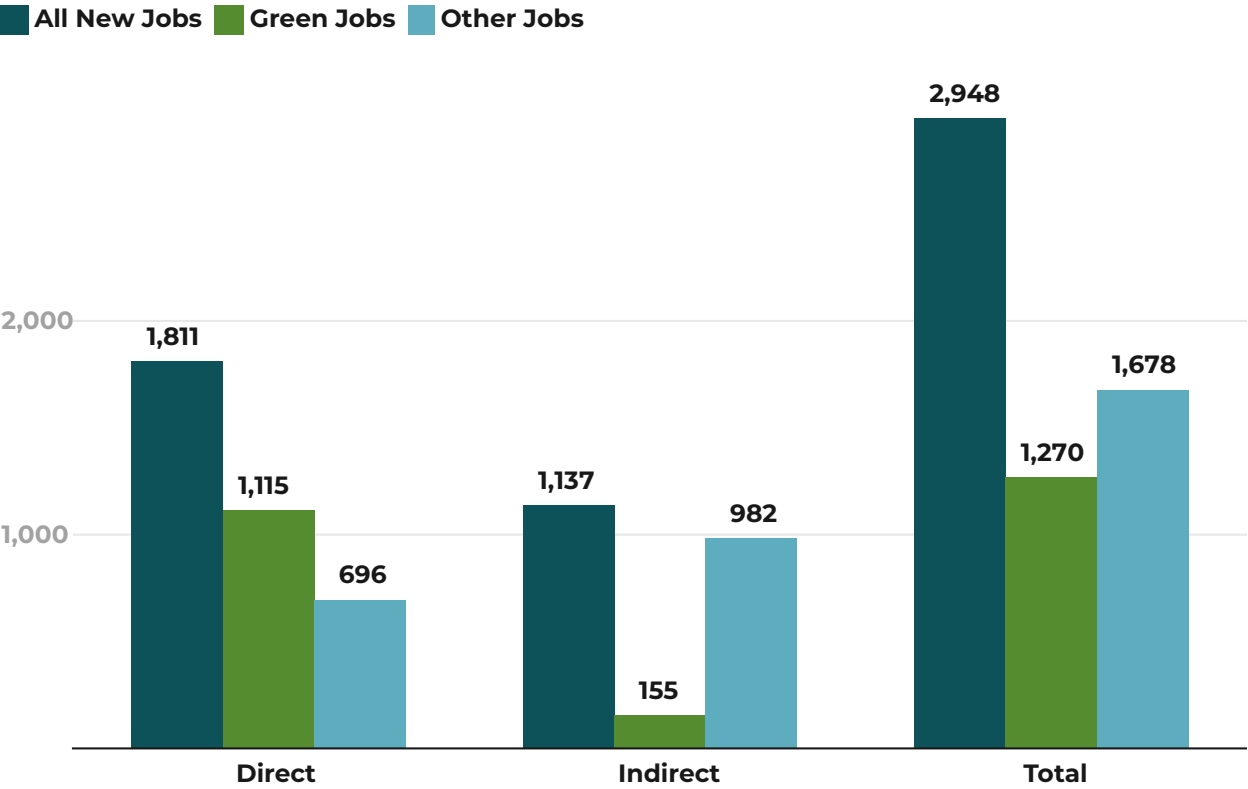
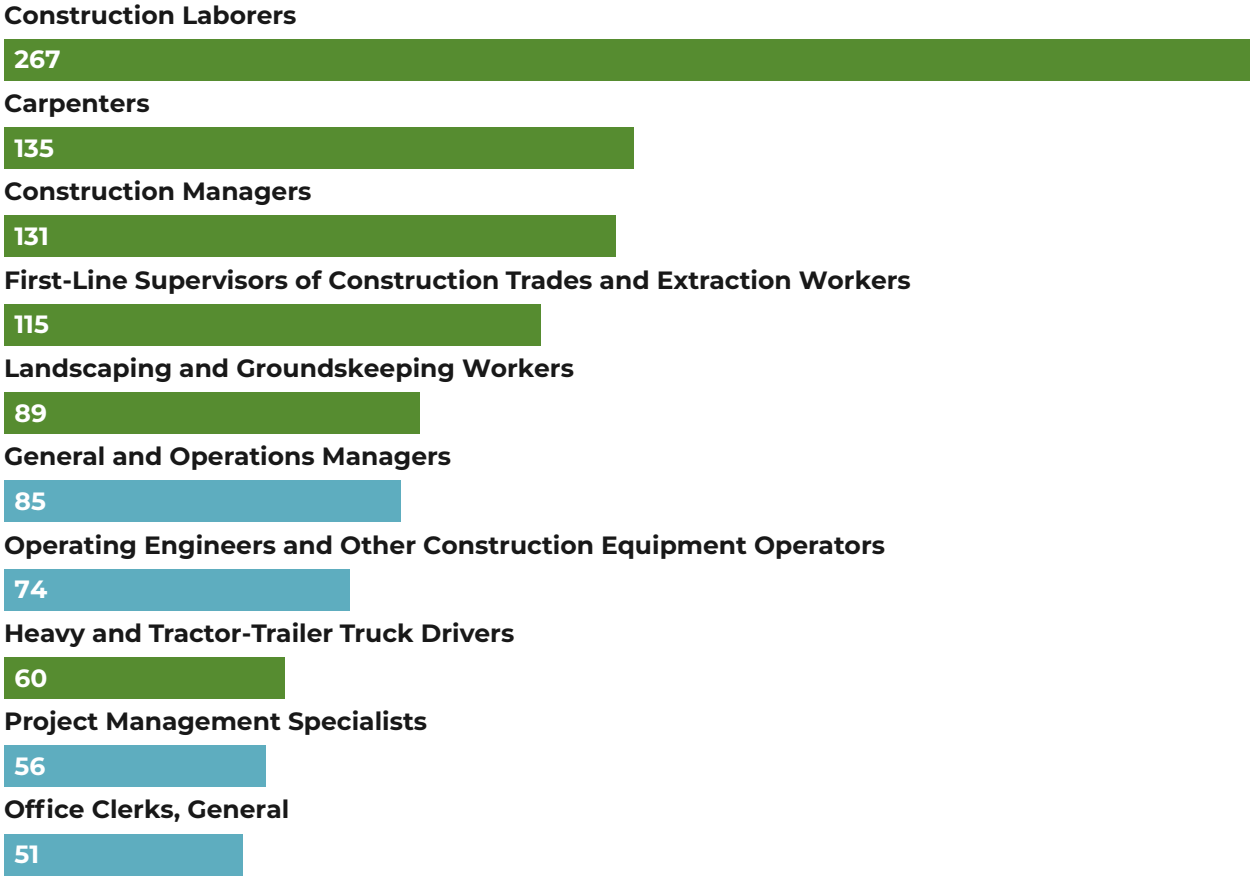


Figure 47. Resilience and Climate Adaptation Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – High Estimate



Figure 48. Resilience and Climate Adaptation Focus Area – Top Ten Occupations by Total New Jobs – High Estimate



Zero Waste Focus Area

To meet the goals set in the Zero Waste focus area the Center estimated that the total investment needed would be between \$28 million and \$72 million. The investments would include strategies like increasing waste diversion, diverting organics from landfills, and decreasing litter and illegal dumping.

Jobs Created: Low Estimate

The low capital investment scenario of \$28 million for the Zero Waste focus area would create a total of 182 jobs within the Cincinnati economy. Out of these new jobs, 134 would be directly created, while 48 of them would be indirectly created. Green jobs make up 55 of all jobs created, while 127 jobs are not identified as green jobs.

Figure 49. Zero Waste Focus Area – Comparison of Direct, Indirect, and Total New Jobs – Low Estimate

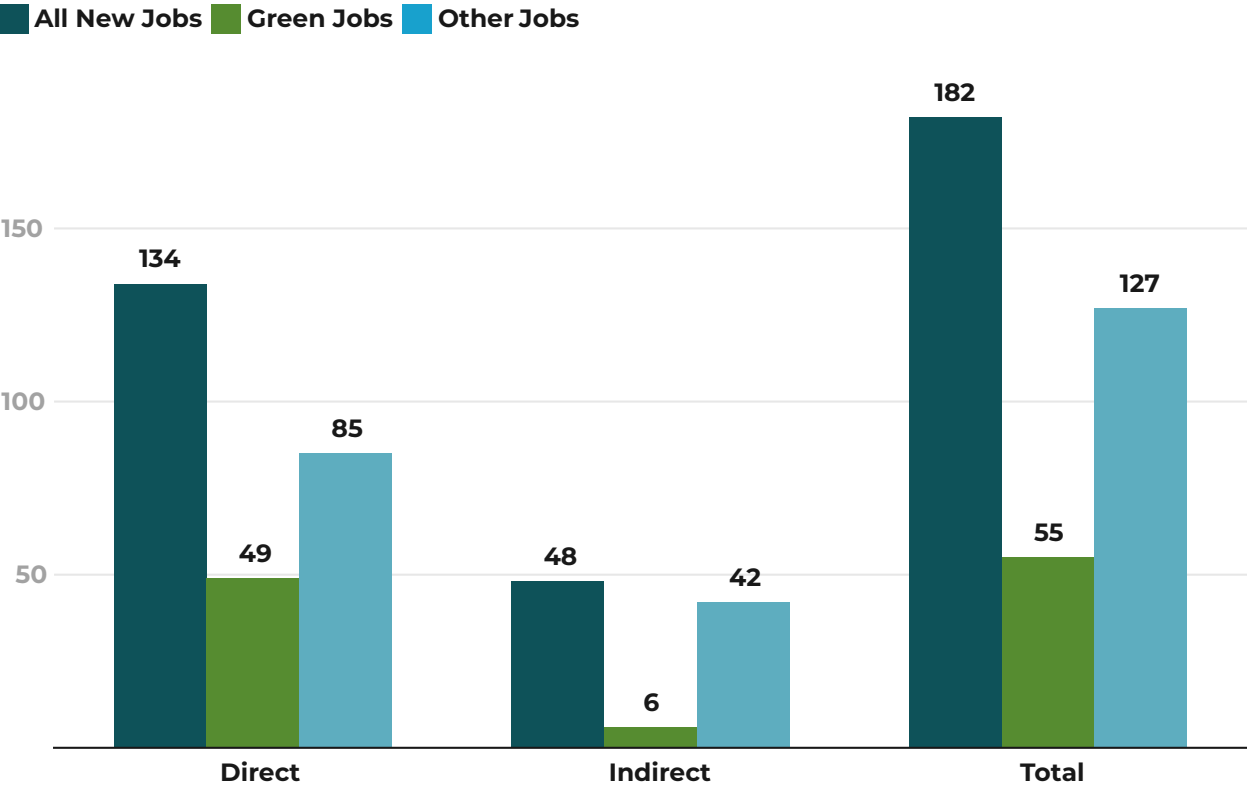


Figure 50. Zero Waste Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – Low Estimate

