

Green Jobs

For the economy...

the workforce...

the planet

California Workforce Investment Board

California Green Collar Jobs Council

March 4, 2009

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Green and clean is not new, but

- Interest is ramping up
- Energy costs rising, water shortages
- Concern for the planet
- Policy and legislative mandates
- President's economic stimulus package



What are the Green jobs that exist today?

- Many studies list “green” occupations
- We’ve looked at more than 80 studies
- Compiled and classified the lists
- Identified about 200 titles—in many cases tied them to existing occupations
- Occupations range from laborers to secretaries to research scientists, engineers and architects
- Often the difference between these workers and others with the same title is new materials or methods



Target Occupations

- Targeted a subset of these 200 occupations for further study
- Occupations that offer good opportunities for workforce development
 - Forecasted number of jobs
 - Potential for growth
 - Good wages
- Collecting information on these occupations in our upcoming survey



Analysis to Date

- Much still needs to be learned
- Business, workers our best source
- Analysis to date based upon
 - Characteristics of the workforce—focus on the unemployed
 - Opportunities afforded by the Economic Stimulus package
 - Occupational information—trends, wages, training levels, skills and knowledge
 - Potential transferrable occupations
 - Real time job opportunities
- Files reflecting the staff analysis are posted on our Understanding the Green Economy web page
<http://www.labormarketinfo.edd.ca.gov/?pageid=1032>



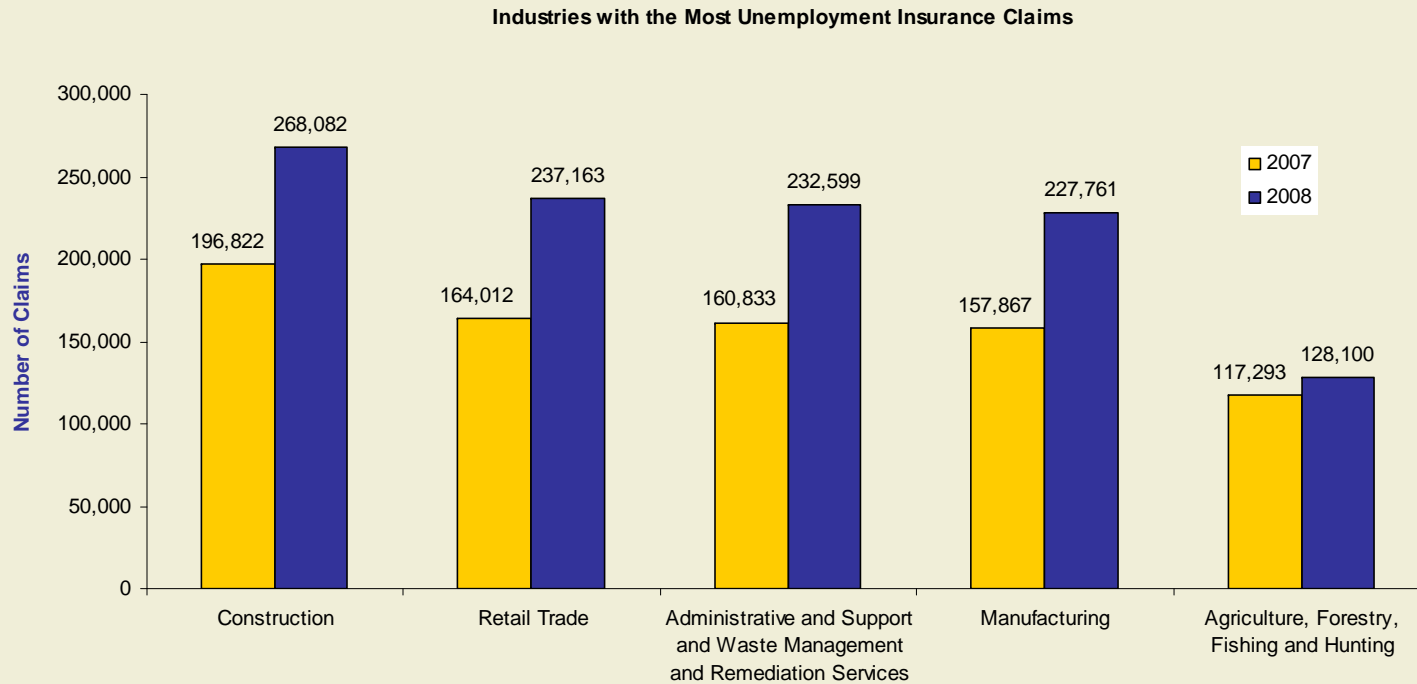
Displaced Workforce

Nearly Ready for New Opportunities

- California's unemployment rate, announced last Friday, is 10.1 %--highest since 1983
- Almost 1.9 million unemployed workers
- 363,000+ new claims filed in January 2009
- Unemployment crosses all industries
- Heaviest hit
 - Construction
 - Retail trade
 - Administrative and Support
 - Manufacturing
 - Agriculture

