

# GREEN COLLAR JOBS

An Analysis of the Capacity of Green Businesses  
to Provide High Quality Jobs for Men and  
Women with Barriers to Employment



RAQUEL PINDERHUGHES, Ph. D.

A CASE STUDY OF BERKELEY, CALIFORNIA  
Funded by The City of Berkeley Office of Energy and Sustainable Development

## EXECUTIVE SUMMARY

2007

## Executive Summary

Poverty and unemployment are significant problems in Berkeley and other Bay Area cities and there is an urgent need for a new source of living wage jobs for low income residents with barriers to employment – a population that includes youth and adults who do not have a high school degree, have been out of the labor market for a long time, were formally incarcerated, have limited education and/or labor market skills. This report describes a category of jobs with significant potential to fill this need – *green collar jobs*.

*Green collar jobs* are blue collar jobs in green businesses – that is, manual labor jobs in businesses whose products and services directly improve environmental quality (Pinderhughes, 2006). Green collar jobs are located in large and small for-profit businesses, non-profit organizations, social enterprises, and public sector institutions. What unites these jobs is that all of them are associated with manual labor work that directly improves environmental quality.

Green collar jobs represent an important new category of work force opportunities because they are relatively high quality jobs, with relatively low barriers to entry, in sectors that are poised for dramatic growth. The combination of these three features means that cultivating green collar jobs for people with barriers to employment can be an effective strategy to provide low-income men and women with access to good jobs-- jobs that provide workers with meaningful, community serving work, living wages, benefits, and advancement opportunities.



Twenty-two different sectors of the U.S. economy currently provide workers with green collar jobs (Pinderhughes, 2006). These sectors include:

1. Bicycle repair and bike delivery services
2. Car and truck mechanic jobs, production jobs, and gas-station jobs related to bio-diesel, vegetable oil and other alternative fuels
3. Energy retrofits to increase energy efficiency and conservation
4. Food production using organic and/or sustainably grown agricultural products
5. Furniture making from environmentally certified and recycled wood
6. Green building
7. Green waste composting on a large scale
8. Hauling and reuse of construction and demolition materials and debris (C&D)
9. Hazardous materials clean up
10. Green (sustainable) landscaping
11. Manufacturing jobs related to large scale production of a wide range of appropriate technologies (i.e. solar panels, bike cargo systems, green waste bins, etc.)
12. Materials reuse/producing products made from recycled, non-toxic materials
13. Non-toxic household cleaning in residential and commercial buildings
14. Parks and open space maintenance and expansion
15. Printing with non-toxic inks and dyes and recycled papers
16. Public transit jobs
17. Recycling
18. Solar installation and maintenance
19. Tree cutting and pruning
20. Peri-urban and urban agriculture
21. Water retrofits to increase water efficiency and conservation
22. Whole home performance (i.e: HVAC, attic insulation, weatherization, etc.)



This report presents an assessment of the potential of Bay Area green businesses to provide high quality green collar jobs to men and women with barriers to employment. The assessment is based on an in-depth study of green businesses in Berkely that provide workers with green collar jobs conducted by Professor Raquel Pinderhughes in 2006-2007. The study addresses seven major questions:

1. **To what extent are green collar jobs good jobs?**
2. **To what extent are green collar jobs suitable for people with barriers to employment?**
3. **To what extent are people with barriers to employment interested in green collar jobs?**
4. **Are green business owners willing to hire workers with barriers to employment for green collar jobs?**
5. **To what extent are the green collar job business sectors growing?**
6. **What strategies are needed to grow the number of green collar jobs?**
7. **What strategies are needed to ensure that workers with barriers to employment can gain access to green collar jobs?**

The assessment reveals that placing job ready workers with barriers to employment in green collar jobs can be an effective way to provide low income people with access to good jobs that can lift these individuals and their families out of poverty.