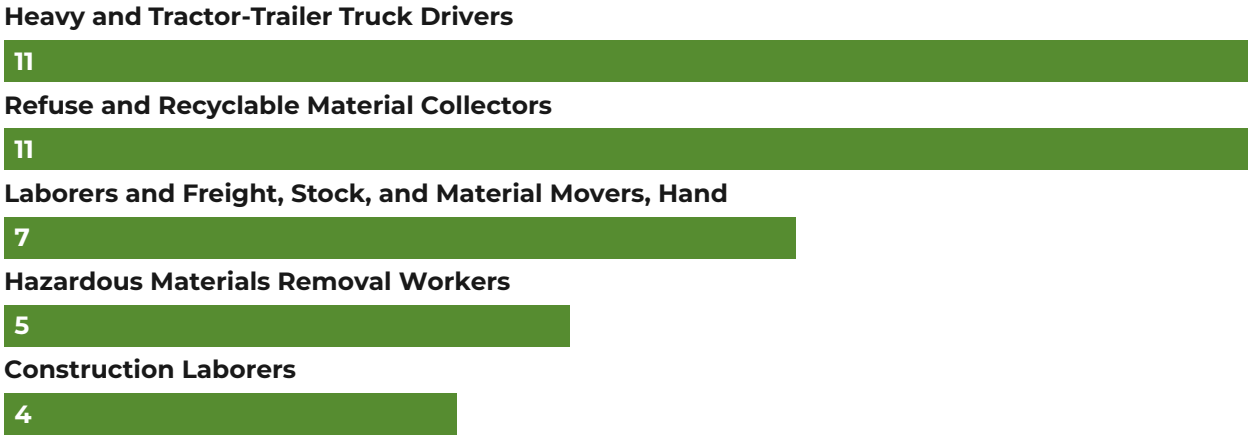
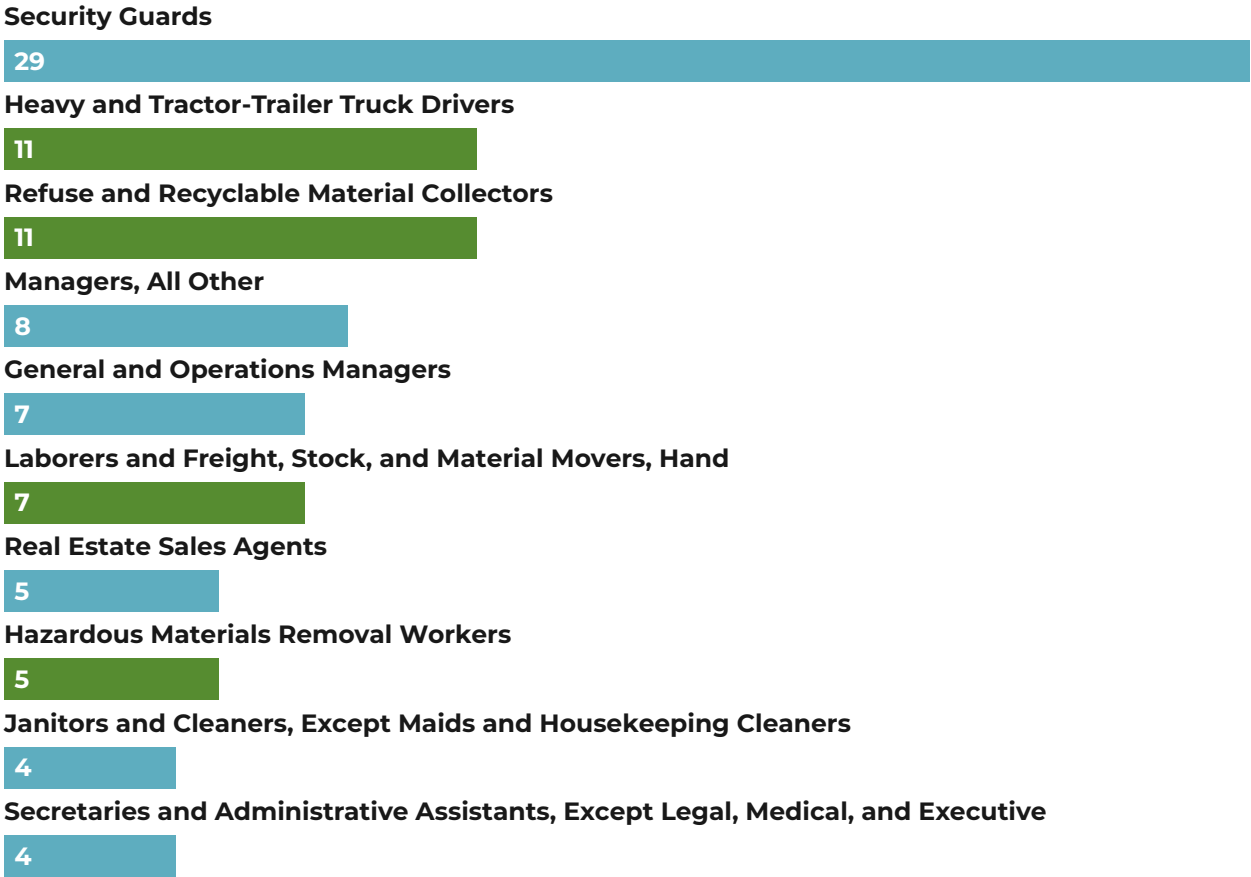


Figure 51. Zero Waste Focus Area – Top Ten Occupations by Total New Jobs – Low Estimate



Jobs Created: High Estimate

At \$72 million, the Zero Waste focus area's high estimate is comparatively lower than the high estimates of the other focus areas in the 2023 Green Cincinnati Plan. With this investment, 612 new jobs could be generated within the Cincinnati economy. Out of all jobs created, 407 would be directly created and 205 would be indirectly created. Of the 612 new jobs, 171 jobs would be identified as green jobs and 441 would not.

Figure 52. Zero Waste Focus Area – Comparison of Direct, Indirect, and Total New Jobs – High Estimate

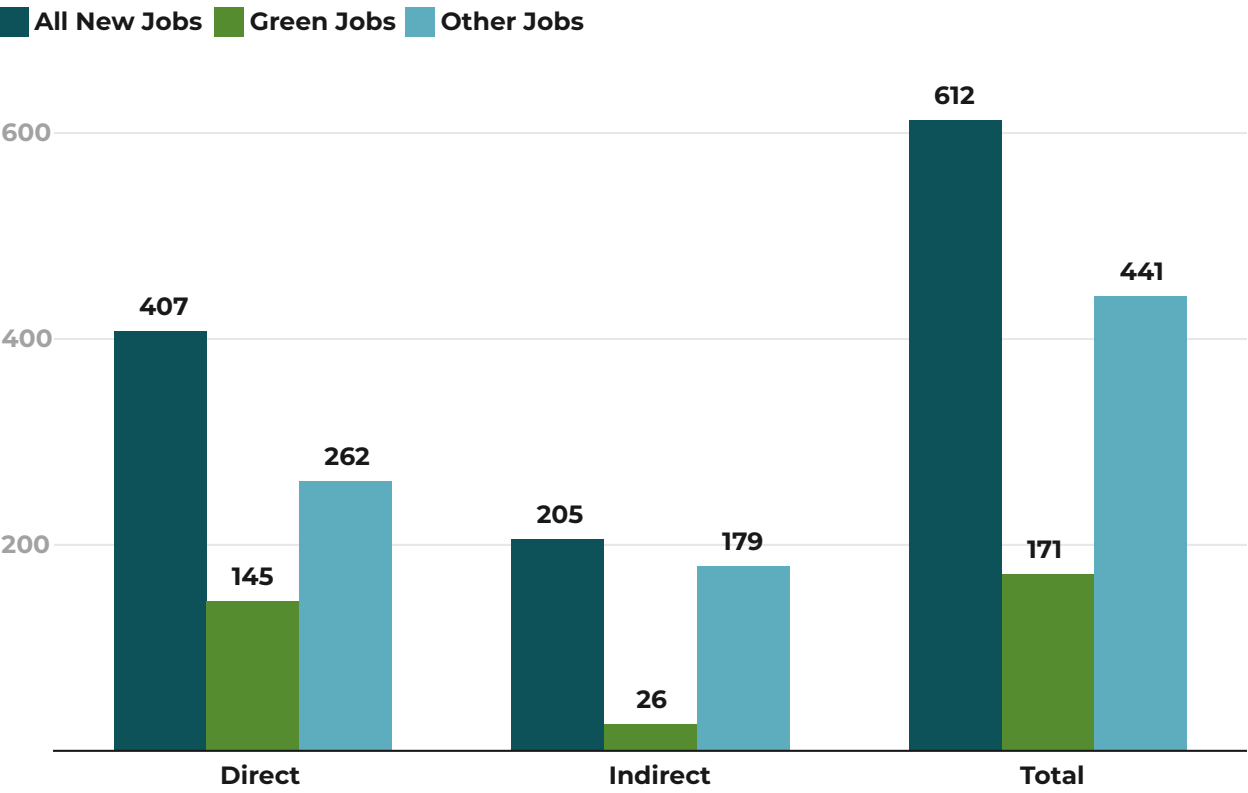
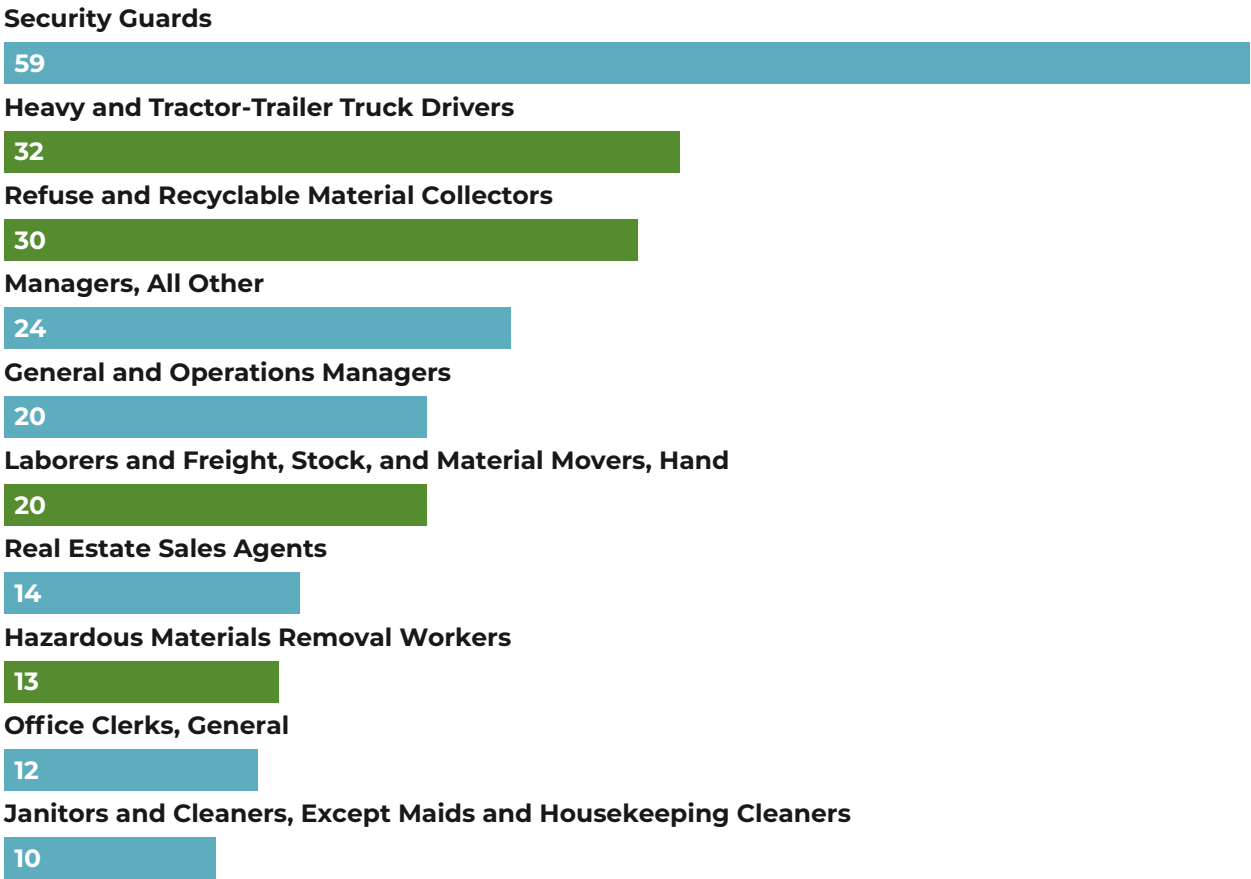