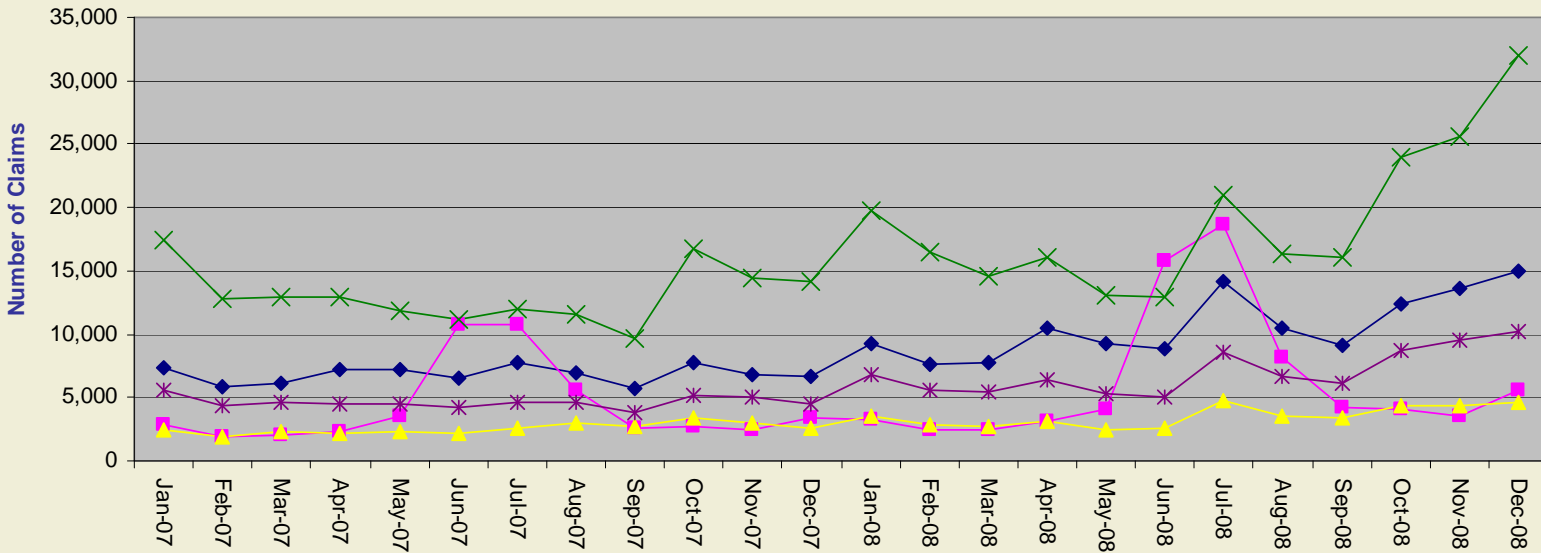


Industries with the Most UI Claims



Unemployment Insurance Claims

Unemployment Insurance Claims History
(Jan 2007-Dec 2008)



- ◆ Professional, Scientific, and Technical Services-106%
- ▲ Real Estate and Rental and Leasing-89%
- ◆ Educational Services-96%
- ◆ Manufacturing-83%
- ◆ Wholesale Trade-81%

Economic Stimulus \$ Opportunities \$

- Estimated Supplemental funding for workforce development including WIA, UI and Employment Service in California
 - \$80 M for Adults
 - \$189 M for Youth
 - \$177 M for Dislocated Workers
 - \$45 M for UI and Employment Service—
50% to **provide reemployment services for the unemployed**



Economic Stimulus Job Creation

- The President's Council of Economic Advisors forecasts almost 3.7M jobs created or saved as a result of the Economic Stimulus package by 4th quarter 2010
- California's share is forecasted to be 11.5% or 421,000 jobs, across all industries



Economic Stimulus Focus on Green

- Smart grid transmission lines
- Energy Efficiency
- Renewable Energy
- Weatherization



Green Occupations

Target occupations for “reskilling”

- Professional (BA or Advanced degree) :
Such as Architects, Cost Estimators, Engineers, Planners, Vocational Education Teachers
- Skilled workers (AA or Post secondary education): Such as Auto, Bus and Truck Mechanics, Biological and Chemical Technicians
- Crafts and Trades Workers (On the job training– varying durations): Such as Assemblers, Carpenters, Electricians, Plumbers, HVAC, Insulation/Weatherization



LMI Available for Target Occupations

- Projected growth through 2016, net replacements, median wages in 2008, and typical training levels
- Forecasted growth from a low of 5.6% for Electrical Engineers to almost 30% for Biological Technicians
- Net replacements for all occupations equal or exceed the forecasted growth. For example, we estimate that replacements for Electrical Engineers are four times the growth numbers.
- Annual wages range from \$23K for Assemblers to \$97K for Construction Managers



Sample Pathways into Green Jobs

Occupations with reskilling potential

Construction Managers

Loan Officers

Loan Interviewers and Clerks

Management Analysts

Real Estate Brokers

Carpenters

Construction Trades, Helpers

Glaziers

Carpenters

Electricians

Heating and Air Conditioning
Technicians/Installers

Plumbers

Roofers

Sheet Metal Workers

Potential Green Jobs (transferrable skills)


Energy Auditors, Commercial and
Residential


Insulation and Weatherization
Workers


Solar PV Panel Installers and
Technicians




Snapshots:

 **Energy Auditors conduct energy assessments** to identify energy efficiency improvement opportunities and offer recommendations for insulation upgrades. Explain incentives, loans, and tax credits for energy efficiency improvements.