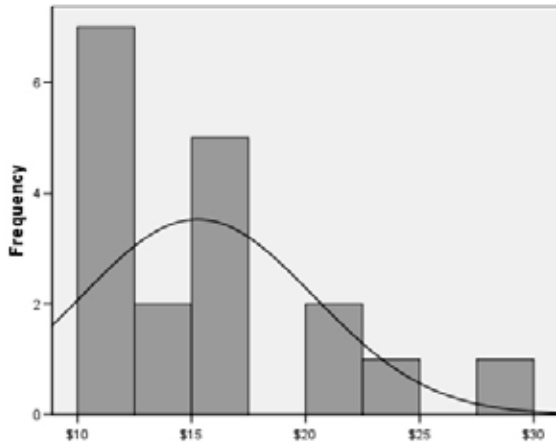
Green Collar Jobs Are Community Serving Work Force Opportunities			
Green Business Sector	Types of Services Providing Green Collar Jobs	Types of Entry Level Green Collar Jobs Currently Available	More Advanced Green Collar Work
Energy	Energy Retrofits HVAC (Heating, Ventilation, Air Conditioning) Solar Installation Water Conservation Whole Home Performance	Customer Service, Evaluation, Installation, Construction, Maintenance, Repair	Energy Partner Journeyman Solar Electrician Service Technician Project Manager
Water	Water Conservation Adaptive Grey Water Reuse	Installation, Construction, Maintenance, Repair	Journeyman Project Manager
Green Building	Construction Demolition & Removal	Construction, Carpentry Demolition, Hauling, Driving	General Contractor Project Manager
Woodworking	Custom architecture, cabinetry, furniture, repairs	Assembly, Sanding, Finishing, Carpentry, Installation	Journeyman Head Carpenter
Green Space	Parks & Open Space Landscaping	Planting, Maintenance Tree Cutting/Pruning	Project Manager Head Gardener
Food	Urban Agriculture Farmers' Markets Specialty Foods Production Baking	Growing, Packaging, Delivery Set-up/Tear-down, Selling Brewing, Roasting, Packaging Baking, Mixing, Cleaning	Production Manager Market Manager Floor Manager Head Baker
Transportation	Bicycle Delivery Bicycle Repair Bio-Diesel/Veggie Fuels Public Transportation	Dispatch and Delivery Assembly and Repair Fuel Production, Distribution Driving, Maintenance, Repair	Messenger/Owner Shop Manager Production Manager Head Mechanic
Non-Toxic Printing	Commercial Printing Services	Binding, Post-Press, Delivery	Press Op, Pre-Press
Non-Toxic Cleaning	Residential & Commercial Cleaning	Cleaning, Customer Service	Team Leader
Waste Stream Diversion	Materials Recycling, Materials Re-use	Collection, Sorting, Driving, Loading, Salvaging, Warehouse, Packaging and Composting	Warehouse Manager, Floor/Department Manager

The key findings for the seven major questions addressed by the study are:

**1. Green collar jobs are good jobs. They provide workers with:**

- Living wages
- Health benefits
- Additional benefits
- Meaningful work
- High levels of job satisfaction
- Opportunities for occupational mobility

**Green Collar Jobs Provide Workers with Living Wages**



**Fig. 3 Hourly Wage Range for Green Collar Jobs in Berkeley Green Businesses**

**Sample of Benefits Provided to Green Collar Workers**

Health Insurance: Medical, Dental, Vision & Dependent Coverage	Trade Benefits
Paid Time Off (PTO): Vacation, Sick Leave, Holidays	Mileage Allowances
Paid Over-Time	Service Awards
Flexible Work Scheduling	Employee Purchases (i.e., replacement of worn-out tools)
401-K Plans and IRAs	Employee Assistance Programs
Profit-sharing	Additional Unpaid Time off
Bonuses	Union Membership Related Benefits such as protection and representation

**2. Green collar jobs are well suited for workers with barriers to employment.**

- Green collar jobs have low barriers to entry.
- Green businesses provide on the job training for entry level and advanced green collar jobs.
- Green collar jobs provide workers with opportunities for advancement.
- Green collar jobs are located in sectors that are growing rapidly.

**3. People with barriers to employment are interested in working in green collar jobs.**

Bay Area workers with barriers to employment are extremely interested in green collar work force opportunities. Importantly, many of the people surveyed have relevant work experience, particularly in the areas of construction, landscaping and bike repair.

**4. The owners and managers of green business are willing to hire job ready workers with barriers to employment for green collar jobs.**

Most owners and managers are enthusiastic about the opportunity to provide low-income local residents with an opportunity to train for, and obtain, green collar jobs in their firms. However, employers need candidates to be job ready. For these employers, "job ready" means that workers have:

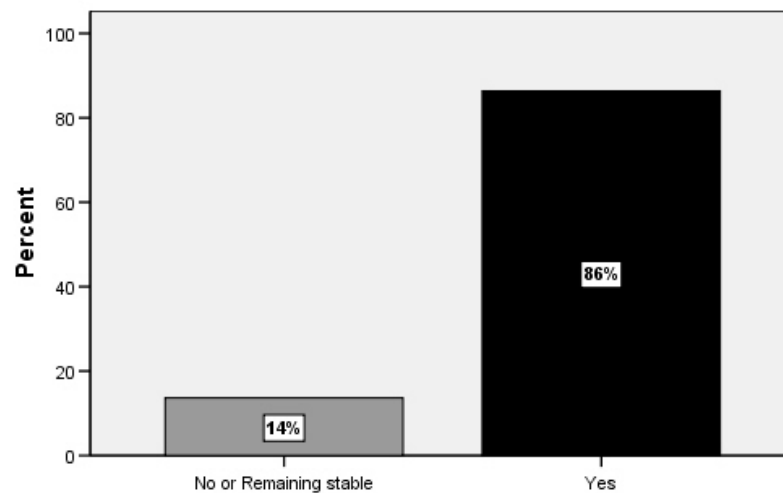
- A sense of responsibility
- A positive attitude
- Consistent punctuality
- Basic presentation, listening, communication, and literacy skills
- A strong work ethic
- The ability to work independently and as part of a team

Employers are willing to partner with job training programs to prepare and place workers with barriers to employment in their firms but these programs need to be well-organized, effective at getting clients job ready, and sensitive to the needs of employers.

## 5. Green collar job sectors are growing.

All of the Bay Area's green collar job sectors are expected to grow over the next decade(s) and as they expand there will be increases in green collar work force opportunities in areas such as alternative energy, bicycle transit, energy and water efficiency and conservation, green building, materials reuse, organic food, public transit, and recycling. Most firms are not adequately prepared to address the work force development issues that will accompany rapid growth. Seventy-three percent of the business owners/managers surveyed stated that there was a shortage of qualified green collar workers for their sector, with the greatest needs in energy, green building, mechanics, and bike repair.

## Green Businesses are Experiencing Significant Growth



**Fig. 11 Is your business growing?**

## 6. Green businesses that provide green collar jobs need to be supported. Support would include:

- Ensuring that green businesses have adequate, appropriate, affordable space.

Most green businesses in the Bay Area are small enterprises that do not own their property, have leases that will expire in the next few years, are growing, and are concerned about space to accommodate growth. These businesses would like to stay in the same locations and are very concerned about maintaining affordable space. City planning agencies can do a great deal to help meet this critical need – especially by preserving affordable industrial land.

- Following the recommendations in the Sustainable Business Action Plan approved by City Council.

Although it makes no reference to green collar jobs, the Sustainable Business Action Plan identifies strategies for developing green businesses in Berkeley in four critical areas: (a) building the demand for green products and services, (b) nurturing existing green businesses; (c) fostering environmental innovation and entrepreneurship in the city; and (d) branding and communication.

- Stimulating the growth of its green business sector and local green businesses.

Strategies to stimulate growth include providing (a) procurement dollars and contracts to purchase goods and services that local green businesses provide; (b) assistance with marketing; (c) access to capital; and (d) technical assistance.

## 7. Ensuring that workers with barriers to employment gain access to green collar jobs will require coordination between effective job training programs and local green businesses.

Providing people with barriers to employment with access to green collar jobs will require a strong partnership between green business employers and job training programs that prepare people with barriers to employment to enter the labor market. These two entities must work closely together to support training and placement. Ideally employers would be convened by the Chamber of Commerce under the umbrella of a *Green Business Council* whose members would meet regularly to inform job training program staff about the needs of their firms and identify placement opportunities in their firms as they emerge.

The report includes a model for an effective green collar jobs training and placement program that meets these needs. The essential features of the model are outlined below.



### Green Collar Jobs Training and Placement Program Model \*

**Purpose of the Program:** To prepare men and women with barriers to employment to become job ready and obtain entry-level green collar jobs

**Types of Jobs.** This program is focused on existing green collar sectors and jobs:

- bicycle repair
- bike delivery services
- energy retrofits to increase energy efficiency and conservation
- food production using organic and/or sustainably grown agricultural products
- green furniture (using environmentally certified and recycled wood and other materials)
- green building
- green composting on a large scale
- hauling and reuse of construction and demolition materials and debris (C&D)
- green (sustainable) landscaping
- materials reuse (i.e. producing products made from recycled, non-toxic materials)
- parks and open space maintenance and expansion
- green printing (using non-toxic inks and dyes, recycled paper, etc.)
- recycling
- solar installation and maintenance
- tree cutting and pruning
- water retrofits to increase water efficiency and conservation
- whole home performance (i.e. HVAC, attic insulation, weatherization, etc.)

---

\* This model was used to develop the *Oakland Green Jobs Corp Program* championed by the Ella Baker Center and the Oakland Apollo Alliance.