Figure 53. Zero Waste Focus Area – Top Five Occupations by Total New Jobs (Green Jobs) – High Estimate



Figure 54. Zero Waste Focus Area – Top Ten Occupations by Total New Jobs – High Estimate

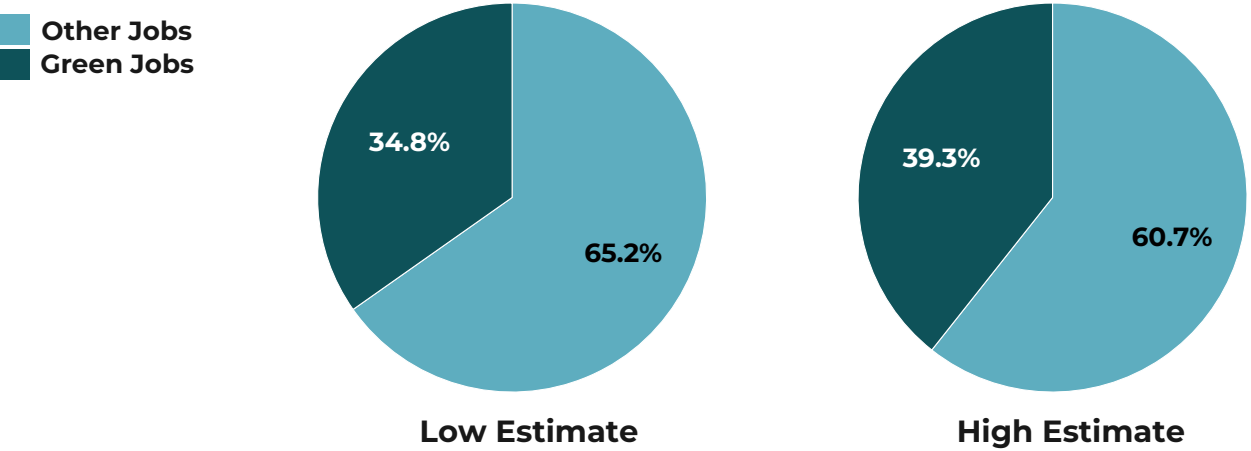


Green Workforce Needs Analysis Summary

Implementing the 2023 Green Cincinnati Plan creates a wealth of workforce opportunities with job creation across all eight key areas: Buildings and Energy, City Operations, Community Activation, Food, Mobility, Natural Environment, Resilience and Climate Adaptation, and Zero Waste. Collectively, these initiatives represent transformative opportunities to build a skilled and sustainable workforce in the Cincinnati region that current and future employers need.

The analysis demonstrates how strategic investments ranging from \$2.6 billion to \$5.7 billion could generate between 16,372 and 44,145 jobs, providing a significant boost to the local economy. Among these, jobs that have been identified as green jobs make up 5,961 to 17,366 positions, offering opportunities in areas such as clean energy, green construction, transportation, and conservation. These roles reflect a diverse range of skills, from technical trades like electricians and carpenters to specialized roles like landscaping supervisors and bus mechanics. However, we note that a large portion of the jobs created have not previously been identified as green jobs, suggesting to policymakers and business leaders that we have a new opportunity to think and act more holistically about green jobs. Collectively, we can prepare for a growing green economy with new job training and educational curricula, as well as work with employers to expand these roles.

Figure 55. Projected Green and Other Jobs Breakdown



Summary data for all focus areas combined is illustrated in Figures 50 through 54 and a list of occupations with more than 50 new jobs created under both the high and low estimates is available in **Appendix II**.

Figure 56. Overall Comparison of Indirect, Direct, and Total New Jobs – Low Estimate and High Estimate

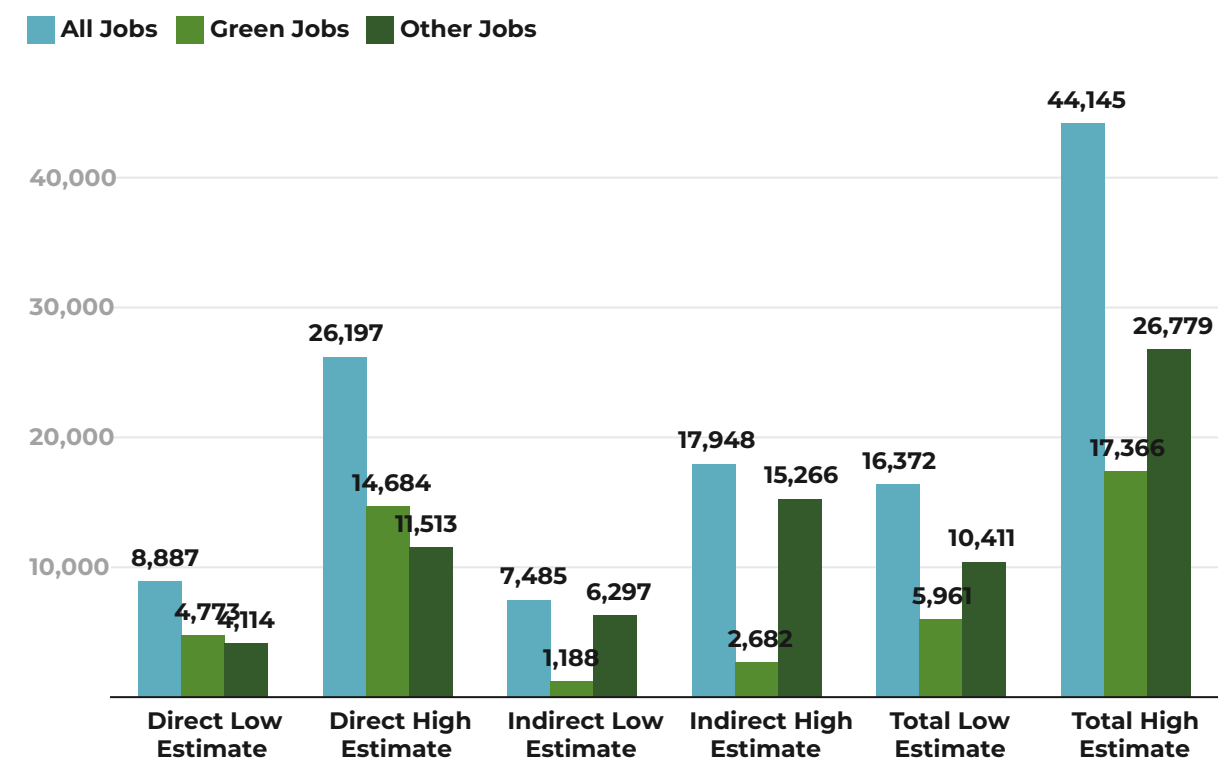


Figure 57. Top Five Occupations by Total New Jobs (Green Jobs) – Low Estimate

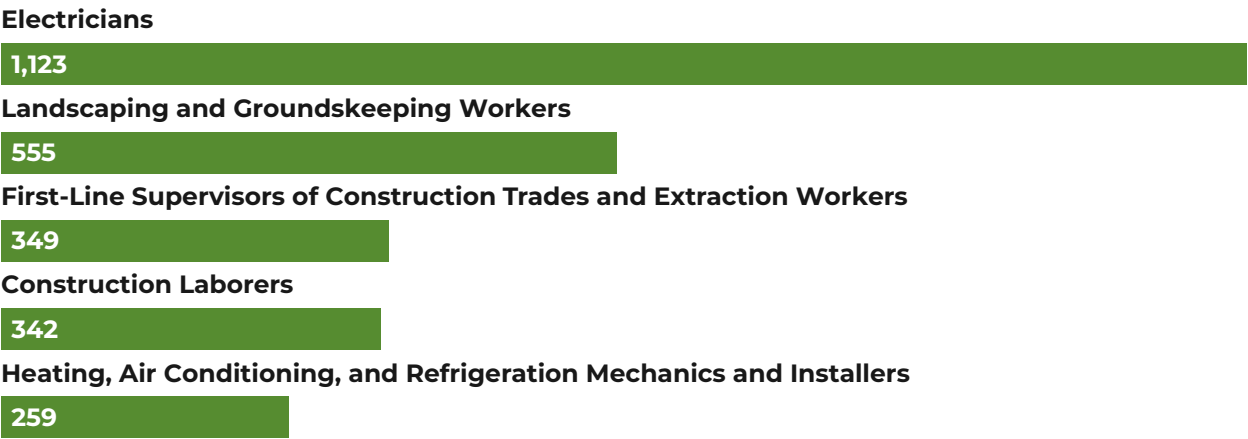


Figure 58. Top Five Occupations by Total New Jobs (Green Jobs) – High Estimate

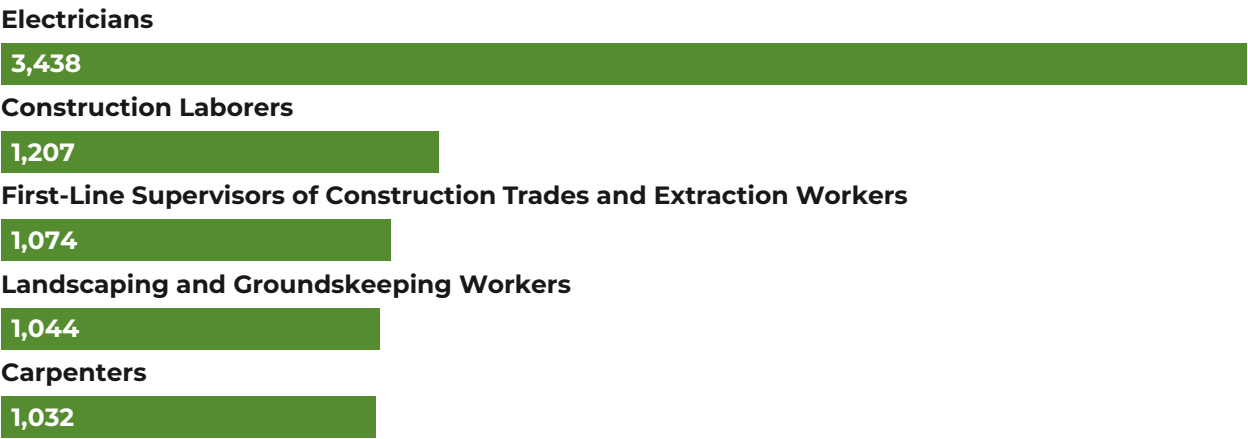


Figure 59. Top Ten Occupations by Total New Jobs – Low Estimate



Figure 60. Top Ten Occupations by Total New Jobs – High Estimate



Key workforce impacts in each focus area include:

Buildings and Energy: As the largest job generator, this focus area could produce 11,514 to 30,925 jobs, emphasizing roles like electricians and HVAC specialists—positions that are critical to advancing energy efficiency and renewable energy goals.

