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3910 University Ave., Suite 400  
San Diego, CA 92105  
P / 619.228.2900 W / [workforce.org](http://workforce.org)

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# Clean Energy

LABOR MARKET ANALYSIS  
REPORT HIGHLIGHTS

San Diego County  
October 2014

For the full report, please visit:  
[workforce.org/industry-reports](http://workforce.org/industry-reports)



The Clean Energy sector represents a broad set of activities from electricity generation to energy accounting. This study focuses on two highly integrated subsectors within Clean Energy in San Diego County: **Renewable Energy** and **Energy Efficiency**. It serves to inform the workforce development system—educational training institutions, Workforce Investment Boards and community organizations—on how to best prepare the future workforce for these two subsectors. The full report analyzes data on job growth, training gaps, hiring challenges and skills in demand from Clean Energy firms.

## OVERVIEW OF THE CLEAN ENERGY SECTOR IN SAN DIEGO COUNTY

Of the 290 Clean Energy employers surveyed for this study, the majority are involved in the Energy Efficiency subsector—which includes lighting, retrofitting, and heating, ventilation and air conditioning (HVAC)—and the Renewable Energy subsector—which includes solar energy and wind power. The remaining 14.8% of firms are primarily involved in “other” work such as alternative transportation or greenhouse gas emissions accounting.

Eleven occupations in the Renewable and Energy Efficiency subsectors were selected for in-depth analysis in this study due to their high level of projected growth, opportunities for employment and training potential:

1. Photovoltaic installers
2. HVAC technicians
3. Construction or project managers
4. Energy auditors
5. Sales representatives
6. Solar water heater installers
7. Photovoltaic designers
8. Weatherization specialists
9. Plumbers
10. Documentation specialists
11. Electricians

### SUBSECTOR MAKEUP OF CLEAN ENERGY FIRMS IN SAN DIEGO COUNTY



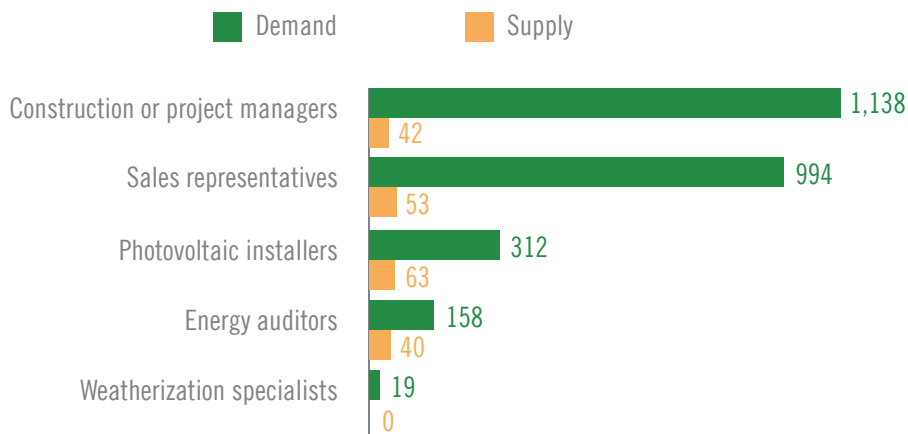
In 2013, San Diego County had 3,181 establishments<sup>1</sup> and 28,597 workers in Renewable Energy and Energy Efficiency. Between 2014 and 2015, employers expect a 11.5% growth in employment (3,285 new jobs) and 2,897 replacement jobs to be available due to employee retirements or other forms of worker attrition.

### 2014-2015 PROJECTED OPENINGS DUE TO NEW AND REPLACEMENT JOBS



This study also provides an analysis of jobs gaps within the sector. A gap is created when the number of trained workers produced by the region’s educational institutions does not match the number of available job openings. Comparing employer demand with worker supply helps identify training gaps that can be filled with workforce development.