**Target Population:** 18-35 year old men and women with barriers to employment. This population includes men and women who do not have a high school degree, have been out of the labor market for a long time, were formally incarcerated, and/or have limited labor market skills and experience.

**Training:** This is an approximately 3-6 month training program that utilizes both training in the classroom and on-the-job training to provide clients with the following direct services: (1) initial assessment; (2) basic literacy skills (math, English, writing, computer, oral presentation, basic communication skills, etc.); (3) life skills and soft skills training; (4) financial management skills; (5) OSHA Safety Training Certification; (6) an environmental educational component; (7) basic vocational skills relevant to green collar work force opportunities.

**Internships:** The Internship component is designed to place job ready clients in local green collar jobs for a trial period of 2-6 months. Internship sites and placements will be identified by employers in the *Green Business Council* who will meet regularly to identify green collar internships as well as full-time jobs for job ready clients. The internships allow the employer and the client a trial period during which they can assess fit and capacity without committing to a full-time permanent position for the client. In the best case scenarios, clients who excel in their internships will be hired on as full-time workers.

**Case Management and Follow Up:** Each client will have access to case management and follow up services during the period in which they work as interns and for up to 6-12 months after they start their first employment opportunity in a green business. Case management and follow up services are designed to help both the client and the employer.

**Pathways to Employment & Educational and Occupational Mobility:** Graduates of training programs that prepare people for green collar jobs will have access to multiple pathways to employment as well as to educational and occupational mobility. These pathways include: (1) ongoing on-the-job training opportunities in green businesses; (2) information about union apprenticeship programs, particularly electrical and construction; (3) access to higher education through adult schools, community colleges, and four year institutions; and (4) ongoing job placement services through employers in the *Green Business Council*.

**Employers:** To succeed the program must have an involved, supportive, and enthusiastic group of green business employers who regularly communicate with the job training staff preparing program participants to enter the labor market. These employers will (a) identify growing green economic sectors and opportunities; (b) identify training standards for specific green-collar jobs; (c) identify placement opportunities; (d) create internship opportunities for program participants; and (e) hire job ready applicants for entry level green collar jobs when there are job openings in their firms. They may also refer job ready applicants to firms outside of Berkeley.

**Green Business Council:** To develop and nurture relationships with employers, the Chamber of Commerce should convene a Green Business Council composed of the owners and managers of local green businesses in the private, non-profit, and public sectors that provide workers with green collar jobs.

**Local Government:** Government staff working on issues related to economic development, work force development, and improvements in environmental quality should provide ongoing support to the green businesses that provide workers with green collar jobs. This can be accomplished in many ways, including: streamlining permitting processes for green businesses that provide green collar jobs in the city; utilizing procurement dollars and city contracts to support local green businesses; creating incentives for working with "first source" hiring policies; helping green businesses access tax credits; working with regional organizations that support job training programs.

**Community Involvement:** The program should involve members of Berkeley's low income communities in assisting with recruitment and retention of program applicants as well as supporting public and private sector initiatives to improve urban environmental quality and create green collar jobs.

# Green Collar Jobs:

An Analysis of the Capacity of Green Businesses to Provide High Quality Jobs for People with Barriers to Employment

## **Raquel Pinderhughes, Ph.D.**

This report was commissioned by staff in the City of Berkeley's Office of Energy and Sustainable Development. The report was written by Dr. Raquel Pinderhughes with assistance from Michelle Jacques-Menegaz and David Schechter. The report is based on a research study designed and conducted by Professor Raquel Pinderhughes with assistance from Michelle Jacques Menegaz and Ed Dehaan. Data collection and analysis took place in 2006-2007. Aly Pennucci and Annie Pennucci assisted with the design of the SPSS component. Ipeleng Kgositsile assisted with preliminary analysis of 2007 data on the level of interest in green collar work force opportunities. Lana Chan assisted with graphic design and layout of the executive summary and final report.

### **The full report can be found at:**

**[www.ellabakercenter.org](http://www.ellabakercenter.org)**

**[www.greenforall.org](http://www.greenforall.org)**

**<http://bss.sfsu.edu/raquelrp/>**

**[www.cityofberkeley.info/sustainable/Government/actionplans.html](http://www.cityofberkeley.info/sustainable/Government/actionplans.html)**

**For additional information, contact Professor Raquel Pinderhughes at [raquelrp@sfsu.edu](mailto:raquelrp@sfsu.edu)**

Professor Raquel Pinderhughes, Ph.D.  
San Francisco State University  
Urban Studies Program  
1600 Holloway Avenue  
San Francisco, CA 94132