City Operations: Investments in transportation and infrastructure could create 330 to 938 jobs, focusing on mechanics, drivers, and assemblers, with significant potential for training and upskilling local workers.

Community Activation: Workforce training is at the core of this focus area, with \$20.5 million to \$71.3 million in investments supporting 368 to 1,531 jobs and equipping 4,000 individuals with green economy skills by 2028.

Food: Investments of \$39 million to \$125 million could create 499 to 1,659 jobs, emphasizing agricultural roles like farmers, alongside initiatives to reduce food deserts and waste.

Mobility: Enhancing public transit and infrastructure with \$209 million to \$386 million could generate 1,308 to 2,544 jobs, including positions in vehicle maintenance and assembly, construction, and logistics.

Natural Environment: Expanding Cincinnati’s green spaces and improving air quality with \$82 million to \$163 million could produce 1,018 to 2,082 jobs, highlighting the demand for landscapers, tree trimmers, and conservation workers.

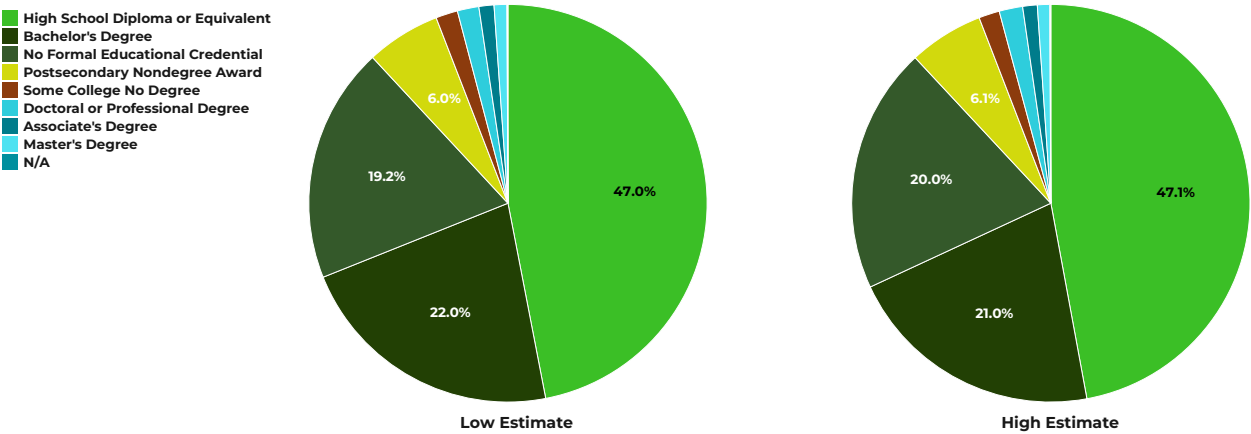
Resilience and Climate Adaptation: Investments of \$77.5 million to \$335 million could yield 590 to 2,948 jobs, predominantly in green construction and infrastructure roles that mitigate climate impacts.

Zero Waste: Despite its relatively modest investment range of \$28 million to \$72 million, this focus area could generate 182 to 612 jobs, supporting waste diversion, recycling, and circular economy initiatives.

Typical Entry Level Education

For the jobs created through green investments, 7,896 of the 16,372 (48.2%) low estimate jobs created do not typically require a bachelor’s degree upon entry. For the high estimate, 22,647 of the 44,145 (51.3%) jobs created do not require a bachelor’s degree. See [Appendix IV](#) for a list of occupations with over 50 quality, projected jobs that do not require a bachelor’s degree or work experience. Additionally, 10,826 of the low estimate jobs (or 66.1%) do not typically require any education above a high school diploma. For high estimates, 29,619 (or 67.1%) of jobs created will only require a high school diploma as the highest level of education required.

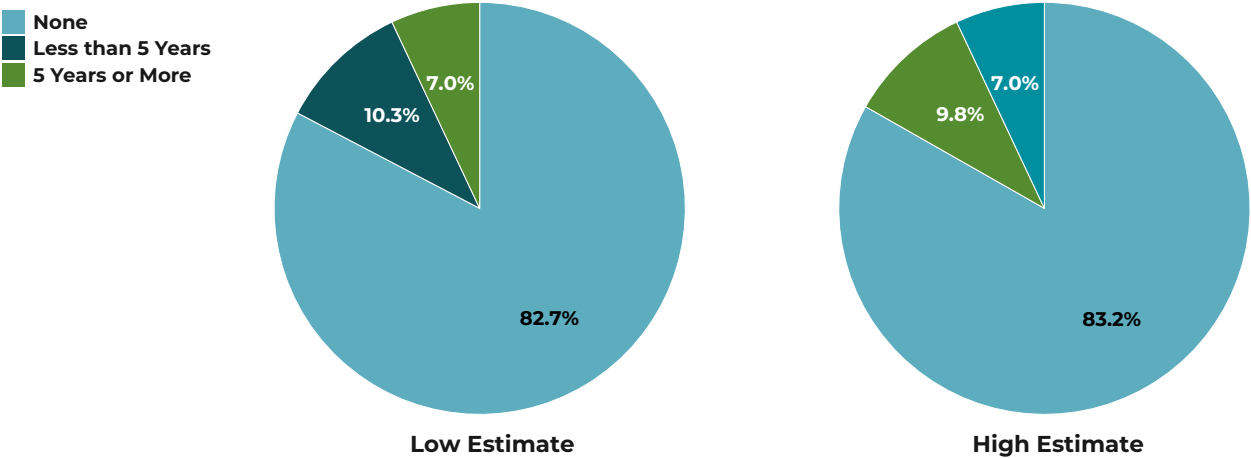
Figure 61. Educational Requirements for Projected Jobs



Work Experience

Among the jobs that will be created with these investments, a large majority will require no work experience. In the low estimates, 13,534 jobs have no previous work experience required, or 82.7% of jobs created. In the high estimates, 36,738 jobs created, or 83.2%, will have no work experience requirements. When examining these experience requirements and removing post-secondary degree requirements, over half require no degree higher than a high school diploma, at 9,231 (or 56%) in the low estimates, and 25,471 (or 58%) of the high estimates require no work experience and a high school diploma as the highest level of educational attainment. The roles with minimal work experience requirements mean that individuals can easily enter these roles and learn the skills needed to succeed on the job. This should be helpful for workforce organizations and education institutions working to help people obtain jobs and careers.

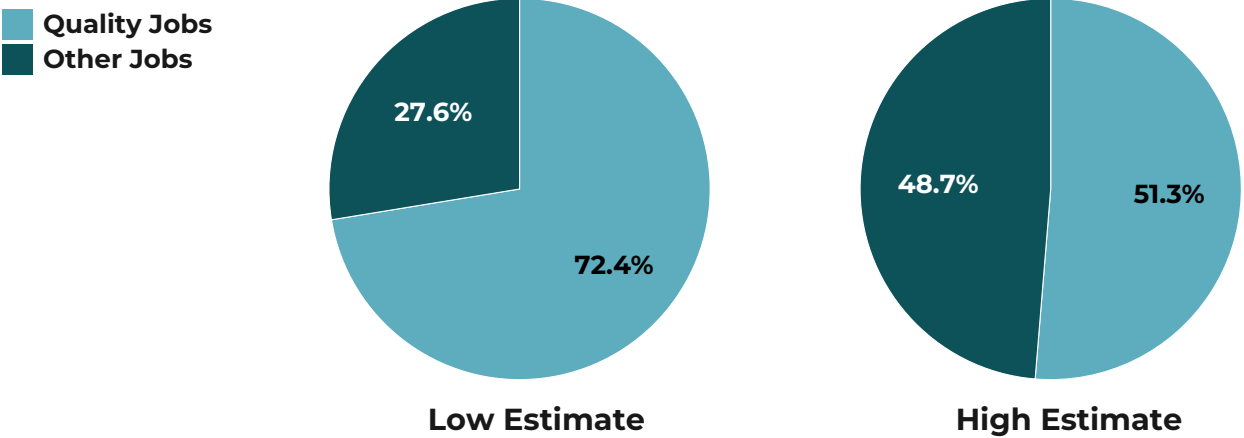
Figure 62. Projected Jobs by Work Experience Requirements



Quality Jobs

When examining the jobs created in our projections, 72% in the low estimates and 51% in the high estimates are quality jobs as defined in this report, or 11,856 and 22,647 jobs, respectively. See **Appendix III** for a list of occupations with over 100 quality, projected jobs.

Figure 63. Projected Quality Jobs



When the City of Cincinnati adopted the 2023 Green Cincinnati Plan, it did so to create a plan to achieve ambitious emissions and consumption reduction targets. The Center for Research and Data analyzed the job creation impacts of those plans. The projected job creation not only addresses the city’s environmental and infrastructure goals but also builds a skilled green workforce that can significantly impact the region’s economic growth.

Key to this transition will be targeted workforce training initiatives, particularly in areas like energy efficiency, green construction, and advanced transportation. Programs that provide certifications and technical education and employers that offer apprenticeships, on the job training, and upskilling will be instrumental in equipping Cincinnati’s workforce to seize these opportunities.

By focusing on workforce equity, the city can ensure that historically underrepresented communities benefit from these investments, fostering inclusive economic growth, and creating new talent pools for employers. It will be essential to prioritize partnerships with local organizations and businesses to further strengthen job pipelines and create lasting economic resilience.

Through these efforts, Cincinnati has the potential to establish itself as a leader in green workforce innovation, serving as a model for cities across the country. The path forward combines sustainability with workforce empowerment, paving the way for a greener, more prosperous future for all its residents. Specific recommendations will be discussed further in the Recommendations section of this report.