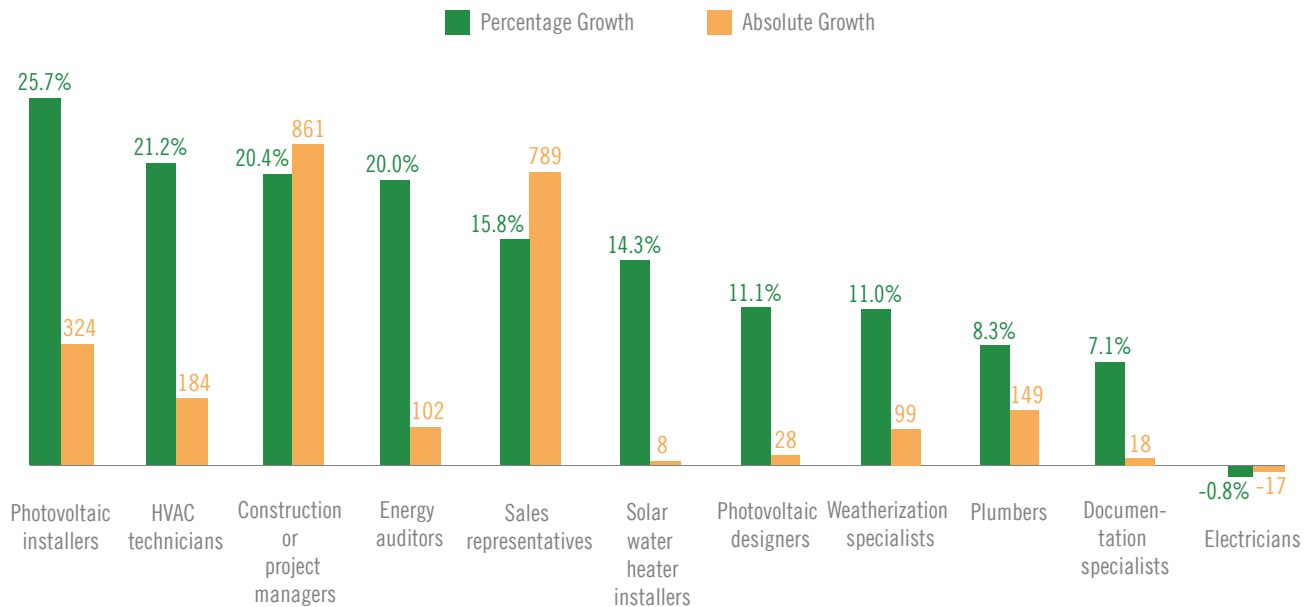
### TOP 5 OCCUPATIONS WITH SUPPLY GAPS



1. An “establishment” is a single physical location of a business used for reporting purposes in government data sources. A single company may have multiple establishments.

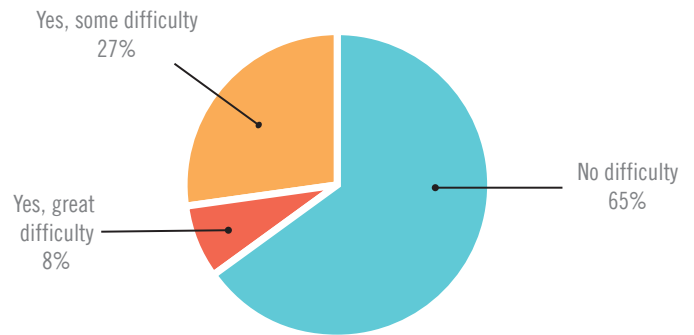
Employers expect all occupations in this study to grow from 2014 to 2015 with the exception of electricians. This may be due to seasonal changes or this position is still recovering from being particularly affected by the Great Recession. Based on historical data and industry trends, however, all occupations are projected to grow in the long-term or the next five years.

### EMPLOYER EXPECTATIONS OF 12-MONTH EMPLOYMENT GROWTH



Approximately 65% of employers in the Clean Energy sector reported having no difficulty in hiring qualified workers—a far larger percentage than other industries in San Diego County. (Typically 30-40% of firms in other industry sectors report having no difficulty in hiring qualified workers.) This suggests that presently there is an ample supply of well-trained workers to fulfill growing employer demand in the region. Despite the supply gaps, there is low difficulty hiring because of the large number of unemployed tradespeople in San Diego County. This large pool of skilled workers could be used to attract Clean Energy firms to San Diego County.

### EMPLOYERS WITH DIFFICULTY IN FINDING QUALIFIED JOB APPLICANTS PERCENT OF SURVEY RESPONDENTS



### RECOMMENDATIONS FOR WORKFORCE DEVELOPMENT

- Rather than expanding training programs, existing ones should invest in technology that meets industry advancements and allows for hands-on training in (or near) the classroom
- Hire faculty with construction and Clean Energy industry sector experience who can set expectations for the type of tasks that are performed on the job
- Provide industry-recognized certifications and training across disciplines such as energy efficient HVAC, plumbing or electrical for trainees to increase their mobility and value in the marketplace
- Recruit dislocated workers with experience in construction fields to upgrade skills in Clean Energy training programs
- Incorporate communication skill development and knowledge of utility program rebates and tax incentives in training programs