

# Green Jobs

For the economy...

the workforce...

the planet

California Workforce Investment Board

California Green Collar Jobs Council

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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

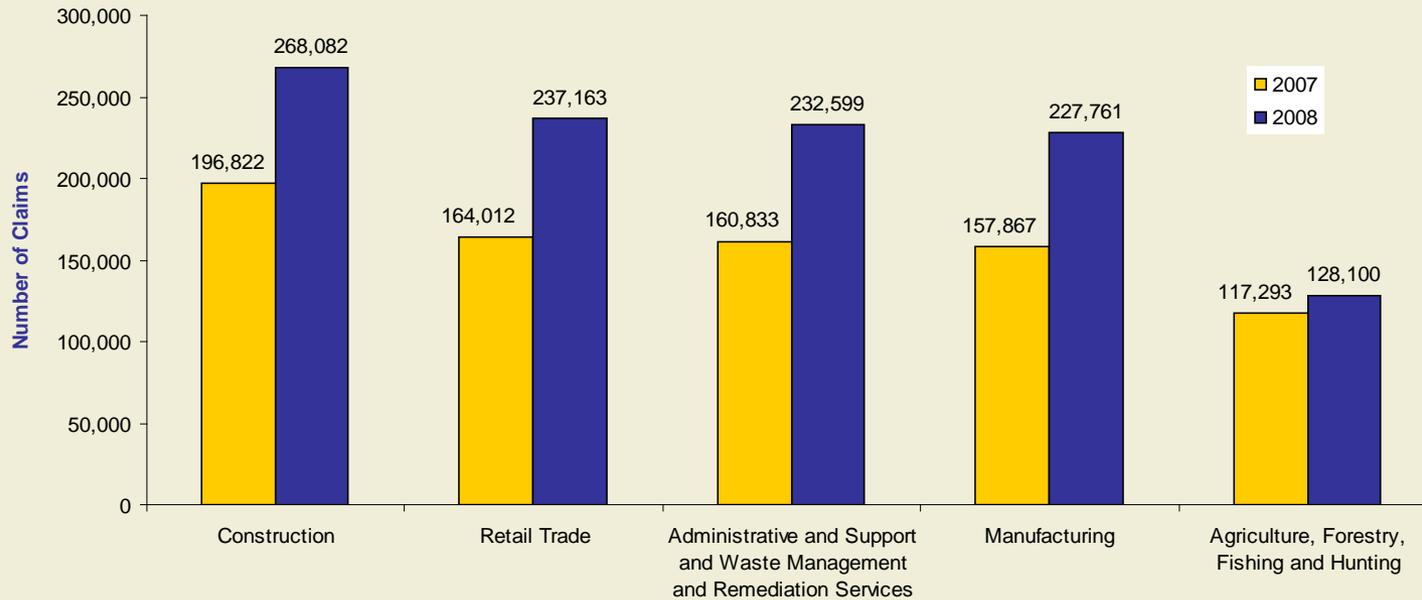
## *Nearly Ready for New Opportunities*

- 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



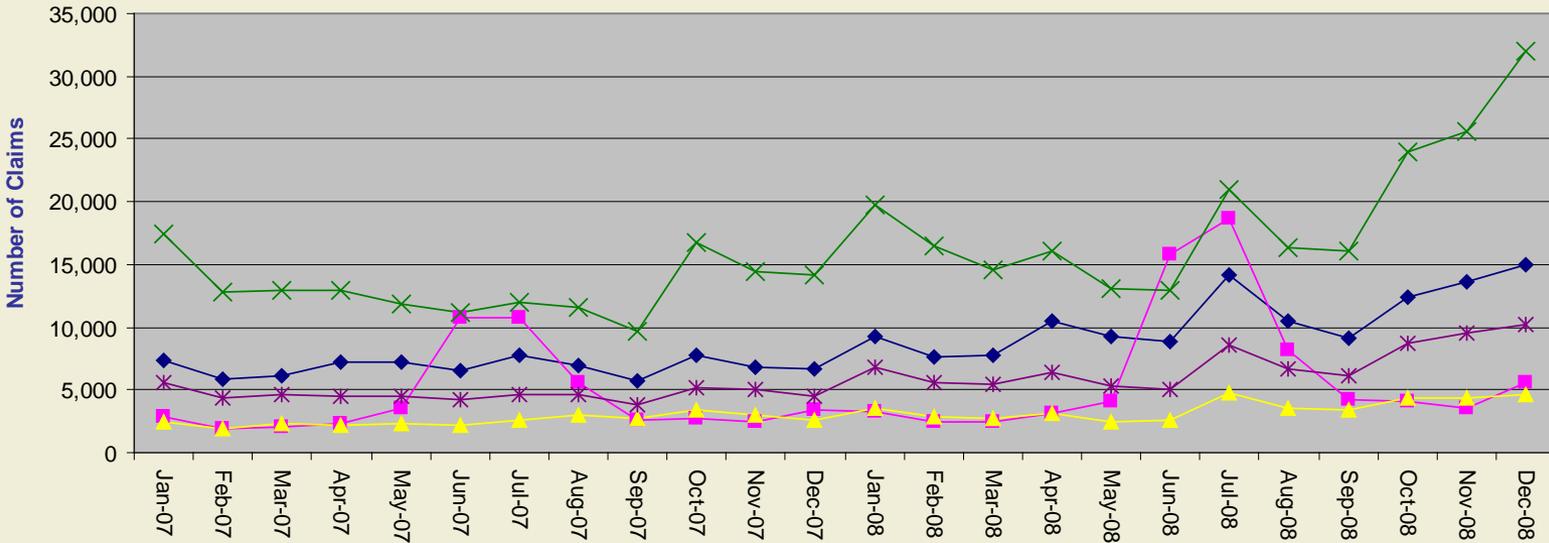
# Industries with the Most UI Claims

Industries with the Most Unemployment Insurance 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 4<sup>th</sup> 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

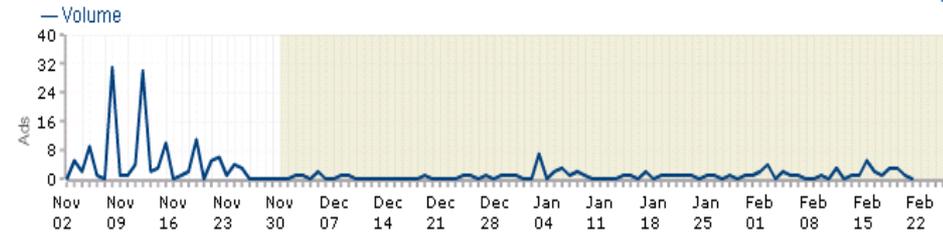
### New Ads Without Duplicates Historical: Last 90 days

[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