ECONOMIC IMPACT OF A GREEN TRANSITION IN THE CINCINNATI REGION

Economic Impact of a Green Transition in the Cincinnati Region

In addition to analyzing investments and job projections, the Center analyzed the total economic impact of green investments and job growth on the Cincinnati region. This was done using an input-out model, similar to the jobs analysis. Projected spending in the Cincinnati economy was assigned to industries based on the North American Industry Classification System (NAICS) and Regional Input-Output Modeling Systems (RIMS II) multipliers published by the Bureau of Economic Analysis (BEA) were used. The RIMS II multipliers are designed to objectively estimate the total impact of spending in a region, considering the initial change in economic activity as well as subsequent rounds of spending. Earnings and taxes generated were also calculated using the Lightcast economic impact model. The Lightcast model utilized BEA, Bureau of Labor Statistics (BLS), and Census data to create an estimate of these variables.

Aside from the practical, adaptational implications of investing in a green transition for Cincinnati, the economic and workforce implications are significant. The estimated economic impact of growing and upskilling the region’s workforce is evidence that the investments made in the transition will have a significant impact on the economy. On the low-end estimates, these investments will contribute **\$4.8 billion** in total impact, **\$1.4 billion** in earnings, and a combined **\$235 million** in local, state, and federal taxes. The high estimates expect a total impact of **\$11 billion**, with estimated earnings of **\$3.4 billion**. These estimated investments would additionally generate **\$421 million** in combined local, state, and federal taxes.

TOTAL ECONOMIC IMPACT

Figure 64. Total Economic Impact Breakdown: Low Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$2,605,000,000	\$824,438,563
INDIRECT	\$2,183,639,115	\$533,549,959
TOTAL	\$4,788,639,115	\$1,357,988,522
		TAXES GENERATED
LOCAL TAXES		\$102,677,178
STATE TAXES		\$94,127,951
FEDERAL TAXES		\$38,008,637
TOTAL TAXES		\$234,813,766

Figure 65. Total Economic Impact Breakdown: High Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$5,676,300,000	\$2,305,865,384
INDIRECT	\$5,323,088,644	\$1,133,291,433
TOTAL	\$10,999,388,644	\$3,439,156,817
		TAXES GENERATED
LOCAL TAXES		\$183,019,112
STATE TAXES		\$168,584,507
FEDERAL TAXES		\$69,428,188
TOTAL TAXES		\$421,031,807

Buildings and Energy

Figure 66. Buildings and Energy Economic Impact: Low Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$2,095,000,000	\$611,337,598
INDIRECT	\$1,645,108,100	\$417,363,483
TOTAL	\$3,740,108,100	\$1,028,701,081
		TAXES GENERATED
LOCAL TAXES		\$91,171,332
STATE TAXES		\$83,844,554
FEDERAL TAXES		\$33,684,009
TOTAL TAXES		\$208,699,895



Figure 67. Buildings and Energy Economic Impact: High Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$4,360,000,000	\$1,520,816,558
INDIRECT	\$3,924,596,800	\$873,007,469
TOTAL	\$8,284,596,800	\$2,393,824,027
		TAXES GENERATED
LOCAL TAXES		\$155,413,997
STATE TAXES		\$143,033,664
FEDERAL TAXES		\$58,659,065
TOTAL TAXES		\$357,106,726

City Operations

Figure 68. City Operations Economic Impact: Low Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$54,000,000	\$20,082,589
INDIRECT	\$53,290,772	\$10,473,638
TOTAL	\$107,290,772	\$30,556,227
		TAXES GENERATED
LOCAL TAXES		\$1,786,031
STATE TAXES		\$1,354,716
FEDERAL TAXES		\$559,274
TOTAL TAXES		\$3,700,021

Figure 69. City Operations Economic Impact: High Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$144,000,000	\$42,224,518
INDIRECT	\$138,568,654	\$19,355,407
TOTAL	\$282,568,654	\$61,579,925
		TAXES GENERATED
LOCAL TAXES		\$1,879,895
STATE TAXES		\$1,741,067
FEDERAL TAXES		\$759,571
TOTAL TAXES		\$4,380,533

Community Activation

Figure 70. Community Activation Economic Impact: Low Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$20,500,000	\$13,136,040
INDIRECT	\$21,576,398	\$5,134,236
TOTAL	\$42,076,398	\$18,270,276
		TAXES GENERATED
LOCAL TAXES		\$521,946
STATE TAXES		\$472,706
FEDERAL TAXES		\$161,138
TOTAL TAXES		\$1,155,790

Figure 71. Community Activation Economic Impact: High Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$71,300,000	\$46,003,396
INDIRECT	\$75,591,270	\$17,809,145
TOTAL	\$146,891,270	\$63,812,541
		TAXES GENERATED
LOCAL TAXES		\$1,808,720
STATE TAXES		\$1,647,032
FEDERAL TAXES		\$561,750
TOTAL TAXES		\$4,017,502

Food

Figure 72. Food Economic Impact: Low Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$39,000,000	\$21,380,401
INDIRECT	\$38,938,970	\$9,219,782
TOTAL	\$77,938,970	\$30,600,183
		TAXES GENERATED
LOCAL TAXES		\$1,149,223
STATE TAXES		\$1,048,662
FEDERAL TAXES		\$391,323
TOTAL TAXES		\$2,589,208

Figure 73. Food Economic Impact: High Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$125,000,000	\$66,214,669
INDIRECT	\$124,701,320	\$29,793,013
TOTAL	\$249,701,320	\$96,007,682
		TAXES GENERATED
LOCAL TAXES		\$3,956,864
STATE TAXES		\$3,627,436
FEDERAL TAXES		\$1,337,258
TOTAL TAXES		\$8,921,558

Mobility

Figure 74. Mobility Economic Impact: Low Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$209,000,000	\$67,386,040
INDIRECT	\$235,037,900	\$35,153,486
TOTAL	\$444,037,900	\$102,539,526
		TAXES GENERATED
LOCAL TAXES		\$3,420,320
STATE TAXES		\$3,150,112
FEDERAL TAXES		\$1,479,367
TOTAL TAXES		\$8,049,799

Figure 75. Mobility Economic Impact: High Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$386,000,000	\$348,867,045
INDIRECT	\$438,943,100	\$64,408,810
TOTAL	\$824,943,100	\$413,275,855
		TAXES GENERATED
LOCAL TAXES		\$6,164,711
STATE TAXES		\$5,762,858
FEDERAL TAXES		\$2,749,880
TOTAL TAXES		\$14,677,449

Natural Environment

Figure 76. Natural Environment Economic Impact: Low Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$82,000,000	\$41,263,658
INDIRECT	\$75,424,700	\$11,895,325
TOTAL	\$157,424,700	\$53,158,983
		TAXES GENERATED
LOCAL TAXES		\$2,284,192
STATE TAXES		\$2,088,366
FEDERAL TAXES		\$796,631
TOTAL TAXES		\$5,169,189

Figure 77. Natural Environment Economic Impact: High Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$163,000,000	\$80,164,229
INDIRECT	\$149,048,800	\$37,214,559
TOTAL	\$312,048,800	\$117,378,788
		TAXES GENERATED
LOCAL TAXES		\$4,523,586
STATE TAXES		\$4,229,807
FEDERAL TAXES		\$1,669,759
TOTAL TAXES		\$10,423,152

Resilience & Climate Adaptation

Figure 78. Resilience and Climate Adaptation Economic Impact: Low Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$77,500,000	\$37,360,637
INDIRECT	\$87,231,675	\$16,414,600
TOTAL	\$164,731,675	\$53,775,237
		TAXES GENERATED
LOCAL TAXES		\$1,609,779
STATE TAXES		\$1,489,714
FEDERAL TAXES		\$644,866
TOTAL TAXES		\$3,744,359

Figure 79. Resilience and Climate Adaptation Economic Impact: High Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$355,000,000	\$169,394,455
INDIRECT	\$401,874,500	\$74,999,728
TOTAL	\$756,874,500	\$244,394,183
		TAXES GENERATED
LOCAL TAXES		\$7,353,948
STATE TAXES		\$6,770,210
FEDERAL TAXES		\$2,931,902
TOTAL TAXES		\$17,056,060

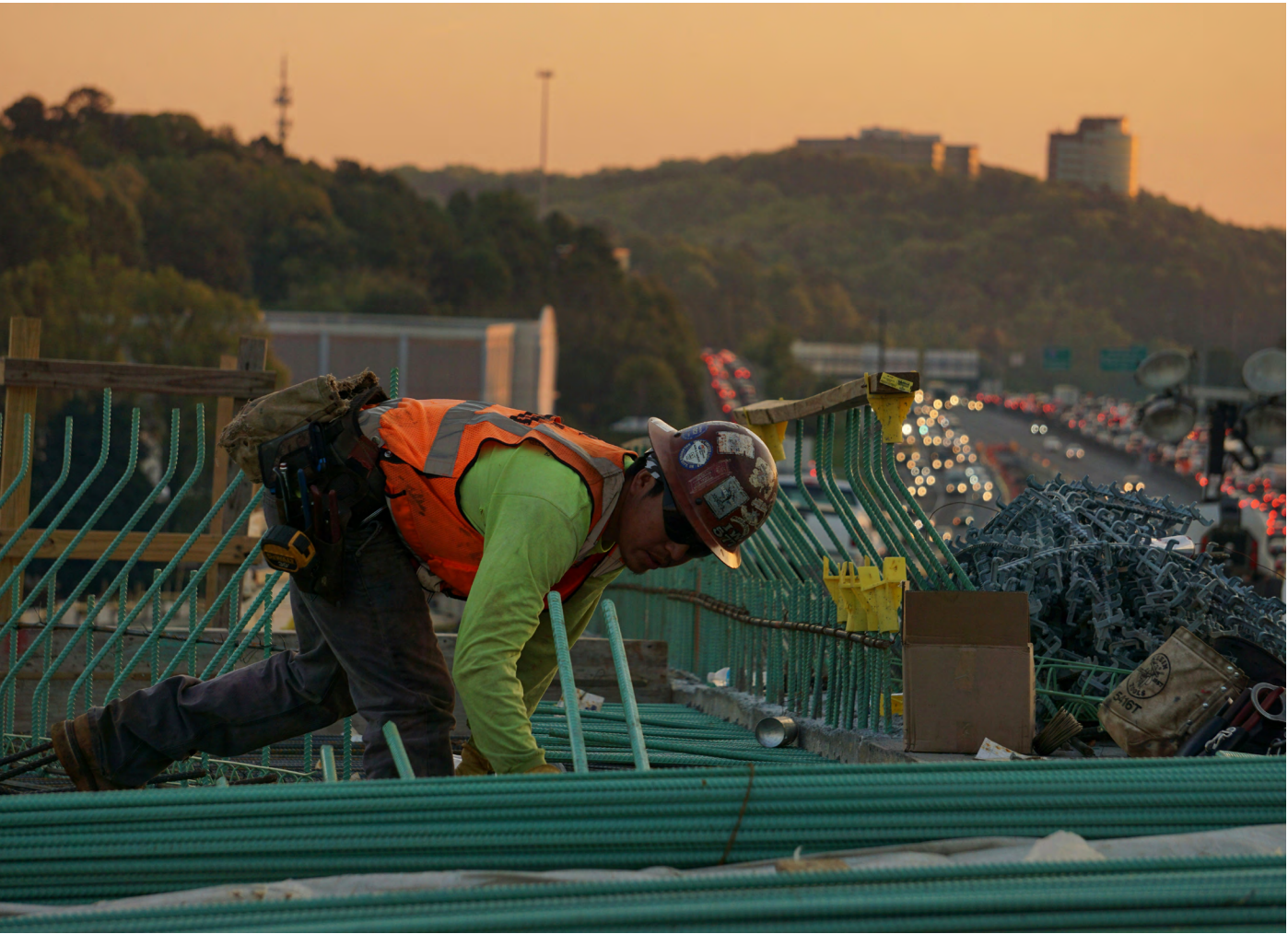
Zero Waste

Figure 80. Zero Waste Economic Impact: Low Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$28,000,000	\$12,491,600
INDIRECT	\$27,030,600	\$6,515,008
TOTAL	\$55,030,600	\$19,006,608
		TAXES GENERATED
LOCAL TAXES		\$734,355
STATE TAXES		\$679,121
FEDERAL TAXES		\$292,029
TOTAL TAXES		\$1,705,505

Figure 81. Zero Waste Economic Impact: High Estimate

	TOTAL IMPACT	EARNINGS
DIRECT	\$141,764,200	\$32,180,514
INDIRECT	\$69,764,200	\$16,703,302
TOTAL	\$141,764,200	\$48,883,816
		TAXES GENERATED
LOCAL TAXES		\$1,917,391
STATE TAXES		\$1,772,433
FEDERAL TAXES		\$759,003
TOTAL TAXES		\$4,448,827



RECOMMENDATIONS

Recommendations

This analysis presents several recommendations based on the data and findings in this report that the community should consider as we work to build the green transition for the Cincinnati region.