 How many? **26,580*** in May, 2007

 Median annual wage--**\$62,828***

*Data are for Cost Estimators, a broader occupation including Energy Auditors, from the Occupational Employment Statistics Survey


 **Insulation and Weatherization Workers line and cover structures with insulating materials.** Work with batt, roll, or blown insulation materials.


 How many? **3,440*** in May, 2007


 Median Annual Wage--**\$37,910***

*Data are from the Occupational Employment Statistics Survey

Snapshot:

 **Solar Photovoltaic Panel Installers and Technicians** install rooftop solar panels and electrical systems. Perform wiring, mounting, carpentry, troubleshooting, and customer interaction.

 How many? **3,338** Statewide [\[1\]](#)

 Median Annual Wage--**\$31,200 -- \$52,000** [\[1\]](#)

[\[1\]](#) Centers of Excellence, 2008 Survey



Real World--*Are there jobs?*

- Test licenses to mine a new application developed for the Conference Board
- Trained Friday morning and began immediately to reality test our analysis of green jobs.
- Wanted Analytics 2.0 scrapes a dozen or more on-line job listing systems, pulling detail down to the job order level
- Examples of sources: Job Central, America's Labor Exchange, Career Builders, Monster, Craig's List, Yahoo
- You can find the Conference Board's monthly summary analyses at their web site under the name *Help Wanted Online*

<http://www.conference-board.org/economics/helpwantedonline.cfm>



Summary Results—Apparently, yes

We found:

- **897,000** California orders in the system (active in the last 90 days) overall.
- More than **17,000** active “**green**” **job orders** (searching all job orders for selected “green keywords”).
- For our 22 target occupations, 31,500 active job orders
- Filtering these job orders for selected “green key words” yielded **4,700 job orders with green aspects**.
- Key words included green; clean tech; solar; wind; LEED; sustainable; sustainability; alternative energy; energy efficient; PV; biofuel; biomass; weatherization; tankless; global warming; recycling, etc.



Sample Report

INTELLIGENCE ON HIRING DEMAND™

[user guide](#) | [training](#) | [feedback](#) | [logs](#) | [logout](#)



current saved past

Add a Filter

Keywords

combine keywords

[Add](#)

Applied Filters

[Reset](#)

keyword: keyword

- "sales"

keyword: keyword

+ "solar"

keyword: keyword

+ "panel"

occupation: detailed (6)

+ Heating, Air Conditioning, ...

location: state

+ California

location: state

My Market

Heating, Air Conditioning, and Refrigeration Mechanics and Installers

California
"panel"; "solar"
excluding "sales"

summary listing

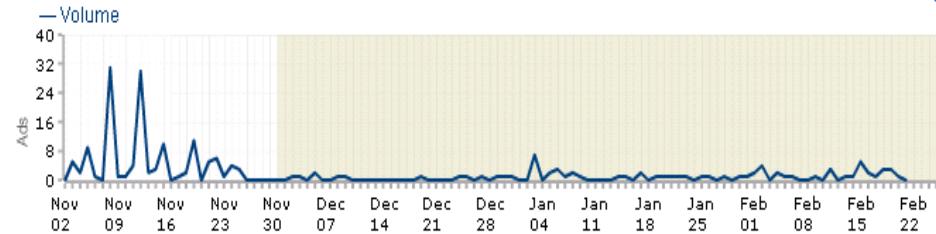
New Ads Without Duplicates Historical: Last 90 days

[Add a View](#) | [Reset Layout](#)

Data Compiled up to Saturday, February 21st, 2009

Daily Total Ad Volume (16Wk)

[Full Height](#)



MSAs	Sites		
Los Angeles-Long Beach-Santa Ana	24	Craigslist	33
San Jose-Sunnyvale-Santa Clara	9	CareerBuilder	18
Riverside-San Bernardino-Ontario	8	JOBcentral	7
Sacramento-Arden-Arcade-Roseville	8	Regional Help Wanted	2
San Francisco-Oakland-Fremont	7	USAJOBS	1
San Diego-Carlsbad-San Marcos	6	Yahoo! HotJobs	1
Oxnard-Thousand Oaks-Ventura	3	Monster	1
Fresno	2	Kijiji	1
Visalia-Porterville	1	Beyond.com	1
Chicago	1	Preferred Jobs	1

Recommended Strategy

- **Assess** unemployed workers for potential capacity to be retrained for these and other green jobs
- Offer “**reskilling**” to add new knowledge and skills to what they already know to take on the new opportunities.
- **Leverage** existing training programs across the state
- **Modify** the courses from semester long, three hours a week to short term intensive bursts to get people into the workforce quickly.
- Work **closely with business** to adjust training
- **Prepare tomorrow’s workforce** for these and many new jobs focused on innovation

