California’s Green Economy

California Green Workforce Coalition
July 9, 2010

Bonnie Graybill
Employment Development Department
Labor Market Information Division
Understanding the Green Economy

What is California LMI Doing/Planning?

- **Collaborating** to expand knowledge
  - Federal/state/local research partners
  - State and local workforce partners
  - Control entities and utilities bringing about climate change

- **Responding to state and national information needs**
  - Sharing knowledge across agencies and geographic areas
  - Hosting a shared “green web page”
    http://www.labormarketinfo.edd.ca.gov/?pageid=1032

- **Surveying** California businesses to establish baselines of green employment and green business practices

- **Conducting and publishing career research** to support workforce development
Our Working Definition of Green Jobs

Green jobs produce ("supply") goods or services that result in:

- **G**enerating and storing renewable energy
- **R**ecycling existing materials
- **E**nergy efficient product manufacturing, distribution, construction, installation, and maintenance
- **E**ducation, compliance and awareness
- **N**atural and sustainable product manufacturing

For the complete definition see:
Sustainable Practices Increase Demand

Important caveat…

- LMID’s green jobs definition focuses on the “supply” side
- Sustainable business practices (the “demand” side) are equally important to California’s green economy
- Demand leads to pressure for additional supply of products and services
- Survey covers “supply” and “demand” separately
Green Economy Survey Details

- Completed January 2010
- Surveyed businesses across the California economy; all industries, all sizes, all areas
- Creates a baseline measure of:
  - Number of workers in green or clean product manufacturing and/or services
  - Number of businesses that have adopted green practices
  - Emerging occupations for further study related to skills and workforce needs
- Partners include Community Colleges, Air Resources Board, California Energy Commission, California Workforce Investment Board, Economic Strategy Panel, Employment Training Panel, and others
California’s Survey Results

- Nearly 15,200 employers responded
- 7.9 percent of employers report employees working on green products and services
- About 3.4 percent of all California workers are working on green products and services (433,000)
- About 61% of green workers spend more than half time on green aspects of job (263,000)
- 57 percent of employers report using at least one green business practice
- 78% of current green workers were trained on the job
Comparison to Other States’ Green Workforce Surveys?

Green jobs as a percent of total employment

- California: 3.4%
- Washington: 3.3%
- Oregon: 3.0%
- Michigan: 3.0%

- Caveat...Definitions vary somewhat between states...
- Renewable energy, recycling, and energy efficiency are in each states definition
Green Workers Reported

PERCENTAGE OF EMPLOYEES IN GREEN CATEGORIES

- Generating and Storing Renewable Energy: 6%
- Recycling Existing Materials: 27%
- Natural and Sustainable Product Manufacturing: 24%
- Energy Efficient Product Manufacturing, Distribution, Construction, Installation, and Maintenance: 27%
- Education, Compliance, and Awareness: 17%
Industries with the Most Green Jobs

- Manufacturing: 88,815
- Construction: 61,300
- Professional, Scientific, and Technical Services: 41,817
- Wholesale Trade: 32,956
- Agriculture, Forestry, Fishing and Hunting: 31,678
Regional Distribution of Green Jobs

10,358

4,276

23,261

1,987

120,032

37,727

13,354

37,735

178,547
Share of Green Jobs by Region

PERCENTAGE OF GREEN JOBS TO ALL JOBS BY REGION
Top Industries in Southern California

**Generating and Storing Renewable Energy**
- Utilities
- Professional, Scientific and Technical Services
- Wholesale Trade

**Recycling Existing Materials**
- Manufacturing
- Administrative and Support and Waste Management and Remediation Services
- Wholesale Trade

**Energy Efficient Product Manufacturing, Distribution, Construction, Installation and Maintenance**
- Construction
- Manufacturing
- Retail Trade

**Education, Compliance, and Awareness**
- Educational Services
- Transportation and Warehousing
- Public Administration

**Natural and Sustainable Product Manufacturing**
- Manufacturing
- Wholesale Trade
- Administration and Support and Waste Management and Remediation
Preparation of Current Green Workers – OJT!
Sustainable Business Practices

If your business makes use of green practices, services or products, what does your firm currently USE on site

- Recycling
- Recycled products
- Energy efficiency/conservation
- Water conservation
- LEED or energy efficient construction and remodeling
- Pollution reduction
- Alternative fuel vehicles
- Some form of renewable energy such as solar, water, wind, biofuel, etc.
- Sustainable farming
What new skills or knowledge will future employees need in order to perform green activities at your firm?

- Waste Minimization: 60%
- Principles of Energy Conservation: 40%
- Information Technology: 20%
- Pollution Reduction and Control: 10%
- Codes/Standards/Legislation: 10%
- Alternative Energy: 10%
- Vehicle Technology/Maintenance: 10%
- Other: 10%

Percent of Firms
What do you view as the largest benefit to your business in taking steps to reduce greenhouse gas emissions?

- Environmentally Beneficial: 70.0%
- Other: 30.0%
- Cost Savings: 20.0%
- Competitive Advantage: 10.0%
- Advantageous Position: 0.0%
Occupational Findings

- **Green workers in 34 listed green jobs**—503,000 reported*
- Additional write-ins—“Other Green Job Titles”—50,000 reported*
- Examples of write-ins—include:
  - Warehouse Recycling Manager
  - LEED Accredited Professionals
  - Environmental Health and Safety Managers
  - Alternative fuel vehicle infrastructure engineers
  - Fleet manager (alternative fuel vehicles)
  - Transportation program specialist
  - Battery recyclers

- Greater detail will be collected in a subsequent occupational skills research during 2010-2011.

*Note: Occupational survey includes workers that do not meet the “product and services” definition, but are green workers—examples, sustainability planner, construction workers for a school district that occasionally maintain solar heater or other sustainable equipment for the school’s facilities, recycling manager for a business, etc.
Top Green Jobs

Top Ten Green Occupations

Employment

- Carpenters (involved in green activities)
- Hazardous Materials Removal Workers
- Farmers, Sustainable
- Assemblers
- Recycling Center Operators
- Electricians (involved in green activities)
- Plumbers, Pipefitters, and Steamfitters (involved in green activities)
- Architects, Except Landscape
- Industrial Production Managers
- Construction Managers

Occupation
Next Steps

- Review findings with key players
- Finalize summary report
- Regional reports as warranted by the data
- Industry-level reports as warranted
- Detailed occupational follow-up and analysis
- Report on occupational skills and workforce development needs
Additional Resources and Information

- Green Job Activities by State
  
  http://www.labormarketinfo.edd.ca.gov/article.asp?articleid=1238

- Workforce Information Council Green Jobs Study Group
  

- ETA Green Jobs Community of Practice
  
  http://greenjobs.workforce3one.org/

- Bureau of Labor Statistics plans to measure the green economy—comments due August 30, 2010
  
  http://www.bls.gov/green/
Questions?

Feel free to get in touch!

Bonnie Graybill
bgraybill@edd.ca.gov
916.262.2620