1. Promote Equitable and Inclusive Workforce Growth

To foster a successful green transition, the Cincinnati region should prioritize inclusive hiring practices, ensuring equitable growth opportunities. A recent survey of 113 construction workers conducted by Co-op Cincy revealed mixed perceptions regarding recruitment practices aimed at underrepresented communities. Responses indicated that while many companies express commitment to diversity, non-white respondents felt more neutral about the actual inclusivity in hiring processes compared to their white counterparts. Additionally, the survey highlighted the importance of competitive pay, as respondents expressed ambivalence regarding wage stability. Businesses can enhance recruitment and retention strategies by directing resources, training opportunities, and targeted support to minority and women-owned business enterprises (MWBs), which historically excel at attracting diverse talent. Cultivating inclusive workplace cultures and actively addressing discrimination are vital for talent retention and promoting a sense of belonging among diverse employees.

“Oftentimes, during the course of my apprenticeship, I’ve witnessed homophobic/racial/misogynistic bigotry at various jobsites. These incidents have made me uncomfortable throughout my career and have made me question if I want to continue to be an electrician.”

- Union Electrician who identifies as a gay, Black male

2. Address Educational Barriers, Retraining Needs, and Leverage Industry Strengths

Cincinnati’s shift toward a green economy requires a proactive approach to addressing educational barriers and workforce retraining needs. Local businesses, especially those in sectors like automotive manufacturing, must transition workers from traditional fossil-fuel-dependent roles to emerging sustainable technologies. Collaborative training programs between employers and educational institutions are essential for facilitating this transition. Incorporating green skills and sustainability modules into existing courses at universities and technical colleges will also ensure ongoing preparedness. The region’s established strengths, particularly in HVAC, plumbing, and electrical trades, should be leveraged to create targeted workforce development initiatives, effectively utilizing the existing skilled workforce. Addressing workforce barriers, such as transportation limitations, math skills deficits, and lower rates of driver’s license attainment, will further support successful workforce participation.

3. Foster Workforce Growth Through Migration

Given Cincinnati’s aging population and tight labor market, it is imperative to actively promote workforce growth through international migration. The region benefits significantly from international migration as migrants are often prime-age workers who participate actively in the labor force. Investment in organizations and programs that facilitate immigrant integration will help ensure Cincinnati remains an attractive and welcoming destination, effectively filling critical workforce gaps and supporting the broader economic and social development of the region.

4. Improve Workforce Data Collection and Coordination

Effective workforce development in the green economy depends heavily on reliable and coordinated data. Stakeholders across the region should collaborate to establish robust data-sharing frameworks. Improved data collection and sharing will facilitate a clear understanding of program effectiveness and workforce needs. Enhanced collaboration across educational and workforce development systems—from early education through apprenticeships—will ensure smooth transitions for workers and maximize workforce retention and training outcomes, significantly benefiting both employers and employees.

5. Enhance Awareness and Accessibility of Green Career Pathways

Lack of awareness about green career opportunities remains a significant barrier to workforce development. To address this, Cincinnati should implement collaborative awareness campaigns involving schools, community organizations, and local employers. Increasing exposure to green careers through scholarships, incentives, training, and supportive services (e.g., stipends for trainees) will attract and retain a diverse and skilled workforce. Proactive efforts are essential to highlight pathways that lead to sustainable employment opportunities and economic mobility.

6. Support and Innovate Apprenticeship Models

Apprenticeships represent an essential pathway to sustainable careers in the green economy. Cincinnati should encourage businesses and training providers to adopt flexible and innovative apprenticeship models tailored to evolving workforce needs. Offering adaptable scheduling and establishing dedicated financial support to mitigate economic barriers can enhance apprentice recruitment and retention. Supporting economically disadvantaged apprentices, particularly those from underrepresented communities, is crucial for expanding workforce diversity and economic inclusion.

7. Encourage Business-Friendly Municipal Procurement and Labor Standards

Local governments can support the regional workforce by adopting procurement policies that incentivize contracts with local businesses investing in community employment and workforce development. By encouraging—rather than mandating—local hiring practices and workforce training initiatives through project labor standards, municipalities can stimulate local economic growth and employment without imposing undue burdens on businesses. This approach fosters collaboration and mutual benefit between local governments and the business community.

8. Foster Employer Coalitions and Encourage Innovative Ownership Structures

Employer coalitions are valuable platforms for addressing shared workforce challenges, especially in emerging green industries. Cincinnati businesses should be encouraged to form coalitions for collective problem-solving, resource sharing, and collaborative training initiatives. Additionally, exploring and supporting diverse and innovative business ownership models—including worker-owned cooperatives, employee stock ownership plans (ESOPs), and other inclusive structures—can promote equitable wealth distribution, community investment, and sustainable business practices. These models enhance economic stability and resilience while aligning workforce interests with business success.

9. Identify and Address Employer Gaps in the Green Economy

To maximize the economic benefits of the green transition, Cincinnati must strategically identify and address gaps in its local employer landscape. This involves assessing current strengths and weaknesses within green industries and attracting businesses that offer entry-level roles with clear advancement opportunities. Encouraging businesses to provide accessible, quality employment positions can promote economic mobility and ensure broad community benefits. Strategic efforts to fill industry gaps will position Cincinnati competitively within the evolving green economy.

10. Identify and Leverage Funding Opportunities

As described throughout this report, a green transition will be costly in the short run to realize bigger economic gains in the long run. An estimated \$2.6 billion to \$5.7 billion in investment from public and private sources will be required to meet these goals. Finding ways to bring this immense sum of resources to the region will be essential, and the Cincinnati region must identify funding at local, state, and federal levels to meet these goals.

Funding opportunities may be available through:

- Infrastructure Investment and Jobs Act (IIJA)
- Inflation Reduction Act (IRA)
- Workforce Innovation and Opportunity Act (WIOA)
- Department of Energy Grants
- Environmental Protection Agency Grants
- Department of Labor
- Ohio’s Department of Development Advanced Energy Fund
- Ohio Environmental Education Fund
- Ohio Grants Partnership
- Private sector investors and corporate partnerships
- Cincinnati’s diverse and robust non-profit sector
- Local, regional, and national philanthropies and foundations

The Path Forward

As Cincinnati moves forward toward a green transition, collaboration between government agencies, businesses, educational institutions, and community organizations will be crucial to achieve meaningful results. Workforce development must remain a central component of the city's green transition to ensure that economic growth is inclusive and sustainable. Policies should focus on expanding workforce training programs, incentivizing diversity in green industries, and ensuring that all Cincinnati residents have access to quality green jobs, like the goals set out in the recommendation section of this report. By prioritizing equity, education, and investment, the city can become a model for sustainable workforce development and a national leader in the green economy.

A green transition in the Cincinnati region is not only a unique opportunity for economic growth and social inclusion, but also as an economic imperative. If the region does not collectively strive to meet these goals, it risks falling behind. The transformation ahead is ambitious, but it presents a generational opportunity to align Cincinnati's workforce with the economic and environmental demands of the future. Through strategic planning, collaboration, and sustained investment, Cincinnati can build a resilient, equitable, and prosperous green economy that benefits all residents, employers, and visitors.

APPENDICES

Appendix I. Identified Green Occupations

Advertising and Promotions Managers
Agricultural Inspectors
Architects, Except Landscape and Naval
Architectural and Civil Drafters
Architectural and Engineering Managers
Automotive Service Technicians and Mechanics
Bus and Truck Mechanics and Diesel Engine Specialists
Bus Drivers, Transit and Intercity
Carpenters
Chemical Engineers
Chemical Technicians
Chemists
Civil Engineering Technologists and Technicians
Civil Engineers
Commercial and Industrial Designers
Compliance Officers
Computer and Information Systems Managers
Computer Systems Analysts
Computer User Support Specialists
Conservation Scientists
Construction and Building Inspectors
Construction Laborers
Construction Managers
Drywall and Ceiling Tile Installers
Electric Motor, Power Tool, and Related Repairers
Electrical and Electronic Engineering Technologists and Technicians

Electrical and Electronics Drafters
Electrical and Electronics Repairers, Commercial and Industrial Equipment
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay
Electrical Engineers
Electrical Power-Line Installers and Repairers
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers
Electricians
Electronics Engineers, Except Computer
Emergency Management Directors
Engine and Other Machine Assemblers
Engineering Technologists and Technicians, Except Drafters, All Other
Engineers, All Other
Environmental Engineering Technologists and Technicians
Environmental Engineers
Environmental Science and Protection Technicians, Including Health
Environmental Scientists and Specialists, Including Health
Farmers, Ranchers, and Other Agricultural Managers
Farmworkers and Laborers, Crop, Nursery, and Greenhouse
Farmworkers, Farm, Ranch, and Aquacultural Animals
First-Line Supervisors of Construction Trades and Extraction Workers
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers
First-Line Supervisors of Mechanics, Installers, and Repairers
Food Scientists and Technologists
Forest and Conservation Technicians
Forest and Conservation Workers
Geoscientists, Except Hydrologists and Geographers
Hazardous Materials Removal Workers
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors

Heating, Air Conditioning, and Refrigeration Mechanics and Installers

Heavy and Tractor-Trailer Truck Drivers

Helpers--Carpenters

Helpers--Construction Trades, All Other

Helpers--Electricians

Helpers--Installation, Maintenance, and Repair Workers

Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters

Hydrologists

Industrial Engineering Technologists and Technicians

Industrial Engineers

Industrial Machinery Mechanics

Industrial Production Managers

Industrial Truck and Tractor Operators

Inspectors, Testers, Sorters, Samplers, and Weighers

Insulation Workers, Floor, Ceiling, and Wall

Installation, Maintenance, and Repair Workers, All Other

Laborers and Freight, Stock, and Material Movers, Hand

Landscape Architects

Landscaping and Groundskeeping Workers

Life, Physical, and Social Science Technicians, All Other

Light Truck Drivers

Locomotive Engineers

Maintenance and Repair Workers, General

Maintenance Workers, Machinery

Materials Engineers

Mechanical Drafters

Mechanical Engineering Technologists and Technicians

Mechanical Engineers

Miscellaneous Assemblers and Fabricators

Miscellaneous Construction and Related Workers

Natural Sciences Managers

Nuclear Engineers

Nuclear Power Reactor Operators

Nuclear Technicians

Operating Engineers and Other Construction Equipment Operators

Plant and System Operators, All Other

Plumbers, Pipefitters, and Steamfitters

Power Distributors and Dispatchers

Power Plant Operators

Production Workers, All Other

Rail Car Repairers

Railroad Conductors and Yardmasters

Refuse and Recyclable Material Collectors

Roofers

Sheet Metal Workers

Soil and Plant Scientists

Solar Photovoltaic Installers

Software Developers

Software Quality Assurance Analysts and Testers

Structural Iron and Steel Workers

Structural Metal Fabricators and Fitters

Tank Car, Truck, and Ship Loaders

Training and Development Specialists

Tree Trimmers and Pruners

Urban and Regional Planners

Water and Wastewater Treatment Plant and System Operators

Welders, Cutters, Solderers, and Brazers

Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders

Wind Turbine Service Technicians

Zoologists and Wildlife Biologists

Appendix II. Projected Jobs (50+ Jobs Added)

[See CSV.](#)

Appendix III. Quality Projected Jobs (100+ Jobs Added)

[See CSV.](#)

Appendix IV. Quality Projected Jobs (100+ Jobs Added) by Least Diverse Racial Workforce Diversity

[See CSV.](#)

Appendix V. Quality Projected Jobs (100+ Jobs Added) by Least Diverse Gender Workforce Diversity

[See CSV.](#)

Appendix VI. Green Occupations

[See CSV.](#)

Appendix VII. Capital Investments to Drive Cincinnati’s Green Economy

Figure 82. Buildings and Energy Focus Area Calculations

Goal	Low Estimate	High Estimate
Electrification of Buildings	\$275,000,000	\$950,000,000
Energy Poverty Reduction	\$20,000,000	\$60,000,000
Clean Energy	\$1,300,000,000	\$1,850,000,000
Energy Efficiency for Remaining Buildings	\$500,000,000	\$1,500,000,000
TOTAL	\$2,095,000,000	\$4,360,000,000

Figure 83. City Operations Focus Area Calculations

Goal	Low Estimate	High Estimate
Electric City Fleet Vehicles	\$12,000,000	\$32,000,000
Charging Infrastructure	\$2,000,000	\$5,000,000
Access to Sustainable Transportation Options	\$16,000,000	\$32,000,000
Renewable Energy	\$12,000,000	\$40,000,000
Energy Efficiency Improvements	\$12,000,000	\$35,000,000
TOTAL	\$54,000,000	\$144,000,000

Figure 84. Community Activation Focus Area Calculations

Goal	Low Estimate	High Estimate
Accessible Outdoor Learning Spaces	\$5,500,000	\$16,300,000
Training for Green Economy Jobs	\$15,000,000	\$55,000,000
TOTAL	\$20,500,000	\$71,300,000

Figure 85. Food Focus Area Calculations

Goal	Low Estimate	High Estimate
Increase Local Food Systems	\$8,500,000	\$27,000,000
Eliminating Food Deserts	\$8,000,000	\$28,000,000
Milan Urban Food Policy Pact	\$5,000,000	\$15,000,000
Decreasing Food Waste	\$7,500,000	\$35,000,000
Increase Food and Agriculture Jobs	\$10,000,000	\$20,000,000
TOTAL	\$39,000,000	\$125,000,000

Figure 86. Mobility Focus Area Calculations

Goal	Low Estimate	High Estimate
Increase Public Transit Miles Traveled	\$46,000,000	\$100,000,000
Increase Zero Emissions Vehicles	\$118,000,000	\$231,000,000
Bike and Pedestrian Infrastructure	\$45,000,000	\$55,000,000
TOTAL	\$209,000,000	\$386,000,000

Figure 87. Natural Environment Focus Area Calculations

Goal	Low Estimate	High Estimate
Tree Canopy Expansion	\$41,000,000	\$55,000,000
Improve Air Quality	\$11,000,000	\$23,000,000
Greenspace Access	\$30,000,000	\$85,000,000
TOTAL	\$82,000,000	\$163,000,000

Figure 88. Resilience & Climate Adaptation Focus Area Calculations

Goal	Low Estimate	High Estimate
Green Infrastructure Projects	\$12,500,000	\$50,000,000
Climate Adaptation Projects	\$27,500,000	\$130,000,000
Revitalization of Brownfields	\$37,500,000	\$175,000,000
TOTAL	\$77,500,000	\$355,000,000

Figure 89. Zero Waste Focus Area Calculations

Goal	Low Estimate	High Estimate
Increase Waste Diversion	\$7,500,000	\$15,000,000
Divert Organics from Landfill	\$10,500,000	\$30,000,000
Decrease Litter and Illegal Dumping	\$10,000,000	\$27,000,000
TOTAL	\$28,000,000	\$72,000,000

Appendix VIII – Workforce System Organizations

Below is a comprehensive list of workforce system organizations and their role in Cincinnati’s Green Workforce system. Majority of the organizations listed below are in the City of Cincinnati/Hamilton County, but this report recognizes that the Greater Cincinnati tristate region (Ohio, Kentucky and Indiana) and surrounding municipalities may have their own workforce ecosystems.

Considerations were made with a focus on accessibility of training, so this list primarily focuses on education and training providers that require two years or less: short-term certificates, credentials, on the job training, and apprenticeships.

Government and the Public Sector

American Job Centers provide free help to job seekers for a variety of career and employment-related needs.

[Ohio Means Jobs Center Cincinnati-Hamilton County](#) – The city and county one-stop job center that works every day to connect job seekers and employers.

American Job Centers in the Greater Cincinnati Region include Cincinnati Hamilton County, Butler County, Warren County, Clermont County, Covington, Florence, and Lawrenceburg. Click here to locate other [American Job Centers](#).

Workforce Development Boards

[Workforce Council of Southwest Ohio](#) – Provides oversight and implements the local area’s Workforce Innovation and Opportunity Act (WIOA) in Cincinnati-Hamilton County, Area 13, and collaborates with regional workforce partners to help strengthen the Tristate’s workforce ecosystem. Job training programs approved through the State of Ohio can become an [Eligible Training Provider](#) (ETP).

Public Libraries

Cincinnati & Hamilton County Public Library has 41 locations to connect people with the world of ideas and information. They have [resources for job seekers](#) which include online learning resources JobNow (expert job coaches), LinkedIn Learning and Universal Class.

Public Social Service Agencies

Hamilton County Job and Family Services has a [youth employment program](#) for Hamilton County residents ages 14-21 which provides jobs and year-round job readiness training.

Economic Development Agencies

[REDI Cincinnati](#) is the first point-of-contact for companies locating or growing in the 15-county region.

Local, State, And Federal Governments

The City of Cincinnati Office of Environment & Sustainability developed the climate action plan, the 2023 Green Cincinnati Plan, launched a [green jobs website](#), and provided a grant match to fund this report.

OKI Regional Council of Governments received an [EPA Climate Pollution Reduction Grant \(CPRG\)](#) in 2023.

The State of Ohio has a [Tech Cred](#) program that reimburses employers up to \$2,000 per credential when a current or prospective employee completes a technology-focused credential. Most credentials take less than a year to complete and many can be completed online. Construction technology, business technology, and information technology are some of their categories with course offerings such as Building Operator, Certified Energy Manager, EPA Section 608 technician, Electric Vehicle Infrastructure Training Program (EVITP) and more. View their list of over 2000 credentials [here](#).

The Ohio Governor’s Office of Workforce Transformation has an [Individual Microcredential Assistance Program \(IMAP\)](#) helps Ohioans participate in a training program to receive a credential at no cost. IMAP training providers will cover all tuition, fees, and additional costs to help you learn new skills and earn a credential that can lead to a good job. Credentials include Agile and Scrum, EPA Section 608 Technician, NCCER Core Curriculum, NCCER Electrical – Level 1, Information Technology, and many more.

The US Department of Energy’s Office of Energy Efficiency & Renewable Energy (EERE) has a [Building Science Education \(BSE\)](#) Solution Center with [open-source training modules](#) and [resources needed to train building professionals](#) on a variety of building science topics including high performance heat pumps, efficient windows, and more.

[ApprenticeOhio](#) is a program through the Ohio Department of Jobs and Family Services that connects companies to people wanting to learn a trade or skill. They assist employers to become a registered apprenticeship sponsor. Apprenticeships can be for any occupation, not just the trades. View the current registered apprenticeships and pre-apprenticeships [here](#).

Nonprofit and Collaborative Entities

[Co-op Cincy](#) nurtures a resilient, interconnected network of worker-owned businesses in Greater Cincinnati. They launched a Good Green Jobs Steering Committee working towards diversifying green jobs in our region, and to create pipelines to family-sustaining careers with worker voice and ownership.

[Green Umbrella](#) is Greater Cincinnati’s Regional Climate Collaborative which consists of A network of people, organizations, and governments committed to taking decisive action in the face of climate change. Their Green School Yards Action Network has a green workforce committee with Cincinnati Public Schools, workforce service partners, and community organizations focused on in-school urban agriculture pathways.

[The Greater Cincinnati Environmental Educators](#) is an umbrella organization composed of environmental education organizations and parks in the tri-state area. They host an annual job fair for employers in the environmental, biological, forestry, educational, recreational and governmental fields.

[The Talent Collaborative of Greater Cincinnati](#) is a regional collaborative of workforce partners that is part of the National Fund for Workforce Solutions network.

Community and Faith-Based Organizations

[People Working Cooperatively](#) – Serves as Hamilton County’s Home Weatherization Assistance Program (HWAP) provider that makes critical home repairs, energy conservation, and accessibility modification services to help residents remain independent and healthy in their homes.

[Habitat for Humanity Greater Cincinnati](#) - Habitat for Humanity of Greater Cincinnati is the largest nonprofit homebuilder in the region. Together with homebuyer families, donors, and volunteers we have built over 680 high-quality modest homes and completed over 140 critical home repairs for low-income homeowners in our community. We operate five Habitat for Humanity ReStores, home improvement retail stores that fund about a third of their work and keeps usable materials from landfills.

Cincinnati ToolBANK has a [training center](#) as a resource for the region to develop and implement programs that build a pipeline of skilled, diverse candidates for apprenticeships and careers in the construction industry.

[CityLink Center](#) collaborates with various industry training and education partners (CEO, Changing Gears, Habitat for Humanity) to provide a holistic system of support. Clients who are engaging in a core service, have access to an incredible line-up of additional supporting services.

[Faith Communities Go Green](#) has an energy efficiency initiative for faith based organizations.

[Sonlight Power](#) designs and builds solar energy solutions for community venues – schools, medical clinics, orphanages, community centers, churches, water-pumping stations – in remote locations around the world, bringing clean electricity for the first time to thousands who do not have it. They have a [1-day hands on solar school workshop](#).

Foundations and Philanthropic Organizations

[Greater Cincinnati Foundation](#) is the region's leading community foundation, their role is to act as a partner, funder, and connector – creating trusted relationships with generous people, nonprofits and community stakeholders to improve quality of life across the region.

[United Way of Greater Cincinnati](#) provides both immediate relief and long-term solutions to the most pressing issues our community faces.

Workforce Service Providers

[Building Value](#) – A social enterprise committed to reducing waste, repurposing materials, and creating sustainable careers in construction. Their training program accelerates construction careers with up to 6 months of paid training in two phases.

[Cincinnati Construction Academy](#) - Paid pre-apprenticeship carpentry training program designed to prepare serious candidates for high-paying jobs as apprentice commercial and residential carpenters.

[Center for Employment Opportunities \(CEO\)](#) provides immediate, effective, and comprehensive employment services exclusively to people recently released from incarceration.

[Easterseals Redwood](#) - Easterseals Redwood offers multiple training pathways for a rewarding career in the construction industry. Their programs provide a strong foundation for a successful future with on-the-job experience, certifications, soft skills development, and professional connections.

[Habitat for Humanity Greater Cincinnati](#) has a 4-week [Construction Training Program](#) located at CityLink is a workforce development initiative designed to train and prepare individuals for careers in the construction industry.

[Groundwork Ohio River Valley](#) - Environmental nonprofit dedicated to the restoration of the urban ecosystem through training the next generation's stewards. Their Green Team cultivates high school students for employment readiness within the green industry through active participation in improving and maintaining trails, parks, and community spaces within the city. Their Green Corps is a professionalized urban conservation corps for young adults across Cincinnati.

Cincinnati Youth Collaborative's [Jobs for Cincinnati Graduates](#), is a credited in-school elective class preparing students for life after high school.

Community Action Agency Cincinnati | Hamilton County offers [career pathway trainings](#) in construction and commercial driver's license (CDL).

[Cincinnati Job Corps](#) provides free career training for 16–24-year-olds in Carpentry (Pre-Apprentice), Construction Facilities Maintenance, Welding, and Automotive and Machine Maintenance and Light Repair.

Interfaith Workers Center has a [Safety Now for All](#) training which offers health and safety workplace training and is the only local organization within 300 miles with a Spanish speaking OSHA 10 trainer.

[Keep Cincinnati Beautiful](#) – Has a workforce development pathway program, Roots to Boots, in partnership with Cincinnati State's Landscape Horticulture Department. Through this program, Cincinnati Public Schools (CPS) recent graduates can earn a college certificate while gaining hands-on experience in the sustainable horticulture field. Participating students receive tuition reimbursements and a monthly stipend.

[Reuse Center](#) keeps building materials out of landfills and has a [Youth Fair Chance Program](#), a three-to-six-month job and life skill training program for youth ages 18-25.

[Urban League of Greater Southwest Ohio](#) - Empowers communities through workforce development, advocacy, and business development programs. Their [Building Futures Program](#) is a 12-week Urban Construction Jobs Program that focuses on apprenticeship readiness and prepares you for career opportunities in the construction and building trades industry.

[Changing Gears](#) is a 4-week training program that equips trainees with a firm foundation of hands-on experience to help begin a career in the automotive repair industry.

[Santa Maria Community Services](#) provides employment coaching for youth ages 16-24 and adults over 25.

[Cincinnati Works](#) provides career coaching, financial coaching, employment connection, and support & counseling. Their [Beacon of Hope Business Alliance](#) is an ecosystem of partners that supports people with criminal records.

Talbert House is a service provider for Hamilton County's Youth Employment program and the lead agency for the [Comprehensive Case Management Employment Program](#) (CCMEP).

[Tikkun Farm](#) is a non-profit farm that has a trauma-informed job readiness program building environmental work and skills for post-high school youth in Mt. Healthy.

The [Cincinnati Zoo Academy](#) is a full college preparatory program with a rigorous course load and hands-on lab experiences with Cincinnati Zoo educators, horticulturalists, animal care and behavioral teams, and world-renowned scientists.

Green Umbrella has a [Climate Action Fellowship](#) that pairs undergraduate and graduate students, and individuals who want to pivot careers into the climate space, with Green Umbrella members to develop practical plans and solutions for a changing climate.

Related organizations that are [Eligible Training Providers](#) through the Workforce Council of Southwest Ohio are 160 Driving Academy, Direct Venture CDL Training, Napier Truck Driving, Southern Ohio Technical Institute, Great Oaks, RWB Construction, Per Scholas.

Workforce Intermediaries

Employers, Industry and the Workforce

Business and Trade Associations

[Cincinnati Regional Chamber](#) serves businesses in the 15-county Cincinnati MSA. Their [Workforce Innovation Center](#) has a [career board](#) for their members and job seekers.

[Greater Cincinnati Apprenticeship Council](#) (GCAC) is the collective of Union Skilled Trades Apprenticeship Programs in Greater Cincinnati, Northern Kentucky and Indiana. This includes Electricians, Heat & Frost Insulators and Allied Workers, Laborers and more.

[IEC of Greater Cincinnati](#) – Independent Electrical Contractors (IEC) offers 4-year electrical training apprenticeship connects people and companies to succeed through education, sharing best practices and promoting safe, professional work methods throughout the electrical industry.

Industry Organizations

[Green Business Council of Cincinnati](#) is the region’s first collaboration of local business leaders devoted to sustainability.

[Allied Construction Industries](#) - With more than 500 members, Allied Construction Industries is a not-for-profit trade association serving the commercial construction industry in the Cincinnati Region. Established in 1929, membership includes both union and open shop employers, who are general contractors, subcontractors,

architects, engineers, developers, material suppliers, and service providers to the commercial construction industry.

[AMIP Cincy](#), Advanced Manufacturing Industry Partnership, serves manufacturers in the Greater Cincinnati region and is focused on the manufacturing workforce and career awareness.

[Supply Chain OKI](#) gets students excited about jobs in the Ohio, Kentucky, and Indiana supply chain industry. They strive to diversify the industry’s workforce with skilled people from all different backgrounds to foster growth in our communities.

Employers

The City of Cincinnati Department of Buildings and Inspections has a [48-week Building Inspector Training Academy](#) designed to provide the full range of basic knowledge and experience for a professional career as a building inspector with the City of Cincinnati. It is designed to attract a diverse pool of candidates as entry level building inspector recruits with the aptitude, experience, and desire to serve the public.

[People Working Cooperatively](#) – Serves as Hamilton County’s Home Weatherization Assistance Program (HWAP) provider that makes critical home repairs, energy conservation, and accessibility modification services to help residents remain independent and healthy in their homes. They created an internal workforce development apprenticeship program to fill needed skilled labor positions.

Labor Unions

[The Cincinnati AFL-CIO Labor Council \(CLC\)](#) is part of the American Federation of Labor and Congress of Industrial Organizations (**AFL-CIO**), a federation of 60 national and international labor unions that represents over 13 million working women and men.

[IBEW – NECA Electrical Training Center](#) – Apprentices in their four-year Electrical Construction Apprenticeship Program obtain at least 8000 hours of compensated on-the-job training and at least 900 hours of related classroom training. Upon completion, the apprentice graduates to Inside Journeyman Wireman status and is fully qualified to perform the work of the trade.

[UA Local 392](#) - We have over 2,300 members who work as Pipefitters, Plumbers, Mechanical Equipment Service (HVAC), and welders.

[LiUNA Local 265](#) has a 4-year Construction Craft Laborer apprenticeship.

Heat & Frost Insulators Local 8 Mechanical insulation is the oldest green technology. It is uniquely positioned to be at the forefront of addressing future problems. Insulation can reduce the number of tons of greenhouse gas emissions into the atmosphere, prevent loss of energy, control condensation, regulate the surface temperature and protect public health wellness and occupant safety. Always willing to accept capable individuals into our trades through our Joint Apprenticeship and Training Committee (J.A.T.C.) program.

The **Central Midwest Carpenters Union (CMRCC)** is more than a collective of skilled tradespeople; it's a community of over 37,000 professionals spread across 36 locals in Indiana, Ohio, Kentucky, and parts of Tennessee. Their closest training center is in Monroe, Ohio but their progressive apprenticeship model only has class onsite once per quarter. They train the skilled millwrights that build the facilities, farms, panels, and towers to collect **renewable energy**.

Education and Training Providers

K-12 Public School Districts

Cincinnati Public Schools - There are 22 school districts comprised of close to 200 public schools located in the Greater Cincinnati area. Cincinnati Public Schools is the largest school system in Greater Cincinnati and Ohio's second largest school district, serving more than 35,000 students in 66 schools across southwest Ohio from pre-K through 12th grade. Of the 66 schools, 16 are high schools which prepare students for enrollment, employment or enlistment, like Woodward High School and Aiken High School. **Career and Technical Education (CTE)** provides several avenues for students to explore what awaits them after high school. Pathways include Agricultural and Environmental Systems, Construction Technology, Engineering and Science Technologies, and Zoo Academy.

Two-Year Colleges

Cincinnati State Technical and Community College is a public technical and community college that offers degrees, certificates and workforce training.

Green job pathways include electromechanical technologies, environmental technologies, and more. Cincinnati State's **Workforce Development Center** provides short-term industry-relevant training for individuals and organizations with programing in industrial maintenance technology and more.

Gateway Community and Technical College in three locations in Northern Kentucky offers a variety of air conditioning technology, diesel technology, electrical technology, energy technologies, CDL, and more.

Four-Year Colleges and Universities

University of Cincinnati (UC) is a public research university with an enrollment of over 53,000 students and is ranked No. 4 in the nation for co-ops and internships by U.S. News & World Report. UC offers hundreds of **academic programs** ranging from engineering, architecture, and environmental studies.

Xavier University is a private Jesuit university in Cincinnati, Ohio.

Northern Kentucky University is a public university in Highland Heights, Kentucky.

Nondegree Education and Training Providers

Southern Ohio Technical Institute provides the HVAC/R community with an employment ready, highly skilled, well-rounded entry-level Installers, and Maintenance and Service Technicians.

Adult Education Providers

Great Oaks Career Campuses – Great Oaks Career Campuses is a public school district offering career and technical training for both high school students and adults. With four campuses and programs in over 25 area schools, Great Oaks annually helps over 17,000 high school students prepare for careers and college, and for thousands of adults to get training and certification to begin a new career or advance in a current career. Great Oaks serves 36 school districts in a 2,200 square-mile area of southwest Ohio. Adult education programs include Alternative/Electric Vehicle Technician, construction technologies, HVAC, and more.

Butler Tech - Offers high school and adult education students unparalleled career technical education. Some programs include Industrial Maintenance Technology and HVAC/R.

**Disclaimer: the above organizations and programs have been identified as offerings in our region. This list is not an endorsement, and additional due diligence is recommended.

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